

15.990: PhD Seminar –
Strategy and Innovation

This seminar has two major purposes. One is to explore important, contemporary issues about strategy and innovation from a variety of theoretical, methodological, and topic-oriented perspectives, with a focus on strategy and innovation in organizational contexts. The second is to practice a variety of skills such as synthesizing research, understanding research designs, and developing research questions that should prove useful in your academic careers. Everyone should have some familiarity with the major related theories including agency, institutional, learning, resource dependence, resource-based view, transaction cost economics, complexity theory, Austrian economics, recombinant search, and social networks. We share responsibility for discussing the readings and raising issues. You are expected to do all of the required readings and to be prepared to discuss the readings (singly and collective) in class on the assigned day. The class format will involve some introductory remarks by me, followed by a group discussion of your analyses of the papers for the day. “Analyzing” each article means laying out:

- research question(s)
- central arguments and hypotheses as appropriate
- for empirical papers, methods (research design, sample, data collection, construct measures, analytic techniques) and results
- key conclusions
- strengths, weaknesses, contributions to the literature, and interesting areas/questions for discussion.

In our analysis, we’ll also synthesize the connections among the readings, including commonalities, essential differences in ideas and approach, connections with other research, and possible extensions or other interesting areas/questions for further discussion.

The readings are below. When articles are from mainstream strategy and organizations journals (ASQ, OS, SMJ, etc.) I have simply noted the journal and year, although I have tried to give full citations for those articles you might not be able to find otherwise. I will assume that you are aware of research by many of the wonderful BPS scholars on our floor, so an attempt has been made not to “represent” research you likely already know well, or can learn in depth from their own PhD seminars. In particular, this course complements 15.342: Organizations and Environments.

The general course requirements are:

1. Class preparation: Analyze (as described above) and be prepared to discuss the readings that are assigned for each class. All students should arrive at class with their analyses of the readings, ready to go. Please ensure that you have a point of view on the key insights of each article as well as each article’s strengths and weaknesses. Also bring your thoughts on questions and interesting issues to discuss during class.
2. Memo: Develop your own point of view on the following questions that consider the readings collectively: What are the common themes within the articles, contradictions among the articles, and insights? (This entails your developing an understanding of the assigned articles, their relationship to one another, and their collective synthesis.) What are the 2-3 most important conclusions from the

readings viewed collectively? Suggest an appropriate follow-on research question(s) for a deductive study based on a research gap that is suggested by these articles collectively. Excluding anything written by me, what is the best of the assigned articles (and why)? Please turn in a memo addressing these issues at the beginning of each class. You may skip four memos on the day of your choosing – that is, you owe me eight memos over the course of the semester.

3. Paper presentation: At least once during the quarter, you will be asked to present an empirical paper (as noted by *) in the day's readings in conference-style. That is, please present the key points of the paper in 10 minutes (firmly enforced), relying on the following flow of roughly 7 power point slides: literature background (note key points and citations), research question(s), major hypotheses (presentation should note underlying arguments) if a deductive study, key aspects of the research design (research design, sample, data collection, construct measures, analytic techniques), major statistical or other results (e.g., regression table), discussion points, and conclusions. In general, given the time limits, it is best to present the heart of the paper well, and not try to include every point. Keep in mind that your presentation should give the audience a few intriguing take-aways, impress the audience with the quality of your research, and stay on time. This presentation will be graded as part of class participation. Class participation (quality thereof, in particular) will constitute 70% of the grade.
4. Final paper: You will be asked to also prepare an approximately 20 page (text) research paper that reviews and synthesizes the research literature on some topic within strategy and/or organization theory or the study of innovation and entrepreneurship that is of particular interest to you. A draft of your second year paper is fine. The paper should include significant use of the empirical literature (using at least 6-8 empirical papers). Use this as an opportunity to write about something that interests you; I am here to support *your* interests. Asking other faculty and students (including more senior students not in the course) for feedback and advice on your work is appropriate. But, all writing must be your own. Please let me know your topic, at the latest, by class on Day 8. This paper is due on December 10th at the regularly scheduled beginning of class. 30% of the course grade is based on this paper.

I anticipate giving everyone an A in return for diligent preparation, inspired class participation, and outstanding writing.

READINGS

Session 1 (Sept 10): Competitive Advantage and Heterogeneous Firm Performance

- Porter, M What is Strategy? HBR
- *McGahan, A. and M. Porter, How much does industry matter, really? (SMJ 1997)
- Davis, J, K. Eisenhardt, C. Bingham. Optimal Structure, Market Dynamism, and the Strategy of Simple Rules, (ASQ 2009)
- Rivkin, J., Reproducing Knowledge: Replication Without Imitation at Moderate Complexity, (OS 2001)
- Repenning, N and Sterman, J., Capability Traps and Self-Confirming Attribution Errors in the Dynamics of Process Improvement (ASQ 2002)

Session 2 (Sept 17): Organizational Boundaries: Theory of the Firm, Agency Theory, and Organizational Control

- *Davis, G. and S. Stout, Organization theory and the market for corporate control: A dynamic analysis of the characteristics of large takeover targets, 1980-1990, (ASQ 1992)
- Eisenhardt, K. Agency Theory: An Assessment and Review (AMR 1989)
- Coase 1937 "Nature of the Firm" *Economica* 386-405
- Williamson, O. 2002. Theory of the Firm as Governance Structure: From Choice to Contract, *Journal of Economic Perspectives* 16(3) 171-195.
- Critique of Williamson's *Markets and Hierarchies* in pgs. 493-504 of Granovetter, M. 1985 "Economic Action and Social Structure: The Problem of Embeddedness" *AJS* 91(3): 481-510.
- Santos F. M., and Eisenhardt K. M. (2005): Organizational Boundaries and Theories of Organization. (OS 2005)

Session 3 (Sept 24): Competition, Rivalry, and Strategic Interaction

- *Chen MJ, D. Hambrick Speed, Stealth, and Selective Attack: How Small Firms Differ from Large firms in their Competitive Behavior (AMJ 1995)
- Lieberman, M. and D. Montgomery First-Mover Advantages (SMJ 1988)
- Gimeno, J. Reciprocal threats in multimarket rivalry: staking out 'spheres of influence' in the US airline industry. (SMJ 1999)
- Porac, J, H. Thomas, F. Wilson, D. Paton, A. Kanfer. Rivalry and the Industry Model of Scottish Knitwear Producers (ASQ 1995)
- Katila R, Chen EL. 2008. Effects of search timing on innovation: The value of not being in sync with rivals." (ASQ 2008)

Session 4 (Oct 1): Strategic Decision Making, Learning, and Managerial Cognition

- Eisenhardt, K and M. Zbaracki Strategic Decision Making (SMJ 1992)
- Eisenhardt, K. Making Fast Strategic Decisions in High-Velocity Environments"(AMJ 1989)
- *Gavetti, G. and D. Levinthal. Looking Forward and Looking Backward: Cognitive and Experiential Search (ASQ 2000)
- Gilbert, C. Unbundling the Structure of Inertia: Resource versus Routine Rigidity (AMJ 2006)
- Bingham, B., K Eisenhardt, and J. Davis. "Opening the Black Box: What Firm Explicitly Learn From Their Process Experience" Working Paper

Session 5 (Oct 8): RBV, Competence, and Dynamic Capabilities

- Peteraf, M. The cornerstones of competitive advantage: A resource-based view. (SMJ 1993)
- *Henderson, R., & Cockburn, I. Measuring competence? Exploring firm effects in pharmaceutical research. (SMJ 1994)
- Eisenhardt, K. & J. Martin Dynamic Capabilities: What are they? (SMJ 2000)
- Burgelman, R. Fading Memories: A Process Theory of Strategic Business Exit in Dynamic Environments (ASQ 1994)
- Rindova, V. and S. Kotha Continuous “Morphing”: Competing Through Dynamic Capabilities, Form, and Function (AMJ 2001)

Session 6 (Oct 15): Governance: Boards, Diversification, and Acquisition

- *Westphal, J., Board games: How CEOs adapt to increases in structural board independence (ASQ 1998)
- Westphal, J and E. Zajac. Defections from the Inner Circle: Social Exchange, Reciprocity, and the Diffusion of Board Independence in US Corporations (ASQ 1997)
- Galunic and Eisenhardt, The Evolution of Intracorporate Domains: Divisional Charter Losses in High-technology, Multidivisional Corporations (OS 1996)
- Hayward, M. and D. Hambrick. Explaining the Premiums Paid for Large Acquisitions: Evidence of CEO Hubris (ASQ 1990)
- Graebner, M. and K. Eisenhardt, The Seller’s Side of the Story: Acquisition as Courtship and Governance as Syndicate in Entrepreneurial Firms (ASQ 2004)

Session 7 (Oct 29): Interorganizational Relationships: CVC, R&D Collaborations, and Alliances

- Gulati, R. Alliances and Networks (SMJ 1998)
- *Katila, R., J. Rosenberger, and K. Eisenhardt. Swimming with Sharks: Technology Ventures and Corporate Relationships (ASQ 2008)
- Davis, J. Rotating Leadership and Symbiotic Organization: Relationship Processes in Collaborative Innovation, Working Paper.
- Baum, J., T. Calabrese, B. Silverman. Don’t Go It Alone: Alliance Network Composition and Startups’ Performance in Canadian Biotechnology (SMJ 2000)
- Lingo, E. and S. O’Mahony Nexus Work: Managing Ambiguity in Network Based Projects (ASQ 2009)

Session 8 (Nov 5): Innovation Processes: Recombination, Bricolage, Improvisation, Brainstorming

- Schumpeter, 1939 (selected readings about recombination)
- Fleming, L. Recombinant Uncertainty in Technological Search (MS 2001)
- Katila, R., & Ahuja, G. Something old, something new: A longitudinal study of search behavior and new product introduction. (AMJ 2002)
- Baker, T. and R. Nelson, Creating Something from Nothing (ASQ 2005)
- Miner, A, P. Bassoff, & C Moorman. Organizational Improvisation and Learning: A Field Study (ASQ 2001)
- *Sutton and Hargadon. Brainstorming Groups in Context: Effectiveness in a Product Design Firm (ASQ 1996)

Session 9 (Nov 12): Technological Trajectories, S-Curves, and Industry Lifecycles

- Dosi, G. 1982. Technological paradigms and technological trajectories. *Research Policy*, 11: 147-162.
- Foster, R. 1986. The S-curve: A new forecasting tool. In *Innovation. The Attacker's Advantage*. Chapter 4, pg. 88-111. Summit Books, Simon and Schuster, New York.
- Christensen, C. 1992. The limits of the technology S-curve. Parts I and II. *Production and Operations Management*. Read Part I carefully. Skim rest.
- Utterback J. and Abernathy A. 1975. Dynamic Model of Process and Product Innovation *Omega* 33:639-656.
- Klepper, S. Entry, Exit, Growth, and Innovation over the Product Life Cycle (AER 1996)
- *Lenox, M., S. Rockhart, A. Lewin. Interdependency, Competition, and Industry Dynamics. (MS 2007)

Session 10 (Nov 19): Innovation and Organizational Outcomes

- Teece, D. 1986. Profiting from technological innovation. Implications for integration, collaboration, licensing, and public policy. *Research Policy*, 15: 285-305.
- *Tripsas, M. 1997. Unraveling the process of creative destruction: Complementary assets and incumbent survival in the typesetter industry. (SMJ 1997)
- M.G. Jacobides, T. Knudsen and M. Augier, 2006. "Benefiting from Innovation: Value Creation, Value Appropriation and the Role of Industry Architectures", *Research Policy*, forthcoming.
- Christensen, C. 1997. How can great firms fail? Chapter 1. In *The innovator's dilemma*. Harvard Business School Press.
- Henderson, R. 1993. Underinvestment and incompetence as responses to radical innovation: Evidence from the photolithographic alignment equipment industry. *Rand Journal of Economics*, 24(2): 248-270.

Session 11 (Dec 3): Interdependence: Platforms, Value Chains, and Market Creation

- Bresnahan, T. and S. Greenstein Technological Competition and the Structure of the Computer Industry. *Journal of Industrial Economics*. 47: 1-40.
- Gawer, A. and R. Henderson. 2007 Platform Owner Entry and Innovation in Complementary Markets: Evidence From Intel, *Journal of Economics and Management Strategy*, 16: 1-34.
- Adner, R. and R. Kapoor "Innovation Ecosystems and Innovators' Outcomes: Evidence from the semiconductor lithography equipment industry, 1962-2004 (forthcoming SMJ)
- Henderson, R., & Clark, K. Architectural innovation: The reconfiguration of existing product technologies and the failure of established firms. (ASQ 1990)
- *Ozcan, P. and K Eisenhardt. Origin of Portfolios: Network Strategy, Tie Portfolios, and Firm Performance in New, Highly Interdependent Markets. (AMJ 2009)

Session 12 (Dec 10): Entrepreneurial Action in Nascent Markets

- Shane, S. Prior Knowledge and the Discovery of Entrepreneurial Opportunities (OS 2000)
- Zott, C. and Q. Huy, "How Entrepreneurs Use Symbolic Management to Acquire Resources", (ASQ 2009)
- Santos, F. and K. Eisenhardt, "Constructing Markets and Organizing Boundaries" (AMJ 2009)
- Gersick, C. "Pacing Strategic Change: The Case of a New Venture" (AMJ 1994)
- *Sine, W., H. Mitsunashi & D. Kirsch Revisiting Burns and Stalker: Formal Structure and New Venture Performance in Emerging Economic Sectors. (AMJ)