

Jacob Spratt

Department of Economics
Gardner Hall CB3305
University of North Carolina
Chapel Hill, NC 27599

jacobmichaelspratt@gmail.com
Phone: (256) 783-7256
Citizenship: USA
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EDUCATION

PhD, Economics

Expected May 2022

University of North Carolina at Chapel Hill

- *Committee:* Lutz Hendricks, Stan Rabinovich, Simon Alder, Neville Francis, Can Tian

BA, Economics and Finance

May 2013

University of North Alabama

SUMMARY OF RESEARCH SKILLS

Economic modeling - model simulations - data collection - data management - statistical analysis - web scraping - oral presentations

SUMMARY OF SOFTWARE SKILLS

Matlab - Stata - Python - Latex - Microsoft Office Suite - basic R

RESEARCH INTERESTS

Spatial economy - human capital - migration - life-cycle dynamics

WORKING PAPERS

Human Capital Spillovers and the Emergence of Smart Cities (JMP)

High skill cities have become more skilled over time, an increase which has also been accompanied by greater income inequality across space and larger education premiums economy-wide. What economic forces have driven the emergence of these "smart cities"? Using a structural model of worker migration and human capital accumulation over the life-cycle, I find that increases in the human capital spillovers and heterogeneity in productivity across space are jointly responsible for the observed phenomenon. Enormous complementarity between the two changes overcame greater congestion stemming from population growth, giving rise to smart cities.

Progressive Taxes and Cities: Dynamic Implications

A nominal progressive income tax levied on workers facing heterogeneous local prices will result in spatial variation in the real income tax rate. This disproportionately affects highly productive agglomerations, where nominal incomes and local prices are both large. Using a model of dynamic migration that endogenously produces productivity, amenity, and human capital growth heterogeneity through the spatial economy, I explore how progressive income taxes increase population dispersion in the spatial economy and lead to lower aggregate human capital growth.

TEACHING EXPERIENCE

Course Instructor

Summer 2018 & Summer 2020

Economics 420 – Intermediate Macro

Economic Department Teaching Assistant

Fall 2016 - Spring 2021

TA for Intermediate Macro

Assistant Course Designer

Summer 2019

PROFESSIONAL EXPERIENCE

Program control analyst

February 2015 – May 2016

System Studies & Simulation, Inc

- Managed the budgets of several defense contracts and subcontracts
- Verified correctness of new contracts, work orders

English Teacher

October 2013 - August 2014

EF, China

- Prepared lesson plans
- Taught English classes; students ranging in age from 3-16

Credit Analyst Intern

June 2013 – August 2013

ServisFirst Bank

- Analyzed tax returns, financial statements, and loan applications
- Prepared documentation for annual bank audit

Process Time Study Intern

March 2013 – May 2013

Kaiser Aluminum

- Recorded time data on wire drawing processes
- Analyzed results of data for manufacturing process optimization

Supply Chain Analyst Intern

June 2012 – August 2012

Supply Chain Process Improvement, Inc

- Created and managed database system in Microsoft Access
- Optimized supply chains using LogicNet Plus simulations

REFERENCES

Lutz Hendricks (Chair)

Associate Professor of Economics
UNC Chapel Hill
Phone: (919) 966-5328
Email: lhendri@email.unc.edu

Simon Alder

Economist
Swiss National Bank
Phone: +1 336 739 0409
Email: simonalders1@gmail.com

Jane Cooley Fruehwirth (Placement Director)

Phone: (919) 966-4886
Email: jane_fruehwirth@unc.edu

Stan Rabinovich

Assistant Professor of Economics
UNC Chapel Hill
Phone: (919) 843-6268
Email: srabinov@email.unc.edu

Mike Aguilar (teaching)

Teaching Professor
UNC Chapel Hill
Phone: (919)-966-5378
Email: maguilar@email.unc.edu