

# **The Economics of E-commerce and Technology**

Introduction

# Outline for Lecture 1

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- ▶ Purpose of course
- ▶ Logistics and teaching method
- ▶ Overview of course
- ▶ Examples of topics we'll cover

# Purpose of this Class

# This Course

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- ▶ **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

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- ▶ **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

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- ▶ **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

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## ▶ 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](mailto: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](http://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

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- ▶ **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](mailto:akavalar@ucla.edu)
  - ▶ Siwei Kwok – [sikwok@ucla.edu](mailto:sikwok@ucla.edu)
  - ▶ Richard Xie – [ecxie@ucla.edu](mailto:ecxie@ucla.edu)

# Content

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- ▶ You 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

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- ▶ **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

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- ▶ **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)

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- ▶ **Case 1: Facebook (Tuesday 11<sup>th</sup> Oct)**
  - ▶ Guest TBA
- ▶ **Case 2: Netflix (Tuesday 25<sup>th</sup> Oct)**
  - ▶ Barry Eggers, UCLA Economics BA, Stanford MBA, former executive at Cisco, founder of Lightspeed Venture Partners
- ▶ **Case 3: Android (Tuesday 8<sup>th</sup> Nov)**
  - ▶ Terry Kramer, UCLA Economics BA, Harvard MBA, former CEO of Q Comm and Regional President of Vodafone.
- ▶ **Case 4: eHarmony (Tuesday 22<sup>nd</sup> Nov)**
  - ▶ Louisa Wee, Stanford MBA, Director Special Projects at eHarmony, where she works closely with the CEO.

# Major Cases

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- ▶ **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)

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- ▶ **Three cases**

- ▶ Case A: Zappos (Friday 30<sup>th</sup> Sept)
- ▶ Case B: Online Restaurants (Friday 14<sup>th</sup> Oct)
- ▶ Case C: The Ladders (Friday 28<sup>th</sup> Oct)
- ▶ Case D: Yelp (Friday 2<sup>nd</sup> Dec)

# Opening a Case

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- ▶ **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

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## ▶ 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

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- ▶ 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

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- ▶ **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

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The Internet Changes Everything....  
Except Economics

# Overview

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Groundwork

**Industry Analysis**  
**Competitive Advantage**  
**Information Goods**  
**Pricing Tools**

Sources of Competitive  
Advantage

**Switching Costs**  
**Network Effects**  
**Platform Markets**

Tools for Online  
Economies

**Dynamic Pricing**  
**Reputation Mechanisms**

# Versioning

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- ▶ 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

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- ▶ **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

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- ▶ **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

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- ▶ 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

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- ▶ 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).