Curriculum Vitae

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Qualifications

Sep 2019 - present	Bocconi University, Milan, Italy PhD in Economics and Finance (Economics Curriculum)
Sep 2016- June 2019	Shanghai Academy of Social Sciences, Shanghai, P.R.China Master in Economics
Sep 2011 - June 2015	Nankai University, Tianjin, P.R.China Bachelor in Physics

Completed PhD courses in macro

2019 – 2020	Macroeconomics 1. Prof Nicola Pavoni Macroeconomics 2. Prof Antonella Trigari Macroeconomics 3: Heterogeneity in Macroeconomics. Prof Marco Maffezzoli Macroeconomics 4: Monetary Economics. Prof Josef Sigurdsson
2020 – 2021	Advanced Macroeconomics 1. Prof Kurt Mitman -------- Topics in Quantitative Macroeconomic. Advanced Macroeconomics 2. Prof Nicola Pavoni ---------Topics in Public Finance, Macroeconomics with Incomplete Information and Behavioral Macroeconomics. Advanced Macroeconomics 3. Prof Carlo Ambrogio Favero --------- Econometric Methods for Finance and Macroeconomics Advanced Macroeconomics 4. Prof Tommoso Moncalei --------- Topics on monetary and financial macroeconomics.

Reference

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Motivation Letter

Zheng Gong [†]

I am a third-year PhD student from Bocconi University, Milan. The efficient and portable computation method from Auclert et al. (2021) helped me a lot with the quantitative exercise of my current project. I think I could benefit from the workshop on mainly two aspects: getting a deeper understanding about the computation methods in Auclert (2019) to be able to tailor it (if necessary) for my future research; and being exposed to more broad topics in heterogeneous-agent macroeconomic models.

Inspired by the partial equilibrium decomposition in Kaplan, Moll and Violante (2018) and Auclert (2019), my current project aims to decompose the effects of aggregate shocks in general equilibrium. The motivation for a GE decomposition is to allow a quantitative assessment of the redistribution channel of monetary policy. Specifically, for a monetary policy shock ϵ_t, I decompose it into an 'aggregate' part $(\epsilon_t, \{\omega_{it}\})$ and a 'redistribution' part $(\{-\omega_{it}\})$, where $\{\omega_{it}\}$ is a cross-sectional transfer among households. Then I assess the economy's response to these two parts separately. The assumption imposed on $(\{\omega_{it}\})$ depends on how the 'aggregate' effect is defined. And I assume that, the economy 's response to the shock's aggregate part $(\epsilon_t, \{\omega_{it}\})$ is equivalent to the response of a constructed representative agent[*]. I find that, the aggregate demand generated from the redistribution shock $(\{-\omega_{it}\})$ is the key to evaluate the amplifying/damping mechanism in HANK models.

In terms of computation, I need to solve the model's impulse response to the (persistent) redistribution shock $(\{-\omega_{it}\})$. I benefited from the nonlinear solution methods from Auclert et al. (2021): after indexing the $(\{-\omega_{it}\})$ with the scalar sequence time t, I can use time t as the proxy of redistribution shock and call the nonlinear solver to solve the model. From this exercise we can see that the method from Auclert et al. (2021) can be widely applicable with only small modifications.

My research interests focus on macroeconomics topics which cannot be done with a representative agent. For example, the implication of (wealth) inequality on optimal monetary policy and fiscal policy; the possibility of a redistribution shock triggering aggregate fluctu-

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[*]We notice this approach is also developed in Hagedorn (2020) to study local determinacy of HANK models.

ations, etc. I wish the research on heterogeneous-agent macroeconomic models could be an influential strand in the future and provide rich fruits for macroeconomics topics.

References

Auclert, Adrien. 2019. "Monetary policy and the redistribution channel." *American Economic Review*, 109(6): 2333–67.

Auclert, Adrien, Bence Bardóczy, Matthew Rognlie, and Ludwig Straub. 2021. "Using the sequence-space Jacobian to solve and estimate heterogeneous-agent models." *Econometrica*, 89(5): 2375–2408.

Hagedorn, Marcus. 2020. "A demand theory of the price level." *Centre for Economic Policy Research*.

Kaplan, Greg, Benjamin Moll, and Giovanni L Violante. 2018. "Monetary policy according to HANK." *American Economic Review*, 108(3): 697–743.