

# SOYOUNG LEE

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## CONTACT

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Bank of Canada  
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## EMPLOYMENT

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Senior Economist, Bank of Canada, 2020 -

## EDUCATION

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### **The Ohio State University**

Ph.D., Economics, 2020  
M.A., Economics, 2015

### **Seoul National University**

B.A., Economics, 2008

## RESEARCH INTERESTS

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Macroeconomics, Financial frictions, Income and Wealth inequality

## CONFERENCE PRESENTATIONS

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Firm Heterogeneity and Macroeconomy	Oxford, 2021
Computing in Economics and Finance (Finalist, Graduate Student Paper Contest)	Ottawa, 2019
Young Economists Symposium	NYU, 2018
Society for Economic Dynamics Annual Meeting	Mexico City, 2018
Midwest Macroeconomics Meetings	Madison, Wisconsin, 2018

## INVITED SEMINARS

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### **2020**

University of Guelph, Bank of Canada, Stockholm University, University of Surrey, Rutgers University, Board of Governors, Simon Fraser University, University of Tennessee

## TEACHING EXPERIENCE

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### **Ohio State**

Principles of Macroeconomics	Instructor, Spring 2019
Intermediate Macroeconomics	TA, Fall 2018
Financial Economics I	TA, Spring 2018
Principles of Microeconomics	TA, Fall 2017
Principles of Macroeconomics	TA, Fall 2016, Spring 2017 and Fall 2019

## LANGUAGES

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English (fluent), Korean (native)  
Fortran 90 (with Open MP), Matlab, Stata, R, Python

## WORKING PAPERS

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### **The Macroeconomic Effects of Debt Relief Policies during Recessions** (Job market paper. Latest version is available at [here](#).)

I study the aggregate and microeconomic effects of debt relief programs during recessions. My model allows households to default on their mortgages and enter into foreclosure, default on unsecured debt and enter into bankruptcy, or both. The result is the first general equilibrium model with aggregate uncertainty, accommodating uninsurable income risk, unsecured debt, financial assets, mortgages, housing, bankruptcy, and foreclosure. The model successfully replicates the distribution of household wealth as well as key asset and debt components. Using this unique laboratory, I explore how one form of household debt forgiveness affects another, how households with differing asset positions are affected, as well as the consequences for aggregate series such as GDP and investment.

General equilibrium movements in house prices and interest rates play an important role in creating an interdependence between the portfolio adjustments of households and the long-term effects of a policy intervention. I find that a mortgage principal reduction program targeting loan-to-value ratios among highly leveraged borrowers delivers significant and persistent increases in aggregate consumption, investment, and output during a recession. It dampens the decline in house prices and stimulates capital accumulation, driving lower interest rates. The initial rise in house prices has lasting effects as it reduces subsequent foreclosures and effectively loosens financial constraints on households. Comparing mortgage forgiveness to a tax rebate, an untargeted transfer to all households, I find that the tax rebate is more effective in reducing bankruptcy, and the principal reduction is more effective in reducing foreclosure and supporting house prices. Both policies have similar overall effects on aggregate consumption, but their distributional effects are different.

### **The Role of Firm Heterogeneity in Earnings Inequality** 2018

Over the past three decades, individual earnings inequality has risen alongside increases in the concentration of firm employment and revenue in the U.S. This paper studies the factors underlying these trends and their macroeconomic impacts. I extend a canonical uninsurable earnings risks model with heterogeneous firms and labor market search friction as in Lucas and Prescott (1974). The model successfully replicates the earnings distribution, individual and firm factors in earnings variance, and the firm size distribution. Using this quantitatively disciplined model, a counterfactual exercise is designed to decompose the factors affecting the rise in earnings inequality. I show that the individual component in wages explains most of the rise in earnings inequality. Surprisingly, changes in the firm productivity distribution and worker allocation across firms do not contribute to the rise in earnings inequality but mitigate it.

### **Generalized Endogenous Grid Method for Models with a Default Option** 2018 (with Youngsoo Jang)

We develop an endogenous grid method for models with a default option in which price schedules are endogenously determined in equilibrium and depend on individuals' states. We obtain computational efficiency and accuracy benefits by combining Fella's (2014) identification for non-concave regions with our own algorithm that numerically searches for risky borrowing limits. These two procedures identify the region of solution sets for which Carroll's (2006) endogenous grid method is applicable. To demonstrate the method, we solve the Nakajima and Rios-Rull's (2014) model. In terms of computation time, this method is four to five times faster than the conventional grid search method. Moreover, various types of accuracy tests indicate that our method yields more accurate results than pure grid search method.

## FELLOWSHIPS, AWARDS AND HONORS

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Kennedy Fellowship	Ohio State, 2019
Alumni Grants for Graduate Research and Scholarship	Ohio State, 2018
Dissertation Fellowship	Board of Governors, 2018
Journal of Money, Credit and Banking Travel Grant	Ohio State, 2018
Overseas Traineeship	Bank of Korea, 2014 - 2016

## PAST EXPERIENCE

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**The Bank of Korea**  
Economist, 2008-2014.

## REFERENCES

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**Professor Aubhik Khan**  
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