

JAUME FREIRE-GONZÁLEZ, PhD

Research Scientist

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BIO

Dr. Jaume Freire González is a tenured Research Scientist at the Institute for Economic Analysis (IAE-CSIC) and an Affiliated Professor at the Barcelona School of Economics (BSE) since 2021. Previously, he was a Beatriu de Pinós Researcher at ENT Foundation (2019–2021), a Marie Curie Fellow at Harvard University's Department of Economics (2016–2018), and a Postdoctoral Researcher at the Environmental Change Institute, University of Oxford (2015–2016). He has also worked as a consultant for many governments and institutions (2006–2021). He conducts applied research on a wide range of sustainability issues from socio-economic and policy perspectives, but his main areas of work are energy and climate change economics, water economics and environmental taxation. He is an expert in the use of applied economic modelling methods including econometrics, input-output analysis and computable general equilibrium models, from an academic and a policy-making perspective.

Public academic profiles:

Google scholar: <https://scholar.google.es/citations?user=kcqKo6UAAA&hl=en>

Scopus Author ID: <https://www.scopus.com/authid/detail.uri?authorId=35247902500>

Orcid ID: <https://orcid.org/0000-0002-5922-3255>

Researchgate: https://www.researchgate.net/profile/Jaume_Freire-Gonzalez

Web of Science Researcher ID: <https://www.webofscience.com/wos/author/record/527813>

EDUCATION

2012: **PhD in Applied Economics** from the Autonomous University of Barcelona (UAB). Qualification: *Cum laude* – Awarded with the Extraordinary Doctorate Award.

2009: **Master of Science in Applied Economics** (MSc) specialised in ecological and environmental economics. Autonomous University of Barcelona (UAB).

2002: **Bachelor in Economics**. University of Barcelona (UB).

CURRENT POSITIONS

From December 2021: **Institute for Economic Analysis (IAE-CSIC)**. Tenured Research Scientist (*Investigador Científico*).

From 2021: **Barcelona School of Economics (BSE)**. Affiliated Professor.

PAST POSITIONS

January 2019 – July 2021: **ENT Foundation**. Beatriu de Pinós Researcher.

January 2018 – December 2018: **ENT Environment & Management**. Marie Curie researcher.

July 2016 – December 2017: **Harvard University**, Department of Economics. Marie Curie researcher.

May 2015 – May 2016: **Oxford University**, Environmental Change Institute. Postdoctoral researcher.

September 2013 – March 2014: **The World Bank**. Consultant (STC) in evaluation of payment for environmental services programs in Latin America. Task Team Lead: Dr. Stefano P. Pagiola - Economics Unit, Sustainable Development Department Latin America and Caribbean Region.

July 2006 – April 2015: **ENT Environment & Management**. Consultant in econ. and environ. policy.

June 2005 – June 2006: **Auding**. Consultant in water, environmental and public economics.

January 2005 – June 2005: **IESE Business School**, e-business centre PwC&IESE. Research assistant.

GRANTS, AWARDS AND HONORS

Recognized among the world's top 2% most influential scientists by the Stanford University–Elsevier ranking continuously from 2019 to 2024 (latest edition), and included in the career-long ranking from 2021 to 2024.¹

Ranked 7th in the field of Economics in Spain based on research performance over the past five years (2022) and 21st (2023) according to the ScholarGPS Top Scholars Ranking.²

2020. Certified accreditation of Research (Associate Professor). Catalan University Quality Assurance Agency (AQU), Government of Catalonia.

2018. Beatriu de Pinós postdoctoral Fellowship 2017. Awarded by the Catalan Government.

2015. Extraordinary Doctorate Award. Awarded by the Autonomous University of Barcelona.

2015. Marie Curie Global Fellowship 2014. Awarded by the European Commission.

2008. FIE pre-doctoral fellowship. Awarded by the Catalan Government.

2009. Travel fellowship, Georgia State University, Atlanta (USA). Instituto de Estudios Fiscales and Fundación Rafael del Pino.

PUBLICATIONS

Articles in refereed journals (JCR):

1. Freire-González, J., Canosa, O. (2024). Economic crises and energy use: An input-output analysis of Catalonia's 2008–2014 financial crisis. *Journal of Industrial Ecology* 1–19.
2. Freire-González, J., Padilla Rosa, E., Raymond, J.L. (2024). World Economies' Progress in Decoupling from CO2 Emissions. *Scientific Reports* 14, 20480.
3. Bordón, M., Freire-González, J., Padilla, E. (2022). The direct rebound effect for two income groups: The case of Paraguay. *Energy for Sustainable Development* 70, 430–441.
4. Bordón, M., Freire-González, J., Padilla, E. (2022). Do household energy services affect each other directly? The direct rebound effect of household electricity consumption in Spain. *Energy Efficiency* 15(7), 1–21.

¹ Baas, J., Boyack, K., Ioannidis, J.P.A. (2023). October 2023 data-update for: "Updated science-wide author databases of standardized citation indicators", Mendeley Data, V6, DOI: 10.17632/btchxktzyw.6: <https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/8>.

² <https://t.ly/QYTsj>

5. Font Vivanco, D., Freire-González, J., Galvin, R., Santarius, T., Walnum, H.J., Makov, T., Sala, S. (2022). Rebound effect and sustainability science: a review. *Journal of Industrial Ecology* 26(4), 1543–1563.
6. Freire-González, J., Ho, M.S. (2022). Policy strategies to tackle rebound effects: a comparative analysis. *Ecological Economics* 193, 107332.
7. Delgado, F.J., Freire-González, J., Presno, M.J. (2022). Environmental taxation in the European Union: are there common trends? *Economic Analysis and Policy* 73, 670–682.
8. Freire-González, J., Martínez-Sánchez, V., Puig-Ventosa, I. (2022). Tools for a Circular Economy: Assessing Waste Taxation in a CGE Multi-Pollutant Framework. *Waste Management* 139, 50–59.
9. Freire-González, J., Ho, M.S. (2021). Voluntary Actions in Households and Climate Change Mitigation. *Journal of Cleaner Production* 321, 128930.
10. Font Vivanco, D., Nechifor, V., Freire-González, J., Calzadilla, A. (2021). Economy-wide rebound makes UK's electric car subsidy fall short of expectations. *Applied Energy* 297, 117138.
11. Freire-González, J. (2021). Governing Jevons' Paradox: Policies and Systemic Alternatives to Avoid the Rebound Effect. *Energy Research & Social Science* 72, 101893.
12. Vélez-Henao, J.A., García-Mazo, C.M., Freire-González, J., Font Vivanco, D. (2020). Environmental rebound effect of energy efficiency improvements in Colombian households. *Energy Policy* 145, 111697.
13. Freire-González, J., Font Vivanco, D. (2020). Pandemics and the Environmental Rebound Effect: Reflections from COVID-19. *Environmental and Resource Economics* 76, 447–517.
14. Pagiola, S., Honey-Rosés, J., Freire-González, J. (2020). Assessing the Permanence of Land Use Change Induced by Payments for Environmental Services: Evidence from Nicaragua. *Tropical Conservation Science* 13, 1–15.
15. Freire-González, J. (2020). Energy taxation policies can counteract the rebound effect: analysis within a general equilibrium framework. *Energy Efficiency* 13(1), 69–78.
16. Freire-González, J. (2019). Does Water Efficiency Reduce Water Consumption? The Economy-Wide Water Rebound Effect. *Water Resources Management* 33(6), 2191–2202.
17. Freire-González, J., Ho, M.S. (2019). Carbon Taxes and the Double Dividend Hypothesis in a Recursive-Dynamic CGE model for Spain. *Economic Systems Research* 31(2), 267–284.
18. Freire-González, J., Puig-Ventosa, I. (2019). Reformulating taxes for an energy transition. *Energy Economics* 78, 312–323.
19. Campos Rodrigues, L., Freire-González, J., González Puig, A., Puig-Ventosa, I. (2018). Climate Change Adaptation of Alpine Ski Tourism in Spain. *Climate* 6(2), 29.
20. Freire-González, J., Decker C.A., Hall, J.W. (2018). A Linear Programming Approach to Water Allocation during a Drought. *Water* 10(4), 363.
21. Freire-González, J., Ho, M.S. (2018). Environmental Fiscal Reform and the Double Dividend: Evidence from a Dynamic General Equilibrium Model. *Sustainability* 10(2), 501.
22. Freire-González, J. (2018). Environmental taxation and the double dividend hypothesis in CGE modelling literature: a critical review. *Journal of Policy Modeling* 40(1), 194–223.
23. Freire-González, J., Decker C.A., Hall, J.W. (2017). A scenario-based framework for assessing the economic impacts of potential droughts. *Water Economics and Policy* 3(4), 1750007.
24. Freire-González, J., Font Vivanco, D. (2017). The influence of energy efficiency on other natural resources use: an input-output perspective. *Journal of Cleaner Production* 162, 336–345.
25. Freire-González, J. (2017). A new way to estimate the direct and indirect rebound effect and other rebound indicators. *Energy* 128, 394–402.

26. Freire-González, J. (2017). Evidence of direct and indirect rebound effect in households in EU-27 countries. *Energy Policy* 102, 270–276.
27. Freire-González, J., Decker C., Hall, J.W. (2017). The economic impacts of droughts: a framework for analysis. *Ecological Economics* 132, 196–204.
28. Freire-González, J., Font Vivanco, D., Puig-Ventosa, I. (2017). Economic structure and energy savings from energy efficiency in households. *Ecological Economics* 131, 12–20.
29. Freire-González, J., Puig-Ventosa, I. (2016). Effects of the hydraulic infrastructure on economic growth: evidence from Catalonia. *Sustainable Water Resources Management* 2(2), 199–206.
30. Font Vivanco, D., McDowall, W., Freire-González, J., Kemp, R., Van Der Voet, E. (2016). The foundations of the environmental rebound effect and its contribution towards a general framework. *Ecological Economics* 125, 60–69.
31. Pagiola, S., Honey-Rosés, J., Freire-González, J. (2016). Evaluation of the Permanence of Land Use Change Induced by Payments for Environmental Services in Quindío, Colombia. *PLoS ONE* 11(3): e0147829.
32. Puig-Ventosa, I., Jofra-Sora, M., Freire-González, J. (2015). Prevention of Waste from Unsolicited Mail in Households: Measuring the Effect of Anti-advertising Stickers in Barcelona. *Journal of Material Cycles and Waste Management* 17(3), 496–503.
33. Freire-González, J., Puig Ventosa, I. (2015). Energy Efficiency Policies and the Jevons Paradox. *International Journal of Energy Economics and Policy* 5 (1), 69–79.
34. Font Vivanco, D., Freire-González, J., Kemp, R., Van Der Voet, E. (2014). The remarkable environmental rebound effect of electric cars: A microeconomic approach. *Environmental Science & Technology* 48 (20), 12063–12072.
35. Freire-González, J., Puig Ventosa, I. (2014). Economic challenges and opportunities of climate change adaptation: the case of Catalonia. *Revista de Estudios Regionales* 99, 47–73.
36. Puig Ventosa, I., Freire-González, J., Jofra-Sora, M. (2013). Determining factors for the presence of impurities in selectively collected biowaste. *Waste Management & Research* 31 (5): 510–517.
37. Freire-González, J. (2011). Methods to empirically estimate direct and indirect rebound effect of energy-saving technological changes in households. *Ecological Modelling* 223 (1), 32–40.
38. Freire-González, J. (2011). Assessing the macroeconomic impact of water supply restrictions through an Input-output analysis. *Water Resources Management* 25 (9): 2335–2347.
39. Freire-González, J. (2010). Empirical evidence of direct rebound effect in Catalonia. *Energy Policy* 38(5), 2309–2314.

Other articles:

40. Freire-González, J. (2018). Los beneficios económicos y ambientales de una Reforma Fiscal Ecológica (The economic and environmental benefits of an Environmental Tax Reform). *Ambienta* 125, 42–49.
41. Campos, L.M., Freire-González, J., González, A., Puig-Ventosa, I. (2016). Costes y beneficios de la adaptación al cambio climático en el sector del turismo de nieve en España (Costs and benefits of climate change adaptation in winter tourism in Spain). *Ambienta* 114, 96–108.
42. Freire-González, J. (2015). L'economia verda: la resposta a la crisi econòmica i ecològica. (Green economy: the response to the economic and environmental crisis). *Eines* 23, 82–90.
43. Jofra-Sora, M., Puig-Ventosa, I., Roca Jusmet, J., Freire-González, J. (2014) ¿Es el puerta a puerta más caro que los contenedores? *IndústriaAmbiente* 5: 26–31.

44. Freire-González, J., Puig Ventosa, I. (2014). Efectos económicos y ambientales del impuesto especial sobre determinados medios de transporte (Economic and environmental effects of vehicle tax). *Gestión y Análisis de Políticas Públicas*, 10.
45. Puig Ventosa, I., Freire-González, J. (2013). Aspectes econòmics de la implantació d'un pagament per serveis ambientals en la gestió dels boscos per a millors hídriques a Catalunya (Economic aspects of Payment for Environmental Services in forestry management for water improvements in Catalonia). *Revista silvicultura* 67, 18–19.
46. Puig Ventosa, I., Freire-González, J. (2011). Beneficios económicos de una mayor calidad del agua de abastecimiento en el consumo de agua envasada de los hogares (Economic benefits of a higher water supply quality in bottled water consumption in households). *Tecnología del agua* 334, 60–65.
47. Puig Ventosa, I., Freire-González, J. (2010). Factores determinantes de los niveles de impropios en la FORM. *Infoenviro* 54: 29-34.
48. Puig Ventosa, I., Freire-González, J., Rodrigo Aribau, J. (2010). Caracterización del compostaje doméstico en Catalunya (Characterization of home composting in Catalonia). *Equipamiento y servicios municipales* 148, 72–81.
49. Puig Ventosa, I., Freire-González, J. (2009). Competitivitat i medi ambient a Catalunya (Competitiveness and the environment in Catalonia). *Idea Sostenible* 18.
50. Freire-González, J. (2009). Eficiència energètica i consum de recursos: una estimació de l'efecte rebot a Catalunya (Energy efficiency and resource consumption: a direct rebound effect estimation in Catalonia). Research papers. Department of Applied Economics. Autonomous University of Barcelona.
51. Freire-González, J., Puig Ventosa, I. (2009). Consum d'aigua i anàlisi Input-output: simulació de l'impacte macroeconòmic de restriccions sectorials en l'abastament d'aigua (Water consumption and Input-output analysis: simulation of the macroeconomic impact of sectoral restrictions on water supply). *Nota d'Economia* 93-94: 107–126.
52. Puig Ventosa, I., Freire-González, J. (2007). Efectos de las políticas ambientales sobre la competitividad (Effects of the environmental policies on competitiveness). *Revista Iberoamericana de Economía Ecológica*, 6, 52-61.

Books and monographs:

53. Pagiola, S., Honey-Rosés, J., Freire-González, J. (2017). Assessing the permanence of land use change induced by payments for environmental services: evidence from Nicaragua. *Payments for Environmental Services (PES) learning paper*; no. 2017-1. Washington, DC: World Bank Group.
54. Freire-González, J. (2016). Eficiencia energética y efecto rebote. Conceptos, métodos y políticas. Docs 2. Vilanova i la Geltrú. Fundació ENT.
55. Pagiola, S., Honey-Rosés, J., Freire-González, J. (2014). Evaluation of the permanence of land use change induced by payments for environmental services in Quindío, Colombia. *Payments for Environmental Services (PES) learning paper*; no. 2014-1. Washington, DC: World Bank Group.
56. Freire-González, J. (2013). Análisis de los efectos de la reforma del impuesto especial sobre determinados medios de transporte (Analysis of effects of transport tax reform). *Papeles de Trabajo* n° 7/2013. Instituto de estudios fiscales. Ministerio de Hacienda y Administraciones Públicas.
57. Ortega Cerdà, M., Font Vivanco, D., Freire-González, J. (2011). Guia sobre finançament i canvi climàtic (Guide on Funding and Climate Change). Oficina Catalana de Canvi Climàtic. Departament de Territori i Sostenibilitat. Generalitat de Catalunya.
58. Alcántara Escolano, V., Freire-González, J. (collaboration), Puig Ventosa, I. (collaboration) (2010). El Compte Satèl·lit de les Emissions Atmosfèriques a Catalunya (the Satellite Accounts of Atmospheric Emissions in Catalonia). Departament de Medi Ambient i Habitatge. Generalitat de Catalunya (Environment Department, Government of Catalonia).

59. Puig Ventosa, I., Freire-González, J., Almazor Escartín, L. (2007). Política ambiental i competitivitat de l'economia catalana (Environmental policy and competitiveness of the Catalan economy). *Temes de Medi Ambient i Habitatge*, Vol.2. Departament de Medi Ambient i Habitatge. Generalitat de Catalunya (Government of Catalonia).
60. Soley, J., Mendoza, E., de Huerta, S., Freire-González, J. (2006). XBRL: hacia una información financiera transparente (Towards a transparent financial information). Cuadernos del ebcentre. e-business centre PwC&IESE. March 2006.

Chapters in books:

61. Freire-González, J. (2023). "Rebound effect and the Jevons Paradox". In Padilla Rosa, E., and Ramos-Martín, J. (Eds.), *Elgar Encyclopedia of Ecological Economics* (pp. 453–459). Edward Elgar Publishing.
62. Freire-González, J. (2012). "Cambio tecnológico y consumo de recursos de los hogares". In Porro, A., *Cambio Global España 2020/50. Consumo y estilos de vida.* (pp. 208–212). CCEIM.
63. Freire-González, J. (2011). "Un modelo Input-output de la energía para la estimación del efecto rebote indirecto en los hogares" (An energy Input-output model to estimate the indirect rebound effect in households). In Cámara, A., Cardenete, M. A., Medina, A., and Monrobel J. R. (Eds.), *Sectores estratégicos para un nuevo modelo económico, IV Jornadas Españolas de Análisis Input-Output*, Universidad Rey Juan Carlos, Madrid.
64. Freire-González, J. (2011). "The effects of energy-saving technological change on energy consumption: assessing the rebound effect". In Ramos-Martín, J., Giampietro, M., Ulgiati, S., Bukkens, S.G.F. (Eds.), *Can we break the addiction to fossil energy?* (pp. 667–676). 7th Biennial International Workshop Advances in energy studies 2010.

Articles in Newspapers/Media:

65. Freire-González, J. (2023). Jevons' Paradox undermines green innovation. The Institute of Art and Ideas (24/08/2023): <https://t.ly/oTymM>.
66. Freire-González, J. (2022). The Jevons Paradox and Rebound Effect: Are we implementing the right energy and climate change policies? The OECD Forum Network (22/09/2022): <https://tinyurl.com/3bazizep>.
67. Freire-González, J. (2018). ¿Por qué es necesario impulsar una Reforma Fiscal Ecológica? *Diario16* (16/10/2018). <https://t.ly/YozPp>.
68. Freire-González, J. (2005). Hacia la globalización de la información financiera. *Expansión* (4/3/2005).

PRESENTATIONS AT CONFERENCES, WORKSHOPS AND SEMINARS

1. Towa, E., Achten, W.M.J., Freire-González, J. (2025). "Mitigating rebound effects: A CGE model analysis of sustainable consumption and production". 31st International Input-Output Association Conference, Malé, Maldives, 6th - 11th July 2025.
2. Towa, E., Achten, W.M.J., Freire-González, J. (2025). "Beyond Efficiency: Evaluating Policy Strategies to Counteract Rebound Effects". 12th International Conference on Industrial Ecology (ISIE2025), Singapore, 1st - 4th July 2025.
3. Freire-González, J., Padilla Rosa, E., Raymond, J.L. (2025). "World Economies' Progress in Decoupling from CO2 Emissions". Annual Applied Environmental Economics Conference, Envecon 2025, London, UK, 14th March 2025.
4. Freire-González, J. (2024). "Economic Modelling of Environmental Policies", IAE-CSIC, BSE Energy Reading Group, 14th November 2024 (Invited seminar).

5. Towa, E., Achten, W.M.J., Freire-González, J. (2024). “Environmental rebound effects of embracing sustainable diets: a Macroscopic Exploration of Consumption Patterns in Belgium”. 14th International LCA Food Conference, Barcelona, Spain, 8th - 12th September 2024.
6. Freire-González, J., Ho, M. (2023). “Policy strategies to tackle rebound effects: A comparative analysis”. 29th International Input-Output Association Conference, Alghero, Sardinia, Italy, 25th - 30th June 2023.
7. Freire-González, J., Ho, M. (2022). “Policy strategies to tackle rebound effects: A comparative analysis”. Department of Economics, University of Strathclyde, Glasgow. 26th October, 2022 (Invited seminar).
8. Bordón Lesme, M., Padilla Rosa, E., Freire-González, J. (2022). “Estimation of the of the rebound effect using energy source-service system modeling to account for the relationship between energy services” 27th Annual Conference of the European Association of Environmental and Resource Economists. Rimini (Italy), 28th June – 1st July 2022.
9. Bordón, M., Freire-González, J., Padilla, E. (2022). “The direct rebound effect for two income groups: The case of Paraguay”. 9th Atlantic Workshop on Energy and Environmental Economics. A Toxa (Spain), 23rd and 24th June 2022.
10. Freire-González, J. (2021). “The rebound effect of energy efficiency: theory and evidence”. IAE-CSIC Internal Seminars. 27th May, webinar.
11. Bordón Lesme, M., Freire-González, J., Padilla Rosa, E. (2020). “The Direct Rebound Effect of Electricity Energy Services in Spanish Households: Evidence from Error Correction Model and System GMM estimates”. 1st ECO-SOS Workshop on Economics and Sustainability. Reus, 2nd October 2020.
12. Bordón Lesme, M., Freire-González, J., Padilla Rosa, E. (2020). “The Direct Rebound Effect of Electricity Energy Services in Spanish Households: Evidence from Error Correction Model and System GMM”. 25th Annual Conference of the European Association of Environmental and Resource Economists (EAERE). Berlin (Germany), 23rd June - 3rd July 2020.
13. Font-Vivanco, D., Nechifor, V., Freire-González, J., Calzadilla, A. (2019). “Capturing policy-induced rebound: A technology-rich life cycle general equilibrium approach”. 10th International Conference on Industrial Ecology. Industrial ecology for eco-civilization. Beijing (China), 7th - 11th July.
14. Freire-González, J., Ho, M.S. (2018). “The Economic and Environmental Effects of an Environmental Fiscal Reform in a Dynamic CGE Framework”. Energy Modelling Platform for Europe (EMP-E) 2018 – Modelling clean energy pathways. Brussels (Belgium), 25th - 26th September.
15. Freire-González, J., Ho, M.S. (2018). “The economic and environmental effects of an environmental fiscal reform in a dynamic CGE framework”. 8th Atlantic Workshop on Energy and Environmental Economics, A Toxa (Spain), 21st - 22nd June 2018.
16. Font Vivanco, D., McDowall, W., Freire-González, J., Kemp, R., van der Voet, E. (2016). “The foundations of the environmental rebound effect and its contribution towards a general framework”. *International Society for Industrial Ecology Americas* 2016.
17. Freire-González, J., Decker, C. (2015). “A framework to assess the economic impacts of droughts”. Symposium: Drought Risk & Decision Making. University of Oxford, Oxford, 8th September 2015.
18. Pagiola, S., Honey-Rosés, J., Freire-González, J. (2015). "Evaluation of the Permanence of Land Use Change Induced by Payments for Environmental Services at Two Sites in Latin America". 4th Annual AERE Summer Conference, 3rd - 5th June 2015.
19. Participation at: “International Rebound Expert Workshop”. RWTH Aachen University. E.ON Energy Research Center. Aachen (Germany), 6th March 2015.
20. Font Vivanco, D, Freire-González, J., Kemp, R., van der Voet, E. (2014). The relativity of eco-innovation. The income rebound effect from new (electric) vehicle propulsion technologies. 20th International Sustainable Development Research Conference (ISDRC), NTNU – Trondheim University, Trondheim (Norway), 18th - 20th June 2014.

21. Pagiola, S., Honey-Rosés, J., Freire-González, J. (2013). "Evaluation of the Long-Term Sustainability of Land Use Change induced by Payments for Environmental Services in Quindío, Colombia". International Workshop: Evaluating Forest Conservation Initiatives: New Tools and Policy Needs. Barcelona, 10th to 12th December 2013.
22. Freire-González, J. (2013). "The Jevons' paradox and the failure of energy efficiency policies". 6th UPC International Seminar on Sustainable Technology Development. Master for Sustainability. Vilanova i la Geltrú, 17th - 26th June 2013.
23. Freire-González, J. (2012). "Reptes i oportunitats de l'economia verda a Catalunya". (Challenges and opportunities of the green economy in Catalonia). Seminar on Green Economy. Economy and Knowledge Department. Government of Catalonia. Barcelona, 10th February 2012.
24. Freire-González, J. (2011). "Un modelo Input-output de la energía para la estimación del efecto rebote indirecto en los hogares" (An energy Input-output model to estimate indirect rebound effect in households). IV Spanish conference on input output analysis. Strategic sectors for a new economic model. Madrid (Spain), 28th - 30th September 2011.
25. Freire-González, J. (2011). "Assessing indirect rebound effect of energy efficiency improvements in households with a generalised Input-output model". UK Energy Research Centre Summer School. University of Warwick, Coventry (UK), 26th June - 1st July 2011.
26. Freire-González, J. (2011). "Las mejoras de productividad energética y el efecto rebote a través de un análisis Input-output de la energía" (Energy productivity improvements and rebound effect through an energy Input-output analysis). I Meeting of the Spanish Ecological Economics Association. Barcelona, 2nd - 3rd June 2011.
27. Participation at: Expert Workshop: "Addressing the rebound effect in policy - Stakeholder meeting with the European Commission DG environment". Brussels (Belgium), 28th March 2011.
28. Freire-González, J. (2010). "The effects of energy-saving technological change on energy consumption: assessing the rebound effect". 7th Biennial International Workshop Advances in energy studies 2010. Barcelona, 19th - 21st October 2010.
29. Freire-González, J. (2010). "The rebound effect: evidence for Catalonia and indirect effects through an environmental Input-output analysis". EXIOPOL Environmental accounting: externality valuation and Input-Output tools for policy analysis. Venice (Italy), 11th - 17th July 2010.
30. Freire-González, J. (2010). "Macroeconomic impact of water supply restrictions through an Input-output analysis". Spain National Young Water Professionals Conference. Barcelona, 16th - 18th June 2010.
31. Freire-González, J. (2009). "Energy efficiency and resources consumption in households: the rebound effect". V Summer School in Public Economics. Georgia State University. Atlanta (USA), 12th July 2009.
32. Freire-González, J. (2009). "Eficiencia energética y consumo de recursos en los hogares: la paradoja de Jevons" (Energy efficiency and resources consumption in households: The Jevons' paradox). IV Meeting of the Spanish Ecological Economics Network. Santiago de Compostela, 11th and 12th June 2009.
33. Puig-Ventosa, I., Freire-González, J. (2007). "Environmentally harmful subsidies in Spain". Environmentally harmful subsidies in Portugal and Europe. Lisboa (Portugal), 23rd February 2007.

SERVICE TO RESEARCH COUNCILS, JOURNALS, PUBLISHERS & CONFERENCES

Scientific evaluator of international research councils and programs:

September – October 2024: National Science Centre Poland. Expert evaluator of scientific proposals within the Preludium 23 programme.

June 2016: European Cooperation in Science and Technology (COST). Expert evaluator of scientific proposals.

July – September 2014: European Commission. Expert evaluator for the European Commission within the Horizon 2020 programme.

Academic Journal Editorial Board Member:

Economics and Business Letters (from September 2018 to March 2025).

Seminar organizer:

From 2022 to 2023 - Bellaterra Applied Economics Seminar (IEA–UAB), with Hanna Wang.

Referee for Scientific Journals:

Nature Climate Change, Nature Communications, PLoS ONE, Ecological Economics, Environmental and Resource Economics, Energy Policy, Economic Systems Research, Renewable & Sustainable Energy Reviews, Environmental Research Letters, Water Resources Management, Energy Economics, Journal of Cleaner Production, Journal of Environmental Management, Energy Research & Social Science, Transportation Research Part A, Agricultural Systems, Energy Efficiency, Sustainability, Energies, Sustainable Water Resources Management, Heliyon, Energy Strategy Reviews, Frontiers in Energy Research, Sustainable Cities and Society, Economic analysis and Policy, International Journal of Global Energy Issues, European Journal of Operational Research, Water Economics and Policy, Economics and Business Letters, Revista Iberoamericana de Economía Ecológica.

Academic Memberships:

European Association of Environmental and Resource economics (EAERE), International Association for Energy Economics (IAEE), Sociedad Hispanoamericana de Análisis Input-Output (SHAIO), International Input-Output Association (IIOA).

SUPERVISOR & MENTOR FOR PHD, MASTER'S, AND UNDERGRADUATE STUDENTS

PhD Supervisor:

1. Aitana Vallina (From 2025). Optimization and Game Theory: Environmental Conflicts, Inequality, and Climate Change Adaptation. PhD in Economics, University of Barcelona. Co-directed by Julia de Frutos (UB) (ongoing).
2. Elisavet Terzanidou (From 2025). “Assessing Circular Rebound Effects under Sustainability Science”. Doctoral Program in Environmental Sciences, Autonomous University of Barcelona – ICTA. Co-directed by Laura Talens (ICTA-UAB) and tutored by David Font (Eco Intelligent Growth) (ongoing).
3. Martín Bordon (2019-2023). “Three essays about The Direct Rebound Effect in Households”. Department of Applied Economics, Autonomous University of Barcelona. PhD dissertation. Co-directed by Emilio Padilla (UAB). Qualification: *Cum laude*. Thesis awarded with the Extraordinary Doctorate Award.

Post-docs and Visiting Researchers Supervisor:

4. Wenfeng Zhang (2025-2026). “Valuation of Energy Infrastructure Based on a General Equilibrium Model: A Case Study of Ultra-High Voltage Projects”. Renmin University of China (RUC). China Scholarship Council (CSC - No. 2022000978). Visiting PhD student.
5. Edgar Towa (From 2023). “Beyond Efficiency: Evaluating Policy Strategies to Counteract Rebound Effects”. Université libre de Bruxelles. Postdoctoral Researcher.
6. Qian Chen (2023-2024). “Research on carbon rebound effects in Chinese households considering carbon tax policy”. Nanjing University of Aeronautics & Astronautics. China Scholarship Council (CSC - No. 202206830067). Visiting PhD student.
7. Martín Bordón (2023-2024). “Methods for Estimating the Direct Rebound Effect of Residential Energy Consumption and its Secondary Effects”. Government of Paraguay (BECAL - BCPO09-23). Postdoctoral Researcher.

Master's Supervisor:

8. Arlet Vila Bagaria (2025). "Assessing the Effectiveness of the EU Emissions Trading System: A Staggered Difference-in-Differences Analysis of CO2 Emissions in the Energy Sector". IDEA Master of Research in Economic Analysis, Autonomous University of Barcelona. Master's dissertation (MSc) (TFM).
9. Martín Bordon (2018). "The Direct Rebound Effect in Spanish Households". Department of Applied Economics, Autonomous University of Barcelona. Masters' dissertation (MSc) (TFM).

Undergraduate Supervisor:

10. Aitana Vallina (2022). "Gender and climate change". University of Oviedo. Undergraduate internship.
11. Oliver Canosa (2019). "Energy input-output analysis in Catalonia". Environmental Sciences, University of Barcelona. Undergraduate dissertation (TFG).

PhD Evaluation Committees:

Thesis Defense Committees: Paloma Heredia Ruiz (UAB-Applied Economics Department - 2025).

Progress/Annual Evaluation Committees: Carlos Gómez Pitarch (UAB-IDEA – 2025).

MAIN RESEARCH AND CONSULTANCY PROJECTS

1. "Economic Toolbox of the Energy Transition Under Climate Change". Ministerio de Ciencia e Innovación. PID2024-158997NB-I00. September 2025 – August 2028.
2. "ICARIA: Improving climate resilience of critical assets". European Commission. HORIZON-MISS-2021-CLIMA-02-03 101093806. December 2023 – December 2025.
3. "Resilient Societies: Poverty, Climate and Conflict". Ministerio de Ciencia e Innovación. PID2021-124256OB-I00. September 2022 – August 2025.
4. "JEVONS: Technological progress and environmental limits: looking for solutions for the Jevons' Paradox". Beatriu de Pinós Fellowship. Government of Catalonia, AGAUR, grant agreement: 2017 BP 00009. ENT Foundation. January 2019 – April 2021.
5. "Canon y mercado de residuos" (Taxes and waste market). Commissioned by IHOBE, Sociedad pública de gestión ambiental País Vasco. October 2020.
6. "Evaluación energética, económica y ambiental de un objetivo vinculante como la energía comunitaria en el Plan Nacional Integrado de Energía y Clima (PNIEC) del Gobierno de España" (Energy, economic and environmental evaluation of the target of community energy in the National Integrated Energy and Climate Plan (PNIEC) of the Government of Spain). Commissioned by Amigos de la Tierra. October 2019 – February 2020.
7. "METRES: Modelling an Environmental Tax Reform in Spain". Marie Skłodowska-Curie Fellowship H2020-MSCA-IF-2014. European Commission, grant agreement: 654189. Harvard University and ENT Environment and Management. July 2016 – December 2018.
8. "MaRIUS: Managing the Risks, Impacts and Uncertainties of droughts and water Scarcity". UK NERC funded project: NE/L010364/1. Environmental Change Institute, Oxford University. May 2015 – May 2016.
9. "Costes y beneficios de la adaptación al cambio climático en el sector del turismo de nieve en España" (Costs and benefits of climate change adaptation in Winter tourism in Spain). Commissioned by Spanish Office of Climate Change. January - April 2015.
10. "Pla d'adaptació al canvi climàtic a l'Àrea Metropolitana de Barcelona" (Climate change adaptation plan for the Metropolitan Area of Barcelona). Commissioned by Metropolitan Area of Barcelona. June – December 2014.

11. “Incidència econòmica dels objectius establerts a l’avantprojecte de llei de canvi climàtic en matèria de reducció de les emissions dels sectors difusos a Catalunya” (Economic impact of objectives established in the climate change law on emissions reduction in Catalonia). Commissioned by the Catalan Office of Climate Change. April – November 2014.
12. “Caracterización de los servicios ecosistémicos del Área Metropolitana de Barcelona y valoración de los servicios de provisión de alimentos” (Characterization of ecosystem services at the metropolitan area of Barcelona and valuation of food provisions services). Commissioned by Barcelona Regional. March – December 2014.
13. “Asistencia técnica para la identificación de mecanismos innovadores de financiación, establecimiento de un sistema para la aplicación de dichos mecanismos, y definición de una metodología para instrumentalizar un mecanismo de sistema de Pagos por Servicios Ambientales en Red Natura 2000 (Technical assistance for identification of funding mechanisms, establishment of a system and defining a methodology for Payment for Ecosystem Services in Natura 2000. Proj. Life+ NAT/ES/700: Priority Actions for Financing Natura 2000). Marco del Proy. Life + NAT/ES/700: Marco Acciones Prioritarias de Financiación de la Red Natura 2000”. Commissioned by Fundación Biodiversidad. Ministry of Agriculture, food and Environment (Spain). September 2013 – May 2014.
14. “Evaluation of land use changes induced by payments for environmental services in Colombia”. Commissioned by the World Bank. With Dr. Jordi Honey-Rosés. Task Team Lead: Dr. Stefano P. Pagiola. January – March 2014.
15. “Propostes de fiscalitat ambiental en relació amb la mobilitat i l’edificació a Catalunya”. (Proposals on Environmental taxation in mobility and building in Catalonia). Commissioned by the Catalan Office of Climate Change. March 2013 – November 2013.
16. “Long-term land use changes and their determinants in a Payment for Environmental Services (PES) program in Matiguás-Río Blanco, Nicaragua”. Commissioned by the World Bank. With Dr. Jordi Honey-Rosés. Task Team Lead: Dr. Stefano P. Pagiola. September - December 2013.
17. “Propuestas de fiscalidad ambiental aplicables en España”. (Proposals on Environmental taxation for Spain). Commissioned by WWF. April – November 2013.
18. “Detecció d’oportunitats per a la promoció de l’ocupació verda a Catalunya”. (Opportunities for the development of green jobs in Catalonia). Commissioned by the Environment Department, Government of Catalonia. July 2012 – March 2013.
19. European Network of Political Ecology. ENTITLE”. Commissioned by the European Commission, in the framework of Marie Curie Training Network. April 2012 – 2015.
20. “Prevenió dels residus de la publicitat a Barcelona” (Prevention of waste from advertising in Barcelona). Commissioned by Barcelona city Council. March 2012 – December 2012.
21. “Estudio de pago por generación de residuos en Usurbil” (Pay-as-you-throw in Usurbil). Commissioned by Usurbil city Council. February 2012 – January 2013.
22. “Aspectes econòmics de la implantació d’un pagament per serveis ambientals en la gestió dels boscos per a millores hídriques a Catalunya” (Economic aspects of Payment for Environmental Services in forestry management for water improvements in Catalonia). Commissioned by Forestry property center (CPF). March – November 2012.
23. “Estudi de viabilitat d’aplicació d’un sistema de pagament per generació de residus a Vilafranca del Penedès”. (Pay-as-you-throw in Vilafranca del Penedès). Commissioned by Vilafranca del Penedès city Council. September 2011 – June 2012.
24. “Anàlisi dels canons de residus municipals de Catalunya: evolució, resultats i anàlisi de la seva efectivitat” (Analysis of the municipal waste taxation in Catalonia: evolution, results and effectiveness analysis). Commissioned by the Catalan Waste Agency. September 2011-March 2012.
25. “Un Green New Deal a Catalunya”. (A Green New Deal in Catalonia). Commissioned by the Green Party (ICV-EUiA). March 2012 – September 2012.

26. “Reptes i oportunitats comercials de l’adaptació al canvi climàtic” (Economic challenges and opportunities of adaptation to climate change). Commissioned by the Catalan Office of Climate Change. October 2011–February 2012.
27. “Análisis de los efectos de la reforma del impuesto especial sobre determinados medios de transporte” (Analysis of effects of transport tax reform). Commissioned by Instituto de Estudios Fiscales (IEF). September 2011 – January 2012.
28. “Pago por generación de residuos comerciales en Manresa” (Pay-as-you-throw in Manresa). Commissioned by Manresa city Council. March 2011 – September 2011.
29. “Estudi d’instruments econòmics per al foment de la prevenció dels residus municipals a Lleida” (Economic instruments to promote municipal waste prevention in Lleida). Commissioned by Lleida city Council. September 2010 – March 2011.
30. “Propostes d’actuació per a l’administració catalana per promoure l’activació del sistema financer cap a la lluita contra el canvi climàtic” (Proposals for Catalan government to promote the activation of the finance system to combat climate change). Commissioned by the Catalan Office of Climate Change. March 2010 – November 2010.
31. “Anàlisi macroeconòmica de les infraestructures hidràuliques a Catalunya” (Macroeconomic analysis of hydraulic infrastructures in Catalonia). Commissioned by the Catalan Water Agency. October 2009 – March 2010.
32. “Metodologia per a la identificació de les causes dels impropis a la FORM i propostes per a la seva reducció” (A methodology for identifying the causes of impurities in FORM and proposals for its reduction). Commissioned by the Catalan Waste Agency. July - October 2009.
33. “Impacte macroeconòmic de diverses alternatives de gestió de residus a través d’una anàlisi Input-output” (Macroeconomic impact of several alternative waste management through an input-output analysis). Commissioned by Fundació Fòrum Ambiental. February – July 2009.
34. “Valoració dels costos econòmics de la sequera a Catalunya (2007-2008)”. (Economic valuation of the costs of the 2007-2008 drought in Catalonia). Commissioned by the Catalan Water Agency. December 2008 – April 2009.
35. “Adaptació de l’estudi sobre comptabilitat satèl·lit de les emissions atmosfèriques a Catalunya.” (Adaptation of the study on satellite accounting of atmospheric emissions in Catalonia) Commissioned by the Environment Department, Government of Catalonia. March – October 2008.
36. “Energy efficiency and rebound effect: methodological developments and empirical evidence”. Predoctoral grant from the FIE 2007 program granted in accordance with Resolution IUE/2656/2007, of July 30, AGAUR, Government of Catalonia.
37. “Valoració dels costos econòmics d’una contingència en l’abastament a l’àmbit de les conques internes de Catalunya” (Economic valuation of the costs of a supply water contingency in internal basins of Catalonia). Commissioned by the Catalan Water Agency. October 2007 – July 2008.
38. “Estudi del compostatge casolà a Catalunya” (Study of home composting in Catalonia). Commissioned by the Tiana City Council and the Waste Agency of Catalonia. June – December 2007. This project won the 2008 Prize for the Environment of the Government of Catalonia.
39. “Beneficis econòmics de la millora de la qualitat de l’aigua com a conseqüència de la posada en funcionament de la dessaladora de la Tordera” (Economic benefits of water quality improvement resulting from the desalination plant of Tordera). Commissioned by the Catalan Water Agency. July – December 2007.
40. “Taxa per al tractament de residus a l’àmbit del consorci per a la gestió de residus del Vallès Occidental” (Waste treatment charge in the Consortium for waste management of Vallès Occidental). Commissioned by Consortium for waste management of Vallès Occidental. April – October 2007.

41. “Informe sobre fiscalitat ambiental i canvi climàtic” (Report on environmental taxation and climate change). Commissioned by the Environ. Department, Government of Catalonia. July – September 2007.
42. “Valoració econòmica dels beneficis domèstics deguts a la millora de qualitat de l’aigua d’abastament a la regió metropolitana de Barcelona, com a conseqüència de les actuacions previstes a la planificació hidrològica” (Economic valuation of households benefits due to improved domestic water supply for the metropolitan region as a result of the actions planned in water planning). Commissioned by the Catalan Water Agency. November 2006 –June 2007.
43. “Cost per als municipis derivats de l’aplicació del programa de gestió de residus municipals a Catalunya (2007 – 2012)” (Cost to municipalities resulting from the application of the Catalan municipal waste management programme (2007 - 2012)). Commissioned by the Waste Agency of Catalonia. January – July 2007.
44. “Estudi de les actuacions per a una nova cultura de l’aigua a Corbera de Llobregat” (Possible actions for a new water culture in Corbera de Llobregat). Commissioned by the City Council of Corbera de Llobregat. July – October 2006.
45. “El finançament del transport públic a l’àmbit de l’Entitat Metropolitana del Transport” (The financing of public transport by the Metropolitan Transportation Authority). Commissioned by Confederació d’Associacions de Veïns de Catalunya (CONFAVC). September 2006.
46. “Avaluació de l’impacte de la política ambiental sobre la competitivitat de l’economia catalana” (Assessing the impact of environmental policy on the competitiveness of the Catalan economy). Commissioned by the Environment Department, Government of Catalonia. May – September 2006.
47. “Costos i ingressos de l’urbanisme per als municipis: metodologia, cas d’estudi i propostes” (Costs and revenues of urbanism: methodology and case study proposals). Commissioned by Institut d’Urbanisme, Habitatge i Activitats Locals de la Diputació de Barcelona. February – July 2006.

ASSISTANCE AT COURSES

La adaptació al canvi climàtic: perspectiva tècnica y jurídica (*Adaptation to climate change: technical and legal perspective*), Universitat Rovira i Virgili. Tarragona, Oct. 2011.

UK Energy Research Centre Summer School. University of Warwick, Coventry (UK), June 2011.

Advanced Course: Economics for Water Ecosystem Services Management. Casa de la Ciencia, CSIC. Sevilla (Spain). May 2011.

EXIOPOL, Summer School on Environmental accounting: externality valuation and Input-Output tools for policy analysis. Venice (Italy). July 2010.

V Summer School in Public Economics. Andrew Young School of policy studies. Georgia State University. Atlanta (USA). July 2009.

V Summer School Multi-scale Integrated Analysis of Societal and Ecological Metabolism. Liphe4. Institut de Ciència i Tecnologia Ambiental (ICTA). Autonomous University of Barcelona. June 2008.