Levi G. Crews

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Contact Information

University of Chicago
Department of Economics
1126 E 59 Street
Chicago, IL 60637 USA

lgcrews@uchicago.edu
+1 (585) 472-6012
levicrews.com

Personal

Citizenship USA
Date of birth 8 February 1996

Research Fields

Macroeconomics, Spatial Economics, International Trade

Education

University of Chicago, Chicago, Illinois USA

Ph.D. in Economics 2017 – 2023 (expected)
M.A. in Economics 2019

Placement

Co-directors: Ufuk Akcigit, uakcigit@uchicago.edu, +1 (773) 702-0433
Manasi Deshpande, mdeshpande@uchicago.edu, +1 (773) 702-8260
Coordinator: Kathryn Falzareno, kfalzareno@uchicago.edu, +1 (773) 702-3026

References

Esteban Rossi-Hansberg (Chair)
Glen A. Lloyd Distinguished Service Professor
University of Chicago
rossihansberg@uchicago.edu
+1 (773) 834-5240

Fernando Alvarez
Inaugural Saieh Family Professor
University of Chicago
f-alvarez1@uchicago.edu
+1 (773) 702-4412

Jonathan I. Dingel
Associate Professor
Chicago Booth
jdingel@chicagobooth.edu
+1 (773) 834-5458

Felix Tintelnot
Associate Professor
University of Chicago
tintelnot@uchicago.edu
+1 (773) 702-3478

Duke University, Durham, North Carolina USA

B.Sc. in Economics (High Distinction), B.A. in Mathematics, *Summa Cum Laude*, 2017

Working Papers

"A Dynamic Spatial Knowledge Economy" (**Job Market Paper**)

Cities have long been thought to drive economic growth, but analyses of spatial policy have largely ignored the effects of such policies on growth. In this paper, I develop a spatial endogenous growth model in which heterogeneous agents make fully forward-looking migration decisions and human capital investments over the life cycle. Local externalities in human capital investment drive both agglomeration and growth. I show that the growth rate depends on the spatial distribution of human capital, making it sensitive to spatial policies. I solve the model numerically, calibrating it to data on U.S. metropolitan areas. I then solve for the allocation that would be chosen by a benevolent national planner. I find that, relative to the decentralized allocation, the planner's allocation features more concentration in the largest city, higher levels of human capital overall, and faster growth. Commonly-proposed place-based policies fall far short or even oppose the planner's policies.

"Agriculture, Trade, and the Spatial Efficiency of Global Water Use" (with T. Carleton & I. Nath)

The global allocation of water use is distorted by two key forces: water is extracted under imperfect property rights, and water-hungry agricultural production and trade is manipulated by an array of distortionary policies, such as production subsidies and import tariffs. This paper combines a wide array of detailed geospatial data with a dynamic spatial equilibrium model to quantify the potential welfare gains of reallocating global water use in agricultural production. First, we draw on existing scientific literature and a novel collection of global spatial datasets to establish a set of five key facts that frame our analysis. We then build a dynamic spatial general equilibrium model of water resource use as well as production, consumption, and trade in agriculture across many crops. In the model, farmers extract water endogenously and the stock of water in each local aquifer evolves dynamically, embedding the spatial and temporal externalities caused by open access to the resource. We calibrate the model using datasets from remote sensing, hydrology, and geology as well as data on agricultural productivity, consumption, and trade. While the calibration is still in progress, we plan to use the model to run a series of counterfactuals, including: comparing the social planner's allocation to the baseline calibration to quantify aggregate welfare gains from removing existing distortions; assessing whether the existing set of agricultural policies offsets or exacerbates the market failure caused by imperfect property rights over water; and examining whether the social planner can approximate the first-best allocation by manipulating agricultural policies alone, shedding light on the substitutability of agricultural and water policies.

Work In Progress

"Predicting Trade Elasticities in the US-China Trade War" (with J. Dingel, S. Heise, & F. Tintelnot)
"Does Eating Local Reduce Emissions?" (with I. Nath)

Presentations

2022 LACEA LAMES (scheduled), BFI Coase Project, UChicago (Capital Theory, Trade & Spatial working group, Applied Macro Theory lunch)
2021 UChicago (Capital Theory, Trade & Spatial working group, Applied Macro Theory lunch)

Research Assistance

University of Chicago

J. Dingel and F. Tintelnot	Jan. 2019 – June 2020
H. Uhlig and D. Krüger	Feb. 2019 – June 2020
B. Neiman and J. Vavra	May 2019 – Nov. 2019

Teaching

University of Chicago

TA	Spatial Economics (PhD)	E. Rossi-Hansberg	Winter 2022
TA	Theory of Income III (PhD)	F. Alvarez	Spring 2021
TA	International Trade (U)	F. Tintelnot	Winter 2021
TA	Managing the Firm in the Global Economy (MBA)	J. Dingel	Winter 2020–21
TA	Financial Markets in the Macroeconomy (PhD)	V. Guerrieri	Spring 2020
TA	International Financial Policy (MBA)	R. Kekre	Spring 2020

Duke University

TA	Intermediate Macroeconomics (U)	M. Connolly	Fall–Spring 2017

Honors and Awards

Margaret G. Reid Dissertation Fellowship	University of Chicago Economics Department	2022–23
Data Acquisition Grant	University of Chicago Economics Department	2019
Travel Grant	Princeton Initiative: Macro, Money and Finance	2019
Neubauer Fellowship	University of Chicago Social Sciences Division	2017–22
Davies Fellowship	Duke University Economics Department	2016
Student Marshal	Duke University	2016
Phi Beta Kappa	Duke University	2016

Service	Cohort Representative	2020–22
	Coordinator: Trade & Spatial working group	2020–21
	Peer Mentor	2019–21
	Coordinator: Applied Macro Theory lunch	2019–20
Referee	*Journal of Political Economy*, *Review of Economics and Statistics*	
Technical Skills	Python, Julia, Matlab, Stata, LaTeX, Unix, Make	