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CURRENT EMPLOYMENT

International Monetary Fund
Economist at the Research Department

September 2025 – Present
Washington DC, USA

PREVIOUS EMPLOYMENT

International Monetary Fund
Economist (EP) at the Research Department

March 2024 – September 2025
Washington DC, USA

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

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

Primary: **Macroeconomics, International Trade**

Secondary: **Labor, Development**

WORKING PAPERS

Minimum Wages, Earnings Inequality and the Informal Sector

with Luiz Brotherhood and Felipe Iachan

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

Conditionally accepted, International Economic Review; IMF Working Paper No. 2025/032

We study social security reforms in economies characterized by segmented labor markets and pension systems. We develop a general equilibrium life-cycle model with heterogeneous agents, endogenous retirement, and sectoral choice. In the model, individuals choose to work in the public sector, the private formal sector, or the informal sector, taking into consideration differences in compensation structures, pension eligibility rules, and benefit formulas across sectors. The model is calibrated to Brazil, a country characterized by high informality, generous public pensions, and rapid demographic transition. We evaluate reforms such as unifying pension systems and increasing the minimum retirement age. These policies reduce the projected social security deficit by nearly 40%, increase output,

stimulate capital accumulation, and generate average welfare gains, despite redistributive effects across age groups, sectors, and along the transition path. Sectoral reallocation, particularly the shift out of public employment and into informal work, plays a key role in shaping the reforms' impact. Ignoring these margins can lead to a significant underestimation of the fiscal and macroeconomic effects of pension reforms.

The Non-traded Gains from Trade: Evidence from Brazil

with Rowan Shi

IMF Working Paper No. 2023/265

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. Larger non-traded producers self-select into importing, expanding as they incorporate foreign inputs. We develop a parsimonious model of heterogeneous producers consistent with the empirical findings, then show that this reallocation is welfare-enhancing but disappears when all non-traded producers make the same importing decision. The quantitative welfare effect of this margin is 0.02% for the average local labor market, reaching up to 0.2% for the largest regions in Brazil.

Beyond Tariffs: Infrastructure Gaps and Trade in LAC

with Rina Bhattacharya, Flavien Moreau and Samuel Pienknagura

Reject and resubmit, World Bank Economic Review; 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.

Do Industrial Policies Increase Trade Competitiveness?

with Yueling Huang, Sandra Baquié, Florence Jaumotte

IMF WP No. 2025/098

Jaden Kim, Yucheng Lu and Samuel Pienknagura

Industrial policies (IPs) are on the rise. The most common motive for pursuing IPs is to boost strategic competitiveness of the targeted products. Leveraging a novel database of industrial policies and using the local projection difference-in-differences approach, this paper examines the dynamic relationship between IPs and trade competitiveness. Our results point to a nuanced picture. On average, products targeted by IPs experience a larger increase in competitiveness than non-targeted ones. However, there is substantial heterogeneity across different types of product and policy instruments. The average effect is driven by initially competitive products. Turning to policy instruments, domestic subsidies are associated with short-term improvements in trade competitiveness, whereas export incentives are linked to medium-term improvements in competitiveness. Finally, we focus on three widely discussed value chains—solar photo-voltaic, wind turbines, and electric vehicles—and present suggestive evidence that IPs can have spillover effects on non-targeted products through value chain linkages. Our findings for these three value chains suggest that IPs targeting upstream products are associated with larger improvements in the RCA of products using these upstream products relative to IPs targeting products at the same value chain stage.

Industrial Policies and Firm Performance: A Nuanced Relationship

with Samuel Pienknagura, Sandra Baquié

IMF WP No. 2025/143

Yueling Huang, Florence Jaumotte and Jaden Kim

We study how industrial policies (IPs) shape firm performance, showing effects vary by instrument, firm and industry characteristics, value chain position, and time horizon. IPs reducing trade barriers are linked to medium-term improvements in performance. Subsidies discriminating against foreign interests yield short-term gains in value added (VA), productivity, and payroll, which fade or turn negative in the medium term. Export incentives lead to short-term declines in firm performance followed by medium-term gains. Effects are stronger for young and financially constrained firms than for older and less constrained ones. Industry distortions also matter—IPs are associated with stronger short-term improvements in VA, capital, and payroll when distortions are high. Finally, we find cross-sectoral spillovers: protective IPs targeting upstream sectors improve outcomes in downstream firms, while those targeting downstream sectors weaken upstream performance. By contrast, spillovers from trade-liberalizing policies are consistently positive and larger in magnitude, regardless of value chain position.

WORK IN PROGRESS

Shaping Innovation: Can Industrial Policies Boost Patent Applications?

with Sandra Baquié, Yueling Huang

Florence Jaumotte, Jaden Kim and Samuel Pienknagura

The Legacy of Exposure to Crime

with Ursula Berresheim and Samuel Pienknagura

Industrial Policy Since the Great Financial Crisis

with Simon Evenett, Adam Jakubik, Jaden Kim, Fernando Martín

Samuel Pienknagura, Michele Ruta, Sandra Baquié and Yueling Huang

POLICY WORK

Hungary: 2025 Article IV Staff Report. IMF Country Report No. 25/250 International Monetary Fund.

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

"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

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

PRESENTATIONS

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

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

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

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

OTHER

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