## Vesa-Matti Heikkuri

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## **Brown University**

Placement Director: Toru Kitagawa Graduate Administrator: Angelica Spertini toru\_kitagawa@brown.edu (401) 863-3836 angelica\_spertini@brown.edu (401) 863-2465

Primary Fields Inequality, Demographic Economics, Macroeconomics

Secondary Fields Economic Growth, Mathematical Economics

Education Brown University

Ph.D., Economics, expected completion May 2023

M.A., Economics, 2018

University of Helsinki M.Sc., Mathematics, 2022

University of Oulu M.Sc., Economics, 2016 B.Sc., Economics, 2014

References Professor David Weil

James and Merryl Tisch Professor of Economics Department of Economics, Brown University

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Professor Oded Galor

Herbert Goldberger Professor of Economics Department of Economics, Brown University

(401) 863-2117

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Professor John Friedman

PDBF Distinguished Professor of Economics Department of Economics, Brown University

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Research Experience Research Assistant, Brown University

Professor David Weil, Summers 2018 and 2019

Research Assistant, University of Oulu

Professor Ilmo Mäenpää, Spring 2016 Professor Rauli Svento, Fall 2015

Professor Mikko Puhakka, Summer 2014

Teaching Experience Teaching Assistant, Brown University

Mathematics for Economists (graduate course), Lecturer Alex Poterack,

Fall 2018 and Fall 2022

Economic Growth, Professor David Weil, Fall 2021

Essential Mathematics for Economics, Lecturer Alex Poterack,

Fall 2019, Spring 2020, and Summer 2021

Economania (Summer course for high school students), Summer 2019 Economic Development, Professor Louis Putterman, Spring 2019

Teaching Assistant, University of Oulu

Economic Theory II (macro), Professor Mikko Puhakka,

Fall 2014 and Fall 2015

Invited Seminars and 2022: PAA Annual Meeting

Conference Presentations 2021: Stone Center on Socio-Economic Inequality at City University of

New York<sup>†</sup>, Max Planck Institute for Demographic Research<sup>†</sup>

Professional Activities Referee

Journal of Economic Growth

Awards and Brown University Merit Dissertation Fellowship

Fellowships Spring 2022

James M. and Cathleen D. Stone Wealth and Income Inequality

**Project Fellowship** 

Spring 2021

Stephen R. Ehrlich Fellowship Fund

2017-2018

Languages Finnish (native), English (fluent) and Skills Matlab, R, Stata, Python, LATEX

## Research Papers

Job Market Paper 1: Population Aging, Cohort Replacement, and the Evolution of Income Inequality in the United States

with Matthias Schief

We study how demographic change affects the evolution of income inequality in the United States both historically and prospectively. We emphasize the distinct roles of population aging and cohort replacement, and develop a methodology to study their joint compositional effect on income inequality. We estimate how income distributions depend on age and birth cohort, and use our results together with demographic data to study how past and projected changes in the population structure affect the income Gini coefficient. In the process, we develop a novel methodology to aggregate subgroup Gini coefficients into a population-level Gini coefficient based on the principle of maximum entropy. We find that rising income inequality is embodied in

birth cohorts born since the mid-20th century and that the increase in inequality over the past two decades can be fully accounted for by demographic change. Similarly, the current population contains information about the evolution of income inequality in the future, and we predict that demographic change over the next four decades will lead to further increase of the income Gini coefficient by two to six percentage points.

Job Market Paper 2: Subgroup Decomposition of the Gini Coefficient: A New Solution to an Old Problem with Matthias Schief

We study inequality decomposition by population subgroups. We define properties of a satisfactory decomposition and ask what these properties imply for the decomposition of familiar inequality indices. We find that the Gini coefficient, the generalized entropy indices, and the Foster-Shneyerov indices all admit satisfactory decomposition formulas derived from a common set of axioms. While our axiomatic approach recovers the known decomposition formulas for the generalized entropy and the Foster-Shneyerov indices, it leads us to a novel decomposition formula for the Gini coefficient. The decomposition of the Gini coefficient can be easily computed, has both a geometric and an arithmetic intuition, and behaves better compared to existing decomposition formulas for the Gini coefficient.

## Work in Progress

On the Determinacy of Equilibrium in a Continuous-time Overlapping Generations Model

Institutional Changes and the Allocation of Talent: Macroeconomic Effects of a School Reform in Finland with Cosimo Petracchi and Matthias Schief

Tight Bounds for the Gini Coefficient of Composite Populations with Matthias Schief

<sup>†</sup>Presentation by co-author