PLACEMENT BROCHURE

2015-2016

DEPARTMENT OF ECONOMICS
270 BAY STATE ROAD
BOSTON, MA 02215
USA

http://www.bu.edu/econ

PhD Placement Director: Randall P. Ellis
Professor of Economics
E-mail: ellisrp@bu.edu
Phone: 617-353-2741

PhD Administrator: Andrew Campolieto
E-mail: acamp@bu.edu
Phone: 617-353-4454
October 2015

Dear colleague:

Attached please find the CVs and abstracts of the nineteen Ph.D. students on the job market from the Boston University Department of Economics. This is a strong cohort, and I encourage you to consider them carefully for any job openings that you may have.

As you may be aware, our department has grown significantly in quality and stature and is now one of the top-rated economics departments in North America and the world. This change in quality has been mirrored in the quality of our graduate students. In the last five years, our doctoral candidates have taken tenure-track jobs at Brown, Harvard Business School, London School of Economics, Purdue, Vanderbilt, Warwick, National University of Singapore, Yale-National University of Singapore, University of Texas – Dallas, Tufts, UNSW, Renmin, Shanghai University of Finance and Economics, Penn State, Missouri, Wayne State, Oklahoma, Pittsburgh, Michigan State, Indiana, University of Kent, New College, and other fine universities and colleges. Our students have also found research positions at Harvard, The World Bank, IMF, and Federal Reserve; post-doc positions at Harvard, EUI, Minnesota, and Oxford; and jobs at many top consulting companies, research institutes, banks, and central banks.

Reflecting a continuing increase in the quality of our entering graduate students and our stringent standards for remaining in the Ph.D. program, we have an excellent group of job market candidates this year. I urge you to closely study the summaries of these candidates and to be in touch with the candidates, their advisors, or me if you need any further information.

This full booklet, as well as job market candidate web pages and research papers, are available on our website at http://www.bu.edu/econ/phd/outcomes/phdcandidates/.

You can contact me at ellisrp@bu.edu, by phone at (617) 353-2741 or by FAX at (617) 353-4449. I will be happy to talk with you about any of the candidates, but in particular about the micro and econometric students, since these are my areas of expertise. My colleague Professor Simon Gilchrist (sgilchri@bu.edu, 617-353-6824) is also helping with job placement and is a better choice if you wish to discuss the macroeconomics and international economics candidates more fully. If you have difficulty reaching a candidate, please feel free to contact me or the Ph.D. program administrator Andrew Campolieto by email (acamp@bu.edu) or phone at 617-353-4454.

I hope the enclosed packet will be useful in your recruiting efforts.

Sincerely yours,

Randall P. Ellis
Professor of Economics
Ajayi, Kehinde  kajayi@bu.edu  (617) 353-4144
Baxter, Marianne  mbaxter@bu.edu  (617) 353-2417
Bazzi, Samuel  sbazzi@bu.edu  (617) 353-6150
Carliner, Geoffrey  carliner@bu.edu  (617) 353-5663
Cati, Regina  catir@bu.edu  (617) 353-4249
Chamley, Christophe  chamley@bu.edu  (617) 353-4250
Decarolis, Francesco  fdc@bu.edu  (617) 353-4535
Ellis, Randy  ellisrp@bu.edu  (617) 353-2741
Epstein, Larry  lepstein@bu.edu  (617) 353-9670
Fernandez-Val, Ivan  ivanf@bu.edu  (617) 353-6821
Fisman, Raymond  rfisman@bu.edu  (617) 353-4958
Fiszbein, Martin  fiszbein@bu.edu  (617) 353-4983
Frydman, Carola  cfrydman@bu.edu  (617) 353-4396
Garetto, Stefania  garettos@bu.edu  (617) 358-5887
Gilchrist, Simon  sgilchri@bu.edu  (617) 353-6824
Guren, Adam  guren@bu.edu  (617) 353-4534
Harris, John  harrisjr@bu.edu  (617) 353-8903
Huynh, Hsueh-Ling  hlhuynh@bu.edu  (617) 353-6823
Idson, Todd  tidson@bu.edu  (617) 353-2742
Jaumandreu, Jordi  jordij@bu.edu  (617) 358-5925
Jones, Leroy  jones@bu.edu  (617) 353-4123
Kaido, Hiroaki  hkaido@bu.edu  (617) 358-5924
King, Robert  rking@bu.edu  (617) 353-5941
Koskinen, Benjamiin  bkosk@bu.edu  (617) 358-2603
Kotlikoff, Larry  kotlikof@bu.edu  (617) 353-4002
Lang, Kevin  lang@bu.edu  (617) 353-5694
Lipman, Bart  blipman@bu.edu  (617) 353-2995
Lucas, Robert  rluicas@bu.edu  (617) 353-4147
Ma, Albert  ma@bu.edu  (617) 353-4010
Manove, Michael  manove@bu.edu  (617) 353-3299
Margo, Robert  margora@bu.edu  (617) 353-6819
McKay, Alisdair  amckay@bu.edu  (617) 353-6324
Miao, Jianjun  maioj@bu.edu  (617) 353-6675
Mookherjee, Dilip  dilipm@bu.edu  (617) 353-4392
Newman, Andrew  afnewman@bu.edu  (617) 358-4354
Noor, Jawwad  jnoor@bu.edu  (617) 353-4436
Ortner, Juan  jortner@bu.edu  (617) 353-9583
Paserman, Daniele  paserman@bu.edu  (617) 353-5695
Perron, Pierre  perron@bu.edu  (617) 353-3026
Persson, Bjorn  bpersson@bu.edu  (617) 358-5926
Qu, Zhongjun  qu@bu.edu  (617) 353-5921
Rysman, Marc  mrysman@bu.edu  (617) 353-3086
Schmieder, Johannes  schmieder@bu.edu  (617) 358-5923
Switala, Andre  switala@bu.edu  (617) 358-2604
Tandon, Pankaj  ptandon@bu.edu  (617) 353-3089
Terry, Stephen  stephent@bu.edu  (617) 353-4455
Vogelsang, Ingo  vogelsan@bu.edu  (617) 353-2996
Watson, Bruce  bdwatson@bu.edu  (617) 353-5851
<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Job Market Paper</th>
<th>Fields</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levent Altinoglu</td>
<td><a href="mailto:levent@bu.edu">levent@bu.edu</a></td>
<td>The Origins of Aggregate Fluctuations in a Credit Network Economy</td>
<td>Macroeconomics, International Economics, Financial Economics</td>
<td>Stefania Garetto, Simon Gilchrist, Adam Guren</td>
</tr>
<tr>
<td>Mirko Fillbrunn</td>
<td><a href="mailto:mfi@bu.edu">mfi@bu.edu</a></td>
<td>Strategic Voting and Ballot Order Effects</td>
<td>Applied Microeconomics, Political Economy, Behavioral Economics</td>
<td>Jawwad Noor, Dilip Mookherjee, Daniele Paserman</td>
</tr>
<tr>
<td>Francois Guay</td>
<td><a href="mailto:fguay@bu.edu">fguay@bu.edu</a></td>
<td>Efficient Parameter Estimation for Multivariate Jump-Diffusions</td>
<td>Financial Econometrics, Asset Pricing, Computational Methods</td>
<td>Zhongjun Qu, Gustavo Schwenkler, Pierre Perron, Steve Lawrence</td>
</tr>
<tr>
<td>Kavan Kucko</td>
<td><a href="mailto:kjkucko@bu.edu">kjkucko@bu.edu</a></td>
<td>Do Workers Respond Differently Across Sources of Income: Evidence from Multiple Income Support Programs</td>
<td>Labor Economics, Public Economics, Macroeconomics</td>
<td>Johannes Schmieder, Kevin Lang, Menzie Chinn</td>
</tr>
<tr>
<td>Timothy Layton</td>
<td><a href="mailto:layton@hcp.med.harvard.edu">layton@hcp.med.harvard.edu</a></td>
<td>Upcoding: Evidence from Medicare on Squishy Risk Adjustment</td>
<td>Health Economics, Public Economics, Labor Economics, Econometrics</td>
<td>Randall Ellis, Thomas McGuire, Keith Ericson, Joseph P. Newhouse</td>
</tr>
<tr>
<td>Ying Lei</td>
<td><a href="mailto:ylei@bu.edu">ylei@bu.edu</a></td>
<td>How Do Firms Advertise When Customer Reviews are Available?</td>
<td>Industrial Organization, Quantitative Marketing, Applied Game Theory, Applied Econometrics</td>
<td>Albert Ma, Marc Rysman, Juan Ortner, Monic Sun</td>
</tr>
<tr>
<td>Jiaxuan Li</td>
<td><a href="mailto:jxli@bu.edu">jxli@bu.edu</a></td>
<td>Gateway Products in the DSLR Camera Market: Dynamic Demand, Consumer Learning and Switching Costs</td>
<td>Industrial Organization, Applied Econometrics</td>
<td>Marc Rysman, Hiroaki Kaido, Albert Ma, Francesco Decarolis</td>
</tr>
<tr>
<td>Mengmeng Li</td>
<td><a href="mailto:mengmeng@bu.edu">mengmeng@bu.edu</a></td>
<td>Big Data in Testing the Efficient Market Hypothesis of the Bitcoin Market</td>
<td>Financial Economics, Computational Economics, Econometrics, Labor Economics</td>
<td>Jianjun Miao, Zhongjun Qu, Stephen Terry</td>
</tr>
<tr>
<td>Shuheng Lin</td>
<td><a href="mailto:slin619@bu.edu">slin619@bu.edu</a></td>
<td>The Dynamics of R&amp;D Organization and Productivity Growth</td>
<td>International Economics, Industrial Organization, Applied Econometrics</td>
<td>Stefania Garetto, Jordi Jaumandreau, Marc Rysman</td>
</tr>
<tr>
<td>Elisabeth Perlman</td>
<td><a href="mailto:perlmane@bu.edu">perlmane@bu.edu</a></td>
<td>Dense Enough To Be Brilliant: Patents, Urbanization, and Transportation in Nineteenth Century America</td>
<td>Economic History, Innovation, Labor Economics, Urban/Regional Economics</td>
<td>Robert Margo, Carola Frydman, Daniele Paserman</td>
</tr>
<tr>
<td>Alex Poterack</td>
<td><a href="mailto:poterack@bu.edu">poterack@bu.edu</a></td>
<td>The Compromise and Attraction Effects Through Frame Preferences</td>
<td>Decision Theory, Behavioral Economics, Health Economics, Industrial Organization</td>
<td>Barton Lipman, Jawwad Noor, Dilip Mookherjee</td>
</tr>
<tr>
<td>Daniel Schwab</td>
<td><a href="mailto:schwab@bu.edu">schwab@bu.edu</a></td>
<td>Employment Protection and the Labor Informatory of the Youth: Evidence from India</td>
<td>Development Economics, Labor Economics</td>
<td>Dilip Mookherjee, Samuel Bazzi, Kevin Lang, Eric Werker</td>
</tr>
<tr>
<td>Yao Shu</td>
<td><a href="mailto:dianashu@bu.edu">dianashu@bu.edu</a></td>
<td>What if Managers Are Not Impartial? The Effect of Favoritism and Influence on Incentive Design and Employee Effort</td>
<td>Organizational Economics, Labor Economics</td>
<td>Andrew Newman, Kevin Lang, Michael Manove</td>
</tr>
<tr>
<td>Benjamin Solow</td>
<td><a href="mailto:bsolow@bu.edu">bsolow@bu.edu</a></td>
<td>Aggregate Uncertainty in Runoff Elections and Open Primaries</td>
<td>Political Economy, Microeconomic Theory, Industrial Organization, Behavioral Economics</td>
<td>Barton Lipman, Laurent Boulton, Juan Ortner</td>
</tr>
<tr>
<td>Patricio Toro</td>
<td><a href="mailto:ptoro@bu.edu">ptoro@bu.edu</a></td>
<td>The Persistent Effects of Credit Availability During Recessions: Evidence from a Natural Experiment</td>
<td>Macroeconomics, Financial Economics, Labor Economics</td>
<td>Daniele Paserman, Simon Gilchrist, Adam Guren</td>
</tr>
<tr>
<td>Ei Yang</td>
<td><a href="mailto:eiyang@bu.edu">eiyang@bu.edu</a></td>
<td>Persistence of History: Financial Friction and Mobility Distortion</td>
<td>Macroeconomics, Computational Economics, Development Economics</td>
<td>Simon Gilchrist, Jianjun Miao, Robert King</td>
</tr>
<tr>
<td>Guihai Zhao</td>
<td><a href="mailto:maxzhao@bu.edu">maxzhao@bu.edu</a></td>
<td>Confidence, Bond Risks, and Asset Returns</td>
<td>Asset Pricing, Macroeconomics, Monetary Economics</td>
<td>Larry Epstein, Francois Gourio, Simon Gilchrist, Jianjun Miao</td>
</tr>
<tr>
<td>Fan Zhuo</td>
<td><a href="mailto:zhuo@bu.edu">zhuo@bu.edu</a></td>
<td>Likelihood Ratio Based Tests for Markov Regime Switching</td>
<td>Econometrics, Time Series, Macroeconomics, Empirical Finance</td>
<td>Zhongjun Qu, Pierre Perron, Hiroaki Kaido, Jianjun Miao</td>
</tr>
</tbody>
</table>
2016 PhD Candidates Boston University Department of Economics

Sorted by Last Name

Levent Altinoglu  Macroeconomics, International Economics, Financial Economics
Mirko Fillbrunn  Applied Microeconomics, Political Economy, Behavioral Economics
Francois Guay  Financial Econometrics, Asset Pricing, Computational Methods
Apoorva Javadekar  Financial Economics
Kavan Kucko  Labor, Public, Macroeconomics
Timothy Layton  Health, Public, Labor, Econometrics
Ying Lei  Industrial Organization, Applied Microeconomics, Applied Game Theory
Jiaxuan Li  Industrial Organization, Applied Econometrics
Mengmeng Li  Financial Economics, Computational Economics, Econometrics, Labor Economics
Shuheng Lin  International Industrial Organization, Applied Econometrics
Elisabeth Perlman  Economic History, Innovation, Labor Economics, Urban/Regional Economics
Alex Poterack  Decision Theory, Behavioral Economics, Health Economics, Industrial Organization
Daniel Schwab  Development Economics, Labor Economics
Yao Shu  Organizational Economics, Labor Economics
Benjamin Solow  Political Economy, Microeconomic Theory, Industrial Organization, Behavioral Economics
Patricio Toro  Macroeconomics, Financial Economics, Labor Economics
Ei Yang  Macroeconomics, Computational Economics, Development Economics
Guihai Zhao  Finance – Asset Pricing, Macroeconomics, Monetary Economics
Fan Zhuo  Econometrics, Time Series, Macroeconomics, Empirical Finance
2016 PhD Candidates Boston University Department of Economics

Sorted by Major Fields

Behavioral Economics
Mirko Fillbrunn
Alex Poterack
Benjamin Solow

Computational Economics
Francois Guay
Mengmeng Li
Ei Yang

Development Economics
Daniel Schwab
Ei Yang

Econometrics
Francois Guay
Timothy Layton
Ying Lei
Jiaxuan Li
Mengmeng Li
Shuheng Lin
Fan Zhuo

Economic History
Elisabeth Perlman

Financial Economics
Levent Altinoglu
Francois Guay
Apoorva Javadekar
Mengmeng Li
Patricio Toro
Guihai Zhao
Fan Zhuo

Health Economics
Timothy Layton
Alex Poterack

Industrial Organization
Ying Lei
Jiaxuan Li
Shuheng Lin
Alex Poterack
Benjamin Solow

International Economics
Levent Altinoglu
Apoorva Javadekar

Labor Economics
Kavan Kucko
Timothy Layton
Mengmeng Li
Elisabeth Perlman
Daniel Schwab
Yao Shu
Patricio Toro

Macroeconomics/Monetary Economics
Levent Altinoglu
Apoorva Javadekar
Kavan Kucko
Patricio Toro
Ei Yang
Guihai Zhao
Fan Zhuo

Microeconomics
Mirko Fillbrunn
Ying Lei
Alex Poterack
Yao Shu
Benjamin Solow

Organizational Economics
Yao Shu

Political Economy
Mirko Fillbrunn
Benjamin Solow

Public Economics
Kavan Kucko
Timothy Layton

Quantitative Marketing
Ying Lei

Theory
Alex Poterack
Yao Shu
Benjamin Solow

Urban/Regional Economics
Elisabeth Perlman
LEVENT ALTINOGLU
270 Bay State Road
Department of Economics
Boston University
Boston MA 02215
Cell: (617) 817-6669
Email: levent@bu.edu
Website: blogs.bu.edu/levent

EDUCATION
Ph.D., Economics, Boston University, Boston MA, May 2016 (expected)
Dissertation Title: Essays on Firm-Level Frictions in Macroeconomics
Dissertation Committee: Stefania Garetto, Simon Gilchrist, and Adam Guren
B.S. (High Honors), Economics, Carnegie Mellon University, Pittsburgh, PA, 2010

FIELDS OF INTEREST
Macroeconomics, Financial macroeconomics, International macroeconomics, International trade

TEACHING EXPERIENCE
Teaching Fellow, Introduction to Macroeconomics, Department of Economics, Boston University, Fall 2012
Teaching Fellow, Introduction to Macroeconomics, Department of Economics, Boston University, Spring 2012

WORK EXPERIENCE
Research Assistant, Stefania Garetto, Boston University (Spring 2013, Fall 2013, Spring 2014, Fall 2014)

FELLOWSHIPS AND AWARDS
Dissertation Fellowship, Federal Reserve Board, Division of International Finance, Summer 2015
Dean’s Fellowship, Boston University, Graduate School of Arts and Sciences
Special Research Fellowship, Spring 2015, Boston University, Department of Economics
Senior Honors Program, Tepper School of Business, Carnegie Mellon University
Thesis Advisor: Dennis Epple

Undergraduate Economics Program Competition, First Place: “Do Zoning Ordinances Affect the Distribution of Housing?” (2010)

WORKING PAPERS
(Job Market Paper)


WORK IN PROGRESS
“Credit Constraints and Job Creation: Evidence from Small Firms” July 2015
“Information-Driven Credit Cycles” (with Giacomo Candian), July 2015

LANGUAGES
English (native), Turkish (fluent), French (moderate)

COMPUTING SKILLS
MATLAB, Stata

CITIZENSHIP
Australia, Turkey, United States (permanent residency)

REFERENCES
Stefania Garetto Department of Economics Boston University Phone: (617) 358-5887 garettos@bu.edu
Simon Gilchrist Department of Economics Boston University Phone: (617) 353-6824 sgilchri@bu.edu
Adam Guren Department of Economics Boston University Phone: (617) 353-4534 guren@bu.edu
The Origins of Aggregate Fluctuations in a Credit Network Economy, (Job Market Paper)

I study how shocks propagate in a credit network economy. I build a model of an economy in which trade in intermediate goods is financed by supplier credit. The credit linkages between firms propagate liquidity shocks and generate a multiplier effect on aggregate output. I construct a proxy of inter-industry trade credit flows by combining firm-level balance sheet data and industry-level input-output data, with which I calibrate the model. I use a structural factor approach to estimate shocks to US industrial production (IP) industries from 1997-2013. Taking into account the credit linkages between these industries, I find that most aggregate volatility in IP was driven by idiosyncratic productivity shocks and aggregate liquidity shocks. During the Great Recession, three-quarters of the drop in aggregate IP was due to an aggregate liquidity shock, and the remainder can be accounted for by idiosyncratic liquidity shocks to a few systemically important industries. I provide microevidence in line with the model’s key mechanism.

Credit Constraints and Job Creation: Evidence from Small Firms

Small firms account for nearly two-thirds of net new jobs. I examine the effects of credit availability on job creation and destruction by small firms using the Survey of Small Business Finances. I first exploit a feature of standard trade credit contracts to identify firms which are liquidity-constrained. I then use the cross-sectional variation in bankruptcy exemption laws across states as an instrument for the supply of credit. I study the differential effects of credit supply on the hiring and firing behavior of constrained and unconstrained firms, and relate these effects to product characteristics and certain aspects of bank-firm relationships. Finally, I develop a model to explain these effects and assess their quantitative significance.

Cross-Border Hiring and Unemployment in a Global Economy

To better understand the relationship between international trade and unemployment, this paper develops a static general equilibrium model with labor market frictions and heterogeneous firms. The novelty is that firms can engage in cross-border hiring, by employing labor domestically or from abroad. There are two channels through which unemployment responds to trade liberalization: there is a rise in expected worker income which reduces unemployment, and an increase in wages which increases the unemployment rate. This paper outlines the conditions on the model parameters under which unemployment rises or falls after trade liberalization. This unique framework is tractable and demonstrates that models in the literature which ignore cross-border hiring likely underestimate the upward force of trade liberalization on unemployment.
MIRKO FILLBRUNN
270 Bay State Road
Boston, MA, 02215 USA
Cell: +1-857-218-2641
Email: mfi@bu.edu
Website: http://people.bu.edu/mfi

EDUCATION
Ph.D. in Economics, Boston University, Boston MA, 2010 - May 2016 (expected)
Dissertation Title: Essays on Applied Political Economy
Dissertation Committee: Jawwad Noor, Dilip Mookherjee, and M. Daniele Paserman

Diplom, Business Mathematics, University of Duisburg-Essen, Duisburg, GERMANY, 2009
(equivalent to Masters)

FIELDS OF INTEREST
Applied Microeconomics, Political Economy, Behavioral Economics

TEACHING EXPERIENCE
Teaching Fellow, Introduction to Microeconomics 101, Department of Economics, Boston University,
Fall 2012, Spring 2014, and Spring 2015

WORK EXPERIENCE
Research Assistant for Professor Leena Rudanko, Boston University, Fall 2011, Spring 2012, Fall 2013
Intern DZ Bank AG, New York, 2009
Intern DZ Bank AG, Frankfurt am Main, 2008

FELLOWSHIPS AND AWARDS
Rosenstein-Rodan Prize for job market paper "Strategic Voting and Ballot Order Effects"
(best original research on development economics or a related discipline among PhD students),
Institute for Economic Development, Summer 2014
Dean’s Fellowship, Boston University, 2010-2015
Special Research Fellowship, Boston University, Spring 2013, Fall 2014
Summer Funding, Boston University, 2010-2014

WORKING PAPERS
"Strategic Voting and Ballot Order Effects," (Job Market Paper) October 2015

WORK IN PROGRESS
"Blame it on the Recession"
"Uninformed Strategic Voting"

CONFERENCES AND PRESENTATIONS
Econometric Society, Minneapolis, Minnesota, MN, 2014
European Economic Association, Toulouse, France, 2014
SITE summer workshop (Stanford Institute for Theoretical Economics), Palo Alto, CA, 2014
Kiel Institute for the World Economy and Kiel University, Kiel, Germany, 2014
Mirko Fillbrunn

**Computer Skills:** STATA, MATLAB, Mathematica, LaTex

**Date of Birth:** 08/07/1990

**Citizenship/VISA:** Germany/ F1

**Languages:** Fluent in English and German, Intermediate Spanish

**References**

**Professor Jawwad Noor**
Department of Economics
Boston University
270 Bay State Road
Boston MA 02215 USA
Phone: +1-617-353-4436
Email: jnoor@bu.edu

**Professor Dilip Mookherjee**
Department of Economics
Boston University
270 Bay State Road
Boston MA 02215 USA
Phone: +1-617-353-4392
Email: dilipm@bu.edu

**Professor M. Daniele Paserman**
Department of Economics
Boston University
270 Bay State Road
Boston MA 02215 USA
Phone: +1-617-353-5695
Email: paserman@bu.edu

September 2015
Strategic Voting and Ballot Order Effects (Job Market Paper)

Substantial evidence suggests that candidates may benefit from being listed early on voting ballots. I provide new evidence on how these ballot order effects change with the number of votes a voter may cast and a candidate’s chances to win the election. Motivated by these regularities, I offer a theory of ballot order effects that combines both behavioral and, new in the literature, rational aspects of voting. I show that this theory is consistent with the empirical patterns and find that rational voters account for around half of total ballot order effects. Lastly, I consider basic versions of purely behavioral models which turn out to be difficult to reconcile with the empirical patterns presented here.

Voting Behavior, Newspapers, and Language

I use variation in languages across Europe to identify a causal impact of newspaper sales on voter turnout. Languages differ in how much space they require to express information. I estimate such language efficiency from large bilingual text compilations. Using a European-wide survey with 18 languages, I find that respondents who speak efficient languages are more likely to read newspapers. This finding is robust to considering only immigrants, controlling for peer effects or using country-level data. Preliminary results show that newspaper consumption increases immigrants’ voter turnout when using language efficiency as an instrument for newspaper consumption to account for potential reverse causality.

Blame it on the Recession

People may blame their misfortune on external forces rather than their own shortcomings to preserve a positive self-image or stay optimistic for the future. Recessions can reinforce this behavior by providing a convenient scapegoat for financial setbacks. I investigate whether such attribution bias indeed varies with the business cycle and find preliminary supportive evidence using the Michigan Survey of Consumers. I show that such state-dependent attribution bias can lead to compromised information aggregation in elections and discuss its implications for stigma-based models.
François D. Guay
270 Bay State Rd
Boston University, Department of Economics
Boston, MA, 02215 USA
Cell: (857) 272-6029
Email: fguay@bu.edu
Website: http://sites.google.com/site/frguay1

Education
Ph.D. in Economics, Boston University, Boston MA, 2016 (expected)
  Dissertation Title: Parameter Inference for Multivariate Stochastic Processes with Jumps
  Dissertation Committee: Zhongjun Qu, Gustavo Schwenkler and Pierre Perron
Ph.D. Classes, Economics,
  Université de Montréal, Montréal, QC, Canada, 2011
M.Sc., Applied Mathematics, Operations Research,
  École Polytechnique de Montréal, Montréal, QC, Canada, 2010
B.Sc., Engineering, Mechanical and Industrial Engineering,

Fields of Interest
  Financial Econometrics, Asset Pricing, Computational Methods

Fellowships and Awards
  Hariri Graduate Fellowship, Hariri Institute for Computing and Computational Science & Engineering,
    Boston University, Summer 2015
  IED Travel Grant, Boston University, Spring 2015
  Department Fellowship, Boston University Department of Economics, 2012 - 2015
  Special Research Fellowship, École Polytechnique de Montréal, 2009 - 2010

Work Experience
  Quantextual Team Intern, State Street Associates, Cambridge, MA, 06/2015 - present
  Research Assistant for Laurent Barras, McGill University, Summer 2011

Working Papers
  "Efficient Parameter Estimation for Multivariate Jump-Diffusions" (Job Market Paper)
    (with Gustavo Schwenkler), October 2015
  "A Stochastic Volatility Model with Markov-Switching Jumps", September 2015
  "A Class of Markov Switching Stochastic Volatility Models" (with Fan Zhuo), August 2015
  "Optimal Pricing in Media Revenue Management" (Master’s Thesis), August 2010

Work in Progress
  "Uncovering the Transition Density of Multivariate Diffusions"
    (with Gustavo Schwenkler)
Teaching Experience

Teaching Fellow, Statistics for Economists (Master’s level), Boston University, Fall 2014, 2015 
Teaching Fellow, Advanced Econometrics (Ph.D. level), Boston University, Spring 2013, 2014 
Instructor, Intermediate Macroeconomics, Boston University, Summer 2014 
Teaching Fellow, Introduction to Macroeconomics, Boston University, Fall 2012 - Fall 2013

Conferences and External Presentations

Green Line BU-BC Conference, Boston University, December 2015 (scheduled)
Finance Brown Bag Seminar, Questrom School of Business, Boston University, October 2015
Econometrics Seminar, Boston University, October 2015
4th PhD Student Conference in Intl Macroeconomics and Financial Econometrics, Paris, March 2015
Econometrics Seminar, Boston University, March 2015
Optimizations Days 2010, Montreal, June 2010

Certification: Passed all three levels of the CFA program, CFA Institute (US), 2015

Professional Service: Officer of the BU Graduate Economics Association

Computer Skills: R, Matlab, C++, MS Office and \LaTeX

Languages: English (fluent), French (native)

Citizenship/Visa: France / in-process for a Green card

References

Professor Zhongjun Qu
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-358-5921
Email: qu@bu.edu

Professor Gustavo Schwenkler
Department of Finance, Questrom School of Business
Boston University
595 Commonwealth Avenue
Boston MA 02215 USA
Phone: +1-617-353-4615
Email: gas@bu.edu

Professor Pierre Perron
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-353-3026
Email: perron@bu.edu

Steven Lawrence
SSGX
State Street Associates
140 Mt Auburn St.
Cambridge MA 02138 USA
Phone: +1-617-259-8024
Email: sclawrence@statestreet.com

October 2015
Efficient Parameter Estimation for Multivariate Jump-Diffusions (Job Market Paper) (with Gustavo Schwenkler), October 2015

This paper develops an unbiased Monte-Carlo estimator of the transition density of a multivariate jump-diffusion process. The drift, volatility, jump intensity, and jump magnitude are allowed to be state-dependent and non-affine. It is not necessary that the volatility matrix can be diagonalized using a change of variable or change of time. Our density estimator facilitates the parametric estimation of multivariate jump diffusion models based on discretely observed data. Under standard conditions, the parameter estimators we propose have the same asymptotic behavior as maximum likelihood estimators when the number of data points grows, even after keeping the observation frequency of the data fixed. In a numerical case study of practical relevance, our density and parameter estimators are found to be highly accurate and computationally efficient.

A Stochastic Volatility Model with Markov-Switching Jumps, September 2015

In this paper, I examine continuous-time stochastic volatility models with jumps in returns and volatility, where the jumps parameters are Markov-switching. I estimate the parameters and the latent processes for the S&P500 and the Nasdaq indices from 1990 to 2014. I find that jumps account for a larger part of the total variance of the returns when allowing the jump intensity to be Markov-switching. In periods of market stress, the dynamics of stochastic volatility differ significantly from the non Markov-switching case, and contributes less to the observed variation in the returns. I test for Markov-switching using the Odds ratios, which reveal the presence of Markov-Switching in the jumps. The models are estimated by MCMC methods.

A Class of Markov Switching Stochastic Volatility Models (with Fan Zhuo), August 2015

This paper provides tools to estimate Markov-Switching continuous-time affine stochastic volatility models with jumps in returns and volatility, where the jumps parameters are not Markov-switching. The estimation is performed via MCMC, which allows to obtain the latent processes induced by the modeling. Furthermore, we propose some misspecification tests and develop a Markov-switching test based on the Odds ratios. We estimate the parameters and the latent processes for the S&P500 and the Nasdaq indices from 1990 to 2014. We show that the S&P500 is the only index exhibiting a Markov-switching behavior, even though plots of the Markov chain for the Nasdaq deceivingly show the contrary.

Optimal Pricing in Media Revenue Management (Master’s thesis - in French), August 2010

TV Channels face many problems when they sell their inventory to media agencies. They have to choose which commercials should be aired, and simultaneously determine the prices of these commercials, while staying competitive. This master’s thesis provides a bilevel programming model to tackle this revenue management problem. The novelty of this modeling lies in the introduction of patterns of commercial spots. As in the cutting stock problem, I use patterns to “cut” media inventories. This way, a pattern can be considered as a set of commercials, and TV channels sell selection of commercial spots. I develop an algorithm to solve the problem, based on well chosen pre-processive cuts. My algorithm allows to optimally schedule and price patterns of commercial spots for a typical prime time on TV.
Apoorva Javadekar
270 Bay State Rd
Boston University, Department of Economics
Boston, MA, 02215 USA
Cell USA: (+1)617-304-7719
Cell India: (+91)9423004488
Email: japoorva@bu.edu
Website: https://sites.google.com/site/apoorvajavadekar

Education
Ph.D. in Economics, Boston University, Boston, USA, (Expected May 2016)
Dissertation Title: Essays on Mutual Funds
Dissertation Committee: Rui Alburqueque, Andrea Buffa, Simon Gilchrist
M.S.c, Financial Engineering, (Distinction), 2008-2009
Birkbeck College, University of London, U.K
M.A, Economics, 2006-2008
Delhi School of Economics, University of Delhi, India
Chartered Accountant (Financial Auditor), 2001-2005
Institute of Chartered Accountants of India
Bachelor of Commerce, (Distinction), University of Pune, India, 2001-2004
Specialization: Statistics
Chartered Financial Analyst, CFA Institute, USA
Exam Status: Passed all three levels

Fields of Interest
Mutual Funds, Asset Pricing, International Finance

Consultancy Assignments and Work Experience
Consultant (Project Financing) to Adani Infrastructure Ltd, India, 2015-present
Research Assistant (Equity Valuation) to Prof. Scott Stewart, Boston University, 2011-2012
Equity Researcher at Wealth Managers (India) Pvt. Ltd, 2005-2006
Audit and Taxation Articleship at B.L. Phatak & Co. for Chartered Accountancy program, 2002-2005

Teaching Experience
Lecturer (International Finance), Questrom School of Business, Boston University, 2014-2015
Teaching Fellow, Microeconomic Analysis, Department of Economics, Boston University, Fall 2011
Assistant professor in Finance, Indira Institute of Management, India, 2009-2010

Working Papers
"Mutual Fund Flows When Manager Has Timing and Picking Skills"

Work in Progress
"Asymmetric Correlation in International Equity Markets" (Joint with Rui Albuquerque)
MEDIA & PRESENTATIONS
Article in Hindustan Times titled *Puzzles in Globalization*, 2013
Presented "Performance of Mutual Funds" at Gokhale Institute of Economics and Political Science, India, 2013

PROFESSIONAL SERVICE: Referee for Finance Research Letters

COMPUTER SKILLS: Stata, Matlab, MS Office, and LaTeX

CITIZENSHIP: India (Visa F1)

REFERENCES
Professor Rui Albuquerque
Questrom School of Business
Boston University
595 Commonwealth Avenue
Boston MA 02215 USA
Phone: +1-617-353-4614
Email: ralbuque@bu.edu

Professor Andrea Buffa
Questrom School of Business
Boston University
595 Commonwealth Avenue
Boston MA 02215 USA
Phone: +1-617-353-4404
Email: buffa@bu.edu

Professor Simon Gilchrist
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-353-6824
Email: sgilchri@bu.edu

October 2015
How Does Mutual Fund Reputation Affect Subsequent Fund Flows? (Job Market Paper)

Paper offers a novel evidence that the link between recent mutual fund performance and subsequent fund flows is largely shaped by its reputation as measured by its prior long-term performance. Both sensitivity and level of fund flows increase in reputation. Particularly, for a fund with low level of reputation, flows are weakly responsive to recent performance. In short, return chasing is limited only for funds with strong reputation. When investors learn about unknown managerial quality and when update to beliefs are a function of signals only independent of priors as in the case of Gaussian signals, competitive capital markets imply that fund flows are completely determined by recent performance. In light of this, I explain the dependence of fund flows on reputation using presence of Inattentive Investors who are otherwise rational. Model additionally generates implications about performance persistence, impact of managerial replacements and fee structure. All the implications are confirmed in the data.

Mutual Fund Flows When Manager Has Timing and Picking Skills

Mutual fund manager can add value either by picking profitable assets and generating alpha or by timing the market by adjusting beta. While traditional theories have focussed on alpha component of manager’s skill, I built a model where manager has both types of skills. This generates an interesting learning mechanism whereby what investors learn about manager depends not only upon managerial performance but market state as well. In particular, period of high (low) market volatility is informative about timing (picking) skills. Because investors value timing skills more during high volatile periods, mutual fund flows inherit cyclical nature implicit in learning mechanism. I test and confirm these predictions in the data. In particular, I show that fund flow sensitivity is increasing in magnitude of market movement as well as conditional volatility, that recessions being characterized by high conditional volatility are also the times with higher flow sensitivity and that funds with good timing skills experience higher capital flows when forecasted volatility is higher.

Asymmetric Correlations In International Equity Markets (Work in progress) (Joint With Rui Albuquerque)

There is large evidence suggesting that global equity returns have higher correlations during recessions as compared to expansions. We show that similar pattern is observable for equity fundamentals like GDP growth or industrial production. We explore asset pricing implications of asymmetric correlations of fundamentals in a standard endowment economy.
Kavan Kucko
Boston University
Department of Economics
270 Bay State Road
Boston MA 02215
Cell: (608) 217-6626
Email: kavan.kucko@gmail.com
Website: https://sites.google.com/site/kavankucko/

Education
Ph.D., Economics, Boston University, May 2016 (Expected)
Main advisor: Johannes Schmieder


Fields of Interest
Labor Economics, Public Economics, Macroeconomics.

Teaching Experience
Instructor, Introduction to Microeconomics, Boston University, Summer 2013
Instructor, Introduction to Microeconomics, Boston University, Summer 2012
Teaching Fellow, Introduction to Microeconomics, Boston University, Fall 2011 & Fall 2014
Teaching Fellow, Introduction to Macroeconomics, Boston University, Spring 2012
Math and Economics Tutor, University of Wisconsin-Madison Athletic Department, 2006-2007

Work Experience
Research Assistant, Boston University, Spring 2015 & Spring 2012-Spring 2014
Research Assistant, Boston University School of Management, Summer 2012
Research Assistant, Board of Governors of the Federal Reserve System, 2008-2010
Project Assistant, La Follette School of Public Affairs, Fall 2007-Spring 2008

Conference Presentations
National Tax Association's 107th Annual Conference on Taxation, Santa Fe, 2014
Western Economic Association's 89th Annual Conference, Denver, 2014
8th Annual Meeting of the Portuguese Economic Journal, Braga, 2014
Summer School on Socioeconomic Inequality, Chicago, 2013
Barcelona GSE Summer Forum, Barcelona, 2013
Euro Area Business Cycle Network Workshop on Uncertainty over the Business Cycle, Frankfurt, 2009

Fellowships and Awards
Special Research Fellowship, Boston University, Spring 2015
Selected for Lindau Nobel Laureate Meetings on Economic Sciences, 2014
Dean's Fellowship, Boston University, 2010-2015
La Follette Project Assistantship, La Follette School of Public Affairs, 2008

Referee Experience
**Publication**


**Working Paper**


**Work in Progress**

“Does the Labor Force Respond Differently Across Sources of Income: Evidence from Multiple Supplemental Income Programs (Job Market Paper)”

“Optimal Income Taxation with Unemployment and Wage Responses: A Sufficient Statistics Approach,” (with Kory Kroft, Etienne Lehmann and Johannes Schmieder)

**Computer Skills:** STATA, MATLAB, JavaScript, Python, FAME, Microsoft Office/Apache Open Office

**Other:** Curling, Softball, Snowboarding, Guitar

**References**

**Professor Johannes Schmieder**  
Department of Economics  
Boston University  
Phone:  
Email: johannes@bu.edu

**Professor Kevin Lang**  
Department of Economics  
Boston University  
Phone:  
Email: lang@bu.edu

**Professor Menzie Chinn**  
Robert M. La Follette School of Public Affairs  
University of Wisconsin-Madison  
Phone:  
Email: mchinn@lafollette.wisc.edu
Does the Labor Force Respond Differently Across Sources of Income: Evidence from Multiple Supplemental Income Programs (Job Market Paper)

Supplemental income programs aimed at transferring resources to low income individuals face an important tension. Unconditional transfers to those not working create incentives for workers to leave the labor force. Conditioning benefits on labor force participation effectively reduce the resources available to those who are unable to work. Through the expansion of EITC and welfare reform, United States shifted focus from unconditional transfers to in work subsidies. The effectiveness of these programs depend on the willingness and ability for individuals to adjust their employment status. Furthermore, many models of optimal taxation depend on estimates of the labor supply elasticity with respect to net of tax income for implementation. There is no a priori reason to believe labor supply elasticities across these income sources should be equal. In this paper I separately estimates labor supply elasticities associated with various sources of income within the context of a discrete choice model. I also tests for income effects that may result in differing elasticities across the earnings distribution. The differences in elasticities across sources of income can inform both policy makers as well as optimal taxation theory.

Optimal Income Taxation with Unemployment and Wage Responses: A Sufficient Statistics Approach

This paper reassesses whether the optimal income tax program features an Earned Income Tax Credit (EITC) or a Negative Income Tax (NIT) at the bottom of the income distribution, in the presence of unemployment and wage responses to taxation. The paper makes two key contributions. First, it derives a sufficient statistics optimal tax formula in a general model that incorporates unemployment and endogenous wages. This formula nests a broad variety of structures of the labor market, such as competitive models with fixed or flexible wages and models with matching frictions. Our results show that the sufficient statistics to be estimated are: the macro employment response with respect to taxation and the micro and macro participation responses with respect to taxation. We show that an EITC-like policy is optimal provided that the welfare weight on the working poor is larger than the ratio of the micro participation elasticity to the macro participation elasticity. The second contribution is to estimate the sufficient statistics that are inputs to the optimal tax formula using a standard quasi-experimental research design. We estimate these reduced-form parameters using policy variation in tax liabilities stemming from the U.S. tax and transfer system for over 20 years. Using our empirical estimates, we implement our sufficient statistics formula and show that the optimal tax at the bottom more closely resembles an NIT relative to the case where unemployment and wage responses are not taken into account.

Labor Market Outcomes of Veterans with Post-2001 Service Time

Military members that serve post-2001 are at a higher risk of long combat tours that could affect future labor outcomes. This paper quantifies the differences in labor market outcomes between veterans who have served during the post-2001 era and those who served since 1980. I find significant differences in wage earnings and probability of employment across veteran types. Veterans tend to earn more than non-veterans, but effects are larger for minority men and even greater for women, regardless of race. Post-2001 veterans, tend to be underemployed compared to other veterans. Young veterans appear to explain a much of the underemployment.

The Predictive Power of the Yield Curve Across Countries and Time

In recent year, there has been renewed interest in the yield curve (or alternatively, the term premium) as a predictor of future economic activity. In this article, we re-examine the evidence for this predictor for both the United States and other advanced economies. We examine the sensitivity of the results to the selection of countries, and to time periods. We find that the predictive power of the yield curve has deteriorated in the last half of the sample period, although there is evidence of a reversal in the lead-up to the Great Recession. There is reason to believe that European country models perform better than those with non-European countries when using more recent data. In addition, the yield curve proves to have predictive power even after accounting for other leading indicators of economic activity.
TIMOTHY J. LAYTON Ph.D.
180 Longwood Ave
Boston MA 02115 USA
Cell: (573) 353-1566
Email: layton@hcp.med.harvard.edu
Web site: http://scholar.harvard.edu/layton

CURRENT POSITION
NIMH Postdoctoral Research Fellow, Department of Health Care Policy, Harvard Medical School (2014-2016)

EDUCATION
Ph.D., Economics, Boston University, Boston MA, May 2014
Dissertation Title: Risk Selection and Risk Adjustment in Competitive Health Insurance Markets
Dissertation Committee: Randall P. Ellis, Thomas G. McGuire, Keith M. Ericson

B.A., Economics and Political Science, Brigham Young University, Provo, UT, 2009

FIELDS OF INTEREST
Health Economics, Public Finance, Labor Economics, Econometrics

TEACHING EXPERIENCE
Instructor, Introduction to Econometrics, Boston University, Summer 2012
Head Teaching Fellow, Introductory Micro and Macro Analysis, Boston University, 2011-12
Instructor, Economic Statistics, Boston University, Summer 2011
Teaching Assistant, Development Economics, Department of Economics, Brigham Young University, Spring 2009

RESEARCH EXPERIENCE
Research Assistant for Thomas McGuire, Harvard Medical School, 2012-2014
Research Assistant for Randall Ellis, Boston University, 2012-2014
Research Assistant for Marianne Baxter, Boston University, 2010
Research Assistant for Michael Meurer and James Bessen, Boston University, 2009-10
Research Assistant for Frank McIntyre, Brigham Young University, 2009

GRANTS
J-PAL North America Health Care Delivery Initiative: Intervening with Consumers to Improve Choices on Health Insurance Marketplaces, 2015 (Co-Investigator), $135,300
Summer Research Grant, Boston University, 2013 (PI), $5,000

FELLOWSHIPS AND AWARDS
Mark A. Satterthwaite Award for Outstanding Research in Healthcare Markets, Kellogg School of Management, 2014
Special Research Fellowship, Boston University, 2013
Teaching Fellowship, Boston University, 2011-2012
Dr. Timothy J. Layton

PUBLICATIONS

WORKING PAPERS

WORKS IN PROGRESS
“Using ‘Nudges’ to Enhance Competition and Save Consumers Money on Health Insurance Exchanges/Marketplaces” (with Keith Ericson, Adam Sacarny, and Jon Kingsdale)
“Are All Managed Care Plans Created Equal? Evidence from Random Plan Assignment in New York Medicaid Managed Care” (with Michael Geruso and Jacob Wallace)
“Adverse Tiering in Health Insurance Marketplaces” (with Michael Geruso)
“Health Plan Payment in Markets with Public and Private Options” (with Thomas G. McGuire and Joseph P. Newhouse)
“The Effect of the Medicare Advantage Quality Bonus Demonstration on Quality in Private Medicare Plans” (with John Ayanian and Andy Ryan)

CONFERENCES AND PRESENTATIONS
2015: ASSA Annual Meeting, BU/Harvard/MIT Health Economics Seminar, Risk Adjustment Network (scheduled), National Tax Association Annual Meeting (scheduled), Harvard Medical School (scheduled)

2014: Kellogg School of Management Conference on Healthcare Markets, American Society of Health Economists, Research Triangle Institute, Risk Adjustment Network, Annual Health Economics Conference


PROFESSIONAL ACTIVITIES
Referee for Journal of Health Economics, Health Services Research, Inquiry

LANGUAGES: Fluent in English and Spanish
COMPUTER SKILLS: STATA, SAS, LaTeX, Microsoft Office
CITIZENSHIP/Visa: USA

October 2015
REFERENCES

Professor Randall P. Ellis
Department of Economics
Boston University
Phone: (617) 353-2741
Email: ellisrp@bu.edu

Professor Keith M. Marzilli
Ericson
Dept of Markets, Public Policy, and Law
Questrom School of Business
Boston University
Phone: (617) 353-4553
Email: kericson@bu.edu

Professor Thomas G. McGuire
Department of Health Care Policy
Harvard Medical School
Phone: (617) 432-3536
Email: mcguire@hcp.med.harvard.edu

Professor Joseph P. Newhouse
Department of Health Care Policy
Harvard Medical School
Phone: (617) 432-1325
Email: newhouse@hcp.med.harvard.edu
TIMOTHY J. LAYTON

Upcoding: Evidence from Medicare on Squishy Risk Adjustment (Job Market Paper) (with Michael Geruso)

Upcoding---manipulation of patient diagnoses in order to game payment systems---has gained significant attention following the increased use of risk-adjusted health plan payments in US insurance markets. We use a novel strategy for identifying upcoding in markets with adverse selection to provide new evidence that private Medicare plans generate 6% to 16% higher diagnosis-based risk scores than the same enrollees would generate under fee-for-service Medicare, where diagnoses do not determine payments. Our estimates imply upcoding generated excess public spending of $10 billion annually and significant consumer choice distortions. Among private plans, we show coding intensity increases with vertical integration, reflecting a principal-agent problem faced by insurers who desire more intense coding from the physicians with whom they contract.

Imperfect Risk Adjustment, Risk Preferences and Sorting in Competitive Health Insurance Markets

Risk adjustment, a policy aimed at reducing insurer “cream-skimming” incentives, can also ameliorate another type of selection problem where consumers inefficiently sort between fixed insurance contracts. I study how imperfect risk adjustment affects prices, sorting, and welfare in competitive health insurance markets. Using a model of consumer choices and plan prices along with a useful graphical representation, I show that the effectiveness of a particular risk adjustment policy depends on the correlation between consumer demand for the adversely selected plan and the “risk scores” assigned to them for the purpose of risk adjustment, not on the correlation between risk scores and costs conventionally used to evaluate risk adjustment policies. I then use administrative health insurance claims data from a large employer and a structural model of consumer demand to simulate competitive equilibria under various risk adjustment policies. Without risk-adjustment the market completely unravels. However, when diagnosis-based risk-adjustment similar to that being used in the Exchanges is implemented, a substantial portion of market unraveling is undone, with over 80% of individuals enrolling in the more comprehensive plan, implying a welfare gain of over $700 per person.

Assessing Incentives for Adverse Selection in Health Plan Payment Systems (with Randall P. Ellis and Thomas G. McGuire)

Health insurance markets face two adverse selection problems. On the demand side, adverse selection leads to price distortions and inefficient sorting of consumers across health plans. On the supply side, adverse selection creates incentives for plans to inefficiently distort benefits. These problems can be addressed by features of health plan payment systems such as premium risk-rating, risk adjustment, and reinsurance. We develop simple Harberger-type measures of the efficiency consequences of both distortions under a given payment system that can be implemented by policymakers to compare payment systems. We illustrate the use of these measures by comparing the payment system used in the Federal Marketplace to several policy alternatives.
YING LEI
270 Bay State Road
Boston MA 02215 USA
Cell: (617) 961-2812
Fax: (617) 353-4449
Email: ylei@bu.edu
Web site: http://blogs.bu.edu/ylei/

EDUCATION
Ph.D., Economics, Boston University, Boston MA, 2016 (expected)
  Dissertation Title: Essays on Internet Economics
  Main Advisor: Albert Ma
  Dissertation Committee: Albert Ma, Marc Rysman, Juan Ortner and Monic Sun
M.A., Economics, New York University, New York NY, 2010
B.A., Economics, Renmin University of China, Beijing, China, 2008

FIELDS OF INTEREST
  Industrial Organization, Applied Microeconomics, Applied Game Theory

TEACHING EXPERIENCE
  Department of Economics, Boston University
    Instructor, Intermediate Microeconomics, Fall 2015
    Teaching Fellow, Empirical Economics, Spring 2015
    Teaching Fellow, Statistics for Economists (graduate), Spring 2015
    Teaching Fellow, Economics of Information (graduate), Spring 2014, Fall 2011
    Teaching Fellow, Behavioral Economics, Spring 2014, Fall 2011
    Teaching Fellow, Game Theory (undergraduate and graduate), Spring 2012
  Stern School of Business, New York University
    Teaching Assistant, Microeconomics, Spring 2010

WORK EXPERIENCE
  Research Assistant, Questrom School of Business, Boston University, Professor
    Monic Sun, Spring 2015
  Research Assistant (Data Analysis), Department of Economics, Boston University,
    Professor Daniele Paserman, Fall 2012-Spring 2013

FELLOWSHIPS AND AWARDS
  Special Research Fellowship, Boston University, Fall 2013, Fall 2014
  Summer Research Grant, Boston University, Summer 2014
  Teaching Fellowship, Boston University, 2011-2015
  Excellent Student Award, Renmin University of China, 2006-2008

October, 2015
WORKING PAPERS
“How Do Firms Advertise when Customer Reviews are Available?”, September 2015.
“Advertising Response to A Better Online Rating: A Regression Discontinuity Design
on Local Restaurants”, October 2015.

WORKS IN PROGRESS
“Delay in Platform Adoption” (joint with Marc Rysman)
“Customer Reviews and Quality Disclosure” (joint with Jacopo Bizzotto)
“Advertising vs. Customer Reviews: A Model of Dynamic Signaling and Social
Learning” (joint with Mengxi Zhang)

REFEREE EXPERIENCE

CONFERENCES
“How Do Firms Advertise when Customer Reviews are Available?”
8th Workshop on Economics of Advertising and Marketing, Oxford, UK, 2015
10th Economic Graduate Student Conference, Washington University in St. Louis,
2015

LANGUAGES
Fluent in English, Native in Chinese (Mandarin)

COMPUTER SKILLS: STATA, R, MATLAB, Mathematica, LaTex, Lyx, Microsoft Office

OTHER: Flute (Amateur Top Level Certificate), Piano (Amateur Top Level Certificate)

CITIZENSHIP/Visa: China/F1

REFERENCES
Professor Ching-To Albert Ma
Department of Economics
Boston University
Phone: (617) 353-4010
Email: ma@bu.edu

Professor Marc Rysman
Department of Economics
Boston University
Phone: (617) 353-3086
Email: mrysman@bu.edu

Professor Juan Ortner
Department of Economics
Boston University
Phone: (617) 353-6323
Email: jortner@bu.edu

Professor Monic Sun
Questrom School of Business
Boston University
Phone: (617) 353-9640
Email: monic@bu.edu

October, 2015
How Do Firms Advertise When Customer Reviews are Available?  
(Job Market Paper)

Online consumer product reviews have become very popular and influential in consumers’ purchase decisions. I study how competing firms choose advertising and prices when customer reviews are available and when firms may build up loyal customer bases. The model predicts that higher-rated firms are more likely to be dominant in advertising. I also analyze an extreme case of the model: an entry game in which an entrant and an incumbent interact. I find that the availability of customer reviews undoes the “fat-cat” effect of a big incumbent with a lot of loyal customers. An incumbent with a high enough ratio of good reviews can successfully deter entry and maintain a high profit. In the end, with data of local restaurants, I use regression discontinuity estimates to test the prediction of the main model, and find supporting empirical evidence in restaurants’ advertising patterns. Comparative statics of the theory model can explain the pattern of advertising response to Yelp rating found in the empirical RDD paper.

Advertising Response to A Better Online Rating: A Regression Discontinuity Design on Local Restaurants

I analyze the advertising spending pattern of local restaurants with different online ratings on Yelp.com. Rating information on Yelp includes the display rating and the distribution of reviews. Surprisingly, although both types of rating information summarize to different extents how consumers like a restaurant, advertising spending responds in entirely opposite directions to changes in display rating and in average rating (i.e. a summary statistic of the distribution). Given the discontinuity in Yelp display ratings that is created by the rounding algorithm, I use an RD design to identify the effect of a higher display rating on local restaurants' advertising spending decisions. I find evidence of a significantly negative effect of display rating on advertising spending for relatively higher-rated (i.e. rated above 3) restaurants. On the other hand, when the display rating is constant, the relationship between local restaurants’ ad spending and average rating is significantly positive. The reason for the opposite advertising responses to display rating and to average rating is the capacity limit of local businesses.

Delay in Platform Adoption  
(with Marc Rysman)

Our paper proposes a new explanation for adoption failure, or adoption delay, in markets with network effects. In our model, consumers and software providers play a dynamic two-sided adoption game, choosing between two incompatible platforms/technologies. Consumers are allowed to choose to wait in adoption, but firms need to adopt one platform upon entry. We show that, in a parameter space that only has standardization equilibria in a static setting, when we introduce dynamics, there exists a "market split and adoption delay" equilibrium. In this equilibrium, firms split between two platforms, and some consumers choose to wait in period 1 in order to join the turn-out-to-be-dominant platform in period 2. This “split and delay” equilibrium is inefficient since the market would benefit from immediate coordination on one platform or the other. Our model is motivated by the 56K modem market, in which competition between two similar technologies appears to have led to adoption failure, until an industry standard setting organization coordinated the market on an alternative standard.

October, 2015
JIAXUAN LI
Department of Economics, Boston University
270 Bay State Road
Boston, MA 02215 USA
Cell: (609) 937-3822
Email: jxli@bu.edu
Website: http://people.bu.edu/jxli

EDUCATION
Ph.D. in Economics, Boston University, Boston MA, 2016 (expected)
   Dissertation Title: Essays on Dynamic Demand, Pricing and Investment
   Dissertation Committee: Marc Rysman, Hiroaki Kaido, Albert Ma and Francesco Decarolis
M.A. in Political Economy, Boston University, Boston MA, 2013
B.A. in Economics and Statistics, Peking University, Beijing China, 2010

FIELDS OF INTEREST
   Industrial Organization, Applied Econometrics

TEACHING EXPERIENCE
   Recitation Instructor, Statistics for Economists (for M.A.), Boston University, Fall 2014
   Teaching Fellow, Intermediate Microeconomics Analysis (for Undergrad), Boston University, Fall 2011 & Fall 2012
   Teaching Fellow, Market Structure and Industrial Organization (for M.A.), Boston University, Fall 2012
   Teaching Fellow, Microeconomics (for M.A.), Boston University, Spring 2012

FELLOWSHIPS AND AWARDS
   Travel Grant, Department of Economics, Boston University, August 2015
   Special Research Fellowship, Boston University, Fall 2013 and Spring 2015
   Teaching Fellowship, Boston University, Fall 2011, Spring 2012, Fall 2012, and Fall 2014
   Dean’s Fellowship, Boston University, 2010 - 2015
   Summer Funding, Boston University, 2010-2014

WORK EXPERIENCE
   Research Assistant for Prof. Hiroaki Kaido, Boston University, Summer 2015 - Present
   Research Assistant for Prof. Marc Rysman, Boston University, Spring 2014
   Research Assistant for Prof. Francesco Decarolis, Boston University, Spring 2013

WORKING PAPERS
   "Gateway Products in the DSLR Camera Market: Dynamic Demand, Consumer Learning and Switching Costs" (Job Market Paper), Sep 2015.
   "Moment Inequalities in the Context of Simulated and Predicted Variables" (with Hiroaki Kaido and Marc Rysman), Oct 2015.

WORK IN PROGRESS
Conferences and External Presentations

42nd EARIE Annual Conference, Munich, Germany, August 2015
10th Annual Economics Graduate Student Conference, Washington U. in St. Louis, October 2015

Referee Experience: The RAND Journal of Economics

Technical Skills: Matlab, Gauss, STATA, AMPL, Python, \LaTeX

Languages: English (Proficient); Chinese (Native)

Citizenship: China F-1

References

Professor Marc Rysman
Department of Economics
Boston University
270 Bay State Road
Boston MA 02215 USA
Phone: +1-617-353-3086
Email: mrysman@bu.edu

Professor Hiroaki Kaido
Department of Economics
Boston University
270 Bay State Road
Boston MA 02215 USA
Phone: +1-617-358-5924
Email: hkaido@bu.edu

Professor Ching-To Albert Ma
Department of Economics
Boston University
270 Bay State Road
Boston MA 02215 USA
Phone: +1-617-353-4010
Email: ma@bu.edu

Professor Francesco Decarolis
Department of Economics
Boston University
270 Bay State Road
Boston MA 02215 USA
Phone: +1-617-353-4535
Email: fdc@bu.edu

Oct 2015
Gateway Products in the DSLR Camera Market: Dynamic Demand, Consumer Learning and Switching Costs (Job Market Paper)

In markets of new technology goods, consumers face uncertainty about their own usage/valuation of the products. In addition, consumers typically invest in complementary goods using the acquired products, making it costly to switch to another brand when repurchasing. Using a rich dataset that tracks individual DSLR camera ownership history, I find that low-end DSLR cameras are gateway products that most consumers buy initially. In addition, consumers who repurchase are more likely to buy high-end DSLR cameras from the same brand as initial purchases. Motivated by the observed data patterns, I design a framework to analyze how consumers make dynamic choices when they need to learn about their own preferences and there is a cost of switching brands. The estimation reveals that “enthusiastic” and “neutral” consumers differ greatly in their unobserved valuation for using advanced cameras ex-post. Enthusiastic consumers who have already learned their types are likely to repurchase high-end DSLR cameras; their repurchases are crucial for the sales of high-end DSLR cameras. The estimated model implies a dynamic complementary relationship between high-end and low-end products that are produced by the same firm. Supply-side simulations imply that firms have incentives to invest in customer base using low-end products and to harvest the resolved uncertainty of valuation and switching costs using high-end products.

Moment Inequalities in the Context of Simulated and Predicted Variables (with Hiroaki Kaido and Marc Rysman)

This paper explores the effects of simulations on the performance of inference methods based on moment inequalities. Commonly used confidence sets for parameters are level sets of criterion functions whose boundary points depend on sample moments in a non-differentiable manner. Due to this non-differentiability, simulation errors can affect the performance of inference in non-standard ways. In particular, a (first-order) bias due to the simulation errors may remain in the estimated boundary of the confidence set. We demonstrate, through Monte Carlo experiments, that simulation errors can significantly reduce the coverage probabilities of confidence sets in small samples. The size distortion is particularly severe when the number of inequality restrictions is large. These results highlight the danger of ignoring the sampling variations due to the simulation errors in moment inequality models. We further investigate the performance of inference methods that properly correct for these variations.

Time to Obtain Innovation and Dynamic R&D Investment

This paper explores the nature of uncertainty in innovation production by quantifying the impact of time-to-obtain-innovation on firms’ R&D investment. Utilizing a rich dataset that tracks Spanish manufacture firms’ R&D activities and innovation outcomes for up to 17 years, I build and estimate a dynamic model of firms’ R&D investment. The model incorporates linkages between knowledge capital stock, innovation and productivity evolution. I find that removing uncertainties in time-to-obtain-innovation encourages R&D investment.
MENGMENG LI  
Department of Economics, Boston University  
270 Bay State Road  
Boston MA 02215 USA  
Phone: (617) 470-8788  
Fax: (617) 353-4449  
Email: mengmeng@bu.edu  
Web site: http://blogs.bu.edu/mengmeng

EDUCATION  
Ph.D., Economics, Boston University, Boston MA, May 2016 (expected)  
  Dissertation Title: *Empirical Studies in Financial Economics and Labor Economics*  
  Main advisor: Jianjun Miao  
  Dissertation Committee: Jianjun Miao, Zhongjun Qu, and Stephen Terry

M.S., Mathematical Finance, Questrom School of Business, Boston University, Boston, MA, 2009

B.A., Dual-degree in Mathematics and Economics, Wuhan University, Wuhan, China, 2008

FIELDS OF INTEREST  
Financial Economics, Computational Economics, Econometrics, and Labor Economics

WORK EXPERIENCE  
  Consultant, Center for Multicultural Mental Health Research, Cambridge Health Alliance, Harvard Medical School, August 2014-May 2015
  Analyst, Boston Merchant Financial, Ltd., Boston, November 2009- April 2010
  Analyst, Dongxing Securities, Wuhan, China, July 2007- June 2008
  Assistant Analyst, Bank of China, Wuhan, China, June 2006 - February 2007

TEACHING EXPERIENCE  
  Teaching Assistant, Intermediate Microeconomics, Department of Economics, Boston University, Spring 2012
  Teaching Assistant, Sports Economics, Department of Economics, Boston University, Spring 2012
  Teaching Assistant, Sports Economics, Department of Economics, Boston University, Fall 2011
  Teaching Assistant, Economic Statistics, Department of Economics, Boston University, Fall 2011

ACADEMIC WORK EXPERIENCE  
  Department Research Assistant for Professor Albert Ma, Department of Economics, Boston University, 2012-2015
  Research Assistant for Professor Yanbo Wang, Questrom School of Business, Boston University, Summer 2013
WORKING PAPERS
“How Medicare Advantage Has Impacted Mental Health Service Utilization,” (with Benjamin L. Cook, Daniel E. Jimenez, and Darcie DeAngelo, to be submitted at November 2015).
“Understanding Provider Prescribing Behaviors after the Black Box Warning for Youth Antidepressant Use,” (with Benjamin L. Cook, Darcie DeAngelo, and Alan Zaslavsky, to be submitted at December 2015).

WORK IN PROGRESS
“Use Natural Language Processor on Medical Records to Predict Patients’ Behaviors”
“Big Data in Financial Economics: How Google Searches Affect the Stock Market”

FELLOWSHIPS AND AWARDS
Research Fellowship, Boston University, 2012-2015
Teaching Fellowship, Boston University, 2011-2012
Beta Gamma Sigma Honor Society, Questrom School of Business, Boston University, 2009
First Prize in Mathematics, Study Competition of Institute for Advanced Study, Wuhan University, 2007
Freshman Fellowship, Wuhan University, 2005

LANGUAGES
English, Chinese

COMPUTER SKILLS
STATA, SAS, R, Python, MATLAB, C/C++, Mathematica, Microsoft Office

DATABASE
API, IPUMS, Bloomberg, DataStream, Compustat, CRSP

OTHER
CFA Candidate, Bloomberg Certificate Program

CITIZENSHIP/VISA: U.S. Permanent Resident

REFERENCES

Jianjun Miao
Professor
Department of Economics
Boston University
Phone: (617) 353-6675
Email: miaoj@bu.edu

Zhongjun Qu
Associate Professor
Department of Economics
Boston University
Phone: (617) 358-5921
Email: qu@bu.edu

Stephen Terry
Assistant Professor
Department of Economics
Boston University
Phone: (757) 754-3514
Email: stephent@bu.edu

October 2015
MENG MENG LI

Big Data in Testing the Efficient Market Hypothesis of the Bitcoin Market (Job Market Paper)

Widely investors are piling into digital currency like Bitcoin. Meanwhile, with nearly one fourth of the entire global population using social media, its impacts on the Bitcoin market become more and more prominent. In this paper, I have investigated the Bitcoin market’s efficiency by examining the correlation between social media information (Twitter) and Bitcoin returns. Firstly I have analyzed Twitter sentiments for more than 1.3 million bitcoin-related tweets between January 2014 and October 2014 using text data mining methods, as well as the Bitcoin market instruments. Further, using Bivariate Granger Causality analysis, I have validated that the sentiment information and the Bitcoin returns are greatly affected in the short term. Moreover, I have testified that the ARIMA Model could better forecast Bitcoin future returns with the sentiment information. In the end I also implement a portfolio management strategy based on the predicted values, which could yield an annual return around 20% for investors.

Examine the Episodes of Exuberance and Collapse in the Chinese Stock Market and the Second-Board Market

Chinese stock market is on an incredible mystery run. With this world-beating stock market attracting an unprecedented number of attentions, one of the most interesting questions would be: “if there any “bubble” existed in Chinese stock market?” In this paper, I use serval extended right-tailed ADF tests to examine the exuberance of a long weekly Chinese stock market data from 1990 to 2013. And I have successfully detected explosive behaviors and found the dates of their rising and burst. Moreover, I have also investigated the second-board market (Growth Enterprises Market) with similar methods. However there was not enough evidence to show the existence of any exuberance.

New Thoughts on “Power Couples”: Does the Co-location Problem Still Exist

College educated couples were increasing located in large metropolitan areas from 1940 to 1990. However the increase had been gradually diminished after 1990. In this paper, I have used multinomial logit models and a triple difference model to analyze those trends. From 1940 to 1990, the urbanization of the college educated couples was caused primarily by the growth of dual career households and the resulting severity of the co-location problem. Meanwhile I have argued that less college educated couples moved to large cities because the co-location effect faded away after 1990. Compared with previous studies, I have also proposed a more accurate method to measure the “coincidental couple” in the triple difference model.

Understanding Provider Prescribing Behaviors after the Black Box Warning for Youth Antidepressant Use (with Benjamin, L. Cook, Darcie Deangelo, and Alan Zaslavsky)

In 2004, the Food and Drug Administration (FDA) issued a black-box warning on antidepressants indicating that they were associated with an increased risk of suicidal thinking, feeling and behavior in young people. According to previous studies, the black-box warning was associated with a “reduction in disparities” in antidepressant use. In this paper, we have investigated the provider factors’ contributions on differential risk diffusion through several multilevel regression models.

How Medicare Advantage Has Impacted Mental Health Service Utilization (with Benjamin, L. Cook, Daniel E. Jimenez, and Darcie Deangelo)

The purpose of this study is to identify the impact of Medicare Advantage (MA) enrollment on any use of mental health care, mental health care expenditures, and mental health care quality using 2004-2011 Medical Expenditure Panel Survey data (Panels 9-15). To address endogeneity of plan enrollment, we also estimate a model replacing Medicare Managed Care enrollment with MA state penetration rates, and explore the use of state penetration rates as an instrument of enrollment in a two stage instrumental variable estimation approach.
SHUHENG LIN
270 Bay State Rd
Boston University, Department of Economics
Boston, MA, 02215 USA
Cell: +1-773-814-5046
Email: slin619@bu.edu
Website: http://people.bu.edu/slin619

EDUCATION
Ph.D., Economics, Boston University, Boston MA, May 2016 (expected)
Dissertation Title: *Innovation and Productivity Growth with Heterogeneous Firms*
Dissertation Committee: Stefania Garetto, Jordi Jaumandreu and Marc Rysman
M.A., Political Economy, Boston University, Boston MA, May 2012
B.S.Comm., Economics and Finance with a minor in Mathematics, Honors Program,
DePaul University, Chicago IL, May 2009

FIELDS OF INTEREST
International Industrial Organization, Applied Econometrics, Labor Economics, Economic Development

TEACHING EXPERIENCE
Lecturer, Modeling Business Decisions, School of Management, Boston University, Spring 2015
Teaching Fellow, Statistics I, Mathematics Department, Boston University, Fall 2014
Co-Head Teaching Fellow, Introductory Macroeconomic Analysis, Economics Department, Boston University, Spring 2014
Teaching Fellow, Introductory Microeconomic Analysis, Economics Department, Boston University, Fall 2013
Instructor, Introductory Macroeconomic Analysis, Economics Department, Boston University, Summer 2012
Teaching Fellow, Introductory Macroeconomic Analysis, Economics Department, Boston University, Fall 2011

WORK EXPERIENCE
Research Assistant for Claudia Olivetti, Boston University, Spring 2012 - Spring 2013
Economic Development Research Intern, Lincoln Park Chamber of Commerce, Chicago IL, 2009
Corporate Relations Intern, The Chicago Council on Global Affairs, Chicago IL, 2009
McCormick Tribune Intern, South-East Asia Center, Chicago IL, 2008-2009
Legal Consulting Intern, Huron Consulting Group, Chicago IL, 2008

WORKING PAPERS
"The Dynamics of R&D Organization and Productivity Growth" (Job Market Paper).
"Innovation and Prices"
(with Jordi Jaumandreu), July 2015.
"Do Firm-Level Shocks Generate Aggregate Fluctuations?"
(with Maria Francisca Perez), July 2014.
WORK IN PROGRESS

"Trade in Tasks and the Skill Premium"
"The Anatomy of China’s Exports to Africa"

CONFERENCE AND SEMINAR PRESENTATIONS

6th Annual ZEW/MaCCI Conference, Mannheim, Germany, June 2015
13th Annual International Industrial Organization Conference, Boston, April 2015
MaCCI Annual Conference, Mannheim, Germany, March 2015
NBER Productivity Lunch Seminar, Boston, September 2014
12th Annual International Industrial Organization Conference, Chicago, April 2014

FELLOWSHIPS AND AWARDS

IED Travel Grant, Boston University, 2014
Funding for a Research Assistant, MA-RA Mentor Program, Boston University, Department of Economics, Summer 2013, Spring 2014
Teaching Fellowship, Boston University, 2011, 2013
56th Presidential Inauguration Conference Scholar, 2009
DePaul University Centennial Scholarship, 2005 - 2009

PROFESSIONAL SERVICE: Referee for Economics of Innovation and New Technology

COMPUTER SKILLS: Stata, Matlab, Gauss, \LaTeX and MS Office

LANGUAGE SKILLS: Fluent in English, Cantonese and Mandarin

CITIZENSHIP/Visa: China/F1

REFERENCES

Professor Stefania Garetto  Professor Jordi Jaumandreu  Professor Marc Rysman
Department of Economics  Department of Economics  Department of Economics
Boston University  Boston University  Boston University
270 Bay State Rd  270 Bay State Rd  270 Bay State Rd
Boston MA 02215 USA  Boston MA 02215 USA  Boston MA 02215 USA
Phone: +1-617-358-5887  Phone: +1-617-358-5925  Phone: +1-617-358-3086
Email: garettos@bu.edu  Email: jordij@bu.edu  Email: mrysman@bu.edu

October 2015
SHUHENG LIN

The Dynamics of R&D Organization and Productivity Growth (Job Market Paper)

This paper estimates a dynamic model of firms’ decisions on whether to conduct research in house, with external units or via both modes. Productivity is modeled to evolve endogenously according to firms’ internal and external R&D decisions, and the costs of starting and continuing research differ by R&D mode and they fluctuate each period. Model estimates from a panel of Chinese manufacturing firms show that start-up cost for either mode is significantly more than continuation cost, in house R&D is more effective, costs less to maintain but more to start than external R&D. These estimates are consistent with the observed cross-sectional differences in firm size by research status, and can match the persistence and transition dynamics in R&D modes. Simulation exercises show that continuation cost reduction induces more changes in R&D decisions, but start up cost reduction leads to the most aggregate productivity gain.

Innovation and Prices (Joint with Jordi Jaumandreu)

This paper investigates the impact of process and product innovations on prices set by firms using prices reported by a sample of manufacturing firms over 17 years. This impact is modeled as the result of two related processes: how innovation affects productivity and hence marginal cost, and how firms pass changes in cost onto prices. Preliminary estimates of the model show that process innovations increase productivity and thus decrease marginal cost as expected; product innovations often increase productivity by less than process innovations, and sometimes they decrease it. Firms tend to take advantage of process innovations to enlarge markups by not completely passing onto prices the decrease in cost. Product innovations, however, do not affect markups. Overall, absent innovation productivity tends to push down prices at an average pace of .5% a year, but process innovations decrease them by 2% despite enlarging the margins, and prices do not change systematically with product innovations.

Do Firm-Level Shocks Generate Aggregate Fluctuations? (Joint with Maria Francisca Perez)

Business cycle fluctuations are often thought to have caused by aggregate shocks, since uncorrelated sector- or firm-level shocks average out in the aggregate due to the law of large numbers. However, a number of studies in recent years show the diversification of idiosyncratic shocks breaks down when sectoral linkages or firm size distributions are highly skewed. This paper empirically examines the contribution of firm-level idiosyncratic shocks to aggregate fluctuations in the US, Germany, Canada, and the UK. We find shocks to large firms are of little relevance in the UK or Canada, but roughly explain one third of output fluctuations in the US and Germany. We argue the ability of the largest firms to transmit shocks is not universal, even when the firm size distribution is highly skewed as the theory suggests.
**Elisabeth Ruth Perlman**
329 Broadway
Apartment 1
Cambridge, MA 02139
Phone: (612) 412-4879
Email: perlmane@bu.edu
Website: [http://people.bu.edu/perlmane](http://people.bu.edu/perlmane)

**Education**
Ph.D. in Economics, Boston University, Boston MA, 2016 (expected)
Dissertation Title: *Connecting the Periphery: Three Papers on the Developments Caused by Spreading Transportation and Information Networks in the Nineteenth Century United States*
Dissertation Committee: Robert A. Margo, Carola Frydman, Daniele Paserman

B.A., Physics and Economics, Carleton College, Northfield, MN, 2006
Diploma, Northfield Mount Hermon School, Northfield, MA, 2002

**Fields of Interest**
Economic History, Innovation, Labor Economics, Urban/Regional Economics

**Teaching Experience**
Instructor, Economic Institutions in Historical Perspective, Department of Economics, Boston University, Spring 2012, Fall 2012
Teaching Fellow, Introductory Microeconomic Analysis, Department of Economics, Boston University, Fall 2010, Fall 2011, Fall 2013
Teaching Fellow, Introductory Macroeconomic Analysis, Department of Economics, Boston University, Spring 2011, Spring 2014
Teaching and Laboratory Assistant, Department of Physics, Carleton College, Fall 2004-Spring 2006
Intermediate Price Theory Tutor, Department of Economics, Carleton College, Fall 2004

**Work Experience**
Senior Research Assistant, Capital Markets, Federal Reserve Board, 2007-2009

**Fellowships and Awards**
Sokoloff Dissertation Fellowship, Economic History Association, Fall 2014-Spring 2015
Dissertation Research Improvement Grant, National Science Foundation, Summer 2014
Economic History Association Data Grant, Spring 2013
Summer Research Grant, Boston University, Summer 2012

**Working Papers**
“Dense Enough To Be Brilliant: Patents, Urbanization, and Transportation in Nineteenth Century America,” September 2015 (*Job Market Paper*)
“Delivering the Vote: The Political Effect of Free Mail Delivery in Early Twentieth Century America” (with Steven Sprick Schuster), *Revise and Resubmit, JEH*, August 2015
“The Impact of Railroads on School Enrollment in Nineteenth Century America” (with Jeremy Atack and Robert A. Margo), June 2012
**Work in Progress**

“Free Mail Delivery, Sears, Roebuck & Co., and the Rural General Store” (with Steven Sprick Schuster)
“Who Used Postal Savings? A Description of the First Federally Insured Savings Institution”
(with Matt Jaremski and Steven Sprick Schuster)
“Credit Access and Patenting Activity in Nineteenth Century America” (with Matt Jaremski)
“Superstars and Scale: The Effect of Market Size on Top Income Inequality” (with Peter Sims)
“Nineteenth Century Moral Laws’ Impact on Innovation”
“The Formation and Persistence of Gay San Fransisco” (with Eric Golson and Casey Petroff)
“Inventor Migration” (with Nicolas Ziebarth)
“Did the Telegraph Have an Independent Impact?” (with Aaron Honsowetz)
“Demographic Impact of South African Rails” (with Johan Fourie)

**Referee Experience**

*The Journal of Economic History, Research Policy*

**Conferences and External Presentations**

2015: Northeast Universities Development Consortium Conference, Brown University (scheduled); Harvard (scheduled); NBER Productivity Seminar; NBER Summer Institute; Alexander Hamilton Center for Political Economy at NYU; Australian National University; University of Warwick; Economic History Association, Nashville TN; World Economic History Congress, Kyoto, Japan

2014: LSE; UC Berkeley; Harvard; NBER Productivity Seminar; Carleton; NBER Summer Institute (poster); Social Science History Association, Toronto, Canada; Western Economic Association International, Denver CO; Economic and Business History Society, Manchester UK;

2013: Yale Law School; University of Essex; University of Nottingham; Seventh World Congress of Cliometrics, Honolulu, Hawai‘i

2012: World Economic History Congress, Stellenbosch, South Africa

2011: UC Irvine; Harvard; University of Warwick

**Computer Skills:** Stata, Python (NLTK, scikit-learn), ArcGIS, SAS, R, MS Office, and LaTeX

**Citizenship:** USA

**References**

<table>
<thead>
<tr>
<th>Professor Robert A. Margo</th>
<th>Professor Carola Frydman</th>
<th>Professor M. Daniele Paserman</th>
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<tr>
<td>Department of Economics</td>
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<td>Boston University</td>
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<td>Boston University</td>
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<tr>
<td>270 Bay State Rd</td>
<td>270 Bay State Rd</td>
<td>270 Bay State Rd</td>
</tr>
<tr>
<td>Boston MA 02215 USA</td>
<td>Boston MA 02215 USA</td>
<td>Boston MA 02215 USA</td>
</tr>
<tr>
<td>Phone: +1-617-353-6819</td>
<td>Phone: +1-847-467-4457</td>
<td>Phone: +1-617-353-5695</td>
</tr>
<tr>
<td>Email: <a href="mailto:margora@bu.edu">margora@bu.edu</a></td>
<td>Email: <a href="mailto:cfrydman@bu.edu">cfrydman@bu.edu</a></td>
<td>Email: <a href="mailto:paserman@bu.edu">paserman@bu.edu</a></td>
</tr>
</tbody>
</table>

September 2015
Dense Enough To Be Brilliant: Patents, Urbanization, and Transportation in Nineteenth Century America (Job Market Paper)

This paper examines how the location of innovation responds to changes in transportation access and information flows. It focuses on the geographical distribution of patenting in the nineteenth century United States as it evolves in response to improvements in access to transportation. I revisit the Sokoloff (1988) hypothesis that increasing market access, caused by the spread of transportation infrastructure, led to an acceleration of innovation in nineteenth century America. I find that although the overall patenting rate is influenced more by local transportation access than by distant expansions of the transportation network, the rate of patents mentioning newer technologies correlates more to the distant expansions than the local access. Instrumental variable estimates indicate that slightly more than half of the increase in patenting between 1850 and 1870 was caused by the spread of the railroad; over the twenty years following the arrival of the railroad in a county the number of patents per capita doubles. The treatment effect is driven by the area of a county that is close enough make a round trip to transportation within a day, and not by the area further away. Automated analysis of the patents’ text shows that these patents are not likely to be on the cutting edge of technology, but rather on older topics. These results are robust to controls for urbanization and the transportation effect is enhanced by prior urbanization. Much of the treatment effect comes from patenting in counties that had not previously patented; suggesting that new access to existing markets spurs development and leads to integration into broader markets for innovation.

Delivering the Vote: The Political Effect of Free Mail Delivery in Early Twentieth Century (with Steven Sprick Schuster), Revise and Resubmit, JEH.

The rollout of Rural Free Delivery (RFD) in the early twentieth century dramatically increased the frequency with which rural voters received information. This paper examines the effect of RFD on voters’ and Representatives’ behavior using a panel dataset and instrumental variables. Communities receiving more routes spread their votes to more parties, especially smaller parties. However, we fail to find a significant change in voter turnout. RFD shifted positions taken by Representatives to ones in line with rural communities, including increasing support for pro-temperance and anti-immigration policies. Our results are much stronger in counties with newspapers, supporting the hypothesis that information flows play a crucial role in the political process.

The Impact of Railroads on School Enrollment in Nineteenth Century America (with Jeremy Atack and Robert A. Margo)

One of the central features of nineteenth century economic development in the United States was the “Transportation Revolution,” in which the speed of moving goods and people increased rapidly, and prices fell, with important economic and social effects. This paper uses a newly created panel data set matching information on transportation infrastructure to individual-level census data for the period 1850 to 1880 to study the impact of the diffusion of the railroad – a key component of the Transportation Revolution – on human capital investment. Using a difference-in-differences approach, we find that gaining access to rail transportation in a county significantly increases the likelihood of school attendance among children ages 6-16. The treatment effect of the railroad is robust to controls for demographic characteristics, socioeconomic status, and location, and is also similar in magnitude for boys and girls. Causal mechanisms are explored, including the effects of rail on the supply of schools through higher property values.
ALEX POTERACK
270 Bay State Rd, Room B02
Boston University, Department of Economics
Boston, MA, 02215 USA
Cell: (602) 334-7392
Fax: (617) 353-4449
Email: poterack@bu.edu
Website: http://poterack.weebly.com

EDUCATION
Ph.D. in Economics, Boston University, Boston MA, 2016 (expected)
   Dissertation Title: Compromise, Extremism, and Guilt
   Main Advisor: Barton Lipman

B.A., Behavioral Economics and Public Policy, Gallatin School of Individualized Study,
   New York University, New York, NY, 2010

FIELDS OF INTEREST
Decision Theory, Behavioral Economics, Health Economics, Industrial Organization

TEACHING EXPERIENCE
Instructor, Intermediate Microeconomic Analysis, Department of Economics, Boston University, Fall 2015, Spring 2016
Instructor, Introduction to Health Economics, Department of Economics, Boston University, Summer 2015
Instructor, International Trade, Department of Economics, Boston University, Summers 2013, 2014, 2015
Head Teaching Fellow, Introductory Macroeconomic Analysis, Department of Economics, Boston University, Spring 2015

WORK EXPERIENCE
Research Assistant for Barton Lipman, Boston University, 2013
Research Assistant for Ching-To Albert Ma, Boston University, 2012

PROFESSIONAL SERVICE:
   Officer of the BU Graduate Economics Association
   Co-Organizer of Decision Theory Reading Group

COMPUTER SKILLS: Stata, Matlab, MS Office, and LaTeX

CITIZENSHIP: USA
WORKING PAPERS
“Extremist Politics and the Preference for Compromise”
(with Benjamin L. Solow)

WORK IN PROGRESS
“The Gift of Indulgence: Giving in the Presence of Guilt”
“Data Collector, M.D.: Moral Hazard and the Difficulty of Applying Big Data to Medicine”

REFERENCES

Professor Barton Lipman
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-353-2995
Email: blipman@bu.edu

Professor Jawwad Noor
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-353-4436
Email: jnoor@bu.edu

Professor Dilip Mookherjee
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-353-4392
Email: dilipm@bu.edu

October 2015
**Alex Poterack**

**The Compromise and Attraction Effects Through Frame Preferences** (Job Market Paper)

The compromise and attraction effects are two of the most robust and well documented violations of WARP, typically arising in the context of goods which can be judged along several distinct attributes. I construct a novel method of representing them by reducing the context of each menu to a “frame”, representing the worst option along each attribute in the menu, and creating a collection of preferences indexed by frames. The preferences behave as though a good’s attractiveness along each attribute is judged relative to the frame with declining marginal utility. I also characterize the properties of a function which represents this collection of preferences. Finally, I develop a list of axioms and a representation theorem which ensure the existence of such a function.

**Extremist Politics and the Preference for Compromise** (with Benjamin L. Solow)

We incorporate two well-documented cases of non-standard preferences in a two-dimensional citizen candidate model of plurality elections. We show that the compromise and attraction effects, violations of WARP which we model through frames of reference, generate novel incentives for candidate behavior. Specifically, entry by an extreme candidate may cause a voter’s frame of reference to shift in ways that favor particular moderate candidates. We show that incorporating these preferences generates equilibria where extremist candidates enter plurality elections in order to attractively frame their preferred moderate, even if the extremist has probability zero of obtaining office themselves.
Daniel Schwab
33 Inman St
Unit 3
Cambridge MA 02139 USA
Cell: (617) 230-4663
Email: schwab@bu.edu
Website: https://sites.google.com/site/danielwschwab/

EDUCATION
Ph.D., Economics, Boston University, Boston MA, May 2016 (expected)
   Dissertation Title: *Three Essays in Microeconomics*
   Main advisor: Dilip Mookherjee
B.A., Mathematics and Statistics (*Magna Cum Laude*), Williams College, Williamstown MA, 2002

FIELDS OF INTEREST
Development Economics, Labor Economics

TEACHING EXPERIENCE
Instructor, Economic Analysis of Legal Issues, Boston University, Spring 2015
Head Teaching Fellow, Introductory Microeconomics, Spring 2013, Spring 2014
Teaching Fellow, Introductory Microeconomics, Fall 2011, Fall 2012, Fall 2013
Teaching Fellow, Introductory Macroeconomics, Spring 2012

WORK EXPERIENCE
Instructor, Game Theory, Boston University Summer Challenge (high school students), Summer 2013
Leader, training session for teaching fellows, Summer 2014

FELLOWSHIPS AND AWARDS
Gitner Prize for Excellence in Teaching Undergraduates by a Ph.D. Student, Boston University, 2015
Funded Participant, Advanced Graduate Winter Workshop, Bangalore, India, 2015
Special Research Fellowship, Boston University, Fall 2014
Finalist, Best Paper Award, Spring Meeting of Young Economists, Vienna, Austria, 2014
Dean’s Fellowship, Boston University, Fall 2011 – present

CONFERENCES AND PRESENTATIONS
Western Economic Association International, Denver CO, 2014
Spring Meeting of Young Economists, Vienna, Austria, 2014
Northeast Universities Development Consortium Conference, Boston MA, 2014
Advanced Graduate Winter Workshop, Bangalore, India, 2015
WORKING PAPERS

WORK IN PROGRESS
“The Political Transfer Problem” (with Faisal Z. Ahmed and Eric Werker)
“Determinants of Formal Sector Employment in the Developing World”
“Do Firms Benefit from Regulations on their Competitors? District-level evidence from India”
“Improving by Importing: The Effect of Import Quality on Export Quality”

COMPUTER SKILLS
Stata, Matlab, Microsoft Office, Latex, Lyx, Shared Computing Cluster

OTHER
Development Reading Group Coordinator

CITIZENSHIP
United States

REFERENCES

Professor Dilip Mookherjee
Economics Department
Boston University
Phone: (617) 353-4392
Email: dilipm@bu.edu

Professor Kevin Lang
Economics Department
Boston University
Phone: (617) 353-5694
Email: lang@bu.edu

Professor Sam Bazzi
Economics Department
Boston University
Phone: (617) 353-6150
Email: sbazzi@bu.edu

Professor Eric Werker
Beedie School of Business
Simon Fraser University
Phone: (778) 782-7725
Email: ewerker@sfu.ca
Employment Protection and the Labor Informality of the Youth: Evidence from India (Job Market Paper)

India's employment protection legislation (EPL) is among the strictest in the world. In this paper, I demonstrate an unintended consequence: EPL shifts formal sector jobs from young workers to older workers. The identification strategy relies on heterogeneity between manufacturing sectors, and is motivated by Rajan and Zingales (1998). I argue that the impact of EPL is strongest in those manufacturing sectors where Indian employers would like to fire workers, proxied by the involuntary separation rate in the United States or Latin America. Finally, I present suggestive evidence that EPL reduces plant-level total factor productivity, and that the shift in jobs from young to old is an important channel.

Profits and Economic Development (with Eric Werker)

Are rents, or excess profits, good for development? Using industry-level manufacturing data, this paper demonstrates a negative effect of rents, measured by the mark-up ratio, on productivity growth. The negative effect is strongest in poor countries, suggesting that high profits stymie economic development rather than enable it. Consistent with the rent-seeking mechanism of our model, we find that high rents are associated with a slower reduction in tariffs. A country's average mark-up in manufacturing is a strong negative predictor of future economic growth, indicating that we may be measuring a phenomenon of the broader business environment.

The Political Transfer Problem (with Faisal Z. Ahmed and Eric Werker)

Abstract to be added
YAO SHU  
270 Bay State Road  
Boston MA 02215 USA  
Cell: (914) 414-2820  
Fax: (617) 353-4449  
Email: dianashu@bu.edu  
Web site: http://blogs.bu.edu/dianashu

EDUCATION

Ph.D., Economics, Boston University, Boston MA, May 2016 (expected)  
Dissertation Title: Learning, Favoritism and Incentive Provision within Organizations  
Main advisor: Andrew Newman

B.S., Applied Mathematics (First Class Honors), National University of Singapore,  
Singapore, 2010

FIELDS OF INTEREST

Organizational Economics, Labor Economics, Microeconomic Theory

TEACHING EXPERIENCE

Teaching Fellow, Microeconomic Theory (Masters Level), Department of Economics,  
Boston University, Fall 2014
Teaching Assistant, Advanced Microeconomic Theory I and II (Ph.D. Level), Department of Economics, Boston University, Spring 2014, Fall 2013, Spring 2013, Fall 2012

WORK EXPERIENCE

Research Assistant, Professor Kevin Lang, Department of Economics, Boston University,  
Summer 2013
Research Assistant, Professor Larry G. Epstein, Department of Economics, Boston  
University, Summer 2012

FELLOWSHIPS AND AWARDS

Dean’s Fellow, Boston University, Fall 2010-Spring 2015  
Dean’s List, National University of Singapore, Fall 2006-Fall 2010

October 2015
WORKING PAPERS


WORK IN PROGRESS

“Multi-lateral Relational Contracts and the Efficiency of Long Term Relationships”
“A Human Capital Based Theory of the Firm”

COMPUTER SKILLS: STATA, MATLAB, LaTex

CITIZENSHIP/VISA: P.R.China/F1

REFERENCES

Professor Andrew F. Newman
Department of Economics
Boston University
Phone: (617) 358-4352
Email: afnewman@bu.edu

Professor Kevin Lang
Department of Economics
Boston University
Phone: (617) 353-5694
Email: lang@bu.edu

Professor Michael Manove
Department of Economics
Boston University
Phone: (617) 353-3299
Email: manove@bu.edu
What if Managers Are Not Impartial? The Effect of Favoritism and Influence on Incentive Design and Employee Effort (Job Market Paper)

This article considers the design and effectiveness of incentive systems when managers hold private subjective performance evaluations and are subject to favoritism and influence. When manager's favoritism cannot be effectively monitored, monetary rewards based on subjective evaluations fail to induce productive effort, while promotion-based reward system remains effective. Practice of favoritism is restrained under the promotion-based scheme, as rewards are tied to assignment and misallocation is costly to managers. Under the optimal promotion-based reward system, the level of productive effort induced is lower than the first best and decreases as employees stay in the same position for longer. Career stagnation is costly to the firm as employees with higher position-specific seniority supplies less effort. We test the prediction using twenty years of personnel records from a large firm and find that effort indeed decreases as employees stay in the same position for longer.

Testing Asymmetric Employer Learning using Wage Data

It is well recognized that employers learn the ability of employees though their performances over time. Although it seems intuitive that incumbent employers should observe more precise performance signals compared to the outside market (asymmetric learning), empirical evidence on asymmetric learning is limited and inconclusive. Existing literature has also confined the modelling of asymmetric learning to 2-periods only due to theoretical difficulties from complicated gaming interactions. In this paper, I propose a new way to model asymmetric learning for multi-periods, and derive testable implications of the model on wage patterns of workers. I then test the model predictions using NLSY97 data. The empirical results are largely consistent with symmetric learning, and show very weak evidence of asymmetric learning in the early years of employment.

Multi-lateral Relational Contracts and the Efficiency of Long Term Relationships

A standard feature of bi-lateral relational contracts is that, when parties are risk neutral, the efficiency of relationships depends on the value of joint surplus only. Changes in bargaining power affects the split of surplus only but not the sustainability of the relationship. In reality, however, long-term relationships are likely to involve more than two parties. In this paper, we model the multi-lateral relational contract involving a chain of three parties and study the performance of the multi-lateral relationship. In contrary to the result under bi-lateral relationship, sustainability of the multi-lateral relationship is no longer invariant to changes in bargaining power. We characterize how variations in bargaining power changes the stability of long term relationships. The results of this paper can potentially be tested with data on long term trade dealings.
Benjamin L. Solow  
270 Bay State Rd, Room B03A  
Boston University, Department of Economics  
Boston, MA, 02215 USA  
Cell: (617) 733-4987  
Email: bsolow@bu.edu  
Website: http://sites.google.com/site/bensolow

Education  
Ph.D. in Economics, Boston University, Boston MA, 2016 (expected)  
Dissertation Title: Aggregate Uncertainty, Framing Effects, and Candidate Entry  
Dissertation Committee: Barton Lipman, Laurent Bouton, and Juan Ortner  
Laurea Magistralis, Economics, (Summa Cum Laude), Università di Bologna, Bologna, Italy, 2010  
B.S., Economics and Political Science, Honors Program, University of Iowa, Iowa City, IA, 2008

Fields of Interest  
Political Economy, Industrial Organization, Behavioral Economics, Microeconomic Theory

Fellowships and Awards  
Special Research Fellowship, Boston University, 2015  
Special Research Fellowship, Boston University, 2014  
College of Arts and Sciences Outstanding Teaching Fellow Award, Boston University, 2014  
Summer Research Grant, Boston University, 2013  
LMEC Scholarship, Università di Bologna, 2008 and 2009  
Howard Bowen Memorial Scholarship, University of Iowa, 2008  
Excellence in Undergraduate Research Award for Social Sciences, University of Iowa, 2007  
Department of Economics Faculty Recognition Award, University of Iowa, 2007

Work Experience  
Research Assistant for Shulamit Kahn, Boston University, 2012  
Research Assistant for Bob Triest and Giovanni Olivei, Federal Reserve Bank of Boston, 2009

Teaching Experience  
Instructor, Empirical Economics, Department of Economics, Boston University, Fall 2015.  
Teaching Fellow, Introductory Microeconomic Analysis, Department of Economics, Boston University, Fall 2011, Fall 2014.  
Head Teaching Fellow, Introductory Microeconomic Analysis and Introductory Macroeconomic Analysis, Department of Economics, Boston University, Fall 2013.  
Instructor, Market Structure and Economic Performance, Department of Economics, Boston University, Spring 2013, Summer 2015.  
Head Teaching Fellow, Introductory Microeconomic Analysis, Department of Economics, Boston University, Fall 2012.  
Teaching Fellow, Introductory Macroeconomic Analysis, Department of Economics, Boston University, Spring 2012.  
Teaching Assistant, International Corporate Governance, Harvard University, Summer 2011.
Publications

Working Papers
“Aggregate Uncertainty in Runoff Elections and Open Primaries”, October, 2015.
“Extremist Politics and the Preference for Compromise” (joint with Alex Poterack), November, 2015.

Work in Progress
“Public Goods Provision and Induced Risk Aversion”
“The Compromise and Attraction Effects: Evidence from Off-Broadway Theater” (joint with Pietro Ortoleva)
“Gerrymandering and Political Polarization”
“Strategic Voting in the Citizen-Candidate Model”
(joint with Laurent Bouton and Micael Castanheira)

Conferences and External Presentations
Eastern Economics Association Annual Meeting, New York City, March, 2015
Lindau Nobel Laureates Meeting on Economic Sciences, Lindau, August, 2014
Western Economics Association Annual Meeting, Denver, June, 2014
Warwick Economics PhD Conference, Coventry, March, 2014
Western Economics Association Annual Meeting, Seattle, June, 2008

Professional Service:
Co-Organizer of Political Economy Reading Group; Officer of the BU Graduate Economics Association

Computer Skills: Stata, Matlab, MS Office, and \LaTeX

Citizenship: USA

References
Professor Barton Lipman
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-353-2995
Email: blipman@bu.edu

Professor Laurent Bouton
Department of Economics
Georgetown University
Intercultural Center 580
37th and O Streets, N.W.
Washington D.C. 20057
Phone: +1-202-687-6109
Email: boutonllj@gmail.com

Professor Juan Ortner
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-353-6323
Email: jortner@bu.edu

October 2015
Aggregate Uncertainty in Runoff Elections and Open Primaries (Job Market Paper)

In this paper I develop a model of strategic entry by candidates for office in runoff elections and blanket primaries. The main contribution of the paper is that I study candidate behavior under aggregate uncertainty, i.e. candidates are unsure of the distribution of voter preferences in the electorate. The set of equilibria with three candidates expands and equilibrium configurations become more diverse after adding aggregate uncertainty, providing a theoretical basis for Duverger’s Hypothesis, the claim that runoffs encourage entry by more than two candidates. One traditional equilibrium where candidates share the same location as the median voter is shown not to exist, and highly differentiated two candidate equilibria are shown to exist, casting doubt on the belief that runoffs promote policy moderation. Three candidate equilibria also predict three empirical phenomena that are unexplained by existing models: some candidates who reach the second round of the election receive fewer votes than they receive in the first round (an apparent violation of the Weak Axiom of Revealed Preference), electoral "reversals," where candidates who obtain a plurality in the first round do not necessarily win in the second round, and candidates who lose with certainty still choose to run. In many cases, these sure losers are Condorcet winners and a Condorcet loser obtains office with positive probability. In blanket primaries, sure loser equilibria and many two candidate equilibria disappear.

Candidate Entry in Non-Majority Runoff Elections

I develop a model of strategic entry by candidates for office in non-majority runoff elections. The main contribution of the paper is that I incorporate the observed differences in thresholds for first-round victory in a citizen-candidate model of runoff elections. The set of equilibria varies substantially with the threshold, indicating that the 50 percent threshold used in most models is not an innocuous assumption. Three main results arise. First, as the threshold decreases from 50 percent, the set of equilibria immediately contains equilibria that were thought to exist only under plurality rule, whereas as the threshold increases from 50 percent, there is no change in the set of equilibria. Second, there are important discontinuities in the set of equilibria as the threshold crosses key values of one half and one third. One such result is that equilibria where all candidates share the position of the median voter disappear for any threshold under one half. Finally, for any threshold under one half, there exist equilibria where a candidate who loses with certainty still chooses to run. These sure losers are Condorcet winners and, in these equilibria, Condorcet losers obtain office with positive probability.

Extremist Politics and the Preference for Compromise (joint with Alex Poterack)

We incorporate two well-documented cases of non-standard preferences in a two-dimensional citizen candidate model of plurality elections. We show that the compromise and attraction effects, violations of WARP which we model through frames of reference, generate novel incentives for candidate behavior. Specifically, entry by an extreme candidate may cause a voter’s frame of reference to shift in ways that favor particular moderate candidates. We show that incorporating these preferences generates equilibria where extremist candidates enter plurality elections in order to attractively frame their preferred moderate, even if the extremist has probability zero of obtaining office themselves.
**Patricio Toro Venegas**

270 Bay State Rd  
Boston University, Department of Economics  
Boston, MA, 02215 USA  
Cell: (617) 510-8366  
Email: ptoro@bu.edu  
Website: [http://blogs.bu.edu/ptoro](http://blogs.bu.edu/ptoro)

**Education**

- Ph.D. in Economics, Boston University, Boston MA, 2016 (expected)  
  - Dissertation Title: *Essays on the Real Effects of Financial Frictions*  
  - Dissertation Committee: Daniele Paserman, Simon Gilchrist and Adam Guren
- M.A. in Economics (Financial Economics)  
  - Pontificia Universidad Católica de Chile, Santiago, Chile, 2005
- Ingeniero Comercial (B.A. Economics)  
  - Pontificia Universidad Católica de Chile, Santiago, Chile, 2005

**Fields of Interest**

- Macroeconomics, Financial Economics, Labor Economics

**Fellowships and Awards**

- Graduate Scholarship, Boston University, 2011 - 2015
- Summer Research Grant, Boston University, 2014
- Beca Chile Doctorado, Conicyt, 2010
- Matrícula de Honor, Pontificia Universidad Católica de Chile, 1999

**Work Experience**

- Visiting Program, Central Bank of Chile, Summer 2013
- Visiting Program, Central Bank of Chile, Summer 2011
- Financial Policy Advisor to Andrés Velasco, Minister of Finance and Alejandro Micco, Ministry of Finance, Chile, 2006-2010
- Junior Economist, Santander Chile, Research Division, Chile, 2005-2006
- Founder, Sushi Time, Chile, 2004-2008

**Working Papers**

- "Financing Firing and Hiring: the Effects of Credit Supply Shocks on Labor Demand and Productivity"  
  (Job Market Paper)

**Work in Progress**

- "Standing on the shoulders of Governments: a positive bank lending shock for SME’s"  
  (with William Mullins)

**Teaching Experience**

- Teaching Fellow, Introductory Macroeconomic Analysis, Department of Economics, Boston University, 2012-2015
- Instructor, Introductory Economics, Department of Economics, Pontificia Universidad Católica de Chile, 2007-2008
Teaching Fellow, Microeconomics I, Pontificia Universidad Católica de Chile, 2004
Teaching Fellow, Industrial Organization, Pontificia Universidad Católica de Chile, 2001-2003
Teaching Fellow, Industrial Organization, Universidad Finis Terrae, 2002

Languages: English (fluent), Spanish (native), Italian (fluent)

Computer Skills: Stata, Matlab, \LaTeX

Citizenship-Visa: Chile-F1

References

Daniele Paserman
Professor
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-358-5695
Email: paserman@bu.edu

Simon Gilchrist
Professor
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-353-6824
Email: sgilchri@bu.edu

Adam Guren
Assistant Professor
Department of Economics
Boston University
270 Bay State Rd
Boston MA 02215 USA
Phone: +1-617-353-4534
Email: guren@bu.edu

October 2015
Financing Firing and Hiring: the Effects of Credit Supply Shocks on Labor Demand and Productivity (Job Market Paper)

This paper investigates how and why credit supply shocks during recessions can have persistent effects on labor productivity at the firm level. It adds to the literature by (1) showing that credit supply shocks have persistent effects on labor productivity and (2) by showing how firms use credit to finance employment adjustments during the recession: firms with better access to credit can churn more workers because they can fund search and dismissal costs. I find that expanding firms churn more workers to fill vacancies and grow faster, while shrinking firms use credit to replace low-quality matches and improve productivity. I use a new matched employer-employee panel of Chilean firms that also includes firm-bank lending relationships. A major bank capital injection during the 2008-09 crisis allows the identification of a positive credit supply shock at the firm level.

Standing on the shoulder of Governments: a positive bank lending shock to SME’s (with William Mullins)

Contractions in bank lending to firms are increasingly well understood but expansions remain understudied. Moreover, expanding Small and Medium Enterprises’ (SMEs) access to bank loans is a frequent policy goal around the world because of SMEs’ political popularity and their role in the economy. This paper studies a Government partial credit guarantee scheme for bank loans to SMEs using a regression discontinuity design around the threshold for eligibility. We use a new matched employer-employee panel of Chilean firms that also includes firm-bank lending and tax data. We find that the program has a large positive effect on firms’ total borrowing, and the effect is persistent. Moreover, firms that obtain bank loans through this scheme purchase more inputs and have higher sales following the loan. Finally, these firms materially increase their hiring of workers, initially via temporary contracts, and then disproportionately retain these workers on indefinite contracts when the temporary contracts expire.
EI YANG
270 Bay State Road
Boston MA 02215 USA
Cell: (347) 882-9922
Fax: (617) 353-4449
Email: eiyang@bu.edu
Web site: http://blogs.bu.edu/eiyang/

EDUCATION
Ph.D., Economics, Boston University, Boston MA, 2016 (expected)
   Dissertation Title: Essays on Financial Friction, Distortions and Development Dynamics
   Main Advisor: Simon Gilchrist
   Dissertation Committee: Simon Gilchrist, Jianjun Miao, Robert G. King

M.A., Economics, New York University, New York NY, 2010

B.A.(Honors), Economics and Mathematics, Renmin University of China, Beijing, China, 2008

FIELDS OF INTEREST
   Macroeconomics, Computational Economics, Development Economics

TEACHING EXPERIENCE
   Teaching Fellow, Introductory Macroeconomics, Department of Economics, Boston University, Spring 2015
   Teaching Fellow, Macro Theory II (first year Ph.D core), Department of Economics, Boston University, Spring 2013, Spring 2014
   Teaching Fellow, Macro Theory I (first year Ph.D core), Department of Economics, Boston University, Fall 2012, Fall 2013
   Teaching Assistant, Intermediate Macroeconomics, Department of Economics, Boston University, Fall 2011, Spring 2012

WORK EXPERIENCE
   Research Assistant, Department of Economics, Professor Robert G. King, Fall 2014

FELLOWSHIPS AND AWARDS
   Teaching Fellowship, Boston University, 2011-2015
   Outstanding Graduate of Renmin University of China, 2008
   Excellent Student Award, Renmin University of China, 2004-2008
   The Credit Scholarship of Hong Kong, Renmin University of China, 2007

Oct 15, 2015
WORKING PAPERS
“Intergeneration Mobility, Inequality and Urbanization”, October 2013.

WORKS IN PROGRESS
“Idiosyncratic Unemployment Risk, Precautionary Saving, and Business Cycles” (with Daeha Cho), December 2014
“Misallocation and Development Dynamics: the Role of Rural-Urban Migration”
“Constrained Efficiency in an Incomplete Economy with Endogenous Job Risk”

LANGUAGES
Fluent in English, Native in Chinese (Mandarin)

COMPUTER SKILLS: MATLAB, Mathematica, STATA, LaTex, Lyx, Microsoft Office

CITIZENSHIP/VISA: China/F1

REFERENCES
Professor Simon Gilchrist
Department of Economics
Boston University
Phone: (617) 353-6824
Email: sgilchri@bu.edu

Professor Jianjun Miao
Department of Economics
Boston University
Phone: (617) 353-6675
Email: miaoj@bu.edu

Professor Robert G. King
Department of Economics
Boston University
Phone: (617) 353-5941
Email: rking@bu.edu

Oct 15, 2015
The Persistence of Development Dynamics: Financial Frictions and Mobility Distortions
(Job Market Paper)
Successful economic reforms produce long-lasting transitional dynamics for developing countries. This paper analyzes how financial frictions and mobility distortions generate the persistence of the post-reform development dynamics. I build a general equilibrium model with heterogeneous agents, occupation choice and rural-urban migration, and I calibrate it to China. The mobility distortion is an occupation distortion and it restricts a proportion of agents to the low productive sector. A removal of distortions triggers the transition of the economy. The transitional path from calibration displays slow convergence. It shows persistent increases in output, productivity and urbanization, mimicking the patterns observed in data. The mobility distortion generates the slow convergence by creating more high-ability but poor agents. After the reform removes the distortions, it takes a long time for these agents to become entrepreneurs and reach their efficient scales due to the financial friction. Compared with the literature using tax distortions, the economy with mobility distortions generates slower convergence. The model also generates the rural-urban migration, which contributes to the persistence by providing high-ability workers and potential entrepreneurs after the reform.

Idiosyncratic Unemployment Risk, Precautionary Saving, and Business Cycles (with Daeha Cho)
We put forward a model that merges the incomplete asset market, labor market frictions, and the nominal rigidity in price setting to study the business cycle implications of precautionary savings induced by idiosyncratic unemployment risks. First, we find that the capital utilization is the key to achieving comovement responses between consumption, investment, and vacancies to an unemployment risk shock. Second, precautionary savings amplify the initial adverse shock through the aggregate demand channel, and decreasing vacancy postings from firms create further idiosyncratic unemployment risks. Third, with the capital utilization, a fall in the investment strengthens the above feedback loop.

The Welfare Analysis of Depressed Migrant Wage in China: a Dynamic View
Empirical studies have documented depressed migrant wages in China. I build a continuous-time heterogeneous-agent model with financial frictions and rural-urban migration to evaluate its impact on the total output and the consumption along the transitional path. The depressed migrant wage per se attracts fewer migrant workers, and it lowers the migrants’ consumption and aggregate output. However, it encourages urban entrepreneurs to substitute capital with labor, reducing the impact of financial frictions. The net effect depends on the stage of development. It benefits the economy initially by speeding up reallocation in the urban sector. This leads to faster urban TFP improvement and capital accumulation. In the later stage, the low consumption effect dominates, which indicates that policy intervention can improve the consumption and the output.

Intergenerational Mobility, Inequality and Urbanization
The intergenerational income mobility and Gini coefficient for family income both increase to high levels since China began economic reform in 1978. I propose a theoretical overlapping generation model with missing capital market and rural-urban migration to explain this moving up along the “Great Gatsby curve.” After the economic reform happens, migrant workers enter the low skill jobs. The increasing wage gap pushes urban workers to invest more in human capital and switch to the high skill jobs. The missing of capital market strengthens the job division. Whether this process continues or not depends on the cost of education. If education cost decreases, the offsprings of migrant workers have more chances to enter the high skill jobs. As agents are heterogeneous in learning ability, the education subsidy achieves a better outcome than a direct redistribution policy.

Oct 15, 2015
GUIHAI ZHAO
8350 Greensboro Drive #716
McLean VA 22102
Cell: (617) 800-6158
Fax: (617) 353-4449
Email: maxzhao@bu.edu
Web site: http://blogs.bu.edu/maxzhao/

EDUCATION
Ph.D., Economics, Boston University, Boston MA, May 2016 (expected)
   Dissertation Title: Confidence, Bond/Equity Risks, and Monetary Policy
   Dissertation Committee: Larry Epstein (Co-Chair), Francois Gourio (Co-Chair),
                          Simon Gilchrist, and Jianjun Miao

M.A., Economics, University at Albany-SUNY, NY, 2009

B.S., Information System, Beijing Information Technology Institute, Beijing China

FIELDS OF INTEREST
   Asset Pricing, Monetary Economics, and Portfolio Choice

TEACHING EXPERIENCE
   Teaching Fellow, Macroeconomics, Department of Economics, Boston University, Spring 2013
   Teaching Assistant, Portfolio Theory, Department of Finance, Boston University, Fall 2011
   Teaching Assistant, Economics of Risk and Uncertainty, Department of Economics, Boston University, Spring 2012
   Teaching Assistant, Introduction to Econometrics, Undergraduate Department of Economics, Boston University, Fall 2012
   Teaching Assistant, Mathematical Economics, Department of Economics, Boston University, Spring 2011

WORK EXPERIENCE
   Research Assistant:
      Professor Marcel Rindisbacher, Department of Finance, Boston University, 2012
      Professor Larry Epstein, Department of Economics, Boston University, 2011, 2014
   Non-academic experience:
      Quantitative Analyst - Market Risk, Capital One, 2015
      Software Engineer at Founder Electronics
      System Engineer at IBM (China)

FELLOWSHIPS AND AWARDS
   Summer Research Grant, Department of Economics, Boston University, Summer 2012, Summer 2013
   Best Performance Award on First Year Comprehensive Exams, University at Albany-SUNY, 2007
WORKING PAPERS
“Learning from Monetary Shocks and Asset Returns” (with Simon Gilchrist), October 2015
“Confidence, Asset Returns, and Monetary Policy in a New Keynesian Model,” December 2014

WORK IN PROGRESS
“Ambiguity Yields, Bond Yields, and Dividend Yields” October 2015
“Portfolio Choice under Constant and Time Varying Ambiguity”
“Central Bank Performance and Cross Country Stock Returns”

CONFERENCES AND PRESENTATIONS
Federal Reserve Bank of Boston, May 2013
BU/BC Green Line Macro Meeting, April 2013

LANGUAGES
Fluent in English, Native in Chinese

COMPUTER SKILLS: MATLAB, SAS, VBA, C++

CITIZENSHIP: China

PROFESSIONAL AFFILIATIONS
The Society for Financial Studies, PhD Student Invitation to the Macro Finance Society VI Workshop

REFERENCES
Professor Larry Epstein
Department of Economics
Boston University
Phone: (617) 353-4142
Email: lepstein@bu.edu

Francois Gourio
Economic Research
Federal Reserve Bank of Chicago
Phone: (312) 322-5627
Email: fgouriowork@gmail.com

Professor Simon Gilchrist
Department of Economics
Boston University
Phone: (617) 353-6824
Email: sgilchri@bu.edu

Professor Jianjun Miao
Department of Economics
Boston University
Phone: (617) 353-6675
Email: miaoj@bu.edu
Confidence, Bond Risks, and Equity Returns
We show that investor confidence (size of ambiguity) about future consumption growth is driven
by past consumption growth and inflation. The impact of inflation on confidence has moved
considerably over time and switched on average from negative to positive in 1997. Motivated by
this evidence, we develop and estimate a model in which the confidence process has discrete
regime shifts, and find that the time-varying impacts of inflation on confidence enables the model
to match the bond risks over different subperiods. The model can also account for stock and bond
return predictability, correlation between price-dividend ratios and inflation, among others.

Learning from Monetary Shocks and Asset Returns (joint with Simon Gilchrist)
In an otherwise standard New Keynesian model, we assume that the monetary authority has more
information about TFP growth than the private sector. Consequently, agents in the private sector
cannot fully distinguish monetary shocks from changes in TFP growth rates when the monetary
authority sets interest rate according to a Taylor rule. In this environment, agents update their
beliefs using a Kalman Filter. Following an expansionary monetary policy shock, agent expects a
higher TFP growth rate which causes stock returns, nominal and real bond yields, output growth,
labor and inflation to rise simultaneously. A calibrated version of the model also does well at
matching the empirical reactions of stock and bond markets to monetary shocks. Monetary shocks
work like noise shocks and generate business cycle comovements among key macro variables.

Confidence, Asset Returns, and Monetary Policy in a New Keynesian
The volatility of macroeconomic and financial variables has exhibited a high degree of time
variation in the data, and the conditional volatility of inflation is positively correlated with future
volatility of other macroeconomic and financial variables. Instead of assuming stochastic
volatility exogenously, this paper proposes a novel model that generates these features
endogenously in a simple New Keynesian framework. The model can generate upward sloping
yield curves and positive correlation between inflation and dividend yields. I assume that agents
are ambiguity averse, and that the amount of ambiguity is affected by the past performance of the
central bank. If the central bank was unable to control inflation and output recently, the agent
becomes more ambiguous about technology growth and the ambiguity process becomes more
volatile, thus (a) output, consumption, dividend yields, and stock returns fall, (b) dividend yield
rises, and (c) the volatility rises. The first two effects imply a positive premium for long term
bond relative to short term bond. Time-varying volatility in confidence implies time-varying
volatility in macroeconomic and financial variables.
FAN ZHUO
270 Bay State Road, Room B11
Department of Economics
Boston University
Boston MA 02215 USA
Cell: +1-410-920-4614
Email: zhuo@bu.edu
Website: people.bu.edu/zhuo

EDUCATION
Ph.D., Economics, Boston University, Boston, MA, May 2016 (expected)
Dissertation Title: Essays on Regime Switching and DSGE Models with Applications to U.S.
Business Cycle
Dissertation Committee: Zhongjun Qu, Pierre Perron, Hiroaki Kaido and Jianjun Miao
M.A., Applied Economics, Ohio University, Athens OH, 2010
M.S., Applied Mathematics, Ohio University, Athens OH, 2009
M.S., Computational Mathematics, Sichuan University, Chengdu, China, 2007
B.S., Applied Mathematics, Beijing Institute of Technology, Beijing, China, 2004

FIELDS OF INTEREST
Econometrics, Time Series, Macroeconomics, Empirical Finance, Data Mining

TEACHING EXPERIENCE
As Lecturer:
Algebra, Department of Mathematics (B.S. course), Ohio University, 2007-2009

As Teaching Fellow:
Advanced Econometrics (Ph.D. course), Boston University, 2011-2012
Mathematical Economics (M.A. course), Boston University, 2013
Introductory Macroeconomic Analysis (B.S. course), Boston University, 2014

WORK EXPERIENCE
Research Assistant for Prof. Pierre Perron, Department of Economics, Boston University, 2015
Research Assistant for Prof. Zhongjun Qu, Department of Economics, Boston University, 2012-2014
Research Assistant for Prof. Julia Paxton, Department of Economics, Ohio University, 2009

FELLOWSHIPS AND AWARDS
Special Research Fellowship, Boston University, 2012-2015
Summer Research Grant, Boston University, 2012
Teaching Fellowship, Boston University, 2011-2012
Teaching Assistantship, Ohio University, 2007-2009

BOOK
“Solutions Manual to Accompany Economic Dynamics in Discrete Time,” (with Yue Jiang and
**Publication**


**Working Papers**


**Work in Progress**

“Stochastic Volatility Models with Regime Switching”
“Falling Behind or Catching Up - Structural Break Story of Africa's Convergence”

**Conference Presentations**

North American Winter Meeting of the Econometric Society, San Francisco (scheduled), Jan 2016
The 11th World Congress of the Econometric Society, Montreal, August 2015
Statistics and Probability Seminar, Boston University, April 2015
23rd Symposium of the Society for Nonlinear Dynamics and Econometrics, Norway, March 2015
Invited Session, Joint Statistical Meetings, Boston, August 2014

**Languages**

Native in Chinese, Fluent in English

**Computer Skills**

MATLAB, Parallel Computing, Stata, R, SAS (Certified Base Programmer)

**Citizenship/Visa:** China/F1

**References**

**Zhongjun Qu**
Associate Professor  
Department of Economics  
Boston University  
270 Bay State Road  
Boston MA 02215 USA  
Phone: +1-617-358-5921  
Email: qu@bu.edu

**Pierre Perron**
Professor  
Department of Economics  
Boston University  
270 Bay State Road  
Boston MA 02215 USA  
Phone: +1-617-353-3026  
Email: perron@bu.edu

**Hiroaki Kaido**
Assistant Professor  
Department of Economics  
Boston University  
270 Bay State Road  
Boston MA 02215 USA  
Phone: +1-617-358-5924  
Email: hkaido@bu.edu

**Jianjun Miao**
Professor  
Department of Economics  
Boston University  
270 Bay State Road  
Boston MA 02215 USA  
Phone: +1-617-353-6675  
Email: miaoj@bu.edu

October, 2015
Likelihood Ratio Based Tests for Markov Regime Switching (joint with Zhongjun Qu)  
(Job Market Paper)

Markov regime switching models are widely considered in economics and finance. Although there have been persistent interests (see e.g., Hansen, 1992, Garcia, 1998, and Cho and White, 2007), asymptotic distributions of likelihood ratio based tests have remained unknown. This paper considers such tests and establishes their asymptotic distributions in the context of nonlinear models allowing for multiple switching parameters. The analysis simultaneously addresses three difficulties: (i) some nuisance parameters are unidentified under the null hypothesis, (ii) the null hypothesis yields a local optimum, and (iii) conditional regime probabilities follow stochastic processes that can only be represented recursively. Addressing these issues permits substantial power gains in empirically relevant situations. Besides obtaining the tests’ asymptotic distributions, this paper also obtains four sets of results that can be of independent interest: (1) a characterization of conditional regime probabilities and their high order derivatives with respect to the model’s parameters, (2) a high order approximation to the log likelihood ratio permitting multiple switching parameters, (3) a refinement to the asymptotic distribution, and (4) a unified algorithm for simulating the critical values. In otherwise linear models, the elements needed for the algorithm can all be computed analytically. The above results also shed light on why some bootstrap procedures can be inconsistent and why standard information criteria, such as the Bayesian information criterion (BIC), can be sensitive to the hypothesis and the model’s structure. When applied to the US quarterly real GDP growth rates, the methods suggest fairly strong evidence favoring the regime switching specification, which holds consistently over a range of sample periods.

Testing for Regime Switching in State Space Models

The aim of this paper is to analyze the likelihood ratio based tests for state space models to test the null hypothesis of one regime versus the alternative of two regimes. I extend the analysis in Qu and Zhuo (2015) to state space models, which includes ARMA and classical regression models as special cases. Since the basic Kalman filter becomes impracticable for state space models with regime switching, a family of modified likelihood ratio (MLR) tests are proposed and the asymptotic distributions of these test statistics are established. I also conduct Monte Carlo experiments to compare the size and power of the MLR test statistics with the competitive tests for regime switching, and one empirical example is demonstrated to study the U.S. unemployment rate.

Estimating a Search and Matching Model with Sticky Price and Staggered Wage Negotiation

The purpose of this paper is to estimate a search and matching model of the aggregate labor market with sticky price and staggered wage negotiation. This paper is based on a partial equilibrium search and matching model and expands the model to a general equilibrium model with sticky prices and staggered wages. By applying the Bayesian methodology, I study the comprehensive quantitative implications of the entire model and the role of sticky price and staggered wage negotiation.