

Roberto Cárdenas Retamal

Worcester, MA, USA

robertocardenasr@ufl.edu | +1 352-328-6840 | <https://robcareta.github.io/>

EDUCATION

2022 – Aug 2026 **Ph.D. in Fisheries and Aquatic Sciences**, University of Florida

Dissertation: “Incentives and Attributes in Seafood Markets”

Co-Chairs: Dr. Frank Asche, Dr. Di Fang

2016 – 2018 **MSc in Natural and Resources Economics**, Universidad de Concepción

Advisor: Dr. Jorge Dresdner

2011 – 2015 **BS in Economics**, Universidad de Concepción

FIELDS

Food Policy and Nutrition Economics, Applied Econometrics (Causal Inference, Machine Learning), Environmental and Natural Resource Economics

JOB MARKET PAPER

“Seafood Purchasing in Response to Type 2 Diabetes Diagnosis,” with Di Fang and Frank Asche
Using NielsenIQ Consumer Panel and Ailment Survey data, this paper identifies newly diagnosed Type 2 diabetic households with a random forest classifier and estimates a probability-weighted event-study regression showing that diagnosis triggers a persistent increase in seafood purchases (5.8% on impact, 14.6% in the following months), concentrated among larger, older, and lower- to middle-income households. *Status: Under review at Food Policy.*

WORKING PAPERS

1. “Seafood Purchasing in Response to Type 2 Diabetes Diagnosis” with Di Fang and Frank Asche
Status: Under review at Food Policy
2. “Price premiums for the MSC-ecolabel in the U.S.: A hedonic analysis of haddock in the U.S. market” with Frank Asche, Di Fang, and Adams Ceballos
Status: Under review at the Journal of the Agricultural and Applied Economics Association
3. “Market Penetration and Economic Potential of Crawfish, Oysters, and Red Drum in Southeastern U.S. Markets” with Quinn LaFontaine, Frank Asche, Andrew Ropicki, and Bixuan Yang
Status: Submitted to Aquaculture

PUBLICATIONS

1. Liu, J., Li, T., Patton, M., **Cardenas-Retamal, R.**, Roy, D. (2026). “More than just a break: performance after walking in green and urban spaces.” *Applied Economics*.
2. Iversen, A., Asche, F., Nyrud, T., Robertsen, R., Bendiksen, B.I., Steinsbø, S. and **Cardenas-Retamal, R.** (2025). “The growing importance of aquaculture: The case of Norwegian salmon.” *Reviews in Aquaculture*, 17(4): e70088.

3. Ceballos-Concha, A., Asche, F., **Cardenas-Retamal, R.** (2025). “Salmon aquaculture in Chile: Production growth and socio-economic impacts.” *Reviews in Aquaculture*, 17(1): e12993.
4. Salazar, C., Jaime, M., **Cárdenas, R.**, Hernández, F. (2025). “Risk perception and production risk in seaweed aquaculture.” *Aquaculture Economics & Management*, 1–29.
5. Salazar, C., Jaime, M., **Cardenas Retamal, R.**, Baquedano, M. (2023). “Women engagement, psychological traits, and gender gaps in the small-scale seaweed aquaculture in Chile.” *Reviews in Aquaculture*, 15(4): 1540–1553.
6. Salazar, C., **Cardenas Retamal, R.**, Jaime, M. (2023). “Environmental efficiency in the salmon industry—an exploratory analysis around the 2007 ISA virus outbreak and subsequent regulations in Chile.” *Environment, Development and Sustainability*, 25: 8107–8135.
7. **Cardenas Retamal, R.**, Barrientos, M., Vasquez-Lavin, F., Ponce, R. (2023). “Intrahousehold bargaining power and time allocation for multiple activities.” *Latin American Economic Review*, 32: 1–22.
8. **Cardenas Retamal, R.**, Dresdner-Cid, J., Ceballos-Concha, A. (2021). “Impact assessment of salmon farming on income distribution in remote coastal areas: The Chilean case.” *Food Policy*, 101: 102078.

EXTENSION PUBLICATIONS

1. “What New and Repositioned Fruits Teach Us: Lessons for the U.S. Muscadine Market,” with Ming Ge, Di Fang, Melinda Knuth, and Lisa House. *Status: In preparation; target outlet: Choices*.
2. Ceballos, A., Cardenas Retamal, R., Dresdner, J. (2023). “Evaluación del impacto socioeconómico de la industria del salmón. Pobreza y distribución del ingreso en zonas costeras rurales en Los Lagos, Chile.” [“Socioeconomic impact assessment of the salmon industry: Poverty and income distribution in rural coastal areas in Los Lagos, Chile.”] (in Spanish). *Interdisciplinary Center for Aquaculture Research (INCAR)*, Policy Brief N° 13.

WORK IN PROGRESS

- “Pregnancy and the Seafood Demand Response: Evidence from Household Scanner Data,” with Frank Asche, Di Fang, Jordan Moor, and Thomas Anderson
- “The Value of Nutritional Attributes on Seafood,” with Frank Asche, Di Fang, and Jordan Moor

RESEARCH EXPERIENCE

Graduate Research Assistant — Fisheries and Aquatic Sciences, University of Florida 2022 – Present

- Designed and executed three dissertation studies using NielsenIQ household scanner data to test how market information, health diagnoses, and life-stage transitions change food purchasing behavior.
- Job market paper: identified newly diagnosed Type 2 diabetic households with a random forest classifier and estimated a probability-weighted event-study regression on NielsenIQ Consumer Panel data linked to an annual health survey; found diagnosis raises seafood purchases by about 5.8% on impact and 14.6% in the following months, concentrated among larger, older, and lower- to middle-income households, with the largest gains among previously low-consuming households and direct

relevance to the 2024 addition of canned seafood to the WIC food package (with Frank Asche and Di Fang; under review, *Food Policy*).

- Used ten years of NielsenIQ scanner data (2010–2020) and a difference-in-differences design to show that pregnancy triggers a persistent, dynamically deepening reduction in seafood purchases, reaching 4.7 percentage points two years post-conception across both high- and low-mercury species, contrary to FDA advisory guidance; extended the analysis with a causal forest identifying household size, income, and pre-pregnancy purchase intensity, rather than age, as the substantive drivers of heterogeneity.
- Built a hedonic pricing model estimating the first U.S. market price premium for Marine Stewardship Council (MSC) sustainability-certified haddock (manuscript under review, *Journal of the Agricultural and Applied Economics Association*).
- Investigating consumer valuation of seafood’s nutritional attributes, including omega-3 (DHA/EPA) content, with Frank Asche, Di Fang, and Jordan Moor (in progress).
- Contributed statistical and analytic sections to a successful \$525,404 USDA NIFA proposal, “Understanding Dietary Change and Food Purchase for Better Policy Design” (Grant No. 2026-67023-45958), led by Dr. Di Fang, participating directly in the writing of the proposal that was ultimately funded.

Research Assistant — Africa’s Seafood Trade and Nutrition Project, University of Florida 2025 – 2026

- Built and analyzed a 25-year bilateral trade panel (3.15M records, 54 countries, 1,759 species) linked to nutrient composition data to quantify cross-border flows of protein, DHA/EPA, iron, zinc, and vitamin B12.
- Estimated structural gravity models with high-dimensional fixed effects and Gini/HHI/Theil inequality decompositions; built a reproducible R analysis pipeline harmonizing product- and country-level nutrient attribute data.

University of Florida (USDA NIFA Specialty Crop Research Initiative) 2025

Research Assistant: “Through the Grapevine: Developing Vitis x Muscadinia Wide Hybrids for Enhanced Disease Resistance and Quality.”

Interdisciplinary Center for Aquaculture Research (INCAR), Universidad de Concepción 2019 – 2022

- Worked as a field survey collector, conducting household and community-level surveys as part of primary data collection.
- Conducted applied econometric analysis on aquaculture, household labor allocation, and regional income distribution, contributing to peer-reviewed publications and policy briefs.
- Co-authored a policy brief synthesizing peer-reviewed evidence for a live, multi-stakeholder policy debate, translating technical findings for policymakers, industry, civil society, and media.

Environment for Development (EfD) Initiative – Chile 2022

Research Assistant.

Economic Commission for Latin America and the Caribbean (ECLAC) 2020

Research Assistant.

Center of Applied Ecology and Sustainability (CAPES) 2020

Research Assistant.

TEACHING EXPERIENCE

Spring 2025	Guest Lecturer , International Agribusiness Marketing (AEB4343), University of Florida
Spring 2023	Teaching Assistant , Agricultural Macroeconomics (AEB 3281), University of Florida
Fall 2022	Teaching Assistant , Agricultural and Natural Resource Ethics (AEB 4126), University of Florida
2022	Lecturer , Statistics for Management; Economics, Sustainability and Entrepreneurship, Universidad Santo Tomás
2018 – 2020	Lecturer , Econometrics, Microeconomics, Universidad del Bío-Bío
2020 – 2022	Lecturer , Development Economics, Environmental Economics, Universidad de Concepción
2019 – 2021	Lecturer , Introduction to Economics, Microeconomics, Econometrics, Natural Resources and Environment Economics, Macroeconomics, Universidad Católica de la Santísima Concepción

HONORS, AWARDS, AND FELLOWSHIPS

2025	Top 10 Most-Cited Articles Published by <i>Reviews in Aquaculture</i> in 2024, for “Salmon aquaculture in Chile: Production growth and socio-economic impacts” (with Adams Ceballos and Frank Asche)
2025	Travel Scholarship – Summer School in Environmental and Energy Economics, University of California, Berkeley
2022	Global Food System Institute Fellowship, University of Florida
2022	Grinter Fellowship Award, University of Florida
2022	Latin American and Caribbean (LAC) Scholarship, University of Florida

GRANTS AND RESEARCH FUNDING

2026 – 2029	Proposal Contributor, “Understanding Dietary Change and Food Purchase for Better Policy Design,” USDA NIFA (Grant No. 2026-67023-45958, \$525,404; PI: Di Fang), University of Florida
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CONFERENCE AND SEMINAR PRESENTATIONS

* *presenting author*

July 2026	Cardenas Retamal, R.*; Asche, F.; Fang, D. “The value of nutritional attributes in seafood.” AAEA Annual Meeting. Kansas City, MO. (<i>Accepted</i>)
July 2026	Cardenas Retamal, R.*; Asche, F.; Fang, D. “Labor outcomes effects of mental health.” AAEA Annual Meeting. Kansas City, MO. (<i>Accepted</i>)
Feb. 2026	Cardenas Retamal, R.* “The value of nutritional attributes in seafood.” Fisheries and Aquatic Sciences Graduate Student Symposium. Gainesville, FL.

Aug. 2025	Cardenas Retamal, R.* “Demand for environmental attributes in the U.S. seafood market.” Summer School in Environmental and Energy Economics, UC Berkeley, CA.
Mar. 2025	Cardenas Retamal, R.*; Asche, F.; Fang, D. “Sustainable seafood consumption: A hedonic analysis of ecolabeling in the U.S. market.” NAAFE. La Jolla, CA.
Feb. 2025	Cardenas Retamal, R.*; Fang, D.; Asche, F. “Disease diagnosis and seafood purchases in the U.S.” Fisheries and Aquatic Sciences Graduate Student Symposium. Gainesville, FL.
Nov. 2024	Cardenas Retamal, R.*; Fang, D.; Asche, F. “Seafood purchase, diet-related disease, and WIC participation.” Southern Economic Association (SEA). Washington D.C.
2024	Ceballos, A.; Asche, F.; Cardenas, R.* “Salmon aquaculture in Chile: Production growth and socio-economic impact.” Aqua2024, World Aquaculture Society. Copenhagen, Denmark.
2024	Cardenas Retamal, R.*; Fang, D.; Asche, F. “Seafood purchase, diet-related disease, and WIC participation.” AAEA Annual Meeting. New Orleans, LA.
2023	Ceballos, A.; Asche, F.; Cardenas, R.* “The socioeconomic impact of salmon aquaculture in Chile.” Fisheries and Aquatic Sciences Graduate Student Symposium, Poster Session. Gainesville, FL.
2023	Ceballos, A.; Asche, F.; Cardenas, R.* “The socioeconomic impact of salmon aquaculture in Chile.” Aquaculture America, World Aquaculture Society. New Orleans, LA.
2022	Cardenas, R.*; Ceballos, A.; Asche, F. “The socioeconomic impact of salmon aquaculture in Chile.” VIII Annual Meeting, Environment for Development Initiative – Chile.
2022	Cardenas, R.*; Orellana, F.* “A new economy for a new constitution.” Commission on the Environment, Rights of Nature, Natural Commons and Economic Model, Constitutional Convention, Chile.
2021	Cardenas Retamal, R.*; Barrientos, M.; Vasquez-Lavin, F.; Ponce, R. “Intrahousehold bargaining power and time allocation for multiple activities.” XI Annual Meeting of the Chilean Society of Regional Studies (SOCHER).
2021	Salazar, C.; Cardenas Retamal, R.*; Jaime, M. “Environmental efficiency in the salmon industry: An exploratory analysis around the ISA virus and subsequent regulations in Chile.” VII Annual Meeting, Environment for Development Initiative – Chile.

PROFESSIONAL SERVICE

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- Referee: *Environment, Development and Sustainability, Frontiers in Human Dynamics, Agricultural and Resources Economics Review, Aquaculture Economics & Management, and Aquaculture International*
 - Member: Agricultural & Applied Economics Association (AAEA), Association of Environmental and Resource Economists (AERE), European Aquaculture Society – World Aquaculture Society, North American Association of Fisheries Economists (NAAFE)

- Treasurer, Graduate Student Organization (2024–2025)
- Volunteer, Future of Food Forum 2024, University of Florida

COMPUTATIONAL SKILLS

Statistical & Programming: R, Stata, Python, SQL, QGIS, LaTeX

Methods: Causal inference (difference-in-differences, event-study design, causal forests), hedonic price and demand estimation, discrete choice modeling, nutrient/food attribute data harmonization, study design, assessment of bias and confounding

AI & Reproducibility: AI-assisted data harmonization and coding (Claude Code), reproducible R/DuckDB pipelines, version-controlled workflows, data visualization

LANGUAGES

Spanish (native), English (fluent)

REFERENCES

Prof. Frank Asche

School of Forest, Fisheries, and Geomatics Sciences

University of Florida

Gainesville, FL

frank.asche@ufl.edu

+1 (352) 222-8481

Prof. Di Fang

Food and Resource Economics Department

University of Florida

Gainesville, FL

difang@ufl.edu

+1 (480) 252-5931

Prof. Kotryna Klizentyte

School of Forest, Fisheries, and Geomatics Sciences

University of Florida

Gainesville, FL

kklizentyte@ufl.edu

+1 (561) 319-3873

Prof. Thomas M. Anderson

Food and Resource Economics Department

University of Florida

Gainesville, FL

thomas.anderson@ufl.edu

+1 (352) 392-3261