

# CONNIE LEE

## Contact Information

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Centre of Industrial Economics  
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citizenship: American and Canadian

## Education

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**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

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Innovation, entrepreneurial financing, applied microeconomics

## Working Papers

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“Buyouts and Start-up Innovation Incentives” (*Job Market Paper*)

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.

“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 differ.

“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

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- 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  
 CERN 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  
 SAE student Workshop in Zurich, Switzerland
- 2017 FAEE Student Workshop in Paris, France  
 CERN Doctoral Seminar at Mines Paristech in Paris, France

## Teaching Experience

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- Teaching Fellow (ATER in French) at the Management Department, Sorbonne University 2020 - 2021  
*Classes taught:* Mathematics for Economists with Professor Thierry Lafay (undergraduate level)  
 Industrial Economics with Professor Florent Pratlong (graduate level)
- Mathematics for Economists (Undergraduate level) Teaching Assistant 2019  
 Professor: Thierry Lafay, Sorbonne University

## Fellowships

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- Teaching Fellowship at Sorbonne University Department of Management 2020 – 2021
- Mines Paristech Ph.D. Fellowship 2016 - 2019
- Ecole Polytechnique Full Masters Scholarship 2013 - 2015

## Other Experiences

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- College de France** Paris, France  
 Research Assistant to Professor Philippe Aghion, Centre for Innovation Economics 2017 – present
- 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**  
Quantitative Analyst Intern, Commodities Team

New York, USA  
2014

**Citi**  
Business Analyst Intern, Citi Velocity Team

New York, USA  
2013

### **Additional**

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**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