

Fernando J. Brito-Gonzalez

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EDUCATION

Ph.D. Food and Resource Economics, University of Florida-Gainesville	Expected May 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 (specifically Micro-econometrics, Applied Machine Learning, and Causal Inference), Market Implications of Artificial Intelligence Innovation, Labor Economics, Agricultural and Rural Policy.

JOB MARKET PAPER

Brito-Gonzalez, F., Onel, G., Gars, J., & Mullaly, C. (2025). Artificial Intelligence (AI) and Agricultural Employment, *American Journal of Agricultural Economics*, under review.

Examines the causal impact of AI innovation on U.S. agricultural employment using 2003–2023 patent data and a shift–share design with instrumental variables. Overall AI exposure increases employment by 10.6% in crop production and 6.8% in animal production, but effects vary by technology type: execution-oriented AI (automation) reduces employment, while cognition- and perception-oriented AI (decision-support and sensing) expand it. Findings suggest that AI mostly transforms rather than replaces farm labor through technological complementarities and task reallocation.

OTHER PUBLICATIONS

Published

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

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

Evolving Skill Demands in U.S. Farm Labor: Text Analysis of H-2A Job Orders (with Gulcan Onel, Jared Gars, Conner Mullaly).

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 of bulbs, seeds, and plants.	01/2020–05/2020
Inter-American Development Bank, Southern Cone Office Macroeconomic bi-annual reports and monthly labor and policy bulletins. Study on Government loans to traditionally unbanked SMEs. Stakeholder engagement workshop on Water Scenarios 2050. Stakeholder engagement workshop on Constitutional Reform in Chile.	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> Study on power generation, distribution & retail markets.	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, & 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

PROFESSIONAL ACTIVITIES

Presentations and Conferences

FRE Student Research Workshop, Gainesville, FL	Jan 2026
10th Annual Agricultural Policy Outlook, Citra, FL	Jun 2025
2025 IATRC Summer Symposium, Seville, Spain	Jul 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

SOFTWARE PROJECTS

University of Florida, Dept. of Food and Resource Economics	06/2025–07/2025
Desktop visualization app for simulated NPV farm profits across H-2A policy and bioeconomic scenarios.	
Inter-American Development Bank, Southern Cone Office	06/2021–07/2021
Interactive dashboard to visualize the co-evolution of countries' development indicators.	
University of Chile, Department of Industrial Engineering	12/2017–03/2018
Online virtual market of pollution permits for classroom experiments and experiential learning.	
“Pedro de Valdivia” High School	12/2010–03/2011
Automatic time-schedule solver for my former high-school.	

PROGRAMMING SKILLS AND LANGUAGES

Statistics and Machine Learning
R's tidyverse, R', Python's TensorFlow, Pytorch and Pandas, SQL, Stata, MATLAB.

Full stack development
R's Shiny, Python's Dash and Otree, HTML, PHP, CSS, JavaScript.

Business Analytics
Arena Simulation Software, RapidMiner, Qualtrics, MS Visual Basic, Java.

Languages
English (Fluent), Spanish (Native).

ACKNOWLEDGMENTS

PhD Scholarship	Ministry of Science of Chile–Santiago, Chile (2018)
Research Fellowship	Inter-American Development Bank–Washington, D.C. (2016)
Graduated <i>Cum Laude</i> for M.Sc. and <i>Summa Cum Laude</i> for B.Sc. degrees	University of Chile–Santiago, Chile (2015)
Winter Internship	Inter-American Development Bank–Washington, D.C. (2014)

LEADERSHIP ACTIVITIES

UF-Graduate Assistants United Departmental Steward	University of Florida–Gainesville, FL (Spring 2026)
FRE-Graduate Student Organization Co-coordinator and event planner	University of Florida–Gainesville, FL (Fall 2024)
UCH-Public Sector & NGO Job Fair Co-coordinator and web developer	University of Chile–Santiago, Chile (Fall 2012)

REFERENCES

Gulcan Onel
Dissertation Committee Co-Chair
Associate Professor
Dept. of Food and Resource Economics
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