# MANUEL FELIPE ROJAS ECHEVERRI

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## EDUCATION

**The Pennsylvania State University** *2018 - 2024*
Ph.D. in Economics

**Universidad del Rosario** *2014-2017*
M.A. in Economics

**Universidad Nacional de Colombia** *2009-2014*
B.A. in Economics

## FIELDS OF SPECIALIZATION

**Applied Microeconomics, Public Economics, Econometrics**

## RESEARCH

**Distributional Effects of a Nonlinear Price Scheme in Public Utilities**

Nonlinear pricing schemes are the primary instruments that policymakers use to ensure access to public utilities for low-income households while penalizing high-income households for overconsumption. In this paper, I evaluate the effectiveness of these pricing schemes and introduce a novel methodology to analyze their impact on the distribution of consumption and welfare in public utilities, specifically focusing on the case of water utilities in Bogotá, Colombia. To achieve this, I employ a combination of reduced-form and structural model techniques, leveraging Bogotá's unique context, where households have historically encountered diverse pricing schemes, including introducing additional nonlinear elements in the pricing scheme through a 2012 policy change. Notably, the results reveal that the nonlinear pricing scheme exhibits regressive characteristics, benefiting wealthier households with higher consumption levels and more significant welfare gains. Furthermore, the evidence suggests that income effects, driven by changes in the virtual incomes of households, are the primary driving force behind these outcomes. These findings underscore the necessity for an alternative approach to achieving more significant equity in the distribution of benefits within public utilities.

**The Water Vital Minimum: Analyzing the Bogotá Free Water Policy**
*With Juan Miguel Gallego, Juan Daniel Oviedo, and Carlos Sepulveda.*

Szabo (2015) analyzes the effects of a free water allowance in South Africa equal to the World Health Organization's recommended minimum. The author demonstrates that the free allowance acts as a lump-sum subsidy without significantly affecting water consumption. Furthermore, it is shown that it is possible to reallocate the current subsidy to form an optimal tariff without needing a free allowance. In this study, we revisit Szabo's analysis using data from Bogotá, Colombia, where a similar policy was implemented. First, employing the methodology proposed by the author, we successfully replicate the original results on consumption, revealing a minimal impact. Second, we reexamine the calculation of the price elasticities for water, identifying lower price elasticities. Third, we replicate creating an optimal tariff that increases social welfare.

## TEACHING EXPERIENCE

**The Pennsylvania State University**

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|---|---|
| Graduate Teaching Assistant: Economic Mergers (Undergraduate) | *2023* |
| Graduate Teaching Assistant: Sports Economics (Undergraduate) | *2022* |
| Graduate Teaching Assistant: Environmental Economics (Undergraduate) | *2020-2022* |
| Graduate Teaching Assistant: Intermediate Microeconomics (Undergraduate) | *2020* |

**Universidad del Rosario**

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|---|---|
| Teaching Assistant: Theory of Regulation and Informality (Undergraduate) | *2017* |
| Teaching Assistant: Mathematical Economics (Graduate) | *2016* |

## RESEARCH AND RELEVANT WORK EXPERIENCE

**The Pennsylvania State University**

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|---|---|
| Research Assistant: Prof. Karl Schurter | *Summer 2021, Summer 2022, Summer 2023* |

**Leico Consultores**

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|---|---|
| Economic Analyst | *2017-2018* |

**Universidad del Rosario**

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| Research Assistant: Prof. Juan Daniel Oviedo | *2014-2018* |

## GRANTS AND AWARDS

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|---|---|
| Science Ministry of Colombia Scholarship | *2020-2022* |
| Banco de la República de Colombia Scholarship | *2018-2022* |
| COLFUTURO Scholarship | 2018-2020 |

## CONFERENCE AND SEMINAR PRESENTATIONS

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| IAES 96th Conference (Philadelphia, PA) | *2023* |

## LANGUAGES

Spanish (Native), English (Fluent).

## COMPUTATIONAL SKILLS

LaTeX, Julia, Matlab, Stata, R, Python

## REFERENCES


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