

# Nicklas Nordfors

Department of Economics  
Stockholm University  
Universitetsvägen 10 A  
Stockholm 106 91, Sweden

[nicklasnordfors.github.io](https://nicklasnordfors.github.io)  
[nicklas-goran.nordfors@su.se](mailto:nicklas-goran.nordfors@su.se)  
(+46) 076-255 9113  
Swedish citizen

## Research Interests

Primary field: Environment, Economic Development  
Secondary field: Urban

## Education

Ph.D. Economics, Stockholm University, Sweden, 2024 (Expected)

Visiting graduate student, UC Berkeley, US, 2022

M.A. Economics, Stockholm University, Sweden, 2017

B.A. Statistics, University of Gothenburg, Sweden, 2016

B.A. Economics, University of Gothenburg, Sweden, 2015

Exchange student, HEC Montréal, Canada, Spring 2013

French language studies, Université Lumière Lyon II, France, 2011

## Job Market Paper

*Drought and city growth.*

Some researchers and policymakers posit that climate change should increase city growth and urbanization as increasing temperatures make rural livelihoods precarious, while others posit that climate change might trap households who cannot afford to migrate in increasing rural poverty. Previous empirical evidence on the link between climate and urbanization is inconclusive. This paper uses new data derived from satellite imagery that maps city growth for 7,000 cities in low and lower-middle income countries across 23 years to provide new evidence on the relationship between drought and urbanization. Cities experience large and persistent declines in growth rates after major drought events: after 11 years, cities remain around 1 to 2 percent smaller, compared to a drought-free counterfactual. I show that the contemporaneous effect of drought on urban growth is misleading and fails to account for the full dynamic effects of drought. Consistent with models that envision a drought-migration poverty trap, the negative effects on urbanization are largest for the poorest countries in the sample.

## Research

*Trade and pollution - Evidence from India* joint with Malin Niemi and Anna Tompsett

What happens to pollution when developing countries open their borders to trade? Trade might increase production and thus pollution (the scale effect), increase incomes and thus demand for cleaner production (the technique effect), or shift production towards more or less clean industries (the composition effect). Empirical evidence on the environmental effects of trade liberalization in developing countries remains limited. We study the effects of the 1991 Indian trade liberalization reform on water pollution. We find that water pollution increased by 0.13 standard deviations per one standard deviation reduction in district-level tariff exposure.

*60 years of global environmental change 1939-1999: digitization of 1.6 million historical aerial photographs*  
joint with Hannah Druckenmiller, Solomon Hsiang, Trinetta Chong, Shruti Jain, Andreas Madestam,  
Luna Yue Huang, Simon Greenhill, Joel Ferguson, Hikari Murayama, Sherrie Wang and Anna Tompsett

Satellite imagery has transformed our understanding of both the natural world and human well-being, but the instrumental record only begins in 1972. We develop an approach to extend these data backwards in time an additional 30 years. We digitize the archive of 1.6 million aerial photographs collected during the processes of mapping what was then British colonies. This archive surveys more than 60 former colonies, where granular data from other sources is notoriously sparse, from the 1940s to the 1990s. We develop a machine learning approach to assemble these photographs into mosaics comparable to modern satellite observations. We then generate large-scale, gridded datasets that provide measures of population density, land use, and infrastructure.

## Previous Experience

Research Institute of Industrial Economics, Stockholm

Research Assistant, 2017–2018.

Stockholm University, Department of Economics

Research Assistant, 2017; Teaching Assistant, 2016–2017.

University of Gothenburg, Department of Economics

Lecturer, Research Assistant, 2014-2015

## Teaching

### Stockholm University

Econometrics I (Master): Fall 2019

### University of Gothenburg

Courses in Microeconomics, Statistics, Econometrics and Macroeconomics: Fall 2014; Spring 2015.

Introductory Statistics (Bachelor): Fall 2013, Spring 2014

## Scholarships

2023 Siamon Foundation (Travel grant); 2022 Siamon Foundation (Travel grant); 2020 Ax:son Johnson Foundation, Siamon Foundation (Travel grant); 2019 Jan Wallander and Tom Hedelius Foundation (Scholarship for studies at UC Berkeley)

## Presentations

2023 IGC-World Bank Young Economist Workshop, Nordic Conference in Development Economics, Aarhus University, Beijer Institute of Ecological Economics (scheduled), ASWEDE (scheduled)

2022 IPWSD Columbia University; Global Policy Lab, UC Berkeley; 13th Annual Giannini Foundation of Agricultural and Resource Economics Student Conference; UC Berkeley Development Lunch;

## Service

President of the Graduate Student Council (Economics), 2018-2019.

## Miscellaneous

*Languages:* English (Proficient), French (Proficient), Swedish (Native)

*Programming Languages:* Python, R, Stata, L<sup>A</sup>T<sub>E</sub>X, QGIS

## References

Anna Tompsett  
IIES, Stockholm University  
anna.tompset@iies.su.se

Andreas Madestam  
Department of Economics, Stockholm University  
andreas.madestam@su.se

Tessa Bold  
IIES, Stockholm University  
tessa.bold@iies.su.se