

# SEOKIL KANG

Bank of Korea  
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## EMPLOYMENT

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Economist	Bank of Korea(Macroeconomic Modeling Team, Office of Economic Modeling and Policy Analysis)	Aug.2022 - present
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## EDUCATION

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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

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Macroeconomics, Monetary and fiscal policy, Bayesian Econometrics

## WORKING PAPERS

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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.

## PRESENTATION

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- 2023 Sungkyunkwan University
- 2022 Bank of Korea, KIF
- 2021 KERIC(virtual), SEA Annual Meeting(Houston), Macro Brownbag (Indiana University)
- 2019 Hoosier Economics Conference(Indiana University)

## TEACHING, RESEARCH EXPERIENCE

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Indiana University Bloomington(2017 - 2022)

- Teaching Assistant      Intro to International Trade, Macroeconomics I(Ph.D.)
- Associate Instructor    Method of Economic Analysis, Intermediate Macroeconomics Theory, Statistical Analysis for Business and Economics, Macroeconomics I(Master)  
(Full teaching responsibilities)
- Research Assistant      Professor Todd Walker

## MISCELLANEOUS

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- Citizenship: South Korea
- Language: Korean(native), English(fluent)
- Computer Skills: Julia, Matlab, Stata, HPC cluster, Dynare

## REFERENCES

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Professor Todd B. Walker  
Indiana University Bloomington  
[walkertb@iu.edu](mailto:walkertb@iu.edu)

Professor Eric M. Leeper  
University of Virginia  
[emljf@virginia.edu](mailto:emljf@virginia.edu)

Professor Christian Matthes  
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Professor Laura Liu  
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