

The Wharton School
UNIVERSITY OF PENNSYLVANIA
Department of Operations and Information Management

Syllabus for OPIM 666

**Information:
Industry Structure and
Competitive Strategy**

Professor Eric K. Clemons
clemons@wharton.upenn.edu
JMHH 572 // Ext. 8-7747

Fall 2003 — Quarter 1
Class Sessions: M, W 12:00-1:30 / M, W 3:00 - 4:30
Office Hours: M 10:30-11:30 / M and W 2:00-2:45

The nearly instantaneous transmission and processing of information is changing the structure of entire industries, and is altering the profitable opportunities available to many firms. The ability to target profitable market segments and to identify individual customers is reducing the value of scale-based operations and the strategic advantage of large firms with existing market share. The ability to monitor the performance of units abroad, without regard to distance or time zones, is increasing the value of cooperative partnerships. This is leading to greater reliance upon outsourcing, benefiting many service industries and once again reducing the advantage of many large firms. At the same time, the impact of information technology on the transparency and efficiency of securities markets is destroying the profits of entire segments of financial services. All aspects of the firm — production, service, sales, marketing, strategy — will be affected. Clearly, some firms will win and others will lose; nearly all will have to change. And yet, fundamental laws of economics have not been repealed. How can previous economic theory, and previous experience with rapid technological change, provide insights for the development of strategy in an increasingly digital age?

This course draws upon the most recent experience in the impact of information technology upon diverse industries, ranging from securities trading to consumer packaged goods retailing. It integrates that experience with relevant theory to develop a theory of competitive strategy for electronic commerce, and for information-based strategies more generally. It is not a tools and techniques course.

Students completing the course will have a sound theoretic framework for pursuing further studies in the area of information-based strategies, including eCommerce. They will understand how information technology affects the basic strategic options available, and will understand how firms and industries are likely to be affected. They will understand the often poorly structured process of evaluating potential systems innovations. They will be able to participate in strategic planning and systems planning because they will understand the relationships among them. The course is particularly recommended for students in strategic management and marketing, and for those interested in careers in consulting or on Wall Street. No background in technology is required. Students completing this course will have mastered a basic understanding of the competitive implications of information technology and the fundamentals of the use of information technology in business. It is recommended that students desiring a more in-depth treatment, including experience with implementing the theories presented here, take the closely related follow-on course in the ISE strategy sequence, OPIM 667.

Required Text

There will be a bulk pack of readings available from Wharton Reprographics.

Course Requirements

There will be several in-class case discussions in the course. Three of the discussion sessions (Capital One Financial, Strategies for eCommerce, Stasis Bank) will also require written case analyses, as specified in the syllabus below. Two of these will be individual exercises while one will be a group assignment. Additionally, there will be four shorter written exercises, also indicated in the syllabus below. (Of these four mini-cases, only your highest three grades will be counted. You can think of the fourth one as a makeup or safety net, and as optional unless you do poorly on one of the first three.) There will be a **timed 2 hour** take-home final exam during the normal examination period. Students will be evaluated on the basis of case performance and on their final examinations.

Student Bios

Please send a word file containing a short biographical sketch, not a full resume, via email, to clemons@wharton.upenn.edu. Please title your attached file **666_I_NAME.doc**, where **I** is your first initial, and **NAME** is your last name; do not name the file resume.doc, or 666.bio, or I will never be able to locate it among the large number of files in my attachments folder. Please answer the following questions:

- your undergraduate field of study and your university
- your expected major at Wharton
- your experiences relevant to the topics of this course
- your reasons for taking this course and what you hope to get out of it

Forming Study Groups

The exercise eCommerce strategies, due on **8 October** will be a group assignment. Please form groups of size three or four and submit a list of group members to Gordon Gao (gaog@wharton.upenn.edu). The list should include the names, telephone numbers, and email addresses of all group members and a designated group member as suggested contact person; please send the list as text in your email message rather than as an attachment to it. Please note that it will be useful, and probably essential, for the group to meet at least once between the classes on 17 September and 8 October. Please note also that it will be essential to get your group list to Gordon by **15 September** to assure that your group receives your specific scenario assignments for the exercise due on **8 October**. Without your group list it will not be possible for Gordon to get you the information you will need to begin work on the assignment.

Course Outline and Readings

- Sept 3 W **Course Orientation and Introduction to Information Economics and Information Strategy**
Introduction to information in business
Read: Cohen and Gooch, Catastrophic Failure
Read: Shapiro and Varian, Information Rules, Chapter 1
- 8 M **Channel Conflict in Information Goods**
How has technology altered the balance of power among channel participants? How can incentives be designed to facilitate transition to new channel structures? How will this play out in the market for pure information goods and services, such as music or news reporting?
Read: Clemons, Gu, and Lang, Newly Vulnerable Markets in an Age of Pure Information Products
- 10 W **Systems and Competitive Advantage — Business-to-Business Intermediation**
Role of systems to exploit critical resources in achieving and sustaining competitive advantage
* BZW Case Discussion
- 15 M **Systems and Competitive Advantage — Market Microsegmentation and Differential Pricing**
Gaining competitive advantage through systems for market microsegmentation and differential pricing; attempting to sustain advantage
* Capital One Case Discussion and Written Analysis
- 17 W **Electronic Consumer Interaction and Planning Under Uncertainty**
Planning under uncertainty and the use of *scenario analysis*. Scenarios for customer-driven electronic commerce.
Read: Clemons and Row, Alternative Futures for Electronic Consumer Interaction: Market Structure and Competitive Strategies
δ **Written comments on the sustainable advantage of successful new entrants after *hustle at a discontinuity***
- 22 M **Systems and Manufacturing — Changing Boundary of the Firm and the Changing Nature of Business-to-Business Markets**
Information Systems and the structure of manufacturing operations — the changing balance between internal production and outside procurement
Read: Clemons, IT and the Changing Boundary of the Firm
Read: Clemons, Reddi, and Row, Move to the Middle (optional)
Read: Bakos and Brynjolfsson, Number of Suppliers (optional)

- 24 W **Focus, Targeting, and Hyperdifferentiation**
Role of information in determining what to offer consumers and in communicating offerings to consumers, and in Role of information in destroying profits in price-based competition and in increasing profits from hyperdifferentiated delight-based offerings.
Read: Clemons, Victory Beer
δ **Written comments on hyperdifferentiation strategies**
- 29 M **Information Technology and Outsourcing — Understanding and Managing Risks**
Understanding, designing, and managing the risk profile associated with outsourcing information systems.
Read: Clemons, Balancing Risks and Rewards of Info Services Outsourcing
* **Written Analysis — Stasis Bank Case**
- Oct 1 W **Information and HyperDifferentiation**
The role of increased information in the changing balance between cost-based strategies and value-based strategies, the changing advantage of incumbents, and the changing nature of competition.
Read: Clemons, Spitler, Gu, Markopolous, Information, HyperDifferentiation, and Delight: The Value of Being Different
- Oct 6 M **Making the Technology Investment Decision**
Assessing strategic options, valuing risky and uncertain strategies, combining scenario analysis with options valuation
Read: Clemons, Information Technology Investments: Dealing Effectively with Strategic Uncertainty Through Scenario Analysis
Read: Clemons, Evaluation of Strategic Investments in Information Technology
δ **Written comments on investment strategies**
- 8 W **eCommerce and Uncertainty — Alternative Strategies**
Information technology and changing role of information, and implications for the balance of power in the distribution channel. Use of scenario analysis for risky and uncertain futures
Read: Review readings for 17 September
* **Written Analysis — eCommerce Strategies**
- 13 M **No Class — Fall Break**
- 15 W **Strategic Sourcing**
What Next for Strategic Sourcing in India? Using an understanding of risks and rewards to predict the future of the outsourcing industry.
Read: Clemons, Reddi, and Asif: Understanding Sourcing as a Strategic Business: The Risks and Rewards of Strategic Sourcing
δ **Written comments on sourcing opportunities**
- 20 M **Course Summary and Overview**
Read: Clemons, IT and Corporate Strategy (optional)
Clemons, PNB MAC (optional)
- 21 T **Optional Evening Review Session**
- 22 W **Take-home Final Exam Distributed**

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Suggestions for Preparing Written Case Analyses

The following simple guidelines will help you in your written case assignments for this course:

- You are, of course, not only permitted but **encouraged to meet to discuss your case assignments** before class, but all written exercises must be done individually.
- The most important thing to remember about the exercises is that it is necessary for you to **answer the assigned questions**. In this course we are not asking you to perform a general competitive analysis, tell a captivating story, summarize the case reading, or describe the company. We are asking you to perform specific analyses, based on specific principles from economics and competitive strategy. Please be certain that your answers are responsive to the assigned questions. While it is not essential to number your answers, this is generally helpful to separate your answers to each of the numbered questions. It helps focus the graders' attention on specific questions; more importantly, it focuses your attention on specific questions. If what you are writing does not respond directly to a specific question, it probably does not need to be written.
- Next, it is critical to understand that the graders are not looking for specific key words, but they are looking for **careful strategic analyses and for specific supporting details**. On many questions, it is possible to reach dramatically different but equally valid conclusions about the case, depending on the assumptions you make or the data you use. Please be specific about your assumptions and your supporting data and clear about your analyses.
- **There is no maximum length acceptable and no minimum length required. Most cases will be three or four pages, double spaced**, although group assignments may be longer. However, longer answers are not generally better or more complete. It is preferable to have a well articulated response that presents a single well considered viewpoint, well defended by specific examples; this is preferable to a lengthy unstructured summary of various points, no matter how interesting each point may be separately. Longer papers frequently mean that you have not yet decided upon your answers and have instead "written around the question" and provided multiple and contradictory responses rather than articulating a single argument.

Your answers to written case assignments will constitute one half of your grade for this course, so written exercises should be done carefully. Since cases will be discussed in class, written assignments done after class would enjoy a considerable advantage over those done before class discussion. Consequently, written analyses cannot be accepted late unless prior arrangements have been made.

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Questions for Discussion

Course Introduction and Orientation

Session 1 — 3 September 2003

1. Why is there an MBA level course on information and information technology? Other technologies are taught in the engineering school. Are there ways in which managerial responsibility for information technology and innovation in I.T. differ from managerial responsibility for other highly risky technology ventures? Why does this course not actually address computers, database management, or other aspects of technology?
2. What are the principal impacts of information technology on business? Can the accumulation of efficiency improvements and other operational impacts lead to fundamental strategic change? Do other impacts of information technology and information access lead to effects separate from efficiency enhancements? Can these be more important than improvements in the efficiency of the firm's operations? Can they lead to fundamental strategic change?
3. How can information technology affect the strategies available to a firm? How can it affect the balance of power among buyers and suppliers, or among manufacturers and consumers? How can this lead to fundamental change in the structure of entire industries?
4. Clearly, information technology has spawned digital businesses, such as software vendors for PCs; portals, net browsers and search engines; and the like. Has information technology fundamentally altered the basis of competition in more traditional industries, providing more traditional goods and services?
5. Please submit a short bio in Word or WordPerfect to **clemons@wharton**. Please describe your undergraduate background (school and major) your principal industry experience (industry, firm, position, and responsibilities), your background in strategy, marketing, or information systems, and your principal interest in this course.
6. What are the differences among comparative advantage, competitive advantage, and sustainable competitive advantage? What is the role of resource differences in sustaining competitive advantage?
7. Why do we argue in this course that hustle is not a strategy nor can it substitute for a strategy, although hustle can certainly be beneficial in the support of and implementation of a strategy?

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Questions for Case Discussion Not for Written Analysis

Channel Conflict in Information Goods Session 2 — 8 September 2003

1. The most important physical resources owned by record companies were studios and factories, which gave them the ability to produce music (record and mix) and then to mass produce physical copies for distribution. What has technology done to the value of resources owned by record companies? Why does this suggest that there may a reduction in their power and profitability?
2. What is the theory of newly vulnerable markets?
3. Can the theory of newly vulnerable markets be applied in the analysis of record companies? That is, (1) have changes made it easier to enter as a producer of recorded music? (2) are there differences in profitability across bands, which might make it more attractive for alternative music producers to take on just these profitable groups? (3) are there obstacles that would prevent established music labels from replicating the strategies of these new entrants?
4. Does piracy represent a problem for record companies? Does it represent a problem for individual groups / performers?

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Questions for Case Discussion Not for Written Analysis

Business to Business eIntermediation — BZW TRADE¹

Session 3 — 10 September 2003

1. Why was the decision to develop TRADE initially difficult for the firm to justify in financial terms?
2. What economic benefits **did BZW expect** to receive from the TRADE system **when it was first developed**? Would these benefits alone have constituted competitive advantage, at least in the short term, **as we have defined it** in this course?
3. Given that competitors were tempted to develop comparable systems in an attempt to gain comparable economic benefits, would you expect BZW's competitive benefits to be sustainable **under the conditions that existed when the system was launched**? If you believe these benefits were indeed sustainable, what explanations can you offer; that is, did BZW enjoy any unique resources that would have been difficult for competitors to obtain and why do you believe that they were difficult to duplicate? If you do **not** believe that benefits are sustainable, please be explicit about who in the City was best positioned to attack, and describe the resources that make success of this attack appear plausible.
4. How might the changes described in Part B of the case affect the competitive advantage of TRADE?
5. What else could destroy the profitability of systems like TRADE, other than the actions of other market making firms? Be specific about what these threats are and why they do indeed represent threats.
6. Innovators in other industries frequently expect to achieve competitive advantage from their innovations; frequently they are unable to do so. Describe other innovations where competitive advantage was sustainable. Be explicit about the resources — other than patent protection or trade barriers — that led to sustainability.

¹ There are no class notes in the bulk pack or webcafe for case discussion sessions.

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Questions for Case Discussion And Written Analysis

Market Segmentation and Differential Pricing — Capital One Financial²

Session 4 — 15 September 2003

- (2 pts.) 1. What is the difference between a customer **loyalty** strategy and a customer **profitability** strategy? Why were so many service sector strategies in the 1980s and 1990s based on loyalty and customer retention?
- (3 pts.) 2. What is the **customer profitability gradient** and why is it so important to modern profitability-based strategies?
- (4 pts.) 3. [Consider the role of **death spiral**, in which competitors attack the most profitable customer segments, forcing average costs and average prices to rise, placing additional customers at risk of pick-off.] What defensive measures are available to respond to opportunistic pickoff based on the CPG?
- (6 pts.) 4. [Consider Capital One (actually, at the time, Signet Bank) and its initial attack on AT&T Universal, CitiBank, and Chase. Capital One was the **high cost producer** (the others enjoyed significant economies of scale) and the **low price provider** of credit card services, offering many customers savings of 400 or 500 basis points, or even more.] After the most expensive period of test and learn was complete, was Capital One's strategy profitable when they were charging less than competitors? If so, how is this possible?
- (5 pts.) 5. [It seems pretty clear that the defender should **always** enjoy an information advantage, relative to a competitor attempting to capture its most profitable customers. That is, the attacker is making **educated guesses** about who **might** profitable and who might not be; the defender it would appear always has more **accurate information** on who **has been** profitable and who has not been.] Why do some attackers encounter situations where defenders appear unable to duplicate the attackers' strategies and unable to defend themselves effectively? What barriers are present in credit cards?
- (5 pts.) 6. Will Capital One be able to sustain its advantage in credit card banking? What options are available to it as it seeks to develop new application areas for its information-based strategies? What other opportunities might it locate so that it can replicate its credit card strategy?

² There are no class notes in the bulk pack or webcase for case discussion sessions.

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Questions for Discussion Not for Written Analysis

eCommerce and Planning Under Uncertainty

Session 5 — 17 September 2003

1. What is the role of subjective, qualitative uncertainty-based planning such as scenario analysis? When is it appropriate to use scenario analysis, and question-driven planning methods in place of more traditional data-driven planning? Why is it especially appropriate for the examination of issues in eCommerce? Why are subjective planning methods like scenario analysis not more widely used?
2. But we already know how grocery shopping played out on the net and we already know what happened to travel agents. Don't we already know which of the four eCom scenarios is going to succeed?
3. Does it appear reasonable to focus on modes of customer interaction when examining strategic uncertainties in eCommerce and electronic customer interaction?
4. What is the meaning of the two axes — **scope** of customer interaction and **duration** of customer interaction — in the scenarios presented? Does this yield four separate and distinct scenarios? Are they all possible? Are they significantly different? Do they require different strategies and different investments to support those strategies?

Questions on individual scenarios on eCommerce and planning under uncertainty, for written analysis and presentation, will be distributed individually to each group. Discussion and written analyses will be due in session 9 on 12 February.

Question for Written Analysis

- (10 pts.) 1. The lessons of BZW seem to imply that resources are essential to sustaining any initial competitive advantage. Moreover, we have already seen that Capital One had no special resource advantage as an attacker, and we have already rejected hustle as a strategy. (1) Is there any reason why Capital One might now be able to enjoy sustainable competitive advantage? (2) If so, what resources does Capital One now enjoy and how did it acquire them? (3) Can this generalize into some form of advantage from hustle-at-a-discontinuity? (4) Can you relate this to newly vulnerable markets?

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Questions for Discussion Not for Written Analysis

Systems and Manufacturing: IT and the Changing Boundary of the Firm

Session 6 — 22 September 2003

1. The principal risks associated with inter-firm cooperation, and with investments in inter-firm coordination, have been **shirking**, **poaching**, and **opportunistic renegotiation**. How might information technology reduce the possibility for shirking? How might use of I.T. in place of other investments in inter-firm coordination reduce the risk of opportunistic renegotiation? What are the implications for the firm's decision to produce internally or procure outside the boundary of the firm? That is, how might the degree of outsourcing be altered?
2. What effects might there be on the duration of contracts and the number of competing suppliers used? That is, how might the **nature** of outsourcing be altered?
3. What are the implications for productivity?
4. What are the stresses that this might induce in existing corporations? What problems might organizations have in achieving the new optimal balance between production and procurement?
5. What are the implications of these shifts — in the balance between spot market purchases and inter-firm coordination, and in the balance between internal production and external procurement — for business school curriculum design?
6. How has the move to eCommerce, intellectual assets, and cooperation for rapid market entry altered the role of poaching? Why do we consider poaching such a significant risk in eCommerce?

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Questions for Discussion And for Written Analysis

Focus, Targeting, and HyperDifferentiation

Victory Beer^{3 4}

Session 7 — 24 September 2003

- (2 pts) 1. What characteristics of **consumers' emotional response or preferences** for different products within a category may be necessary for the development of hyperdifferentiation strategies? (This completely ignores, for now, any aspects of the cost of producing or of distributing these products, but simply focuses on consumers' response to alternative offerings that are in the same category and in some sense compete with each other.)
- (2 pts) 2. What **distribution of consumers with different preferences** may be necessary for hyperdifferentiation to represent a viable strategy? That is, is it sufficient to know that some consumers strongly prefer Belgian-style wheat beer (Golden Monkey), others strongly prefer spicy floral hoppy malt beers (Hop Devil), and others hate them both and drink Budweiser? Or do we need to know more than the existence of strong preferences among consumers before we can assess the viability of differentiation based upon those preferences?
- (2 pts) 3. What do we need to know about the **cost of targeting small groups** within a specific category of products and of producing and distributed highly differentiated products to different consumer niches? Under what conditions might we say this is elitist and under what conditions is it simply good business?
- (2 pts) 4. Does hyperdifferentiation provide **first order sustainable competitive advantage**? Does it provide **second order competitive advantage**? Under what conditions, or for what product types? When does hyperdifferentiation become merely a **strategic necessity**?
- (2 pts) 5. It is sometimes argued that hyperdifferentiation strategies do not work for large scale operations, or that they are elitist. How does this relate to the argument that could be made, claiming that differential pricing strategies do not scale, or that they exploit the poor?

³ Please note that this is a mini-case assignment and is worth only 10 points; it is not a full assignment worth 25 points.

⁴ Unlike other class discussions of cases, there will be overheads posted on the course website.

**OPIM 666 — Information:
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Information Technology and Outsourcing:
Stasis Bank Case⁵**

Session 8 — 29 September 2003

Questions for Case Discussion Only

1. What advantages can a third-party provider of data processing services offer to its customers? What advantages can it offer even to an industry giant? What is the source of these advantages?
2. Ultimately, Bank officers discovered that their software vendor had misrepresented both the state of its systems (unfinished), and its banking expertise (rudimentary). What could the Bank have done to protect itself during the contracting process?

**Questions for Case Discussion
And for Written Analysis**

- (7 pts) 3. [The vendor knew that this is a large software development project.] What is the **principal form of risk associated with the development effort from the perspective of the software vendor**? Why would experienced vendor executives have been likely to foresee the problems that they encountered? Why might some go forward anyway?
- (7 pts) 4. [Bank executives knew that they had neither the systems expertise nor the banking expertise to develop their own systems and chose to outsource both strategy and the systems to support it.] What is the **risk profile associated with this outsourcing relationship from the perspective of the Bank**? How did their decision to outsource systems in an area that they could not manage internally contribute to this risk profile?
- (6 pts) 5. [The environment of financial services firms in which Stasis operated **changed even more rapidly** than its software vendor anticipated, with new entrant banks providing superior services and targeting them at the Bank's most attractive accounts, and regulators rewriting the rules for all competitors.] What risk or risks might rapid change create for STASIS? What are the implications of these problems for its software vendor, under the terms of their contract as it was originally written?
- (5 pts) 6. [Moreover, the vendor continued to provide incomplete systems, late, and at high cost.] Much of the necessary functionality was being developed for the Bank rather than simply being customized and installed, imposing great delay and much higher prices as the project unfolded. Why was the Bank unable to terminate its contract and find another software vendor?

⁵ There are no class notes in the bulk pack or webcafe for case discussion sessions.

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Questions for Discussion Not for Written Analysis

Information and HyperDifferentiation

Session 9 —1 October 2003

1. Why does information technology increase a customer's willingness to pay for goods that actually meet his or her precise needs?
2. Why does a customer's willingness to pay, based on increased information endowment, change the value that a producer of goods or services might obtain from differentiation?
3. Why would increased information endowment decrease a customer's willingness to pay for goods that do not satisfy his or her requirements, or for goods that do not match his or her precise preferences?
4. How do these two changes alter the value of differentiation strategies, both requiring differentiation and punishing producers of commodity goods and services?
5. Is this new, or is this just a continuation of the basic value of differentiation?
6. What other factors, like demographics, might explain or accelerate these trends?
7. How does hyperdifferentiation reward incumbents? How is this different from differential pricing, which actually rewarded new entrants?

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**Questions for Discussion
Not for Written Analysis**

Making the Technology Investment Decision

Session 10 —6 October 2003

1. What is the role of subjective and qualitative analysis in making the decision to implement strategic information systems projects? Why can't all strategic systems investments be justified through use of precise and accurate verifiable data?
2. What problems might be encountered trying to justify systems investments without such hard data? How can this best be managed?
3. What is the role of *strategic necessity* in justifying systems investments? Can systems create value for your customers and still not lead to additional profits or even to additional revenues? What are the limitations of attempting to justify investments by appealing to "strategic necessity" for the firm?

**Questions for Discussion
And for Written Analysis**

(Students who miss class because of the Jewish holiday Yom Kippur are invited to submit this write-up at the following class session)

- (10 pts.) 4. How can scenario analysis be combined with options valuation to provide a mechanism for evaluating investment opportunities and suggesting timing of these investments or priorities among these investments? How can we develop a theory that will actually allow us to calculate a numerical value for an investment that enables a strategy to be pursued? There are so many variables — rates of customer adoption, timing of competitor actions — for which we have probability distributions but no single estimates? How might we use this theory to impose some priorities among investment opportunities?

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**Questions for Discussion
And for Written Analysis**

**eCommerce and Planning Under Uncertainty:
Development of Alternative Strategies⁶**

Session 11 — 8 October 2003

Group Preparation Questions
Each group will have been assigned specific scenarios to analyze in advance of
this class

⁶ There are no class notes in the bulk pack or webcafe for case discussion sessions.

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Questions for Case Discussion Not for Written Analysis

Strategic Sourcing: What Next for Strategic Sourcing in India?

Session 12 — 15 October 2003

1. Why is understanding the changing risk profile associated with sourcing important for other than academic reasons? What predictions might it enable or facilitate?
2. What has changed the risk reward tradeoffs when firms decide whether to do work internally, to outsource it domestically, or to outsource it to India? Why is there more outsourcing today than there was five or ten years ago?
3. Likewise, why is there more internal off-shore work being done; that is, why do firms have subsidiaries or operations centers in India when they did not do so five or ten years ago?
4. How would an economist like Adam Smith, analyzing the comparative advantage of nations, feel about cross border outsourcing? How would the governor of New Jersey or the mayor of San Jose California feel about it?
5. The extraordinary quality of life enjoyed by American blue color workers after World War II, relative to the entire rest of the world, was justified by their productivity, which rested upon capital equipment and training. What has happened to the training and education advantage? What has happened to the capital investment advantage? What are the long term implications for quality of life?

Questions for Discussion And for Written Analysis

- (10 pts.) 6. Why might it be possible to have off-shore radiology labs operate in the Philippines or India? Why might it be more difficult to have off-shore pediatrics diagnostic centers? Why might it be possible to have off-shore outsourcing centers compute the price complex portfolio trades (large numbers of buys and sells off stocks) based on size and risk associated with the position being assumed? What are other operations in the securities industry that might be too risky to outsource, regardless of potential savings? Suggest a possible good opportunity for outsourcing in India or Manila, and suggest a really bad business or operation to outsource, and explain each recommendation.

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Questions for Discussion
Not for Written Analysis

Course Summary and Conclusion

Session 13 — 20 October 2003

1. What is the role of possession of critical resources in achieving sustainable competitive advantage from systems innovations?
2. What is the role of inter-organizational power, especially that resulting from relationship-specific investments, in explaining a firm's retention of economic benefits from systems innovations?
3. When does it make sense to be an early implementor of an innovative application of I.T.? When does delay in implementation become more attractive? When is independent development appropriate and when might cooperation with other participants be more appropriate?
4. What new pricing strategies are enabled by information technology?

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Questions for Written Analysis

(Optional Fourth Case)

(These questions should be written only by students who have made special prior arrangements to do the optional assignment.)

Systems, Channel Power, and Cooperative Partnerships: Reengineering Money

24 October 2003

1. **Benefit Creation:** What benefits does Mondex create for **consumers**? How might these benefits be **quantified**? What would determine consumers' willingness to pay for Mondex? Similarly, what benefits might Mondex create for local **originators** in each market? What would determine their willingness to pay for Mondex?
2. What are the competitive implications of Mondex for **issuers**, and again what would determine their willingness to pay for participation?
3. **Pricing Strategies to Encourage Early Adoption:** How should Mondex charge local originators? How should originators charge for local franchises to participate as issuers and how should they charge issuers for funds transfer to maximize adoption and usage, and to maximize float and profitability? How should local franchised issuers set rates to consumers and merchants— for equipment and for funds transfer — to maximize early adoption? How should they set rates to maximize long term profitability?

[Again, it may be helpful to consider how bargaining power among different constituencies — originators, issuers, and users — may change over time and how this may affect the selection of pricing strategies.]