

## **Shmuel San**

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### **NEW YORK UNIVERSITY**

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### **Education**

PhD. In Economics, New York University, 2015-2021 (expected)  
Thesis Title: Essays in Labor Economics and Innovation  
M.A. in Economics, The Hebrew University of Jerusalem, 2011-2014  
B.S. in Mathematics, Bar Ilan University, 2002-2005

### **References**

Professor Christopher Flinn  
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212-998-8925 (office)  
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Professor Petra Moser  
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Professor Alfred Galichon  
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Assistant Professor Martin Rotemberg  
19 West Fourth St., 6<sup>th</sup> Floor  
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### **Teaching and Research Fields**

Primary field: Labor Economics  
Secondary fields: Innovation, Economic History

### **Teaching Experience**

#### **New York University**

Fall, 2016

Math for Economists I (Ph.D. level), for Luke Geldermans

#### **The Hebrew University**

Spring, 2014

Public Economics (M.A. level), for Itay Shurtz

Spring, 2014

Public Economics (B.A. level), for Itay Shurtz

Fall, 2013

Price Theory A (B.A. level), for Alon Eizenberg

### **Research Experience and Other Employment**

2018-2019

NYU, Research assistant for Petra Moser

2017-2018

NYU, Research assistant for Walker Hanlon

2014-2015

Bank of Israel, Economist at the research department

2012-2014

The Hebrew University, Research assistant for Momi Dahan

2011-2012

The Hebrew University, Research assistant for Claude Berrebi

### **Professional Activities**

#### **Presentations (+ means scheduled)**

2021

TAU (econ)<sup>+</sup>, Oslo<sup>+</sup>, CEMFI<sup>+</sup>, CESifo Venice Summer Institute<sup>+</sup>

2020

NBER SI (DAE poster session), BIU (business), TAU (public policy), EGSC, NEUDC, Hebrew U (agriculture), EPFL, PhDEVS, Hebrew U (public policy), Hebrew U (econ), FSU, BGU, Haifa, TAU (business), EHA Israel, Econometric Society European Winter Meeting, Collegio Carlo Alberto (PhD workshop), IDC<sup>+</sup>, BIU (econ), Hebrew U (business)

2019

SOLE

2018

AASLE (Seoul), EMCON (Northwestern), Warwick

2017

EHA (poster session), YES (Yale)

2014

Bank of Israel

#### **Referee**

2020

*The Review of Economics and Statistics, Journal of Economic Geography*

#### **Honors, Scholarships, and Fellowships**

2020-2021

NYU Dean's Dissertation Fellowship

2019

Economic History Association Graduate Fellowship

2019-2021

The Institute for Humane Studies Fellowship

2018

Best Third-Year Paper Award, NYU

2018-2021

Provost's Global Research Initiatives Fellowship, NYU Tel-Aviv

2018

Exploratory Travel and Data Grant, Economic History Association

2015- 2020

MacCracken Fellowship, NYU

2011-2012

Rector's Award for Outstanding Students, The Hebrew University of Jerusalem

2011-2012

Dean's Award for Outstanding Students, Faculty of Social Sciences, The Hebrew University

2011-2013

Merit Scholarship for MA Research Students, Department of Economics, The Hebrew University

### **Research Papers**

#### **“Who Works Where and Why? Parental Networks and the Labor Market” (Job Market Paper)**

Social connections are valuable for workers entering the labor market, both because they may increase the likelihood of knowing about a job opening at a specific firm and because they may increase the likelihood of being hired, conditional on knowing about an opening. Using data from Israel and relying on identifying variation from the timing of job movements of parents' coworkers, I find that workers are three to four times more likely to find employment in firms where their parents have professional connections than in otherwise similar firms. I use the same variation to structurally estimate a matching model of the labor market with search frictions, and find that connections double the probability of meeting and increase by 35% the likelihood of being hired after meeting. The estimated value of one additional meeting with a connected firm is 3.7% of the average wage, with around 2/5 of the increase coming from the direct value of a connection. Connections matter for inequality; I find that the wage gap between Arabs and Jews decreases by 12% when equalizing the groups' connections, but increases by 56% when prohibiting the hiring of connected workers. These seemingly opposing results are explained by the fact that Arabs have connections to lower-paying firms but use their connections more

extensively.

### **“Labor Supply and Directed Technical Change: Evidence from the Abrogation of the Bracero Program in 1964”**

This paper provides causal evidence for the impact of a shift in labor supply on the creation of new technology. To do so, it exploits a large exogenous shock to the labor supply in the US agricultural sector caused by the abrogation of the *bracero* agreements between the United States and Mexico at the end of 1964. Using a text-search algorithm allocating patents to crops, I show a negative labor-supply shock induced a sharp increase in innovation in technologies related to more affected crops. The effect is stronger for technology related to labor-intensive production tasks. Farm-value dynamics indicate the policy change was unexpected and undesirable for the farm owners.

### **“Immigration, Science, and Invention: Evidence from the Quota Acts” (with Petra Moser)**

Immigration quotas in the 1920s targeted “undesirable” nationalities to stem the inflow of low-skilled Eastern and Southern Europeans (ESE). Detailed biographical data for 91,638 American scientists reveal a dramatic decline in the arrival of ESE-born scientists after the quotas. Under the quotas, an estimated 1,165 ESE-born scientists were lost to US science. To identify effects on invention, we use k-means clustering to assign scientists to unique fields and then compare changes in patenting by US scientists in the pre-quota fields of ESE-born scientists with changes in other fields where US scientists were active inventors. Baseline estimates imply a 68% decline in invention. Decomposing this effect, we find the quotas reduced both the number of US scientists working in ESE fields and the number of patents per scientist. Firms that employed ESE-born scientists experienced a 53% decline in invention. The quotas’ effects on invention persisted into the 1960s.

### **“The Role of Firms in the Assimilation of Immigrants” (with Jaime Arellano-Bover)**

This paper studies the role of firms in immigrants' labor market assimilation. We do so in the context of a large and sudden international migration shock: the arrival of nearly 1 million former Soviet Union (FSU) Jews to Israel in the 1990s. We use newly available Israeli population employer-employee data with information on workers' place of birth and migration year. Over the course of 25 years since arrival to Israel, immigrants gradually entered higher-paying, larger, older, and less segregated firms. Gradual access to higher-paying firms explains a significant fraction of immigrants' labor market assimilation. Firm-specific pay premiums account for (i) 20%-32% of the immigrant-native salary differential in the first 20 years since arrival and (ii) 28% of the gap between immigrants' own salary 1 and 25 years since arrival. FSU immigrants, who were highly educated, surpass natives after 20 years in Israel in terms of their employers' pay premiums, size, and age. An implication of our findings is that a significant fraction of the immigrant-native wage gap, especially shortly after arrival, is due to labor market rents as opposed to workers' underlying productivity differences.

### **“Discrimination and the Gender Gap in Wages” (with Eric Gould)**

#### **Miscellaneous**

**Languages:** Hebrew (Native), English (Fluent)

**Software:** C++, Python, R, Matlab, Stata

**Birth Year:** 1986

**Citizenships:** Israel, Austria

