Alan Leal

Economist | Ph.D. in Economics, University of São Paulo, Brazil

Regional Economics | International Trade | Environmental Economics

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Summary

Alan Leal holds a Ph.D. in Economics from the University of São Paulo, Brazil. He is specialized in regional economics, international trade, and environmental economics, with both academic and professional experience in these three areas. He is thoroughly experienced in several programming languages as his GitHub page can attest. He is the creator of an input-output and spatial econometrics packages in Julia, a non-cointegration test implementation in Stata and Matlab, and more recently an R package on Brazilian international trade data. He is also specialized in several theoretical and empirical modeling approaches, with published papers on game theory, CGE, dynamic panels, time series, input-output, staggered differences-in-differences, among other methods. He is well versed in GIS software and packages, such as QGIS, ArcMap, and Julia, R, and Python's geospatial libraries. He strives for the intersection of well-grounded theory and evidence-based insights that can support policy makers and other stakeholders. He is currently employed at Climate Policy Initiative as a senior analyst.

Academic Formation

University of São Paulo

Ph.D. in Economic Theory | *2021 - 2025*
Dissertation: International Trade and Deforestation: the Political Economy behind Brazilian Land-Intensive Exports

Universidade Federal de Minas Gerais

Master's in Economics | *2018 - 2020*
Thesis: Two essays on the relevance of interest rates on capital flows and credit

Universidade Federal de Viçosa

Bachelor in Economics | *2014 - 2017*
Excellent academic performance certificate

Professional Experiences

Climate Policy Initiative | Senior Analyst

April 2025 - Present | Rio de Janeiro, RJ

- Senior Analyst working with the rural credit and small farms access workstream
- Responsible for drafting policy-oriented research and engaging with small farmers, organizations, financiers, and government

Inter-American Development Bank | External Consultant

August 2024 - March 2025 | Brasília, DF

- External consultant in the evaluation of federal subsidies with the Budget and Planning Ministry, focusing on tributary and financial subsidies

Talanoa Institute | Climate Policy Analyst

May 2022 - December 2022 | São Paulo, SP
- Climate Policy Analyst analyzing the Brazilian accession to OECD, within a climate and environmental lens

Fundação Instituto de Pesquisas Econômicas (FIPE) | Researcher

November 2023 - December 2024 | São Paulo, SP
- Impact of PROADI/SUS on the Brazilian economy (GDP and employment)
- Regional intelligence for hearing aid devices
- Indicators for the I Plan of Policies for Women in the state of São Paulo

Universidade Federal de Minas Gerais/Belo Horizonte City Hall | Researcher

February 2020 - January 2021 | Belo Horizonte, MG
- Update in the modeling of Belo Horizonte's real estate appraisal, employing spatial econometrics methods and machine learning

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Teaching Experiences

- **Econometrics** (2021-2022) - Causal Inference at undergraduate level
- **Calculus** (2019) - Introduction to Calculus at undergraduate level
- **Calculus** (2015-2017) - Calculus at undergraduate level

Peer-reviewed Published Papers

- Leal, A., & Haase, M. A. O. (2025). Instant payments and banks: the impacts of PIX on bank branches in Brazil. *Economia Ensaios*.
- Leal, A., & Martins, M. M. V. (2025). Brazilian exports imputation: a new algorithm for estimating the municipal production directed at the foreign market. *Revista Brasileira de Estudos Regionais e Urbanos*.
- Trevizan, A. F., Leal, A. M. M., & Valle, V. E. N. (2025). Forest trade on the Amazon frontier and its interaction with the EUDR. *International Journal for the Semiotics of Law*. https://doi.org/10.1007/s11196-025-10250-7
- Rocha, A., Haddad, E., Leal, A., & Corrêa, J. (2024). Water charge and conservation of natural areas: An ex-ante assessment of a policy proposal for the Mantiqueira region, Brazil. *Water Resources Research*. https://doi.org/10.1029/2023WR034510
- Silva, J. F., Silva, F. F., Leal, A. M. M., & Oliveira, H. C. (2021). Regional economic resilience and mining in the State of Minas Gerais/Brazil: The barriers of productive specialisation to formal employment and tax management. *Resources Policy*. https://doi.org/10.1016/j.resourpol.2020.101983
- Leal, A. M. M., & Teixeira, E. C. (2021). Efeito do transtorno depressivo sobre os rendimentos do trabalho por gênero e setor produtivo brasileiro. *Revista Desenvolvimento Socioeconômico em Debate*.
- Leal, A. M. M., & Teixeira, E. C. (2021). Percepção da corrupção e o desempenho acadêmico de estudantes. *RACEF*, 12(3). http://dx.doi.org/10.13059/racef.v12i3.672
- Leal, A. M. M., Santos, F. P., & Romero, J. P. (2021). Efeitos do crescimento econômico sobre a desigualdade salarial por gênero no Nordeste-Brasil. *Revista GeoNordeste*.

Selected Working Papers

- Leal, A., & Martins, M. M. V. (2025). Do more open economies lead to export concentration? The case of selected agribusiness goods in Brazilian municipalities. SSRN. https://dx.doi.org/10.2139/ssrn.5345901
- Leal, A., D'Amato, S., & Viveiros, I. (2021). Short and long-run relations between capital netflows and the differential of American and Brazilian interest rates. *Textos para Discussão Cedeplar-UFMG*, TD 629. (in press for the Economia Aplicada)

Publications (Miscellaneous)

- Leal, A. (2025). *Julia para economistas regionais* [*Julia for regional economists*] (2nd ed.). Author. https://alanleal-econ.com/wp-content/uploads/2025/08/Julia_para_Economistas_Regionais_2_ed.pdf

Code and Packages

- comexTL - R package for Brazilian international trade data
- SpatialEconometrics.jl - Julia package for spatial econometrics
- InputOutput.jl - Julia package for input-output analysis
- ncointtest - Stata implementation of non-cointegration test
- ncointtest_matlab - Matlab implementation of non-cointegration test

Technical Skills

Software and Languages:
- R (advanced)
- Python (advanced)
- Julia (advanced)
- Stata, MATLAB
- ArcMap, QGIS

Econometric Methods:
- Panel data
- Time series
- Spatial econometrics
- CGE models
- Panel VAR

Languages

- Portuguese (Native)
- English (Fluent)