SERGIO PELAEZ

spelaez3@gatech.edu | LinkedIn: sergio-pelaez-148690147

EDUCATION

Ph.D. in Public Policy | Concentration in Science and Technology Policy | Minor in Analytics GPA: 4.0/4.0
Georgia Institute of Technology, Atlanta, GA, USA Jan 2021 – Expected Dec 2024
Dissertation Title: "*Value Expressions in Patent Text: A New Method and its Applications to Patent Valuation and Direction*"

Advised by Philip Shapira, Diana Hicks, Alan Marco, Juan D Rogers, and Barbara Ribeiro
M.A. in Economics of Public Policy GPA: 4.63/5.0
Universidad del Rosario, Bogota D.C., Colombia Jul 2016 – Apr 2018
Thesis Title: "*Commodities' cycle and fiscal policy under inconsistent preferences*"

Advised by Juan Pablo Zarate and Juan Jose Echavarria
B.A. in Economics and B.A. in Business (Dual Degree) GPA: 4.2/5.0
Universidad Autonoma de Manizales, Manizales, Colombia Jul 2016 – Apr 2018

WORK EXPERIENCE

Georgia Institute of Technology **Atlanta, GA**
Graduate Research Assistant January 2021 – Present
- Put forward a new method to classify complex and abstract social science concepts using Large Language Models (LLMs) for creating a labeled set and open-source discriminative machine classifiers (e.g., BERT) for training and prediction
- Extracted and organized millions of societal impact sentences from patent text, theorizing on their normative and instrumental roles in patent drafting and prosecution aided by insights from interviews with inventors, lawyers, and examiners
- Evaluated the network structure and impacts of a National Nanotechnology Coordinated Infrastructure (NNCI) facility

Inter-American Development Bank (IDB) **Washington D.C/Bogota D.C, Colombia/Buenos Aires, Argentina**
Consultant October 2019 – Present
- Awarded ~$36k after winning three competitive calls for research papers (5% acceptance rate), shaping the IDB's tax, antitrust and business innovation policy recommendations across various Latin American countries

Technopolis Group **Brighton, UK/Bogota D.C, Colombia**
Consultant June 2023 – Present
- Co-Led the development of a successful ~$105K research proposal to conduct analysis examining gender gaps in knowledge-intensive business services

Department of Economic Development **Manizales, Colombia**
Economic Advisor March 2020 – January 2021
- Spearheaded the design and implementation of an economic reactivation strategy that maintained 16,000 jobs, mitigating the impact of the crisis on the local economy and serving as an example for the rest of the country

World Bank **Bogota D.C., Colombia**
Consultant April 2018 – July 2020
- Worked on multiple science, technology and innovation projects totaling ~$25 million; designed and conducted semi-structured interviews, undertook statistical analyses, and authored reports presented to government officials

TEACHING EXPERIENCE

Universidad del Rosario **Bogota D.C, Colombia**
Lecturer **January 2017 – June 2020**
- Introductory economics (bachelor's course) and macroeconomic policy (master's course)

Universidad Nacional de Colombia **Manizales, Colombia**
Lecturer **June 2015 – June 2016**
- Introductory economics (bachelor's course)

PROFESSIONAL AND PUBLIC SERVICE

- Journal referee: Research Policy (x2), Economics of Innovation and New Technology (x5), and LACEA
- External volunteering: Peace volunteer at International Education Peace Volunteers since January 2024
- Georgia Tech: Coordinator of the School of Public Policy's AI discussion group since January 2023

HONORS AND AWARDS

- Received the Outstanding PhD Student Award from Georgia Tech
- Awarded a full PhD scholarship from the Colombian Government (25% acceptance rate) and Georgia Tech (15% acceptance rate)
- Won the 2017 NASPAA global simulation competition, resulting in a paid internship at the UN World Food Programme in Rome, Italy
- Distinguished as a lead student during undergraduate studies

SKILLS AND INTERESTS

- Skills: Python, R, Stata, API integration, LLM prompt engineering, text mining, machine learning, causal inference, computational social networks, interviews, focus groups, qualitative coding, ethnography
- Interests: Reading, meditation, philosophy, science, tennis, hiking, chess, guitar

PUBLICATIONS

<u>**Peer-reviewed**</u>

Pelaez, S., Verma, G., Ribeiro, B., & Shapira, P. (2024). Large-scale text analysis using generative language models: A case study in discovering public value expressions in AI patents. *Quantitative Science Studies*, 1-26.

Pelaez, S., Hurtado, B., & Avila-Maecha, J. (2024). Taxation and innovation: evidence from Colombia. *Economics of Innovation and New Technology*, *33*(1), 166-184.

Pelaez, S., Youtie, J., & Shapira, P. (2022). Analyzing research outcomes and spillovers at a US nanotechnology user facility. *Journal of Nanoparticle Research*, *24*(12), 243.

Pelaez, S. (2018). Ciclo de recursos naturales y política fiscal bajo preferencias inconsistentes. *Coyuntura Económica*. 48(1 y 2) Junio-Diciembre, pp. 13-78.

<u>**Preprint/working papers**</u>

Pelaez, S. (2024). Exporting Knowledge-Intensive Business Services (KIBS): Innovation and Complementary Factors. *Available at SSRN 4799870* : https://ssrn.com/abstract=4799870 or http://dx.doi.org/10.2139/ssrn.4799870

Pelaez, S., & Gutierrez, J. D. (2023). The Gradual Impact of Sanctioning Cartels on Market Competition: Evidence from the Colombian Manufacturing Sector. *Available at Research Square* [https://doi.org/10.21203/rs.3.rs-2928151/v2]

<u>**Work in progress**</u>

Pelaez, S., Verma, G., Ribeiro, B., & Shapira, P. "Do Societal Promises Influence Patent Value? An Analysis of Inventions in Artificial Intelligence." *To be submitted to Research Policy, Spring 2024* (Work in Progress).

Pelaez, S., & Hicks, D. "Words Into Actions: How Value Expressions Relate to Patent Direction." *Planned for submission, Fall 2024* (Work in Progress).

Pelaez, S. "The Fiscal Returns of Productive Development Programs." *Planned for submission, Spring 2025* (Work in Progress).