Saeed Shaker-Akhtekhane

Contact

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Citizenship and Visa Status

Iran (F-1 visa)

Education

The Ohio State University   Columbus, OH
Ph.D., Economics,   Expected May 2021
M.A., Economics,   2016

East Carolina University   Greenville, NC
M.S., Economics,   2015

University of Tabriz   Tabriz, Iran
B.S., Mathematics,   2008

Research Interest

Macroeconomics

Financial Frictions

Economic Development

Research Papers

Job Market Paper

Financial Frictions and Productivity Losses: Importance of Default-Led Heterogeneity   Download
in Collateral and Loan Rates

Working Papers

Impact of Entry Costs on Aggregate Productivity: Financial Development Matters   Download

Entry Barriers in a Two-Sector economy with Perfect and Imperfect Financial Markets   Download

Firm Entry and Exit in Continuous Time   Download

Fellowships, Awards and Honors

University Fellowship, Graduate School, Ohio State University	Spring 2021
Departmental Citation in Teaching Excellence	2019
Journal of Money, Credit and Banking Fellowship	2015-2016
Tehran Stock Exchange Organization's Thesis Award	2011

Conference Presentations/Invitations

Midwest Economics Association, 84th Annual Meeting, Evanston, IL, USA (cancelled due to pandemic)	2020
Conference on Probability Theory and its Applications, Athens, Greece	2014
International Conference on Econometrics and Application, Sanandaj, Iran	2012

Teaching Experience

Independent Teaching

Elementary Econometrics ([Download Syllabus](#))   Summer 2019

Teaching Assistant and Recitation Leader

Intermediate Microeconomics   Fall 2016, Spring 2018

Intermediate Macroeconomics   Fall 2018

Health Economics   Fall 2019

Principles of Microeconomics   Spring 2017, Spring 2019, Fall 2020

Skills

Programming

Python, R, Stata, Matlab, Fortran, C, SQL

Machine Learning

Random Forests, Linear Discriminant Analysis, Principal Component Analysis, Neural Networks

Lnaguages

English (fluent), Farsi, Turkish, Azeri (native)

Other Professional Activities

Research fellow, AEA summer program at Michigan State University   Summer 2017

Financial Economist, Egtesad Modaber Kish, Tehran, Iran   2011-2014

Reviewed for: International Conference on Physics, Mathematics and Statistics   2019

Pre-Ph.D. Research Papers

A Comprehensive Evaluation of Value-at-Risk Models and a Comparison of Their Performance in Emerging Markets, with Mohsen Seyghali and Solmaz Poorabbas, *Journal of Risk Model Validation*, 2018 ([view paper](#))

Exponentially Declining Weighted Bootstrapping as an Alternative Value-at-Risk Measurement Technique, with GholamReza Keshavarz Haddad, *Working paper, Sharif University of Technology,* 2017

References

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Financial Frictions and Productivity Losses: Importance of
Default-Led Heterogeneity in Collateral and Loan Rates   (Job Market Paper: latest version here)

I develop a model of entrepreneurship with default to quantitatively analyze the impact of financial frictions on total factor productivity (TFP). Default risk justifies the need for collateral. Entrepreneurs that vary in their levels of collateral face different costs of borrowing, which, in turn, leads to further heterogeneity in collateral. Entrepreneurs are charged higher loan rates if the value of their collateral is low, which favors the wealthy over the poor, regardless of their talent, and discourages poor individuals from self-financing to start or expand their businesses. The close link between deposit rates and loan rates, in most models, is broken. The resulting change in the dynamics of wealth accumulation and self-financing has important implications on misallocation and economic development. My model can explain large losses from financial frictions while being consistent with the high persistence of productivity, a challenge for existing models of financial frictions.

My analysis shows sizeable losses from financial frictions, more than 40% in TFP losses for the U.S. if we were to replace its financial markets with a poorly functioning one. Without default and heterogeneity in collateral and loan rates, my model would function similarly to a neo-classical model, which justifies the small impact of financial frictions, only 7% loss in the U.S. TFP.

Financial frictions in my model stem from three different sources: limited enforceability related to the recovery rate of collateral by financial intermediaries; informational frictions related to inefficiencies in financial intermediaries' evaluation of entrepreneurs' default risks; and frictions related to entrepreneurs expectations of future loan terms. I use machine learning classification techniques to solve the problem financial intermediaries face evaluating entrepreneurs' default risk. There are relatively large TFP losses due to amplification effects between the three sources of financial frictions.

Impact of Entry Costs on Aggregate Productivity: Financial Development Matters   (download here)

This paper revisits the question: what is the impact of entry costs on cross-country differences in output and total factor productivity (TFP)? I argue that for the countries with low levels of financial development, the answer is the conventional one in the literature, that higher entry costs cause misallocation of productive factors and lower TFP. However, for countries with reasonably high levels of financial development, the conventional answer does not hold. Motivated by observations on cross-country data, I propose a new theory on the impact of entry costs on TFP. In my mechanism, two competing forces affect TFP when entry cost changes: A wealth-based selection force and a productivity-based selection force. This makes TFP a hump-shaped function of entry costs. Entry costs are not inherently bad for TFP if their target is to deter low productivity individuals from starting businesses. I develop an analytically tractable model of firm dynamics with entry barriers and financial frictions and derive the sufficient conditions for the impact of entry cost on TFP in both wealth- and productivity-based selection phases.

Firm Entry and Exit in Continuous Time   (download here)

In this paper, I develop and analyze a model of firms' entry and exit in a continuous-time setting. I build my analysis based on Hopenhayn (1992) firm dynamics framework and use the continuous-time structure to solve the model. Solving the model in continuous-time brings in many advantages, such as lower computational cost and the model's tractability. However, there are some challenges too. One of the major challenges is to have entry cost in the model, i.e., to obtain a Hamilton-Jacobi-Bellman equation that incorporates the entry cost. I use a form of exit cost as the future value of the entry cost to avoid this problem. To do so, I have to keep track of the firms' age distribution in addition to the distribution of the shocks, which makes my model richer than Hopenhayn's (1992). To solve for the joint stationary distribution of the firms, I introduce a simple process for aging and obtain the Kolmogorov forward equation using the age and shock processes. Another important contribution of this paper is to introduce a way to deal with the Kolmogorov equation in two states with discontinuity and combine them into one equation that governs the state of the economy. The results obtained in this paper are in line with those reported in Hopenhayn (1992). However, the methods, tools, and the way of approaching the model differs depending on whether I solve the model in discrete or continuous time. The tools and procedures developed in this paper can easily be extended to other optimal stopping time problems.