Application for Graduate Student Workshop on Heterogeneous-Agent Macroeconomics

Sigmund Ellingsrud

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1 Cover Letter

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1.1 References

- Andreas Fagereng, Professor at BI Norwegian Business School andreas.fagereng@bi.no
- Gisle James Natvik, Professor at BI Norwegian Business School gisle.j.natvik@bi.no

2 Coursework in Macro

- DRE7033 - Advanced Macroeconomics 1 `https://programmeinfo.bi.no/nb/course/DRE-7033/2020-autumn`
- DRE7034 - Advanced Macroeconomics 2 `https://programmeinfo.bi.no/nb/course/DRE-7034/2020-autumn`
- DRE 7040 - Topics in Macroeconomics I `https://programmeinfo.bi.no/nb/course/DRE-7040/2021-autumn`
- DRE 7041 Topics in Macroeconomics II `https://programmeinfo.bi.no/en/course/DRE-7041/2021-autumn`
- DRE 4017 - Numerical Methods in Finance and Economics `https://programmeinfo.bi.no/en/course/DRE-4017/2021-autumn` I'm adding this course as the applications of the tools we've learned was centered around the Ayagari model.

3 Motivation for attending workshop

My position as a PhD student is within an ERC funded project titled 3D in Macro, which purpose is to research the heterogeneity along three distributional dimensions: Income, Wealth and Consumption. Formal reasoning around these topics requires a solid fundament based on the current tabyia of heterogenous agent modeling. It's therefore easy to feel motivated attending such a workshop, as it will teach me the necessary foundation of research within how macroeconomic policy influence distributions and how distributions influence macroeconomic policy. Particularly the latter group of questions are tremendously hard to argue about without a sufficiently rich modelling framework.

Although I haven't written any research papers yet, all topics I'm currently exploring fits within the framework of heterogenous agent macroeconomics. Specifically, I believe the advantage of having access to Norwegian register data ought to enable thinking properly about how to link heterogenous agent models with empirical evidence.

I believe I have obtained the necessary background skills to participate in the workshop. Both as part of one of my courses Topics in Macroeconomics and Computational Economics have I practiced relevant solution methods programatically. As an example, I've written a Julia version of the implicit upwind-scheme solution method used in the paper by Achdou et al. From

previous professional experience, I'm fluent in Python and acceptable with Julia and Matlab.

In addition, I both hope and believe it will serve as an opportunity to meet and interact with other students and researchers interested in similar topics.

Finally, the reason for the long delay in my Master's degree was due to fortunately resolved health issues.

SIGMUND ELLINGSRUD

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EDUCATION

BI *August 2020 - June 2024*
PhD candidate

University of Oslo *August 2009 - June 2019*
Master in Economics
Macroeconomics
Average Grade: A

University of California - Berkeley *August 2012 - June 2013*
Exchange Student at Graduate program

Norwegian Officer Candidate School *August 2006 - June 2008*
Leadership, Physical Education and Military Strategy

EXPERIENCE

Retriever August 2019 - August 2020
Data Analyst *Oslo,Norway*

· My work is centred around finding applications of media-data. For instance how it can affect sales or prices. In addition, I have tasks connected with cleaning, maintaining or fetching data.

Norges Bank August 2013 - June 2014
Research Assistant *Oslo, Norway*

· Worked on estimating a model explaining exchange rate fluctuations with heterogeneous information. Worked on writing a survey documenting recent advances in research on or relevant to macroprudential policy

Storebrand Summer 2012
Intern *Lysaker, Norway*

· Worked on mutual fund selection and evaluation for Storebrand's Asset Management department, unit for Alternative Investments.
· Worked on technical maintenance and development of their databse tools.

University of Oslo August 2011 - July 2012
Research Assistant *Oslo, Norway*

· Worked on econometric analysis and estimation of panel data.
· Organizing conferences, updating textbooks and preparing slides on my Professors behalf.

The Norwegian Army July 2008 - July 2009
Sergeant *Bardufoss, Tromsø*

· Worked as a sergeant. Educating and leading recruits serving their mandatory military service.

TECHNICAL STRENGTHS

Computing Proficiency	Python, LaTeX
Familiar with	Julia, R, Matlab, Dynare, Stata, Excel VBA
Tools	Microsoft Office Suite
Misc	Advanced first aid course

OTHER

Student Council - International House of Berkeley
Secretary

· Secretary for the student body representing residents at IHouse Berkeley.

Student Council - Dep. of Economics, University of Oslo
Chair

· Chair for the student body representing students.