



MGMT 939: PhD Seminar on Entrepreneurship and Innovation

Fall (Q2) 2020 [0.5 credit unit]

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Office hours: email for appointment

Fall (Q2) 2020

Mondays, 2-5 PM

via Zoom (to be finalized)

Course Description

This quarter-length course explores key topics at the intersection of entrepreneurship and innovation. While the course primarily draws from established theory and empirics from management and economics, it will also include discussions of emerging phenomena in this rapidly evolving field. We will begin by reviewing the basic properties of ideas that uniquely shape the sources and dynamics of entrepreneurship and innovation.

Subsequently, we will explore innovation-related challenges and opportunities for startups. Special focus will be placed on research application in which students design and present their own research proposal broadly in the area of entrepreneurship and innovation.

Though there is no pre-required coursework to enroll, students are encouraged to take this course in sequence with MGMT 937.

Course Logistics

Format

This course consists six weekly sessions (3 hours each). In each session, we will discuss the assigned papers around a focused theme in entrepreneurship & innovation. Similar to other doctoral seminars, this course is highly interactive. Students are expected to actively contribute to both the classroom discussions and student-led presentations by not only answering questions, but also raising new questions and issues in the broader literature.

Discussion Leader Exercise

The field of entrepreneurship and innovation is constantly evolving with new phenomena that underlie how individuals and firms pursue new opportunities. To highlight and learn from recent developments in this area, an assigned discussion leader will open up the classroom discussion by identifying an emerging phenomenon in entrepreneurship and

innovation – one that hasn't yet been extensively addressed in the existing literature. Examples include: diversity issues in startup hiring; FTC's April 2020 investigation into the anti-competitiveness of large tech firms' startup acquisitions.

After identifying a topic of discussion, the leader's role on the day of class is the following: (1) Share a news article, blog post, or a real-life example of an organization/individual on the phenomenon; (2) provide a brief description of the phenomenon and why it is intriguing and/or important; (3) prepare a few open-ended questions for classroom discussion. Slides are encouraged but not required.

Final Project

To conclude the course, there will be a research proposal as a final project. The proposal should broadly be in the area of entrepreneurship and innovation. Depending on the class size, students may work in teams (to be communicated). During the second half of last two or three sessions, each student (or team) will present their research proposal covering:

- (1) Research question – *What do you aim to investigate?*
- (2) Motivation – *What is at stake? Why should others care?*
- (3) Brief literature review – *What do we already know? What don't we know?*
- (4) Theory and/or Hypotheses – *What do you predict?*
- (5) Empirical strategy – *How will you answer your question?*
- (6) Preliminary results (if available)

Each presentation should be 15 minutes and include a slide deck. The final grade will be based on the presentation and the submitted slide deck (i.e., no additional write-up).

Grading

The final course grade will be based on the following:

- 40% Attendance and Participation
- 20% Discussion Leader Exercise
- 40% Final Project

Sessions

Below is a list of the 6 weekly sessions:

1. Foundations of Entrepreneurship and Innovation: *Ideas*
2. Supply of Entrepreneurs and Innovators
3. Startup Innovation Advantage
4. Employee Mobility and Entrepreneurship
5. Commercialization Strategy
6. Startup Exits: IPOs and Acquisitions

Readings

1. Foundations of Entrepreneurship and Innovation: *Ideas*

Arrow, Kenneth. 1962. "Economic Welfare and the Allocation of Resources for Invention." In *The Rate and Direction of Inventive Activity: Economic and Social Factors*. Princeton, NJ: Princeton University Press. **READ pp. 609-618 ONLY.**

Varian, Hal R. 2004. "Review of Mokyr's 'Gifts of Athena'." *Journal of Economic Literature*, 42(3): 805-810.

Jaffe, Adam B., Manuel Trajtenberg, and Rebecca Henderson. "Geographic localization of knowledge spillovers as evidenced by patent citations." *The Quarterly journal of Economics* 108, no. 3 (1993): 577-598.

Williams, Heidi L. "Intellectual property rights and innovation: Evidence from the human genome." *Journal of Political Economy* 121, no. 1 (2013): 1-27.

OPTIONAL

Murray, Fiona, and Siobhán O'Mahony. "Exploring the foundations of cumulative innovation: Implications for organization science." *Organization Science* 18, no. 6 (2007): 1006-1021.

Jones, Benjamin F. "The burden of knowledge and the "death of the renaissance man": Is innovation getting harder?." *The Review of Economic Studies* 76, no. 1 (2009): 283-317.

Wuchty, Stefan, Benjamin F. Jones, and Brian Uzzi. 2007. "The Increasing Dominance of Teams in Production of Knowledge." *Science* 316(5827): 1036-1039.

Galasso, Alberto, and Mark Schankerman. "Patents and cumulative innovation: Causal evidence from the courts." *The Quarterly Journal of Economics* 130, no. 1 (2015): 317-369.

Bresnahan, Timothy F., and Manuel Trajtenberg. 1995. "General Purpose Technologies: Engines of Growth?" *Journal of Econometrics* 65(1): 83-108.

Bloom, N., Jones, C. I., Van Reenen, J., & Webb, M. (2020). Are ideas getting harder to find?. *American Economic Review*, 110(4), 1104-44.

Bloom, Nicholas, Mark Schankerman, and John Van Reenen. "Identifying technology spillovers and product market rivalry." *Econometrica* 81, no. 4 (2013): 1347-1393.

2. Supply of Entrepreneurs and Innovators

Sørensen, Jesper B., and Magali A. Fassiotto. "Organizations as fonts of entrepreneurship." *Organization Science* 22, no. 5 (2011): 1322-1331.

Azoulay, Pierre, Benjamin F. Jones, J. Daniel Kim, and Javier Miranda. "Age and high-growth entrepreneurship." *American Economic Review: Insights* 2, no. 1 (2020): 65-82.

Brooks, Alison Wood, Laura Huang, Sarah Wood Kearney, and Fiona E. Murray. "Investors prefer entrepreneurial ventures pitched by attractive men." *Proceedings of the National Academy of Sciences* 111, no. 12 (2014): 4427-4431.

Bernstein, Shai, Rebecca Diamond, Timothy McQuade, and Beatriz Pousada. *The contribution of high-skilled immigrants to innovation in the United States*. NBER Working Paper No. 3748. 2018.

OPTIONAL

Zolas, Nikolas, Nathan Goldschlag, Ron Jarmin, Paula Stephan, Jason Owen-Smith, Rebecca F. Rosen, Barbara McFadden Allen, Bruce A. Weinberg, and Julia I. Lane. "Wrapping it up in a person: Examining employment and earnings outcomes for Ph. D. recipients." *Science* 350, no. 6266 (2015): 1367-1371.

Sichel, Daniel, and Eric von Hippel. *Household innovation, R&D, and new measures of intangible capital*. No. w25599. National Bureau of Economic Research, 2019.

Stephan, Paula E. *How economics shapes science*. Vol. 1. Cambridge, MA: Harvard University Press, 2012.

Moser, Petra, Alessandra Voena, and Fabian Waldinger. "German Jewish émigrés and US invention." *American Economic Review* 104, no. 10 (2014): 3222-55.

Kerr, William R., and William F. Lincoln. "The supply side of innovation: H-1B visa reforms and US ethnic invention." *Journal of Labor Economics* 28, no. 3 (2010): 473-508.

Azoulay, Pierre, Benjamin F. Jones, J. Daniel Kim, and Javier Miranda. "Immigration and Entrepreneurship in the United States." *NBER Working Paper* (2020).

Younkin, Peter, and Venkat Kuppuswamy. "The colorblind crowd? Founder race and performance in crowdfunding." *Management Science* 64, no. 7 (2018): 3269-3287.

Gompers, Paul A., and Sophie Q. Wang. *And the children shall lead: Gender diversity and performance in venture capital*. No. w23454. National Bureau of Economic Research, 2017.

3. Startup Innovation Advantage

Christensen, Clayton M. *The innovator's dilemma: when new technologies cause great firms to fail (Chapter 1 ONLY)*. Harvard Business Review Press, 2013.

Henderson, Rebecca M., and Kim B. Clark. "Architectural innovation: The reconfiguration of existing product technologies and the failure of established firms." *Administrative science quarterly* (1990): 9-30.

Zenger, Todd R. "Explaining organizational diseconomies of scale in R&D: Agency problems and the allocation of engineering talent, ideas, and effort by firm size." *Management science* 40, no. 6 (1994): 708-729.

OPTIONAL

Schumpeter, Joseph. "Chapter 7: Creative destruction." *Capitalism, socialism and democracy* 825 (1942): 82-85.

Bresnahan, Timothy F., Shane Greenstein, and Rebecca M. Henderson. "Schumpeterian competition and diseconomies of scope: illustrations from the histories of Microsoft and IBM." In *The rate and direction of inventive activity revisited*, pp. 203-271. University of Chicago Press, 2011.

Felin, Teppo. "When strategy walks out the door." *MIT Sloan Management Review* 58, no. 1 (2016).

Sørensen, Jesper B., and Toby E. Stuart. "Aging, obsolescence, and organizational innovation." *Administrative science quarterly* 45, no. 1 (2000): 81-112.

Balasubramanian, Natarajan, and Jeongsik Lee. "Firm age and innovation." *Industrial and Corporate Change* 17, no. 5 (2008): 1019-1047.

Agarwal, Rajshree, Raj Echambadi, April M. Franco, and Mitrabharun B. Sarkar. "Knowledge transfer through inheritance: Spin-out generation, development, and survival." *Academy of Management journal* 47, no. 4 (2004): 501-522.

Davis, Jason P., and Vikas A. Aggarwal. "Knowledge mobilization in the face of imitation: Microfoundations of knowledge aggregation and firm-level innovation." *Strategic Management Journal* (2019).

Babina, Tania, and Sabrina T. Howell. "Entrepreneurial spillovers from corporate R&D." *National Bureau of Economic Research Working Paper No. w25360*, 2018.

4. Employee mobility and entrepreneurship

Gompers, Paul, Josh Lerner, and David Scharfstein. "Entrepreneurial spawning: Public corporations and the genesis of new ventures, 1986 to 1999." *The journal of Finance* 60, no. 2 (2005): 577-614.

Campbell, Benjamin A., Martin Ganco, April M. Franco, and Rajshree Agarwal. "Who leaves, where to, and why worry? Employee mobility, entrepreneurship and effects on source firm performance." *Strategic Management Journal* 33, no. 1 (2012): 65-87.

Chatterji, Aaron K. "Spawned with a silver spoon? Entrepreneurial performance and innovation in the medical device industry." *Strategic management journal* 30, no. 2 (2009): 185-206.

Starr, Evan, Natarajan Balasubramanian, and Mariko Sakakibara. "Screening spinouts? How noncompete enforceability affects the creation, growth, and survival of new firms." *Management Science* 64, no. 2 (2018): 552-572.

OPTIONAL

Klepper, Steven. "Disagreements, spinoffs, and the evolution of Detroit as the capital of the US automobile industry." *Management science* 53, no. 4 (2007): 616-631.

Sørensen, Jesper B., and Amanda J. Sharkey. "Entrepreneurship as a mobility process." *American Sociological Review* 79, no. 2 (2014): 328-349.

Marx, Matt, Deborah Strumsky, and Lee Fleming. "Mobility, skills, and the Michigan non-compete experiment." *Management science* 55, no. 6 (2009): 875-889.

Campbell, Benjamin A., Russell Coff, and David Kryscynski. "Rethinking sustained competitive advantage from human capital." *Academy of Management Review* 37, no. 3 (2012): 376-395.

Tan, David, and Christopher I. Rider. "Let them go? How losing employees to competitors can enhance firm status." *Strategic Management Journal* 38, no. 9 (2017): 1848-1874.

Corredoira, Rafael A., and Lori Rosenkopf. "Should auld acquaintance be forgot? The reverse transfer of knowledge through mobility ties." *Strategic Management Journal* 31, no. 2 (2010): 159-181.

Agarwal, Rajshree, David Audretsch, and M. B. Sarkar. "The process of creative construction: knowledge spillovers, entrepreneurship, and economic growth." *Strategic Entrepreneurship Journal* 1, no. 3-4 (2007): 263-286.

5. Startup commercialization strategy

Gans, Joshua S., David H. Hsu, and Scott Stern. "When does start-up innovation spur the gale of creative destruction?" *RAND Journal of Economics* 33, no.4 (2002): 571-586

McDonald, Rory, and Cheng Gao. "Pivoting isn't enough? Managing strategic reorientation in new ventures." *Organization Science* 30, no. 6 (2019): 1289-1318.

Gans, Joshua S., Scott Stern, and Jane Wu. "Foundations of entrepreneurial strategy." *Strategic Management Journal* 40, no. 5 (2019): 736-756.

OPTIONAL

Gans, Joshua S., and Scott Stern. "The product market and the market for "ideas": commercialization strategies for technology entrepreneurs." *Research policy* 32, no. 2 (2003): 333-350.

Arora, Ashish, Andrea Fosfuri, and Alfonso Gambardella. "Markets for technology and their implications for corporate strategy." *Industrial and corporate change* 10, no. 2 (2001): 419-451.

Kerr, William R., Ramana Nanda, and Matthew Rhodes-Kropf. "Entrepreneurship as experimentation." *Journal of Economic Perspectives* 28, no. 3 (2014): 25-48.

Hegde, Deepak, and Hong Luo. "Patent publication and the market for ideas." *Management Science* 64, no. 2 (2018): 652-672.

Aggarwal, Vikas A., and David H. Hsu. "Modes of cooperative R&D commercialization by start-ups." *Strategic management journal* 30, no. 8 (2009): 835-864.

Marx, Matt, Joshua S. Gans, and David H. Hsu. "Dynamic commercialization strategies for disruptive technologies: Evidence from the speech recognition industry." *Management Science* 60, no. 12 (2014): 3103-3123.

Zuzul, Tiona, and Mary Tripsas. "Start-up inertia versus flexibility: The role of founder identity in a nascent industry." *Administrative Science Quarterly* 65, no. 2 (2020): 395-433.

6. Startup Exits: IPO and Acquisitions

Aggarwal, Vikas A., and David H. Hsu. "Entrepreneurial exits and innovation." *Management Science* 60, no. 4 (2014): 867-887.

Cunningham, Colleen, Florian Ederer, and Song Ma. "Killer acquisitions." *Journal of Political Economy*, Forthcoming.

Stuart, Toby E., and Olav Sorenson. "Liquidity events and the geographic distribution of entrepreneurial activity." *Administrative Science Quarterly* 48, no. 2 (2003): 175-201.

OPTIONAL

Bernstein, Shai. "Does going public affect innovation?." *The Journal of finance* 70, no. 4 (2015): 1365-1403.

Graebner, Melissa E., and Kathleen M. Eisenhardt. "The seller's side of the story: Acquisition as courtship and governance as syndicate in entrepreneurial firms." *Administrative Science Quarterly* 49, no. 3 (2004): 366-403.

Kapoor, Rahul, and Kwanghui Lim. "The impact of acquisitions on the productivity of inventors at semiconductor firms: A synthesis of knowledge-based and incentive-based perspectives." *Academy of Management Journal* 50, no. 5 (2007): 1133-1155.

Seru, Amit. "Firm boundaries matter: Evidence from conglomerates and R&D activity." *Journal of Financial Economics* 111, no. 2 (2014): 381-405.

Kim, J. Daniel. "Startup Acquisitions as a Hiring Strategy: Worker Choice and Turnover." *Available at SSRN 3252784* (2020).

Ahuja, Gautam, and Riitta Katila. "Technological acquisitions and the innovation performance of acquiring firms: A longitudinal study." *Strategic management journal* 22, no. 3 (2001): 197-220.

Babina, Tania, Paige Ouimet, and Rebecca Zarutskie. "Going entrepreneurial? IPOs and new firm creation." *US Census Bureau Center for Economic Studies Paper* No. CES-WP-17-18 (2017): 17-32.