

CONNIE LEE

Contact Information

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Education

Mines Paristech, PSL University
Ph.D. Candidate in Economics
Dissertation: Essays on Firm Innovation

Paris, France
Expected 2020

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

Paris, France
2016

Columbia University
B.Sc., Operations Research: Financial Engineering
Minor in Computer Science

New York, USA
2014

Research Interests

Innovation, entrepreneurship, applied microeconomics

Working Papers

“Firm R&D Inertia”

Abstract: Firm R&D decisions are likely to have lasting consequences. Here I will document patterns of firm technological position over its 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 – they exhibit inertia. I then describe how the degree of inertia is affected by initial conditions. I also explore the firm size distribution and technological sector concentration and discuss how the innovation strategies may be different depending on the firm size and degree of concentration in the sector.

“Buyouts and Start-up Innovation Incentives”

Abstract: This paper investigates how start-up innovation choices are affected by incumbent firm interactions. In particular, incumbent firms have an impact on start-up exit strategies as they can affect their expectations of getting acquired, of success, or of going bankrupt. Using the asymmetric effect of the 2008 financial crisis on firm access to financing between new entrants and incumbents, I infer a likelihood of getting bought out for entrants. I then estimate how an increase in the expectation of getting acquired affects a new firm's innovation choices with respect to the existing firms. I construct a novel measure of innovation proximity and show that new firms innovate “closer” to their potential acquirers.

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

Abstract: Does regulatory leadership lead to more innovation? Here we study this question through the case of vehicle emission regulations. There have been multiple rounds of increasingly stringent vehicle emission regulations that require firms to innovate in order to continue selling in those markets. Through the use of patent data, we identify the related technologies and firms and measure the quality of the innovation. We then use the staggered implementation of different levels of regulation to determine leader and laggard countries. The findings show that there are decreasing returns to late regulation implementation. Additionally, we provide evidence that firms with home countries that are regulatory leaders increase their innovation globally significantly.

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

Teaching Experience

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

Fellowships

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| Mines Paristech Ph.D. Fellowship | 2016 - 2019 |
| Ecole Polytechnique Full Master Scholarship | 2013 - 2015 |

Other Experiences

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| College de France | Paris, France |
| Research Assistant to Professor Philippe Aghion, Centre de l'économie de l'innovation | <i>2017 – present</i> |
| Agence Française de Développement | Paris, France |
| Research Assistant to Professor Gael Giraud, Chair on Energy Prosperity | <i>2017</i> |
| Altai Consulting | Paris, France |
| Consultant and Data Science Intern, Masae Analytics Team | <i>2016</i> |
| Columbia University | New York, USA |
| Research Assistant to Professor Tim Leung, IEOR | <i>2014</i> |
| Millennium Partners | New York, USA |
| Quantitative Analyst Intern, Commodities Team | <i>2014</i> |
| Citi | New York, USA |

Additional

Refereeing: Journal of the Economics of Transition

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

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

Hobbies: Rock climbing, gardening, piano, fantasy football