Marcos Thiago de Araújo Marcolino

Curriculum Vitae
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Personal Data

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Citizenship: Brazil

Major Fields of Concentration

Macroeconomics, Environmental Economics

Employment

2018-Present: Postdoctoral Researcher at Potsdam Institute for Climate Impact Research (PIK)

Education

Degree	*Field*	*Institution*	*Year*
PhD	Economics	University of Minnesota	2018
MA	Economics	University of Minnesota	2017
MA	Economics	University of Brasilia (UnB)	2011
BA	Economics	University of Brasilia (UnB)	2008

Dissertation
Title: "Essays in Macroeconomics"
Advisor: Prof. Larry Jones

References

Prof. Larry Jones	+1 (612) 624-4553 lej@umn.edu
Prof. V.V. Chari	+1 (612) 626-7151 chari002@umn.edu
Prof. Christopher Phelan	+1 (612) 626-2533 cphelan@umn.edu
Dr. Simran Sahi	+1 (612) 625-6353 ssahi@umn.edu

Honors and Awards

2018	*Distinguished Instructor*, Department of Economics, University of Minnesota
2015	*Distinguished Instructor*, Department of Economics, University of Minnesota
2013	*Distinguished Teaching Assistant*, Department of Economics, University of Minnesota
2012 - 2013	Edward Cohen Fellowship, University of Minnesota
2009 - 2011	*CAPES*, Fellowship for Masters in Economics, Brazilian Ministry of Education, Brasilia-DF, Brazil

Teaching Experience

2017 – 2018	Instructor for *Principles of Macroeconomics*, University of Minnesota
2017 (Summer)	Instructor for *Cost-Benefit Analysis*, University of Minnesota
2017 (Jan – May)	Instructor for *Intermediate Macroeconomics*, University of Minnesota
2015 – 2016	Instructor for *Cost-Benefit Analysis*, University of Minnesota
2015 (Jan - May)	Instructor for *Intermediate Macroeconomics*, University of Minnesota
2013 – 2014	Instructor for *Principles of Microeconomics*, University of Minnesota
2012 - 2013	Teaching Assistant for *Principles of Microeconomics*, University of Minnesota
2011	Teaching Assistant for *Macroeconomics* (MA and PhD), University of Brasilia

Professional Experience

2005	Intern, Ministry of Finance – Brazil Federal Revenue, Brasília-DF, Brazil

Working Papers

"Structural Transformation and Labor Productivity in Brazil", with Daniela Costa

Work in Progress

"Accounting for Structural Transformation in the U.S."
"Structural Transformation and Energy Use: A Cross-Country Analysis"
"Rainfall and Structural Transformation in Africa"
"Intergenerational Carbon Externality and Credible Policy"

Computer Skills

Fortran, MATLAB, Stata, R, LaTex

Languages

English (fluent), Portuguese (native)

Abstracts

"Structural Transformation and Labor Productivity in Brazil", with Daniela Costa

This paper examines the labor reallocation across agriculture, manufacturing and services, and their impacts on aggregate labor productivity in Brazil from 1950 to 2010. We use a multisector model that features nonhomothetic

preferences with constant elasticity of substitution and wedge distortions. This framework allows us to decompose the drivers of labor reallocation into supply-side, demand-side and wedge distortions. For the 1950-2010 period, the demand-side effects were responsible for most of the reallocation of labor away from agriculture towards manufacturing and services. On the other hand, if we focus only in the 1980-2010 sub-period, the supply-side drivers become the biggest determinant for labor reallocation. In addition, we explore two important aspects of the Brazilian economy: the fast growth of manufacturing productivity from 1950 to 1980 and its subsequent sluggishness, and the decline of services productivity after 1980. We find that the fast growth of manufacturing productivity is responsible for 14.5% of the aggregate productivity level in 1980. We also find that if services labor productivity had stayed constant at its 1980 level, aggregate labor productivity in 2010 would be 28% higher than observed.

"On the Sources of Structural Transformation in the U.S."

I investigate the sources of labor reallocation from the manufacturing sector towards services in the United States from 1950 to 2010. I use a multi-sector model with sector-specific productivity growth and non-nomothetic preferences to decompose the sources of labor reallocation into supply-side, demand-side and wedge distortions. The decompositions is performed in the context of a competitive economy where the competitive equilibrium with wedges reproduces prices and quantities of the economy exactly. During the 1950-2010 period, the demand-side mechanism accounts for 56% of the reallocation of labor. Focusing only in the sub-period from 1950 to 1980, 78% of the reallocation is demand-driven. In the sub-period from 1980 to 2010, the three sources of labor reallocation are quantitatively important. Demand-side accounts for 45%, supply-side for 29% and wedge distortions for 26%.

"Structural Transformation and Energy Use: A Cross-Country Analysis''

I investigate the interaction between the process of structural transformation - reallocation of labor and production across agriculture, manufacturing and services - and energy use. I use a multi-sector model of structural transformation to explain the differences in aggregate energy productivity between countries. I measure labor productivity and energy productivity levels across countries using the model. Sectoral energy productivity differences of the United States relative to other countries are large. Over time, energy productivity gaps have declined in the agriculture and services sectors, but not as much in manufacturing. The gap in manufacturing energy productivity persists mainly because all countries have displayed similar growth in manufacturing energy productivity.

"Rainfall and Structural Transformation in Africa"

I study the impact of rainfall anomalies in the reallocation of labor from the agricultural sector towards non-agriculture in Africa since 1970.

"Intergenerational Carbon Externality and Credible Policy"

I study the depletion of an exhaustible resource that generates negative externality in an OLG framework without commitment.