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Education

- 2013 (June) PhD in Economics. Department of Economics at University of Gothenburg, Sweden.
Title of the thesis dissertation: "Essays on the Economics of Air Quality Control".
- 2003 M.A. in Economics, Universidad de Los Andes. Bogota, Colombia.
- 2003 M.A. in Environmental and Natural Resource Economics, Universidad de Los Andes/
University of Maryland. Bogota, Colombia.
- 1998 B.S. in Forest Engineering, Universidad del Tolima. Ibague, Colombia.

Interest Fields

Environmental policy instruments with particular application to externalities such as climate change and air pollution. Impact evaluation.

Languages

Spanish (native), English (fluent), Swedish (beginner).

Professional Experience

Research:

- 2015-present Director of the Research Group on Environmental, Natural Resource and Applied Economic Studies (REES) – Environment for Development Initiative (EFD).
<https://efdinitiative.org/colombia>
<http://scholar.google.com/citations?user=sjJol0oAAAAJ&hl=es>
<https://orcid.org/0000-0001-9474-0023>

Academia:

- 2019-present Associate Professor – Department of Economics at Universidad de Los Andes, Bogota, Colombia.
Courses taught: Intermediate Econometrics, Quantitative Methods for Economists, The Economics of Air Pollution Control, and some sessions in the field of climate change for the courses of Environmental and Natural Resource Economics.
- 2013-2018 Assistant Professor – Department of Economics at Universidad de Los Andes, Bogota, Colombia.
Courses taught: Introductory Econometrics, Intermediate Econometrics, Advanced Econometrics, Environmental Economics, and Impact Evaluation.
- 2005-2008 Instructor Professor – Department of Economics at the Universidad de Los Andes, Bogota, Colombia.

Courses taught: Introductory Econometrics, Intermediate Econometrics, Probability and Statistics, Math Review for Master Program in Economics, Quantitative Methods, and Module of Economics in the course of Constitution and Democracy.

- 2003-2004 Instructor Professor – Department of Economics at the Universidad de Los Andes, Bogota, Colombia.
Courses taught: Intermediate Econometrics, Workshop of Econometrics I, Workshop of Advanced Econometrics for the Master Program in Environmental and Natural Resource Economics, Math Review for Master Program in Economics and Environmental and Natural Resource Economics, and Math Review for Specialization Program in Economics.
- 2001-2002 Teaching Assistant — Department of Economics at the Universidad de Los Andes, Bogota, Colombia.
Courses assisted: Advanced Econometrics, Agricultural Economics, Economic Development and Environment.

In the Public Sector:

- 2004 - 2005 Advisor – Office of Urban Development and Environmental Policy, Departamento Nacional de Planeacion, Bogota, Colombia.
- 2003 Advisor – Section of Environmental Studies, Office of Environmental Policy, Departamento Nacional de Planeacion, Bogota, Colombia.
- 1999 University Professional – Section of Internal Control, Corporacion Autonoma Regional del Cauca, Popayan, Colombia.
- 1998 University Professional – Operative Section - Unidad Operativa Regional Costa Pacifica - Corporacion Autonoma Regional del Cauca, Popayan, Colombia.

Publications

Articles in Journals:

- Carson, R.T., Hanemann, M., Köhlin, G., Adamowicz, W., Sterner, T., Amuakwa-Mensah, F., Alpizar, F., Khossravi, E., Jeuland, M., Bonilla, J. A., Tan-Soo, J., Nam, P., Wagura, S., Wadehra, S., Chegere, M. J., Visser, M., Chukwuone, N. & Whittington, D. 2023. Perceptions of the seriousness of major public health problems during the COVID-19 pandemic in seven middle-income countries. *Communications Medicine* 3 (193): 1-7.
<https://doi.org/10.1038/s43856-023-00377-8>
- Bonilla, J. A., Aravena, C., & Morales-Betancourt, R. 2023. Assessing Multiple Inequalities and Air Pollution Abatement Policies. *Environmental and Resource Economics*, 84: 695-727.
<https://link.springer.com/article/10.1007/s10640-022-00745-3>
- Bonilla, J. A., Lopez-Feldman, A., Pereda, P. C., Rivera, N. M., & Ruiz-Tagle, J. C. (2023). Association between long-term air pollution exposure and COVID-19 mortality in Latin America. *PLoS One*, 18(1), e0280355.
<https://doi.org/10.1371/journal.pone.0280355>
- Blackman, A., Bonilla, J. A., & Villalobos, L. (2023). Quantifying COVID-19's silver lining: Avoided deaths from air quality improvements in Bogotá. *Journal of Environmental Economics and Management*, 117, 102749.
<https://doi.org/10.1016/j.jeem.2022.102749>
- Bonilla, J. A. (2022). Forest fires and impacts of COVID-19 lockdowns on air quality in four Latin American megacities. *Environmental Research Letters*, 17(10), 104003.
<https://iopscience.iop.org/article/10.1088/1748-9326/ac8ec1/meta>

- Guzman, L. A., Beltran, C., Bonilla, J. A., & Cardona, S. G. 2021. BRT fare elasticities from smartcard data: Spatial and time-of-the-day differences. *Transportation Research Part A: Policy and Practice*, 150, 335-348.
<https://doi.org/10.1016/j.tra.2021.06.018>
- Amaechina, E., Amoah, A., Amuakwa-Mensah, F., Amuakwa-Mensah, S., Bbaale, E., Bonilla, J. A., Brühl, J., Cook, J., Chukwuone, N., Fuente, D., Madrigal-Ballester, R., Marín, R., Nam, P. K., Otieno, J., Ponce, R., Saldarriaga, C. A., Vazquez-Lavin, F., Viguera, B. & Visser, M. 2020. Policy note: policy responses to ensure access to water and sanitation services during COVID-19: snapshots from the environment for development (EfD) network. *Water Economics and Policy*, 6(04), 2071002.
<https://doi.org/10.1142/S2382624X20710022>
- Sterner, T., Carson, R. T., Hafstead, M. A., Howard, P., Jagers, S. C., Köhlin, G., Parry, I., Rafaty, R., Somanatan, E., Steckel, J. C., Whittington, D., Alpizar, F., Ambec, S., Aravena, C. A., Bonilla, J., Daniels R. C., Garcia, J., Harring, N., Kacker, K., Kerr, S., Medhin, H., Nam, P. K., Romero, G., Johansson-Stenman, O., Toman, M., Xu, J. & Wang, M. 2020. Funding inclusive green transition through greenhouse gas pricing. *CESifo DICE Report*, 18(01), 03-08.
- Bonilla, J. A. 2019. The More Stringent, the Better? Rationing Car Use in Bogota with Moderate and Drastic Restrictions. *The World Bank Economic Review* 33(2): 516-534.
<https://doi.org/10.1093/wber/lhw053>
- Bonilla, J.; Coria, J.; Sterner, T. 2018. Technical Synergies and Trade-Offs Between Abatement of Global and Local Air Pollution. *Environmental and Resource Economics* 70(1): 191–221.
doi: 10.1007/s10640-017-0117-8.
- Bonilla, J.; Coria, J.; Mohlin, K.; Sterner, T. 2015. Refunded emission payments and diffusion of NOx abatement technologies in Sweden. *Ecological Economics* 116, 132–145.
doi:10.1016/j.ecolecon.2015.03.030.
- Coria, J.; Bonilla, J.; Grundström, M.; Pleijel, H. 2015. Air pollution dynamics and the need for temporally differentiated road pricing, *Transportation Research Part A: Policy and Practice* 75, 178-195.
<http://dx.doi.org/10.1016/j.tra.2015.03.004>.
- Westerlund, J., Urbain, J.-P., Bonilla, J. 2014. Application of air quality combination forecasting to Bogota. *Atmospheric Environment* 89, 22-28.
<http://dx.doi.org/10.1016/j.atmosenv.2014.02.015>.
- Bonilla, J. A.; Rosales R. and Maldonado J. 2003. El Valor Económico de la Predicción del Fenómeno El Niño Oscilación del Sur (ENOS) en el Sector Azucarero Colombiano. *Revista Desarrollo y Sociedad* No. 52, 1 – 38 p, September, Bogotá.

Books:

- Echeverry, J. C.; Bonilla, J. A.; Clavijo, A.; Fergusson, L.; Moya, A.; Navas, V. and Querubin, P. 2008. Quién manda sobre las cuentas públicas? Inflexibilidad presupuestal en Colombia, Argentina, México y Perú. Ediciones Uniandes, Universidad de Los Andes, Bogotá.

Available abstract in Spanish at:

http://economia.uniandes.edu.co/es/investigaciones_y_publicaciones/cede/publicaciones/libros_y_otras_publicaciones_del_cede/2008/quien_manda_sobre_las_cuentas_publicas_inflexibilidad_presupuestal_en_colombia_argentina_mexico_y_peru

- Fajardo, M.; Ospina, M.; Bonilla, J. and Sánchez, F. 2008. Historia del CEDE. 50 años de investigación en economía 1958-2008. Ediciones Uniandes, Universidad de Los Andes, Bogotá.

Available abstract in Spanish at:

http://economia.uniandes.edu.co/es/investigaciones_y_publicaciones/cede/publicaciones/libros_y_otras_publicaciones_del_cede/2008/historia_del_cede_50_anos_de_investigacion_en_economia_1958_2008

Working Papers:

- Whittington, D.; Carson, R.; Hanemann, M.; Köhlin, G.; Adamowicz, W., Sterner, T.; Amuakwa-Mensah, F.; Alpizar, F.; Khosravi, E.; Jeuland, M.; Bonilla, J.; Tan-Soo, J.; Nam, P.; Ndiritu, S.; Wadehra, S.; Chegere, M.; Visser, M.; Chukwuone, N. 2022. How People Prioritize Health Issues During the COVID-19 Pandemic: Evidence from Seven Developing Countries. Working Paper.
- Becerra, L., & Bonilla, J. A. 2022. Climatic shocks, air quality, and health at birth in Bogotá. Working Paper
- Bonilla, J. A. 2022 Causal short-term impacts of COVID-19 lockdowns on air quality in four megacities in Latin America. Working Paper
- Bonilla, J. A., López-Feldman, A., Pereda, P. C., Rivera, N. M., & Ruiz-Tagle, J. C. 2021. Long-Term Air Pollution Exposure and COVID-19 Mortality in Latin America. FEA/USP. Working Paper Series Nr. 2021-23
- Sarmiento, O. L., García J., Higuera-Mendieta, D., Useche, A., Wilches-Mogollon. M. A., Montes, F., Bonilla, J., Morales, R. & Guzman, L. A. 2019. Innovaciones Latinoamericanas para ciudades y comunidades cada vez más sostenibles y saludables: Aprendizajes de América Latina frente al Objetivo de Desarrollo Sostenible Número 11 desde la Salud urbana. Centro de los Objetivos de Desarrollo Sostenible para América Latina (CODS). *CODS Nro. 1*. ISSN 2665-6655. Bogotá.
- Blackman, A., Bonilla, J. A., Villalobos. 2021. Quantifying COVID-19's Silver Lining: Avoided Deaths from Air Quality Improvements in Bogotá. Washington, DC: Inter-American Development Bank. IDB Working Paper Series IDB - WP - 1270.
- Bonilla, J. A., Aravena, C., & Morales-Betancourt, R. 2021. Assessing multiple inequalities and air pollution abatement policies. Documento CEDE 2021-39.
- Bonilla, J. and Carriazo, F. 2018. Assessing social experiments using Apps: the case of Car-free days in Bogotá. Documento CEDE 2018-50. Bogota.
- Bonilla, J. 2018. Should we blame buses? Bus strikes and air quality. Working Paper
- Echeverry J, Bonilla J.A., Moya A. 2006. Rigideces institucionales y flexibilidad presupuestaria: los casos de Argentina, Colombia, México y Perú. Documento CEDE 2006-33. Bogota.
- Rosales, R. and Bonilla, J. A. 2006. Introducción a la Econometría. Apuntes de Clase CEDE 2006-3. Bogota.
- Rosales, R.; Bonilla, J. A. and Apaza, E. 2004. Economía de la Producción de Bienes Agrícolas. Teoría y Aplicaciones. Documento CEDE 2004-34. Bogota.

Other publications:

- Bonilla, J. A., Cárdenas, J. C., Helo, J., Laajaj, R., Maldonado J., Renau, J., Velez, M. 2022. La agenda ambiental como parte del modelo económico de Colombia. Nota Macroeconómica No. 40. Facultad de Economía. Uniandes. Bogotá.
- Bonilla, J., Moros, L., Moreno, R., Maldonado, J., Renau, J. M., Valderrama, D., Villegas, C., & Velez, M. A. 2020. De la interrelación entre los sistemas naturales y socioeconómicos. Discusiones sobre Ambiente para el Desarrollo No.1. Facultad de Economía. Uniandes. Bogotá.
- Bonilla, J. & Tovar, J. 2020. El nuevo pico y placa no es una buena idea en periodo de pandemia. Discusiones sobre Ambiente para el Desarrollo No.3. Facultad de Economía. Uniandes. Bogotá.

- Echeverry, J. C.; Bonilla, J. A. and Moya, A. (2006). Colombia Client Perspectives on Elements of World Bank Support. Working Paper for “Development Results in Middle Income Countries: An Evaluation of the World Bank’s Support”, prepared for the World Bank, Universidad de Los Andes, Bogotá.

Work in Progress:

- How does traffic congestion affect air pollution? A comparative analysis across countries (with Kacker, K., Tan-Soo, J., and Qin, P.).
- Expected global urban gains of complying the new 2021 World Health Organization guidelines for fine particulate matter: economic estimates of the attributable health burden.
- Ground-level ozone under traffic disruptions: gasoline and diesel vehicles-free days (with Bento, A.).
- Cleaning the air: Good policies against bad air quality? (with Villegas, C., Arango, S. and Orrego, S.).

Supervised Students (works in Spanish)

- Nicolas Mejia. PM10 forecasting and prevention in critical episodes of air quality in Bogotá. This study received special recognition from the Ministry of Environment and Sustainable Development in Colombia among several academic works in the celebration of the Inter-American Day of Air Quality. Link to the news: <http://www.minambiente.gov.co/index.php/noticias/4102-minambiente-afianza-estrategias-con-la-academia-para-el-mejoramiento-de-la-calidad-del-aire>
- Nicolás Osorio. Costs of attending emergencies derived from attacks to the oil infrastructure: the Caño Limón Coveñas Pipeline
- Alejandro Herrera. Transit and crime. Evidence of traffic flows in the Bus Rapid Transit System in Bogotá.
- Javier Chávez, María Alejandra Espinosa, Diana Milena Lara and Brenda Pérez. Effect of the driving restriction program of motorcycles on air quality
- Valeria Sandoval. Subjective value of time for using public transport in Bogotá.
- Juan Sebastian Hernandez. Economic value of air quality in the Kennedy area measured through the health impacts.
- Daniela De La Hoz. Factors that affect mobility in Bogotá.
- German Ricaurte. Willingness to pay for improving bicycle use.
- Rafael Rubiano. Shadow price of methane emissions in the livestock sector in Colombia.
- Camilo Avila. Weather effects on food prices in Colombia.
- Nestor Andres Gomez. Armed conflict impacts on water quality risk index in Colombia.
- Lina Marcela Quiñonez. PM10 forecasts and its relationship with respiratory diseases in the Kennedy area.
- Erika Salcedo and Sabina Talero. Estimation of land-use opportunity costs to design payment for environmental services in the Tota Lake.
- Camilo Parra. Efectos heterogéneos del valor económico del tiempo en el transporte de Bogotá.
- Camila Cortés. Down by the River: The effect of water pollution over cognitive development
- Carlos Andres Beltran. Hop on - hop off: TransMilenio's demand reaction to a fare increase
- Luis Becerra. Economic Impacts of Climate Change
- Jorge Montero. Heterogeneous effects of marine protected areas on fishing efforts

In Media

In the recent years I have participated in the debate about the importance of studying air quality in cities and the need for effective policies to cut emissions. Some local media (El Tiempo, Semana, LaRepública, Canal1, City TV, among others) cite my research results.

Editorial Service

2005 – 2007 Editorial Coordinator of the Journal *Desarrollo y Sociedad*. ISSN: 0120 – 3584.

Other Professional Activities

- 2014 – present Reviewer for the following journals: *Economic Inquiry*, *Resource and Energy Economics*, *Environmental and Resource Economics*, *Journal of Environmental Economics and Management*, *Agricultural Economics*, *Environment and Development Economics*, *Transportation Research Part A: Policy and Practice*, *Transportation Research Part D: Transport and Environment*, *Regional Environmental Change*, *The Energy Journal*, *International Journal of Sustainable Transportation*, *Case Studies on Transport Policy*, *Nature Climate Change*, *Sustainable Cities and Society*, *Marine Policy*, *Latin American Economic Review*, *Latin American Research Review*, and *Desarrollo y Sociedad*.
- 2021 – present Co-organizer of the LAERE-EfD Seminar.
- 2020 – present Member of the Group of External Experts on Air Quality to support the Bogotá's Secretary of Environment.
- 2013 – present Reviewer of some proposals or papers submitted to the Environment for Development Initiative (EfD).
- 2019 Local coordinator and organizer of the 13th Annual Meeting of EfD (Bogotá Nov. 21-Nov. 25). It is the largest annual conference in the Global South on the application of environmental economics to development.
- 2008 – present Reviewer of some thesis for the Master Program in Economics. Universidad de Los Andes, Bogota, Colombia.
- 2005 – 2007 Assistant of the Economic Development Research Center Seminar. Universidad de Los Andes, Bogota, Colombia.