CONNIE LEE

Contact Information

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Education

Mines Paristech, PSL University — Paris, France
Ph.D. Candidate in Economics — *2016 – Present*
Dissertation: Essays on Firm Innovation

Paris School of Economics — Paris, France
M.Sc., *M2: Analysis and Policy in Economics* — *2016*
M1: Quantitative Economics and Finance (at Ecole Polytechnique)

Columbia University — New York, USA
B.Sc., *Operations Research: Financial Engineering* — *2014*
Minor in Computer Science

Research Interests

Innovation, entrepreneurship, industrial organization

Working Papers

"Buyouts and Innovation Incentives: The Case of the Great Recession"

Abstract: This paper examines the interactions between large incumbent firms and new entrants on innovation decisions in the context of the 2008 financial crisis. I posit that there was an asymmetric effect of the crisis on firm access to financing which increased the opportunity for financial flows between firms. Mergers and acquisitions are one type of financial flow with well documented data that I suggest became more likely during this period. With an increased likelihood of being bought out, I investigate whether new entrants began innovating ``closer'' to their potential acquirers to further increase their chances of a buyout. "Closeness" in terms of innovation is hard to characterize. I will present results with different measures that have been used in the prior literature and their different interpretations. We indeed find that higher expectations of buyout result in less original innovation in entrants.

"Firm R&D Inertia"

Abstract: Firm R&D decisions are likely to have lasting consequences. However this has not been documented in terms of firms' technological position. This paper introduces the concept of firm inertia and presents some patterns about it over the life cycle. Using patent data, I build a measure to compare the similarity between an innovative firm's technological contents over time with its technological position when it enters. I find that new entrants are likely to continue patenting in areas similar to their initial invention for multiple years. Given that on the aggregate, firms experience inertia, I then describe how the degree of inertia is affected by initial conditions. I find that the initial originality of the firm negatively affects the inertial tendencies of the firm while having previous experience in R&D exerts a positive effect on firm inertia. The heterogeneous firm size distribution is also explored as is the effect of technology sector concentration.

"Regulation Timing on Green Innovation: The Case of Vehicle Emissions", joint with Matthieu Glachant and Antoine Dechezlepretre

Abstract: This paper studies vehicle emissions regulations and provide evidence that there are decreasing returns to late regulation implementation for firm innovation. Vehicle emission regulations are adopted in a large set of countries, they undergo multiple levels of stringency and are relatively comparable between countries; as such, they provide a good setting to study this question. Through the use of patent data we build innovation indicators as well as proxies for regulation specific market sizes at the firm level. These are used to investigate the push and pull dynamics of innovation creation. Additionally, different emissions control technologies are addressed individually and surprisingly, despite their different characteristics, give similar results.

Conference Presentations

2020 Dauphine Doctoral Workshop in Paris, France

2019 RCEA Growth, Innovation, and Entrepreneurship Conference in Waterloo, Canada
Comparative Analysis of Enterprise Data (CAED) Conference in Ann Arbor, USA
R&D Management Conference at Ecole Polytechnique in Paris, France
CERNA Doctoral Seminar at Mines Paristech in Paris, France
ZEW-Leibniz Seminar in Mannheim, Germany
Young Economists Seminar, Telecom Paris in Paris, France

2018 i3 Conference on "The Regulation and Innovation Nexus: New Issues, New Perspectives" in Paris, France
Druid Academy in Odense, Denmark
SAEE student Workshop in Zurich, Switerland

2017 FAEE Student Workshop in Paris, France
CERNA Doctoral Seminar at Mines Paristech in Paris, France

Teaching Experience

Mathematics (Undergraduate level) Teaching Assistant — 2019 & 2020
Professor: Thierry Lafay, Sorbonne University

Fellowships

Mines Paristech PhD Fellowship — 2016 - 2019

Ecole Polytechnique Full Master Scholarship — 2013 - 2015

Other Experiences

College de France — Paris, France
Research Assistant to Professor Philippe Aghion, Centre de l'économie de l'innovation — *2017 – 2018*

Agence Française de Développement — Paris, France
Research Assistant to Professor Gael Giraud, Chair on Energy Prosperity — *2017*

Altai Consulting — Paris, France
Consultant and Data Science Intern, Masae Analytics Team — *2016*

Columbia University — New York, USA
Research Assistant to Professor Tim Leung, IEOR — *2014*

Millennium Partners — New York, USA
Quantitative Analyst Intern, Commodities Team — *2014*

Citi New York, USA
Business Analyst Intern, Citi Velocity Team *2013*

Additional

References: Available upon request

Refereeing Service: Journal of the Economics of Transition

Computer Skills: Python, STATA, Matlab, R, C, C++, Unix, SQL, VBA
some experience with: Java, SAS, Ruby on Rails

Languages: English (native), French (working knowledge), Chinese (working knowledge)

Hobbies: Rock climbing, gardening, piano