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15.963 Advanced Strategy  
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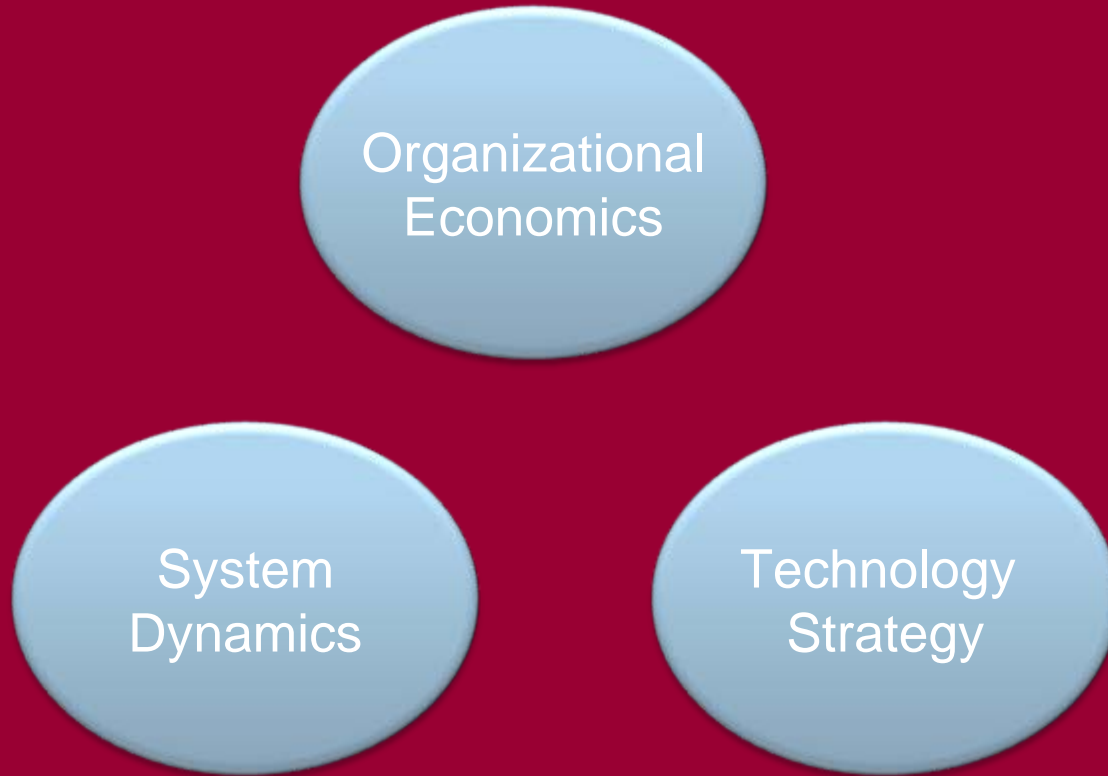
# 15.963: Advanced strategy

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**Management**

# Introduction

- Origins of the class
- A puzzle – and a hypothesis
- Class outline
- Deliverables
- Housekeeping

# In the beginning...



*Um....Do you guys ever talk to each other?*

# PIMO: “Program in Innovations in Markets and Organizations”

Organizational  
Economics

System

Technology

Do leading edge research –  
and *bring it into the classroom*

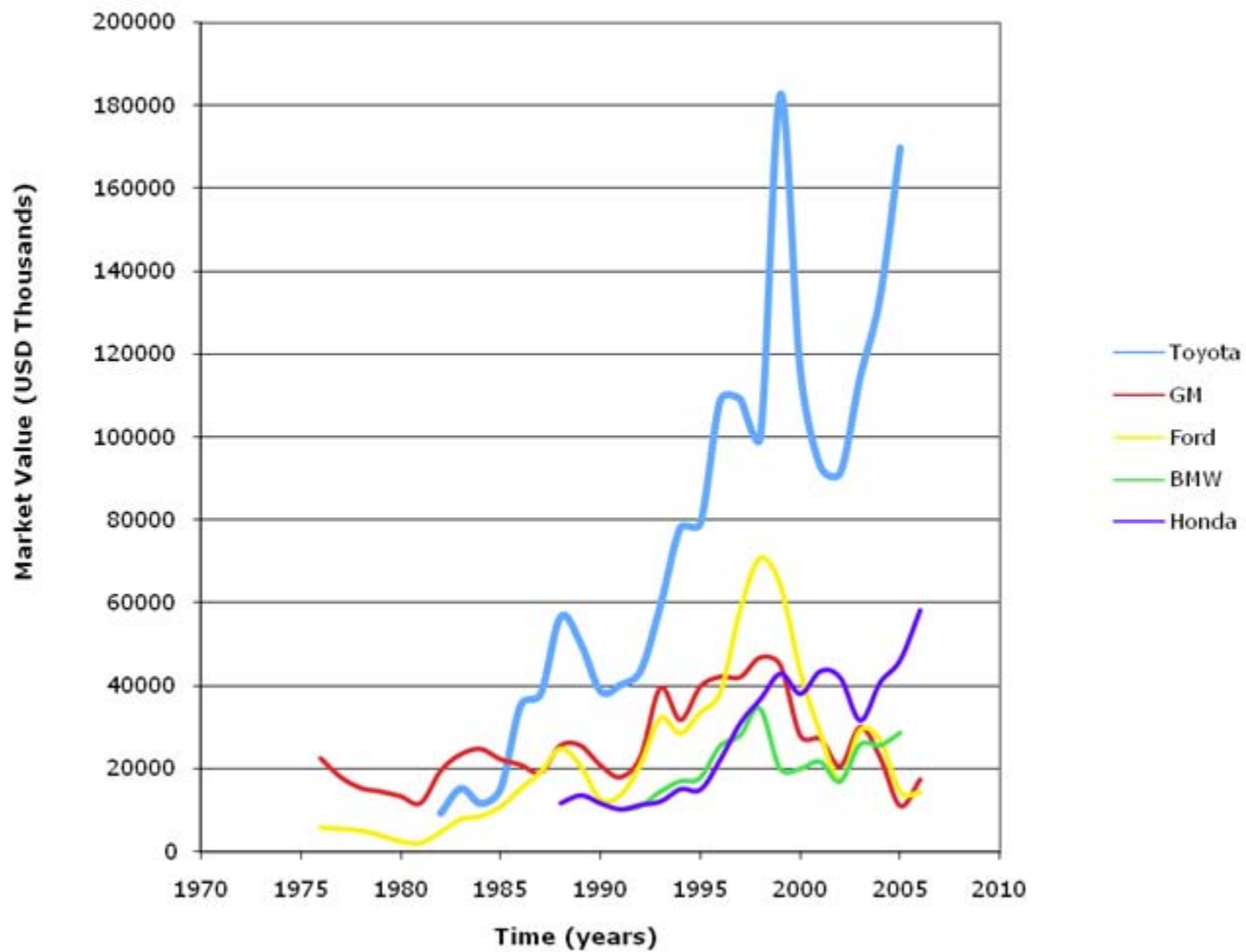
# Our focus:

- The dynamics of industry evolution:
- The dynamics of organizational evolution:
- *And the interaction between them*

# THE PUZZLE

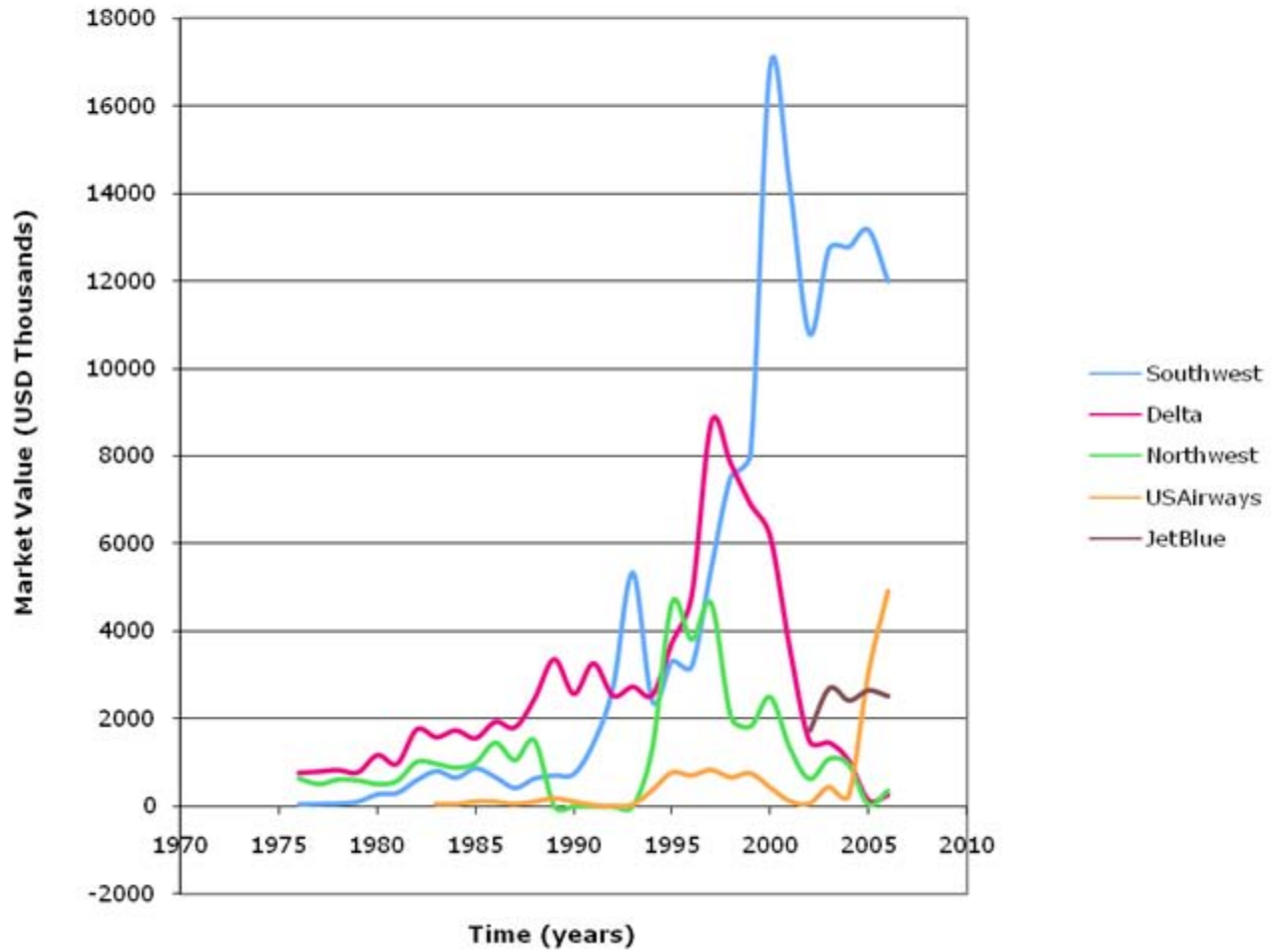
Persistent Performance Differences in Seemingly Similar Enterprises: “PPDs in SSEs”

Market Value for Leading Automobile Companies 1976 - 2006





### Market Value for Leading Airline Companies 1976 -2006



# Evidence of Persistent Performance Differences

(N. Beaulieu, R. Gibbons, & R. Henderson)

- A. Large-sample profitability studies  
(control for industry;  $N \geq 11$ )
- B. Large-sample productivity studies  
(control for some inputs;  $N \geq 28$ )
- C. Productivity studies with physical output  
(control for prices;  $N \geq 15$ )

# A. Large-Sample Profitability Studies

- Decompose firm-level performance (ROA, EVA) into:
  - Industry effects
  - Corporate effects
  - Business Unit/Segment effects
- Robustness: PPDs found in
  - Different data sets (FTC data, Compustat, Stern-Stewart)
  - Different sectors (manufacturing & retail)
- Representative Findings
  - 30% of variation in performance attributable to firm effects
  - Significant percentage of firm-level performance attributable to extreme (best and worst) performers
  - 35-55% of variation remains unexplained

Schmalensee, Rumelt, McGahan-Porter, Brush et. al., Roquebert et. al.,  
Hawanini et. al., Hansen-Wernerfelt, Mauri-Michaels, ...

## B. Large-Sample Productivity Studies

- Investigate sources of productivity growth
  - Compute total factor productivity as residual
  - Decompose industry productivity growth (within & between firms, entry & exit)
  - Replicated in datasets from different countries
- Measurement & estimation challenges
  - Missing data on inputs and prices
  - Endogeneity of input choices
  - Entry, exit, and selection biases
- Representative Findings
  - Significant variation in establishment productivity after adjusting for inputs
  - Persistence at the top of the productivity distribution over 5-10 years
  - Adjusting for variation in prices *increases* intra-industry productivity dispersion

Griliches-Mairesse, Klette, Biorn, Haltiwanger-Lane-Spletzer, Bailey-Hulten-Campbell, Foster-Haltiwanger-Syverson, Eslava-Haltiwanger-Kugler-Kugler, ...

## C. Small sample productivity studies: Productivity in physical units

- Productivity measured in physical output
  - Examples: defect rates (semiconductor manufacturing), meals prepared, patents obtained (pharmaceuticals), mortality rates (hospitals)
  - Performance measures adjusted for internal and external factors (e.g., inputs & variation in demand)
  - Frequently smaller samples and shorter panels
  - PPDs documented in a variety of industries: e.g. semiconductors, apparel manufacturing, hospitals, steel mini-mills, ship-building, pharmaceutical research, high-precision machining
- Representative findings
  - Wide dispersion in productivity remains after removing variation attributable to demand-side factors (i.e. prices)
  - Some studies document intra-firm performance differences in addition to intra-industry differences (replication vs. imitation)

Macher-Mowery, Hatch-Mowery, McClellan-Staiger, Huckman-Pisano, Dunlop-Weil, Chew-Bresnahan-Clark, Argote-Beckman-Epple, Henderson-Cockburn, ...

**SOMETHING IS GOING ON**

What?

# Two potential (entirely complementary) streams of exploration

- Structural position
  - First mover advantages, economies of scale, economies of scope, network externalities...
    - Eg: Oxford & Cambridge, U. Haul, Microsoft, Coca-Cola...
- Organizational “capabilities”
  - But what are they?
  - Tacit routines? Embedded knowledge? Incentive systems? Cognitive frames? Customer relationships? Great people? Culture? Style? Leadership?.....

# Our working hypothesis:

- One important source of long term competitive advantage is the ability to build and maintain “relational contracts”
- “Contracts” that allow the organization to behave in non routine, “far sighted”, “trustful” ways
  - To maintain “high performance work systems”
  - To face problems rather avoiding them
  - To invest in longer term initiatives even when current pressures are intense
  - To face “worse before better...”



# The core work of the course...

- Unpack the sources of long term competitive advantage:
  - In class
  - And in the case of a particular firm that you will study throughout the semester

# Course Outline

- What drives sustained performance?
  - Review 15.900, Explore Wal-Mart & Southwest
- Organizational competence & relational contracts
  - Review 15.311, Explore relational contracts at Lincoln Electric, Nucor, Toyota & BP
- Changing relational contracts
  - If relational contracts are so great, how come everyone doesn't have one – BP, Delta's Song, Toyota revisited
- Doing strategy when relational contracts matter
  - Corning, Lilly, Simmons
- Leadership revisited
  - Good to Great, Paul Levy @ the Deaconess Hospital

# This course is not:

- A conventional course in advanced strategy
  - Think about taking 15.912, “Technology Strategy” and/or 15.834 “Marketing Strategy”
- All that you need to know about designing and building an effective organization
  - Think about taking 15.394, “Designing & leading entrepreneurial organizations” or 15.320, “Strategic organizational design”
- All that you need to know about high performance work systems
  - Think about taking 15.966, “Strategic Human Resource Management”
- Easy

# What I expect from you:

- Class participation!
- Teams of 2-3 people:
  - Which company will you focus on? Why?
- Three two page papers about the company:
  - Due February 21<sup>st</sup>, March 4<sup>th</sup>, March 13<sup>th</sup>
- A brief slide deck outlining your conclusions:
  - In class, May 13<sup>th</sup>
- A final paper
  - Due May 15<sup>th</sup>
- And... arriving on time, staying for the whole class, not sending email...

# What you can expect from me:

My best efforts to make this a class that you will remember, that will intrigue and challenge you and that might... perhaps... make a difference to your career.