ENJAR LKHAGVAJAV

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EDUCATION

Ph.D., Economics, Boston University, Boston MA, May 2022 (expected)
Dissertation Title: *Essays on Firm Innovation and R&D*
Main advisor: Stephen J. Terry

M.A., Political Economics, Boston University, Boston MA, 2019

B.S., Economics with Honors and Mathematics *(with Distinction)*, University of Michigan, Ann Arbor MI, 2015

FIELDS OF INTEREST

Macroeconomics, Economic Growth, Economics of Innovation

WORKING PAPERS

"Exploitative Innovation and Growth," October 2021. Job Market Paper
"Patent Disclosure, Firm Innovation, and Growth,"

WORK IN PROGRESS

"Survey Expectations and the New Keynesian Wage Phillips Curve,"

WORK EXPERIENCE

Research Assistant for Laurence J. Kotlikoff, Boston University, Fall 2021
Summer Internship, Monetary Policy Department, Bank of Mongolia, Summer 2017, Summer 2018

TEACHING EXPERIENCE

Instructor, Intermediate Macroeconomics, Department of Economics, Boston University, Fall 2020
Instructor, Introductory Macroeconomics, Department of Economics, Boston University, Summer 2018, Summer 2020
Head Teaching Fellow, Introductory Macroeconomics, Department of Economics, Boston University, 2018-2020
Teaching Fellow, Introductory Macroeconomics, Department of Economics, Boston University, 2017-2018
Teaching Fellow, Introductory Microeconomics, Department of Economics, Boston University, Fall 2016

PRESENTATIONS

Economics Graduate Student Conference, Washington University in St. Louis, Fall 2021
Technology and Policy Research Initiative, School of Law, Boston University, Fall 2020
Boston University Macro Dissertation Workshop, Fall 2018, Fall 2019, Fall 2020

FELLOWSHIPS AND AWARDS

Graduate Student Fellowship, Boston University, 2015-2020
Mongolian Government Scholarship, Government of Mongolia, 2012-2015
Departmental Putnam Competition Honorable Mention, University of Michigan, Spring 2013
Honorable Mention, International Mathematical Olympiad, 2010
Silver and Bronze Medals, Mongolian National Mathematical Olympiad, 2007-2010

CITIZENSHIP/VISA STATUS: Mongolia/F1

ANALYTICAL SKILLS

Large Data Analysis, Regression Analysis, Policy Evaluation, Numerical Optimization, Dynamic Programming, Structural Modeling, Model Simulation, Structural Estimation

TECHNICAL SKILLS

R, MATLAB, STATA, Cluster Computing

REFERENCES

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Exploitative Innovation and Growth (Job Market Paper)

While innovating, firms can either develop fully novel exploratory ideas or exploit their existing ideas. Using firm patent data, I document how U.S. manufacturing firms' innovation became more exploitative and that their patent growth rate simultaneously declined after 2000. To rationalize these changes in firm innovation, I build a firm-level endogenous growth model with both initial exploratory and subsequent exploitative innovations. Estimating my model using 1990-2000 microdata, I show that a decline in the usefulness of exploratory innovations as a foundation for future exploitation can match a shift in the composition of innovation we saw over this period, resulting in a 0.8 percentage point decline in firm average growth and a 9% decline in firm market value post-2000.

Patent Disclosure, Firm Innovation, and Growth

A patent system requires innovators to reveal their new ideas in return for monopoly rights to their use. This paper shows both empirically and theoretically that patent disclosure requirements can discourage firm patenting. First, I empirically analyze the effect of the American Inventor's Protection Act of 1999 (AIPA), which shortened publication time for patents filed after 2000. Due to earlier patent disclosure, U.S. public firms lowered their patenting and R&D growth. I then build a Schumpeterian endogenous growth model with firm innovation and patenting together with a role for disclosure policy. At the firm level, the model reveals that patent disclosure can lower patenting due to a trade-off between costly disclosure and patent monopoly protection. The model matches the empirical evidence of lower firm patenting due to higher patent disclosure. At the macro level, the patent disclosure could reduce patenting and overall economic growth, contributing to recent U.S. trends.

Survey Expectations and the New Keynesian Wage Phillips Curve

Learning the dynamics of wage inflation and its relationship with other macroeconomic variables helps to study monetary policy effects and implement optimal policies for central banks. Expectations matter, at least in baseline macroeconomic models, so much that certain monetary policies are relied on the expectation transmission to affect variables in the economy. This paper estimates the New Keynesian Wage Phillips Curve introduced in Gali (2011b) using rational expectations and survey expectations of wage inflation separately in New Zealand. The empirical result implies no significant relationship between the unemployment rate and wage inflation when rational expectations is considered. However, the unemployment rate takes a statistically significant and negative coefficient when the survey expectations is used. The effect of the unemployment rate on wage inflation was most substantial during 2000-2008, during which the unemployment rate dipped to the all-time low level in New Zealand.