Marcos Ribeiro Frazao

Address: Department of Economics
                   Yale University
                   New Haven, CT 06520-8268

Telephone: (203) 676 9967

E-mail: marcos.frazao@yale.edu

Web page: sites.google.com/view/marcos-frazao

Citizenship: Brazil (F-1 Visa)

Fields of Concentration:
International Trade
Macroeconomics

Desired Teaching:
Macroeconomics
International Trade

Comprehensive Examinations Completed:
2016 (Oral): International Trade *with distinction*, Macroeconomics
2015 (Written): Microeconomics, Macroeconomics

Dissertation Title: *Essays on Geography and Firm Dynamics*

Committee:
Professor Samuel Kortum (Chair)
Professor Costas Arkolakis (Co-Chair)
Professor Michael Peters

Expected Completion Date: May 2021

Degrees:
Ph.D., Economics, Yale University, 2021 (expected)
M.Phil., Economics, Yale University, 2017
M.A., Economics, Yale University, 2016
M.A., Economics, Getulio Vargas Foundation, 2014
B.A., Economics, Getulio Vargas Foundation, 2011

Fellowships, Honors and Awards:

Dissertation Fellowship (2019-2020)

Walter G. Preston Jr. Fellowship (2019–2020)

Frazier Jelke Fellowship (2018-2019)

Frazier Jelke Fellowship (2017-2018)

Falk Foundation Fellowship (2016-2017)

Lester Page Hoole Fellowship (2015-2016)

Scholarship for Master's Studies, Brazilian Coordination Office for the Improvement of Graduate Personnel (CAPES) (2012-2014)

Scholarship for Undergraduate Studies based on merit (GPA), FGV-RJ (2007-2011)

Teaching Experience:

Fall 2016, Teaching Assistant to Prof. Tony Smith and Prof. Zhen Huo, Macroeconomics PhD first year, Yale University

Spring 2017, Teaching Assistant to Prof. Giuseppe Moscarini, Intermediate Macroeconomics, Yale College

Fall 2017 and Fall 2018, Teaching Assistant to Prof. William Nordhaus, Intermediate Macroeconomics, Yale College

Spring 2018 and Spring 2019, Teaching Assistant to Prof. Michael Peters, Intermediate Macroeconomics, Yale College

Summer 2020, Teaching Assistant to Prof. Zvika Neeman, Game Theory, Yale College

Research Experience:

Research Assistant at Brazilian Institute of Economics (IBRE-FGV), 2008-2009

Working Papers:

"Brand Contagion: The Popularity of New Products in the United States", (November 2020), *Job Market Paper*

"Geographic Spillovers and Exporter's Growth", (2017)

Work In Progress:

"Internal Gravity and Customer Base", (2019)

"A Method for Estimating Bounds on Switching Costs Using Intertemporal Moment Inequalities", *with Vitoria Rabello de Castro*, (2020)

Referee Service:

Journal of International Economics

Languages:

Portuguese (native), English, Spanish (intermediate), French (beginner)

References:

Prof. Samuel Kortum
Yale University
Department of Economics
New Haven, CT 06520
PO Box 208264
Phone: (203) 432 6217
samuel.kortum@yale.edu

Prof. Costas Arkolakis
Yale University
Department of Economics
New Haven, CT 06520
PO Box 208268
Phone: (203) 432 3527
costas.arkolakis@yale.edu

Prof. Michael Peters
Yale University
Department of Economics
New Haven, CT 06520
PO Box 208268
Phone: (203) 432 3527
m.peters@yale.edu

Dissertation Abstract

In my dissertation, I study the effects of geography on firm dynamics.

Brand Contagion: The Popularity of New Products in the United States [Job Market Paper]

What drives the growth of brand sales over time and space? Brands are an essential informational point of contact between final consumers and producers. From this perspective, understanding how brand sales evolve geographically is relevant for three reasons. First, it represents an important dimension of firm growth. Second, it provides evidence about how geography impacts the transmission of information about products. Third, it provides insights about the intrinsic value of a brand's customer base.

To study growth in brand sales, I compile a data set with more than 150,000 brands of retail products sold in the United States between 2007 and 2016. I use the Nielsen Homescan Panel data to aggregate the brand-level spending of more than 50,000 households in 44 regions. I also count the number of consumers who purchased products associated with each brand in all locations to create a customer base measure and use the purchase's UPC-level data to generate a price index for each brand. These measures allow me to break brand sales into three components: customer base, price level, and quantity per customer.

I use the data to establish stylized facts. I show that brand sales are concentrated in a few nearby locations; they grow with age and are more likely to increase in areas close to previously successful regions. I also observe the dynamics of the three sales components and find that customer base accounts for almost all brand sales variation, both across locations and over time. This evidence suggests that non-pricing mechanisms affect the brand's acquisition of customers. It also indicates that geography plays a vital role in customer acquisition, as new customers are more likely to be close to the current ones.

Motivated by these findings, I propose a model in which consumers aware of a brand might 'infect' others with that knowledge. For a given type of product, the consumer buys from the brand with the lowest price among the ones they are aware of. Brands also have different costs of delivering goods across locations. The combination of contagion and heterogeneity in costs dictates the endogenous evolution of the customer base. I estimate the model using the simulated method of

moments to recover the parameters associated with contagion among locations and delivery costs. Estimates show that the rate of contagion decreases with distance. They also show that the welfare gains associated with reducing the information frictions are larger than the gain from lowering transportation costs.

Internal Gravity and Customer Base

How does distance affect the sales of brands in the United States? To answer that question, I use brand data across 44 different regions in the US. At the brand level, most of the effect of distance on sales is associated with a reduced number of customers in distant locations rather than sales per customer. At the aggregate level, most sales reduction comes from having fewer brands serving other areas. To understand what drives these patterns, I introduce a trade model between regions with shipping costs and search frictions between brands and final consumers. The preliminary estimates suggest that the shipping costs are a log-linear function of distance. However, information frictions are lower at the origin than at other destinations but are not affected by distance otherwise.

Geographic Spillovers and Exporter's Growth

Does selling to a country increase the demand for a firm's product in neighboring locations? To answer this question, I study the post-entry sales of Brazilian exporters in different markets. The border-effect is associated with higher initial sales, higher growth, and lower probability of exit, controlling for firm-year fixed effects. Even accounting for the spell-length of exporting events, which serves as a control for unobserved demand heterogeneity, I find that selling to a bordering country in the previous period increases sales by more than 10% at any given age. These results suggest that the persistent geographic spillovers on exporters' sales are more likely due to increasing demand than to lower fixed costs.