Aurora Stephany

University of Washington
Department of Economics

asteb@uw.edu
Phone: +1 (206) 209-6359

Education

University of Washington
Doctoral Candidate 2018
PhD Economics (expected Spring 2019)
Areas of Interest: Microeconomic Theory, Applied Microeconomics, Industrial Organization, Information Economics, Transaction Costs and Property Rights.

M.A., Economics, 2015.
Fields: Microeconomic Theory, Econometrics

Universidad Simon Bolivar
M.S. studies (ABD), Mathematics, 2012.

Universidad Central de Venezuela
B.A., Economics, 2009

Research Positions Held

2014 - Present: Department of Economics, University of Washington
Doctoral Student
Advisor: Dr. Yoram Barzel, PhD
Project: Property Rights, Transaction Costs and Information

2008 - 2010: Research Vicepresidency, Development Bank of Latin America (*CAF, in Spanish)*
Research Assistant
Supervisor: Dr. Jose G. Pineda, PhD
Project: Report on Economics and Development (RED)
Description: Gathering and cleaning data, mostly from available sources of official country statistics, as well as IMF, World Bank and OCDE. Data analysis and data handling responsibilities, as well as finding and summarizing relevant literature, and writing original content.

Research Papers

JMP: Transaction Costs in the Trading of Variable Quality Commodities (2019)
With Yoram Barzel. Working paper
Abstract at the end of this document.

Attribution and Responsibility: Implications of Blockchain Technology for Small Producers and Vertical Disintegration (2019)
Under development. Description at the end of this document.

Research Papers

Information and Intermediation in Economics: A Framework (2019)
With Yoram Barzel. Working paper

Single Mothers and Children's Achievement: An empirical Inquiry into the Trade-Off Between Support and Fitness in Marriage (2019)
With Yoram Barzel and Qing Zhang. Working paper
Abstract at the end of this document.

The Rationale of Marriage and the Impact of DNA testing on the Organization of Marriage (2019)
With Yoram Barzel and Qing Zhang. Working paper
Abstract at the end of this document.

Dowry and Bride Price: an Economic Perspective (2019)
With Yoram Barzel. Working paper
Abstract at the end of this document.

Inefficiencies in a three-sided matching model with an intermediate agency (2014)
Working paper

Teaching

2018 - Present: School of Business, University of Washington, Bothell
Introductory Microeconomics, Introductory Macroeconomics,
Business Statistics, Managerial Economics

2013 - 2018: Department of Economics, University of Washington Seattle
Teaching Assistant: Introductory Microeconomics, Introductory Macroeconomics
Instructor: Game Theory, Advanced Microeconomics, Intermediate Microeconomics,
Introductory Microeconomics, Introductory Macroeconomics

2017: Seattle District Colleges (North and Central)
Adjunct Faculty: Principles of Macroeconomics, Principles of Microeconomics

2015 - 2016: Seattle University, Alberts School of Business
Adjunct Faculty: Principles of Microeconomics, Principles of Macroeconomics,
Intermediate Macroeconomics and Global Business

2010 - 2012: Universidad Simon Bolivar
Classes taught in Spanish
Instructor: Calculus 1, 2 and 3; Introductory Geometry

Awards and Fellowships

York Fellowship
University of Washington, 2012-2013
Summa Cum Laude in Economics
Universidad Central de Venezuela
Mathematical Olympiad Awards
Gold Medal at Venezuelan Olympiad,
Honour Mention at Caribbean and Central American Olympiad
Participant at IMO

Computer Skills

Advanced: Python , Excel VBA ; Intermediate Octave/Matlab, R, Stata.
Very competent at learning new software tools.
LaTeX, Office Suite. Proficient with Linux and Windows, familiar with Apple OS.
Experience with vector-based graphic tools, such as Adobe Illustrator and Inkscape.

Technical Skills

Econometrics, Causal Modeling, Basic proficiency in Machine Learning,
Understanding of blockchain and cryptocurrency fundamentals.

Languages

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

References

Yoram Barzel
University of Washington
Department of Economics
yoramb@uw.edu,+1 (206) 543-2510

Patrick Bajari
University of Washington
Department of Economics
Chief Economist and Vice President
Amazon
bajari@uw.edu,+1 (206) 543-8172

Chris Anderson
School of Aquatic and Fishery Sciences
University of Washington
cmand@uw.edu,+1 (206) 543-1101

Judith Thornton *(Teaching)*
Department of Economics
University of Washington
thornj@uw.edu,+1 (206) 543-5784

Research Details

Research on Information and Measurement Costs in Economics

- **Transaction Costs in the Trading of Variable Quality Commodities** (2019)
  With Yoram Barzel
  We study the organization of markets when goods are heterogeneous and contracting is not viable. Buyers presented with a batch of non-uniform goods sold at the same price gather information in two ways: by *scanning* the overall quality and variability of the whole batch, and by *inspecting* individual units in order to get the best ones (i.e. cherry-picking). Both scanning and inspection represent a cost to the buyer which does not result in a transfer to the seller, thus reducing the gains from the transaction. We develop a model for this situation and obtain several theoretical results which are then contrasted with common practices in retail trade. We prove that 1. If buyers are allowed to inspect, the good must be sold at a price above average value. 2. As a result, the quality distribution will decay over time, and the seller will be forced to lower the price. 3. The problem is more acute when there is greater dispersion in quality. 4. The seller is motivated to make individual inspection costly, but he must keep the cost of scanning the whole batch low. 5. There are large gains to be made by increasing uniformity. 6. When buyers differ from each other, the ones with lower cost of inspecting could drive away the ones with higher inspection cost. When this problem is serious enough, the market for the commodity may not exist. The results in this paper help explain a wide variety of observed phenomena in various markets. Oranges are often displayed in a pyramid to make scanning cheap but individual inspection costly, thus inducing random picking. We also explain why pre-selected (pre-packaged) fruit is cheaper, why supermarkets with a heterogeneous customer base tend to sell either very uniform produce or pre-bagged produce, why there is a "second hand" vegetable market, and why producers are willing to incur very large costs to achieve uniform goods.

- **Information and Intermediation in Economics: A Framework**
  With Yoram Barzel
  We propose a framework that explicitly includes the costs incurred by potential buyers when deciding to buy: assessing the attributes of a good ("quality", for example) as well as their own utility, before consumption. Because these costs may be large, many potentially beneficial transactions are foregone. Several mechanisms emerge to prevent this outcome, such as formal guarantees or sellers' reputations. However, sellers do not in general have comparative advantage in guaranteeing or establishing reputations. This gives rise to intermediation. We model conditions in which third parties insert themselves in the relationship between producer and final consumer, and the forms this relationships takes depending on the informational structure of the market in question. We argue that this intermediation makes possible many markets that would not otherwise be viable, and that technological advances in information collection and broadcasting are associated to greater economic gains through the realization of previously inviable transactions. *Work in progress.*

Research on Implications of Blockchain Technology for Economic Organization

- **Attribution and Responsibility: Blockchain and its Implications for Small Producers and Vertical Disintegration**

  I model the possible implications of blockchain technology implementation for disintegrating supply chains. When there are a large amount of small producers, usually there are one or several intermediate steps in which a large company buys the production of many suppliers and acts as an enforcer of minimum quality standards. Buyers down the supply chain are not informed of the specific provenance of their goods other than they come from this large company. Consequently, other than the "minimum

standard" enforced by the company, small producers have no incentive to improve their quality or sell different varieties, as creating a reputation is costly and they are not likely to enjoy the benefits. Blockchain technology lowers the cost of tracking provenance (for buyers) and thus establishing reputation (for producers), so it creates incentives for more levels of quality and more variety. I predict that as a result, supply chains will disintegrate: individual producers will not need the intermediate large companies as quality gurantors, and industries are likely to disintegrate, that is, have a larger number of individual sellers. This technology is being experimentally implemented in fowl (chicken and turkey) as well as seafood industries, but the model applies to many others. *Work in progress.*

Research on the Economic Rationale for Marriage

- **Single Mothers and Children Achievement: An empirical Inquiry into the Trade-Off Between Support and Fitness in the Marriage** (2019)
  With Qing Zhang. Working Paper

  We propose and test a rationale for marriage as a contract. Marriage contracts have been so prevalent throughout history (as opposed to simple cohabitation, reproduction without cohabitation, or short-term contracts) because marriage contracts help solve property rights issues arising in the transaction: men cannot commit to supporting children in advance, and women cannot commit to fidelity in advance. A woman would like the fittest man possible to father her children, and a man will only support children if he believes they are his. The marriage contract allows this transaction by introducing external enforcement (by the State, the Church, or social norm). A clear implication of our marriage hypothesis is that women who plan to be single mothers will seek men of higher standing than their own (e.g. better educated or wealthier), while women who plan to marry and obtain support will marry men of the same standing as them. We expect children of the two groups of women will perform differently. We assess two groups of young adults according to their mothers' status: women who were willing to be single mothers (i.e., those were not married when they gave birth) and women who expected to obtain male support but became single mothers (i.e., those who were married when they gave birth but lost their husbands shortly thereafter). We then compare each youth to his or her own mother's school and income outcomes. Using data from the National Longitudinal Survey of Youth (1997), we find significant differences in both school and income outcomes between the two groups of offspring. The hypothesis is confirmed, as the children of intentional single mothers outperform their mothers by a greater magnitude than do the children of unintentional single mothers.

- **The Rationale of Marriage and the Impact of DNA testing on the Organization of Marriage** (2019)
  With Qing Zhang. Working Paper
  We argue that the rationale for marriage is to provide paternity assurance to the man and to ensure the man adheres to his duties in his children's upbringing. Traditionally, men's paternity is assured primarily by imposing constraints on women's activities. For example, historically, married women have had limited liberty to travel, limited access to the marketplace, and limited access to social events. On the other hand, enforcing the man's obligations in the upbring of his children is facilitated by having the two parties register their relationship at the state or religious authorities. Our marriage hypothesis predicts that with the emergency of DNA paternity test, more children will be born to unmarried cohabiting partners, and the increase is larger for those of lower standing than for those of higher standing. Our marriage hypothesis also predicts that with the emergence of DNA test, the gain from raising children while married or cohabiting (vs. alone) increases. As a result, we expect that more children will be born in marriage or to cohabiting partners, and fewer to single mothers. We use data from the National Survey of Family Growth to test our hypothesis. Preliminary results support our hypothesis.

- **Dowry and Bride Price: an Economic Perspective** (2017)
  With Yoram Barzel We use a property rights approach to explain the existence, and in some cases

coexistence, of bride price and dowry. We propose that the two institutions serve different purposes. Bride price is a transfer from the groom's family to the bride's, and it represents compensation for the productivity of the bride throughout her life. Dowry, on the other hand, is a transfer from the bride's family either to the new couple or to the family of the groom. The marriage rationale proposed in our parallel work indicates that the institution of marriage will impose constraints on the bride, so as to ensure that her children are biologically her husband's. These constraints will in many cases lower her quality of life, and most importantly, will prevent her family from ensuring her safety and comfort after she has moved to her husband's home. By transferring assets to the new couple, the bride's family tries to ensure her survival and comfort. These assets will thus be not in the form of money or liquid commodities, but rather in illiquid, difficult-to-sell assets that result in a higher quality of life for her, and that the husband might not decide to buy on his own.

Our framework explains why it has been observed in several cultures that both bride price and dowry can exist together: a simple exchange of cash between the families would not serve much purpose, and given the relative magnitude of the exchanges, could even be inefficient. But the transfer of cash in one direction and assets in the other does indeed make sense as a way to ensure the bride has access to some tools and comforts that her husband might otherwise not provide. *Work in progress.*