Leonel Borja Plaza

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Education

Cornell University — Ithaca, NY
Ph.D. Applied Economics and Management — August 2024 (Expected)

Northeastern University — Boston, MA
Masters in Economics — December 2017

Universidad San Francisco de Quito — Quito, Ecuador
Economista — June 2014
Magna Cum Laude

Research interests

Labor Economics, Development Economics, Applied Econometrics

Honors and scholarships

Cornell University Fellowship	Fall 2018, Spring 2019, Fall 2023, Spring 2024
Dean's Scholarship (Northeastern University)	2016-2017
Fulbright Scholarship (for Master Studies in the US)	2019
Adam Smith Scholarship (Universidad San Francisco de Quito)	2009 - 2014
2nd Place *Colegio de Administración para el Desarrollo Honors Award* (Universidad San Francisco de Quito)	2014

Working papers

Essentially Heterogeneous: The Consequences of Teen Childbearing on Ecuadorian Mothers and Children (Job Market Paper)

Abstract: Does teen childbearing cause low socioeconomic status that persists intergenerationally? I estimate marginal treatment effects of teen childbearing on schooling and labor outcomes for Ecuadorian mothers and schooling and health outcomes for their firstborn children. Findings suggest that women with unobservable characteristics that make them less likely to become teen mothers are less likely to participate in the labor force, have fewer years of schooling, and are less likely to finish high school if they become teen mothers. Women with values of unobservables that make them more likely to become teen mothers do not have their schooling attainment negatively impacted and increase their labor force participation. I do not find evidence of effects on firstborn children. These findings help reconcile seemingly conflicting evidence from past studies and imply that there is potential to improve women's outcomes by reducing teen childbearing rates when opportunity costs are sufficiently high. However, they counter the belief that teen childbearing has been a significant source of intergenerational transmission of low socioeconomic status.

Early Life Nutritional Improvements and Intergenerational Impacts on Education: Evidence from the INCAP longitudinal Study

with Jere Behrman, John Maluccio, Reynaldo Martorell, Manuel Ramírez-Zea, Aryeh Stein and John Hoddinott

Abstract: Whether any policy-induced benefits on human capital endure over the long term in resource-constrained environments is a concern because human capital may require sustained investment not to fade away. However, there is evidence that improvements in early-life nutrition increase schooling attainment and income in adulthood. Can these impacts also benefit the next generation? In this paper, we study the intergenerational effects on children's education of having a parent receive protein supplementation in early childhood in a low-income, rural setting. Using a difference-in-difference framework, we show that children of early-treated male but not female participants of the INCAP longitudinal study —a nutritional intervention that occurred in Eastern Guatemala in the 1970s— have higher enrollment rates and schooling attainment than children of late- or non-treated fathers. We also find positive effects on boys' non-verbal cognitive ability, but these estimates are imprecise. We find no impact on vocabulary tests.

Work in Progress

Talent (Miss)Allocation and the Cost of Inequality of Opportunity

Abstract: The extent of malnutrition and access to pre-primary education rates worldwide suggest that many children do not receive optimal human capital investments at critical periods in their early life, irreversibly limiting their ability to realize their full potential by no fault of their own. If the optimal allocation of talent occurs when the individuals with the highest human capital match with the most productive jobs, barriers to early-life human capital formation represent a source of inequality of opportunity that produces an inefficient allocation of talent across occupations. Through counterfactual analysis, this paper quantifies the aggregate implications that stem from talent reallocation across occupations when barriers to human capital formation in early life are reduced.

The Effects of Compulsory Schooling on the Marriage Market: Evidence from Ecuador

Abstract: In 1977, Ecuador extended compulsory schooling from 6 to 9 years. Using a regression discontinuity design on recent household survey data, I find that the reform did not affect women's educational attainment, while it led to an average increase of 0.8 years of schooling for men. These heterogeneous effects had implications in the marriage market. Men married younger, more educated, and taller women. Women, on the other hand, were more likely to remain single, while those who got married did so to older, less educated, but also taller men. For couples that had children, where women should have benefited from the reform, the educational attainment gap between husbands and wives was significantly reduced.

Presentations	European Association of Labour Economists Conference, Norwegian School of Economics, Norway, September 2024 (upcoming)
	Association Française des Économistes de la Population, Campus Condorcet, May 2024
	Center for the Economics of Human Development, University of Chicago, March 2024
	Development Economics Seminar 2024, Cornell University, November 2023
	Development Economics Graduate Seminar, Cornell University, October 2023
	Pacific Conference for Dev. Econ, University of Washington, March 2023

Research experience

Graduate Research Assistant for the AEA Data Editor   June 2021- July 2022

- Analyzed and verified over 50 replication packages to ensure accuracy and reproducibility of published research in AEA journals, enhancing publication standards.
- Enhanced code and data integrity by debugging and executing code across Python, Stata, R, Fortran, Matlab, and Julia, managing large-scale datasets using cloud-based platforms.
- Developed and delivered custom tutorials for undergraduate students, significantly improving their proficiency in Stata, command-line operations, and report writing using VScode and Markdown.
- Automated data collection by writing advanced R scripts to scrape over 300 articles, streamlining the annual Data Editor's report process.

Research assistant, "Reducing the Cost of Remoteness: Community-Based Health Interventions and Fertility Choices"
PIs: Catalina Herrera Almanza   October 2016 – December 2017
María Rosales Rueda
Link to published article here.

- Found and mapped the nearest health facilities for 16,000 households in Madagascar using R, STATA, and GIS, providing a measure of access to healthcare services.
- Computed a comprehensive asset index using Principal Components Analysis to socioeconomically classify households based on survey data.
- Performed regression analysis on cross sectional and panel data for causal inference.
- Cleaned and prepared household survey data (Madagascar's ENSOMD and DHS) for analysis on STATA. Created tables with summary statistics and calculated key indicators.

Teaching experience

Teaching assistant, Charles H. Dyson School of Applied Economics and Management

Impact Finance	Spring 2024
Student mentoring, design of course material, grading.	
Corporate Finance	Fall 2023
Student mentoring, grading.	
Intro to Development Economics	
Guest lectures (growth, gains from trade), student mentoring, grading.	Summer 2023
Weekly discussion sections, grading.	Fall 2020
International Trade and Finance	
Student mentoring, grading.	Spring 2021
Student mentoring, grading, transition from in-person to online instruction.	Sring 2020
Managerial Economics	
Student mentoring, grading.	Fall 2020

Professional experience	**Research Analyst**, Research and Data Division, Ecuadorian Ministry of Social and Economic Inclusion	February 2018 - July 2018 Quito, Ecuador

- Pioneered an econometric model to analyze the impact of program attendance on the development of 8,000 young children, informing strategic enhancements in national child welfare initiatives.
- Created a vulnerability index for the "Misión Ternura" project, optimizing resource allocation to reduce undernutrition in targeted populations.

Knowledge Management Specialist, August 2014 - August 2016
Knowledge Management division, Fundación CRISFE (NGO) Quito, Ecuador

- Constructed a "Theory of Change" that encompassed all projects within the organization.
- Econometrically assessed the impact of an art-based after-school tutoring program on the school performance.
- Designed project evaluation procedures defining goals, indicators and data collection instruments.
- Evaluated an entrepreneurial support program with activities from survey design to data processing.
- Supervised field work done by contractors during household survey data collection in rural areas of Ecuador.

Assistant of Standards and Methodologies, February 2014 - August 2014
Standards and Methodologies Division, Quito, Ecuador
National Institute of Statistics (INEC)

- Accompanied surveyors of statistical operations including the CPI and the Living Standards Survey.
- Designed the project: "Implementing the Generic Statistical Business Process Model, through automation of processes" to standardize operations among departments.
- Researched the potential of using Benford's Law as a tool to uncover anomalies in firm survey data.

Skills

Software/ Programming
R, STATA, LATEX, Python, MATLAB, Docker, Spss, GIS, QGIS, JULIA.
Languages
Spanish (native), English (fluent), Italian (beginner), French (beginner).
Various
Survey design, causal inference, machine learning, experimental and quasi-experimental research designs, econometric modeling, data cleaning and preparation, parallel computing, data visualization, program evaluation, detail oriented, adaptability, critical thinking, active listening, problem solving.

Service to profession   **Referee**: Economics and Human Biology. **Guest Lecture** on casual inference: "New Dimensions" program, which provides free training on data analysis to low-income Ecuadorian women. **Proposal Reviewer**: STAARS research mentoring program, which works with African scholars.

Selected Continuing Education   "AI, Deep and Machine learning in Python" (Cornell), "Data Mining on R" (Universidad Simón Bolívar), "Computing National Indicators on Household Surveys" (INEC).

Other interests   Acoustic guitar, Brazilian Jiu-Jitsu, languages learning.

References
John Hoddinott jfh246@cornell.edu
Chris Barrett cbb2@cornell.edu
Brian Dillon bmd28@cornell.edu