# Farzaneh Davarzani Ph.D., MBA

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#### About me

Experienced macroeconomist with a focus on time-series and data analysis, skilled in advanced statistical and econometric techniques. Known for critical thinking, providing strategic recommendations to inform decision-making processes.

# Experience

Sep 2023 - Senior Analyst, University of Toronto, Remote, Canada

Present Postdoctoral Researcher in Health Economics

- Demonstrated leadership skills in leading research projects and coordinating team efforts
- O Translate complex findings into clear and compelling reports, meeting rigorous standards of quality
- O Capable of conducting thorough policy analysis to evaluate the impact of various measures and provide informed recommendations
- Strong problem-solving abilities to tackle challenges encountered during research projects and derive innovative solutions
- Employed statistical a range of methods for data cleaning and analysis, informing economic policies
- O Utilized Delphi survey method for qualitative insights from industry professionals

## Aug 2022 - Senior Researcher in Macroeconomics, Carleton University, Remote, Canada

Present Postdoctoral researcher - Time Series Analyst

- Employed causal inference techniques on panel data to discern causal relationships in macroeco-
- Perform nuanced economic analyses with meticulous attention to detail, ensuring accuracy and adherence to methodologies
- O Implemented strategies to tackle cointegration, cross-sectional dependence, and heterogeneity to determine the optimal methodology
- Conducted qualitative analysis of micro data to discern trends in public health finance in Canada

#### April 2021 - Data Analyst in Labor Market, Statistics Canada, Remote, Canada

Sep 2021 O Analyzed job data according to National Occupational Classification codes for Census 2021

- Utilized statistical methods to ensure accurate classification of labor market information
- O Conducted data validation and quality assurance procedures to maintain data integrity
- Managed and maintained databases to ensure accessibility and usability of labor market information

# April 2021 - Advance Researcher and research assistant, University of Ottawa, Ottawa, Canada

- Sep 2021 O Analyzed data using macroeconomic methods to explore indicators in panel data
  - Conducted data analysis on the impact of commodity price data on domestic business cycles
  - Studied the impact of commodity price shocks on output gaps using advanced analytical techniques
  - Acquired, organized, and processed data from the World Development Indicator website

## Sep 2020 - Lecturer in Macroeconomics, University of Ottawa, Ottawa, Canada

- Apr 2021 O Covered time series analysis, business cycles, and essential quantitative techniques.
  - Provided instruction on complex macroeconomic theories and models.
  - Instructed students on using STATA, MATLAB, and Eviews software for analysis.
  - Provided guidance on applying quantitative methods to macroeconomic analysis.

## Jan 2019 - Advanced Income Tax Associate, H&R Block, Ottawa, Canada

- Present O Examined tax returns and financial records nationwide, including Quebec
  - Generated audit reports with strategic recommendations
  - O Conducted field audits for adherence to tax and business laws
  - O Provided tailored financial and tax advice based on financial statements

## Education

Sep 2015 - Ph.D. in Economics, University of Ottawa, Ottawa, Canada

April 2022 Specialization in Applied Macroeconomics

- Applied macroeconomics for causal inference
- Prediction, modeling, and data simulation
- Estimating and forecasting macroeconomic trends and indicators

Utilized advanced statistical and econometric techniques, including Monte Carlo simulation, factor models, and structural vector autoregressive models for analyzing global commodity price shocks and their impact on inflation. Also employed difference and system-generalized method-of-moments estimators to examine the relationship between income inequality and investment in resource-rich countries.

Sep 2009 - MBA in Finance, Shahrood University of Technology, Shahrood, Iran

Jul 2012 Top 1%, Specializations: Economics and Finance

Sep 2005 - B.A. in Industrial Management, Shahrood University of Technology, Shahrood, Iran

Jul 2009 Top 1%, Specializations: Business and Finance

## Academic Work

# Preventive Care Spending and Mortality, Working Paper

with Mehdi Ammi

 On the Long-Run Association Between Preventive Care Spending and Mortality: Evidence from OECD Countries, 1970-2020

This study examines the long-term relationship between preventive care spending and mortality rates across 37 OECD countries from 1970 to 2019. Using dynamic common correlated effects (DCCE) panel error correction modeling, it finds a modest long-run preventive care spending elasticity of -0.10, indicating reduced mortality. Higher preventive spending correlates with decreased infant mortality and fewer daily smokers, contributing to increased life expectancy.

#### Public Health Expenditure items, Working Paper

with Mehdi Ammi and Sara Allin

Qualitative Study to Categorize Public Health Expenditure Items in Canada
 This comprehensive study delves into the qualitative analysis of public health expenditures across various jurisdictions in Canada. Utilizing data from the Canadian Institute for Health Information (CIHI), we investigate the components of public health expenditures. Our methodology involves employing focus group discussions to explore differences in categorizing public health spending across different government levels and international contexts.

#### Commodity Prices and Inflation, Submitted

World Shocks, World Prices, and Domestic Inflation

This research investigates the impact of global commodity price shocks on domestic inflation. Using factor models and structural vector autoregressive models with data from 67 countries (1970-2014), this paper uncovers that world shocks significantly influence inflation fluctuations in the median country. Furthermore, this paper emphasizes the necessity of incorporating commodity price factors in assessing the effects of world shocks on domestic inflation, as single-world-price models tend to underestimate their role in domestic business cycles.

#### Income Inequality and Domestic Investment, Working Paper

• The Impact of Income Inequality on Investment in Resource-Rich Countries

This study explores the relationship between income inequality, natural-resource rents, and domestic investment in resource-rich countries. Employing difference and system-generalized method-of-moments estimators with data from 57 resource-rich countries (1982-2015), This paper finds that countries with higher income inequality allocate a relatively smaller proportion of natural-resource rents to domestic investment. The results hold robust across various income-inequality measures, estimation methods, and specifications, providing implications for resource-rich countries aiming for higher economic growth through effective resource utilization.

# **Commodity Price Shocks and Output Gap**

On Commodity Prices Matter for Estimating the Output Gap?

In this research, I investigate the significance of commodity price shocks in estimating the output gap. Utilizing the Beveridge and Nelson decomposition method and a VAR model with data from advanced and emerging economies (1980-2018), I find that foreign shocks play a substantial role in influencing the output gap compared to the output trend. Additionally, I emphasize the significant contribution of commodity price shocks to the foreign shocks' influence on the output trend and the importance of incorporating commodity price indices in analyzing the effects of world shocks on the output gap.