

Fernando J. Brito-Gonzalez

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Citizenship: Chile · U.S. Permanent Resident

EDUCATION

Ph.D. Food and Resource Economics, University of Florida-Gainesville	Expected June 2026
M.Sc. Agricultural and Resource Economics, University of Maryland-College Park	Dec 2020
M.Sc. Applied Economics, University of Chile	May 2015
B.Sc. Industrial Engineering, University of Chile	May 2015

FIELDS OF INTEREST

Applied Econometrics (Spatial Econometrics, Causal Inference, Machine Learning), Agricultural and Resource Economics, Geospatial Analysis, Decision-Support Tools.

RESEARCH PAPERS

Job Market Paper

Brito-Gonzalez, F., Onel, G., Gars, J., & Mullally, C. (2025). “Artificial Intelligence (AI) and Agricultural Employment,” *American Journal of Agricultural Economics*, revise and resubmit (final draft in preparation).

Abstract. This paper estimates the causal impact of AI innovation on U.S. agricultural employment (2003–2023) using a county-level shift–share design with foreign-patent instruments. Aggregate AI exposure raises employment by 10.6% in crop production and 6.8% in animal production; the net effect (AI plus offsetting non-AI innovation) remains positive at roughly +1.3% in crops and +2.7% in livestock. Notably, effects differ by technology type: execution-oriented AI (automation) reduces employment, while cognition- and perception-oriented AI (decision-support and sensing) expand it. Significant geographic heterogeneity exists, with the strongest complementarities emerging in regions specialized in labor-intensive crops. These results indicate that AI serves to transform rather than displace agricultural labor.

Published Works

Onel, G., Brito-Gonzalez, F., Gars, J., & Mullally, C. (2025). “Sensing, Thinking, Doing: AI’s Growing Role on the Farm, and What It Means for Farm Work,” *Choices*, 40(3).

Work in Progress

“Spatial Analysis of Evolving Skill Demands in U.S. Specialty-Crop Farm Labor” (with Gulcan Onel, Jared Gars, Conner Mullally).

“Geographic Clusters of Crop Innovation: A Spatial Econometric Analysis of Spillovers.” Final project for the Spatial Econometrics course of Prof. Robert T. Walker (UF Geography).

“Automation and Guest Worker Dependence in U.S. Agriculture: Evidence from Robotic Patents and H-2A Employment” (with Gulcan Onel, Jared Gars, Conner Mullally).

“Implications of Nonclassical Measurement Error in NAWS for Estimating Substitution between Authorized and Unauthorized Farmworkers” (with Gulcan Onel).

RESEARCH EXPERIENCE

University of Florida, Dept. of Food and Resource Economics NSF-funded project on Human-Robot collaboration.	04/2021–06/2025
Inter-American Development Bank, Southern Cone Office Study on the Sustainable Development Goals and policy spatial spillovers.	06/2023–07/2023
University of Maryland, Dept. of Ag. and Res. Economics Study on the trade in bulbs, seeds, and plants.	01/2020–05/2020
Inter-American Development Bank, Southern Cone Office Macroeconomic biennial reports and monthly labor and policy bulletins. Study on government loans to traditionally unbanked SMEs. Stakeholder engagement workshop on <i>Escenarios Hídricos 2030–2050</i> .	04/2016–07/2018
Rand Corporation Questionnaire design and cost/power calculations for a large-scale panel survey.	06/2015–05/2016
University of Chile, <i>Programa de Economía Ambiental</i> Estimation of elasticity of substitution by power source.	12/2011–04/2012

TEACHING EXPERIENCE

Instructor

Mathematics for Economics (Graduate level), UF	Summer B 2023
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Teaching Assistant

Applied Machine Learning (Graduate level) with Prof. Gulcan Onel, UF	Spring 2026
Optimization for Economics (Graduate level) with Prof. Lars Olsen, UMD	Fall 2019
World Hunger, Population, and Food Supplies with Prof. Kartik Mishra, UMD	Spring 2019
Land Economics with Prof. David Newborn, UMD	Fall 2018
Environmental Economics (Graduate level), UCH	Spring 2017
Empirical Methods for Economics and Finance (Graduate level), UCH	Spring 2014
Microeconomic Theory, UCH	Spring 2014

Mentoring

Applied Machine Learning (UF)	Spring 2026
Empirical Methods for Economics and Finance (UCH)	Spring 2014

PROFESSIONAL ACTIVITIES

Presentations in Conferences

2026 AAEA Annual Meetings, Kansas City, MO	Aug 2026 (forthcoming)
WERA-72 Annual Meeting, Utah	Jun 2026 (forthcoming)
IAAE 2026 Annual Conference, Nova SBE, Lisbon, Portugal	Jun 2026 (submitted)
FRE Student Research Workshop, Gainesville, FL	Jan 2026
2025 IATRC Summer Symposium, Seville, Spain	Jun 2025
10th Annual Agricultural Policy Outlook, Citra, FL	Jun 2025
8th SAEA Annual Meetings, Atlanta, GA	Jan 2024
2023 Graduate Student Research Day, Gainesville, FL	Jun 2023
2022 AAEA Annual Meetings, Anaheim, CA	Aug 2022

Referee Service

Applied Economic Perspectives and Policy (Editor: Conner Mullally)	Jan 2026
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APPLIED PROJECTS

AAEA Data Visualization Challenge, AAEA Annual Meetings R Shiny spatial visualization of land use data.	06/2026–07/2026
University of Florida, Dept. of Food and Resource Economics R Shiny app simulating NPV farm profits under H-2A and bioeconomic scenarios.	06/2025–07/2025
AAEA Data Visualization Challenge, AAEA Annual Meetings R Shiny spatial visualization of food security data.	06/2023–07/2023
Inter-American Development Bank, Southern Cone Office R Shiny dashboard of cross-country development indicators.	06/2021–07/2021
University of Chile, Department of Industrial Engineering Python's oTree online pollution-permit market for classroom experiments.	12/2017–03/2018
Pedro de Valdivia High School Class-schedule optimizer (PHP/SQL, simplex algorithm).	12/2010–03/2011

COMPUTER SKILLS AND LANGUAGES

Statistics and Machine Learning
R's tidyverse, Python's TensorFlow, PyTorch and pandas, SQL, Stata, MATLAB.

Spatial and Geospatial Analysis
R's sf, spdep, spatialreg, splm, tmap, and terra.

Decision-Support Tools
R's shiny, Python's Dash and oTree, HTML, PHP, CSS, JavaScript.

Spoken Languages
English (Fluent), Spanish (Native).

FELLOWSHIPS, HONORS, AND AWARDS

FRE Departmental Award for Academic Support	University of Florida (2026)
PhD Scholarship	Ministry of Science of Chile (2018)
Research Fellowship	Inter-American Development Bank (2016)
Graduated Cum Laude, M.Sc. degree	University of Chile (2015)
Graduated Summa Cum Laude, B.Sc. degree	University of Chile (2015)
Winter Internship	Inter-American Development Bank (2014)

LEADERSHIP ACTIVITIES

FRE Centennial Gala	
Graduate Student Ambassador	University of Florida (2026)
UF Graduate Assistants United Departmental Steward	University of Florida (2026)
FRE Graduate Student Organization Co-coordinator and event planner	University of Florida (2024)
UCH-Public Sector and NGO Job Fair Co-coordinator and web developer	University of Chile (2012)

REFERENCES

Gulcan Onel
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Conner Mullally
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