The Economics of E-commerce and Technology

Introduction
Outline for Lecture 1

- Purpose of course
- Logistics and teaching method
- Overview of course
- Examples of topics we’ll cover
Purpose of this Class
This Course

- This course will
  - Identify the major issues facing technology and online firms.
  - Analyze strategies these firms could take.
  - Look at examples of real-life firms and their evolution.

- We take a strategic approach
  - “Developing a broad formula for how a business is going to compete, what its goals should be, and what policies will be needed to carry out these goals” (Porter, Competitive Strategy)
What you will learn

- **Economic tools**
  - Portable ideas to enable you to analyze strategic problems
  - Think about key factors in an industry from first principles.

- **The key issues facing specific industries**
  - Through case studies you will learn about real-life firms
  - Learn about the fastest growing part of the economy

- **Broad skills**
  - How to think like an economist
  - How to argue and present clearly

- **Goal**: train you to think rigorously, using theory and data, about new strategic situations you will encounter.
How I use Strategy

- Auction design
  - Design procurement systems for governments and car firms.

- Pricing policies
  - Develop dynamic pricing algorithms for airlines.

- Reputation
  - Analyze how reputation provides incentives to investment.

- This is a broad based class
  - But choice of topics sometimes reflects my interests
Logistics and Teaching Method
Lectures and Office Hours

- **Lectures**
  - Tue, Thurs 9:30-10:45 (Lecture 1), 11:00-12:15 (Lecture 2)
  - Attendance is compulsory for case lectures.

- **Contacting me**
  - Please feel free to email me – sboard@econ.ucla.edu
  - Quick questions: right after class
  - Longer discussions: office hours MW 4-5pm, Bunche 9353.

- **Websites**
  - Organizational material (syllabus, slides, readings) can be found on www.econ.ucla.edu/sboard/teaching/tech_11/tech_11.html
  - Exercises and general interest articles are on the blog. http://econ106t.wordpress.com/
Lab Sections

- Lab classes
  - Consists of “big lab” and “small lab”

- Small lab
  - Used for case analysis and presentations
  - Attendance is compulsory (not traditional TA sections)

- Big lab
  - A couple will be used to talk about cases and projects.
  - Otherwise used for group meetings and talking to TAs

- The TAs are
  - Andraz Kavalar - akavalar@ucla.edu
  - Siwei Kwok – sikwok@ucla.edu
  - Richard Xie – ecxie@ucla.edu
Content

- Your are responsible for assigned readings and everything that comes up in class
  - Sometime, key points will be things I say
  - Often, they will be things your peers say

- Prerequisites
  - Econ 11, 41 and 101
  - Interest and enthusiasm.

- Remarks
  - We will use calculus
  - You are responsible for economic logic, not for the math
Course Evaluation

- The course is not about
  - Awarding grades
  - Screening students
  - Making you prove how hard you can work

- It is about
  - Becoming a better economist
  - Improving your presentation/rhetorical skills
  - Learning from your classmates
Course Evaluation

- **10% Participation**
  - Case discussions, class participation

- **30% Case write-ups**
  - Short answer questions prior to each big case.

- **30% Final paper**
  - Mini case study of firm you pick
  - Write in group of 3 (different from presentation group)

- **30% Final**
  - 3 hour case write up;
  - Closed book, but allowed 10 sides (5 pages) of notes

- **Lab grades: 100% participation**
  - Case discussions and presentations
Major Cases (in lecture)

- **Case 1:** Facebook (Tuesday 11\textsuperscript{th} Oct)
  - Guest TBA

- **Case 2:** Netflix (Tuesday 25\textsuperscript{th} Oct)
  - Barry Eggers, UCLA Economics BA, Stanford MBA, former executive at Cisco, founder of Lightspeed Venture Partners

- **Case 3:** Android (Tuesday 8\textsuperscript{th} Nov)
  - Terry Kramer, UCLA Economics BA, Harvard MBA, former CEO of Q Comm and Regional President of Vodafone.

- **Case 4:** eHarmony (Tuesday 22\textsuperscript{nd} Nov)
  - Louisa Wee, Stanford MBA, Director Special Projects at eHarmony, where she works closely with the CEO.
Major Cases

- Form teams of 3-4 people.
  - If you have a team, let me know; otherwise I will assign teams

- Prepare case before the class
  - Answer case questions in written form ("case write up")
  - Prepare 10-15 minute presentation opening the case
  - Practice presentation in lab section prior to case

- On the big day
  - Hand in case write up
  - I’ll randomly pick one team to open the case

- Hour of discussion lead by executive
  - Graded on quality, not quantity
  - Prepare to be challenged; come up with evidence for your answers
  - Expect cold calling
Minor Cases (in small lab sections)

- Three cases
  - Case A: Zappos (Friday 30\textsuperscript{th} Sept)
  - Case B: Online Restaurants (Friday 14\textsuperscript{th} Oct)
  - Case C: The Ladders (Friday 28\textsuperscript{th} Oct)
  - Case D: Yelp (Friday 2nd Dec)
Opening a Case

- Clear assessment of the key problem (40%)
  - Competitive positioning of current business
  - Threats to the current state (both micro and macro)
  - Understanding of existing and desired customers

- Identification of 2-3 strategic options with a recommendation for one. (40%)
  - What the business should do and the rationale
  - Analysis should draw on data in case or relevant benchmarks
  - A valuation for the strategic option and key sensitivities

- Implementation plan and risk mitigation strategy (20%)
  - Resources to execute plan and timeframe
  - What could go wrong?
Teaching Method

- **Theoretical approach**
  - Start from first principles
  - Informs what issues we should be concerned with
  - *But* predictions may be ambiguous, or theory may be wrong

- **An empirical approach**
  - Look at examples and find common elements of strategic decisions
  - Embrace richness of real life problems
  - *But* lose can lost the big picture, may mistake skill for luck, hard to identify key decisions,
  - Should you just imitate successful firms?
Feedback

- This is a new, evolving course.
- Your feedback and suggestions regarding the course are very welcome at any time (email, in person etc).
- I will solicit preliminary feedback from the class during week 4.
Materials

- Highly recommended
  - Shapiro and Varian, “Information Rules”.

- More formal background
  - McAfee, “Competitive Solutions”
  - Cabral, “Introduction to Industrial Organization”

- Case studies
  - Folder in library or buy at http://hbsp.harvard.edu/

- Articles
  - Found on JSTOR

- Slides
  - Posted online
## Prices for “Information Rules”

<table>
<thead>
<tr>
<th>Featured Sellers</th>
<th>Seller Rating</th>
<th>Discounts</th>
<th>Price</th>
<th>BottomLinePrice™</th>
</tr>
</thead>
<tbody>
<tr>
<td>textbooks.com</td>
<td></td>
<td>Free Shipping!</td>
<td>$26.60</td>
<td>No Tax + Free Shipping $26.60</td>
</tr>
<tr>
<td>Buy.com</td>
<td></td>
<td>Free Shipping!</td>
<td>$25.07</td>
<td>+ $2.44 tax + Free Shipping $27.51</td>
</tr>
</tbody>
</table>

### More Sellers

<table>
<thead>
<tr>
<th>Seller</th>
<th>Rating</th>
<th>Discounts</th>
<th>Price</th>
<th>BottomLinePrice™</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valore Book</td>
<td>Not Rated</td>
<td>Free Shipping!</td>
<td>$25.27</td>
<td>No Tax + Free Shipping $25.27 (28% OFF)</td>
</tr>
<tr>
<td>Barnes &amp; Noble.com</td>
<td>Fewer than 10 reviews</td>
<td>Free Shipping!</td>
<td>$32.49</td>
<td>+ $2.68 tax + Free Shipping $35.17</td>
</tr>
<tr>
<td>Alibris</td>
<td><em>3</em> <em>3</em> <em>3</em></td>
<td></td>
<td>$20.25</td>
<td>+ $1.47 tax + $3.99 shipping $25.71</td>
</tr>
</tbody>
</table>
The Internet Changes Everything…. Except Economics
Overview

Groundwork

Sources of Competitive Advantage

Tools for Online Economies

Industry Analysis
Competitive Advantage
Information Goods
Pricing Tools

Switching Costs
Network Effects
Platform Markets

Dynamic Pricing
Reputation Mechanisms
Versioning

- Intuition suggests that firm will charge higher price if good is more expensive to make.
- But firm may pay money to create bad version of product.
- Example: IBM Laserprinter
  - IBM inserted chip to halve speed of printer.
  - Then reduced price and marketed to households.
  - Inefficient but helped discriminate. Sold “Series E” to home market without cannibalizing professional model.
- Often seen with websites (e.g. NYT, Salon)
  - Have to pay or view ad to view all site.
- Blog Exercise: provide an example of versioning.
Lock-in and Switching Costs

- Why did MS pay $400m for Hotmail in 1997?
  - Hotmail had no source of revenue.
  - Why not lure all customers to MS email?
- Hotmail’s customers were locked in
  - Have thousands of old messages.
  - File systems and contacts set up.
  - People know your email address.
- Gmail minimizes switching costs when joining
  - Import contacts and old emails.
  - Forward emails for three months.
- ...but raise switching costs when leaving?
Network Effects

- AOL Instant Messenger was launched in 1997.
  - People had “Buddy List”.
  - Could chat with friends online.
- Network effects very important
  - I only want AIM if my friends have AIM.
  - Need to solve coordination problem.
  - Hard to break into market.
- Have different instant messenger systems
  - AIM, G-chat, Yahoo messenger, MSN messenger, Skype, ICQ.
- Interoperability
  - In 2006, Yahoo and MSN opened up to each other.
Platform Markets

- I found my apartment through Westside Rentals
  - Charges $60 for two months membership to search.
  - Free for landlords to post.

- Example of platform market (or two-sided market)
  - Facilitate interaction between two (or more) different groups.

- Why choose this pricing?
  - Why not charge posters (like monster.com with jobs)?

- Is it vulnerable to competitors?
  - Issue: Need to have both sides of the market.
Behavior-Based Pricing

- Amazon knows about customers from past behavior.
  - Frequent customers buy lots of DVDs
  - Infrequent customers rarely buy DVDs

- Suppose a customer looks at “The Wire” Box Set.
  - Should Amazon charge different prices to different customers?

- Of course! They should charge more to customers with higher willingness to pay.

- But what if frequent customers find out? Will they still be frequent?

- In September 2000, Amazon was caught doing this. It resulted in a lot of publicity (Wash Post, Sept 27th).