

# Northwestern

## Economics

**RENÉ LEAL-VIZCAÍNO**

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### PERSONAL INFORMATION

Citizenship: Mexico

### RESEARCH AND TEACHING FIELDS

Research Primary Field: Microeconomic Theory  
Secondary Field: Industrial Organization  
Teaching: Microeconomic Theory, Industrial Organization

### DOCTORAL STUDIES

Ph.D., Economics, Northwestern University, Evanston, Illinois  
Dissertation: "The Quality of Information and Comparative Statics"  
Committee Chairperson: Professor Eddie Dekel  
Date of Completion: June 2018 (expected)

### PREDOCTORAL STUDIES

M.A.: Economics, Northwestern University, Evanston, Illinois, 2013  
B.S.: Applied Mathematics, ITAM, Mexico, 2011

### FELLOWSHIPS AND AWARDS

Dissertation Fellowship, Northwestern University, 2017-2018  
Fellowship, Northwestern University, 2012-2013  
Honorable Mention, Premio de Investigación Ex ITAM 2012 (second place research award for undergraduate thesis)  
Graduate Scholarship, CONACYT, ITAM (70%) M.A. in Economic Theory (GPA 9.7/10 top 1% of the class)  
Baillères Scholarship, (100%) B. A. in Economics and B. S. in Applied Mathematics.  
Highest score in admissions test.

## TEACHING EXPERIENCE

Teaching Assistant, Northwestern University,  
General Equilibrium (graduate 2014-2016, Prof. Marciano Siniscalchi)  
Game Theory (graduate 2014, Prof. Jeffrey Ely)  
Industrial Organization (undergraduate 2013)  
BRIDGE Summer Program first-generation college students (summer 2016)

## RESEARCH AND WORK EXPERIENCE

Research Assistant to Professor Matthew Notowidigdo, 2016-2017  
Research Assistant Center for Economic Theory, 2015-2016

## PROFESSIONAL ACTIVITIES

Conference Presentations (2017): ITAM Alumni Conference, 73rd Annual Congress of the International Institute of Public Finance (University of Tokyo).

## JOB MARKET PAPER

Quantifying the Welfare Gains of Variety: A Sufficient Statistics Approach (with Kory Kroft, Jean-William Laliberté, and Matthew Notowidigdo). July 2017.

This paper develops a new revealed-preference approach for valuing changes in product variety. We show that the “variety effect” – the change in consumer surplus resulting from a change in the number of available products, holding prices constant – can be represented graphically as the area between the inverse market demand curves before and after the change in product variety. Our key contribution is to derive a sufficient statistics formula for the variety effect under the assumption of parallel inverse market demand curves. This formula depends on the price elasticity of demand when variety is fixed and the price elasticity of demand when variety is permitted to vary. We demonstrate that a wide class of continuous and discrete choice models give rise to parallel inverse demand curves, showing that our formula is robust. We illustrate the value of our approach by considering an empirical application to taxes. In particular, we show how one can implement our sufficient statistics formula using reduced-form estimates of the effect of taxes on variety and the effect of taxes on prices and quantities in two cases: where variety is held constant and where variety responds to a change in taxes through firm entry or exit. Combining retail scanner data from grocery stores in the U.S. with detailed local sales tax data and using within-store and between-store variation in rates and exemptions, we estimate a large effect of sales taxes on product variety. Finally, we discuss several additional applications in Industrial Organization and Public Economics.

## PUBLICATIONS OUTSIDE ECONOMICS

1. [Local Completeness, Lower Semi Continuous from Above Functions and Ekeland’s Principle](#). (with Carlos Bosch) *Bulletin of the Korean Math. Soc.* 51 (2014), No. 2, pp. 437–442

## OTHER PAPERS

### 1. “Entry and the Value of Information in Auctions”

In most of the auctions literature, the model assumes a fixed number of bidders with a fixed information structure. This modeling choice is unrealistic and carries strong implications: For example, participation is always valuable for the seller through increased competition and potential efficiency gains. However, an auction format that raises more revenue for a fixed number of bidders also induces less participation. An auctioneer that takes this effect into account will trade off some of the rent extraction to induce more participation. One contribution of the paper is to show that a similar tradeoff is present when bidders choose the intensity with which they gather information. In fact, I show that the auctions that induce more information acquisition are also those that give more value to the bidders. Therefore, the auctioneer also needs to balance this tradeoff. In terms of the theory, a basic problem is that we only know how to rank the value of information for two different auction formats when the number of bidders is fixed. I solve this problem by developing the tools to rank the value of information when participation is endogenously determined. The tools include introducing new orders in the space of bidder's utility functions and the space of information structures. A notable implication is that (in common value auctions), for a class of ordered signals, the first price auction induces more entry and more information acquisition than a second price auction, but the second price auction raises more revenue. Several other results are provided for auctions with interdependent values and security-bid auctions where contingent payments are allowed.

### 2. Ex-ante Comparative Statics: Responsiveness to Information Quality (with Teddy Mekonnen). January 2017.

In the single decision maker model, an agent chooses an action after observing a signal that is informative of the state of the world. From an ex-ante perspective, the agent's optimal action is a random variable that depends on the signal realization. We study how the quality of information affects the responsiveness of the action to the signal, a concept of dispersion that encompasses mean-preserving spreads and second-order stochastic dominance relations. As the quality of information increases, the agent tailors her actions to her beliefs more closely, and consequently the action is more responsive to the signal. In the case of several agents, we extend our results to Bayesian games with complementarities, where optimal actions are now Bayes Nash Equilibria, and where we allow for the quality of information to change for several players. Finally, in Bayesian games with one sided information acquisition we use the concept of responsiveness to characterize the value of transparency by providing a taxonomy of the value of information in the covert and the overt information acquisition games.

### 3. Acquisition and Disclosure of Information to a Monopoly. July 2016.

I characterize the jointly optimal information acquisition and disclosure policies in a buyer-seller game where acquiring information is costly. When a new product is introduced by a monopolist, an uninformed buyer can incur a cost to get a signal of her valuation from a family of available signals. At the point where the information acquisition strategy is chosen the buyer can also commit to disclose information: any signal weakly less informative than the one acquired can be transmitted to the seller. For any given information acquisition strategy, disclosure can increase informational rents to the buyer, therefore she must take into account the optimal disclosure policy for each signal to compute the real value of information. I introduce continuous and

connected families of information acquisition strategies and cost, and I characterize the jointly optimal choice of the buyer. In the particular case when information acquisition is unrestricted: all signals are available to the buyer; and the cost function is increasing in informativeness, the optimal policy involves no disclosure of information to the monopolist.

## LANGUAGES

English (fluent), Spanish (native).

## REFERENCES

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