Alejandro Sarasti Sierra

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Education

Universidad de los Andes — **Bogotá, Colombia**
M.A. in Economics (PEG), expected — *2025 – Dec 2026*
Thesis: *Real Effects of Accounting Changes: How Do Changes in Firms' Observables Affect Productivity and Access to Credit?* Advisor: Christian Posso (Banco de la República). GPA: 4.6/5.0.

Universidad EIA — **Medellín, Colombia**
B.Sc. in Economics — *Dec 2024*
Thesis: *Valuing Data as an Intangible Asset*. GPA: 4.2/5.0.

Universidad de Antioquia — **Medellín, Colombia**
B.Eng. in Systems Engineering — *In progress*
Coursework completed; undergraduate thesis in progress: *Interpretability of Language Models: Identifying a Misalignment Direction in Internal Representations*. GPA: 4.2/5.0.

Experience

Universidad de los Andes — **Bogotá, Colombia**
Project Manager, Atención en el Aula *(Attention in the Classroom)* — *Oct 2026 – Present*
Manage a research project with six principal investigators that evaluates the effect of mobile devices on student attention through a randomized design across course sections. Lead the classroom video-processing pipeline: computer-vision measurement of attention with EduSense, large-scale video processing on the university's high-performance computing (HPC) cluster, a privacy-preserving design that stores only attention metrics and no images, and the choice of cameras and lenses for the 2027 rollout.

World Bank — **Medellín, Colombia**
Research Assistant — *Jan 2025 – Present*
Firm-level data and productivity estimation (Stata, R) for research on business dynamism in Colombia.

Banco de la República (Central Bank of Colombia) — **Cartagena, Colombia**
Research Intern — *Jan – Dec 2024*
Center for Regional Economic Studies (CEER). Historical and contemporary demographic and economic data for research on subnational informality and demographic change; small area estimation and econometric models in R and Stata.

ECSIM — **Medellín, Colombia**
Research Assistant — *Jul 2021 – Oct 2022*
System-dynamics economic models in Matlab (Simulink).

Publications

Acosta, K., Jaramillo-Echeverri, J., Lasso-Jaramillo, D., & Sarasti-Sierra, A. (2025). **The geography of informality: the case of Colombia**. *Spatial Economic Analysis*. doi:10.1080/17421772.2025.2522807. Replication package: github.com/sarasti2/replication-geography-of-informality-colombia.

Ramírez-Giraldo, M. T. (coord.), Acosta-Ordoñez, K., . . . , Sarasti-Sierra, A., et al. (2026). **Explorando las brechas de género en Colombia** [Exploring gender gaps in Colombia]. *Ensayos sobre Política Económica (ESPE)*, No. 111. Banco de la República. doi:10.32468/espe111. Author of Section 1.1, *Gender demographic trends, 1973–2023*.

Otero-Cortés, A. (coord.), Acosta, K., . . . , Sarasti-Sierra, A., et al. (2025). **Nueva evidencia sobre la informalidad laboral y empresarial en Colombia** [New evidence on labour and business informality in Colombia]. *Ensayos sobre Política Económica (ESPE)*, No. 108. Banco de la República. doi:10.32468/espe108. Author of Section 1.2, *Labor informality in small municipalities*.

Work in Progress

Jaramillo-Echeverri, J., Sarasti-Sierra, A., & Flórez, L. A. **Gender Inequality and Demographic Change: Implications for Long-Run Growth**. Forthcoming in *Documentos de Trabajo sobre Economía Regional y Urbana*, Banco de la

República.

Jaramillo-Echeverri, J., & Sarasti-Sierra, A. **Cambio demográfico en las regiones de Colombia** [Demographic Change in Colombia's Regions]. Book chapter, CEER 30-year volume, Banco de la República (eds. J. Bonet and C. Granger).

Akcigit, U., Aristizábal-Ramírez, M., Posso, C., Sarasti-Sierra, A., & Zambrano, A. **Approximating True Firm Productivity in Data-Scarce Settings**.

Presentations

Nov 2026: **Demographic Change in Colombia's Regions**, with J. Jaramillo-Echeverri.
Cambio demográfico en las regiones de Colombia.
Authors' workshop, CEER 30-year volume, Banco de la República, Bogotá, 25 Nov 2026 (scheduled).
Code: github.com/sarasti2/Demografia_30_CEER.

2026: **Gender Inequality and Demographic Change: Implications for Long-Run Growth**, with J. Jaramillo-Echeverri and L. A. Flórez.
Desigualdad de género y cambio demográfico: implicaciones para el crecimiento de largo plazo.

Oct 2026: IX Congreso de Economía Colombiana, Universidad de los Andes, Bogotá.

Apr 2026: POPULORUM 2026 (III Congreso Nacional de Demografía), Universidad Externado de Colombia, Bogotá. Earlier version: *Gender Gaps in Demographic Dynamics* (*Brechas de género en las dinámicas demográficas*).

Teaching

Universidad de los Andes — **Continuing Education, School of Economics**
Co-instructor, Impact Evaluation with Machine Learning — *2027-1*
Upcoming course, with Ana María Patrón: causal machine learning for impact evaluation in R and Python.

Universidad de los Andes — **Bogotá, Colombia**
Teaching Assistant, Microeconometrics (graduate) — *Aug – Dec 2026*
Tutorial sessions, course materials and problem sets for the M.A. in Economics.

Additional Training

2023: **Micro-degree in Artificial Intelligence**, Fusemachines (288 hours). Computer vision and image processing with OpenCV, scikit-image and NumPy.

Awards and Honours

2022–2023: Dean's List (top academic performance), Universidad EIA: 2022-2, 2023-1, 2023-2.

Oct 2023: Second place, National Academic Economics Competition (CANE), Universidad del Rosario, Bogotá.

Sep 2023: EIA Datathon, Universidad EIA, Medellín.

Skills and Interests

Programming: **Advanced:** Python, Stata, R, LaTeX, Git, HPC. **Intermediate:** Matlab, C++, ArcGIS, Docker.

Languages: Spanish (native), English (fluent, C1), Portuguese (basic, A2).

Research interests: Demographic dynamics; gender and development; growth and productivity; computational and econometric methods for scarce or imperfect data.

References

Manuel Fernández Sierra: Assistant Professor, Economics Department, Universidad de los Andes
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Mateo Uribe-Castro: Economics Department, Universidad de los Andes
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Juliana Jaramillo-Echeverri: Researcher, Center for Regional Economic Studies (CEER), Banco de la República
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