Sergio de Holanda Rocha

Contact Information

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Education

University of Illinois at Urbana-Champaign
Ph.D. in Economics — 2022 (Expected)

Universidade Federal de Pernambuco
M.Sc. in Economics — 2014
B.Sc. in Economics — 2011

Research Areas

Corporate Finance, Financial Constraints,
Firm Networks, Applied Microeconomic Theory

Working Papers

The Downstream Channel of Financial Constraints and the Amplification of Aggregate Downturns
(with G. Cortes), **Job Market Paper (Runner up, Best Paper in Corporate Finance, FMA 2021)**

Predatory Stock Price Manipulation
(with R. Matta and P. Vaz)

Short Selling and Product Market Competition
(with R. Matta and P. Vaz)

Trade Networks and Diffusion of Regulatory Standards
(with P. Thakur)

Work in Progress

Product Market Decisions under Financial Distress
(with D. Bernhardt and G. Cortes)

Transboundary Diffusion of Regulations: Role of Product Proximity and Product Heterogeneity
(with P. Thakur)

Teaching Experience

(Students' evaluations in parentheses)

University of Illinois at Urbana-Champaign

Assistant Instructor—Microeconomics (Graduate, M.Sc. Program in Policy Economics)
Online: Spring 2021 (**4.9**/5.0**); Fall 2020 (**4.2**/5.0)
In-Person: Fall 2019 (**5.0**/5.0**); Fall 2018 (**5.0**/5.0**); Fall 2017 (**4.8**/5.0**)

Teaching Assistant—Microeconomic Principles (Undergraduate)
In-Person: Spring 2017 (**4.4**/5.0*)

Teaching Assistant—Microeconomic Theory (Graduate, Ph.D. Program, Gies College of Business)
In-Person: Fall 2016 (**4.9**/5.0**)

* Awarded in the "List of Teachers Ranked as Excellent by their Students"
** Outstanding Rating (Top 10% university-wide Teaching Assistants)

Instructor—Math Camp Review Course (Graduate, M.Sc. Program in Policy Economics)
Online: Fall 2020 (Not Evaluated)
In-Person: Fall 2021; Fall 2019; Fall 2018; Fall 2017 (Not Evaluated)

Universidade Federal de Pernambuco

Teaching Assistant—Statistics, (Graduate, M.Sc. and Ph.D. Programs in Economics)
In-Person: Spring 2015, Spring 2014 (Not Evaluated)

Teaching Assistant—Microeconomics, (Graduate, M.Sc. and Ph.D. Programs in Economics)
In-Person: Spring 2013 (Not Evaluated)

Honors, Awards, and Grants

Lemann Fellowship, Lemann Center for Brazilian Studies	AY 2021–2022
Paul W. Boltz Fellowship, University of Illinois	Summer 2020
Department Travel Grant, University of Illinois	Fall 2019
Robert E. Demarest Memorial Teaching Award, University of Illinois	Summer 2019
Economics Department Graduate Fellowship, University of Illinois	AY 2015–2016
CNPq Graduate Fellowship, Brazilian Federal Government	2012–2014
CNPq Research Scholarship, Brazilian Federal Government	2009–2010

Professional Experience

Consultant Intern at *Consultoria Econômica e Planejamento* (CEPLAN) 2010–2012

Presentations

§: Scheduled
†: By coauthor

2022: American Finance Association (poster session)[§].
2021: Australasian Finance and Banking Conference[§], Financial Management Association, Latin American Meeting of the Econometric Society, Vietnam Symposium in Banking and Finance, Midwest Economic Association, University of Illinois (Graduate Seminar).
2020 and earlier: North American Regional Science Association, University of Illinois (Graduate Seminar), Latin American Meeting of the Econometric Society, Brazilian Meeting of the Econometric Society[†], Mid-Continent Regional Science Association[†], University of Illinois (Banking *&* Financial Intermediation Seminar), Universidade Federal de Pernambuco[†], Association for Public Economic Theory, International Workshop on Game Theory *&* Economic Applications of the Game Theory Society, Brazilian Association of Graduate Programs in Economics (Regional Meeting).

Refereeing

Canadian Journal of Economics (2), *Brazilian Review of Finance*

Computer Skills

R, Stata, LaTeX, Microsoft Office

Languages

English (Fluent), Portuguese (Native), Spanish (Basic)

References

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Working Papers

■ **The Downstream Channel of Financial Constraints and the Amplification of Aggregate Downturns**
Job Market Paper
with G. Cortes (University of Florida)

We identify a novel channel through which financial constraints propagate downstream in production networks. As firms interact along the supply chain, upstream firms can play a key role in providing liquidity to their customers when needed, particularly in the form of trade credit. This paper explores how largely exogenous variation in upstream firms' financing constraints affects the exposure of downstream customers to industry downturns. To do this, we exploit recent developments on production network data of US-listed firms to link firms horizontally and vertically. This allows us to disentangle and quantify the contribution of both horizontal and vertical relations on firms' exposure to aggregate shocks. We show that firms with financially-constrained suppliers experience additional valuation losses during industry shocks. Our baseline downstream amplification effect corresponds to roughly 60% of the horizontal amplification documented in the literature. These effects are larger during more severe downturns and when: (i) suppliers are more constrained; (ii) firms depend on more specific inputs; and (iii) suppliers are more concentrated. The effects are attenuated or muted at high levels of downstream firms' accounts payable and upstream firms' accounts receivable, suggesting trade credit as a mechanism through which the downstream channel operates. We also find that our baseline amplification effects impact firms' balance sheets via lower output levels, consistent with input disruptions. In addition to our amplification result, we also document that firms with constrained suppliers are more severely affected by supply-chain shocks. Our findings uncover two network implications of financing constraints: a more severe downstream *contagion* of negative shocks and the *amplification* of customer industries' valuation losses. Our results lend support to policies that facilitate trade credit in upstream segments during crises.

■ **Predatory Stock Price Manipulation**
with R. Matta (SKEMA Business School) and P. Vaz (Federal University of Pernambuco)

We develop a theory of stock price manipulation in the context of product market duopolists. In the model, feedback effects from secondary equity markets to real investment decisions allows a speculator to profit by pairing a short sale of a firm's share with a buy trade of its competitor's even when uninformed about firms' fundamentals. This *predatory stock price manipulation* distorts the investment incentives of the firm targeted by short selling to the benefit of its rival. This trading strategy makes product market outcomes that are favorable to the speculator more likely to happen, allowing her to close both the short and long stock positions at a profit. We show that predatory manipulation partially undermines equity markets' ability to achieve efficient allocations, decreasing investment efficiency. Our analysis unveils how stock traders can exploit competition between firms to increase manipulation profits and effectiveness with sophisticated trading strategies that employ buy orders, providing new insights into the regulation of short sales.

■ **Short Selling and Product Market Competition**
with R. Matta (SKEMA Business School) and P. Vaz (Federal University of Pernambuco)

We empirically investigate how short selling affects product market performance. First, we document that short interest has a historically negative association with US-listed firms' share of industry sales that is driven solely by large firms. To gauge causal effects of short selling, we exploit a natural experiment in which constraints on short sales were relaxed for a randomized group of firms. We show that treated firms experienced decreases in market share relative to industry peers in the control group. These effects are driven by large firms, firms in concentrated markets, and product markets where

firms compete in strategic substitutes. Further tests suggest that product market interactions amplify the responsiveness of firms' output levels to the release of information caused by short selling, generating our baseline results. Our findings are consistent with a managerial disciplining channel in which short interest reveals information of inefficient overreach by firms with market power, leading to downsizing and spin-offs.

■ **Trade Networks and Diffusion of Regulatory Standards**
with P. Thakur (University of Illinois)

We study network effects in the diffusion of regulatory standards through international trade. Using spatial econometric techniques, we show that countries are more likely to domestically adopt regulations that they comply with while exporting. We find evidence of such diffusion primarily in regulations concerning attributes of the final product rather than production processes. Consistent with a network effect, we show that countries that are more open to international trade are the drivers of regulatory diffusion. In a novel analysis, we assess diffusion in individual features *within* labelling regulations—the most prevalent regulations in our data. We find that labelling requirements ensuring the safety of use propagate the most. We also find that countries tend to adopt domestic regulations with requirements similar to those imposed by their importing partners, providing evidence of *within*-regulation diffusion in individual requirements. Our results support the argument that economic integration can facilitate the strengthening of regulatory standards by aligning economic incentives and social goals of countries.

Work in Progress

■ **Product Market Decisions under Financial Distress**
with D. Bernhardt (University of Illinois) and G. Cortes (University of Florida)

We will study the impact of retailers' entry and exit decisions on local markets. We explore synergies between stores at nearby localities to gauge economies of agglomeration and estimate the local propagation of shocks related to entry/exit decisions of retailers. We will investigate whether financially sound firms are better able to exploit investment opportunities during local market shocks. We combine data from multiple sources to build a comprehensive sample of U.S retailers. We use these data to compute local stores connectedness in a novel way to capture how financial fragility shapes the responses of stores to local shocks. We believe this project will broaden our understanding of the financial aspects of the "retail apocalypse" phenomenon.

■ **Transboundary Diffusion of Regulations: Role of Product Proximity and Product Heterogeneity**
with P. Thakur (University of Illinois)

International trade can foster policy coordination among countries by facilitating regulatory diffusion from regulation-imposing importers to their exporting partners. Moreover, the ease of adoption of a regulation depends on the value added from adoption, which can vary by type of commodity, and the proximity of the commodity to another for which the regulation has already been implemented. In this project, we expand our analysis in Rocha and Thakur (2021) to assess indirect propagation across commodities and product characteristics driving regulatory diffusion. We use an extensive dataset of multiple regulations imposed on imported goods by countries over the years for several traded commodities. Expanding usual spatial econometric techniques to panels of high dimensionality, we intend to quantify and contrast the direct *within-commodity* and indirect *cross-commodity* channels of diffusion. By combining our data with information on product complexity, hazardousness, and end-use, we will be able to determine product characteristics that are more strongly associated with diffusion due to pressure from importers.