

CURRICULUM VITAE

Samuel Hurtado

Spain, 1978

Head of the Macroeconomic Modelling unit at the Bank of Spain since 2018, where we develop and use (i) the big macro models for policy simulation, forecasting, estimating the effects of shocks, etc, including both the big DSGE and the big traditional macro model (ii) short-term forecasting tools, and (iii) models for evaluating the effect of climate change. My research also includes heterogeneous-agents models, and the use of machine learning tools in economics. I have several papers published in journals such as *Econometrica*, *IJCB*, *JEEA* and *Economic Modelling*.

ACADEMIC:

M.Sc. in Economics

Centro de Estudios Monetarios y Financieros (CEMFI), 2003-2005

B.Sc. in Economics

University of Granada, 1996-2000

EMPLOYMENT:

Banco de España: Head of the Macroeconomic Modelling Unit (2018-present)

D.G. Economics and Statistics > Economic Developments Department

European Central Bank: Financial Stability Expert (3-months leave from BdE, in 2015)

D.G. Macro-Prudential Policy and Financial Stability > Macro-Financial Policies

Banco de España: Economist (2006-2018)

D.G. Economics, Statistics and Research > Economic Analysis and Forecasting > Modelling

Banco de España: Junior Economist (2001-2003)

D.G. Economics, Statistics and Research > Economic Analysis and Forecasting > Analysis

PUBLICATIONS:

[link to IDEAS.repec](#) [link to google scholar](#)

2023, *Econometrica*: **Financial Frictions and the Wealth Distribution**. Joint with Jesús Fernández-Villaverde and Galo Nuño. [Link](#), [WP link](#).

2023, *Economic Modelling*: **Green Policies and Transition Risk Propagation in Production Networks**. Joint with Pablo Aguilar and Beatriz Gonzalez. Forthcoming, [WP link](#).

2022, *Journal of the European Economic Association*: **Monetary Policy and Sovereign Debt Sustainability**. Joint with Galo Nuño and Carlos Thomas. [Link](#), [WP link](#).

2022: **Deciphering the macroeconomic effects of internal devaluations in a monetary union**. Joint with Javier Andrés, Óscar Arce and Jesús Fernández-Villaverde. *International Journal of Central Banking*. [Link](#), [WP link](#).

2022, *Journal of Economic Studies: Weather, mobility and the evolution of the Covid-19 pandemic*. Joint with Corinna Ghirelli, Andrea González and José Luis Herrera. [Link](#), [WP link](#).

2021, *Applied Economics: The narrative about the economy as a shadow forecast: an analysis using Banco de España quarterly reports*. Joint with Nelida Diaz, Corinna Ghirelli, Javier J. Perez and Alberto Urtasun. [Link](#), [WP link](#).

2019, *International Journal of Central Banking: Comparing fiscal multipliers across models and countries in Europe*. Joint with a long list of eurosystem authors. [Link](#), [WP link](#).

2017, *Public Finance and Management: The macroeconomic impact of delayed government payments: a case study*. Joint with Mar Delgado Téllez, Pablo Hernández de Cos and Javier J. Pérez. [Link](#), [WP link](#).

2016, *International Journal of Central Banking: Policy spillovers and synergies in a monetary union*. Joint with Óscar Arce and Carlos Thomas. [Link](#), [WP link](#).

2014, *Economic Modelling: DSGE Models and the Lucas Critique*. [Link](#), [WP link](#).

2011, *Economic Modelling: The impact of oil price changes on Spanish and euro area consumer price inflation*. Joint with Luis J. Álvarez, Isabel Sánchez and Carlos Thomas. [Link](#), [WP link](#).

2010, *SERIEs, Spanish Economic Association: Spain in the euro: a general equilibrium analysis*. Joint with Javier Andrés, Eva Ortega and Carlos Thomas. [Link](#), [WP link](#).

WORKING PAPERS AND OTHERS:

2023: *Economic effects of a possible prolonged deterioration in the general health of the Spanish population*. Joint with Mario Izquierdo. Banco de España Economic Bulletin. [Link](#).

2022: *The spread of inflation from energy to other components*. Joint with Jose Manuel Gonzalez, Danilo Leiva and Alberto Urtasun. Banco de España Economic Bulletin. [Link](#).

2022: *The ECB's price stability framework: past experience, and current and future challenges*. Joint with a long list of eurosystem authors. Occasional Paper Series 269, European Central Bank. [Link](#).

2021: *The design of macroeconomic scenarios for climate change stress tests*. Joint with Pablo Aguilar and Beatriz Gonzalez. Banco de España Financial Stability Review. [Link](#).

2021: *New Data Sources for Central Banks*. Joint with Corinna Ghirelli, Javier J Pérez and Alberto Urtasun. Chapter in *Data Science for Economics and Finance*, Springer. [Link](#).

2021: *Review of macroeconomic modelling in the Eurosystem: current practices and scope for improvement*. Joint with a long list of eurosystem authors. European Central Bank Occasional Paper Series, n.269. [Link](#).

2021: *The ECB's price stability framework: past experience, and current and future challenges*. Joint with a long list of eurosystem authors. European Central Bank Occasional Paper Series, n.269. [Link](#).

2021: *The relationship between pandemic containment measures, mobility and economic activity*. Joint with Corinna Ghirelli, María Gil and Alberto Urtasun. Banco de España Occasional Paper 2109. [Link](#).

2020: ***The ECB monetary policy response to the Covid-19 crisis***. Joint with Pablo Aguilar, Óscar Arce, Jaime Martínez-Martín, Galo Nuño and Carlos Thomas. Banco de España Occasional Paper n.2026. [Link](#).

2019: ***Quest for robust optimal macroprudential policy***. Joint with Pablo Aguilar, Stephan Fahr and Eddie Gerba. Banco de España Working Paper n.1906. [Link](#).

2017: ***New Version of the Quarterly Model of Banco de España (MTBE)***. Joint with Ana Arencibia, Mercedes de Luis and Eva Ortega. Banco de España Occasional Paper n.1709. [Link](#).

2016: ***Public Finances and Inflation: The Case of Spain***. Joint with Pablo Hernández de Cos, Francisco Martí and Javier J. Pérez. Banco de España Occasional Paper n.1606. [Link](#).

2014: ***Update And Re-Estimation Of The Quarterly Model Of Banco De España (MTBE)***. Joint with Pablo Manzano, Eva Ortega and Alberto Urtasun. Banco de España Occasional Paper n.1403. [Link](#).

2011: ***Nueva actualización del modelo trimestral del Banco de España***. Joint with Elena Fernández, Eva Ortega and Alberto Urtasun. Banco de España Occasional Paper n.1106. [Link](#).

2011: ***Assessing the sensitivity of inflation to economic activity***. Joint with Konstantins Benkovskis, Michele Caivano, Antonello D'Agostino, Alistair Dieppe, Tohmas Karlsson, Eva Ortega and Tímea Várnai. European Central Bank Working Paper n.1357. [Link](#).

2008: ***Accelerating Dynare, up to 10x, with SilverBullet***. Mimeo, Banco de España. [Link](#).

2007: ***Update of the Quarterly Model of the Banco de España***. Joint with Eva Ortega, Pablo Burriel, José Luis Fernández and Eva Ferraz. Banco de España Working Paper n.0717. [Link](#).

2005: ***Ajustes por calidad y precios hedónicos en el sector de ordenadores en España***. Advised by Pedro Mira. CEMFI Master Thesis n.0507. [Link](#).

2003: ***Evolución de la calidad del factor trabajo en España***. Joint with Esther Moral. Banco de España Occasional Paper n.0306. [Link](#).

COMPUTING SKILLS:

Advanced programming skills and experience with lots of different computing languages, including Matlab (plus Dynare), Python, Fortran, Gauss, and VBA.

Experience with several statistical software packages, including Eviews, PC-Give, Tramo-Seats, and Stata.

Experience programming neural networks and machine learning algorithms using both Matlab and Python+TensorFlow.

Basic notions of C, R, Java, Mathematica, TROLL and SAS.

Some experience writing code in VHDL for FPGA programming.