Avi Lipton

March 2023

First Year Economics PhD Student, Harvard University
Contact: alipton@g.harvard.edu, 215-499-5444
Reference: Ludwig Straub, ludwigstraub@fas.harvard.edu

I would like to attend the Workshop on Heterogeneous Agent Macroeconomics to gain the tools to develop and estimate a quantitative Heterogeneous Agent, New Keynesian (HANK) model with search and matching frictions (SAM) in the labor market in order to quantify the welfare trade-offs of unemployment and inflation. I would like to apply such a model to study topics such as the optimal size of fiscal stimulus during recoveries from recession.

I first worked with NK and SAM models as a research assistant at the Federal Reserve Board. I contributed to the development of the Board's US-FLM model, a medium scale DSGE model with sticky prices, sticky wages, search and matching in the labor market, and financial frictions. I re-derived the full set of equilibrium conditions to check for errors and then coded the equations in Dynare and produced impulse responses. Through this work, I learned how the combination of NK and SAM models can produce more realistic labor market dynamics than either on their own. I also particularly appreciate that these models allow for monetary policy that targets the unemployment rate rather than just the output gap, as the unemployment rate is the outcome of interest for the Fed's dual mandate.

After my work on US-FLM, my supervisor, Isabel Cairó, and I developed a NK model with SAM frictions, endogenous separations, and taste based discrimination against black workers. We applied the model to asses the impact of the Federal Open Market Committee's switch from an interest rate policy that reacts to deviations of the employment rate from target to one that only reacts to shortfalls in employment. We found that this more accomadative monetary policy could narrow the unemployment rate gap between black and white workers. The major drawback to our analysis is that we include perfect consumption insurance across workers within the representative black household and the representative white household. By removing idiosyncratic earnings risk due to unemployment, we will underestimate the welfare benefit to black workers of a narrower unemployment rate gap. In my future research, I would like to properly account for the welfare effects of this earnings risk by embedding the Standard Incomplete Markets (SIM) model into the household block of a NK model with SAM frictions. Specifically I would like to build on Ravn and Sterk (2020)'s "Macroeconomic Fluctuations with HANK & SAM: an Analytical Approach" to develop a full blow quantitative model that can make precise welfare statements. I want to participate in this workshop in order to gain the skills to do this.

Adding a SIM household block into a NK model with SAM frictions will also break Ricardian equivalence and allow me to consider the effects of fiscal policy on unemployment dynamics. Specifically, I would like to study the effect of fiscal stimulus during recoveries from recessions. At the "Inflation and Inequality" panel during this year's ASSA meeting, Jason Furman argued that in 2008 the fiscal policy response to the Great Recession was too weak, prolonging the recovery; but, that the policy response to COVID was too strong, producing too much cost in inflation for too little gain in output at the margin. I believe a HANK model with SAM frictions can provide a framework to systematically assess arguments like Furman's in terms of welfare. Such a model can determine precisely which parts of the distribution would be helped or hurt had the response been bigger or smaller and thus the overall welfare consequences of differently sized recoveries.

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Undergraduate Education

2016-2020 **B.A. in Economics & Mathematics** (Cert: Social Theory), Wesleyan University
High Honors in Economics; University Honors; GPA: 4.00/4.00

Publications

Lipton, Avi. 2022. "The Racial Wealth Gap and the Role of Firm Ownership." AEA Papers and Proceedings, 112: 351-55.

Works in Progress

“Fiscal Adjustment and the Business Cycle in Small Open Economies"(Coauthored with Manuel Gonzalez-Astudillo and Juan Guerra-Salas)

“Labor Market Discrimination and the Racial Unemployment Gap: Can Monetary Policy Make a Difference?" (Coauthored with Isabel Cairó)

Research Experience

Research Assistant, **Federal Reserve Board** June 2020 - June 2022

Economist Supervisors: Isabel Cairó, Manuel Gonzalez-Astudillo, Diego Vilan

- Derived the full set of model equations and deterministic steady states for medium scale New Keynesian models with search and matching frictions, endogenous separations, and financial frictions, as well as for Small Open Economy models with fiscal policy.
- Coded, simulated, and estimated the above models using Dynare and external Matlab files.
- Developed a guide to future RAs for obtaining the state-space form of DSGE models using first order perturbation around the deterministic steady-state, obtaining the likelihood function using the Kalman Filter, and estimating the unobserved states and deep parameters using the Gibbs sampler.
- Wrote Python code to scrape data from the Ecuadorian Central Bank for a survey of professional forecasters.

Peter G. Peterson Fiscal Fellow, **Progressive Policy Institute** Summer 2019

- Researched and summarized information on various fiscal policy topics such as the Child Tax Credit, Medicare Part D, and carbon taxation to assist in the writing of PPI's comprehensive budget proposal *Funding America's Future: A Progressive Budget for Equitable Growth*.
- Crafted language for sections of the Progressive Budget for Equitable Growth on topics such as Social Security and health care policy to explain PPI's recommendations in persuasive and relatable terms.
- Published a blog post, "UBI is the Wrong Way to Fight Poverty", to convince voters and policymakers why expanding the Earned Income Tax Credit is a better approach to addressing poverty than Universal Basic Income.

Research Assistant, **Wesleyan University Economics Department** May 2018 - May 2019
Supervisor: Karl Boulware

- Managed data in Stata for Professors Boulware and Kuttner for their paper, "Labor Market Conditions and Charges of Discrimination: Is There a link?" published in the 2019 May issue of the American Economic Review.
- Performed statistical analysis and data management in Stata for professor Boulware's research on gentrification.
- Developed a conceptual framework with professor Boulware for his research on gentrification.

PhD Macro Courses

ECON 2010C: Economic Theory

- Taught by David Laibson and Adrien Bilal.
- The first half covered stationary, non-stationary, discrete-time, and continuous-time dynamic programming.
- The second half covered the Permanent Income Hypothesis, the Standard Incomplete Market Model, the Hugget and Ayigari Models in steady state, and the Diamond, Mortensen, and Pissarides Search and Matching Model.

ECON 2010D: Economic Theory

- Taught by Ludwig Straub and Xavier Gabaix.
- The first half covered the Neoclassical Growth Model, the Real Business Cycle Model, and The New-Keynesian Model.
- The second half will cover international finance.

Programming Skills

Julia, LaTeX, Matlab (including Dynare), Python, Stata.