

SAEED SHAKER-AKHTEKHANE

CONTACT

Department of Economics
The Ohio State University
1945, N. High St., 410 Arps Hall
Columbus, OH 43210

Email: shaker.34@osu.edu
Website: sites.google.com/view/saeed-shaker
Phone: +1-252-412-7983

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
Computational Economics

RESEARCH PAPERS

Job Market Paper

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

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)

Relative Importance of Employment and Investment Frictions and Their Interactions (draft available upon request)

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

Languages

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

Professor Aubhik Khan

Department of Economics
The Ohio State University
410 Arps Hall, 1945 N. High St.
Columbus, OH 43210
khan.247@osu.edu

Professor Julia Thomas

Department of Economics
The Ohio State University
410 Arps Hall, 1945 N. High St.
Columbus, OH 43210
thomas.2108@osu.edu

Professor Kyle Dempsey

Department of Economics
The Ohio State University
410 Arps Hall, 1945 N. High St.
Columbus, OH 43210
dempsey.164@osu.edu

Professor Benjamin Moll

Department of Economics
London School of Economics and Political Science
32 Lincoln's Inn Fields, Houghton St.
London, UK
b.moll@lse.ac.uk

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 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. Consistent with empirical evidence, my model can generate a weak self-financing motive while allowing for a highly persistent individual productivity, a challenge for existing models of financial frictions.

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 risks. 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. Large TFP losses arise as there is amplification between the three sources of financial friction. Without default and heterogeneity in collateral and loan rates, my model would function similarly to a neo-classical model, and there would be a small impact of financial frictions with only a 7% loss in TFP.

Impact of Entry Costs on Aggregate Productivity: Financial Development Matters

([download](#))

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](#))

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.

Entry Barriers in a Two-Sector economy with Perfect and Imperfect Financial Markets ([download](#))

In this paper, I analyze the impact of entry barriers on a two-sector economy with perfect and imperfect financial markets. The literature suggests that higher barriers to entry would hurt the economy through occupational and factor misallocation. However, a separate analysis of economies with nearly perfect and imperfect financial markets shows that these results only hold for the economies with imperfect financial structures. In the economies with near-perfect financial markets, the entry barriers have almost no impact or may positively impact output or total factor productivity (TFP). This study shows that higher entry costs would hurt the productivity of the sector with high concentration, i.e., with large-scale firms, and would benefit the more competitive sector, i.e., with many small firms. As a result, the entry barriers might help or hurt economies depending on their sector/industry structure. To analyze the dynamics of entry barriers and their impact on TFP, I develop an entrepreneurship model in continuous time with two sectors in the presence of both financial and physical frictions. My analysis suggests that higher entry barriers would help the economies with a relatively high share of the small-scaled sector and vice versa.

Relative Importance of Employment and Investment Frictions and Their Interactions (draft available upon request)

In this paper, I develop a model of firm dynamics in a continuous-time setting to analyze the impact of factor adjustment costs on aggregate productivity. The model includes both employment and investment frictions. I have used general forms of adjustment costs for both factors, including fixed, quadratic, and partial irreversibility components. I analyze these frictions' impact, both separately and jointly on total factor productivity (TFP). My analysis suggests that there is a threshold for both capital and labor adjustment costs above which the TFP becomes insensitive to the changes in adjustment costs. Another important result is that, when we analyze the impact of capital adjustment costs on TFP, it suffices to have only investment friction in the model, and adding labor frictions seem to have almost no impact on the results. However, both frictions in the model are crucial when we analyze the impact of labor adjustment costs on TFP. This means that analyses done in the literature using only labor adjustment costs are likely to over/under-estimate these frictions' impact on TFP.