

University of Minnesota - Twin Cities

Department of Economics
 4-101 Hanson Hall
 1925 Fourth Street South
 Minneapolis, MN 55455
 U.S.A.

Placement Directors

Timothy Kehoe
 (612) 625-1589
 tkehoe@umn.edu
 Loukas Karabarounis
 (612) 625-7504
 loukas@umn.edu

Placement Coordinator

Wesley Peterson
 (612) 625-6859
 pete6046@umn.edu

Curriculum Vitae**Fall 2024****Mauricio Barbosa-Alves****Personal Data***Address*

4-101 Hanson Hall
 1925 Fourth Street South
 Minneapolis, MN 55455

Contact Information

Cell: (612) 231-0747
 E-mail: barbo104@umn.edu
 URL: <https://mbarbosaalves.github.io>

Citizenship: Brazilian (J-1 Visa, not subject to two-year requirement)

Major Fields of Concentration

Macroeconomics, International Economics, Environmental Economics

Education

| <i>Degree</i> | <i>Field</i> | <i>Institution</i> | <i>Year</i> |
|---------------|--------------|------------------------------------|-------------|
| PhD | Economics | University of Minnesota (expected) | 2019-2025 |
| MA | Economics | Sao Paulo School of Economics, FGV | 2016-2018 |
| BS | Economics | University of Sao Paulo, USP | 2011-2015 |

Dissertation

Title: "Essays on Macroeconomics"

Dissertation Advisor(s): Professor Manuel Amador and Professor Timothy Kehoe

Expected Completion: Summer 2025

References

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|-------------------------|----------------------------------|--|
| Professor Manuel Amador | (612) 624-4060 amador@umn.edu | Department of Economics University of Minnesota 4-101 Hanson Hall |
| Professor Timothy Kehoe | (612) 625-1589 tkehoe@umn.edu | 1925 Fourth Street South Minneapolis, Minnesota 55455 |
| Dr. Doireann Fitzgerald | doireann.fitzgerald@gmail.com | Research Department Federal Reserve Bank of Minneapolis 90 Hennepin Avenue |
| Dr. Javier Bianchi | javier.i.bianchi@gmail.com | Minneapolis, Minnesota 55401 |

Honors and Awards

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| 2024-2025 | <i>Henry R. Sandor Fellowship in Environmental Economics</i> , Department of Economics, University of Minnesota, Minneapolis, Minnesota. |
| 2021 | <i>Second Place</i> , Third-Year Paper Competition, Department of Economics, University of Minnesota, Minneapolis, Minnesota. |
| 2019-2020 | <i>Kurt Winkelmann and Janine Gleason Fellowship</i> , Department of Economics, University of Minnesota, Minneapolis, Minnesota. |
| 2019-2020 | <i>Estudiar con Esperanza Fellowship</i> , University of Minnesota, Minneapolis, Minnesota. |
| 2016-2017 | <i>Scholarship from CNPq for Master in Economics</i> , Sao Paulo School of Economics, Sao Paulo, Brazil |

Teaching Experience

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| Fall 2022-Summer 2024 | <i>Instructor</i> , Department of Economics, University of Minnesota, Minneapolis, Minnesota. Taught six consecutive semesters of <i>Financial Economics</i> . |
| Summer 2021 | <i>Instructor</i> , Department of Economics, University of Minnesota, Minneapolis, Minnesota. Taught <i>Intermediate Microeconomics</i> . |
| Fall 2020-Spring 2021 | <i>Teaching Assistant</i> , Department of Economics, University of Minnesota, Minneapolis, Minnesota. Led three recitation sections for <i>Principles of Microeconomics</i> . |
| 2018 | <i>Instructor</i> , Sao Paulo School of Economics, Sao Paulo, Brazil. Taught <i>Macroeconomics</i> , in Portuguese. Undergraduate level. March to September. |
| 2018 | <i>Teaching Assistant</i> , Sao Paulo School of Economics, Sao Paulo, Brazil. Taught <i>Macroeconomics IV</i> , in Portuguese. Graduate level. October to November. |
| 2017-2018 | <i>Teaching Assistant</i> , Sao Paulo School of Economics, Sao Paulo, Brazil. Led recitations for 10 courses at various levels and topics, in Portuguese. |

Research Experience

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| 2021-2022 | <i>Research Analyst</i> , Federal Reserve Bank of Minneapolis, Minneapolis, Minnesota. Research analyst for Dr. Javier Bianchi. |
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Working Papers

Barbosa-Alves, Mauricio, and Braulio Britos, “Climate Change, Food Prices, and Inequality”, Job Market Paper. Presented at: (2024) UMN-UW Graduate Workshop, HHEI Alumni Conference, UMN Jamboree.

Barbosa-Alves, Mauricio, Javier Bianchi, and César Sosa-Padilla, “International Reserves Management under Rollover Crisis”. **Revise and Resubmit at Quarterly Journal of Economics**. Presented at: (2023) European University Institute (*); (2024) SAET, Rice University (*), University of Florida (*), Midwest Macro, SED (*), Torcuato Di Tella (*), Central Bank of Chile (*), Central Bank of Uruguay (*), Stanford SITE (*).

Barbosa-Alves, Mauricio, and Braulio Britos, “Climate Change and International Migration”. Presented at: (2023) UMN-UW Graduate Workshop (*), University of Minnesota (*); (2024) Tulane University (*).

Barbosa-Alves, Mauricio, “Dollar Inflation and Sovereign’s Debt Currency Denomination”. Presented at: (2022) UMN-UW Graduate Workshop.

Araujo, Luis, Mauricio Barbosa-Alves, and Vladimir Kuhl Teles, “Bank Capital Structure and Productivity Growth”

Computer Skills

Matlab, Julia, R, LaTeX

Languages

Portuguese (Native), English (Fluent)

Abstract(s)

Barbosa-Alves, Mauricio, and Braulio Britos, “Climate Change, Food Prices, and Inequality”, Job Market Paper.

This paper examines how climate change will affect food prices across regions and people across the income distribution, emphasizing the uneven effects on agricultural productivity. As climate change reshapes comparative advantages in food production, adaptation through re-optimizing food sourcing is constrained by trade frictions. These frictions induce local sourcing, making food prices dependent on local productivity and increasing prices everywhere. Since food expenditure shares decline with income, higher food prices raise concerns about inequality. We develop a macro-trade model of food production and trade. Our model embeds income heterogeneity and two types of food goods subject to differentiated trade frictions. In our setting, welfare losses associated with climate change are driven by food expenditure shares, trade shares between regions, and productivity changes. Using Brazil as a case study, we estimate intra-national trade shares, which are not observed in the data. To recover these shares, we exploit short-term weather shocks, price changes, and driving times between locations. We find that trade frictions for fresh food are twice as sensitive to driving time relative to commodities, which face lower trade costs. Counterfactual analysis using FAO potential productivity forecasts reveals significant welfare losses due to climate change. The lowest income decile in the most affected states would be willing to give up 3% of their income to avoid the expected changes in productivity. Road infrastructure improvements, such as increasing average driving speeds by 10%, could mitigate these effects. The lowest income group would be willing to pay up to 0.8% of their income to fund such a policy.

Barbosa-Alves, Mauricio, Javier Bianchi, and César Sosa-Padilla, “International Reserves Management under Rollover Crisis” **Revise and Resubmit at Quarterly Journal of Economics.**

This paper investigates how a government should manage international reserves when it faces the risk of a rollover crisis. We ask, should the government accumulate reserves or reduce debt to make itself less vulnerable? We show that the optimal policy entails initially reducing debt, followed by a subsequent increase in both debt and reserves as the government approaches a safe zone. Furthermore, we find that issuing additional debt to accumulate reserves can lead to a reduction in sovereign spreads.

Barbosa-Alves, Mauricio, and Braulio Britos, “Climate Change and International Migration”

This paper studies the impact of climate change on international migration. Using census data from Guatemala, we document novel evidence suggesting that areas affected by elevated temperatures exhibit less migration in the following year. The magnitude is larger in rural areas. We postulate that in the short run, years with higher-than-usual temperatures reduce rural productivity, decreasing migration from credit-constrained workers who need to pay migration costs. In this context, climate change’s effects are two-sided. While declining rural productivity makes migration more appealing, it also makes it increasingly difficult to pay the migration cost. We build a dynamic incomplete-markets migration model with credit-constrained workers and migration costs where elevated temperatures affect rural productivity. We estimate the effect of elevated temperatures on crop yields and then estimate the model to match the temperature-migration link we document. We project rural productivity for different climate change scenarios. We show that migration slowly increases for all scenarios as low-income workers need to start saving to migrate. Additionally, we find that transfers providing insurance against elevated temperatures reduce migration under all scenarios. Counterintuitively, although the weather-contingent transfers help pay the migration cost, its insurance effect makes staying more appealing.

Barbosa-Alves, Mauricio, “Dollar Inflation and Sovereign’s Debt Currency Denomination”

A remarkable observation across Emerging Markets in the past two decades is the shift on the currency denomination of its debt—from foreign currency (FC) debt toward local currency (LC) debt. This paper argues that changes in the cyclical properties of global inflation with respect to EM’s output can help account for this pattern. I provide suggestive evidence that, for a large set of EM’s, global inflation became increasingly more counter-cyclical since the Global Financial Crisis, and this period coincides with an increase in EM’s share of external debt denominated in LC. A counter-cyclical global inflation increases the variance of borrowing costs in dollars, motivating a reallocation towards more LC debt. Precisely, I provide estimates of conditional covariance between US GDP deflator—a proxy for international investor’s inflation—and a set of EM’s real GDP. Then, I provide a simple sovereign default model with nominal debt to rationalize the salient patterns of the data.