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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)	Fernando Alvarez
Glen A. Lloyd Distinguished Service Professor	Inaugural Saieh Family Professor
University of Chicago	University of Chicago
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Jonathan I. Dingel	Felix Tintelnot
Associate Professor	Associate Professor
Chicago Booth	University of Chicago
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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 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 cities, higher levels of human capital overall, and faster growth. Commonly-proposed place-based policies fall far short of, or even oppose, the planner’s policies.

“Agriculture, Trade, and the Spatial Efficiency of Global Water Use” (with [T. Carleton](#) & [I. Nath](#))

Over 90% of global water use occurs in agricultural production, which is subject to two pervasive distortions: (i) incomplete property rights for farmers accessing water and (ii) subsidies, taxes, and tariffs affecting agricultural output. This paper combines a rich collection of global geospatial data with a dynamic spatial equilibrium model to quantify the impact of agricultural and trade policies on regional water scarcity and welfare. In the data, we show that water-intensive crops concentrate in water-abundant locations, implying a strong role for comparative advantage in governing global water use, though a small number of regions with very water-intensive production are losing water rapidly over time. The model captures production, consumption, and trade in agriculture across many countries and crops, as well as the dynamic evolution of local water stocks as farmers extract water from a common pool. We calibrate the model to match observed patterns of agricultural production and hydrological trends, and will use it to compare the existing allocation to the global planner’s undistorted steady state and a hypothetical scenario with no international trade in agriculture.

WORK IN
PROGRESS

“Does Eating Local Reduce Emissions?” (with [I. Nath](#))

This paper examines the conventional wisdom that promoting consumption of locally-produced food reduces greenhouse gas emissions. We start by exploring the partial equilibrium consequences of a single consumer’s sourcing decisions using existing data on emissions from shipping, along with a new high-resolution global spatial dataset containing scientific estimates of crop-wise emissions from agricultural production. Initial exploration suggests that the spatial variation in production emissions from agriculture is substantial relative to the emissions from shipping. Next, we will use a global model of production, consumption, and trade in agriculture to investigate the general equilibrium consequences of varying the level of globalization. We plan to use the model to compare global agricultural emissions under existing policy to a scenario that imposes autarky on all local regions, and to an alternative scenario with much greater openness to trade.

“Trade Policy and Food Security” (with [I. Nath](#))

This paper investigates how trade policy affects stability in food supply and food prices. We show that openness to trade exerts two competing forces on volatility: (i) diversifying supply across many countries reduces the exposure of local consumers to domestic or regional shocks and (ii) relying on imports for consumption of a necessary good creates vulnerability to geopolitical risk or trade barriers erected in response to instability. We use global panel data on agricultural production, prices, trade flows, trade policy, and weather to examine how trade barriers respond endogenously to agricultural supply shocks and explore the domestic and international transmission of price fluctuations. We plan to use a model of production, consumption, and trade in agriculture to study optimal trade policy for promoting food supply stability in countries facing endogenous trade barriers and stochastic shocks to productivity.

“Predicting Trade Elasticities in the US-China Trade War” (with [J. Dingel](#), [S. Heise](#), & [F. Tintelnot](#))

PRESENTATIONS

2022 LACEA LAMES, 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	<i>Journal of Political Economy, Review of Economics and Statistics</i>		
TECHNICAL SKILLS	Python, Julia, Matlab, Stata, L ^A T _E X, Unix, Make		