Cristian Espinosa

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Education

2018 - Present	**PhD(c) in Economics (expected 2025)** University College London (UCL)
2012	**M.A. in Economics** University of Chile
2010	**B.A. in Economics** University of Chile

Research Interests:

International Economics (Trade and Macroeconomics), Empirical Macroeconomics

References

Morten O. Ravn
Department of Economics
University College London
Email: m.ravn@ucl.ac.uk

Franck Portier
Department of Economics
University College London
Email: f.portier@ucl.ac.uk

Raffaella Giacomini
Department of Economics
University College London
Email: r.giacomini@ucl.ac.uk

José-Víctor Ríos-Rull
Department of Economics
University of Pennsylvania
Email: vr0j@upenn.edu

Employment

2013 - 2017	**Central Bank of Chile** Financial Policy Division, Financial Stability Subdivision Economic and Financial Analyst

Job Market Paper

From Protection to Retaliation: The Welfare Cost of Tariffs

Abstract: This paper explores the welfare costs of trade barriers, which depend on trade elasticities. State-of-the-art literature uses tariffs as instruments to structurally identify them. Studies, using Trump tariffs, in the US estimate modest elasticities, implying low welfare costs. In this paper, I build a two-country model of political economy to explain these results and introduce a novel identification strategy for estimating elasticities. The model features a selection mechanism for goods chosen for treatment, based on the government's objective function and the state of the economy. When raising revenue, the government imposes tariffs on sectors with low demand elasticity. In response, the other country retaliates by targeting goods with high demand elasticity to maximize economic harm on the trade partner. This provides a framework for two possible instruments: protectionist and retaliatory tariffs. As trade policy targets the extremes of the demand elasticity distribution, Trump's protectionism aligns with modest elasticity estimates of the lower bound. Using administrative data from Canadian imports, I employ the 2018 retaliatory tariffs against the US as an instrument to estimate the elasticities corresponding to the upper bound. I find the demand elasticity for imports ranges between 2.5 and 5.2, while the supply elasticity of exports is zero. This suggests that welfare costs could double, reaching up to $22 billion.

Working Papers

The Macroeconomic Effect of Modern Protectionism

Abstract: This paper estimates the dynamic effects of import tariffs on key macroeconomic aggregates in a small open economy. Due to the countercyclical profile of tariffs, simultaneity between tariffs and GDP induces attenuation bias in the calculation of impulse response functions. To address this issue, we develop a novel instrument based on retaliatory tariffs, constructed from a database of temporary trade barriers. Retaliatory tariff rates are constrained by the World Trade Organization (WTO) to match those imposed by trade partners. The identifying assumption is that tariffs imposed by trade partners are orthogonal to the own economic activity shocks. Retaliation responds to a foreign partner's defection rather than to domestic economic conditions, allowing the identification of an exogenous import tariff shock using an Proxy-SVAR model. Our key findings are that an increase in tariffs: (i) is inflationary (for consumer prices); (ii) has a negative and quite persistent impact on GDP; and (iii) worsens the trade balance on impact. The results are robust across various alternative specifications and the estimated effects exceed those obtained using standard timing restriction models.

Publications

The Carbon Tax as an Automatic Stabilizer in a Commodity-Producing Small Open Economy, with Pablo Gutierrez Cubillos and Bastián Castro Nofal

***Economic Analysis and Policy* (2025)**

Abstract: In this paper, we evaluate the role of carbon taxes as automatic stabilizers in small open economies (SOEs) that specialize in the export of a single commodity, particularly those highly dependent on energy inputs for production. Specifically, we examine the carbon tax's ability to reduce the volatility of the real exchange rate and energy prices. This analysis is conducted through the lens of a DSGE model that incorporates an externality affecting GDP, originating from the burning of fossil fuels for energy generation. We assume this externality drives climate change, and the government, aiming to internalize these damages, imposes a Pigouvian tax on the energy sector. Our model is calibrated for the Chilean economy, which is highly specialized in copper production. The results show that the tax: (i) reduces energy volatility by 14% and energy price volatility by 10%, and (ii) lowers the variance of the real exchange rate by 1.8%. These stabilizing effects are robust to different shock specifications and the choice of model used to represent household consumption.

Welfare Analysis of an Optimal Carbon Tax in Chile, with Jorge Fornero

***Economic Analysis Review* (2014)**

Abstract: We analyze a dynamic stochastic general equilibrium model which includes a negative externality that arises from fossil fuels burning. The carbon released to the atmosphere by electricity producers is the main driver of climate change. We adapt the optimal tax derived by Golosov et al. (2011) to a small open economy to force polluters to internalize their damages. The results show that the tax benefits outweigh their costs; yet welfare gains seem to be marginal under plausible parameters. We calculate the optimal carbon tax for Chile and the tax effectiveness achieved, which is around 10 percent. The results remain robust to variations in the utility function, changes in parameters that determine the externality and alternative degrees of commitment to reduce emissions.

Other Pre-Doc Publications

2017 — Espinosa, C., Fernandez, J, and Vasquez, F.
Firm's Stress Testing: An Application to the Chilean Non-Financial Corporate Sector (in Spanish)
Journal Economía Chilena (The Chilean Economy)

2015 — Espinosa, C., and Fornero, J.
Welfare Analysis of an Optimal Carbon Tax in Chile, in C. García (Ed.) (in Spanish)
Economía y Energía: La experiencia Chilena (Book chapter)

Espinosa, C., and Fernandez, J.,
Historical Comparison of Results in the Chilean Corporate Sector (in Spanish)
Journal Economía Chilena (The Chilean Economy)

Teaching Assistant Experience

2019 - Present — **University College London (UCL)**
MSc Time Series Econometrics, Profs. Raffaella Giacomini and Saleem Bahaj
BSc Econometrics for Macroeconomics and Finance, Prof. Dennis Kristensen
BSc Money and Banking, Prof. Silvia Dal Bianco

2010 - 2013 — **University of Chile**
MA Econometrics I, Prof. Valentina Paredes
BA Econometrics I, Prof. Andres Sagner

2011 - 2012 — **Diego Portales University**
MA Econometric Theory, Prof. Rodrigo Montero
BA Macroeconomics II, Profs. Ricardo Mayer and Rodrigo Montero

2010 — **Institute of Banking Studies Guillermo Subercaseaux**
BA Financial Econometrics, Prof. Andres Sagner

Seminars, Workshops and Conference Presentations

2024 — ENTER Seminar, University of Mannheim
MMF annual conference, Manchester
Workshop on dynamic macroeconomics, Vigo
ENTER Seminar, Stockholm School of Economics (SSE)
RES Easter School, Bristol University

2023 — AASLE Conference, Taiwan
Nordic Summer Symposium in Macroeconomics, Sweden
ENTER Jamboree, Mannheim University
Macroeconomic workshop, Surrey University

2022 — ENTER Jamboree, Universitat Autonoma Barcelona (UAB)

Short Courses and Summer Schools

2024	Research Easter School for the Royal Economic Society, University of Bristol International Economics and Trade Profs. Meredith Crowley and Isabelle Mejean
2022	Economics Summer School, University of East Anglia Bayesian Structural Vector Autoregressions Profs. Martin Bruns and Robin Braun
2019	Research Easter School for the Royal Economic Society, University of Essex New Monetarist Economics: Theory, Evidence and Policy Implications Prof. Randall Wright
2015	Microeconometrics Summer School, Barcelona GSE Dynamic and Non-Linear Panel Data Models Profs. Sergi Jiménez-Martín and J.M. Labeaga

Professional Memberships

2021 - Present	European Network for Training in Economic Research (ENTER) UCL ENTER Representative
	Economics: The Open-Access, Open-Assessment Journal Journal Reviewer (referee)
2019 - Present	Student member of the Royal Economic Society (RES)

Honors and Awards

2024	UCL NSAF Fellowship
2021	PhD in Economics Scholarship, by Department in Economics at UCL
2019	MRes in Economics passed with distinction
2011	M.A. in Economics Scholarship, by University of Chile
2010	B.A. in Economics and Professional Degree ranked among top 10%

Skills

Programming:	STATA, MATLAB, Dynare, Python LaTeX, Microsoft Office and Visual Basic
Languages:	Spanish (Native), English (Fluent)

Personal Information

Residence:	London, United Kingdom
Citizenship:	Chilean