

# Research statement

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I am an applied microeconomist with research interests in Empirical Industrial Organization and Applied Econometrics. My work aims to understand the behavior of consumers and firms, and how it affects market efficiency and welfare. On the supply side, my research focuses on firm performance after mergers and on firm heterogeneity and pricing strategies. On the demand side, I have studied consumer's preferences for quality attributes and the effects of their introduction. I have also explored vertical differentiation in the context of trade issues. I employ both reduced-form and structural estimation techniques, and most of my work includes a methodological contribution. In what follows, I describe in more detail these research agendas.

In my Job Market Paper entitled "Pricing strategy heterogeneity in retail gasoline markets" I document for the first time the existence of heterogeneous firm strategies in U.S. retail gasoline markets and show that it explains a significant part of the high cross-sectional, market-level price variability. I identify different strategies by inspecting firm-level price dynamics for the presence of asymmetric cycles using a database of daily gas prices in the U.S. collected by my classmate and coauthor Carlos Hurtado. These type of cycles have hitherto been regarded as a market-level phenomenon, hence their identification for individual gas stations represents another contribution. The methodology employed to detect station-level price cycles involves the construction of a cycling indicator that overcomes issues with the measure of cycle asymmetry used in previous work. I find a high degree of within-market variability in cycling behavior that provides me with an identification strategy to estimate a cycling-induced price gap of -3.43 cents, which rules out conventional forms of collusion being the force driving these cycles, as has been recently claimed. Moreover, some testable predictions of the theory of Edgeworth cycles, the most popular theoretical foundation adopted in the literature for the cycle asymmetry, do not hold in light of the new evidence. My findings suggest that the station's choice of a pricing strategy is related to the type of consumer targeted: non-cycling stations aim to attract inelastic consumers, while cycling stations target price-sensitive, search-prone consumers.

In our paper "Firm performance and organizational disruption: evidence from U.S. airline mergers", joint with Jorge Lemus and Guillermo Marshall, we use administrative data from the U.S. airline industry to measure the quality added from a merger over time. We leverage unique industry features to separate organizational from non-organizational effects of a merger on quality

provision. Organizational effects are found to cause a long-lasting and significant reduction in the quality supplied by a merged firm. Also, we find that merged firms may perform poorly relative to the merging firms' pre-merger performance.

In "New goods with new attributes: combining revealed and stated preferences to assess the effect of a novel quality label in the food industry" Victoria Lacaze and I propose a method to evaluate the effect on market outcomes of the introduction of a product that possess a hypothetical attribute. We augment the structural demand model we estimated with scanner data in "Preferences, market structure, and welfare evaluation in the Argentinean frozen fried potato industry" by calibrating the parameter of the preferences for the new attribute with self-collected primary data on willingness-to-pay for sustainably produced potatoes. We use our model to address some policy relevant issues, such as how much more could producers be paid for these potatoes by means of the additional consumer surplus the processing firms could extract.

"The Micro-D classification: a new approach to identifying differentiated exports", joint with Federico Bernini, Juan Carlos Hallak, and Alejandro Vicondoa, argues that exports of differentiated products, especially when sold to developed countries, signal the acquisition of knowledge that reflects development progress. We propose a new classification that provides a more precise identification of differentiated exports; specifically, we use package size as a proxy for product differentiation in food and beverages. We apply the Micro-D classification to Argentina in 1998-2011 to deliver a new picture of the country's sources of export upgrading.

In my paper "A nonparametric density-based likelihood ratio test for normality" I propose a goodness-of-fit test based on the likelihood ratio approach, using a nonparametric estimation of the sample density. I evaluate the test statistic under several specifications of kernel estimation, logspline estimation, and smoothing spline using Monte Carlo simulations. I find that the preferred specification of my test statistic, which uses the smoothing spline estimator, outperforms well-known normality tests in terms of power under several alternative distributions.

My near-term research agenda will largely continue to focus on topics in Empirical Industrial Organization. Following up on the findings of my Job Market Paper, the next step involves analyzing gas stations strategy switching over time. In collaboration with another coauthor, I am exploring the retail gasoline market in Brazil, with focus on the impact of political scandals on firms' performance. I am also carrying out a project on the role of brand loyalty on soda consumption in the U.S.