

HAN LIU

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EDUCATION

Ph.D. in Economics , The George Washington University, Washington, DC	Expected 2021
M.A. in Economics , Clemson University, Clemson, SC	2013
B.S. in Finance , Central University of Finance and Economics, Beijing, China	2011

FIELDS OF SPECIALIZATION

Primary: Urban and Regional Economics, Real Estate Finance
Secondary: Applied Microeconomics, Applied Econometrics

WORKING PAPERS

“How Should We Measure Shocks To Housing Return: Total versus Appreciation Return?” (Job Market Paper)

The total return to housing is properly measured as the sum of its rental and appreciation returns. This paper discusses specific properties of the relation between the two components of total return using the estimates of these rates across US MSAs. Capitalization rates are constructed using pooled-tenure hedonic estimation. Persistence in these return rates are demonstrated using Im-Pesaran-Shin panel unit root tests and augmented Dickey-Fuller regressions. Empirical tests following the Case-Quigley-Shiller framework examine the housing wealth effect on consumption, using total versus appreciation returns. The principle finding is that the effect of a housing return shock on consumption is much larger when it is measured as an innovation in the total return to housing, implying that the CAP rate component of return is important.

“Shifting House Price Gradients: Evidence Using Both Rental and Asset Prices”

Alonso (1964), Mills (1967) and Muth (1969) formalize the monocentric standard urban model and advocate the gradient approach to analyze the urban structure. Subsequent literature concentrated on changes in the population density or the housing asset price gradients. This paper adds to the literature by providing direct evidence documenting shifts of the house price gradients for both the owner-occupied market and the rental market. Rental and asset price indices are constructed based on simple hedonic estimation, repeat value method, and hybrid model. The slope of the rental price gradient largely increased before the early 1990s, and has stayed stable since then. For the owner-occupied market, there is an overall steepening of the asset price gradient over 1985-2013. Possible reasons for the steepening of house price gradient are then developed using the standard urban model.

WORK IN PROGRESS

“Study on the Skill Intensity Ratio among International Immigrations”

TEACHING EXPERIENCE

The George Washington University, Washington, DC

Lecturer, Department of Economics

- Principles of Microeconomics

Summer 2018

Teaching Assistant, Department of Economics

- Principles of Microeconomics
- Principles of Macroeconomics
- Introduction to Econometrics

Fall 2015, Fall 2016, Fall 2017, Fall 2018, Fall 2019

Spring 2016, Spring 2017, Spring 2018, Spring 2019

Spring 2020

PROFESSIONAL EXPERIENCE

International Finance Corporation, Washington, DC June 2020 - September 2020

Research Analyst, Modeling Team, Economics and Development Impact Department

- Automated data collection from large data sets across 200 countries using API and robotic process automation, and shortened the time needed for the previously manual process by 80%.
- Performed cross-sectional study to understand detailed industry data of 146 IFC invested countries, and produced visualizations of the stylized facts of sectoral vulnerability factors using STATA.
- Built analytical reports on country's economy vulnerabilities due to COVID-19, and provided financial-driven business implications to support the implementation of Anticipated Impact Measurement and Monitoring framework used across IFC and WBG.
- Identified data harmonization improvements, and collaborated with other economists to re-design the internal data processing framework to enable data compiling at scale.

The World Bank, Washington, DC

May 2015 - August 2015, May 2016 - August 2016

Short Term Consultant, Trade and International Integration Unit, Development Economics Research Group

- Constructed harmonized and standardized data sets of detailed custom data and household survey, and created a uniform database pooling across 102 countries to support the team for multinational analysis.
- Applied synthetic control and difference-in difference methods to evaluate the impact of reforms to customs and other border management agencies.
- Created visualizations of welfare results as maps, figures and tables using GIS, R and STATA, to illustrate the distributional impact of price changes on household consumption that are induced by tariff changes.
- Collaborated with data engineering and business teams to provide policy and business implications on trade policy reform, by building input-output tables, trade policy dashboard and reports.

EMPIRICAL PROJECTS

Mapping Crime Data Using Spatial Analysis Tools in R

- Loaded spatial objects from shapefiles of large crime datasets from the National Institute of Justice.
- Clipped the crime points outside target space and produced cross polygon comparisons.
- Plotted crime heatmap with Leaflet using a own-created evenly spaced and finer grid, and added an open source layer of city map to create interactive crime maps.

Estimating the Capitalization Rate of Multifamily Housing in Northern Virginia in Python

- Adopted a Python wrapper around the Zillow API to scrape information of multifamily housing in Northern Virginia based on zip code and address.
- Estimated the capitalization rate based on pooled-tenure hedonic model, using housing units located in buildings where owning and renting are observed simultaneously to control for the amenity effect.
- Visualized the capitalization rates in forms of cross-sectional comparison and time series trend using plotting tools in Python.

CONFERENCES & PRESENTATIONS

“How Should We Measure Shocks To Housing Return: Total versus Appreciation Return?”

Presenter/Discussant, Southern Economic Association Conference, Virtual: November 2020 (scheduled)

“How Should We Measure Shocks To Housing Return: Total versus Appreciation Return?”

Presenter, IRES doctoral symposium, Virtual: October 2020 (scheduled)

“How Should We Measure Shocks To Housing Return: Total versus Appreciation Return?”

Presenter, GW Economics SAGE Seminar, Washington, DC: April 2020

- “Shifting House Price Gradients: Evidence Using Both Rental and Asset Prices ”
Presenter, ASSA 2020 Annual Meeting, San Diego, CA: January 2020
- “Shifting House Price Gradients: Evidence Using Both Rental and Asset Prices ”
Presenter/Discussant, AREUEA International Conference, Milan, Italy: June 2019
- “Shifting House Price Gradients: Evidence Using Both Rental and Asset Prices ”
Presenter/Discussant, Asian Meeting of the Econometric Society, Xiamen, Chin: June 2019
- “Shifting House Price Gradients: Evidence Using Both Rental and Asset Prices ”
Presenter, Washington DC Urban Economics Day, Washington, DC: May 2019
- “Study on the Skill Intensity Ratio among International Immigrations”
Presenter/Discussant, Eastern Economic Association Conference, New York City, NY: March 2019
- “Shifting House Price Gradients: Evidence Using Both Rental and Asset Prices ”
Presenter, GW Economics SAGE Seminar, Washington, DC: October 2018

SERVICE & MEMBERSHIPS

Organizing Committee, 1st GW Student Research Conference, The George Washington University 2017
 Member: American Economic Association, Urban Economics Association, The American Real Estate and Urban Economics Association

HONORS & AWARDS

Academic Excellence Teaching Assistantship Award	2015-2020
CCAS Dean’s Graduate Conference Travel Grant	2020
James R. Webb ARES Foundation Fellowship	2020
Summer 2019 Pre-dissertation Fellowship	2019

SKILLS

Programming & Software: Stata, R, GIS, Python, LATEX, UiPath Robotic Process Automation
Language: Mandarin (Native), English (Full professional proficiency)

REFERENCES

Anthony Yezer (Main Advisor)
 Department of Economics
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Leah Brooks
 Trachtenberg School of Public Policy and Public Affairs
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