

# Giorgi Nikolaishvili

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## Research Fields

Primary: Macroeconomics, Time Series Econometrics  
Secondary: Monetary Economics, Banking, Financial Economics

## Education

2019 - pres.	Ph.D. in Economics, <i>University of Oregon</i>
2019 - 20	M.S. in Economics, <i>University of Oregon</i>
2015 - 19	B.S. in Economics, <i>Tufts University</i>
2015 - 19	B.S. in Mathematics, <i>Tufts University</i>

## Working Papers

### *“Commercial Bank Heterogeneity and the Transmission of Monetary Policy”*

The literature on the aggregate bank lending channel (BLC) shows evidence of the transmission of monetary policy into the real economy through changes in the supply of bank loans. However, insights on the distributional properties of the BLC are scarce and inconclusive. I study how different dimensions of bank heterogeneity influence their individual roles in the BLC, with a special focus on the distinction between community and non-community banks in the United States. I find that the bank-level responses of lending growth to monetary policy shocks are quite diffuse across both community and non-community banks, but also that the spread of community bank responses to monetary policy shocks is greater than that of non-community banks. My results also suggest that output growth is affected quite differently by shocks to community bank lending than those to non-community bank lending. Lastly, I find that community banks play a key role in influencing the real output growth of certain sectors of the U.S. economy.

### *“Pass-Through Impulse Response Function (PT-IRF)”*

Impulse response functions (IRFs) are uninformative about the channels through which a shock propagates through a dynamical system. I formulate the concept of a pass-through impulse response function (PT-IRF), which decomposes an IRF by identifying the passage of a structural shock through specific media in a given system. I demonstrate the applicability of the PT-IRF by performing inference on the effect

of a monetary policy shock on unemployment through changes in bank lending in a simple vector autoregression, effectively estimating and testing the existence of the credit channel of the monetary transmission mechanism.

### ***“The Evolution of Community Bank Interconnectedness”***

I estimate national and regional latent drivers of quarterly fluctuations of state-average community bank return-on-equity (ROE) for all 50 states in the US. I do so by modeling a dataset of state-average community bank ROE series as a multi-level / hierarchical dynamic factor model (HDFM), which I then estimate using Bayesian methods to extract posterior distributions of country- and region-level dynamic factors. I find evidence of both considerable national comovement and state-specific idiosyncrasy, yet no significant regional comovement. I also find a decrease in the intensity of idiosyncratic dynamics of state-level community bank profitability since the global financial crisis, along with an increase in national comovement across most states. I conclude that the US community banking sector has become more interconnected since the crisis, which implies greater exposure to systemic risk and increased vulnerability during future financial crises.

### ***“Measuring Economic Activity in the Presence of Large MNEs”*** with Philip Economides (*Submitted*)

In 2015, changes to Irish tax legislation, known as the “2015 Finance Act”, coincided with a 26% annual increase in real gross domestic product. We show evidence confirming the conclusions of existing literature, which suggests that the presence of large multinational enterprises (MNEs) is likely to have distorted Irish GDP – a measure previously considered to be a reliable proxy of domestic economic activity. Furthermore, we provide an alternative method of statistically isolating the variation in GDP growth attributable solely to domestic activity growth to infer the prevailing state of the Irish economy. Our findings imply a 21% lower level of GDP relative to the official measure recorded for 2020. We suggest that our methodology may be applied by policymakers in small open economies to improve the accuracy of growth and business cycle monitoring.

## **Works in Progress**

### ***“Efficiently Estimating Many-Level High-Dimensional Hierarchical Dynamic Factor Models using Bayesian Methods”***

*“Aggregating Policy Rules to Approximate Temporary Equilibria”* with David Evans

*“Model Uncertainty and Agent Survival”* with David Evans

## **Pre-Doctoral Works**

*“Using deep learning to examine the correlation between transportation planning and perceived safety of the built environment”* with Justin Hollander, Alphonsus Adu-Bredu, Minyu Situ, and Shabnam Bista, *Environment and Planning B: Urban Analytics and City Science*, 2020.

## Software

*DynamicFactorModeling.jl*

Julia package for simulating and estimating multi-level dynamic factor models using classical and Bayesian statistical methods.

*PassThroughIRF.jl*

Julia package for estimating pass-through impulse response functions (PTIRFs).

## Presentations & Conferences

- 2022 (3x) Macro Group, *University of Oregon*
- 2021 (3x) Macro Group, *University of Oregon*

## Teaching

- Spring 2023 EC313 – Intermediate Macroeconomic Theory, *University of Oregon*
- Winter 2023 EC370 – Money and Banking, *University of Oregon*
- Fall 2021 EC370 – Money and Banking, *University of Oregon*
- Summer 2021 EC470 – Monetary Policy, *University of Oregon*

## Teaching Assistance

- Spring 2022 EC320 – (Undergraduate) Introduction to Econometrics, *University of Oregon*
- Winter 2022 EC513 – (Master's) Advanced Macroeconomic Theory, *University of Oregon*
- Winter 2022 EC313 – (Undergraduate) Intermediate Macroeconomic Theory, *University of Oregon*
- Spring 2021 EC607c – (PhD) Core Macroeconomics III, *University of Oregon*
- Winter 2020 EC607b – (PhD) Core Macroeconomics II, *University of Oregon*
- Fall 2019 EC607a – (PhD) Core Macroeconomics I, *University of Oregon*

## Awards

- 2022 Best PhD Research Paper Award, *University of Oregon*
- 2020 - pres. Graduate Teaching Fellowship, *University of Oregon*
- 2020 Edward G. Daniel Scholarship, *University of Oregon*
- 2019 - 20 Graduate Student Fellowship, *University of Oregon*

## Professional Experience

- Summer 2022 Research Assistant (to Dr. David Evans), *University of Oregon*
- 2018-19 Research Assistant, *Urban and Environmental Policy and Planning Department, Tufts University*
- 2018 Research Assistant, *Macroeconomic Research Division, National Bank of Georgia*
- 2017 Investment Management Summer Analyst, *Dorsar Investment Co.*
- 2016 Research Assistant, *Economic Policy Research Foundation of Turkey*

## Personal Information

**Citizenship:** Georgia

**Languages:** English, Russian, Georgian, Spanish (elementary)

**Computing:** Julia (advanced), R (advanced), MATLAB, Python, SQL, Bash, C

**Other Interests:** Jazz guitar, woodworking, sculpting, strength sports, MMA, gardening

## References

### **Jeremy Piger**

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University of Oregon  
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### **George Evans**

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