Seokil Kang

Bank of Korea
Office of Economic Modeling and Policy Analysis
39, Namdaemun-ro, Jung-gu, Seoul
Republic of Korea, 04531

Email: kangseokil@bok.or.kr
URL: https://seokil-kang.github.io/
Mobile: (+82) 10-8968-0027

Employment

Economist	Macroeconomic Modeling Team, Bank of Korea	Aug.2022 - present

Education

Ph.D. Economics	Indiana University Bloomington, USA	2022
M.A. Economics	Yonsei University, Korea	2016
B.A. Economics	Yonsei University, Korea	2014

Field of Interest

Macroeconomics, Monetary and fiscal policy, Bayesian Econometrics

Working Papers

1. **"Quantifying the Fiscal Backing for Monetary Policy"**
   I ask to what extent can data reveal whether fiscal policy responses to monetary policy shock are consistent with the theoretical adjustments necessary for successful inflation-targeting monetary policy. I employ a DSGE model to estimate the fiscal response to a monetary policy shock under the active monetary and passive fiscal policy regime. A monetary contraction raising interest rate by 25 basis points reduces the market value of government debt by 0.8% because the bond price devaluation outweighs the fall in inflation. This reduction splits into a 1.7% decline due to higher discount rates and a 0.9% increase in expected primary surpluses. I also estimate a VAR that takes an agnostic view on the policy regime to examine how closely the data conforms to the theory. I find that the data accounts for 90% of the primary surplus response dictated by theory, suggesting that the data reveals the presence of fiscal backing for monetary policy.

2. **"Simulated Annealing Multiplicative Weights Algorithm for Solving a DSGE Model"**
   This paper introduces a simulation-based adaptive algorithm to solve a DSGE model with a large state space, namely the curse of dimensionality. It aims to generate a stationary distribution over policy space which is concentrated on the optimal policy. The key strategy is to construct a finite policy space of heuristic policies. To update the distribution over policy space, the method adopts on-line computation via iterative simulation with emphasis on rolling-horizon control to foster the speed of algorithm. Subsequently, I deliver that the algorithm achieves theoretical convergence to the optimal value function and the stationary distribution over policy space is concentrated on the optimal policy. Application to solve the simple two-period RBC model follows as a sample exercise. The result shows the performance is desirable within the feasible number of iterations and size of restricted policy space respectively.

Policy Papers

1. "BOK-LOOK: A Semi-Structural Model for Korea's Open Economy and Monetary Policy Analysis" with Seungryul Jeong, Hyungbae Cho, Jinwoon Yoon, Dongjae Lee, **BOK Working Paper Series**, 2025

2. Interaction between Monetary and Fiscal Policy in a Small Open Economy: Focusing on Fiscal Backing(In Korean), Chapter 5 in **KDI 재정전문가 네트워크 구축**, 2025

Presentation

2026	IMF-ASEAN COP on IPF Workshop (Bank of Thailand, Scheduled)
2024	Bank of England, Banque de France, European Central Bank, The 18th Dynare Conference(Singapore)
2023	Sungkyunkwan University, Bank of Korea
2022	Bank of Korea, KIF
2021	KERIC(virtual), SEA Annual Meeting(Houston), Macro Brownbag (Indiana University)
2019	Hoosier Economics Conference(Indiana University)

Miscellaneous

Citizenship: South Korea

Language: Korean(native), English(fluent)

Computer Skills: Julia, Matlab, Stata, HPC cluster, Dynare

References

Professor Todd B. Walker
Indiana University Bloomington
walkertb@iu.edu

Professor Christian Matthes
University of Notre Dame
cmatthes@nd.edu

Professor Eric M. Leeper
University of Virginia
eml3jf@virginia.edu

Professor Laura Liu
University of Pittsburgh
laura.liu@pitt.edu

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