

# Mehmet Furkan Karaca

• Curriculum Vitae • October 2022 •

## CONTACT INFORMATION

Department of Economics  
Michigan State University  
486 W. Circle Drive  
110 Marshall-Adams Hall  
East Lansing, MI 48824

**Email:** [karacame@msu.edu](mailto:karacame@msu.edu)  
[mehmetfurkankaraca@gmail.com](mailto:mehmetfurkankaraca@gmail.com)  
**Phone:** +1 (517) 481-0223  
**Website:** [sites.google.com/view/mehmet-furkan-karaca](https://sites.google.com/view/mehmet-furkan-karaca)  
**Citizenship:** Turkish

## PLACEMENT OFFICERS

<b>Placement Director</b>	Soren Anderson	<a href="mailto:sta@msu.edu">sta@msu.edu</a>	+1 (517) 355-0286
<b>Academic Program Coordinator</b>	Jay Feight	<a href="mailto:feightja@msu.edu">feightja@msu.edu</a>	+1 (517) 355-6579

## REFERENCES

<b>Raoul Minetti</b> ( <i>chair</i> ) Department of Economics Michigan State University +1 (517) 355-7349 <a href="mailto:minetti@msu.edu">minetti@msu.edu</a>	<b>Luis Araujo</b> Department of Economics Michigan State University +1 (517) 355-7583 <a href="mailto:araujolu@msu.edu">araujolu@msu.edu</a>	<b>Qingqing Cao</b> Department of Economics Michigan State University +1 (517) 432-4978 <a href="mailto:caoqq@msu.edu">caoqq@msu.edu</a>
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## EDUCATION

**Ph.D. in Economics**  
▪ Michigan State University 2023 (expected)

**M.A. in Economics**  
▪ Michigan State University 2019  
▪ Koç University, Istanbul, Turkey 2016

**B.S. in Economics**  
▪ TOBB University of Economics and Technology, Ankara, Turkey 2014

## RESEARCH INTERESTS

Macroeconomics, Financial Economics, Technological Change and Innovation

## JOB MARKET PAPER

**“Credit Reallocation and Technological Change”**  
(with Raoul Minetti and Pierluigi Murro)

*This paper studies the dynamic process of credit reallocation and its interaction with aggregate innovative activity. To draw out theoretical predictions, we build a static model to investigate the consequences of lenders’ decision on reallocating credit and borrowers’ choice on innovating. We show that an escalation in credit reallocation disrupts innovative activities. Then, using a novel dataset on bank balance sheets and aggregate number of patents for Italy, we examine the effect of credit reallocation on innovation. We construct measures of credit reallocation and collect aggregate number of patents as a measure of innovative activity across Italian provinces. We find that an increase in credit reallocation reduces innovative activity while aggregate credit growth helps to expand it.*

## WORKING PAPERS

**“Credit Reallocation, Dividend Payout and Innovation”**

*This paper studies the effect of credit reallocation on dividend payouts and, ultimately, innovation in an economy with heterogeneous firms. I build on the intuition that innovative firms tend to pay higher dividends with the expectation of better future performance, while higher dividend payouts reduce the possibility of higher R&D investments leading to a lower level of innovation. At the same time, banks can play a ‘Schumpeterian’ role of creative destruction through reallocating credit to more innovative firms. My aim is to explore the underlying mechanism in a general equilibrium framework. In addition, I investigate the relationship employing the number of patents to measure firm innovation and the debt levels to calculate firm level measures of credit reallocation.*

### **“Innovation and Interest Rates: The Role of Patent Collateralization”**

(with Qingqing Cao and David Hong)

We investigate the role interest rates play in the decision making process of firms’ innovation and capital expenditures. More precisely, evidence suggests firms have been placing their patents as collateral for loans in greater frequency. This brings up the possibility of asymmetric collateralization values between physical capital and loans which is the prime mechanism we aim to explore. Subsequently, we shall test the generated theoretical hypotheses to matched firm patent value US data. More explicitly, we use USPTO’s patent assignment database to see which patents are used as collateral and match patents with the Innovation (Patent) Valuation Database. We posit a lower interest rate environment is more stimulative for innovation via the lending channel.

#### **WORK IN PROGRESS**

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### **“Bank Capital Structure and Credit Reallocation in the Knowledge Economy”**

I study the composition of bank assets and loan portfolios during the transition of the real sector to a knowledge economy. Annual Historical Bank Data from FDIC reveals two important facts: intangible asset holdings of U.S. commercial banks and savings institutions have increased dramatically over the past four decades, and the composition of loan portfolios has shifted from commercial and industrial loans to real estate loans. I aim to show that the compositional shift in loan portfolios are driven by the rise in bank intangible asset holdings which is a result of the transition to a knowledge economy and are not simply the results of financial innovations, higher mortgage demand, or deeper bond markets over the same time period.

### **“The Macroeconomic Implications of Lending Favoritism by Public Sector Banks”**

(with Yogeshwar Bharat and David Hong)

Lending favoritism by public sector banks is well-documented in the literature. We aim to micro-found the lending decision-making process of both private and public sector banks and to postulate the macroeconomic implications of a recessionary shock. Utilizing matched bank firm Indian data via the Reserve Bank of India, we aim to test the evidence of such behavior by measuring the degree of credit reallocation/misallocation across sectors.

### **“Nonlinear Knowledge Production and Patent Disclosures: A General Equilibrium Treatment Effects Approach”**

(with Nick Brown and David Hong)

We aim to explore the incentives for firms to hide or reveal their innovations under a general equilibrium framework. To that end, appropriate derivations of an econometric estimator with the aim of alleviating sample selection bias and accounting for spillover effects in a general equilibrium treatment effect framework is our objective. A potential policy change we are considering is the passage of the Asset-Backed Securities Facilitation Act in Delaware in 2002 and the passage of the American Inventor’s Protection Act of 1998 as well.

### **“Supply Chain Induced Inflation: Input-Output Framework with Empirical Evidence from Turkey”**

(with David Hong and Mehmet E. Samci)

We build on the framework that studies the optimal monetary policy under a multi-sector economy with input-output linkages. We aim to extend the production network framework and include empirical evidence from matched bank-firm Turkish data. The novelty of our approach is the inclusion of micro-level input-output data that is also recorded at the Central Bank of the Republic of Turkey. We are currently underway in the process to receive permission to access said data.

#### **REFeree**

Oxford Economic Papers

#### **PRESENTATIONS**

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Midwest Macroeconomics Fall Meeting	2022
Michigan State Macro Group Seminar Series	2021
Michigan State Red Cedar Conference	2020

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<b>SKILLS</b>	Language	
	▪ Turkish (native), English (fluent)	
	Software	
	▪ STATA, R, MATLAB, $\LaTeX$ , Gephi.	
<b>HONORS AND AWARDS</b>	Dissertation Completion Fellowship, Michigan State University	2023
	Supplemental Research Fellowship, Michigan State University	2022
	Best Advanced Research Fellow, AEA Summer Program	2020
	The Scientific and Technological Research Council of Turkey Scholarship	2014 – 2016
	Koç University Graduate Fellowship, M.A., Koç University	2014 – 2016
	Certificate of High Honor, TOBB University of Economics and Technology	2014
	Full Scholarship, B.S., TOBB University of Economics and Technology	2009 – 2014
	Ranked 97 <sup>th</sup> in the National University Entrance Exam (OSS)	2009
<b>TEACHING EXPERIENCE</b>	<b>Michigan State University</b>	
	▪ Graduate Teaching Assistant	
	• Macroeconomics	Spring 2022
	▪ Undergraduate Instructor	
	• Money, Banking and Financial Markets, <i>Online</i>	Summer 2019
	▪ Undergraduate Teaching Assistant	
	• Advanced Macroeconomics	Fall 2022, Fall 2021, Summer 2021, Spring 2021, and Fall 2020
	• Macroeconomics and Public Policy	Spring 2021, Fall 2020
	• Intermediate Macroeconomics	Summer 2021, Fall 2018, Fall 2017
	• Intermediate Microeconomics	Spring 2018
	• Introduction to Macroeconomics	Spring 2020, Fall 2019, Spring 2019
	<b>AEA Summer Program</b>	
	▪ Research Fellow for Advanced Level Research Methods	Summer 2020
	▪ Tutor for Advanced Microeconomic Theory	Summer 2020
	<b>Koç University</b>	
	▪ Undergraduate Teaching Assistant	
	• Intermediate Macroeconomics	Spring 2017, Fall 2016, Spring 2016, Fall 2015
	• Principles of Economics	Spring 2015
	• Intermediate Microeconomics	Fall 2014
<b>RESEARCH EXPERIENCE</b>	Center for Social Policy Research, TOBB University of Economics and Technology	
	▪ Assistant Researcher	Sep 2013 – Aug 2014
	Foreign Economic Relations Board (DEIK), Istanbul, TURKEY	
	▪ Research Intern, Strategy and Communication Councillorship	Jan 2012 – May 2012
<b>UNIVERSITY SERVICE</b>	Department of Economics Advisory Committee Member, MSU	2019 – 2020
	Economics Graduate Student Organization Board Member, MSU	2019 – 2020
	Graduate Economics First-Year Mentor, MSU	2019 – 2020
	MSU Turkish Student Association President	2018 – 2019