

Cristian Mardones | CV

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Research Interests

I have been active in environmental economics, energy economics, climate change economics, and economic modeling for more than ten years. I am ranked worldwide in the top 5% of economists with the most scientific publications weighted by the number of authors according to Ideas Repec <https://ideas.repec.org/top/top.person.anbpages.html#pma601>. My current research involves studying the simulation of environmental and energy policies that contribute to carbon neutrality in Chile and other countries, using Leontief price models, MRIO models, CGE models, and microsimulations. Also, I have experience conducting ex-post evaluation (impact evaluation) of environmental policies with econometrics techniques.

Education

University of Chile, Santiago, Chile. *Ph.D. in Economics*, 2006-2009

University of Concepcion, Concepcion, Chile. *M.S. in Environmental Economics and Natural Resources Economics*, 2004-2006.

University of Concepcion, Concepcion, Chile. *B.S. in Economics*, 1996 – 2000.

Teaching Experience

Associate Professor. University of Concepcion, 2016 – At the present

Assistant Professor. University of Concepcion, 2010 – 2015

External funding

1. FONDECYT Regular 2022 project No. 1220010 "Simulation of environmental and energy policies that contribute to carbon neutrality." ANID, Chile. Principal researcher. Period: 2022-2025.
2. Proyecto Fondef ID23I10431. "Towards a circular industry: Transformation of post-consumer cement bags into an additive to improve the durability and sustainability of concrete". Alternate Director and co-researcher. Period: 2023-2025.
3. FONDECYT Regular 2019 project No. 1191303 "Effectiveness of environmental taxes to

reduce CO₂ emissions in Chile: analysis under partial and general equilibrium approaches." CONICYT, Chile. Principal researcher. Period: 2019-2021.

4. CORFO 18IIP-93627 project "Breathe Biobio." Alternate Director and co-researcher. Period: 2018-2020.
5. INNOVA CHILE project No. 16PES-67902 "Building research capacities in innovation and entrepreneurship studies." Alternate Director and co-researcher. Period: 2017-2018.
6. INNOVA CHILE project No. 15PES-44389 "Generation and dissemination of knowledge to improve decision-making in public policy of innovation and entrepreneurship." Co-researcher. Period: 2015-2017.
7. FONDECYT Initiation 2011 project No. 11110007 "Modeling Tax and Redistributive Policies in Chile." CONICYT, Chile. Principal researcher. Period: 2011-2012.

Publications

1. **Mardones, C.** (2025). Internalizing the externalities of fine particulate matter emitted by firewood heaters through environmental taxes. *Renewable Energy*. In press.
2. Fernández-López, R., **Mardones, C.**, Sosa, G., Navarrete, J.P. (2025). Assessing the environmental impact of the carbon tax in Chile using a Bayesian difference-in-differences approach. *Annals of Operations Research*. In press.
3. **Mardones, C.**, Henríquez, V. (2025). Estimating elasticities of substitution and price elasticities of industrial demand using different levels of aggregation for energy inputs. *Energy*, 336, 138499. <https://doi.org/10.1016/j.energy.2025.138499>
4. Fernández-López, R., **Mardones, C.** (2025). Impact evaluation of the carbon tax in Chile using the difference-in-differences method. *Energy*, 318, 134863. <https://doi.org/10.1016/j.energy.2025.134863>
5. **Mardones, C.** (2025). An input-output approach to study the impact of carbon taxes in (almost) every country. *Environmental Development*, 53, 101102. <https://doi.org/10.1016/j.envdev.2024.101102> (WOS; Q2)
6. **Mardones, C.**, Albornoz, F., Cuevas, C., Rozas, C. (2024). Finding cost-effective options to reduce fine particulate matter emissions in a city highly polluted by firewood heaters. *International Journal of Environmental Science and Technology*, In press. <https://doi.org/10.1007/s13762-024-06140-3> (WOS; Q3)
7. **Mardones, C.** Herreros, P. (2025). Does corporate social responsibility contribute to reducing energy intensity? *Environment, Development & Sustainability*. In press. <https://doi.org/10.1007/s10668-024-05357-z> (WOS; Impact Factor year 2023: 4.7)
8. **Mardones, C.**, Correa, M. (2025). Methodological proposal to approximate the sectoral impacts of a carbon tax at the regional level – The case of Chile. *Economic System Research*. 1–24. <https://doi.org/10.1080/09535314.2024.2397974> (WOS; Impact Factor year 2023: 1.8)
9. **Mardones, C.** (2024). Internalization of the social cost of carbon in each of the countries of the world—An economic assessment of its impacts. *Energy Efficiency*, 17, 79. <https://doi.org/10.1007/s12053-024-10261-6> (WOS; Impact Factor year 2023: 3.2)
10. Jimenez, J., Fernández, A., **Mardones, C.** (2024). Impact of atmospheric particle concentrations on respiratory diseases in the population of the city of Los Ángeles, Chile.

- Revista Internacional de la Contaminación Ambiental*, 40. In press. <https://doi.org/10.20937/RICA.54987> (WOS WOS; Impact Factor year 2023: 0.4)
11. **Mardones, C.**, Albornoz, F. (2024). Cost-effective options to reduce emissions from residential firewood heating in south-central Chile. *Energy*, 308, 132919. <https://doi.org/10.1016/j.energy.2024.132919> (WOS; Impact Factor year 2023: 9.0)
 12. **Mardones, C.** (2024). Improving the estimation of the distributional impacts of carbon pricing and targeted transfers to reduce its regressivity in Latin American countries. *Ecological Economics*, 225, 108336. <https://doi.org/10.1016/j.ecolecon.2024.108336> (WOS; Impact Factor year 2023: 6.6)
 13. **Mardones, C.** (2024). Estimation of green mining GDP for 40 countries. *Natural Resources Forum*, 2024, 48(3), 715–742. <https://doi.org/10.1111/1477-8947.12336> (WOS; Impact Factor year 2023: 3.5)
 14. **Mardones, C.**, Alvial, E. (2024). Evaluation of a carbon tax in Costa Rica linking a demand system focused on energy goods and an input-output model. *Applied Energy*, 363, 123078. <https://doi.org/10.1016/j.apenergy.2024.123078> (WOS; Impact Factor year 2023: 10.1)
 15. **Mardones, C.**, Andaur, C. (2024). Evaluating carbon taxes in Argentina based on the demand for GHG-intensive goods and an input-output approach. *Sustainable Production and Consumption*, 2024, 46, 418–429. <https://doi.org/10.1016/j.spc.2024.03.007> (WOS; Impact Factor year 2023: 10.9)
 16. **Mardones, C.** (2024). Measuring the efficiency gains of merging carbon markets – A microsimulation for thermoelectric and industrial sources. *Energy*, 290, 130108. <https://doi.org/10.1016/j.energy.2023.130108> (WOS; Impact Factor year 2023: 9.0)
 17. **Mardones, C.** (2024). Contribution of the carbon tax, phase-out of thermoelectric power plants, and renewable energy subsidies for the decarbonization of Chile – A CGE model and microsimulations approach. *Journal of Environmental Management*, 2024, 352, 120017. <https://doi.org/10.1016/j.jenvman.2024.120017> (WOS; Impact Factor year 2023: 8.0)
 18. **Mardones, C.** (2024). Analyzing the complementarity between thermal improvement and the replacement of wood-burning heaters to reduce outdoor air pollution. *International Journal of Environmental Science and Technology*, 21(1), 189–204. <https://doi.org/10.1007/s13762-023-04964-z> (WOS; Impact Factor year 2023: 3.0)
 19. **Mardones, C.** & Orellana, A. (2023). Estimating production functions to determine the marginal economic value and price elasticity of water in the Chilean industrial sector. *Utilities Policy*. 85, 101677. <https://doi.org/10.1016/j.jup.2023.101677> (WOS; Impact Factor year 2023: 3.8)
 20. **Mardones, C.** (2023). Economic and environmental effects of financing subsidies for non-conventional renewable energies with a carbon tax – A comparison of intersectoral models. *Renewable Energy*, 217, 119205. <https://doi.org/10.1016/j.renene.2023.119205> (WOS; Impact Factor year 2023: 9.0)
 21. **Mardones, C.** & Orellana, A. (2023). Estimation of a demand system to obtain the price elasticities of water and elasticities of substitution in the Chilean industrial sector. *Water Resources and Economics*, 44, 100234. <https://doi.org/10.1016/j.wre.2023.100234> (WOS; Impact Factor year 2023: 2.3)
 22. **Mardones, C.**, Herreros, P. (2023). Ex post evaluation of voluntary environmental policies on the energy intensity in Chilean firms. *Environment, Development and Sustainability*,

- 25, 9111–9136. <https://doi.org/10.1007/s10668-022-02426-z> (WOS; Impact Factor year 2023: 4.7)
23. **Mardones, C.** (2023). Economic, environmental, and social assessment of the replacement of coal-fired thermoelectric plants for solar and wind energy in Chile. *Journal of Cleaner Production*, 411, 137343. <https://doi.org/10.1016/j.jclepro.2023.137343> (WOS; Impact Factor year 2023: 9.7)
24. **Mardones, C., Silva, D.** (2022). Evaluation of Non-survey Methods for the Construction of Regional Input–Output Matrices When There is Partial Historical Information. *Computational Economics*, 61(3), 1173–1205. <https://doi.org/10.1007/s10614-022-10241-x> (WOS; Impact Factor year 2023: 1.9)
25. Campos, L., & **Mardones, C.** (2023). An Economic Evaluation of the Health and Agricultural Damages Caused by Copper Mining in Chile. *Latin American Research Review*, 58(2), 342–367. <https://doi.org/10.1017/lar.2022.16> (WOS; Impact Factor year 2023: 0.7)
26. **Mardones, C., & Ortega, J.** (2023). The individual and combined impact of environmental taxes in Chile – A flexible computable general equilibrium analysis. *Journal of Environmental Management*, 325, 116508. <https://doi.org/10.1016/j.jenvman.2022.116508> (WOS; Impact Factor year 2023: 8.0)
27. **Mardones, C.** (2022). Economic effects of isolating Russia from international trade due to its ‘special military operation’ in Ukraine. *European Planning Studies*, 31(4), 663–678. <https://doi.org/10.1080/09654313.2022.2079074> (WOS; Impact Factor year 2023: 2.6)
28. **Mardones, C.** (2022). Pigouvian taxes to internalize environmental damages from Chilean mining—A computable general equilibrium analysis. *Journal of Cleaner Production*, 362, 132359. <https://doi.org/10.1016/j.jclepro.2022.132359> (WOS; Impact Factor year 2023: 9.7)
29. **Mardones, C.** (2022). Impact of the critical episode management program on emergency room admissions for respiratory diseases in south-central Chile. *Air Quality, Atmosphere and Health*, 15(6), 1079–1094. <https://doi.org/10.1007/s11869-022-01191-2> (WOS; Impact Factor year 2023: 2.9)
30. **Mardones, C. & Sepulveda, L.** (2022). Public Funding Effects on Inputs and Outputs from the Innovative Process in Chilean Firms. *Economics of Innovation and New Technology*, 31(5), 416–445. <https://doi.org/10.1080/10438599.2020.1827574> (WOS; Impact Factor year 2023: 3.2).
31. **Mardones, C., Ortega, J.** (2021). Are the emissions trading systems’ simulations generated with a computable general equilibrium model sensitive to the nested production structure? *Applied Energy*, 298, 117222. <https://doi.org/10.1016/j.apenergy.2021.117222> (WOS; Impact Factor year 2023: 10.1)
32. **Mardones, C., Velásquez, A.** (2021). Macroeconomic, intersectoral, and environmental effects of R&D subsidies in Chile: An input-output approach. *Technological Forecasting and Social Change*, 173, 121112. <https://doi.org/10.1016/j.techfore.2021.121112> (WOS; Impact Factor year 2023: 12.9)
33. **Mardones, C.** (2021). Ex-post evaluation of residential insulation program in the city of Temuco, Chile. *Energy for Sustainable Development*, 62, 126–135. <https://doi.org/10.1016/j.esd.2021.04.003> (WOS; Impact Factor year 2023: 4.4)

34. **Mardones, C., & Silva, D. (2021).** Estimation of regional input coefficients and output multipliers for the regions of Chile. *Papers in Regional Science*, 100(4), 875-889. <https://doi.org/10.1111/pirs.12603> (WOS; Impact Factor year 2023: 2.4)
35. **Mardones, C. (2021).** Ex-post evaluation and cost-benefit analysis of a heater replacement program implemented in southern Chile. *Energy*, 227, 120484. <https://doi.org/10.1016/j.energy.2021.120484> (WOS; Impact Factor year 2023: 9.0)
36. **Mardones, C. & Brevis, C. (2021).** Constructing a SAMEA to analyze energy and environmental policies in Chile. *Economic System Research*, 33(4), 576-602. <https://doi.org/10.1080/09535314.2020.1839386> (WOS; Impact Factor year 2023: 1.8).
37. **Mardones, C. (2021).** Ex-post evaluation of public funding programs on innovation in Chilean firms. *Revista Contaduría y Administración*, Vol. 66(3), 00011. (SCOPUS)
38. **Mardones, C. (2021).** Analysis on complementarity between a CO₂ tax and an emissions trading system to reduce industrial emissions in Chile. *Energy & Environment*, 32(5), 820–833. <https://doi.org/10.1177/0958305X20954197> (WOS; Impact Factor year 2023 4.0)
39. **Mardones, C. & Ávila, F. (2020).** Effect of R&D subsidies and tax credits on the innovative processes of Chilean firms. *Academia Revista Latinoamericana de Administracion*, 33(3-4), 517–534. <https://doi.org/10.1108/ARLA-08-2020-018> (WOS; Impact Factor year 2023: 1.3)
40. **Mardones, C. & Mena, C. (2020).** Effects of the internalization of the social cost of global and local air pollutants in Chile. *Energy Policy*, 147, 111875. <https://doi.org/10.1016/j.enpol.2020.111875> (WOS; Impact Factor year 2023: 9.3)
41. **Mardones, C. & García, C. (2020).** Effectiveness of CO₂ taxes on thermoelectric power plants and industrial plants. *Energy*, 206, 118157. <https://doi.org/10.1016/j.energy.2020.118157> (WOS; Impact Factor year 2023: 9.0)
42. **Mardones, C. & Mena, C. (2020).** Economic, environmental and distributive analysis of the taxes to global and local air pollutants in Chile. *Journal of Cleaner Production*, 259, 120893. <https://doi.org/10.1016/j.jclepro.2020.120893> (WOS; Impact Factor year 2023: 9.7)
43. **Mardones, C. & Lipski, M. (2020).** A carbon tax on agriculture?—a CGE analysis for Chile. *Economic System Research*, 32(2), 262-277. <https://doi.org/10.1080/09535314.2019.1676701> (WOS; Impact Factor year 2023 1.8)
44. **Mardones, C. & Cornejo, N. (2020).** Ex-post evaluation of environmental decontamination plans on air quality in Chilean cities. *Journal of Environmental Management*, 256, 109929. <https://doi.org/10.1016/j.jenvman.2019.109929> (WOS; Impact Factor year 2023: 8.0)
45. **Mardones, C. & Madrid, N. (2020).** Ex-Post Evaluation of the R&D Tax Incentive Law in Chile. *Academia Revista Latinoamericana de Administracion*, 33(3-4), 337–359. <https://doi.org/10.1108/ARLA-03-2019-0092> (WOS; Impact Factor year 2023: 1.3)
46. **Mardones, C. & Cornejo, N. (2020).** Ex - post evaluation of a program to reduce critical episodes due to air pollution in southern Chile. *Environmental Impact Assessment Review*, 80, 106334. <https://doi.org/10.1016/j.eiar.2019.106334> (WOS; Impact Factor year 2023: 9.8)

47. García, C. & **Mardones, C.** (2020). Análisis de un impuesto al CO₂ sobre generadoras termoeléctricas usando indicadores de costo-efectividad. *Revista Internacional de Contaminación Ambiental*, 36(2), 333-349. <https://doi.org/10.20937/rica.53406> (WOS; Impact Factor year 2023: 0.4)
48. **Mardones, C.** (2019). Short- and long-term ex post evaluation of community-based environmental initiatives in Chile. *Cepal Review*, 128, 155-181. <https://hdl.handle.net/11362/44983> (WOS; Impact Factor year 2023: 0.3)
49. Espinoza, C., **Mardones, C.**, Saez, K., Catalan, P. (2019). Entrepreneurship and regional dynamics: the case of Chile. *Entrepreneurship and Regional Development*, 31(9-10), 755–767. <https://doi.org/10.1080/08985626.2019.1565421> (WOS; Impact Factor year 2023: 3.3)
50. Remaggi, J., **Mardones, C.** & Jiménez, J. (2019) Impacto de la contaminación por material particulado sobre las atenciones de urgencias por causas respiratorias en Chillán, Concepción y Los Ángeles. *Revista Chilena de Enfermedades Respiratorias*, 35, 181-190. <http://dx.doi.org/10.4067/S0717-73482019000300181> (SCIELO)
51. **Mardones, C.**, Cabello, M. (2019). Effectiveness of local air pollution and GHG taxes: the case of Chilean industrial sources. *Energy Economics*, 83, 491-500. <https://doi.org/10.1016/j.eneco.2019.08.007> (WOS; Impact Factor year 2023: 13.6)
52. **Mardones, C.**, Biénzobas, R. (2019). Ex-post evaluation of clean production agreements in the Chilean industrial sectors. *Journal of Cleaner Production*, 213, 808-818. <https://doi.org/10.1016/j.jclepro.2018.12.228> (WOS; Impact Factor year 2023: 9.7)
53. **Mardones, C.**, del Rio, R. (2019). Correction of Chilean GDP for natural capital depreciation and environmental degradation caused by copper mining. *Resources Policy*, 60, 143-152. <https://doi.org/10.1016/j.resourpol.2018.12.010> (WOS; Impact Factor year 2023: 10.2)
54. **Mardones, C.** (2019). Determining the ‘optimal’ level of pollution (PM_{2.5}) generated by industrial and residential sources, *Environment Impact Assessment Review*, 74, 14-22. <https://doi.org/10.1016/j.eiar.2018.09.003> (WOS; Impact Factor year 2023: 9.8)
55. **Mardones, C.**, & Zapata, A. (2019). Impact of public support on the innovation probability in Chilean firms. *Economics of Innovation and New Technology*, 28(6), 569-589. <https://doi.org/10.1080/10438599.2018.1546548> (WOS; Impact Factor year 2023: 3.2)
56. **Mardones, C.**, & Zapata, A. (2019). Determinants of public funding for innovation in Chilean firms, *Contaduría y Administración*, 64, 1-16. <https://doi.org/10.22201/fca.24488410e.2018.1602> (SCOPUS/SCIELO)
57. **Mardones, C.**, & Zapata, A. (2018). Factors explaining firms’ receipt of public funding for innovation: the case of Chilean small and medium-sized enterprises. *Journal of Technology Management & Innovation*, 13(2), 12-22. <http://dx.doi.org/10.4067/S0718-27242018000200012> (SCOPUS)

58. **Mardones, C. & B. Flores** (2018). Effectiveness of a CO₂ tax on industrial emissions. *Energy Economics* 71,370-382. <https://doi.org/10.1016/j.eneco.2018.03.018> (WOS; Impact Factor year 2023: 13.6)
59. **Mardones, C. & M. Riquelme** (2018). Estimation of the value of statistical life in Chile and extrapolation to other Latin American countries. *Latin American Research Review*, 53(4), 815-830. <https://doi.org/10.25222/larr.61> (WOS; Impact Factor year 2023: 0.7)
60. **Mardones, C. & T. Muñoz** (2018). Environmental taxation for reducing greenhouse gases emissions in Chile: an input-output analysis. *Environment Development & Sustainability*, 20(6), 2545-2563. <https://doi.org/10.1007/s10668-017-0004-z> (WOS; Impact Factor year 2023: 4.7)
61. **Mardones, C. & N. Baeza** (2017). Economic and environmental effects of a CO₂ tax in Latin American countries. *Energy Policy* 114, 262-273. <https://doi.org/10.1016/j.enpol.2017.12.001> (WOS; Impact Factor year 2023: 9.3)
62. **Mardones, C. & J. Fuentes** (2017). Regulaciones para reducir emisiones de MP_{2.5} y externalidades sobre sus precursores cuando existe disponibilidad de un combustible limpio. *Revista Internacional de Contaminación Ambiental*, 33(3), 505-520. <https://doi.org/10.20937/rica.2017.33.03.13> (WOS WOS; Impact Factor year 2023: 0.4)
63. **Mardones, C. & B. Flores** (2017). Evaluation of a CO₂ tax in Chile: Emissions Reduction or design problems? *Latin American Research Review*, 52(3), 334-343. <https://doi.org/10.25222/larr.33> (WOS; Impact Factor year 2023: 0.7)
64. **Mardones, C. & A. Hernández** (2017). Análisis de subsidio al sector silvícola de la región del Biobío, Chile. *Madera y Bosques*, 23 (2), 53-68. <https://doi.org/10.21829/myb.2017.2321494> (WOS; Impact Factor year 2023: 0.4)
65. **Mardones, C. & L. Sepulveda** (2017). Evaluación ex-post de franquicia tributaria SENCE para capacitación laboral y su efecto sobre empresas chilenas. *Estudios Gerenciales*, 33(143), 163-176. <https://doi.org/10.1016/j.estger.2017.03.001> (SCOPUS).
66. **Mardones, C. & T. Muñoz** (2017). Impuesto al CO₂ en el Sector Eléctrico Chileno: Efectividad y Efectos Macroeconómicos. *Revista Economía Chilena*, 20(1), 4-25. <https://hdl.handle.net/20.500.12580/3587> (SCOPUS).
67. **Mardones, C. & A. Saavedra** (2016). Comparison of economic instruments to reduce PM_{2.5} from industrial and residential sources. *Energy Policy*, 68, 443-452. <https://doi.org/10.1016/j.enpol.2016.09.011> (WOS; Impact Factor year 2023: 9.3).
68. Muñoz, T. & **C. Mardones** (2016). Simulation of a CO₂e tax to mitigate impacts from Chilean agricultural and livestock sectors on climate change. *Agrociencia*, 50(3), 271-285. <https://www.scielo.org.mx/pdf/agro/v50n3/1405-3195-agro-50-03-271.pdf> (WOS; Impact Factor year 2023: 0.5).
69. **Mardones, C. & C. Gárate** (2016). Participación de mercado y decisiones de marketing: un estudio de la industria chilena. *Revista Contaduría y Administración*, 61(2), 243-265. <https://doi.org/10.1016/j.cya.2015.12.003> (SCOPUS).

70. Carrasco, R., J. Jiménez & **C. Mardones** (2016). Análisis costo-beneficio de calefacción distrital en la zona central de Chile. *Revista Internacional de Contaminación Ambiental*, 32(1), 35-45. <https://www.scielo.org.mx/pdf/rica/v32n1/0188-4999-rica-32-01-00035.pdf> (WOS; Impact Factor year 2023: 0.4).
71. **Mardones, C.** (2015). An Income Tax Increase to Fund Higher Education: A CGE Analysis for Chile. *Economic Systems Research*, 27(3), 324-344. <https://doi.org/10.1080/09535314.2015.1030359> (WOS Impact Factor year 2023: 1.8).
72. **Mardones, C.** & J. Jimenez (2015). Alternatives for reducing fine particulate matter from industrial activities in Concepción Metropolitan Area, Chile. *Energy & Environment*, 26(3), 445-456. <https://doi.org/10.1260/0958-305X.26.3.445> (WOS; Impact Factor year 2023: 4.0).
73. **Mardones, C.** & L. Sanhueza (2015). Tradable Permit System for PM_{2.5} Emissions from Residential and Industrial Sources. *Journal of Environmental Management*, 157, 326–331. <https://doi.org/10.1016/j.jenvman.2015.03.054> (WOS; Impact Factor year 2023: 8.0).
74. Rioseco, G., **C. Mardones** & J. Jiménez (2015). Efecto Directo e Indirecto de la Dispersión de las Emisiones Industriales sobre la Regulación Ambiental. *Revista de Análisis Económico*, 30(2), 79-96. <http://dx.doi.org/10.4067/S0718-88702015000200004> (SCOPUS).
75. **Mardones, C.**, A. Saavedra & J. Jiménez (2015). Cuantificación económica de los beneficios en salud asociados a la reducción de la contaminación por MP₁₀ en Concepción Metropolitano, Chile. *Revista Médica de Chile*. 143, 475-483. <http://dx.doi.org/10.4067/S0034-98872015000400009> (WOS; Impact Factor year 2023: 0.5).
76. Sanhueza, L., **Mardones, C.**, J. Jiménez (2015). Efectos de la incorporación de fuentes residenciales en mecanismos de compensación de emisiones industriales de MP₁₀. *Revista Internacional de Contaminación Ambiental*, 31(3), 279-291. <https://www.scielo.org.mx/pdf/rica/v31n3/v31n3a8.pdf> (WOS WOS; Impact Factor year 2023: 0.4).
77. **Mardones, C.**, C. Paredes, J. Jiménez, O. Farías & P. Catalán (2015). Tecnologías de control de emisiones y disponibilidad de gas natural como opciones para reducir emisiones de MP_{2,5} en el Concepción Metropolitano. *Revista de Análisis Económico*, 30(1), 3-23. <http://dx.doi.org/10.4067/S0718-88702015000100001> (SCOPUS).
78. **Mardones, C.** (2014). Complementariedad entre impuestos planos y subsidios monetarios para mejorar la distribución del ingreso en Chile. *Economía Chilena*, 17(3), 4-27. <https://hdl.handle.net/20.500.12580/3568> (SCOPUS).
79. Alegría, M., **Mardones, C.** & J. Jimenez (2013). Reduction of PM₁₀ emissions under scenarios of regulation and availability of natural gas in the Bío-Bío Region, Chile. *Energy & Environment*, 24(6), 1031-1041. <https://doi.org/10.1260/0958-305X.24.6.1031> (WOS; Impact Factor year 2023: 4.0).

80. **Gallardo, A.** & C. Mardones (2013). Environmentally Extended Social Accounting Matrix for Chile. *Environment Development & Sustainability*, 15, 1099-1127. <https://doi.org/10.1007/s10668-012-9430-0> (SCOPUS).
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82. **Mardones, C.,** J. Jimenez & M. Alegría (2012). Reducción Costo-efectiva de Emisiones Industriales en Concepción Metropolitano, Chile: Gas Natural vs. Tecnologías de Abatimiento. *Interciencia* 37(10), 751-756. <https://www.redalyc.org/pdf/339/33925472003.pdf> (WOS; Impact Factor year 2023: 0.4).
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Service activities

1. Member of the “Higher Council for Science and Technology”, Fondecyt/ANID (2022 – 2022).
2. Peer reviewer of several national and private agencies: The National Accreditation Committee (CNA) (since 2019), the CONICYT (2019 – 2020), and the ANID (2021 – 2022).
3. Ph. D program of Industrial Engineering, Committee, Universidad de Concepción (2022 – 2022).
4. Ph. D program of Energies, Director, Universidad de Concepción (2022 – 2025).

International Consulting Experience

Inter-American Development Bank, Consultant, 2021. Project: "Climate Change Consultant for Designing, Executing, and Communicating Microsimulations of Environmental Tax Reforms and Compensation Packages"

National Consulting Experience

1. Ministry of Environment (Chile), Consultant, 2018. Project: "Retrospective analysis of the implementation of green taxes on automobiles."
2. Ministry of Environment (Chile), Consultant, 2017. Project: "Preparation of ex - post evaluation of the atmospheric decontamination plan - PDA of Temuco."
3. Ministry of Environment (Chile), Consultant, 2016. Project: "Preparation of a methodological guide for the ex-post evaluation of environmental policies."
4. Ministry of Energy (Chile), Consultant, 2014. Project: "Cost-benefit of implementing a natural gas network in cities with intensive firewood consumption."
5. Australis Power, Consultant, 2014. Project: "Analysis of natural gas availability scenarios on the industrial sector of Metropolitan Concepción."
6. Ministry of Environment (Chile), Consultant, 2014. Project: "Preparation of the diagnosis of air quality and decontamination measures in Talca and Maule."
7. Ministry of Environment (Chile), Consultant, 2012. Project: "Preparation of the general analysis of the economic and social impact of the prevention plan by PM10 in the Metropolitan Concepción."
8. Lota Protein, Consultant, 2011. Project: "Study for the analysis of the efficiency of the national fishing sector."
9. Ministry of Environment (Chile), Consultant, 2011. Project: "Preparation of the general analysis of the economic and social impact of the decontamination plan in Central Valley of O'Higgins region."
10. Regulación & Mercados, Consultant, 2010. Project: "Pricing process for GTD"
11. Ministry of Employment, Consultant, 2008. Project: "Preparation of a study on unemployment and occupation in districts of Biobío region."
12. Ministry of Public Works (DGA, Chile), Consultant, 2008. Project: "Preparation of a study on the socioeconomic impact of the secondary water quality standard of Huasco river."
13. Ministry of Public Works (DGA, Chile), Consultant, 2008. Project: "Preparation of a study on the socioeconomic impact of the secondary water quality standard of Mataquito river."
14. Ministry of Environment (CONAMA Biobío Region, Chile), Consultant, 2007. "Preparation of socioeconomic impact study of decontamination plan by PM₁₀"
15. Ministry of Economy (CORFO Biobío Region, Chile), Consultant, 2007. Project: "Study of the demand of the main industries in the country, identification of regional metalworking SMEs and definition of target markets for investors."
16. Ministry of Environment (CONAMA Los Lagos Region, Chile), Consultant, 2007. Project: "Preparation of a study of the socioeconomic impact of the secondary standard of water quality of Llanquihue Lake."

17. Ministry of Environment (CONAMA Antofagasta Region, Chile), Consultant, 2007. Project:
"Preparation of a study of the socioeconomic impact of the prevention plan for SO₂."