

DONGGYU LEE
University of Maryland
Department of Economics
College Park, MD 20742
Phone: (240) 393-9438
Email: dglee81@umd.edu

EDUCATION

Ph.D. Economics, University of Maryland at College Park, expected May 2021
M.A. Economics, Seoul National University, South Korea, 2014
B.A. Economics, Seoul National University, South Korea, 2009 (with honors)

FIELDS OF SPECIALIZATION

Primary: Macroeconomics, Monetary Economics
Secondary: Computational Economics

DISSERTATION

Essays on Monetary Policy and Household Inequality

Committee: Prof. Borağan S. Aruoba (co-chair), Prof. Luminita Stevens (co-chair), Prof. Thomas Drechsel, Prof. John Shea

JOB MARKET PAPER

“Quantitative Easing and Inequality” [\[Link\]](#)

This paper studies how quantitative easing (QE) affects household welfare across the wealth distribution. I build a heterogeneous agent New Keynesian (HANK) model with household portfolio choice, wage and price rigidities, endogenous unemployment, frictional financial intermediation, an effective lower bound (ELB) on the policy rate, forward guidance, and QE. To quantify the contribution of the various channels through which monetary policy affects inequality, I estimate the model using Bayesian methods, explicitly taking into account the occasionally binding ELB constraint and the QE operations undertaken by the Federal Reserve during the 2009-2015 period. I find that QE program unambiguously benefited all households by stimulating economic activity. However, it had non-linear distributional effects. On the one hand, it widened the income and consumption gap between the top 10% and the rest of the wealth distribution, by boosting profits and equity prices. On the other hand, QE shrank inequality within the lower 90% of the wealth distribution, primarily by lowering unemployment. On net, it reduced overall wealth and income inequality, as measured by the Gini index. Surprisingly, QE has weaker distributional consequences compared with conventional monetary policy. Lastly, forward guidance and an extended period of zero policy rates amplified both the aggregate and the distributional effects of QE.

WORKING PAPERS

“The Effects of Monetary Policy on Consumption and Inequality” [\[Link\]](#)

Recent work with heterogeneous agent New Keynesian (HANK) models has shown that monetary policy shocks affect consumption mostly through a general equilibrium change in the real wage and have distinct distributional consequences. I show the fragility of these results, demonstrating how they depend on (1) the severity of wage rigidities and labor market frictions, (2) the cyclicity of profits, and (3) the progressivity of fiscal policy. I develop a HANK model that generates movements of the real wage and profits that are consistent

with the data: in response to an expansionary monetary policy shock, profits increase and the real wage responds little. Indirect effects still dominate the direct effects of policy on consumption, as in Kaplan, Moll and Violante (2018). However, the effect on consumption through real wage changes is limited. Instead, a fall in unemployment risk contributes to a large increase in poor households' consumption, while an increase in profits leads to a significant response of wealthy households' consumption. Since both poor and wealthy households increase their consumption substantially, the distributional consequences of monetary policy shocks are much weaker than in previous work. What emerges instead is a hollowing out of the distribution, as middle-income households benefit the least. In contrast, in the flexible wage specification, the top quintile of the wealth distribution unambiguously loses, while the lower quintiles gain. Moreover, the distributional consequences depend crucially on fiscal policy. An expansionary monetary policy shock reduces inequality only when the government increases lump-sum transfers in response to a fall in the real value of government debt. When the fiscal authority adjusts government purchases or tax rates, welfare gains are larger for wealthier households.

“Top Income, Financial Intermediation, and Small Firms” with Sebastian Doerr and Thomas Drechsel [\[Link\]](#)

This paper shows that rising top income shares reduce job creation by small firms. We hypothesize that rising top income shares lower the amount of deposits banks receive to fund small firms, which depresses small firms' job creation. The mechanism is based on two observations: (i) high-income households save relatively less in the form of bank deposits, and (ii) small firms are bank-dependent. We exploit variation in top incomes across US states to establish that a 10 percentage point (p.p.) increase in the top 10% income share reduces the net job creation rate of small firms by 2 p.p., relative to large firms. The strength of the effect declines in firm size, increases in external financial dependence, and is stronger for higher income share thresholds. Results are similar when we use an instrumental variable strategy and include granular fixed effects. We then build a general equilibrium model with heterogeneous households that face a portfolio choice between high-return direct investments and low-return deposits that insure against liquidity risk. Banks use deposits to lend to heterogeneous firms subject to a costly-state-verification problem. We use the model to study job creation across firm sizes under a range of top income shares.

WORK IN PROGRESS

“The Distributional Consequences of Raising the Inflation Target in a Heterogeneous Agent New Keynesian Model” with Jun Hee Kwak

In recent decades, a secular decline has pushed the natural rate of interest to levels close to zero, increasing the risk that recessions will push nominal interest rates to the zero lower bound, limiting the effectiveness of conventional monetary policy. One potential remedy is to increase the inflation target to 4%. This paper assesses the effects of such a policy change on the economy using a heterogeneous agent monetary model with rigid wages and prices, procyclical profits, and a steady state wealth distribution that matches the current distribution in the United States. Preliminary results show that at the new steady-state with a higher inflation target, the economy accumulates less capital as a higher cost of price adjustments lowers the rate of return on investment. Moreover, the lower return on investment mainly reduces the welfare of wealthy households that are major claimants of profits. Thus, a higher inflation target reduces the level of wealth and income inequality. However, during the transition, the economy can experience an expansion with a higher level of capital if the central bank delays the required policy rate adjustments. The benefits from such an expansion tend to be larger for wealthier households. This is because a continuing and rapid increase in the inflation rate erodes the value of real wages, which hurts poor wage earners disproportionately. Hence, during the transition to a higher inflation target, wealth and income inequality can rise.

PREDOCTORAL RESEARCH

“Research on the Impact of Internet Banking on Demand Deposit and Bank Profitability” with Bonggeul Chun, 2014, *BOK Working paper*, Bank of Korea, NO. 14-6.

“Bitcoin: Current Status and Implications”, 2013, *Payment and Settlement Research Paper*, Bank of Korea, NO. 2013-3.

“Mobile Payment Innovations”, 2013, *BOK Issue paper*, Bank of Korea, NO. 2013-7.

“Cashless Society” with Jeonggyu Kim, 2012, *BOK Discussion paper*, Bank of Korea, NO. 2013-1.

TEACHING EXPERIENCE

MATLAB course (graduate), Department of Economics, University of Maryland, Fall 2018
Teaching Assistant, Money and Banking (undergraduate), University of Maryland, Fall 2015 and Spring 2016

RESEARCH AND RELEVANT WORK EXPERIENCE

Research Assistant, Prof. Thomas Drechsel, University of Maryland, Fall 2019– Present
Research Assistant, Prof. Luminita Stevens, University of Maryland, Fall 2017– Spring 2019
Economist, Payment and Settlement Department, Bank of Korea, 2011–2015
Research Assistant, SNU Institute for Research in Finance and Economics, 2009–2010

CONFERENCE PRESENTATIONS

2020: Young Economist Symposium 2020 (Virtual), VMAC Junior (coauthor presented), SEA Annual Meeting (Virtual, scheduled)
2019: George Washington University Student Research Conference, Georgetown Center for Economic Research Biennial Conference, Midwest Economic Theory Conference, Bloomington, Indiana

GRANTS AND AWARDS

Ann G. Wylie Fellowship, Fall 2020
Graduate Assistantship, University of Maryland, Fall 2015-Spring 2020
Scholarship funded by Seoul National University Alumni Association, 2007-2010
Scholarship for Superior Academic Performance, Department of Economics, Seoul National University, Fall 2007, Spring 2008, Spring 2009

PROGRAMMING AND LANGUAGES

Programming: MATLAB, Julia, STATA, SAS, Eviews
Languages: English (fluent), Korean (native)

REFERENCES

Prof. Borağan Aruoba	University of Maryland	aruoba@umd.edu	(301) 405-3508
Prof. Luminita Stevens	University of Maryland	stevens7@umd.edu	(301) 405-3515
Prof. Thomas Drechsel	University of Maryland	drechsel@umd.edu	(301) 405-9952
Prof. John Shea	University of Maryland	jshea1@umd.edu	(301) 405-3491