Cover Letter

CONTACT INFORMATION

Marco Olivari
812 Memorial Drive, apt. 1710
Cambridge, MA, 02139
Mobile: (617) 386–3637
Mail: olivari@bu.edu

REFERENCE

Professor Adam Guren
Boston University
Department of Economics
270 Bay State Road
Boston, MA 02215
Mobile: (617) 353–4534
Mail: guren@bu.edu

Marco Olivari

812 Memorial Drive, Cambridge (MA), USA ◇ olivari@bu.edu

Last updated: March 20, 2023

Education

Boston University — Boston, MA
Ph.D. in Economics–2nd year. GPA: 3.95/4.0 — Sept. 2021 – Present

- First Year Coursework: **Macro Theory 1, Macro Theory 2**, Micro Theory 1, Micro Theory 2, Econometrics 1, Econometrics 2, Mathematics.
- Second Year Coursework: **Topics in Macro/Monetary, Applied Macroeconomics**, Asset-Pricing, Financial Econometrics, Time Series, Advanced Topics in Econometrics, **Monetary Economics** (attended at Boston College).

Bocconi University — Milan, Italy
M.S. in Economic and Social Sciences (DES/ESS) – Summa cum Laude. GPA: 29.3/30 — Sept. 2018 – Apr. 2021

- Ph.D. courses: Microeconomics 1, **Macroeconomics 1.**
- Relevant Coursework: Advanced Mathematics, Advanced Statistics, Econometrics, Time-Series, **Advanced Macroeconomics**, Microeconometrics, **Monetary Policy**.

University of Perugia–SMI — Perugia, Italy
Summer School in Mathematics. GPA: 4.0/4.0 — Jul. 2020 – Aug. 2020

- Relevant Coursework: Functional Analysis (A), Mathematical Statistics (A+).

Bocconi University — Milan, Italy
B.S. in Economics and Social Sciences (CLES)– Summa cum Laude. GPA: 29.50/30 — Sept. 2015 – Sept. 2018

UCLA, Department of Economics — Los Angeles, CA
Undergraduate Visiting Student – GPA: 4.0/4.0 — Jan. 2018 – March 2018

Research Activity

Working Papers:

– GLS-IV in Time Series Regressions (2023), joint with Pierre Perron

We consider a linear regression model with serially correlated errors. We introduce a new IV estimator which is more efficient than the optimal GMM estimator. We propose also a feasible implementation of the estimator.

Research Assistant to:

– Prof. Pierre Perron (Boston University) — June. 2022 – Present

– Prof. Carlo Favero (Bocconi), Andrea Ichino (EUI), and Aldo Rustichini (Univ. of Minnesota) — Mar. 2020 – Jan. 2021

Industry Experience

Rationis Portfolio Tech Solutions — Milan, Italy
*Financial Engineer - **Internship*** — Feb. 2021 – Jul. 2021

European Commission DG Ec-Fin — Luxembourg, Luxembourg
*Research Assistant - **Traineeship*** — Jun. 2019 – Aug. 2019

Other Information

Programming: Full command of Python, R, and LaTeX. Good command of Matlab, Stata, and git for version control.
Languages: Italian (Native), English (Fluent – C2).
Sports Practiced: Sailing (X2 Italian Champion H22), Skiing, Tennis.

Motivational Statement

I am a second-year Ph.D student and my research interest are (i) Monetary Economics, (ii) Macro-Labor and (iii) Time-Series Econometrics. I consider the NBER Workshop on Heterogeneous-Agent Macroeconomics a valuable opportunity to learn the Sequence Space Jacobian which is essential for my research.

First, I outline two research ideas I developed for the two 2^{nd}-year Macro sequence under the supervision of Prof. Adam Guren (Boston University) and Masao Fukui (Boston University). For both, I plan to use Sequence Space Jacobian to solve the model. Then, I present my current time-series paper and explain the implications for the identification of the New Keynesian Phillips Curve.

Entrepreneurship and Labor Market Friction I would like to test if institutional changes and labor market frictions can explain the decline in entrepreneurship rate among US households. I am expanding the simple Lucas' span-of-control model to account for unemployment. The presence of unemployment has non-obvious effects on the willingness to become an entrepreneur. On the one hand, high unemployment means cheap labor for the potential entrepreneur, increasing her likelihood of success. On the other hand, in case of failure, the entrepreneur would end up unemployed in a period of high unemployment. Changes in institutional settings and labor market frictions can modify the trade-off and might help explain the decline in entrepreneurship rate. I believe a quantitative answer to this question can be provided through the lenses of a directed search model, as in Menzio and Shi (2010). The Sequence Space Jacobian can be applied: the value function does not depend on the distribution of heterogenous workers across employment states.

Labor supply heterogeneity and the transmission of monetary policy Flexible labor supply is a hedge against income risk. However, because of preferences or contractual constraints, the extent to which individuals can adjust their labor supply varies across people. Are people saving and consuming differently as a consequence of this? How does this friction affect the transmission of monetary policy? A decrease in interest rate stimulates consumption due to intertemporal substitution for a given income. However, because of different labor supply elasticities, income increases more for those who can easily adjust their number of hours worked. Then, depending on whether these people have higher or lower MPC, there will be an amplification or dampening of the transmission of monetary policy.

GLS-IV in Time Series Regressions (2023) - *with Pierre Perron* We consider a linear regression model with serially correlated errors. In this context, we propose a new IV estimator (GLS-IV) that is more efficient than the commonly used optimal GMM estimator. The key is that we apply the weight directly to each observation rather than to the moments as in GMM.
More importantly, in line with Hayashi and Sims (1983), our estimator is robust to weakly exogenous instruments. Weak exogeneity arises naturally with the rational expectation assumption in models that feature serial correlation in the errors. For example, estimating the New Keynesian Phillips Curve by exploiting the rational expectations hypothesis to get the moment conditions leads to forecast errors of $MA(k-1)$ form. Hence, GMM leads to inconsistent estimates of the Phillips Curve's parameters. This inconsistency could explain the conflicting results found by Mavroeidis, Plagborg-Møller, and Stock (2014) on the empirical evidence of inflation expectations. We show that GLS-IV leads to consistent estimates.

References

Hayashi, Fumio, and Christopher Sims. 1983. "Nearly efficient estimation of time series models with predetermined, but not exogenous, instruments." *Econometrica: Journal of the Econometric Society* 783–798.

Mavroeidis, Sophocles, Mikkel Plagborg-Møller, and James H Stock. 2014. "Empirical evidence on inflation expectations in the New Keynesian Phillips Curve." *American Economic Journal: Journal of Economic Literature* 52 (1): 124–188.

Menzio, Guido, and Shouyong Shi. 2010. "Block recursive equilibria for stochastic models of search on the job." *Journal of Economic Theory* 145 (4): 1453–1494.