

Draft Syllabus
Economics of Electronic Commerce
PUBP 775, SYST 695

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Objectives: 1) To understand the economic principles that are shaping the evolution of electronic commerce; 2) To understand and evaluate managerial decisions in electronic commerce in light of economic principles. Business to business transactions will be emphasized, although business to consumer transactions will not be ignored.

Pedagogy: Learning will take place through reading, lecturing, and discussion. Some of the discussion will take place on-line. In order to engage in on-line discussion, you will need a web browser (preferably Internet Explorer from Microsoft) and a reliable Internet connection.

Required Texts: Stan Liebowitz, *Re-Thinking the Network Economy* (AMACOMM, 20010; Brad Cox, *Superdistribution* (New York: Addison-Wesley, 1996); specified case studies from the Harvard Business School; readings from economists and historians as enumerated below.

Recommended Texts: Carl Shapiro and Hal Varian, *Information Rules* (Boston: Harvard Business School Press, 2000).

Schedule*:

#	Date	Subject	Case	Readings
1	1/22	Overview of Economics		Robbins et al
2	1/29	Revolutions in Commerce		McCraw et al
3	2/5	E-Commerce & Econ Growth		Gordon et al
4	2/12	Competition		Schumpeter et al
5	2/19	Property (Intellectual & Other)		
6	2/26	B2B Business Models	Vertical Net	
7	3/5	Mid-term Examination		
8	3/12	Spring Break		Case #
9	3/19	Enterprise Resource Planning	Cisco Systems Architecture	9-301-099
10	3/26	Disintermediation	Dell Online	9-598-116
11	4/2	Economics of the Supply Chain	Ford Motor Company	9-699-198
12	4/9	Marketing	BizRate.Com	9-501-024
13	4/16	Finance	Ameritrade Holding Corporation	9-200-057
14	4/23	Entrepreneurial Ventures	Pandesic	9-399-129
15	4/30	Financial Bubbles	The Dot-Com Crash of 2000	9-101-110
16	5/7	Final Examination		

*This schedule is subject to revision.

Week 1. Overview of Economics.

Readings: Lionel Robbins, *The Nature and Significance of Economic Science*, Ch. 1, 2

Carl Menger, *Principles of Economics*, Chs. 1, 2.

Friedrich Hayek, "The Use of Knowledge in Society," *Individualism and Economic Order* (Chicago: University of Chicago Press, 1948)

Brad Cox, *Superdistribution* (New York: Addison-Wesley Publishing, 1996), Chapter 2, "The Structure of Production."

Questions: 1. Is a computer an economic good? Why or why not? Is Netscape an economic good? Why or why not?

2. Draw a diagram depicting the structure of production for a laptop computer. (You may wish to use either Compaq or Dell for your diagram. Please reference any sources that you use in your research.) Trace back at least two components to their source as raw materials. In your diagram, draw a demarcation line separating the manufacture of the computer from its distribution to customers.

3. Draw a diagram depicting the structure of production of a web browser. (You may wish to use either Netscape or Internet Explorer for your diagram. Please reference any sources that you use in your research.) Trace back any appropriate components to their source as original materials. In your diagram, draw a demarcation line separating the "manufacture" of a browser from its distribution to customers.

Week 2. Brief History of Commerce: Three Revolutions.

Readings. T.S. Ashton, *The Industrial Revolution* ()

Louis Hacker, *American Capitalism* (Princeton: D. Van Nostrand, 1957), pp. 9-95.

Alfred Chandler, *The Visible Hand* (Cambridge: Harvard University Press, 1977), "Introduction," pp. 1-12, "The Coming of the Modern Industrial Corporation," pp. 285-314.

Thomas K. McCraw, *Creating Modern Capitalism* (Cambridge: Harvard University Press, "Introduction," pp. 1-16.

Brad Cox, *Superdistribution*, Ch. 1, "Information Revolution," pp. 1-19.

Questions: 1. Chart the rate of growth of Europe up to 1500 or 1600. Chart the rate of growth of the U.S. and England from 1800 to 1900, from 1900 to 1950. Did you find the information needed to construct your chart on the internet? If so, where? If not, where did you find it?

2. Chart the rate of growth of the U.S., England, France and Japan from 1950 to 1990, from 1990 to 2000. Did you find the information needed to construct your chart on the internet? If so, where? If not, where did you find it?

Week 3. Electronic Commerce.

Readings: U.S. Department of Commerce *Digital Economy 2000* (Digital: June 2001), Ch I, "Information Technology and the New Economy; Ch II, "Electronic Commerce: The Leading Edge of the New Economy," pp. 1-22.
<http://www.esa.doc.gov/de2000.pdf>

Coppel, Jonathan, *E-Commerce: Impacts and Policy Challenges*, OECD Economics Department Working Paper NO. 252, June 2000
http://www.oecd.org/publications/Pol_brief/9701_Pol.htm

Coffman, K. G. and A. M. Odlyzko, "Internet growth: Is there a "Moore's Law" for data traffic?", AT&T Labs - Research, July 11, 2000.
<http://www.research.att.com/~amo/doc/internet.moore.pdf>

Gordon, Robert, "Does the New Economy Measure up to the Great Inventions of the Past," *Journal of Economic Perspectives* (Fall 2000): pp. 49-75.

Bambury, Paul, "A Taxonomy of Internet Commerce," *First Monday*, digital 1998¹
http://www.firstmonday.dk/issues/issue3_10/bambury/index.html

Carl Shapiro and Hal Varian, *Information Rules* (Boston: Harvard Business School Press, 1999), Ch.1, "The Information Economy," pp. 1-18.

Brad Cox, *Superdistribution*, Ch 3, "Software Crisis," pp. 45-73.

Questions: 1. What is electronic commerce? The information economy? The digital economy? The new economy? Give a definition and examples of each term. Briefly explain similarities and differences between these terms.

2. Compare the effects of the Internet to the effects of steam power. To the effects of electricity.

3. Paul Bambury writes:

The native Internet culture has adapted to this imaginary Internet space, which is by definition abundant. Information - the predominant property or commodity - is abundant and largely free. So the native Internet economy is based not on scarcity but on abundance, this is the primary difference between the Internet economy and the real-world. In many ways the native Internet economy is similar to that of hunters and gatherers who inhabit tropical rain forests. Resources are abundant, giving and sharing are culturally valued, status is determined by prowess, contribution and reputation

¹ Has a lot of economic mistakes. Do not put in required reading, but include in reading list. Shows how B to B commerce fits in the world of internet commerce.

rather than possession of property and territory. The interface between the real-world economy and the native Internet economy is essentially a clash of cultures.

Explain why you agree or disagree with Bambury's statement.

Week 4. Competition.

Joseph A. Schumpeter, "The Process of Creative Destruction," in *Capitalism, Socialism, and Democracy*, Chapter VII (New York: Harper and Row, 1947)

Friedrich A. Hayek, "The Meaning of Competition," in *Individualism and Economic Order*, Chapter 5 (Chicago: University of Chicago Press, 1948)

George Stigler, "Perfect Competition, Historically Contemplated," *Journal of Political Economy*, February 1957, pp. 1-17.

"Is the dot.com bubble bursting?" BBC News Talking Point
http://newsvote.bbc.co.uk/hi/english/talking_point/newsid_702000/702507.stm

"New Economy or Old Economy, a Shakeout is a Shakeout," March 8, 2001
http://www.ebizchronicle.com/wharton01/29_shakeout.htm

Questions: 1. Can you think of goods or services in electronic commerce that correspond to the perfectly competitive model? Can you think of goods or services in electronic commerce that correspond to Schumpeter's "gale of creative destruction?" Which kind of competition predominates in electronic commerce?

2. Interpret the dot.com bubble and its burst in terms of Hayek's discovery procedure.

Week 5. Property Rights.

Ludwig von Mises, "Ownership," in *Socialism* Chapter 1 (London: Jonathan Cape, 1936)

Harold Demsetz, "The evolution of property rights,"

Armen Alchain

Week 6. B2B Business Models

VerticalNet

VerticalNet is a leading operator of online trading communities. The company specializes in business to business transactions and operates over fifty websites, from Water Online to Chemical Online. The company's websites offer news and buyers' guides, and also permit exchanges. VerticalNet is now trying to expand into electronic commerce. Mark Walsh, the chief executive officer, has to decide how far he can expand the franchise without undermining the firm's current business.

Questions: 1. Evaluate the specific criteria that VerticalNet uses to select vertical markets to enter. Are these criteria appropriate? Are they too restrictive? Are they too loose? Can you think of better criteria?

2. Who will use VerticalNet's services?
3. Should VerticalNet move from content and community to electronic commerce?
4. What are the advantages and disadvantages of VerticalNet's portfolio model?
5. Do you agree with Mark Walsh when he says that, in order to succeed in B2B markets, managers need to be "inside out" rather than "outside in?"

Week 7. Midterm Examination

Week 8. Spring Break

Week 9. Enterprise Resource Planning

Cisco Systems Architecture: ERP and Web Enabled IT 9-301-099

Founded by two Stanford computer scientists in 1984 and brought public in 1990, Cisco Systems now dominates the "Internetworking" market. The firm is at the forefront of three proprietary networks—telephone networks for voice transmission, local and wide area networks for data, and broadcast networks for video. The internet and its open standards are creating a new competitive battleground for entrenched telecommunications firms such as AT&T, Verizon, British Telecom and Deutsche Telecom.

1. Evaluate the analysis that recommended ERP to Cisco's Board.
2. How was Cisco able to implement enterprise resource planning in just nine months?
3. What were the anticipated benefits and costs of connecting with the customer through I-Net? What organizational characteristics were necessary for I-Net?
4. What benefits did Cisco achieve from I-Net?

Week 10. Disintermediation

Dell Online 9-598-118

In July 1996, Dell Computers began to conduct commerce over the Internet. Michael Dell set a goal of achieving 50% of the company's revenues from the Internet channel within a few years. How to achieve this goal, indeed, evaluating the performance of the Internet channel, represents a significant challenge for the firm.

1. How would you judge Dell's online success?
2. What advantages does Dell derive from its online channel? Are the advantages significant? Are they sustainable? Which of Dell's competitors should it worry about? Why?
3. How should Dell go about conducting 50% of its business over the Internet by 2000?

Week 11. Economics of the Supply Chain

Ford Motor Company: Supply Chain Strategy 9-699-198

Late in 1998, Teri Takai, director of supply chain systems, has been asked how Ford should use the Internet to improve its interactions with suppliers. What seemed like a simple, straightforward question turned out to be broad and surprisingly difficult. Takai's staff is divided on what the recommendation should be. Some are advocating a Dell model, while others advocate a more cautious approach.

1. Compare buying a computer and buying a car.
2. What advantages does Dell derive from virtual integration? How important are these advantages in the automobile business?
3. What challenges does Ford face that are not also faced by Dell?
4. What recommendations should Ms. Takai make to senior executives?

Week 12. Marketing.

BizRate.com 9-501-024

BizRate collects consumer data at the point that they purchase goods or services from web vendors. The company then makes its data available to consumers as BizRate star ratings, which it makes available on its website. The company earns revenue by selling detailed customer feedback analysis to vendors. In October 1999 Bizrate introduced several e-commerce initiatives, which led to a surge in its website traffic and a spike in the number of vendors signing up with Bizrate. At this point, the company debated

whether to abandon its market research (a B2B activity) for electronic commerce (a B2C activity).

1. How did BizRate originally benefit the consumer? The vendor?
2. How did BizRate market its value to consumers and vendors? Why was the firm successful at exploiting the value it created?
3. How did Red October change BizRate's value to the retail shopper? To the vendor? Does BizRate's new business model conflict with its old?
4. Is BizRate "anti-Amazon," as Chuck Davis claims? What does he mean when he says that BizRate is anti-Amazon?
5. Should BizRate drop its market research as a line of business?

Week 13. Finance

Ameritrade Holding Corporation 9-200-057

As Ameritrade, a discount brokerage firm, prepares for an equity offering, many of its senior managers are selling their stock in the company. The Chief Executive Officer is concerned that potential investors will interpret the insider sales as evidence that the company is overvalued. Such an interpretation might interfere with the equity offering. Moreover, the CEO is concerned that sales by top managers will undermine a carefully thought-out compensation system designed to align the interests of managers with those of shareholders.

1. Why are Ameritrade executives selling their stock? How will investors and potential investors interpret the sales?
2. Will the executives' sale of stock undermine the alignment between the company and its shareholders?
3. Should the CEO take steps to reduce such trading? If so, which steps would you recommend?

Week 14. Entrepreneurial Ventures

Pandescic 9-399-129

Week 15. Financial Bubbles

The Dot-Com Crash of 2000 9-101-110

Week 16. Final Examination