Dong Ho Kang

Pesonal Website

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Education

Present	Ph.D. Candidate in Economics, University of Missouri, Columbia, MO, USA Thesis: *Essays on Housing Macroeconomics with Heterogeneous Agent* Advisor: Dr. Aaron Hedlund Committee: Dr. Chao Gu, Dr. Joseph Haslag, and Dr. Jialu Shen Projected graduation: May. 2024
2017	M.A. in Economics, Hanyang University, Seoul, South Korea Thesis: *Monetary Policy Independence in Korea* Advisor: Dr. Daekeun Park
2015	B.A. in Economics, Hanyang University, Seoul, South Korea

Research Interests

Primary: Quantitative Macroeconomics, Household Finance, Real Estate

Secondary: Monetary Economics

Working Papers

"**How Does Credit Score Rationing Shape the Housing Market?**" (Job Market Paper)

By developing a macro-housing model with heterogeneous agents, defaultable mortgages, and **dynamically evolving credit scores** influenced by household earnings and decision-making behavior, including debt repayment, I investigate the effects of implementing a **minimum credit score requirement** for mortgage approval on the housing market. Introducing this requirement reduces the risk of default and average mortgage rates and lowers the average loan-to-value ratio and the proportion of mortgage holders. Notably, instituting this threshold at the subprime level results in a 5-percentage-point increase in homeownership. Through counterfactual experiments, this growth is attributed to two main factors: i) the motivation provided by credit scores, which encourages households to acquire ownership to enhance their creditworthiness, and ii) access to more affordable mortgage rates due to the decline in default risk within an economy that mandates a minimum credit score.

"**Residential Construction and Housing Price Boom after Recovery from the Great Recession**"

Recent experiences in the US housing market, especially during the 2010s, differ from the previous housing boom of 2000–2008 in several significant ways. First, a **stagnant housing supply** can have a substantial impact on house price volatility. Second, despite low mortgage rates and significant increases in income, there has been slow growth in the homeownership rate. Using a macro-housing model with a heterogeneous agent, this paper establishes quantitatively that the dynamics of the 2010s housing market can be attributed to two distinct factors: a decrease in the **productivity of residential construction sector** and a rapid increase in real median income. Specifically, a negative productivity shock in the residential construction sector led to a shortage of supply, causing house prices to increase. Simultaneously, the positive income shock stimulated housing demand, further driving up prices. However, the effect of the income shock was not strong enough to counterbalance the negative supply shock from decreasing residential productivity, resulting in a slow recovery of the homeownership rate.

Work In Progress

"**Does Interest on Reserves Matter?**" (with Joseph Haslag)

The theoretical implications of **paying interest on reserves** have been a subject of debate since Wallace's seminal work in 1981, which argues that the price level and the consumption are not affected by changes in the money supply when fiat money is fully backed by capital and generates interest. Since the Federal Reserve started paying interest on reserves in 2008, this paper rigorously and empirically examines this theory. We explore the scope of the monetary policy's impact on macroeconomic variables before and after the policy's adoption by applying a vector autoregression model with an **external instrumental variable** to isolate orthogonal monetary policy shocks. Our findings are consistent with Wallace's hypothesis: After the implementation of interest on reserves, monetary policy shocks seem to exert no statistically significant effects on the consumption, price index, or industrial production. This starkly contrasts with the pre-implementation period, during which these shocks had notable impacts.

"**Monetary Policy Independence in Korea**"

This paper focuses on investigating the monetary policy independence in South Korea. While the well-known **Trilemma theory** suggests that South Korea can maintain a certain level of autonomy in its monetary policy due to its flexible exchange rate and free capital market, there is an opposing narrative that the international financial cycle, largely influenced by **asset dollarization**, may hinder the ability of countries with flexible exchange rates to pursue monetary policy independently from the United States. To specifically test this hypothesis, this paper examines the relationship between US interest rates and the interest rate spreads between certificates of deposit and commercial paper in Korea. Using structural vector autoregression analysis, I have found that a 0.2 percentage points increase in the 1-year treasury rate leads to a 0.05 percentage points increase in South Korea's interest rate spread between certificates of deposit and commercial paper in the short run. This finding provides evidence supporting the idea that US monetary policy significantly affects the financial conditions of South Korea.

Prior Employment and Other Positions

Research Assistant 2023 - Present
University of Missouri, Columbia, MO

- Kenneth Lay Research Fund

Teaching Assistant 2018 - 2022
University of Missouri, Columbia, MO

- Principles of Microeconomics
- Principles of Macroeconomics
- Money, Banking and Financial Markets
- Macroeconomic Theory

Teaching Assistant 2015 - 2016
Hanyang University, Seoul, South Korea

- Macroeconomics
- International Finance

Presentations

Missouri Valley Economic Association, 60th Annual Conferences Oct. 2022

Programming Skills

Fortran, Stata, MATLAB, R, Latex, Parallel computing (with OpenMP)

References

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