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Education

Ph.D. Candidate in Economics, University of British Columbia, 2015 to present
Thesis Title: Subjective Expectation Formation: A Recurrent Neural Network Approach

M.S. University of Texas at Austin, 2015

M.A. Simon Fraser University, 2013

B.A. Fudan University, 2012

Research Fields

Primary fields: Behavioural Macroeconomics, Monetary Economics, Deep Learning
Secondary fields: Applied Macroeconomics, Expectation Formation

Dissertation Chapters

"Subjective Expectation Formation: A Recurrent Neural Network Approach " (Job Market Paper)

Households are exposed to a rich set of signals that can help them form expectations. How they make use of these signals remain a debated question among economists. Standard learning models rely on structural assumptions and parametric methods that are typically incapable to capture potential non-linear and state-dependent relationship between signals and expectations. This paper tackles the problem by proposing a generic learning model that can cover a large class of expectation formation models, including those are standard in the literature. The average structural function of this model is estimated with an innovative semi-parametric approach: Recurrent Neural Network. Average marginal effect of signals on expectational variable is estimated using Double De-biased Machine Learning estimator, together with valid inferences. Applying this approach to survey expectations for U.S. households, I find: (1) agents' perceptions about future economic condition have asymmetric and non-linear response to signals; (2)the attentions to past and future signals in the learning model are highly state-dependent, agents are adaptive learner in ordinary periods and become forward looking as state of economy gets worse; (3) both signal and exposure to news on economic condition play important role in creating the attention-shift. I then propose a model that features rational inattention to explain these patterns.

"Monetary Policy when the Phillips Curve is Locally Quite Flat"

(Joint with Paul Beaudry and Franck Portier)

This papers begins by highlighting how the presence of a cost channel of monetary policy can offer new insights into the behavior of inflation when the Phillips curve is locally quite flat. For instance, we highlight a key condition whereby lax monetary policy can push the economy in a low inflation trap and we discuss how, under the same condition, standard policy rules for targeting inflation may need to be modified. In the second part of the paper we explore the empirical relevance of the conditions that give rise to these observations using US data. To this end, we present both *(i)* a wide set of estimates derived from single-equation estimation of the Phillips curve and *(ii)* estimates based on structural estimation of a full model. The results from both sets of empirical exercises strongly support the key condition we derived.

"Great Moderation on Different Frequency Bands"

In this paper I document new data patterns for US economy since 1950 to describe the volatility change usually referred as "Great Moderation". I argue the conventional approach using first difference data is a particular way of data transformation and has lost some important features in a way that is in favor of the existing explanations on Great Moderation. I then want to explore plausible causes for Great Moderation that is consistent with both the conventional and the new patterns of data.

Working Papers

"Convergence Across Castes" (Joint with Amartya Lahiri and Viktoria Hnatkovska)

"Disagreement about Inflation Forecast and its Impact on Business Cycle"

"Cross-correlation of Survey Expectation: A Test of Joint Expectation Formation"

Teaching Experience

Spring 2020	Quantitative Economic Modeling with Data Science Applications, University of British Columbia, Teaching Assistant for Professor Jesse Perla and Professor Paul Schrimpf
Winter 2019	Advanced Macroeconomics (Masters), University of British Columbia Teaching Assistant for Professor Michael Devereux
Winter 2017-2018	Advanced Macroeconomics (Masters), University of British Columbia Teaching Assistant for Professor Viktoria Hnatkovska
Spring 2018	Monetary Economics (Masters),University of British Columbia Teaching Assistant for Professor Jesse Perla
Winter 2016	Econometrics Theory (PhD), University of British Columbia Teaching Assistant for Professor Kevin Song

Research Experience

2017-2018	Research Assistant for Professor Jesse Perla
2017	Research Assistant for Professor Amartya Lahiri
2016-2017	Research Assistant for Professor Yaniv Yedid Levi

Honors, Scholarships and Fellowships

2017-2019	Li Tze Fong Memorial Fellowship, University of British Columbia
2015-2019	Four Year Fellowship, University of British Columbia
2016	Chuck Blackorby Prize, Vancouver School of Economics
2016	John Cragg Prize, Vancouver School of Economics
2013-2015	Department of Economics Fellowship, University of Texas at Austin
2012-2013	Departmental Fellowship, Simon Fraser University

Presentations

2015-2020	Macroeconomics Seminar, University of Texas at Austin; Macroeconomics Lunch Seminar, University of British Columbia; Econometrics Seminar, University of British Columbia The Society for Computational Economics 26th Conference (Cancelled)
(scheduled)	Society for Economic Dynamics Annual Meeting 2020 (rescheduled to 2021)

Certificates and Other Academic Activities

Summer 2018	Tools for Macroeconomics Workshop London School of Economics and Political Science
Referee:	Canadian Journal of Economics

Programming Skills

STATA, Matlab, Python, TensorFlow, LATEX, Julia (Basic), R(Basic)

References

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