

Robert Baluja

Department of Economics, University of Arizona

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RESEARCH FIELDS

Environmental Economics, Labor Economics, Industrial Organization

EDUCATION

University of Arizona

Ph.D. (M.A. en route) - Economics

Tucson, AZ

Expected 2025

University of California, San Diego

B.S. - Mathematics & Economics; Summa Cum Laude

La Jolla, CA

2020

WORKING PAPERS

Migration in a Warming World: The Dynamics of Migration within Mexico

Climate change will lead to large changes in global weather patterns and extreme events. The damages from such changes will be spatially heterogeneous, implying that migration can be a valuable form of adaptation. Its value and responsiveness to different policy levers are open empirical questions. To provide answers, I specify and estimate a dynamic life-cycle model of migration with a spatially and temporally heterogeneous climate. Estimation of the model primitives follows a nested full-solution pseudo-maximum likelihood routine. I estimate a strong home-bias preference; individuals require an annual wage premium of roughly 50% to be indifferent between living somewhere other than their location of birth and remaining in this location. Moreover, I estimate a high cost of migration; however, even with this high cost, migration is a valuable form of adaptation to climate change. Under a business-as-usual scenario, I find that migration reduces climate damages in Mexico by 29%, with large heterogeneity across space. I further find that migration rates are highly responsive to policy-induced reductions in their costs; a permanent 1% such decrease leads to an increase in migration rates of around 5.4%. I find that a one-time subsidy of \$200, to be used at any point in the life-cycle, generates \$1.6 billion in welfare gains, with much of the value coming from the option value of never-movers. This highlights the importance of considering dynamic option values when designing policy to aid costly adaptation.

PFAS in Drinking Water Wells Cause Preterm and Low-Weight Births

with Wesley Howden, Bo Guo, Ashley Langer, and Derek Lemoine

There is evidence of widespread human exposure to per- and polyfluoroalkyl substances (PFAS) but limited evidence of human health impacts. Using data on New Hampshire births from 2010–2019, we show that receiving water that had flowed beneath a PFAS-contaminated site increases first-year infant mortality by 161% [95% CI: 70–251%], the chance of a birth before 28 weeks of gestational age by 120% [95% CI: 30–210%], and the chance of birthweight below 1,000 g by 152% [95% CI: 48–257%]. Extrapolating to the contiguous U.S., PFAS contamination imposes annual social costs of approximately \$8 billion. These health costs are substantially larger than the cost of removing PFAS from the public water supply.

PRESENTATIONS

2024: AERE Summer Conference, University of Arizona Econometrics Lunch

2023: AERE@OSWEET, AERE@WEAI, AZ ENREE Workshop, Columbia University IO Colloquium, Sacramento Economics Roundtable, 2nd Summer School on the Economics of Migration

2022: CU Environmental & Resource Economics Workshop

2019: UCSD Faculty Mentor Program Symposium, UCSD Undergraduate Research Conference

VISITS

2023: PER-IO Graduate Student Visitor, Department of Economics, Columbia University

GRANTS AND AWARDS

2024: Dror Research Excellence Award, AERE Travel Scholarship, GPSC Travel Grant

2023: AEA Mentoring Program Travel Grant

2022: Steve Manos Prize for Best Second-Year Paper, GPSC Travel Grant

2020: Phi Beta Kappa

RESEARCH EXPERIENCE

Research Assistant

Prof. Ashley Langer

University of Arizona

Spring 2022 - Present

Research Assistant

Prof. Derek Lemoine

University of Arizona

Spring 2022 - Fall 2023

Research Assistant

Prof. Philip Roeder

University of California, San Diego

Spring 2019

TEACHING

Instructor of Record

Macroeconomic and Global Institutions and Policy - Summer 2024 (Online)

Basic Economic Issues - Summer 2023 (In-Person)

Teaching Assistant

Environmental Economics - Spring 2024

Economics of Sports - Spring 2023

Mathematical Economics (PhD) - Fall 2021, Fall 2022

Math Camp (PhD) - Summer 2022

Economics of Strategy - Fall 2020, Spring 2021

Climate Science & Economics: How Should Policy Control Warming? - Fall 2021

Basic Economic Issues - Fall 2020

SKILLS SUMMARY

Programming Languages: Julia, Python, R

(Non-Programming) Languages: English (Native), Spanish (Basic)