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DOCTORAL STUDIES Massachusetts Institute of Technology (MIT)
PhD, Economics, Expected completion June 2025
DISSERTATION: "Effects of Immigration on Labor Markets: Theory, Methods, and Evidence"

DISSERTATION COMMITTEE AND REFERENCES

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PRIOR EDUCATION Koc University
Bachelor of Arts in Economics and Bachelor of Science in Mathematics 2017
Master of Arts in Economics 2019

CITIZENSHIP Turkish **GENDER:** Male

LANGUAGES Turkish, English, French

FIELDS Primary: Labor Economics, Public Economics
Secondary Fields: Applied Econometrics, Development Economics

MIT Economics

FIRST LAST

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TEACHING EXPERIENCE	14.41 Public Finance & Public Policy (undergraduate) Teaching Assistant to Professor Jon Gruber	2024
	14.01 Principles of Microeconomics (undergraduate) Head Teaching Assistant to Professor Sara Ellison	2023
	14.01 Principles of Microeconomics (undergraduate) Teaching Assistant to Professor Jon Gruber	2021
	14.64 / 14.661 Labor Economics (undergraduate/graduate) Teaching Assistant to Professors Joshua Angrist and Heather Sarsons	2021
	14.662 Labor Economics 2 (graduate) Teaching Assistant to Professors Joshua Angrist and Heather Sarsons	2024 (planned)
RELEVANT POSITIONS	Research Assistant to Professor Joshua Angrist	2022-24
FELLOWSHIPS, HONORS, AND AWARDS	International Association for Applied Econometrics Conference <i>Best Paper Presented by a Graduate Student Award</i> for <i>Synthetic instruments in DiD designs with unmeasured confounding</i> (joint with Jaume Vives-i-Bastida)	2024
	Institute of Humane Studies Junior Fellow Conference	2024
	MIT Hausman Dissertation Fellowship	2024
	MIT Global Seed Fund	2023
	MIT Shultz Fund	2022-2024
	MIT Center for International Studies Summer Research Grant	2022-2023
	Unicredit Foundation Crivelli Europe Scholarship	2019
PROFESSIONAL ACTIVITIES	Referee: American Economic Review Insights, Journal of Development Economics, European Economic Review	
	Conferences and Presentations: International Association of Applied Econometrics, Society of Labor Economics, Identity & Conflict Lab at Yale, American Causal Inference Conference, IZA workshop on Labor Markets and Innovation during Times of War and Reconstruction, Bilkent University, Koc University, Ted University	
	Service: Organizer, MIT Labor Lunch (2021-2022)	
PUBLICATIONS	“Driving While Hungry: The Effect of Fasting on Traffic Accidents” <i>Journal of Development Economics, May 2024.</i>	
	I study the impact of hunger on traffic accidents by exploiting the fasting that is religiously mandated during the month of Ramadan. Identification comes from working hours not being adjusted during Ramadan in Turkey. I find that driving while fasting at rush hour is associated with a significant increase in road traffic	

accidents. Using existing survey evidence on fasting rates in Turkey, I conclude that hunger induced by fasting increases the probability of an accident by 25%, which is smaller than the effect of driving while intoxicated, but larger than the effect of mild sleep deprivation.

RESEARCH PAPERS

“Effect of Immigrants on Regions that Don’t Receive Immigrants” (Job Market Paper) (with Tishara Garg)

This paper investigates how immigration-induced wage shocks can propagate beyond the regions directly affected by immigrant arrivals through production networks. Using the Syrian refugee crisis in Turkey as a quasi-experiment, we first show that low-skill immigrants lower labor costs in low-skill intensive industries in the host regions. We then use the universe of Turkish employer-employee-linked records, balance sheet data, and near universe of firm-to-firm transactions from VAT records to show that firms in non-host regions who were relatively more exposed to the inflow of immigrants through their supply chain hired more workers, increased production and share of labor in production costs. The latter suggests that labor and intermediate goods are gross complements, with an estimated elasticity of substitution around 0.78. Finally, we study the general equilibrium effects of an immigration shock on real wages and welfare throughout the economy by incorporating immigration into a model of production networks. Our analytical results show that immigration can increase or decrease real wages in the control regions based on the shape of the production network. We calibrate the model using our data and reduced-form estimates. Our counterfactual estimates show that immigrants’ effects on non-host regions are negligible in the aggregate, but can be economically meaningful for industries that are trade-dependent on the host region.

“Formal Effects of Informal Labor: Evidence from the Syrian Refugees in Turkey”

I study how firms and native workers respond to an informal labor supply shock, driven by an inflow of refugees who are not provided work permits and are thus only employable in the informal economy. Crucially, I distinguish between native workers in the informal and formal sectors, of which the latter may be positively or negatively impacted. The empirical setting is the Syrian refugee crisis in Turkey. Using travel distance as an instrument for refugee location, I show that a one percentage point (pp) increase in the refugee/native ratio decreases native informal salaried employment by 0.17 pp and formal salaried employment by 0.13 pp among low-skill natives. I document two mechanisms: (i) formal firms reduce their formal labor demand, and (ii) new firms relocate from formal to informal economy. These estimates imply a relatively high elasticity of substitution, of approximately 10, between formal and informal workers. This is consistent with the Turkish context, where informal employment is often in the same sectors and even in the same firms as formal employment. As a counterfactual, I predict that granting refugees work permits would have created up to 120,000 more formal jobs in the economy through

higher informal wages.

“Synthetic instruments in DiD designs with unmeasured confounding”
(with Jaume Vives-i-Bastida)

Unmeasured confounding and selection into treatment are key threats to reliable causal inference in Difference-in-Differences (DiD) designs. In practice, researchers often use instrumental variables to address endogeneity concerns, for example through shift-share instruments. However, in many settings instruments may be correlated with unobserved confounders, potentially exhibiting pre-trends. In this paper we explore the use of synthetic controls to address unmeasured confounding in IV-DiD settings. We propose a synthetic IV estimator that partials out the unmeasured confounding and derive conditions under which it is consistent and asymptotically normal, when the standard two-stage least squares is not. Motivated by the finite sample properties of our estimator we then propose an ensemble estimator that might address different sources of bias simultaneously. We illustrate our method through a simulation exercise and two shift-share empirical applications: the Syrian refugee crisis effect on Turkish labor markets and the impact of Chinese imports on US manufacturing employment.

“Formal Effects of Informal Labor Supply and Work Permits: Evidence from Venezuelan Refugees in Colombia”
(with Dany Bahar and Isabel Di Tella)

Whether refugees should have work permits is an active policy debate. We formalize the relevant trade-offs of providing work permits to refugees and test them empirically. Our setting is the Venezuelan refugee crisis in Colombia. The keys to our analysis are (1) refugees arrive without work permits initially, and (2) Colombia started granting work permits to Venezuelans in waves. Using a shift-share design and relaxing the exogeneity of shares assumption by employing Synthetic IV à la Gulek and Vives (2023), we find that the arrival of informal refugees displaced formal and informal natives in salaried jobs, which suggests high substitutability between informal and formal labor in production. Work permits allow middle to high-skill refugees to find formal jobs and work closer to their skill level, reducing the mismatch in the economy. This comes at a cost to some natives, who lose their formal jobs, and at a benefit to others, who observe increases in salaries.

“Occupational Heterogeneity of Child Penalty in the United States”

I investigate the extent to which the child penalty varies by occupation, the role of occupational heterogeneity in driving gender inequality, and the correlates of occupation-specific gender penalties. I document that fatherhood’s average zero effect masks the fact that some occupations have large negative penalties and some have large positives. Even motherhood’s large negative effect masks that some occupations have essentially zero or even positive penalties. Occupational

change post-parenthood explains one-third of the income penalties for women and almost all for men. Availability of part-time work, not the flexibility of hours, is associated with lesser inequality in employment penalties.

**RESEARCH IN
PROGRESS**

“Does Working From Home Reduce the Child Penalty?”
(with Christina Langer)

Abstract: Child penalty accounts for most of the gender gap in earnings in the developed countries. In this paper, we examine how the recent increase in the availability of remote work has affected mothers' labor market outcomes. Our identification strategy exploits the heterogeneous rise in remote work across occupations. By comparing child employment penalties across occupations with higher and lower exposure to remote work, before and after its widespread adoption, we find that the availability of remote work decreases child employment penalties for mothers but does not impact the employment penalties for men. We are currently investigating changes in income, hours, and wage penalties, as well as the implications for gender inequality in earnings.