

# Rafael Machado Parente

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## CURRENT EMPLOYMENT

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**International Monetary Fund**  
Economist (EP) at the Research Department

March 2024 – Present  
Washington DC, USA

## PREVIOUS EMPLOYMENT

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**International Monetary Fund**  
Economist (EP) at the Western Hemisphere Department

September 2022 – March 2024  
Washington DC, USA

**GAP Asset Management**  
International Macroeconomics Analyst (Intern)

January 2012–March 2013  
Rio de Janeiro, Brazil

## EDUCATION

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**Ph.D. in Economics**  
Princeton University

2022  
Princeton NJ, USA

**M.Sc. in Economics**  
Fundação Getúlio Vargas (EPGE)

2016  
Rio de Janeiro, Brazil

**B.A. in Economics**  
Fundação Getúlio Vargas (EBEF)

2014  
Rio de Janeiro, Brazil

## RESEARCH INTERESTS

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Primary: **Macroeconomics, International Trade**

Secondary: **Labor, Development**

## WORKING PAPERS

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### Minimum Wages, Earnings Inequality and the Informal Sector

*R&R, American Economic Review; IMF Working Paper No. 2024/159*

How do minimum wages affect earnings inequality in countries with large informal sectors? I provide reduced-form evidence that the 2000s minimum wage hike in Brazil raised overall inequality by increasing inequality inside the informal sector. I develop a model where heterogeneous firms select into informality to investigate when and how raising the minimum wage can increase inequality. I calibrate the model to Brazil and find that, by generating substantial informality, the increase in the minimum wage raised overall inequality by 6.4%. These results suggest that movements into and out of the informal sector modulate the effects of formal labor legislation.

### Social Security Reforms, Retirement, and Sectoral Decisions

with Pedro Cavalcanti Ferreira and Bruno Delalibera

*R&R, International Economic Review; IMF Working Paper No. 2025/032*

In many countries, the regulations governing pension systems, hiring procedures, and job contracts differ between the public and private sectors. Public sector employees tend to have longer tenures and higher wages compared to workers in the private sector. As such, social security reforms can affect both retirement decisions and sectoral choices. We study the effects of social security reforms on retirement and sectoral behavior in an economy with multiple pension systems. We develop a general equilibrium life-cycle model with three sectors – private formal, private informal and public – and endogenous retirement. We quantitatively assess the long-run effects of reforms being discussed and implemented around the world. Among them, we study the unification of pension systems and increasing the minimum retirement age. We calibrate our model to Brazil, where the retirement conditions resemble those of many other countries. We find that these reforms lower the likelihood of individuals to apply to a public job and increase the profile of savings over the life

cycle. In the long run, these reforms lead to higher output and capital, reduced informality, and average welfare gains. They also drastically reduce the social security deficit.

### **Non-traded Gains from Trade: Evidence from Brazil**

with Rowan Shi

*IMF Working Paper No. 2023/265*

We investigate how trade shocks affect the allocation of labor across plants at the local labor market level. Using Brazil's import liberalization as a quasi-natural experiment, we uncover a new margin for the gains from trade: the reallocation of labor from smaller to larger producers in the non-traded sector. We find that in response to liberalization, larger non-traded producers self-select into importing, expanding as they gain access to inputs from abroad. We then develop a parsimonious model of heterogeneous producers incorporating this mechanism. The theory is consistent with the empirical findings and show that reallocation among non-traded producers is welfare-enhancing. In contrast, this reallocation effect disappears when all nontraded producers make the same importing decision.

### **Beyond Tariffs: Infrastructure Gaps and Trade in LAC**

with Rina Bhattacharya, Flavien Moreau and Samuel Pienknagura

*Based on IMF WP No. 2024/253 and IMF WP No. 2024/032*

Despite progress in reducing policy-induced trade barriers, Latin America's trade openness has barely increased. We use disaggregated trade data to find considerable empirical evidence of under-trading, albeit with substantial heterogeneity across sub-regions and products. Poor transport infrastructure and customs inefficiencies are key factors explaining under-trading in manufacturing in most sub-regions in Latin America and the Caribbean (LAC), while other constraints, such as the quality of factors of production or governance, appear to affect specific countries in the region. Leveraging recent advances in the structural gravity literature, we estimate trade elasticities at different horizons and show how long-run elasticities in LAC significantly diverge from peers, in part due to the region's relatively poor infrastructure. Counterfactual policy experiments suggest that closing half of the infrastructure gap between LAC and advanced economies could lift exports by up to 30 percent and yield significant GDP gains.

## **WORK IN PROGRESS**

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### **Do Industrial Policies Increase Trade Competitiveness?**

with Yueling Huang, Sandra Baquié, Florence Jaumotte  
Jaden Kim, Yucheng Lu and Samuel Pienknagura

### **Industrial Policies and Firm Performance: A Nuanced Relationship**

with Samuel Pienknagura Sandra, Baquié  
Yueling Huang, Florence Jaumotte and Jaden Kim

### **The Legacy of Exposure to Crime**

with Ursula Berresheim and Samuel Pienknagura

## **POLICY WORK**

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*Industrial Policies: Handle with Care.* IMF Staff Discussion Notes No. 2025/002. International Monetary Fund.

Annex I: Informality and Inequality: Insights on Minimum Wages from Brazil. *2024 G-20 Background Note on the Impact of Growth on Inequality and Social Outcomes.* International Monetary Fund.

Belize: 2024 Article IV Staff Report. IMF Country Report No. 24/124 International Monetary Fund.

Belize: 2024 Selected Issues. IMF Country Report 23/125, International Monetary Fund.

Belize: 2023 Article IV Staff Report. IMF Country Report No. 23/164 International Monetary Fund.

Belize: 2023 Selected Issues. IMF Country Report 23/165, International Monetary Fund.

October 2023 Regional Economic Outlook: Western Hemisphere, "Trade Integration and Implications of Global Fragmentation to Latin America and the Caribbean." (Background Paper 2).

October 2023 Regional Economic Outlook: Western Hemisphere, "Crime and its Macroeconomic Consequences in Latin America and the Caribbean." (Online Annex 4).

## PRESS

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"Why Latin America is the world's trade pipsqueak?" The Economist. June, 2024.

"Salário mínimo não é um bom indexador." Folha de S. Paulo. May, 2024.

"How Latin America Can Use Trade to Boost Growth." IMF Blog. November, 2023.

"Latin America Can Boost Economic Growth by Reducing Crime." IMF Blog. December, 2023.

## REFEREEING

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The B.E. Journal of Macroeconomics; The Quarterly Review of Economics and Finance

## PRESENTATIONS

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2024: Princeton University, World Bank; 2023: LACEA; 2022: Federal Reserve Board, Fundação Getulio Vargas (EESP), Fundação Getulio Vargas (EPGE), Inter-American Development Bank (IADB); 2019: Society for Economic Dynamics

## PRIZES AND HONORS

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International Economics Section Summer Fellowship, Princeton University	2018–2021
Graduate Fellowship, Princeton University	2016–2022
Fellowship for Master's Studies in Economics, CNPq	2014–2016
Undergraduate Scholarship, Fundação Getúlio Vargas (EBEF)	2011–2014

## RESEARCH EXPERIENCE

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Research Assistant for Professor Stephen Redding	Princeton University, Spring 2019
Research Assistant for Professor Oleg Itskhoki	Princeton University, Summer 2017
Research Assistant for Professor Pedro Cavalvanti Ferreira	Fundação Getúlio Vargas (EPGE), 2016

## TEACHING EXPERIENCE

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Teaching Assistant: Introduction to Microeconomics (Undergraduate)	Fall 2020
Professor Kelly Noonan	Princeton University
Teaching Assistant: Introduction to Macroeconomics (Undergraduate)	Fall 2018, Spring 2020
Professor Elizabeth Bogan	Princeton University
Teaching Assistant: Macroeconomic Theory II (Graduate)	July 2015–September 2015
Professors Cezar Santos and Felipe Iachan	Fundação Getúlio Vargas (EPGE)
Teaching Assistant: International Trade (Undergraduate)	January 2015–June 2015
Professor Erica Diniz Oliveira	Fundação Getúlio Vargas (EPGE)
Teaching Assistant: Macroeconomic Theory I (Graduate)	January 2015–March 2015
Professor Rubens Penha Cysne	Fundação Getúlio Vargas (EPGE)

## OTHER

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Programming:	Fortran, Matlab, Stata, $\text{\LaTeX}$
Languages:	Portuguese (native), English (fluent), Spanish (elementary)
Citizenship:	Brazilian, Portuguese
Other interests:	Basketball and rock climbing