



ICAE

Instituto Complutense
de
Análisis Económico

ANNUAL REPORT 2023

1. PRESENTATION

The **Institute of Economic Analysis (ICAE)** is a research center at the Complutense University of Madrid founded in 1993 by academics to improve the understanding of Macroeconomics, Microeconomics, Monetary and Financial Economics, Econometrics and Mathematics.

ICAE is currently composed of 25 members and is constantly expanding. Most of the research conducted at ICAE is performed with funds from government research projects, the Complutense University and private institution that support research, training, economic and financial advice through various agreements.

ICAE conducts [research](#) on macroeconomics, microeconomics, econometrics and finance and disseminates it through publications in top journals, [working papers](#), conferences and other initiatives. Our academics use online resources, such as RePec, to promote our research-based policy analysis and enhance the dissemination of research in Economics.

ICAE also offers economic and financial advice and expertise for public and private institutions. Several members of ICAE are advisors for Spanish companies or administrations. The Institute provides expertise for various studies and training programs

ICAE organizes joint [research seminars](#) and workshops with the [department of Economic Analysis](#) at the Complutense University where its own researchers and other academics present the results of their most recent works in Economic Theory, Econometrics and Finance.

The ICAE participates in the twice yearly (spring and autumn) Panel analysis of the state of the Spain.

2. PEOPLE

Management team

Teodosio Pérez-Amaral	<i>Director</i>
Antonia Díaz	<i>Deputy Director</i>
Carmelo Rodríguez-Álvarez	<i>Academic Secretary</i>

Founders and Senior Strategic Advisors

Antonio Abadía
Alfonso Novales

Researchers

Francisco Javier André	Juan César Palomino
Andrés Barge-Gil	Teodosio Pérez-Amaral
Marcos Bujosa	Rafaela M ^a Pérez
Ester Camiña	Luis A. Puch
José Ignacio Conde-Ruiz	M ^a Dolores Robles
Gisela di Meglio	Carmelo Rodríguez-Álvarez
Antonia Díaz	Juan Gabriel Rodríguez
Manuel Domínguez	Jesús Ruiz
M ^a Esther Fernández	Rafael Salas
Alfredo García-Hiernaux	Daniel Santín
Iñigo Herguera	José Félix Sanz
Elena Huergo	Marcello Sartarelli
Miguel Jerez	Miguel Sebastián
Juan Ángel Jiménez-Martín	Raquel Sebastián
Blanca Martínez	Simón Sosvilla-Rivero
Alfonso Novales	Angel Valarezo
José M ^a Ortiz-Villajos	



Research fellows

Chia-Lin Chang

Lola Collado

Luis Franjo

Aurora García Gallego

Manuel García Goñi

Laura García Jorcano

Marta Gómez-Puig

Laurentiu Guinea

Alfredo Ibáñez

M^a José Luengo-Prado

Imran Shah

Carlos Vidal-Meliá

Administrative Secretary

Adelaida Dohijo Gutiérrez

3. PUBLICATIONS

Journal articles

- Efficient water use and reusing processes across Spanish regions: A circular data envelopment analysis with undesirable inputs
Journal of Cleaner Production.
<https://doi.org/10.1016/j.jclepro.2023.139929>
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- *Media Coverage of Carbon Neutral Organizations in Costa Rica*
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- *Socioeconomic driving forces behind air polluting emissions in Mexico*
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- *The Effect of Science and Technology Parks on Tenant Firms: A literature review*
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- *Los canales de la política monetaria*
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- *An indicator of monetary bias for emerging and partially dollarized economies: The case of Uruguay*
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<https://doi.org/10.1016/j.iref.2023.01.004>
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- *Identification of canonical models for vectors of time series: A subspace approach*
Statistical Papers.
<https://doi.org/10.1007/s00362-023-01451-y>
Garcia-Hiernaux, A., Casals, J., Jerez, M.
- *Forecasting unemployment with Google Trends: Age, gender and digital divide*
Empirical Economics, 65, 587-605.
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Mulero, R., Garcia-Hiernaux, A.
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Industry and Innovation 30:7, 755-765.
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Yang, R., Caporin, M., **Jiménez-Martín, J.A.**
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Ciarreta, A., **Martínez, B.**, Nasirov, S.
- *El marco institucional para la evaluación de políticas públicas en España*
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- *Maximal Domains for Strategy Proof Pairwise Exchange*
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- *Desigualdad de las rentas de mercado en España: procesos generadores y políticas*
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- *Ideology and policy decision-making in the face of the Coronavirus pandemic in the USA*
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- *The labour market, income per capita and welfare in Europe: An overview of the last two decades*
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- *Financial market analogies of the COVID-19 pandemic: evidence from the Dow Jones Industrial Average Index*
Applied Economics Letters, 30, 2364-2369
<https://doi.org/10.1080/13504851.2022.2097172>
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- *Currency and commodity return relationship under extreme geopolitical risks: Evidence from the invasion of Ukraine*
Applied Economics Letters
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- *Unleashing the potential of online learning in Spain: An econometric analysis*
Telecommunications Policy, 47(6), 1-17.
<https://doi.org/10.1016/j.telpol.2023.102544>
López, R., **Valarezo, A., Pérez-Amaral, T.**

Books and book chapters

- *La Juventud Atracada*
Ediciones Península. Grupo Planeta. ISBN: 978-84-1100-179-3.
Conde-Ruiz J.I., Conde-Gasca, C.
- *Retos Futuros del Mercado de Trabajo*
Un país posible: Manual de reformas políticamente viables (Editorial Deusto)
ISBN 8423436411
Conde-Ruiz, J.I., Lahera, J.
- *Structural Change and Tertiarization in Developing Countries*
Edward Elgar (978 1 80220 258 8)
<http://dx.doi.org/10.4337/9781802202595.Structural.Change.and>
Di Meglio, G., Gallego, J.
- *Macroeconomic Forecasting Evaluation of MIDAS Models*
Springer
https://doi.org/10.1007/978-3-031-40209-8_10
Bonino, N., **Garcia-Hiernaux, A.**
- *De “holandeses del sur” a “Hong Kong” del Mediterráneo. Una historia económica de Menorca*
Editorial de la Universidad de Jaén (ISBN: 978-84-9159-544-1)
Hernández Andreu, J., **Ortiz-Villajos, J.M.**

- *Cuerpo Superior de Técnicos Comerciales y Economistas del Estado – Tercer ejercicio. 3A24. Economía del bienestar (III). Las funciones de bienestar social. Teoría de la elección colectiva. El teorema de imposibilidad de Arrow y desarrollos posteriores.*
ICEX. España, Exportación e Inversiones. Editores Héctor Jiménez y Ángel Rodríguez **Rodríguez-Alvarez, C.**
- *Cuerpo Superior de Técnicos Comerciales y Economistas del Estado – Tercer ejercicio. Capítulo 3A16. Análisis de mercados (I). El modelo de competencia perfecta. Análisis de equilibrio parcial: corto y largo plazo; dinámicas de ajuste y estabilidad del equilibrio. Análisis de eficiencia y bienestar.*
ICEX. España Exportación e Inversiones.
Rodríguez-Alvarez, C.
- *Review for "Deferred acceptance algorithm with retrade."* MR4497941
AMS American Mathematical Society ISSN 0025-5629
<https://mathscinet.ams.org/mathscinet/pdf/4497941.pdf>
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- *Review for "Core and top trading cycles in a market with indivisible goods and externalities".* MR4419550
AMS American Mathematical Society ISSN 0025-5630
<https://mathscinet.ams.org/mathscinet/pdf/4419550.pdf>
Rodríguez-Alvarez, C.
- *The economic cost of loneliness and of empowering care for older persons*
Leuven University Press (978-94-6270-364-3)
<http://dx.doi.org/10.2307/j.ctv35r3v37.6>
Pacolet, J., Rodríguez Cabrero, G. **Sosvilla-Rivero, S.**

Working papers and policy papers

- *Reforming Dual Labor Markets: "Empirical" or "Contractual" Temporary Rates?*
Studies on the Spanish Economy eee2023-36, Fedea.
Conde-Ruiz, J.I., García, M., Puch, L.A. y Ruiz, J.
- *Diferencias de género en la investigación económica. Un enfoque de aprendizaje automático.*
Fedea Working Paper 2023/02 (Marzo 2023) ISBN: 978-84-17609-67-2
<https://documentos.fedea.net/pubs/dt/2023/dt2023-02.pdf>
Conde-Ruiz, J.I., García, M., Puch, L.A., Ganuza, J.

- *“Panorama del uso de tecnologías digitales para la recolección de datos sobre el comercio de servicios”*.
ONU Documents.
<https://etradeforall.org/es/documentos/panorama-del-uso-de-tecnologias-digitales-para-la-recoleccion-de-datos-sobre-el-comercio-de-servicios/>
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- *Documentos de Proyectos (LC/TS.2023/170)*, Santiago.
Comisión Económica para América Latina y el Caribe (CEPAL), 2023.
<https://www.cepal.org/es/publicaciones/68803-panorama-uso-tecnologias-digitales-la-recoleccion-datos-comercio-servicios>
Herguera, I.
- *¿Cómo está la economía española?: Reflexiones en período electoral*
Fedea: Estudios sobre la economía española 2023/2024 (Julio 2023)
<https://documentos.fedea.net/pubs/eee/2023/eee2023-24.pdf>
Novalés, A.
- *Notas sobre el Proyecto de Ley de Función Pública*
Fedea: Policy Paper (Mayo 2023)
<https://documentos.fedea.net/pubs/fpp/2023/05/FPP2023-02.pdf>
De la Fuente, A., **Novalés, A.**, García Díaz, M.A., González-Calbet, L., Onrubia, J., Sanmartín, A.
- *El sector público que necesitamos tras la pandemia*
ICAE Working Paper nº 2304 (Octubre 2023)
<https://hdl.handle.net/20.500.14352/88548>
Novalés, A.
- *The Political Economy of the Recovery, Transformation, and Resilience Plan*
ICAE Working Paper nº 2305 (Octubre 2023)
<https://docta.ucm.es/entities/publication/89f13a86-359e-4e4a-8bc3-e29432b7b919>
Novalés, A.
- *On the measurement of distributional divergence: A unifying proposal*
SSRN working paper
<http://dx.doi.org/10.2139/ssrn.4578727>
Salas, R., Lasso de la Vega, C., Rodríguez, J.G.

Divuligation

- *La evaluación de políticas públicas en España: equívocos e incumplimientos*
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- *"5G Networks: Bridging the Infrastructure Gap"* blog entry in: Global Infrastructure Hub-G20 Initiative, July 19, 2023
<https://www.github.org/articles/5g-networks-bridging-the-infrastructure-gap/>
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- Resolución del III Concurso "*Nada es Gratis*" a la divulgación de Trabajos de Fin de Máster en Economía, 11/01/2024.
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Puch, L., with A. Aparicio, A. Arenas, S. Sánchez-Pages and J. Vall.
- *Transición Energética con tipos altos*, 07/11/2023.
<https://nadaesgratis.es/luis-puch/transicion-energetica-con-tipos-altos>,
Puch, L., with **L. Guinea** and **J. Ruiz**
- *Convocatoria de Premios a la Divulgación de Trabajos de Fin de Máster en Economía, 2022-23*, 10/10/2023.
<https://nadaesgratis.es/editores/convocatoria-de-premios-a-la-divulgacion-de-trabajos-de-fin-de-master-en-economia-2022-23>
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- *Tipos altos*, 12/05/2023.
<https://nadaesgratis.es/luis-puch/tipos-altos>
Puch, L., with **L. Guinea**
- *Edward C. Prescott, maestro de generaciones*, 10/02/2023.
<https://nadaesgratis.es/luis-puch/prescott-maestro-generaciones>
Puch, L., with **A. Díaz**
- *Doctorados en Economía a la luz del sol*, 19/01/2023.
<https://nadaesgratis.es/pedro-rey-biel/doctorados-en-economia-a-la-luz-del-sol>
Puch, L., with J. Jimeno and P. Rey
- *Avances de la electricidad renovable en España*. Dic. 23
<https://nadaesgratis.es/admin/avances-de-la-electricidad-renovable-en-espana>
Salas, R., with **M. Sebastián**



- *Geografía, actividad económica y movilidad laboral (I)*
<https://nadaesgratis.es/antonia-diaz/geografia-actividad-economica-y-movilidad-laboral-i>
Díaz, A.
- *Geografía, actividad económica y movilidad laboral (II)*
<https://nadaesgratis.es/antonia-diaz/geografia-actividad-economica-y-movilidad-laboral-ii>
Díaz, A.

4. RESEARCH GRANTS AND CONTRACTS

Research grants

- *ENFIELD: European Lighthouse to Manifest Trustworthy and Green AI*
European Commission. Horizon 2023. Ref: 101120657
Research directors: **Alfredo Garcia-Hiernaux, Teodosio Pérez-Amaral, Ángel Valarezo**
- *Mercados, innovación y medio ambiente*
Comunidad de Madrid. Ref: H2019/HUM-5859
Research director: **Iñigo Herguera**
- *Igualdad de oportunidades, inclusión social y bienestar*
Comunidad de Madrid. Ref: H2019/HUM-5793
Research director: **Juan Gabriel Rodríguez**
- *Cambio Climático, Sostenibilidad y Economía Circular: Incentivos, Instituciones y Políticas.*
Ministerio de Ciencia e Innovación. Ref: PID2022-138754OB-I00
Research director: **Francisco J. André**
- *Investigaciones en tecnología y sostenibilidad, innovación y el medio ambiente*
Ministerio de Ciencia e Innovación. Ref: PID2019-107161GB-C32
Research director: **Luis Puch**
- *Innovación y estrategias empresariales en un entorno sostenible*
Ministerio de Ciencia e Innovación. Ref: PID2020-112984GB-C21
Research director: **Elena Huergo**
- *Movilidad social y oportunidades: el papel de las redes sociales y la automatización*
Ministerio de Ciencia e Innovación. Ref: PID2019-104619RB-C42
Research director: **Juan Gabriel Rodríguez**
- *Desigualdad y oportunidades: el papel de la tecnología, educación, esfuerzo y contaminación*
Ministerio de Ciencia e Innovación. Ref: PID2022-137352NB-C43
Research director: **Juan Gabriel Rodríguez**
- *Greenness-at-Risk*
Agencia Estatal de Innovación. Ref: TED2021-129891B-I00
Research director: **Juan Angel Jiménez Martín**

- *Tecnología, Capital Humano, Innovación, Comercio y Recursos Naturales.*
Ministerio de Ciencia e Innovación. Ref: PID2022-138706NB-I00
Research directors: **Antonia Díaz, Luis Puch**
- *Technological change and wage inequality in Spain*
Fundación La Caixa (Social Research Call 2022)
Research director: **Juan Gabriel Rodríguez**
- *Una primera aproximación a la estimación de la distribución de la tenencia de activos financieros y no financieros y fuentes patrimoniales en Canarias*
Gobierno Regional de Canarias
Research director: **Gustavo Marrero**
- *Red Española en Macroeconomía*
Acciones Dinamización Redes Excelencia 2022
Research director: **Antonia Díaz**
- *Innovación y desarrollo regional: Menorca en el contexto balear y español (siglos XIX y XX)*
Boletín Oficial Islas Baleares Nº 148, 27/08/2020
Research director: **José M. Ortiz-Villajos**

Research contracts

- *Análisis del cártel de coches sancionado por la CNMC. Búsqueda de fuentes - Primeras pruebas econométricas*
Research director: **Andrés Bargé-Gil**
- *Estimación del impacto económico del CSIC*
Research director: **Andrés Bargé-Gil**
- *Asesoramiento en los procesos judiciales del cartel de camiones II*
Research director: **Andrés Barge-Gil**
- *Impacto del impuesto sobre las transacciones financieras en el mercado bursátil español*
Research director: **María Dolores Robles**

5. EDUCATION

Finance Quantitative Master

This Master deals with the study of the methods with which banks, brokerage houses and financial institutions in general value assets and make decisions. In these contexts, mathematics is a fundamental tool that supports risk assessment and management. Therefore, prior training and taste for methods such as Mathematics, Probability and Statistics is essential. More detailed information can be found in the degree brochure available from this page.

The program is interuniversity, which guarantees a large and well-qualified teaching staff. The Master is structured in two courses. In the first, all subjects are compulsory and the aim is to create a common body of financial knowledge. This first course is taught on the Campus of the University of the Basque Country for courses that begin in an even year, and at the Campus of the University of Valencia for those that begin in an odd year. The second course is specialization, all subjects are optional and it is always taught on the Somosaguas Campus of the Complutense University. Therefore, it requires at least a change of residence and exclusive dedication.

The promotions are between 20 and 25 students, who find work in the sector even before graduating (either they combine work with the development of the Master's Thesis, or they commit to entering different companies after defending it). As an example, this year 13 companies have come to recruit in the program classrooms: KPMG, PWC Audit, PWC Consulting, Deloitte, Minsait-Indra, Banco de Santander, Intermoney, Gran-Thornton, Repsol, Cepsa, ARFIMA, Serfiex, NTT -Data.

Master Coordinator at UCM: Esther Fernández Casillas

Quantitative Finance and Economics PhD

The Doctorate Program in Quantitative Finance and Economics is an interuniversity program in which the Complutense University of Madrid participates, together with the University of Castilla La Mancha, the University of Valencia and the University of the Basque Country (coordinating headquarters). Its origin is in the fusion of the interuniversity doctorate in Banking and Quantitative Finance and the doctorate in Economic Analysis and Policies, both distinguished with the Quality Mention by the Ministry of Education. It has recognized Level 4 of the Spanish Qualifications Framework for Higher Education (MECES) and corresponds to Level 8 of the European Qualifications Framework (Royal Decree 22/2015, of January 23, BOE 02/07/2015).

It is aimed at carrying out relevant research work that represents an original contribution, publishable in the best academic journals and with the potential to have an impact in the field of finance and economics.

Students in the program must have a solid background in finance, economics, quantitative methods and data analysis that allows them to understand the theoretical and empirical foundations of finance and economics, as well as the tools necessary to make original contributions in these areas.

The PhD program offers supervision in various fields of finance and macroeconomics. We focus on topics that are being actively researched by faculty in participating departments. At the UCM they consist of:

- Measurement of financial risks and risk coverage
- Financing the ecological transition
- Valuation of financial and raw material derivatives
- Economic policies (monetary and fiscal): design and evaluation
- International economy and finance

Program Coordinator at UCM: María Dolores Robles

6. ORGANIZATION OF SEMINARS AND CONFERENCES

Internal Seminar 2024

24 January

- Speaker: E. García Miralles (BdE)
- Title: When Death was Postponed: The Effect of HIV Medication on Work, Savings, and Marriage.

31 January

- Speaker: D. Andrés (UCM)
- Title: Storage and Renewable Energies: Friends or Foes?

14 February

- Speaker: Gerard Llobet (CEMFI)
- Title: Understanding Power Contracts: The Role of Counterparty Risk (joint with Natalia Fabra, UC3M)

21 February

- Speaker: A. Nieto Castro (LISER)
- Title: Television and Academic Achievement: Evidence from the Digital Television Transition in the UK.

22 February

- Speaker: Carlos Vidal (U. Valencia)
- Title: The implicit (un)healthy life expectancy used for pricing long-term care insurance and life care annuities (with Ventura-Marco and Garvey).

12 March

- Speaker: T. Kehoe (U. Of Minnesota & FDR)
- Title: Default and Interest Rate Shocks: Renegotiation Matters

13 March

- Speaker: A. Hernando Veciana (UC3M)
- Title: Designing Price Benchmarks Robust to Manipulation

20 March

- Speaker: B. de Blas Pérez (UAM)
- Title: “Structural policy, growth and welfare in the medium-term of advanced countries” (joint with Mónica Correa-López)

10 April

- Speaker: Javier Quintana (Banco de España)
- Title: Carbon Pricing, Border Adjustment and Renewable Energy Investment: a Network approach

17 April

- Speaker: Runfeng Yang (Università Ca' Foscari, Venice)
- Title: The Artificial Intelligence Premium

24 April

- Speaker: J. V. Rodriguez-Mora (CUNEF)
- Title: The role of industries in rising inequality

8 May

- Speaker: T-M. Niguez (U. of Westminster)
- Title: Analytic moments of TGARCH (1,1) models with polynomially adjusted densities

16 May

- Speaker: Abel Brodeur (U Ottawa)
- Title: Mass Reproducibility and Replicability: A New Hope

22 May

- Speaker: H. Veiga (UC3M)
- Title: Stock market returns predictability: A time-varying analysis (joint with I. Casas, and X. Mao)

29 May

- Speaker: Constantatos Christos (U. Macedonia)
- Title: On the Relative Effectiveness of Voluntary Agreements and Mandatory Regulation, when Consumers are Environmentally Conscious (joint with Apostolos-Ioannis Martis)

5 June

- Speaker: T. Dominguez-Lino (Chicago Booth)
- Title: Efficiency and Redistribution in Environmental Policy: An Equilibrium Analysis of Agricultural Supply Chains

24 June

- Speaker: M. Almagro (Chicago Booth School of Business)
- Title: Optimal Urban Transportation Policy: Evidence from Chicago



Workshops and conferences

- [“6th Spanish Network of Macroeconomics Workshop”](#).
Workshop del Network financiado por el Programa de Redes de Excelencia del Ministerio de Ciencia e Innovación.
Luis A. Puch (comité científico)
- “The economics of platforms”
Iñigo Herguera García y Teodosio Pérez Amaral
- “17th International Conference on Computational and Financial Econometrics”
Organization of the section: “Financial risks in green transition: Greenness-at-Risk”.
Juan Angel Jiménez Martín



7. MEDIA PRESENCE

- TELEVISION NACIONAL (La Sexta, A3). 64 intervenciones con el logo ICAE
Miguel Sebastián
- [24 Columnas Invertia / El Español](#)
Miguel Sebastián

