Mustafa Runyun

Boston College, 4th-year Economics Ph.D. Candidate

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Recommendation Letter Writer: Joanna Venator (venator@bc.edu)

My name is Mustafa Runyun, and I am writing to express my enthusiasm for the opportunity to join the NBER Innovation Research Boot Camp. To briefly introduce myself, my academic interests revolve around two main pillars: understanding the effects of changes in the labor market on employment, major choice, and family dynamics; and exploring firm dynamics and conducting policy research within the labor market context. I consider myself an applied economist and econometrician with a strong focus on labor economics. My research agenda includes analyzing changes in the labor market and family dynamics in response to technological innovations and government interventions.

Currently, I am investigating the effects of automation in the labor market on family structures and dynamics in the United States, while also evaluating the impact of nationwide tax and subsidy policies on firm dynamics and the labor market in Turkey. Over the course of my Ph.D. training, I have developed a solid foundation in econometric modeling, data analysis, empirical industrial organization, and applied research. My recent projects have required advanced coding skills in Python, R, and Stata, collaborative problem-solving, and the application of econometric and computational tools to address pressing economic challenges.

Before beginning my Ph.D., I gained significant experience in policy evaluation and economic research. I had the privilege of working with scholars like Ali Hortacsu and Chad Syverson to analyze the effectiveness of a nationwide tax subsidy program in Turkey. This project, funded by the Ministry of Industry and Commerce, involved formulating economic models, conducting empirical studies, and presenting results to ministry stakeholders. Our team essentially provided advanced consulting services to assess the policy's effectiveness and develop strategies for its sustainability. This experience gave me valuable insights into the intersection of academia and policy-making, as well as the importance of tailoring research to different audiences.

What draws me to the NBER Innovation Research Boot Camp is its definition of innovation in the announcement: "Innovation is a key force in economic growth, firm dynamics, inequality, and labor market outcomes." My primary research interests include firm dynamics, labor market analysis, and family economics as they relate to these topics. Collaborating with leading experts and scholars to tackle diverse challenges aligns with my aspiration to apply these concepts to solving complex problems, particularly in the labor market. I am especially eager to deepen my experience and understanding of the Economics of Innovation as a foundation for exploring the Economics of AI and automation in the labor market.

Thank you for your time and consideration. I look forward to your response and acceptance.

Sincerely,

Completed Ph.D. Courses in Boston College:

ECON7720 – Math for Economists

ECON7740 – Microeconomic Theory I

ECON7741 – Microeconomic Theory II

ECON7750 – Macroeconomic Theory I

ECON7751 – Macroeconomic Theory II

ECON7770 – Statistics

ECON7772 – Econometric Method

ECON8085 – Labor Economics I

ECON8085 – Labor Economics II

ECON8821 – Time Series Econometrics

ECON8822 – Cross Section and Panel Data Econometrics

ECON8825 – Topics in Econometric Theory

ECON8853 – Industrial Organization I

ECON8854 – Industrial Organization II

ECON8861 – Monetary Economics I

Application Proposal

My academic interests center on two key areas: examining how labor market shifts influence employment, career choices, and family dynamics, and investigating firm behavior while conducting policy research in the context of labor markets and developing technologies. My research focuses on assessing labor market transformations and family dynamics in response to technological advancements and government policies. I am currently examining how automation in the labor market influences family structures and dynamics in the United States, while also assessing the effects of national tax and subsidy policies on firm behavior and the labor market in Turkey. Throughout my Ph.D. training, I have built a strong expertise in econometric and computational modeling, data analysis, empirical industrial organization, applied research, and advanced programming skills in Python, R, and Stata.

In my job market paper, I analyze the effects of automation in the labor market and the displacement of routine and labor-intensive occupations on marriage market sorting in the U.S. since 1980. I employ novel and advanced empirical and computational methods from the literature. My initial findings indicate that automation in the labor market has decreased marriage stability and marriage rates among older and less-educated individuals while positively influencing marriage quality, rates, and stability, as well as leading to greater assortative mating. Despite the centrality and importance of this topic, the existing literature remains inadequate and has primarily focused on the challenges faced by a narrow segment of society. My findings suggest that this technological shift has brought significant societal transformations with diverse effects that cannot be reduced to simplistic conclusions.

While I can demonstrate novel effects of automation on the marriage market, refining my evaluation methods and proxy measurements is necessary. Existing identification strategies, such as lagged routine employment shares, offer insights but fail to capture the full impact. To address this, I plan to use patent data and trained machine learning models to estimate patent intensity for occupational tasks, identifying which tasks have been automated and to what extent. The literature's predominant focus on job displacement overlooks productivity gains and task creation. By integrating patent data and machine learning, I aim to provide a more comprehensive analysis of automation's effects on labor and marriage markets.

My research agenda focuses on the future of work, shaped by firm dynamics, technological advancements, and labor market transformations. While corporations drive innovation, individuals and families also play a vital role in adapting to these changes. Households influence labor market outcomes through career choices, education, and adaptation strategies. Effective policies must account for these transformations to avoid inefficiencies or hindering progress. Labor market policies should prioritize workforce adaptability, enabling individuals to benefit from technological advancements. Beyond employment, these shifts also affect human capital, the marriage market, and intergenerational mobility, highlighting the need for a comprehensive understanding of their long-term effects.

In the foreseeable future, I plan to extend my research agenda to Economics AI and the effects of recent advancements in generative large language models on labor market dynamics. I believe these developments have brought disruptive transformations and new opportunities for both the workforce and firms. Examining the nature of innovation is a crucial research effort to harness this wave of transformation in key areas of a country and the world.

I plan to apply the experience and insights gained from the boot camp to refine my estimation strategies, analyze the effects of technological innovation on the labor market, and deepen my understanding of recent technological advancements in productivity of workforce and firms. These improvements will enhance my research project and help refine my research agenda.

Curriculum Vitae

January, 2025

Mustafa Runyun

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Education

Boston College
Ph.D., Economics (Ongoing)
Fields: Labor Economics, Econometrics, Applied Economics
Thesis Advisors: Donald Cox and Joanna Venator

Boğaziçi University
M.A., Economics, 2020 (High Honor Degree)
Fields: Applied Econometrics, Immigration Economics, Capital Market
Thesis Advisor: Prof. Murat G. Kırdar

Boğaziçi University
B.A., Economics, 2017 (Honor Degree)
B.A., Political Science and International Relations, 2017 (with Double Major)

Research Fields

Labor Economics, Applied Econometrics, Causal Inference,
Applied Microeconomics, Firm Dynamics, Economic History,
Population and Family Economics, Economics of Migration

Professional Appointments

Economics Department, Boston College
Teaching Assistantship (2021-Ongoing)

Turkish Management Sciences Institute &
Scientific and Technological Research Council of Turkey (TUBITAK)
(Researcher and Data Analysist in Government-Funded Project (2019-2021)
(The project includes the analysis of the Entrepreneur Information System (GBS)
micro data and is funded by the Ministry of Industry and Technology (Turkey)))

Economics Department, Boğaziçi University
Teaching Assistantship (2018-2020):

İSAR Foundation
Independent Researcher (2017-2018):

Working Papers

Micro-and Macroeconomic Impacts of a Place-Based Industrial Policy (No. w31293).
National Bureau of Economic Research, 2023.
(with Ali Hortaçsu, Chad Syverson, Enghin Atalay and Mehmet Fatih Ulu)

The Impact of Syrian Refugee Influx on Turkish Capital Stocks:
Credit Expansion and Savings

Work in Progress

Automation in the Labor Market and Matching in the Marriage Market
(Job Market Paper)

The Effects of Assisted Reproductive Technology Policies on
Assortative Mating and Marriage Characteristic

A Different Approach to the Temettuat Registers: Tax, Welfare and
Economic Environment of Ottoman Empire at the 19th Century

Awards and Fellowships

Boston College Graduate Assistantship
Boston, 2021-ongoing.

Koc University Teaching Assistantship Fellowship
İstanbul, 2020-2021.

Boğaziçi University Teaching Assistantship Funding
İstanbul, 2018-2020.

ISAR Research Fellowship
Istanbul, Turkey, 2017-2018.

Achievement Scholarship of Turkish Prime Ministry
(For top 100 students in the University Entrance Exam in Turkey)
Istanbul, Turkey, 2012-2017.

Conferance and Presentation

Graduate Congress for Modern Turkish Studies, 2019
Department of Modern Turkish Studies, Istanbul Sehir University.

2nd Graduate Conference in Civilization Studies, 2019
Aliance of Civilizations Institute, Ibn Haldun University

Other Training

Basic and Advanced Training Program in ISAR Foundation
Extra Curriculum Program on 2009-2017
Islamic History and Near East Geography
Classical Arabic and Text Interpretation
Advanced in Theological Science

Languages

English (advanced), Arabic (advanced), Ottoman Turkish (advanced),
Turkish (mother tongue), German (pre-intermediate)

Computer Skills

Stata (advanced), Matlab (advanced), Python (advanced), R (advanced),
Microsoft Office (advanced), C++ (intermediate), Latex (advanced)

Other Professional Occupations

dunyabizim.com Cultural Reporting Portal
Content Writing in Cultural Reporting, 2009-2017.

Degrees and Certificates

Qasid Arabic Institute
Arabic Language Course, 2018

High Honor Degree
Boğaziçi University, 2020

Honor Degree
Boğaziçi University, 2017

Turkish Entrance Exam of 2012
94th between 1 Million Student

Inter-High School Project Contest of TÜBİTAK
3rd of Marmara Region at Field of History
Scientific and Technological Research Council of Turkey, 2011.

Encouragement Award for Amateur Documentary Shooting
Istanbul Development Agency, Turkish Prime Ministry, 2010.

Inter-High School Writing Contest
1st, Üsküdar County Directorate of Education, Istanbul, Turkey, 2009.

Personal

Date of Birth: April 6, 1993, Istanbul, Turkey
Nationality: Turkish
Marital Status: Married

References

Prof. Enghin Atalay
Economics
Federal Reserve Bank of Philadelphia
atalayecon@gmail.com
Phone Number: Available upon request

Prof. Donald Cox
Economics
Boston College
donald.cox@bc.edu
Phone Number: Available upon request

Prof. Mehmet Fatih Ulu
Finance
Koc University
mehmetfatihulu@gmail.com
Phone Number: Available upon request

Prof. Joanna Venator
Economics
Boston College
venator@bc.edu
Phone Number: Available upon request

BOSTON COLLEGE

DEPARTMENT OF ECONOMICS

February 5, 2024

To whom it may concern:

I am writing to recommend Mustafa Runyun for the 2025 NBER Innovation Research Boot Camp. I am one of Mustafa's primary academic advisors and have known him since Fall 2022 when he took my graduate level labor economics course during the second year of his PhD program. Mustafa has a keen interest in technological innovation's impact on the labor market. Mustafa's research agenda focuses on how technological change differentially impacts different demographic groups and the spillovers of these technological change onto family formation. In his primary project, he documents how the displacement of routine occupations by roboticization and out-sourcing impacts marriage outcomes differently across generations in terms of timing of marriage, longevity of matches (i.e., divorce), and assortative matching. He also has early-stage work exploring the role of AI diffusion across industries on labor market outcomes such as employment transitions and wages.

I strongly recommend Mustafa for this program. He is a hard worker and has strong skills in both empirical econometric work and structural modeling. I'll note: he has taken the initiative to build a research agenda somewhat independently, pursuing these and interests in technological diffusion despite there not be a natural advisor for these topics at BC – my own research focuses more on family structure and fertility, rather than technological change. I believe his existing interests and skills will be bolstered by participating in a boot camp that can help him gain a stronger network in this sub-field.

Sincerely,

Joanna Venator

Wieler Family Sesquicentennial Assistant Professor

Department of Economics, Boston College

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