# Paulo Victor Da Fonseca

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## Research Interests

Macroeconomics, Monetary and Fiscal Policy, Dynamic Stochastic General Equilibrium (DSGE) Models, Heterogeneous Agents New Keynesian Models, Agent-based Modeling, Bayesian Estimation.

## Education

### **Federal University of Santa Catarina**

Florianópolis, Brazil

PhD in Economics Mar 2016 - Mar 2020

- Thesis: "Three essays on monetary and fiscal policy interactions"
- Available at: repositorio.ufsc.br/handle/123456789/216729
- Supervisors: Prof. Jaylson Jair da Silveira and Prof. Guilherme Valle Moura
- Scholarship: Coordination for the Improvement of Higher Education Personnel (CAPES) Brazilian federal government agency
- Overall GPA: 3.87/4.0

### Università degli Studi di Milano-Bicocca, Italy

Milano, Italy

Visiting Scholar

Sep 2018 - Mar 2019

- Supervisor abroad: Prof. Alice Albonico
- · Scholarship: Sandwich Doctorate Coordination for the Improvement of Higher Education Personnel (CAPES)

#### **Federal University of Santa Catarina**

Florianópolis, Brazil

MSc. in Economics

Mar 2013 - Mar 2015

- Thesis: "Extração de esforço de trabalho e diferenciais de salários em um ambiente macrodinâmico clássico" (Labor effort elicitation and wage differentials in a classical macrodynamic environment)
- Available at: tede.ufsc.br/teses/PCNM0276-D
- Supervisor: Prof. Jaylson Jair da Silveira
- · Scholarship: National Council for Scientific and Technological Development (CNPq) Brazilian federal government agency
- Overall GPA: 3.76/4.0

#### **Federal University of Santa Catarina**

Florianópolis, Brazil

BSc. in Economics

Mar 2008 - Mar 2013

- Thesis: "Dinâmicas migratórias em um ambiente complexo e adaptativo com redes small-world" (Migratory dynamics in a complex and adaptive environment with small-world network)
- Available at: repositorio.ufsc.br/handle/123456789/103895
- · Supervisor: Prof. Jaylson Jair da Silveira
- Overall GPA: 3.67/4.0

# Work Experience \_

#### **Santa Catarina State University**

Florianópolis, Brazil

Lecturer in Economics

Aug 2021 - Present

- Macroeconomic Theory I
- Microeconomic Theory I
- Contemporary Economic Thought
- Quantitative Methods in Economics I
- Quantitative Methods in Economics II

#### **Business Intelligence and Data Analysis Observatory**

Florianópolis, Brazil

Project Manager

Nov 2020 - Mar 2022

- Plan and develop the project of setting an observatory for monitoring the main indicators of the Federal University of Santa Catarina through iteractive dashboards. Website for the project: obs.ufsc.br/observatorio/portal
- · Coordinate the team that monitored the key indicators for planning the return for presential activities admist COVID-19 at the University

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**Undergraduate Teaching Assistant** 

- Macroeconomic Theory II
- · Mathematical Economics

#### **Federation of Industries os Santa Catarina**

Florianópolis, Brazil

Part-Time Researcher Sept 2015 - Apr 2016

 Working in a research team carrying out the strategic planning for the development of industrial sectors in Santa Catarina State, Brazil, 2012 -2022

# **Working Papers**

## Optimal monetary and fiscal policy with limited asset markets participation and government debt

Building on a standard New Keynesian model, the model economy is augmented to incorporate the government's budget constraint – where public expenditures are financed by distortionary taxation and/or issuing of long-term debt – and the existence of limited asset markets participation. Without the ability to commit to an optimal plan, discretionary policies in the presence of government debt yield a state-dependent inflationary bias problem and also create a debt stabilization bias. Moreover, the presence of limited asset markets participation deepens distortions in the economy. As a result, the share's size of liquidity constrained agents impacts the long-run equilibrium values of relevant macroeconomic variables. Furthermore, the optimal response to shocks can be radically different under distinct levels of government debt and fraction of rule-of-thumb consumers. Finally, higher levels of public debt causes a redistribution effect leading to rises in steady state inequalities among agents.

## Strategic fiscal and monetary interactions in the Brazilian economy

This paper identifies the leadership structure of the game played by monetary and fiscal authorities in the Brazilian economy after the implementation of inflation targeting regime in 1999. A stylized small-scale New Keynesian model augmented with fiscal policy is estimated using Bayesian methods. I assume that monetary and fiscal authorities can act strategically under discretion in a non-cooperative setup and compare three different forms of games: (i) simultaneous move; (ii) fiscal leadership; and (iii) monetary leadership. I find strong empirical support for the hypothesis that the Brazilian fiscal authority acts as a Stackelberg leader. The results obtained can shed some light on the improvement of policy design in the Brazilian economy. Submitted to Revista Brasileira de Economia (Brazilian Review of Economics).

### · Strategic interactions, inflation conservatism and the level of government debt: A nonlinear analysis

This paper addresses the state dependencies in strategic interactions between an inflation conservative central bank and a benevolent fiscal authority. Building on a standard New Keynesian model extended to include fiscal policy and nominal government debt, I consider the effects of independent, discretionary and possibly non-cooperative policymakers, rather than joint optimal policies. The main contribution of this work is solving for the discretionary equilibrium of the policy games using nonlinear global solution techniques. I found that under a fiscal leadership policy game, delegating monetary policy to an inflation conservative authority can function as a device for fiscal discipline and reduces both stabilization and level inflationary biases. The consequences in terms of welfare losses are mostly harmless in this case. Nonetheless, in comparison to the cooperative setup, a simultaneous move policy game not only increases the gap between actual inflation and its target rate but is also associated with higher welfare losses. These losses are an increasing function of the degree of monetary conservatism.

## Skills

Programming

Julia (Proficient user), MATLAB (Proficient user), Dynare (Proficient user), Python (Extensive use), R (Extensive use),

SQL (Familiar), Stata (Familiar).

Miscellaneous LaTeX, Markdown, Git, Microsoft Office.

**Personal interests**Amateur musician: electric guitar and bass player. Philosophy of mathematics and logic. Love to travel and experience different cultures.

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## **Honours and Awards**

**Scientific initiation award in Social Sciences,** Project: "Dinâmicas migratórias e complexidade: uma

abordagem computacional baseada em agentes" (*Migratory dynamics and complexity: an agent-based computational approach*) - Federal University of Santa Catarina

Brazil

## **Presentations**

**64th Brazilian Society for the Advancement of Science (SBPC) Annual Meeting,** Migratory dynamics and

complexity: an agent-based computational approach - Federal University of Maranhão

Brazil

# **Languages**

Portuguese Native proficiency

**English** Professional proficiency (TOEFL iBT certification)

Italian Intermediary proficiencySpanish Intermediary proficiency

## Academic References \_\_\_\_\_

### André Alves Portela Santos, PhD

Madrid, Spain

Assistant Professor, CUNEF

- E-mail: andreportela@gmail.com
- Website: sites.google.com/site/andreportela
- Google Scholar profile: scholar.google.com.br/andre-portela

#### Guilherme Valle Moura, Dr.

Florianópolis, Brazil

Full-Time Professor, Federal University of Santa Catarina

- E-mail: guilherme.moura@ufsc.br
- Google Scholar profile: scholar.google.com.br/guilherme-moura

### Jaylson Jair da Silveira, Dr.

Florianópolis, Brazil

Full-Time Professor, Federal University of Santa Catarina

- E-mail: jaylson.silveira@ufsc.br
- Google Scholar profile: scholar.google.com.br/jaylson-silveira

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