

# Jorge Arenas Amorós

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## RESEARCH

### Revisiting Fundamentals of the European Gas Market: The Role of Supply Substitution

- Develops a Bayesian SVAR with sign restriction over elasticities to identify European natural gas market drivers.
- Not all the supply shocks are alike: LNG supply disruptions have permanent effects on prices than pipeline supply.
- Policy-relevant insights on energy security and market integration in the euro area.

### New measures of market-based monetary policy surprises in macroeconomic outcomes

- Constructs a high-frequency monetary-policy-surprise measure repricing in contracts of Polymarket.
- Changes around discrete events (e.g., FOMC decisions, speeches, minutes) across different horizons.
- Monetary policy surprises are projected into different macro-financial time series using a monthly VAR.

### Nonlinear Price Dynamics in Gas and Electricity Spot Markets

- Develops a nonlinear error-correction framework to jointly model electricity and natural gas spot prices.
- Smooth-transition dynamics to allow adjustment speeds and price pass-through to vary across regimes.
- Time-varying volatility and cross-market spillovers to address volatility clustering.

## EXPERIENCE

### Teaching Assistant

University of Alicante — *Fundamentos del Análisis Económico*

2022 – present  
Alicante, Spain

- *Introduction to Statistics*: probability theory and statistics (undergraduate)
- *Introduction to Macroeconomics*: introductory macroeconomics (undergraduate)
- *Mathematics I*: introductory algebra and calculus (undergraduate)
- *Statistics*: graduate course in statistics. Instructor: M. Dolores Collado
- *Econometrics*: graduate course in econometrics. Instructor: M. Dolores Collado

### Data Replicator

Journal of the European Economic Association

2025 – present  
Remote

- Check that data used during the replication package is cited appropriately.
- Ensured that code in replication packages for accepted papers ran correctly.
- Reproduce all the results from the manuscript.

## EDUCATION

### PhD in Economics

University of Alicante

Sep. 2023 – present  
Alicante, Spain

- **Supervisor:** Iván Payá
- **Research:** Applied Macroeconomics, Time Series, Monetary Economics, Energy Economics.

### Master in Quantitative Economics

University of Alicante

Sep. 2021 – June 2023  
Alicante, Spain

- **Coursework:** Research-oriented master program, with a first year focused on core graduate courses in economics and a second year devoted to specialized elective coursework.
- **Master Thesis:** *Impact of Natural Gas and Crude Oil shocks on European stock returns*; analyzed the heterogeneous transmission of supply and demand shocks in natural gas and crude oil markets to European equity returns

## Bachelor in Economics

Complutense University of Madrid

Sep. 2017 – June 2021

Madrid, Spain

- **Selected courses with honours:** Advanced Macroeconomics, International Finance, Regulation Economics, Macroeconomics III, Microeconomics II, Bachelor Thesis.
- **Last year specialization:** Economic Analysis mention.

## ADDITIONAL TRAINING

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### Bayesian Models and Forecasting

Italian Econometrics Association

Aug. 2024

Venice, Italy

- Postgraduate course focused on Bayesian multivariate models and forecasting in economics and finance, including structural analysis, nonparametric methods, and forecast combinations, with hands-on MATLAB applications.
- Instructors: Marta Banbura, Roberto Casarin, Matteo Ciccarelli, and Francesco Ravazzolo

### Financial Econometrics

University of Alicante

Feb. 2025

Alicante, Spain

- Graduate course on econometric methods for financial and macroeconomic time series, covering frequentist and Bayesian inference, estimation and testing with dependent observations, and applications including VaR/CoVaR, dependence modeling, and Bayesian SVARs.
- Instructor: Dante Amengual

### Causal Inference with VARs

EABCN Training School

Nov. 2025

Online

- Covered VAR/SVAR foundations, identification challenges, and methods including short- and long-run restrictions, Cholesky decomposition, sign restrictions, heteroskedasticity-based identification, and proxy-SVAR approaches, with practical empirical sessions.
- Instructor: Giovanni Ricco

## REFERENCES

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- Iván Payá (University of Alicante)
- Ángel León (University of Alicante)

## SKILLS

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**Programming :** MATLAB, Python, R, Stata and SQL

**Tools :** GitHub, L<sup>A</sup>T<sub>E</sub>X, Notion, Office

**Languages:** Spanish (native), English (fluent), Mandarin (beginner), Polish (beginner)