

Eduardo García Echeverri

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Date of Birth: 2nd April 1990
Citizenship: Colombian
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Education

2016-Present: Ph.D. in Economics - University of Rochester, United States.

Advisor: Neşe Yildiz.

Expected Completion: June 2022.

2016-2018: M.A. in Economics - University of Rochester, United States.

2012-2013: M.A. in Economics - Universidad de los Andes, Colombia.

2008-2012: B.A. in Economics - Universidad de los Andes, Colombia.

Research Fields

Econometric Theory; Applied Econometrics; Labor Economics; Intergenerational Mobility; and Game Theory.

Subfields: *Nonparametric and semiparametric models; income, education and health mobility; and learning in games.*

Working Papers

“Measuring Intergenerational Mobility in Population Subgroups Using φ -divergences”

Job Market Paper

“Learning in Games Where Agents Sample”

Revise and Resubmit in *Games and Economic Behavior*.

“Low CPU Cost Semiparametric Estimation”

With Steven Stern and Neşe Yildiz.

Work in Progress

“The Long Run Effects of Trade Liberalization on Income Risk and Occupational Mobility”

With Marcos Ceron and Paulo Lins.

Publications (Pre Ph.D.)

“Hot Spots Policing in a High Crime Environment: An Experimental Evaluation in Medellín”

Journal of Experimental Criminology, 2020

With Daniela Collazos, Daniel Mejía, Daniel Ortega, and Santiago Tobón.

“The Influence of Multilateral Development Institutions on Latin American Development Strategies”

Alternative Pathways to Sustainable Development: Lessons from Latin America, 2017

With Guillermo Perry.

“State Capabilities in Colombian Municipalities: Measurements and Determinants”

Development Bank of Latin America-CAF, Working Paper 2014/08

With Guillermo Perry and Pedro Jiménez.

Conferences and Presentations

2021: · LACEA-LAMES 2021.

- 32nd Stony Brook International Conference on Game Theory (Virtual).
- 16th European Meeting on Game Theory (Virtual).
- 15th International Conference on Game Theory and Management (Virtual).

2019: · 2nd Annual Meeting Colombian Economics Conference (Bogotá, Colombia).

- New York Camp Econometrics XIV (Clayton, NY).
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Teaching Experience

Instructor, University of Rochester:

- **Econometrics ECO 231W (Undergraduate)**, *Instructor rating: 5.0/5.0, Teaching skills: 4.9/5.0*
Summer 2021

Teaching Assistant, University of Rochester:

- **Math Statistics and Econometrics ECO485 (Graduate)**, *Instructor: Neşe Yildiz*
Fall 2018, Fall 2019, Fall 2020
- **Econometrics ECO231W (Undergraduate)**, *Instructor: Kegon Tan*
Spring 2019, Spring 2020
- **Macroeconomics II ECO476 (Graduate)**, *Instructor: Narayana Kocherlakota*
Spring 2019, Spring 2020
- **Econometrics, Microeconomics and Math Economics (Master’s Students)**, *Instructor: Paulo Barelli*
Fall 2020, Spring 2021

Teaching Assistant, Universidad de los Andes:

- **Advanced Microeconomics (Ph.D. Students)**, *Instructor: Paula Jaramillo*
Fall 2014, Fall 2015
 - **Advanced Microeconomics (Master’s Students)**, *Instructor: Paula Jaramillo*
Fall 2013, Spring 2014, Fall 2015
 - **Economic Theory of Conflicts (Undergraduate)**, *Instructor: Daniel Mejía*
Fall 2015
 - **Economic Development (Undergraduate)**, *Instructor: Guillermo Perry*
Fall 2013, Spring 2014, Fall 2015
 - **Introduction to the Colombian Economy (Undergraduate)**, *Instructor: Guillermo Perry*
Spring 2016
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Working Experience

Graduate Research Assistant, Wallis Institute of Political Economy, University of Rochester

Apr 2019-May 2019, Sep 2020-Aug 2021

Research Assistant, Centro de Estudios Sobre Seguridad y Drogas, Universidad de los Andes

Aug 2014-Jul 2016

Research Assistant, Centro de Estudios Sobre Desarrollo Económico, Universidad de los Andes
Jul 2013-Aug 2014

Research Assistant, Fundación para la Educación Superior y el Desarrollo–FEDESARROLLO
Jan 2012-Jul 2012

Fellowships, Scholarships and Awards

Dean's Post-Field Research Dissertation Completion Fellowship (2021-2022), University of Rochester.

Tapan Mitra Prize for Best Theoretical Paper, University of Rochester.

Summer Research Grant 2018, University of Rochester.

Summer Research Grant 2017, University of Rochester.

Graduate Fellowship and Tuition Scholarship (2016-2021), University of Rochester.

Special Mention in the Juan Luis Londoño Award for Best Master's Thesis, Universidad de los Andes.

Best Teaching Assistant Award, Universidad de los Andes.

Skills

Computational: Stata, Matlab, ArcGIS, Python, and R.

Languages: English (Fluent), Spanish (Native) and French (Basic).

Professional Affiliations

Econometric Society, American Economic Association, Latin American and Caribbean Economic Association.

References

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Selected Abstracts

“Measuring Intergenerational Mobility in Population Subgroups Using φ -divergences”

This paper introduces a measure of intergenerational social mobility based on φ -divergences. The measure can be decomposed to study mobility in population subgroups of interest and can be used to describe mobility of multiple outcome variables across an arbitrary number of generations, unlike most indicators in the literature. The measure also fully controls for marginal distributions, meaning it is not affected by income growth or changes in income inequality. I propose two estimators for the measure: a non-parametric estimator and an estimator based on the mobility matrix. I provide conditions under which these estimators are \sqrt{n} -consistent and asymptotically normal. With a specific φ -divergence, the Hellinger distance, I measure multidimensional social mobility in the USA and Germany using the PSID, the SOEP, and US administrative tax data. The measure reveals lower income and health mobility in the USA than Germany, but the opposite for educational mobility. It also shows income mobility for both countries is lowest in the tails of the parental income distribution and greatest in the centre. This inverted U-pattern is more pronounced in the USA. Most of these empirical findings for population subgroups are hidden to the existing indicators in the literature.

“Learning in Games Where Agents Sample”

This paper proposes an equilibrium concept –the Sampling Bayesian Equilibrium– for games in which players observe the actions of only a small random sample of other players. I show the existence of these equilibrium points for *i*) a class of coordination of global games and for *ii*) general static games in normal form. For the first, I further show the existence of a unique interior Sampling Bayesian Equilibrium, easing comparative statics over the set of equilibria. Using asymptotic Bayesian analysis, in particular Bernstein- von Mises theorem, I show that most equilibrium points in the complete information games (where agents have perfect foresight over the actions of all other players) can be obtained as limits of pure-strategy Sampling Bayesian Equilibria of the perturbed games, as agents learn and sample sizes tend to infinity. These purification results are robust to a wide class of prior distributions over strategy profiles and are consistent with Nash’s ‘mass-action’ interpretation of mixed strategies.

“Low CPU Cost Semiparametric Estimation”

This paper introduces a Low CPU Cost Semiparametric (LCS) estimator for linear single index models. The LCS estimator significantly reduces estimation time when compared to the standard semiparametric estimator in Ichimura (1993). It does so by more than 90% in medium sample sizes. Moreover, it makes estimation feasible in a regular PC when the sample size exceeds 10,000 observations. We provide conditions for the consistency of the LCS estimator based on spline function theory. In our empirical application, we study determinants of expenditures in vocational rehabilitation (VR) programs using the RSA-911 data, containing information on more than 900,000 workers with disabilities. We find that minorities such as African Americans, Hispanic or females have lower expenditures in VR programs. On the other hand, expenditure is greater for more educated workers.

“The Long Run Effects of Trade Liberalization on Income Risk and Occupational Mobility”

This paper studies the long run effects of trade liberalizations on income volatility and occupational mobility. Due to its unique set of features, we focus our attention on the Brazilian trade liberalization of the beginning of the 1990s. We first estimate time-varying measures of regional income risk using longitudinal data for workers’ earnings from the *Relação Anual de Informações Sociais* (RAIS). Second, we use the Brazilian occupation’s classification system (coupled with machine learning text analysis) to create an aggregate measure of regional occupational mobility. The latter not only measures the extensive margin (% of workers switching occupation) but also takes into account the skill distance between occupation switches. We use data on regional tariff reductions to study the long terms effects of a greater exposure to the trade shock on regional income risk and occupational mobility.

“Hot Spots Policing in a High Crime Environment: An Experimental Evaluation in Medellín”

Objectives: Test direct, spillover, and aggregate effects of hot spots policing on crime in a high-crime environment. **Methods:** We identified 967 hot spot street segments and randomly assigned 384 to a six-month increase in police patrols. To account for the complications resulting from a large experimental sample in a dense network of streets, we use randomization inference for hypothesis testing. We also use non-experimental streets to test for spillovers onto non-hot spots and examine aggregate effects citywide. **Results:**

Our results show an improvement in short-term security perceptions and a reduction in car thefts, but no direct effects on other crimes or satisfaction with policing services. We see larger effects in the least secure places, especially for short-term security perceptions, car thefts, and assaults. We find no evidence of crime displacement but rather a decrease in car thefts in nearby hot spots and a decrease in assaults in nearby non-hot spots. We estimate that car thefts decreased citywide by about 11%. **Conclusions:** Our study highlights the importance of context when implementing hot spots policing. What seems to work in the USA or even in Bogotá is not as responsive in Medellín (and vice versa). Further research—especially outside the USA—is needed to understand the role of local crime patterns and police capacity on the effectiveness of hot spots policing.