

JUHANA SILJANDER

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Office Contact Information

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Placement Directors: Professor Ufuk Akcigit, uakcigit@uchicago.edu, (773) 702-0433

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Graduate Student Coordinator: Amy Schulz, aschulz@uchicago.edu, (773) 834-1972

Education

The University of Chicago, 2016 to present

Ph.D. Candidate in Economics

Thesis Title: “Aggregate effects of talent allocation: Evidence from the Finnish comprehensive school reform”

Expected Completion Date: June 2022

Ph.D., Mathematics, Aalto University, Finland

M.S., Mathematics, New York University

M.Sc., Mathematics, University of Oulu, Finland

References:

Professor Lars Peter Hansen (Primary Advisor)

University of Chicago

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Professor Joseph Vavra

Univ. of Chicago Booth School of Business

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Professor Stéphane Bonhomme

University of Chicago

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Assistant Professor Thibaut Lamadon

University of Chicago

lamadon@uchicago.edu

Teaching and Research Fields:

Primary fields: Macroeconomics, Labor Economics

Secondary fields: Macro-Finance, Applied Econometrics

Teaching Experience:

Spring, 2021 Economic Policy Analysis, University of Chicago, Instructor

Autumn, 2019 Economic Policy Analysis, University of Chicago, Instructor

Autumn, 2019 Macroeconomics (MBA), Chicago Booth, Teaching Assistant for John Huizinga

Summer, 2019 Macroeconomics (MBA), Chicago Booth, Teaching Assistant for John Huizinga

Spring, 2019 Economic Policy Analysis, University of Chicago, Teaching Assistant for Kotaro Yoshida

Winter, 2019 Investments (MBA), Chicago Booth, Teaching Assistant for Niels Gormsen

Autumn, 2018 Macroeconomics (MBA), Chicago Booth, Teaching Assistant for John Huizinga

Summer, 2016 Differential Equations, University of Jyväskylä, Finland, Instructor

Research Experience and Other Employment:

2019	Research assistant for Niels Gormsen
2015 – 2016	University of Jyväskylä, postdoctoral researcher (mathematics)
2012 – 2015	University of Helsinki, Academy of Finland postdoctoral research fellow (mathematics)
2010 – 2012	The Boston Consulting Group, Associate

Honors, Scholarships, and Fellowships:

2021	Yrjö Jahnsson Foundation Graduate Grant
2020	Data Acquisition Grant, University of Chicago Dept. of Economics
2017	CRSP Summer Research Grant, Booth School of Business
2016 – 2022	Social Science Graduate Fellowship, University of Chicago
2012 – 2015	Academy of Finland postdoctoral research fellowship in mathematics
2007 – 2009	Fulbright Foundation Scholarship
2006	Ernst Lindelöf prize (master's thesis award), The Finnish Mathematical Society

Professional Activities:Referee (mathematics):

Journal de Mathématiques Pures et Appliquées, Nonlinear Analysis: Theory, Methods & Applications, Manuscripta mathematica, Annales Academiæ Scientiarum Fennicæ Mathematica, Journal of Mathematical Analysis and Applications, Applied Mathematics Letters

Conference and Seminar Presentations (economics):

2021	Young Economist Symposium (Princeton)
2021	16 th Annual Economics Graduate Student Conference (WUSTL)
2021	50 th Annual Meeting, Illinois Economic Association
2021	Chicago Joint Program and Friends Conference (UChicago)

Language and Computer Skills:

Computer Skills: R, Matlab, Mathematica

Languages: English (Fluent), Finnish (native)

Research Papers:

“Aggregate effects of talent allocation: Evidence from the Finnish comprehensive school reform”
(Job Market Paper)

Abstract: I consider occupational talent allocation in a structural macro model, where workers have unobservable skill and preference heterogeneity across various occupations. I estimate the model using Finnish administrative data, and find that in the recent past workers' occupational sorting patterns have had negligible effect on aggregate productivity. Nevertheless, talent allocation is important for income inequality. Gender differences in occupational sorting, in particular, explain 3.5 percentage points of the gender earnings gap. I use a 1970s Finnish comprehensive school reform as an instrument to further consider these sorting effects. The reform's differential impact on women's skills and sorting preferences increased aggregate productivity by one percent, half of which was due to differential sorting effects between the genders. The results suggest that occupational sorting effects may be important in the context of schooling reforms affecting the skill distribution.

“A debt-financed real estate boom with an endogenous credit crunch”

Abstract: I present a continuous-time macro model of the real estate market, where exogenous relaxation of a financing constraint produces a housing boom as well as a subsequent endogenous credit crunch without an additional shock reversal. I consider two types of agents: (i) productive, but credit constrained, *entrepreneurs* and (ii) patient *savers*, with differing productivity and saving propensities. An exogenous credit liberalization allows the entrepreneurs to increase their ownership of business capital. The savers selling the capital readjust by increasing their portfolio share on housing, creating a housing boom. Different saving propensities between the agents, however, lead to an eventual endogenous reversal with decreasing output and decreasing interest rate during the bust. I also propose a novel house price decomposition, dynamics of which are characterized in a closed form phase diagram. Quantitative analysis suggests that the model is capable of explaining the house price boom preceding The Great Recession.

Work in Progress:

“Universities, urbanization, and regional development” with Annika Nivala, Mikko Silliman and Tuomo Suhonen

“Monetary policy with financial frictions and transaction costs”

Policy work:

Myllärniemi, M. et al. Eroon koronasta working group (2020). Corona-Free Finland: The rationale and methods for elimination of the coronavirus epidemic in Finland. Working group report.

Publications (mathematics):

On the parabolic Harnack inequality for non-local diffusion equations (with D. Dier, J. Kemppainen, and R. Zacher). *Math Z.* 295 (2020), 1751–1769.

Boundary regularity for the porous medium equation (with A. Björn, J. Björn, and U. Gianazza). *Arch. Rational Mech. Anal.*, 230 (2018), no. 2, 493-538.

On the interior regularity of weak solutions to the 2-D incompressible Euler equations (with J.M Urbano). *Calc. Var. Partial Differential Equations*, 56, 126 (2017).

Representation of solutions and large-time behavior for fully nonlocal diffusion equations (with J. Kemppainen and R. Zacher). *J. Differential Equations*, 263 (2017), no. 1, 149-201.

Everywhere differentiability of viscosity solutions to a class of Aronsson's equations (with C. Wang and Y. Zhou). *Ann. Inst. H. Poincaré Anal. Non Linéaire*, 34 (2017), no. 1, 119-138.

Decay estimates for time-fractional and other non-local in time subdiffusion equations in \mathbb{R}^d (with J. Kemppainen, V. Vergara, and R. Zacher). *Math. Ann.*, 366 (2016), no. 3-4, 941-979.

Hölder continuity for parabolic Q -minima in metric measure spaces (with M. Masson). *Manuscripta Math.*, 142 (2013), no. 1-2, 187-214.

Local Hölder continuity for doubly nonlinear parabolic equations (with T. Kuusi and J.M. Urbano). *Indiana Univ. Math. J.*, 61 (2012), no. 1, 399-430.

Hölder continuity for Trudinger's equation in measure spaces (with T. Kuusi, R. Laleoglu, and J.M. Urbano). *Calc. Var. Partial Differential Equations*, 45 (2012), no. 1-2, 193-229.

Obstacle problem for nonlinear parabolic equations (with R. Korte and T. Kuusi). *J. Differential Equations*, 246 (2009), no. 9, 3668--3680.