

Francesco Saverio Bellelli

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Bio

I am an applied economist, with interests ranging from macroeconomic and financial forecasting, to trade, machine learning, climate and environmental issues.

After completing a PhD in economics at Durham University, I went on working in the banking industry and for international organisations in Geneva. In the last two years, I worked as a research economist at the World Trade Organization (WTO), where I got involved in several projects related to trade and the environment.

I like to apply economics to real world problems and provide insights for decision making. Over the past years, I analysed and wrote about macroeconomic issues, developed economic forecasting models, created new datasets on environmental policies, applied advanced text analysis and machine learning techniques, developed programming libraries, and even served as economic expert in international trade disputes.

Education

Ph.D in Economics (2019) — Durham University, Durham, UK.

- My research activity focused on the economics of international environmental agreements
- Supervisors: Prof. Riccardo Scarpa and Dr. A. Aftab.
Jury: Dr. A. Sauquet and Prof. Thomas Renstrom
- Grant from Durham University Business School
- April 2016 – July 2019

M.Sc. in Financial Economics (2015) *with distinction* — Oxford Brookes University, Oxford, UK.

- Highest score among the 2015 cohort
- September 2014 – October 2015

B.Sc in Economics (2014) *Laurea triennale* — Università degli Studi di Roma Tre, Rome, Italy.

- October 2010 – April 2014

Baccalauréat économique et social (2010) — Lycée Chateaubriand, Rome, Italy

- Final French secondary school examination.
- Studied at the following institutions: Institut Saint-Dominique (Rome, Italy), Lycée Molière (Rio de Janeiro, Brazil), Lycée Français International de Delhi (New Delhi, India).

Relevant experience

WTO

since January 2020

Research economist

I worked on a number of research projects for the World Trade Organisation. As a member of the Quantitative modelling and analysis unit, I deal with economic research and econometric modelling of trade, with a particular focus on the environment-related activities of WTO. My current research projects relate to innovation, environmental measures, fisheries subsidies, regional trade agreements, and international trade. As part of my work, I apply advanced data analysis techniques, such as econometric modelling, natural language processing algorithms, or machine learning algorithms, to gain insights from WTO member data. I also participate to the drafting of WTO flagship publications, research papers, and other internal reports. I served as economic expert in two international trade disputes.

Pictet

June – December 2019

Econometrician trainee

Banque Pictet is a Swiss multinational private bank specialised in wealth and asset management. I worked within the Asset Allocation & Macro Research (AA&MR) team, whose main tasks consist in analysing sectoral and global economic dynamics in order to formulate an economic scenario and a medium- to long-term investment strategy. Among other things, my work involved collecting and analysing financial and macroeconomic data, replicating models from the empirical financial and economic literature, and econometric research on macroeconomic and financial trends. For example, I developed for the bank a set of mixed-frequency data models to track and forecast in real-time the business cycle and other financial indicators.

UNHCR

June – July 2019

Data analyst intern

The UNHCR is the UN agency for refugees. The main tasks of the internship involved the production of statistics related to UNHCR staff, the analysis of trends in the personnel data, the management of the UNHCR database and the implementation of automation processes for the analysis of data from the Division of Human Resources. At the time of my internship UNHCR was enacting a policy of decentralisation and regionalisation of the central bureaux. Within this context, I supported the staff appointment decisions through the provision of statistics that were used to assess the gender and geographic distribution during the selection process.

Durham University

May 2016 – April 2019

PhD candidate & researcher

My main duties consisted in performing economic research with the aim of fulfilling the requirements of the doctorate programme. In addition, in 2017 I offered tutoring service in econometrics to postgraduate students at Durham University Business School. And in the years 2017-2018 I acted as representative of PhD students at Durham University. In this role, I participated to the faculty's board meetings and represented the interests of doctoral students. This entailed providing guidance on academic and procedural matters, being the first contact for students in trouble, improving communication with academic staff, and coordinating with other representatives to further student requests with the faculty.

Skills & trainings

- Language skills:**
- Italian — mother tongue
 - English — fluent (C2)
 - French — fluent (C2)
 - Portuguese — good (B2)
 - Spanish — beginner (A2)
- Computer skills:**
- General: Latex, Microsoft Office suite
 - Programming languages: R, Julia, Python
 - Statistical packages: Stata, Eviews, MLwiN
 - Interactive data visualisation: Shiny apps, Tableau
 - Other specialised software: Datastream, Bloomberg, QGIS
- Training courses:**
- Advanced Panel Data Analysis (Prof. Woolridge, Durham University: 16–18 May 2018)
 - Panel Data Analysis with Political Data (ECPR, Central European University: 7–11 August 2017)
 - Multilevel Modelling with MLwiN (University of Bristol: 11–13 July 2017)

Publications

Working papers

1. Bellelli, F.S. and Xu, A. How do environmental policies affect green innovation and trade? Evidence from the WTO environmental database (EDB). (*Soon to be published as WTO staff paper,*)
2. Bellelli, F.S., Scarpa, R. and Aftab, A.. An empirical analysis of participation in environmental agreements. (*Under review at Journal of Political Economy*)
3. Xu, A., Tresa, E., Bellelli, F.S., Bacchetta, M., Monteiro, J.A.. Trade and the transfer of climate-related technologies. *World Trade Organization, Trade and climate change information brief.* (*Under internal review*)
4. Bellelli, F.S., Xu, A. Why should we fish for an agreement? An economic analysis of fisheries subsidies. (*to be published as WTO discussion paper*)
5. Bellelli, F.S., Monteiro, J.A. and Xu, A. Assessing the environmental effectiveness of environmental provisions in regional trade agreements. (*Drafting in progress*)

Peer-reviewed journals

1. Bellelli, F.S., Scarpa, R. and Aftab, A. (*Forthcoming*) The joining dilemma: A survey of the empirical literature on environmental treaty participation. *Review of Environmental Economics and Policy.*

Contributions to books and reports

1. WTO (*Forthcoming*) World Trade Report 2022
2. WTO (2021) *World Trade Report 2021; Economic resilience and trade*. World Trade Organization. Geneva, Switzerland. Available at: https://www.wto.org/english/res_e/publications_e/wtr21_e.htm.
3. Pictet (2020) *Horizon 2020: Long-term investing in a world marked by pandemic*. Pictet WM, AA&MR. Geneva, Switzerland.

Other publications

1. Xu, A., Bellelli, F.S., Tresa, E., Bacchetta, M., Monteiro, J.A. (2021) Carbon content of international trade. *World Trade Organization, Trade and climate change information brief*, n°4. Available online at: https://www.wto.org/english/news_e/news21_e/clim_03nov21-4_e.pdf.
2. Bellelli, F.S. (2019) An overview of the main climate change agreements and the process that led to their formation. *The Foundation Journal*, Vol.XI, pp 1–15.
3. Bellelli, F.S. (2019) Understanding climate change. *New Vision*. April 11. Available online at: https://www.newvision.co.ug/new_vision/news/1498270/understanding-climate-change.
4. *Maps & data visualisation for:* Johnson, S. (2019) The great haul of China, illustrated. *Financial Times*. November 19. Available online at: <https://www.ft.com/content/4975eb8a-0ab6-11ea-bb52-34c8d9dc6d84>.
5. *Maps & data visualisation selected for:* Smith, A. (2019) Ten charts that tell the story of 2019. *Financial Times*. December 29. Available at: <https://www.ft.com/content/62fbf660-2651-11ea-9a4f-963f0ec7e134>.
6. Bellelli, F.S. (2019) The determinants of environmental policy and diplomacy; An empirical investigation of participation in environmental treaties and the influence of domestic groups. *Doctoral theses, Durham University*. Available at: <http://etheses.dur.ac.uk/13328/>.
7. Bellelli, F.S. (2015) The dynamic relationship of income with health and education spending. *Theses, Oxford Brooks University*. Available at: <https://radar.brookes.ac.uk/radar/items/8e1f4895-c565-4228-9eec-65a13e87f634/1/.PDF>
8. Bellelli, F.S. (2014) Del principio della domanda effettiva in Keynes e Kalecki. *Tesi, Università degli Studi di Roma Tre*. Available at: <https://fbellelli.com/research.html>

Additional information

- Multicultural background: I lived in 8 different countries (Italy, Brazil, India, United Kingdom, Belgium, North Macedonia, China and now Switzerland) and enjoy travelling.
- Received training in first aid during a summer school organised by the Italian Red Cross (2010)
- Member of the European Consortium of Political Research (ECPR)