MIT Economics

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DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD in Economics, June 2024
DISSERTATION: "Essays on Inequality in Cities"

DISSERTATION COMMITTEE AND REFERENCES

David Autor
MIT Department of Economics
77 Massachusetts Avenue, E52-438
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Dave Donaldson
MIT Department of Economics
77 Massachusetts Avenue, E52-552
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David Atkin
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PRIOR EDUCATION

Stanford University 2018
BA in Economics, *with Honors and Distinction*
BS in Applied Mathematics, *with Distinction*

CITIZENSHIP USA **GENDER:** Female

LANGUAGES English (Native), Mandarin, Arabic (Intermediate), French (Advanced)

FIELDS

Primary Fields: Labor, Trade
Secondary Fields: Urban, Economic History

TEACHING EXPERIENCE

14.662 Graduate Labor Economics (MIT)	2024
Teaching Assistant to Professor David Autor	
14.04 Intermediate Microeconomics (MIT)	2020
Teaching Assistant to Professor Robert Townsend	
14.03 Microeconomics for Public Policy (MIT)	2020
Teaching Assistant to Professor Nicolas Lambert	
Econ 50 Intermediate Microeconomics (Stanford)	2016
Teaching Assistant to Professor Chris Makler	

RELEVANT POSITIONS

Economist at U.S. Census Bureau	2020-24
Research Assistant to David Autor	2019
Research Assistant to Rebecca Diamond and Petra Persson	2016-17
Research Assistant at the Council of Economic Advisers	2016
Research Assistant to Matthew Gentzkow	2015-16

FELLOWSHIPS, HONORS, AND AWARDS

Institute for Humane Studies Fellowship	2023
C. Lowell Harriss Dissertation Fellowship, Lincoln Institute	2023
Graduate Women of Excellence, MIT	2023
George and Obie Shultz Fund Grant (x4), MIT	2020, 2023
Graduate Student Council Teaching Award in the School of Humanities, Arts and Social Sciences (SHASS), MIT	2021
National Science Foundation Graduate Research Fellowship	2018-23
Department of Economics Graduate Fellowship, MIT	2018-20
David M. Kennedy Thesis Prize, Stanford (Best Thesis in the Social Sciences)	2018
Firestone Medal, Stanford (Best Thesis in Economics)	2018
Phi Beta Kappa, Stanford (Elected Junior Year)	2017
R. Richard Hodge Undergraduate Scholarship, Stanford	2015-17

PROFESSIONAL ACTIVITIES

Referee: *American Economic Journal: Applied Economics, Econometrica, Journal of Public Economics*

Conferences & Presentations

2023: RUSH (Regional/Urban/Spatial/Housing) Brownbag, NBER Economics of Transportation Spring Meeting, Urban Economics Association Summer School, NBER Summer Institute (Urban), Census Bureau, Harvard/Boston University Economic History Workshop, North American Urban Economics Association Meetings

2022: European Urban Economics Association Meetings, Jerusalem Advanced School in Economic Theory for International Economics, Rising Scholars Chicago Booth, Census Bureau

2020: Boston University Women in Economics Workshop

Organizer, Applied Micro/Labor Lunch at MIT	2020-21
Organizer, RUSH (Regional/Urban/Spatial/Housing) Brownbag	2022-23

RESEARCH PAPERS

Unequal Access: Racial Segregation and the Distributional Impacts of Interstate Highways in Cities (Job Market Paper)

Best Student Paper Prize, Urban Economics Association

This paper investigates the impact of the largest infrastructure project in American history—the Interstate highway system—on racial inequality and the role of institutional segregation in its disparate incidence. To evaluate the distributional impacts, I develop a general equilibrium spatial framework that incorporates empirical estimates using novel disaggregated commute flows from Census microdata in 1960 and 1970 for 25 cities. I show that highways generated substantial costs from local harms on adjacent areas as well as benefits from reductions in commute times. In the urban core, costs outweigh benefits as proximity to highways is greater and commute time reductions are lower since connectivity improves predominantly in remote suburbs. I find the initial concentration of the Black population in central areas and their low mobility away are key contributors to their welfare losses from the Interstate highway system. Exclusionary institutions, delineated using redlining maps, account for much of their concentration in addition to sorting on housing prices and preferences for racial composition. These institutional barriers further inhibit their spatial mobility outwards. When barriers are eliminated and Black households are granted access beyond central neighborhoods, the racial gap in impacts is reduced as the Black population benefits more from interstate development. These results highlight how segregation shapes inequality in the incidence of place-based shocks.

Opportunity in Motion: Equilibrium Effects of Highway Construction on Economic Mobility

Place-based policies often aim to improve local economic opportunity and at large scale, trigger household migration that alters the peer composition of neighborhoods (1) directly targeted and (2) indirectly affected through migration. Aside from the immediate impact of the policy, general equilibrium (GE) changes in peer composition are also important determinants of economic mobility—and create winners and losers. I study these equilibrium effects in the context of the interstate highway system, a transformative place-based policy for U.S. cities. I employ novel measures of intergenerational mobility for the near universe of 57 million children born between 1964 to 1979, constructed using machine learning methods and historical IRS tax forms. I find areas with commuting access improvements from highway construction experienced increases in average income and inflows of higher-educated, higher-occupational status, and White households. With detailed income and location for 1974 to 2018, I extend the movers design to show that both Black and White children benefit from growing up in neighborhoods (tracts) with greater average income and higher status peers. In areas with lower access improvements, which experience outflows of high-status peers, children subsequently face declines in economic opportunity. I incorporate these GE forces into a spatial equilibrium framework to quantify the aggregate consequences of the interstate system on intergenerational mobility by race.

The Intergenerational Effects of Local Shocks: Income, Migration, and Human Capital (with Martha Stinson and Sean Wang)

We study the channels through which changes in local economic conditions during early childhood affect long-run outcomes for children from differing economic backgrounds. We exploit geographic variation across counties in the decline of manufacturing employment during the 1979 to 1984 period with microdata from the Longitudinal Business Database. To assess the exogeneity of local labor market shocks, we construct additional shocks by combining industry-level energy intensity with spikes in oil prices as a result of the 1979 energy crisis. With administrative and survey data that trace the full trajectory of the children's lives, we measure how these local changes impact educational attainment, income, and the quality of the firm of employment in the modern day. We explore how migration of parents away from counties experiencing declines and changes in parental income during childhood are central mediators for our findings.

Intergenerational Linkages between Historical IRS 1040 Data and the Numident: 1964-1979 Cohorts (with Martha Stinson)
Census Bureau Center for Economic Studies (CES) Technical Note

We construct novel parent-child linkages between the universe of parent tax filers in IRS 1040 forms in 1974 and 1979 and the universe of children from the Census Numident in the cohorts of 1964 to 1979. Variables used for matching are parent names of children and names of parent tax filers, which are obtained from a restricted name file provided by the Social Security Administration. Applying name-matching techniques that incorporate supervised learning methods, we flexibly compare parent names and disambiguate parent-to-parent matches. To feasibly conduct the matching for a large set of comparisons, we employ parallel computing on Amazon Web Services. This report documents the iterative process for identifying matches and the algorithm that is used for assessing the likelihood of a match. We provide match rates for different demographic groups and validate the accuracy of the linkages.

Intergenerational Linkages between the 1940 Full Count Census and the Numident: 1930-1940 Cohorts (with Martha Stinson)
Census Bureau Center for Economic Studies (CES) Technical Note

We expand the coverage of Protected Identification Keys (PIKs) for the universe of children in the cohorts of 1930 to 1940 in the 1940 Full Count Census. Parents and children are recorded together in the 1940 Census, so we assign three sets of names to link children in the 1940 Census to children in the Census Numident: father's name, mother's name, and child's name. Location of birth and year of birth are additional matching variables. We document the iterative process for matching children and our approach to addressing name changes for women. The matching is conducted with parallel computing on Amazon Web Services for men and women separately. With these linkages, we measure intergenerational mobility using IRS 1040 forms in 1974 and 1979

that report income at mid-life for these cohorts. Finally, we compare our linkages to previously constructed PIK linkages to compute how many additional matches are recovered using our machine learning algorithm and verify the accuracy of the links. Match rates are reported by gender and race.

RESEARCH IN PROGRESS

Municipal Coordination, Zoning, and Inequality in Public Goods
(with Vincent Rollet)

We study the political economy of local zoning decisions and its impact on public goods provision. In the United States, public goods are provided locally and financed through property taxation. This arrangement incentivizes municipalities to attract more affluent residents (or rather to exclude poorer ones) which they often achieve through stringent zoning regulations. As restrictive land-use exerts a negative externality on other municipalities in the same metropolitan area, zoning decisions at the municipality level can generate inefficiency more broadly. To study the impacts of local decision-making, we develop a dynamic framework of residential choice that integrates voting models from political economy. Our framework is estimated using historical series of Censuses of Governments on municipal revenue and expenditures, individual-level migration history, and a novel panel dataset on land-use regulations. We examine if a counterfactual with inter-municipal coordination, rather than local authority in zoning, is a politically feasible path to reducing inefficiency in housing and inequality in public goods.

SERVICE

Mental Health & Peer Support Grad Group, MIT Economics (Peer Counselor and Co-Founder)	2019-23
Graduate Student Council, Diversity Equity & Inclusion (DEI), MIT (Coordinator in 2019-2020, Dept. Representative in 2019-2021)	2019-21
Diversity Equity & Inclusion Committee, MIT Economics	2020-21
Search Committee for the SHASS Assistant Dean of DEI	2021
Harvard/MIT Application Assistance Mentoring Program	2020-22