

Juan Pablo Ángel Mojica

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1616 18 th St NW, Washington, D.C., 20009

EDUCATION

Sergio Arboleda University

Bachelor of Science in Economics (minor in economic policy), *Magna Cum Laude*

Bogotá, Colombia

2014-2019

- Best University's Honors Program Member. 2017 - 2018.
- Graduated with a special mention diploma from the National Council of Professionals in Economics (CONALPE).

WORK EXPERIENCE

International Monetary Fund

Research Analyst at ICD-MF

Washington DC, USA

October 2021 - Currently

- Supported the Integrated Macroeconomic Forecasting Environment (IMFE) project in migrating existing economic frameworks, linking and simulating a wide range of different forecasting models, collecting and processing data. Participated in presentations and live demonstrations to disseminate knowledge about the project.
- Built an excel (VBA) template to easily compute natural disaster risk scenarios based on the logic of the Debt Dynamics Tool. This template also contains a detailed and comprehensive database on different natural disaster events and the behavior of the main macro-fiscal variables for 193 countries.
- Research on fiscal policy related issues, such as; empirical estimation of tax buoyancy, the general equilibrium effects of fiscal rules, the intersection between monetary and fiscal policy, and the macroeconomic impacts of natural disasters.

Central Bank of Colombia

Economist at Public Sector Department

Bogotá, Colombia

August 2019 - September 2021

- Collaborated in constructing technical macroeconomic analysis focusing on fiscal and monetary policies, using Dynamic and Stochastic General Equilibrium (DSGE) models for the Colombian economy.
- Developed quantitative tools for measuring the impact of fiscal policy changes in the economy and their interaction with monetary policy, and contributed to implementing innovative solution methods for DSGE models (linear time iteration).
- Contributed to Central Bank's forecasts discussions and development of monetary policy reports.
- Built programs in Matlab to efficiently perform dynamic transitions, stochastic simulations, computation of fiscal multipliers, laffer curves, and debt sustainability analysis.

Central Bank of Colombia

Intern at the Macroeconomic Modeling Department

Bogotá, Colombia

July 2018 - December 2018

- Built a program in Matlab to efficiently perform parameter sensitivity analysis within any DSGE model.
- Collaborated in the theoretical derivation of some models, including the steady state solution, the models' calibration, the log-linear approximation of the equations, and the computation of the policy functions.
- Provided research assistance in building a literature review for policy discussions with the Board of Directors, and constructing technical notes, presentations, and articles to disseminate departmental research results

Sergio Arboleda University

Research Assistant, Department of Economics

Bogotá, Colombia

August 2016 - July 2017

- Collaborated in the construction of a Social Accounting Matrix (SAM) for Colombia (2009, 2010, 2011) and Bogotá (2010).
- Collaborated in constructing different regional indicators: input-output matrix, estimation of sectorial multipliers, and spatial autocorrelation indices.

OTHER ACADEMIC EXPERIENCE

Research Assistant. Juan José Ospina, PhD

January 2019 - May 2019

- Assisted the researcher in estimating fiscal multipliers for Colombia.

TEACHING EXPERIENCE

Department of Economics, Sergio Arboleda University

Lecturer: *Dynamic Macroeconomics with Matlab*

January 2019 - June 2020

Assistant Professor - Norman Maldonado (Ph.D.): *Advanced Microeconomics*

January 2016 - July 2017

Central Bank of Colombia

Advanced course in economics. *Fiscal policy analysis with DSGE*

July 2020

WORK IN PROGRESS

- Non-linear stationary RBC with climate risks and remittances. With Emilio Fernández Corugedo (IMF) and Andrés González (IMF). In progress.

PUBLICATIONS

- Ángel, J. & Rincon, H. (2023). Who would bear a reduction of the corporate income tax?. Borradores de Economía 1260, Banco de la Republica de Colombia. Doi: <https://doi.org/10.32468/be.1260>.
- Jamaica - First reviews under the precautionary and liquidity line and under the resilience and sustainability facility arrangements. Annex IV: A dynamic stochastic general equilibrium model to quantify the return of investment in resilient infrastructure. ISSN: 9798400254215/1934-7685.
- Ángel, J., Corrales, J., & Cornevin, A. (2023). A Deep Dive into Tax Buoyancy: Comparing Estimation Techniques in a Large Heterogeneous Panel. IMF Working Paper No. 2023/071. Doi: <https://doi.org/10.5089/9798400238376.001>
- Ángel, J., García, D., & Cuervo, N. (2019). The construction of high-rise housing in Bogota (2012-2017): determinants of its importance and location (in spanish). Estudios de región: crecimiento urbano, mercado laboral e instituciones, 259. Available: <http://hdl.handle.net/11232/1558>
- Ángel, J., García, D., & Maldonado, N. (2017). Literature review of the methodologies used in elaborating Regional Social Accounting Matrices (in Spanish). Ensayos de Economía, 27(51), 125-149. doi: <https://doi.org/10.15446/ede.v27n51.69117>

CONTRIBUTIONS

- Bulir, A., Baksa, D., Corrales, J. S., González, A., Rodríguez, D., & Heng, D. (2021). Using Macroeconomic Frameworks to Analyze the Impact of COVID-19: An Application to Colombia and Cambodia. Technical Notes and Manuals, International Monetary Fund. ISSN: 9781513571973/2075-8669
- Parra, J. A., et. al. (2020). Pension system in Colombia: description, demographic trends and macroeconomic analysis (in spanish). ESPE. Available: <https://repositorio.banrep.gov.co/handle/20.500.12134/9899>

COMPLEMENTARY MOOCS

NOVEMBER 2020	Advanced Monte Carlo for Macroeconometrics	Central Bank of Colombia
DECEMBER 2020	Economic Modelling and Forecasting	Bank of England
MARCH 2021	Public Debt Sustainability	Central Bank of Colombia
OCTOBER 2021	Financial Programming an Policies 1 and 2	IMF
NOVEMBER 2021	Macroeconomic Diagnostics	IMF
DECEMBER 2021	Monetary Policy Analysis and Forecasting	IMF
AUGUST 2023	Formulation, Estimation, and Policy Analysis with DSGE Models	IMF - Lawrence J. Christiano

LANGUAGES AND COMPUTER SKILLS

SPANISH: Native ENGLISH: Fluent

Microsoft Office, VBA, \LaTeX , STATA, R, Python, MATLAB, Dynare - IRIS - RISE.