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**Fields of Concentration:**
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**Desired Teaching:**
Industrial Organization, Applied Econometrics, Undergraduate Microeconomics, Undergraduate Econometrics.

**Comprehensive Examinations Completed:**
2020 (Oral): Industrial Organization and Econometrics
2019 (Written): Microeconomics and Macroeconomics

**Dissertation Title:**
*Public vs. Private: The Industrial Organization of Education and Other Regulated Markets.*

**Committee:**
Professor Katja Seim (Chair)
Professor Steven Berry
Professor Christopher Neilson

**Degrees:**
Ph.D., Economics, Yale University, 2024 (expected)
M.Phil., Economics, Yale University, 2022
M.A., Economics, Yale University, 2020
M.A., Economics, FGV EPGE, 2018
B.A., Economics, PUC-Rio, 2015

**Fellowships, Honors and Awards:**
Dissertation Fellowship, Yale University, 2022-2023
Nathan Hale Associates Fellowship, Yale University, 2019-2020
Doctoral Fellowship, Yale University, 2018-2024
CAPES Master's Fellowship, FGV EPGE, 2016-2018

BTG-Pactual Scholarship, PUC-Rio, 2011-2015
PUC-Rio Entry Exam Scholarship, PUC-Rio, 2011-2015

**Research Grants:**

Robert E. Evenson Fund, Economic Growth Center at Yale ($9,150.00).

**Teaching Experience:**

*Yale College (undergraduate courses)*

Fall 2020, Teaching Assistant to Prof. Yusuke Narita, Intro to Probability and Statistics
Spring 2021, Teaching Assistant to Prof. Yuichi Kitamura, Econometrics
Fall 2021, Teaching Assistant to Prof. Nick Ryan, Intro to Data Analysis and Econometrics
Spring 2022, Teaching Assistant to Prof. Penny Goldberg, Intro to Microeconomics
Fall 2023, Teaching Assistant to Prof. Eva Chalioti, Intermediate Microeconomics

*FGV EPGE (graduate courses)*

2017, Teaching Assistant to Prof. Marcelo Moreira, Statistics II
2017, Teaching Assistant to Prof. Caio Almeida, Statistics I

**Research and Work Experience:**

Research Assistant to Prof. Soheil Ghili, Yale University, 2020
Research Assistant to Prof. Marcelo Moreira, FGV EPGE, 2017-2018
Research Assistant to Prof. Carlos Viana de Carvalho, PUC-Rio, 2012-2013

**Working Papers:**

"College Quality and Tuition Subsidies in Equilibrium," *Job Market Paper,* with Alvaro Cox.

**Work In Progress:**

*"*Ownership Effect on Productivity and Investment: Water Utilities in Brazil", with Rodrigo Naumann.

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**References:**

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## Dissertation Abstract

**College Quality and Tuition Subsidies in Equilibrium,** with Alvaro Cox *[Job Market Paper]*

In Brazil, most of the growth in higher education in the last decades has happened through the expansion of the private sector. Such an expansion has led private institutions—nonprofits and for-profits—to dominate the market, serving more than 70% of enrolled students. In parallel, the government implemented two policies to assist low-income students in attending private institutions: scholarships and subsidized student loans. A concern is that private institutions with market power will imperfectly pass through subsidies by adjusting both price and quality. In this paper, we address this question and study how such demand-side subsidies affect the equilibrium level of price and quality provision in the higher education sector in Brazil.

We measure quality using value-added models, where a student's post-graduation outcome is determined by their pre-enrollment characteristics and a program fixed effect, which we interpret as the program's value added. We leverage rich individual-level data and link multiple administrative datasets to track students before enrollment, during college, and after college. We use students' pre-enrollment characteristics from a nationwide standardized entry exam and consider two post-graduation outcomes: a standardized "exit" exam—which tests graduates' major-specific knowledge—and labor income from a matched employer-employee database. Our estimates indicate that colleges' contributions to students' academic achievement and to their salaries are correlated. We show that a sizeable part of the variation in value added is explained by inputs to value-added production. In particular, the composition of instructors in terms of educational attainment and type of work contract are strong predictors of value added. Lastly, we find that value added increases in the share of students receiving subsidy support.

Next, we develop a static equilibrium model of demand, pricing, and quality provision. We rely on a discrete choice model to represent how students select a program—or not to enroll in college. Students consider price, distance, value-added quality, probability of receiving either form of subsidy, and the student's entry exam performance relative to the program's average. On the supply side, private colleges compete by choosing price and quality. We consider two counterfactuals: decreasing the supply of loans by 10% and decreasing the supply of scholarships by 10%. We find similar patterns under both scenarios but much stronger effects for scholarships. In particular, by lowering the supply of scholarships by 10% in each program across the country, there would be 13 thousand fewer students in college, corresponding to approximately 80% of the total reduction in scholarships. For-profit institutions would lose about 9% of their market share, while nonprofits would lose only about 0.9%. Most programs would have an incentive to decrease quality and price, with a median change of -5% in value-added and of -0.7% in price.

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**Ownership Effect on Productivity and Investment: Water Utilities in Brazil,** with Rodrigo Naumann

Access to treated water and sanitation is essential for public health and economic development. However, many developing countries still face the challenge of serving a large fraction of their population. This project investigates how a water utility's ownership type, i.e., private or public, affects its productivity and incentives for coverage expansion. First, we use a panel of municipalities to run an event-study analysis of municipalities who switched their operators from public to private. We find that switchers were substantially more diligent in charging customers as they sharply increased the number of meters and fraction of billed water. Moreover, municipalities that switched to private operators show a substantial increase in new connections to treated water networks but without a sizeable increase in average price. Next, we propose a production function model that incorporates the firm's ownership type. In our model, we posit that utilities value a combination of profits and non-pecuniary benefits to rationalize their choice and allow such valuation to vary by ownership type. We also investigate how the ownership type affects the flexible input choices and unobserved productivity.