

# Sun Kyoung Lee

Economic Growth Center  
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## Citizenship

South Korea (US permanent resident)

## Academic Employment

Yale University, Postdoctoral Associate, Economic Growth Center, 2019 - Present

## Education

Columbia University, Ph.D., Economics, 2012 - 2019  
Columbia University, M.Phil., Economics, 2015  
Columbia University, M.A., Economics, 2014  
Yonsei University, B.A., Economics, 2011, Summa Cum Laude equivalent

## Visiting Position

Opportunity & Inclusive Growth Institute, Federal Reserve Bank of Minneapolis, Visiting Scholar (Scheduled, July-Sep 2022)

## Research Interests

Economic History, Urban Economics, Transportation, Inequality, Innovation

## Working Papers

**"When Cities Grow: Urban Planning and Segregation in the Prewar US" (Job Market Paper)**

### Abstract

I examine the influence of the United States' first comprehensive land-use regulations ("zoning") and growth of transportation infrastructure on intra-city migration in New York City from 1870 to 1940. Combining a new panel dataset derived from archived Census forms with newly digitized real-estate transaction records, I find that segregation between-neighborhood by race and income increased dramatically after the building of transit infrastructure; segregation within-neighborhood increased substantially by race after zoning was implemented. I estimate the value of "tipping point" and show that housing price changes of "tipping" neighborhoods gradually decreased as the inflow of one black population in tipping neighborhoods is associated with the outflow of 2.5 white population. In addition, I find that while white and black workers migrating from the rural South to New York City exhibited similar urban wage premium of about 40%, black migrants were largely excluded from the most innovative and high-growth job sectors such as manufacturing and finance.

## **"European Immigrants and the United States' Rise to the Technological Frontier"** with Costas Arkolakis, Michael Peters

### **Abstract**

We study the role of European Immigration on local and aggregate economic growth in the United States between 1880 and 1920. We employ a big data approach and link, at the individual-level, information from the Population Census, the universe of patents, and millions of historical immigration records. We find that immigrants were more prolific innovators than natives, and document large differences in innovation potential across nationalities and regions in the United States. To measure the importance of immigrants for the creation of new ideas and economic growth, we develop a new spatial model of growth through the dissemination of knowledge and workers' mobility. The model allows us to use our micro and regional empirical findings to measure immigrants' innovation human capital and the degree of knowledge diffusion which regulates scale effects. We quantitatively analyze the effects of imposing major immigration restrictions on American economic growth in the 19th and early 20th centuries. We find large, accumulating losses from these restrictions. Both the scale effects and the exclusion of high-human capital immigrants contribute significantly to these losses.

## **Work in Progress**

### **"The Impact of Rent Regulations in the 1920s New York City: External Effects and Property Prices"** with Maximilian Guennewig-Moenert, Ronan Lyons

#### **Abstract**

In April 1920 New York City introduced the first rent control laws in the United States. The policy provides a new type of rent control which has not been studied previously. While rent increases of more than 25 percent per year were banned, the main effect of the controls was to give judges, who were elected by municipal district, the ability to evaluate on a case-by-case basis whether a rent increase was "reasonable". A judge could reinstate the previous rent or grant tenants stays of up to one year under the old rent. This gave the judges *de facto* discretionary authority over rents, since "reasonableness" was in practice *not* bound to the 25 percent rule, meaning the intensity of the policy could vary by judge. We digitize data on conveyances and recorded leases from archives and listed rents from newspaper ads, to build a novel database of housing market outcomes for New York City from 1918 to 1935. We also assemble a judge-level dataset, including political affiliation from the NYC Official City Directory, newspaper articles and information contained in the federal US census, including personal background, exploiting their parents' birthplace as an instrument for political affiliation. We then implement different approaches to assess the impact of rent control policy on housing market outcomes: a standard difference in differences approach; a spatial regression discontinuity design; and an instrumental variable strategy.

### **"Social Agglomeration Forces and the City"** with Peter Luff

#### **Abstract**

The presence of "agglomeration forces" in production markets is widely accepted and has been recently quantified in the economics literature. Social scientists have done little theoretical work, however, and even less quantitative work, on how the logic of agglomeration might also apply to social groups and the gains that people derive from their social interactions. This paper attempts to bridge this gap by modeling and measuring the benefits in terms of social prestige that arose from the spatial concentration of socialites in Manhattan in the 1920s. We formulate a model of location-based social status determination that illustrates why these benefits might make spatial concentration desirable for members of the social elite. To test the model, we draw on the 1920 and 1924 volumes of the New York Social Register, federal income tax data for New York City residents in the 1920s, and United States Federal Census records to compile a novel dataset containing demographic information, club affiliations, occupations, incomes and addresses of over 700 socially prominent men living in Manhattan in the early 1920s. Treating club memberships as a proxy for social prominence, we exploit an instrumental variable approach, using expected changes in family size as an instrument for neighborhood choice, to measure the relationship between

an individual's residence relative to others in the group and his social status. Our results suggest that there are strong, statistically significant benefits in terms of social status that come with living in closer proximity to others in one's social group.

### **"American Intergenerational Mobility in History and Space"**

with Rodrigo Adao, Costas Arkolakis, Jack Liang

#### **Abstract**

We exploit advances in data digitization and machine learning to study intergenerational mobility in the United States before World War II. Using machine learning techniques, we construct a massive database for multiple generations of fathers and sons. This allows us to identify "land of opportunities" — locations and times in American history where kids had chances to move up in the income ladder. Our massive sample allows us to extrapolate income variation from occupations and demographic and geographic characteristics. We find that intergenerational mobility elasticity relatively stable during 1880-1940; there are regional disparities in terms of giving kids opportunities to move up, and the geographic disparities of intergenerational mobility have evolved over time. Our findings and descriptive analyses so far do not identify the causal mechanisms of intergenerational mobility, but we are working on evaluating the impact of policies in explaining these patterns.

### **Grants**

National Science Foundation "RIDIR: A Big Data Approach to Understanding American Growth" (\$1,004,899), co-Principal Investigator, Proposal No: 1831524, 2018-2022, joint with Costas Arkolakis and Michael Peters

Kauffman Foundation National Bureau of Economic Research Entrepreneurship Grant (\$20,000), co-Principal Investigator, joint with Costas Arkolakis and Michael Peters, July 2017 - June 30, 2018

National Science Foundation Doctoral Dissertation Research in Economics: Urban Transit Infrastructure and the Growth of Cities (\$18,240), Proposal No: 1658827, 2016-2018, co-Principal Investigator, Doctoral Advisor: Donald R. Davis

the American Real Estate and Urban Economics Association, Graduate Study Award, 2017

Program for Economic Research Data Grant (\$5,000), Columbia University, 2016

International Seminar Data Grant, Columbia University, 2016

Travel Data Grant, Columbia University, 2016

### **Honors, Awards, and Affiliation**

2019 IPUMS Research Award (The IPUMS USA): "Crabgrass Frontier Revisited in New York: Through the Lens of 21st-century Data"

the Alice Hanson Jones Fellowship for Economics and History, 2017-2018

C. Lowell Harriss Dissertation Fellowship Program, Lincoln Institute of Land Policy, 2017

Economic History Association Graduate Fellowship, 2017

Doctoral Dissertation Fellowship, Columbia University, 2017-2018

Doctoral Research Fellow, Furman Center for Real Estate and Urban Policy at New York University, 2014- 2015

Pre-Doctoral Fellowship, Furman Center for Real Estate and Urban Policy at New York University, Fall 2015

Kwanjeong Educational Foundation Fellowship, 2012-2016

Fulbright Graduate Study Award, 2011 (declined)

United States Department of State Fellowship, 2009

University of Chicago, Study of the United States Institute for Korean Undergraduate Leaders Program, Sponsored by the Bureau of Educational and Cultural Affairs U.S. Department of State, Jan 2009-Feb 2009

Korea Foundation for Advanced Studies Special Scholarship for Undergraduate Students, 2009-2011

Yonsei University, Department of Economics: Highest Honors Student Award (Fall 2008), High Honors Student Award (Spring 2007, Fall 2007), Honors Student Award (Spring 2009, Fall 2009)

Yonsei University "Freedom Scholarship" Department of Economics, 2007-2011

Brain Korea 21 Scholarship, Sep 2011-May 2012

Bank Of Korea Scholarship, Mar 2009-Aug 2009

National Champion of Nationwide Essay Competition on Human Rights Issues, Commemorating the end of *Apartheid* in South Africa (Highest Honors), The Ministry of Foreign Affairs & The South African Embassy Seoul, 2005

National Champion of Nationwide Reading Contest (Highest Honors), The Ministry of Education & The Ministry of Culture, Sports and Tourism, 2005

## **Teaching Experience:**

### **Yale University, Department of Economics**

Undergraduate Economics of Cities, Econ 428 (lecture), Spring 2021 (teaching evaluations are available upon request)

Undergraduate Economics of Cities, Econ 464 (seminar), Spring 2022 (scheduled)

### **Columbia University, Department of Economics**

Undergraduate Corporate Finance, Professor Tri Vi Dang, Fall 2017

Undergraduate Urban Economics, Professor Brendan O'Flaherty, Fall 2016

Master International Economics, Professor Donald R. Davis, Summer 2016

Undergraduate Economics of New York City, Professor Donald R. Davis, Spring 2016, Fall 2014

Undergraduate Public Finance, Professor Francois Gerard, Spring 2015

Undergraduate Intermediate Microeconomics, Professor Jonathan Vogel, Spring 2014

Undergraduate Intermediate Microeconomics, Professor Steven Olley, Fall 2013

### **Yonsei University, Department of Economics**

Graduate Microeconomics 1, Professor Sunku Hahn, Fall 2010, Spring 2011

Undergraduate Law and Economics, Professor Sunku Hahn, Fall 2010, Spring 2011

Undergraduate Game theory, Professor Sunku Hahn Fall 2011, Spring 2012

MBA Game Theory and its Economic Applications, Professor Sunku Hahn, Fall 2011, Spring 2012

## Seminar and Conference Presentations:

2022 (including scheduled)	University of Bonn, Nova School of Business and Economics, Rutgers New Brunswick, NYU Stern Econ, NYU Furman Center, National University of Singapore (NUS) Real Estate, University of Bern, University of Michigan, Seoul National University, Urban Economics Association, Southern Economic Association, AREUEA
2021	Oxford, Yale SOM Finance, Society for the Advancement of Economic Theory, the American Enterprise Institute, Sogang University, Korea Advanced Institute of Science and Technology
2020	Bank of Mexico, RIDGE Virtual Forum Economic History workshop
2019	Society for Economic Dynamics, Social Science History Association, Yale University, Yonsei University, The Korean Economic History Society, Seoul National University, Chung-Ang University, Korea University, Korea Development Institute
2018	WEHC, Rutgers University
2017	AREUEA-ASSA Chicago, NYU Interdisciplinary Perspectives on Urban Infrastructure Conference, SAET, NBER Summer Institute Development of American Economy

## Professional Activities

2020-Present	Co-organizer of Economic History Lunch, Yale (with Jose-Antonio Espin-Sanchez)
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## Research Experience

**Columbia University, Department of Economics Jan 2014 - Sep 2015**

Research Assistant for Professor Donald R. Davis

**Yonsei University, Department of Economics May 2010-August 2012**

Research Assistant for Professor Changyoung Jeong, former President of Yonsei University

Research Assistant for Professor Sunku Hahn

## Non-Economics Published Books

영어의 신 (A book project to tackle educational inequality through fun English education, written in Korean), 2008, Joong Ang Magazine & Books, ISBN: 9788964560488

보카 올마이티 (A sequel to the earlier book, written in Korean), 2009, Joong Ang Magazine & Books, ISBN: 9788983758446

## Computer Skills

STATA, R, SQL, ArcGIS, QGIS, Python, CartoDB, Tableau

## Languages

Korean (native), English (fluent), Chinese (intermediate)

## **References**

Naomi Lamoreaux (Primary)  
Stanley B. Resor Professor of Economics and History  
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