

Technology Issues in Electronic Commerce

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What is E-Commerce

Many definitions ...

Wide view: Electronically based (commercial) activities

Narrow view: Use of the internet to enable business transactions

For example:

'The use of the Internet and the web to transact business. More formally, digitally enabled commercial transactions between and among organizations and individuals.'

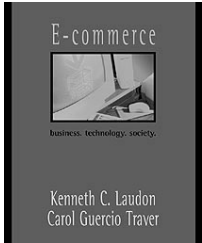
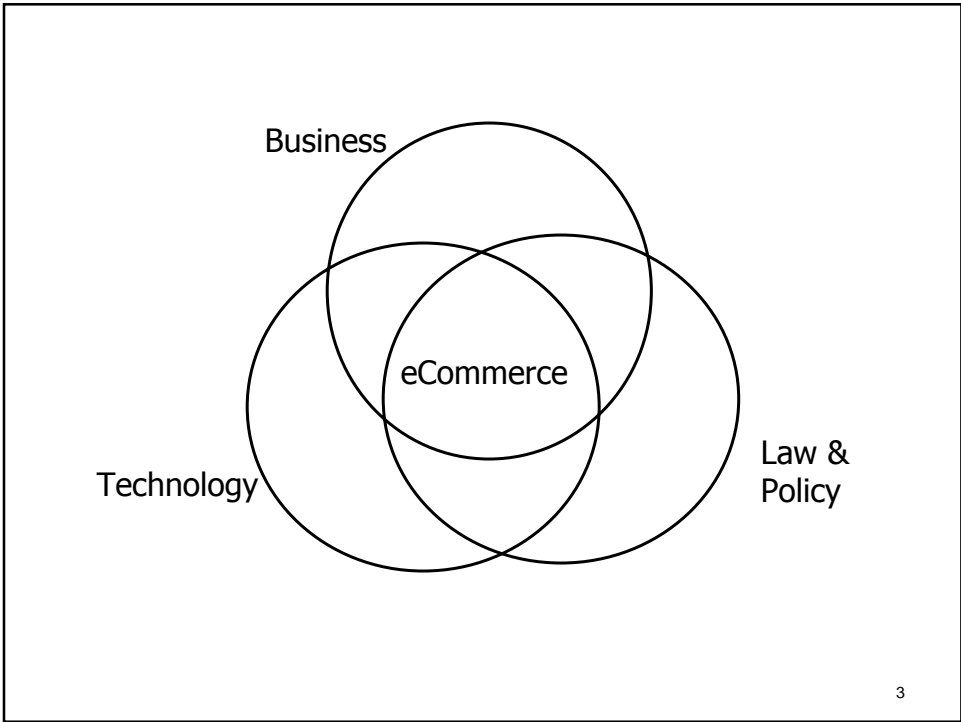
K. Laudon and C. Traves, E-commerce, Addison Wesley 2001

E-commerce and e-business

Internet terminology is still in a state of flux; nowhere is this more evident than in the past use of the terms *e-commerce* and *e-business*. Both have been used to describe any business activity which uses the Internet. However, some consensus is emerging in that the terms are gradually being employed in a more focused way. The term *e-commerce* is increasingly being used to describe online retailing, for example the use of the Web to sell books. The term *e-business* is increasingly being used to describe all business activities using the Internet, not just online retailing.

D. Ince, Developing Distributed and E-commerce Applications, Addison Wesley 2002

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E-Commerce I (1995-2000)

Explosive growth, dot.com collapse

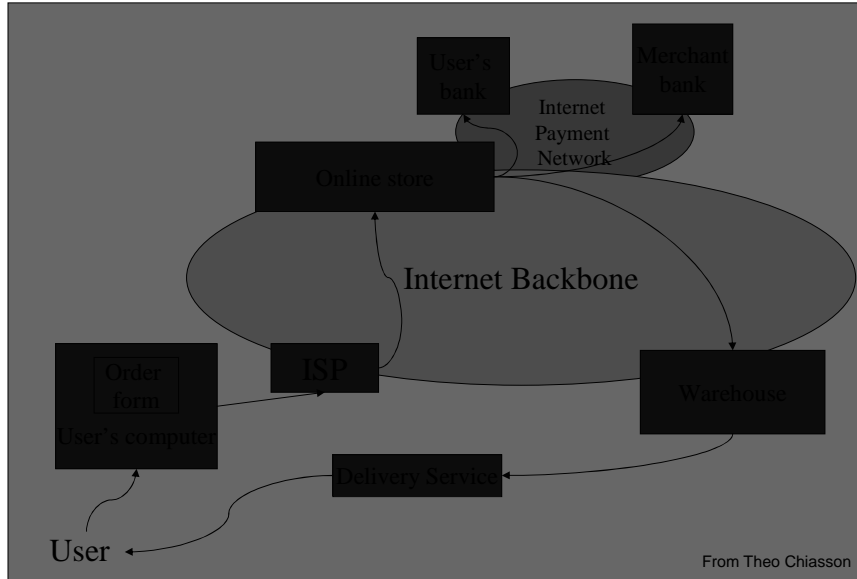
E-Commerce II (2001-2005)

Reassessment of e-commerce companies

TABLE 1.5 E-COMMERCE I AND E-COMMERCE II COMPARED

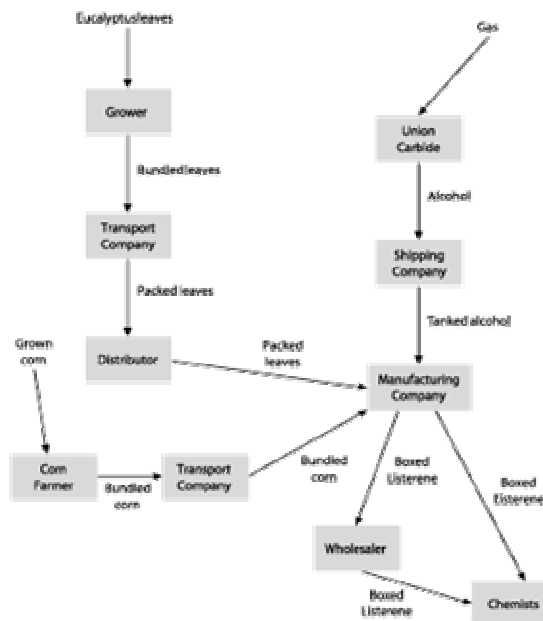
E-COMMERCE I	E-COMMERCE II
Technology-driven	Business-driven
Revenue growth emphasis	Earnings and profits emphasis
Venture capital financing	Traditional financing
Ungoverned	Stronger regulation and governance
Entrepreneurial	Large traditional firms
Disintermediation	Strengthening intermediaries
Perfect markets	Imperfect markets, brands, and network effects
Pure online strategies	Mixed "clicks and bricks" strategies
First mover advantages	Strategic follower strength

A typical online commerce transaction



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Supply chain management



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Major Types of E-Commerce

	TYPE OF E-COMMERCE	EXAMPLE
Market relationships	B2C—Business to Consumer	Amazon.com is a general merchandiser that sells consumer products to retail consumers.
	B2B—Business to Business	eSteel.com is a steel industry exchange that creates an electronic market for steel producers and users.
	C2C—Consumer to Consumer	eBay.com creates a marketplace where consumers can auction or sell goods directly to other consumers.
Technology-based	P2P—Peer to Peer	Gnutella is a software application that permits consumers to share music with one another directly, without the intervention of a market maker as in C2C e-commerce.
	M-commerce—Mobile commerce	Wireless mobile devices such as PDAs (personal digital assistants) or cell phones can be used to conduct commercial transactions.

K. Laudon and C. Traves, E-commerce, Addison Wesley 2001

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Type of Applications

- Home shopping (banking, etc)
- Electronic service delivery (e.g. GOL)
- Information repository and exchange
- Procurement, B2B, Electronic Market places, Enterprise applications
- Electronic democracy, Voting, Justice, Policing
- etc

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Can you think of more?

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E-Commerce & Technology

- Technology should not be at the center of your business case
- However ...

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This course

- This is a graduate-level course
- Big picture (which is important), what is e-commerce about, what are the subjects that you might want to study in more detail
- (Lectures), discussions, assignments, feedback test
- Talk to specialists, learn their culture
- How to succeed: Ask questions, be active, have fun!!!

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Focus of this course

- Technology issues
- Concepts & Tools (overview)
- Networking (specifically the internet)
- Distributed Systems
- Web programming
- Data warehousing & mining
- Enabling technology (e.g. cryptography)
- Standards & protocols

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CS and E-Commerce

- Level of technology discussions
(Do I have to program?)
- Interfacing technology with business