ICS 132: Organizational Information Systems

E-Commerce - I

administrivia

• mistake on my grading guide for SQL
  - give us the papers back and we'll regrade

• comments on final
  - the final will be cumulative
  - cover all the material from the class
    - including qualitative methods

• next week review?
  - want to spend most of Tuesday's lecture on case studies
  - can spend some time in review if you like
  - email me topics
  - if I don't hear, I won't do any

ecommerce

• this week's lectures are on ecommerce
  - because it's a major "cultural event"
  - because it draws together many of our concerns
    - markets, economics, communication, data
    - the "coevolution" at the center of the class

two central questions

• what is ecommerce?
  - the role of technology?
  - the impact on organizations?

• just how does it change things?
  - a radical idea?
  - brave new world?
  - more of the same?
ecommerce?

- ecommerce – a radical new idea?
- let's think back...
  - commerce 5000 years ago

ecommerce?

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ecommerce?

- ecommerce – a radical new idea?
- let's think back...
  - commerce 5000 years ago
  - not so very different
- commerce & information
  - commercial transactions have always depended on information

ecommerce?

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two components

- commerce has always depended on information
  - what's different in ecommerce is the medium
    - electronic forms of communication and exchange
      - telephone, television, the Internet
  - commercial transactions have two components
    - an information component
      - product availability, customer preferences, etc.
    - a physical component
      - exchange of payment and goods, etc.

two questions

- two questions for ecommerce
  - how to improve or transform the information component?
    - better information
    - more effective use of the information you have
  - how to manage the physical component?
    - logistics
    - payment systems
  - but ...
**ecommerce impacts**

- Technology and practice co-evolve
  - New forms (e.g., ecommerce) arise out of old
  - New technologies provide new opportunities
  - There are some substantive impacts
- Think about this material on three levels
  - Those that haven’t changed at all
    - E.g., markets, costs, speed
  - Changes in mechanism but not in practice
    - E.g., payment systems, disintermediation
  - Fundamentally new
    - E.g., demand aggregation, mass customization

**a framework (Zwass, 2002)**

- Electronic marketplaces
- Products and systems (e.g., consumer services)
- Enabling services (e.g., directories, dig. libraries, auditing)
- Secure messaging (e.g., EPI, SSL)
- Hypermedia object management
- Communication utilities
- Wide-area telecommunications

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**zwass’ framework**

- Infrastructure
  - Technically, ecommerce pre-dated the Internet
    - “EDI” is a term in use since the 1970s
  - Culturally, it’s a new phenomenon
    - Growth in infrastructure and access to infrastructure
    - Interesting case: mobile ecommerce in Europe
- Services
  - Importantly, frequently rely on third parties
    - E.g., financial services; trusted third parties (TTP) for crypto
- Products and Structures
  - Ecommerce may result in new forms of product
  - But more especially new marketplaces

**pressures towards ecommerce**

- Why pursue an online strategy?
  - Visibility to more customers
  - Reduce costs (inventory, stores, salaries, etc)
  - Improved efficiency through electronic processing
  - Integrate operations with suppliers
- The important thing about these...

**efficiency arguments (1)**

- The context for organizational life
  - The organization’s environment changes all the time
    - Remember the organism argument
  - Much ecommerce is a response to those changes
    - In other words, it’s more of the same
- Efficiency arguments part of first category
  - “Things that haven’t changed at all”
  - Efficiency was always important
ecommerce impacts (2)

- the second level
  - changes in mechanism but not in practice
    - things we were doing before, but can now do in new ways
- two examples
  - "disintermediation"
  - payment systems

disintermediation

- "disintermediation"
  - "dis-" + "intermediary" + "-ation"
  - non-technically, cutting out the middleman

- two examples
  - "disintermediation" in digital libraries?
  - perceived advantages
    - reducing costs
    - building a closer customer relationship
      - and presumably getting more information from them
  - the most extreme form
    - bypass yourself!
      - Dell Computer: from production to logistics

disintermediation isn't a new phenomenon

- producers exploit multiple "channels"
  - direct sales, outlets, major retailers, etc
- electronic commerce provides a new channel
  - explicit in a "clicks and mortar" approach
    - combines traditional and electronic commerce
- disintermediation is a "level 2" phenomenon
  - not a new mechanism, but conducted in new ways
next time

- more "level 2" impacts
  - payment systems
- "level 3" impacts
  - mass customisation
  - demand aggregation
- overall assessment