

# Nadja van 't Hoff

DEPARTMENT OF ECONOMICS · UNIVERSITY OF SOUTHERN DENMARK

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## Research

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Primary field: **Econometrics**

Secondary fields: **Causal inference, Applied microeconometrics**

My interests are within the field of **microeconometrics**, specifically **causal inference** and **causal machine learning**, especially the methods for identifying and estimating causal effects in case of **many instrumental variables**. I am also interested in the **empirical application** of these methods within **health** and **development economics** to evaluate policy interventions using observational data.

## Current position

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**Assistant Professor (non-tenure-track)**

University of Southern Denmark

Odense, DK

Mar 2024 - Now

## Education

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**Ph.D. in Economics**

University of Southern Denmark

Odense, DK

Dec 2020 - Feb 2024

“Correlation Does Not Imply Causation: Essays in Causal Inference” under the supervision of Professor Giovanni Mellace

Ph.D. Committee: Toru Kitagawa, Michael Lechner, and Volha Lazuka

**Visiting researcher**

Boston College, host: Arthur Lewbel

Boston, US

Jan 2022 - Jul 2022

**M.Sc. Econometrics and Management Science**

Erasmus University Rotterdam

Rotterdam, NL

Sep 2019 - Nov 2020

**B.Sc. Econometrics and Operations Research**

University of Amsterdam

Amsterdam, NL

Sep 2015 - Jan 2019

**University exchange**

Pontificia Universidad Católica de Chile

Santiago, CL

Feb 2019 - Jul 2019

## Working papers

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**Identifying Causal Effects of Discrete, Ordered and Continuous Treatments using Multiple Instrumental Variables**

*(Job Market Paper)*

*Abstract:* Inferring causal relationships from observational data is often challenging due to endogeneity. This paper provides new identification results for causal effects of discrete, ordered and continuous treatments using multiple binary instruments. The key contribution is the identification of a new causal parameter that has a straightforward interpretation with a positive weighting scheme and is applicable in many settings due to a mild monotonicity assumption. This paper further leverages recent advances in causal machine learning for both estimation and the detection of local violations of the underlying monotonicity assumption. The methodology is applied to estimate the returns to education and assess the impact of having an additional child on female labor market outcomes.

**Limited Monotonicity and the Combined Compliers LATE**

*(R&R Review of Economics and Statistics)*

with Arthur Lewbel (Boston College) and Giovanni Mellace (University of Southern Denmark)

## Nudging Nutrition: Lessons from the Danish “Fat Tax”

with Christian M. Dahl (University of Southern Denmark), Giovanni Mellace (University of Southern Denmark) and Sinne Smed (University of Copenhagen)

## Work in progress

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### Gender Differences in Healthcare Utilization

with Giovanni Mellace (University of Southern Denmark) and Seetha Menon (University of Southern Denmark)

### Heterogeneous Impacts of Microcredit: Insights from Seven Countries Using Generic Machine Learning

with Anna Baiardi (Erasmus University Rotterdam) and Andrea Naghi (Queen Mary University of London)

### Optimal Instruments, Realistic Assumptions: Selecting Instruments and Addressing Exclusion Violations in High-Dimensional IV Models

with Giovanni Mellace (University of Southern Denmark)

### Behavioral Traits, Substance Abuse, and Life Outcomes: Insights from Mendelian Randomization with UK Biobank Data

with Stephanie von Hinke (University of Bristol), Giovanni Mellace (University of Southern Denmark), and Emil Sorensen (University of Bristol)

## Teaching experience

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### Lecturer – Regression Analysis (10 ECTS)

Bachelor students, University of Southern Denmark

Odense, DK

Fall 2024

### Lecturer – Statistics for Product Development and Innovation (5 ECTS)

Bachelor and Master students, University of Southern Denmark

Odense, DK

Fall 2021 & Fall 2022

### Teaching assistant - Microeconometrics (10 ECTS)

Master students, University of Southern Denmark

Odense, DK

Fall 2020 & Fall 2021

## Academic work experience

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### Research assistant - Causal machine learning

for Andrea Naghi and Anna Baiardi, Erasmus University Rotterdam

Rotterdam, NL

Oct 2019 - Nov 2020

## Conference presentations and invited seminars (including scheduled)

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| 2024 | Seminar at University of St. Gallen<br>Groningen Workshop on Causal Inference and Machine Learning (invited)<br>Econometric Society European Meeting<br>Counterfactual Methods for Policy Impact Evaluation<br>Aarhus Workshop in Econometrics (invited)<br>American Causal Inference Conference (poster)<br>European Causal Inference Meeting (poster)<br>Royal Economic Society Annual Conference<br>Seminar at University of Amsterdam                            |
| 2023 | European Winter Meeting of the Econometric Society;<br>(EC) <sup>2</sup> Conference on “Identification and Inference in Structural Econometric Models” (poster)<br>Seminar at Lund University<br>European Association of Labour Economists Conference (poster)<br>International Association for Applied Econometrics Annual Conference<br>Siena Workshop on Econometric Theory and Applications<br>International Workshop on “Machine Learning in Program Evaluation |

High-dimensionality and Visualization Techniques”  
Italian Congress of Econometrics and Empirical Economics  
2022 European Winter Meeting of the Econometric Society  
Nordic Econometric Meeting

## Professional service

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**Referee service:** Empirical Economics.

**Workshop co-organizer:** Women in Economics Denmark Workshop, October 30-31, 2024. Together with Seetha Menon (University of Southern Denmark) and Helena Skyt Nielsen (Aarhus University).

**Member of the Equality Committee:** Advisory committee of the Faculty of Business and Social Sciences, University of Southern Denmark.

## Travel grants

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2021	William Demant Fonden	1500 USD
2021	Brorson Rejselegat	3000 USD
2021	Torben og Alice Frimodt Fonden	3000 USD

## Skills

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Programming R, Python, HTML, Javascript, SQL  
Languages Dutch (native), German (native), English (fluent), Spanish (basic), French (basic), Danish (basic)

## References

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**Arthur Lewbel**  
Boston College  
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**Andrea Naghi**  
Queen Mary University of London  
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**Toru Kitagawa**  
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**Giovanni Mellace**  
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