Fiona Sijie Feng

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Current

Job Market Candidate, NYU Stern Economics

PhD Committee

Petra Moser (Chair, *Economics, NYU Stern*)	pmoser@stern.nyu.edu
Luis Cabral (*Economics, NYU Stern*)	luis.cabral@nyu.edu
Walker Hanlon (*Economics, NYU Stern*)	whanlon@stern.nyu.edu
Robert Seamans (*Management & Organizations, NYU Stern*)	rseamans.stern.nyu.edu

Research interests

Innovation and technology, machine learning & natural language processing, urban economics, law and economics, management, labour policy

Education

NYU Stern School of Business 2013-

Ph.D. Candidate in Economics

University of Melbourne 2011

Honours in Economics

University of Auckland 2007-2011

Bachelor of Arts/Bachelor of Commerce (Philosophy & Economics)

Papers

Measuring the Diffusion of Innovation: A Reassessment of Knowledge Spillovers Using Machine Learning (*Job Market Paper*)

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Abstract: The ideas of new invention are captured by the text of a patent. Empirical measures of knowledge flows have relied on citations, which reflect the influence of other patents on an invention but not external sources of knowledge. I use unsupervised machine learning methods to convert patent abstracts (which are descriptions of the invention) to numerical vector space representations. Knowledge spillovers are measured using the similarity across patent text vectors. I find that geographic localization effects are insignificant to modest: prior to controlling technological proximity, within technology field patents from the same city are about 0-0.08 standard deviations more similar than patents from different cities. Including further technology controls reduces estimates to -0.02 to 0.04. This suggests that local differentiation in technology space may play a minor role in determining innovation. By contrast, citations based measures find that local patents have 0.24-0.30 standard deviations more citations from the same city compared to a non-local control. These findings indicate that geographic localization of knowledge spillovers may not be a strong driver of local innovation and agglomeration, as suggested by standard citations-based analyses.

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Effect of management and workplace policies on workers' job satisfaction.

State sponsored innovation: Examining government funded technology from past to present.

Maintaining suspicion: Job creation through surveillance and incarceration.

Professionalisation as barrier to entry. *Joint with Karen Huang (Harvard)*

Awards & Fellowships

American Economic Association (AEA) CSWEP Summer Dissertation Fellowship, *Federal Reserve Bank of Minneapolis* — 2018

Policy Research Fellowship, *Internet Association* — 2017

Teaching Commendation for Rating 6.5/7, Introductory Microeconomics, *NYU Stern*

Conferences

Transatlantic Doctoral Conference, London Business School, London, England — 2018

Early Career Economists Conference, Monash University, Melbourne, Australia

NET Institute Conference (Discussant), NYU Stern, New York, USA — 2017

NBER Digitization Tutorial, Stanford University, Palo Alto, USA

Teaching

NYU Stern — UG

Teaching Fellow, Competitive Analysis with Prof. Greg Kubitz (Spring 2017, Spring 2018)

Teaching Fellow, Introductory Microeconomics with Prof. Simon Bowmaker (Fall 2016, Fall 2017)

University of Melbourne

Tutor, Advanced Macroeconomics with Prof. Lawrence Uren (Semester 2, 2012)

Tutor, Intermediate Macroeconomics with Prof. Chris Edmond (Semester 2, 2012)

Tutor, Introductory Macroeconomics (Semester 2, 2011; Semester 1, 2012)

NYU Stern — MBA

Teaching Fellow, MBA and EMBA Global Economy with Prof. Stan Zin (Summer 2015, Summer 2016, Summer 2017)

Teaching Fellow, Financial Crisis with Prof. Kim Schoenholtz (Fall 2014)

Professional Service

NYU Stern

Doctoral Student Events Committee (2015)

Doctoral Applications Reviewer (2010)

University of Auckland

Student Representative, University Central Committee, Senate and Equity (2010)

Treasurer, Auckland University Students' Association (2009-10)

Personal

Citizenship: New Zealand

Languages: English (Native), Chinese Mandarin (Fluent)

Programming languages: Python, R, Stata