

ANELÍ BONGERS

Space Economics Lab ◊ Department of Economics ◊ Campus El Ejido s/n, 29013 ◊ Málaga ◊ Spain
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EDUCATION

PhD Economics Department of Economics	University of Málaga December 2015
MA in Economics (International Cooperation and Development Policies)	University of Málaga December 2010
BA in Economics Faculty of Economics and Business	University of Málaga June 2006

FIELDS OF INTEREST

Space Economics, Technological Change, Economic Growth and the Business Cycle; Environmental Economics; Space Economics; International Economics; Income Distribution and Inequality; Operational Research.

RANKINGS

Ideas/RePEc. Top 11% authors in Spain, publications last 10 years (February 2025). Top 5% authors in the World, number of downloads through RePEc Services over the past 12 months.

Google Scholar. 289 cites, h-index: 11 (March, 2025).

ResearchGate. Research Interest Score 140.40, 180 cites, h-index 8 (March 2025).

POSITIONS

Associate Professor (Accreditation) (Acreditada Titular de Universidad)	ANECA. September, 2022.
Associate Professor (Profesora Permanente Laboral)	Department of Economics, University of Málaga. October 26, 2023-current.
Assistant Professor (Profesora Ayudante Doctor)	Department of Economics, University of Málaga. October 13, 2023-October 25, 2023.
Researcher (Investigadora Postdoc)	Department of Economics, University of Málaga. February 1, 2022-October 12, 2023.
Temporary Assistant Professor (Profesor Sustituto Interino)	Department of Economics, University of Málaga. October 1, 2021-January 31, 2022.
Young Talented Researcher (Investigadora Joven Postdoc)	Department of Economics, University of Málaga November 15, 2019-September 31, 2021.
Temporary Assistant Professor (Profesor Sustituto Interino)	Department of Economics, University of Málaga. October 21, 2009-November 14, 2019.

PUBLICATIONS

Papers in Journals

- Bongers, A. and Torres, J.L. (2024): Star wars: Anti-satellite weapons and orbital debris. **Defence and Peace Economics**, 35(7), 826–845.
- Bongers, A. (2024): Household behavior and the rebound effect. **Energy Economics**, 130, 107267.
- Bongers, A. and Tamor, M.A. (2023): Climate change, energy transition and global temperature stabilization. **Climate Change Economics**, 14(2), 2350008.
- Bongers, A. and Torres, J.L. (2023): Orbital debris and the market for satellites. **Ecological Economics**, 209, 107831.
- Bongers, A. (2023): Learning-by-doing, organizational forgetting, and the business cycle. **Bulletin of Economic Research**, 75(1), 141-150.
- Bongers, A. and Casas, P. (2022): The circular economy and the optimal recycling rate: A macroeconomic approach. **Ecological Economics**, 199, 107504.
- Bongers, A. (2022): Energy mix, technological change, and the environment. **Environmental Economics and Policy Studies**, 24(3), 341-364.
- Bongers, A., Díaz-Roldán, C. and Torres J.L. (2022): Brain Drain or Brain Gain? International labor mobility and human capital formation. **Journal of International Trade and Economic Development**, 31(5), 647-671.
- Bongers, A., Díaz-Roldán, C. and Torres, J.L. (2022): Highly skilled international migration, STEM workers, and innovation. **Economics**, 16 (1), 73-89.
- Bongers, A., Gómez, T. and Torres, J.L. (2021): Dynamic macroeconomic models with Excel. **Journal of Economic Education**, 52(4), 372.
- Bongers, A. (2021): Economic growth and the functional distribution of income: A labor share Kuznets curve. **Economics Bulletin**, 41(1), 192-200.
- Bongers, A. and Torres J.L. (2021): A bottleneck combat model: an application to the Battle of Thermopylae. **Operational Research**, 21(4), 2859-2877.
- Bongers, A. and Picatoste, X. (2021): Productivity growth: Technological progress and technical efficiency. **Atlantic Economic Journal**, 49(1), 10, 103.
- Bongers, A. and Picatoste, X. (2021): Contribución del Análisis Económico a la docencia en Políticas Públicas, **E-pública**, 28, 29-47.
- Bongers, A. (2020): The environmental Kuznets curve and the energy mix: A structural estimation. **Energies**, 13(10), 1-21.
- Bongers, A., Gómez, T. and Torres, J.L. (2020). Teaching Dynamic General Equilibrium Macroeconomics to Undergraduates using a Spreadsheet. **International Review of Economics Education**, 35, 1-11.
- Bongers, A. (2020): Energy efficiency, emission energy, and the environment. **Energy Research Letters**, 1(2), 1-5.
- Bongers, A. and Torres, J.L. (2020): Factores determinantes del crecimiento económico: Una comparativa a nivel mundial. **Papeles de Economía Española**, 164, 15-40.
- Bongers, A and Torres J.L. (2020): Revisiting the Battle of Midway: A counterfactual analysis. **Military Operations Research**, 25(2), 49-68.
- Bongers, A and Díaz-Roldán, M.C. (2019): Stabilization policies and technological shocks: Towards a sustainable economic growth path. **Sustainability**, 11(1), 1-19.

Bongers, A. and Torres, J.L. (2018): Fiscal policy, the trade balance and the Twin deficit hypothesis. **Cuadernos de Economía, Información Comercial Española**, 94, 33-56.

Bongers, A. (2017): Learning and forgetting in the jet fighter aircraft industry. **Plos One**, 14 (9), 1-19.

Bongers, A., Gómez, T. and Torres, J.L. (2017): Una aproximación alternativa a la enseñanza de la Macroeconomía: La Macroeconomía Computacional, **E-pública**, 21, 1-21.

Bongers, A. and Torres, J.L. (2014): Technological change in U.S. jet fighter aircraft. **Research Policy**, 43, 1570-1581.

Bongers, A. and Torres, J.L. (2014): Measuring technological trends: A comparison between U.S. and U.S.S.R./Russian jet fighter aircraft. **Technological Forecasting and Social Change**, 87, 125-134.

Book's Chapters

Bongers, A. (2020): Economic Growth, Technological Progress and Technical Efficiency: A World Comparative 1970-2014. **Economic Policies for Development: Beyond the Millennium Goals**, Chapter 6. Nova Science Publishers.

Bongers A. and Molinari B. (2020): Economic Growth, Technological Progress, and Employment. Decent Work and Economic Growth. **Encyclopedia of the UN Sustainable Development Goals**. Springer.

Bongers, A. and Díaz-Roldán, C. (2018): On the adjustment mechanisms in open economies: The road from exchange rates to monetary unions. **Monetary Union: Background Advantages and Disadvantages**, Chapter 4. Nova Science Publishers.

Books

Bongers, A., Gómez, T. and Torres, J.L. (2020): **An Introduction to Computational Macroeconomics**. Vernon Press. ISBN: 678-1-62273-654-6.

Bongers, A., Gómez, T. and Torres, J.L. (2019): **Introducción a la Macroeconomía Computacional**. Vernon Press. ISBN: 978-1-62273-600-2.

Edited Books

Capó, J., Heredero, M.I. and Bongers, A. (2017): Libro de resumen de Ponencias de las IX Jornadas de Docencia en Economía, 2017. ISBN: 978-84-16929-67-2.

Ramos-Herrera, M.C. and Bongers, A. (2018): **Innovando en la motivación de los alumnos en las asignaturas de Economía**. Egregius Ediciones. ISBN: 978-84-17270-28-5.

Bongers, A., Heredero M.I. and Corchuelo, B. (2018): Libro resumen de Ponencias de las X Jornadas de Docencia en Economía, 2018. ISBN: 978-84-17293-40-6.

Working Papers

Bongers, A., Ortiz C. and Torres, J.L. (2024). **DISE: A Dynamic Integrated Model for Orbital Debris Mitigation Policy Evaluation**, Space Economics Working Papers 03-2024, Institute for Space Economics.

Bongers, A., Molinari, B., Rouillon S. and Torres, J.L. (2024). **The foundations of the economics of the outer space: A premier overview**, Space Economics Working Papers 01-2024, Institute for Space Economics.

Bongers, A., Molinari, B. and Torres, J.L. (2022). **Computers, Programming and Dynamic General Equilibrium Macroeconomic Modeling**, MPRA Paper 112505, University Library of Munich, Germany.

Bongers, A., Molinari, B. and Torres, J.L. (2021). **Labor share and income distribution: Size of the cake or the cake portion?**, Working Paper series 21-06, Rimini Centre for Economic Analysis.

RESEARCH PRIZES

Young Researcher Award in Social Sciences. IX Edition of Research Price Marjorie Grice-Hutchinson. Second Prize to the article "Technological change in U.S. jet fighter aircraft", published in the journal **Research Policy**. University of Málaga, 2016.

VISITING

Visiting Scholar: Instituto Universitario de Estudios Marítimos. Universidad de A Coruña. A Coruña, October 1, 2023-December 31, 2023.

Visiting Scholar: Department of Economics, Cardiff Business School. Cardiff, July 1, 2023-September 30, 2023.

Visiting Scholar: Department of Economics, Facultad de Derecho y Ciencias Sociales de la Universidad de Castilla La-Mancha. Ciudad Real, September 15, 2022-November 15, 2022.

Visiting Scholar: Department of Economics, Facultad Ciencias Económicas y Empresariales de la Universidad Autónoma de Madrid. Madrid, November 18, 2019-January 31, 2021.

Visiting Scholar: Department of Economics, Facultad de Derecho y Ciencias Sociales de la Universidad de Castilla La-Mancha. Ciudad Real, July 1, 2019-July 31, 2019.

Visiting Scholar: Department of Economics, Facultad de Economía y Empresa de la Universidad de A Coruña. A Coruña, September 17, 2018-September 30, 2018.

Visiting Scholar: Department of Economics, Facultad de Derecho y Ciencias Sociales de la Universidad de Castilla La-Mancha. Ciudad Real, July 1, 2018-July 31, 2018.

GRANTS AND FELLOWSHIPS

Research Project "Polución en el espacio exterior: Implicaciones económicas de la basura espacial", PID2023-152748OB-100. Ministerio de Ciencia y Tecnología. 2023-2027. (Researcher).

Research Project "Análisis comparativo de retribuciones de profesionales médicos en España y sus Comunidades Autónomas", Ministerio de Sanidad. December 1, 2023-February 14 2024. (Researcher).

Research Project "Fiscal deficit and the current account: An analysis of the twin deficits", Instituto de Estudios Fiscales, Ministerio de Hacienda. June 1, 2021-July 31, 2022. (Principal Investigator, PI).

Research Fellowship (Contrato de reincorporación de doctores, PAIDI2020). February 1, 2022-January 31, 2025. (Principal Investigator, PI).

Research Project "Ruralidad, pobreza y riesgo de exclusión ante la cuarta revolución industrial". Universidad de A Coruña. July, 1, 2021-July 1, 2022. (Work Team Member).

Research Project "Investigación en desarrollo y desigualdad, innovación y medioambiente", PID2019-1071616B-C33. Ministerio de Ciencia y Tecnología. June, 1, 2020-May 31, 2023. (Work Team Member).

Research Fellowship. European Regional Development Fund (ERDF) Research Program, "Human Capital and International Mobility of Workers", UMA18-FEDERJA-145, November 15, 2019-November 14, 2021. (Principal Investigator, PI).

Research Project "Investigación sobre capital y desigualdad y sobre tecnología y medio ambiente", ECO 2016-76818-C3-2-P. Ministerio de Ciencia y Tecnología. September 27, 2016-October 16, 2019. (Work Team Member).

Research Project "Short and long-run effect of public road investment", I+D+i Research Projects Junta de Andalucía, March 1, 2011-March 31, 2012. (Researcher).

Research Project "Economic Analysis", SEJ-122. Junta de Andalucía. November 22, 2009-Current. (Researcher).

Research Fellowship "Human Capital, Technological Progress and Productivity Growth", Fundación Centra de Estudios Andaluces, Junta de Andalucía. March 1, 2015-December 31, 2015. (Researcher).

INNOVATIVE EDUCATION PROJECTS

Innovative Education Project "Utilización de la Dinámica de Sistemas para la enseñanza de la Macroeconomía". Universidad de Málaga, October 2019-September 2021.

Innovative Education Project "Incorporación de simulaciones numéricas a la enseñanza de la asignatura de macroeconomía en el grado de economía". Universidad de Málaga, December 2017-December 2019.

Innovative Education Project "Utilización de la herramienta "Solver" de Excel para resolver problemas de optimización dinámico: Aplicaciones al problema del consumidor". Universidad de Málaga, November 2013-October-2015.

Innovative Education Project "Herramientas de Auto-aprendizaje para la economía usando la hoja de cálculo Excel". Universidad de Málaga, May 2011-September 2012.

Innovative Education Project "Teaching Innovation for High Education". Universidad de A Coruña. 2018-2024.

ORGANIZATION OF SCIENTIFIC EVENTS

XXIII Conference on International Economics, Universidad de Málaga, June 2022. Member of the Organizing Committee.

I International Conference on Teaching Innovation, Madrid, 2019. Member of the Organizing Committee.

VIII International Conference on Economic Development and Social Sustainability (EDaSS), University Jaume I, Castellón, 2019. Member of the Organizing Committee.

VII International Conference on Economic Development and Social Sustainability (EDaSS), Universidad Autónoma de Madrid, Madrid, 2018. Member of the Organizing Committee.

VII International Conference on Communication and Digital Information. Universidad de Zaragoza, Zaragoza, 2017. Member of the Organizing Committee.

I International Conference on Teaching Innovation. Universidad de Sevilla, Sevilla, 2017. Member of the Organizing Committee.

IX Conference on Economic Education. Universidad de Málaga, Málaga, 2017. Member of the Organizing Committee.

66th European Meeting of the Econometric Society and the 27th Annual Congress of the European Economic Association. Universidad de Málaga, Málaga, 2012. Member of the Organizing Committee.

PRESENTATIONS AT CONFERENCES

Research Conferences

- XX Edition of the International Scientific Conference, ECOTREND, Rumania, 2023.
- XII International Conference on Economic Development and Social Sustainability (EDaSS), University of Castilla La Mancha, Cuenca (Spain), 2023.
- X International Conference on Economic Development and Social Sustainability (EDaSS), Universidad Nacional de La Matanza, Buenos Aires, 2021.
- IX International Conference on Economic Development and Social Sustainability (EDaSS), Universidad de A Coruña, A Coruña, 2020.
- 90th International Atlantic Economic Society Conference, Washington, 2020.
- XXI Conference on International Economics, Universidad de Castilla-La Mancha, Toledo, 2020.
- VII International Conference on Economic Development and Social Sustainability (EDaSS), Universidad Jaume I, Castellón 2019.
- XVI Edition of the International Scientific Conference, University of Targu Jiu (Rumania), 2019.
- 87th International Atlantic Economic Society Conference, Athens, 2019.
- XV Edition of the International Scientific Conference, University of Targu Jiu (Rumania), 2018.
- VII International Conference on Economic Development and Social Sustainability (EDaSS), Universidad Autónoma de Madrid, Madrid, 2018.
- XX Reunión de Economía Mundial, Universidad de Almería, 2018.

Economic Education Conferences

- XIV Jornadas de Docencia en Economía, Universidad de Castilla-La Mancha, Toledo, 2022.
- XII Jornadas de Docencia en Economía, Universidad de Vigo, 2020.
- I International Conference on Teaching Innovation, Madrid, 2019.
- XI Jornadas de Docencia en Economía, Universidad de Zaragoza, Zaragoza, 2019.
- X Jornadas de Docencia en Economía, Universidad de Extremadura, Badajoz, 2018.
- VII International Conference on Communication and Digital Information, University of Zaragoza, Zaragoza, 2017.
- Conference on Economics and Welfare in the Digital Era, Universidad de A Coruña, A Coruña, 2017.
- I Congreso Internacional de Innovación y Tendencias Educativas, Universidad de Sevilla, Sevilla, 2017.
- IX Jornadas de Docencia en Economía, Universidad de Málaga, Málaga, 2017.
- VIII Jornadas de Docencia en Economía, Universidad Autónoma de Madrid, Madrid, 2016.
- II Jornadas de Docencia en Economía, 2010.

SCIENTIFIC PROGRAM COMMITTEES

- XII International Conference on Economic Development and Social Sustainability (EDaSS), Universidad de Castilla-La Mancha, 2023.
- XXIV Conference on International Economics, Universidad de Alcalá de Henares, June 2023.
- XXIII Conference on International Economics, University of Málaga, June 2022.

IX Jornadas de Docencia en Economía. Universidad de Málaga, Málaga, 2017.

X Jornadas de Docencia en Economía. Universidad de Extremadura, Badajoz, 2018.

XI Jornadas de Docencia en Economía. Universidad de Zaragoza, Zaragoza, 2018.

TEACHING

Undergraduate Teaching: Introduction to Economics, Political Economy, Macroeconomics, Microeconomics, International Economics, Advanced Macroeconomics.

Graduate Teaching: Monetary Economics, Banking and Finance (University of Málaga), Income Inequality (University of A Coruña).

Invited Teaching Seminars: Human Capital and International Migration (University of Castilla-La Mancha, 2019), Returns to Education (University of Castilla-La Mancha, 2017).

PHD THESIS ADVISOR

Daniel Megía, Análisis de escenarios eficientes en la industria del fútbol. University of Málaga, 2022.

César Ortiz, Externalities in the Outer Space: Orbital Debris. Thompson Rivers University, Canada. In process.

REFEREE ACTIVITIES

Journal of Economic Dynamics and Control, Environmental and Resource Economics, Macroeconomic Dynamics, Technological Forecasting and Social Change, Energy Economics, International Review of Economic Education, Defence and Peace Economics, Bulletin of Economic Research, Plos One, Naval Research Logistic, Operational Research, European Journal of Government and Economics, Computers and Education, Sustainability.

TRAINING COURSES

Macroeconomics and Climate Change. Taught by Professors J. Hassler and P. Krusell, Institute for International Economic Studies (IIES) at Stockholm University. CEMFI Summer School, Madrid, 2023.

LANGUAGES

Spanish (Native), English, Chinese (Fluent).

OTHERS

Awarded with 1 Positive Research Evaluation (“Sexenios de Investigación”): 2014-2020.

Married, one daughter (13 years old) and one son (10 years old).