Maliheh Birjandi-Feriz

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Immigration Status: U.S. Permanent Resident (Green Card Holder)

RESEARCH INTERESTS

Economics of electronic marketplaces, digital research and experimentation (A/B testing), econometrics and machine learning, Big Data econometrics, Bayesian econometrics, applied microeconomics and industrial organization, large scale experimentation

EDUCATION

Department of Economics, Yale University — **New Haven, CT**

Ph.D. Candidate in Economics — 2013-2019 (expected)

M.A. & M.Phil. in Economics — 2014, 2015

- Fields of Concentration: Industrial Organization, Econometrics, Economics of Digitization
- Develop a Bayesian learning model to study welfare impacts of online consumer reviews in presence of social learning using big data scraped from an online travel agency, simulate the model using Metropolis–Hastings algorithm in R and MATLAB (advisors: Philip Haile, Judith Chevalier, Steven Berry)
- Investigate online trade channels and firm performance in export markets using firm level data from US Census of Manufacturers (advisors: Peter Schott, Penny Goldberg)
- Develop and simulate a demand estimation model to examine ethnic product differentiation in the market for funeral services using demographic, firm-specific and market level data
- Coursework: Applied Microeconometrics, Time Series Econometrics, Empirical Microeconomics, Computational Methods
- Served as teaching assistant for Intermediate Micro, Industrial Organization, Competition Economics and Policy

Fletcher School of Law and Diplomacy, Tufts University — **Medford, MA**

Master of Arts in Law and Diplomacy (MALD) — 2013

- Fields of Study: Economic Development, International Trade
- Recipient of *Robert Stewart Award*, awarded to an outstanding student who best exemplifies high academic achievements

Graduate School of Management and Economics, Sharif University of Technology — **Tehran, Iran**

Master of Business Administration (MBA) — 2009

- Coursework: Corporate Finance, Operations Management, Corporate Strategy, Marketing, Pricing, Econometrics

Sharif University of Technology — **Tehran, Iran**

Bachelor of Science in Engineering, Minor: Information Systems & System Analysis — 2007

SKILLS

Programming Languages:	MATLAB , C++, Fortran, Python
Operating Systems:	Linux/Unix , OS X, Windows
Statistical Softwares:	Stata ,R, SAS
Other Packages:	LaTeX , Lyx, Tableau, GAMS, LINGO
Skills:	Big data econometrics, familiarity with machine learning techniques

PROFESSIONAL EXPERIENCE

World Resources Institute (WRI), *Summer Research Fellow,* 2012 — **Washington, D.C**

- Conducted research on climate finance and allocation approaches in the Green Climate Fund, co-authored a paper on *Making the Green Climate Fund's Allocations Add Up to its Ambition,* Received the Prize for Best Research Content

The World Bank, Office of Chief Economist for the Middle East and North Africa Region, *Consultant, 2012* — **Washington, D.C**

- Served as research economist, worked with the chief economist to conduct empirical econometric analysis and statistical investigation on the data gathered from World Justice Project, co-authored a working paper on *Access to Justice for Women in Middle East and North Africa*

PERSONAL

- Personal interests: Marathon Runner, Yoga, Origami, Reading with spesific focus on biographies and innovative thinkers
- Resident Coordinator (RC) for Graduate Housing at Yale University, work on all levels with 100+ residents, supervisors, and Yale University professional staff to ensure the efficient operation of the residential living environment, involved in community development activities and programming initiatives 2016-present

Research Projects

Maliheh Birjandi-Feriz

November 17, 2016

1- Social Learning in Online Platforms: The rise of user-generated content on platforms such as Booking.com or TripAdvisor has fundamentally changed the way that buyers and sellers meet and interact in the marketplace, revealing the importance of social learning. Social learning is defined as the process by which individuals use feedback from their peers and modify their own expectations of product quality accordingly. Online platforms are an ideal environment to study social learning. Through crowdsourced reviews, customers learn about the opinions of others, which will influence their purchase decisions. Social learning in consumption has enormous implications for firms. Information that was revealed yesterday affects the choices of today's customers and as a result affects the information that is generated by those customers, illustrating the impact that one review can have on all subsequent decisions. In such a context, one can easily see that the return to attracting a new customer is different from the direct effect that this customer has on profits. Furthermore, social learning makes the success of a product more difficult to predict. Depending on whether the initial customers happened to like the product or not, two products of similar quality may have vastly different market shares in the long run. There are key questions that are of interest to platforms and also of interest to the academia. In this paper, we empirically examine observational learning in the context of Online Travel Agent (OTA) Market (TripAdvisor). We provide a learning-based model of market demand. The fundamental questions that we address are : *to what extent does observational learning lead customers to ignore superior products, or waste time and resources learning about inferior products? And how does this choice depend on product quality, the available product information, or the decisions of past customers?* In this project, we take a first step toward characterizing an optimal information disclosure strategy when customers observe signals about other agents' satisfaction. That is, we investigate *how basic operational decisions of platforms (here TripAdvisor) interact with the social learning process, and could be modified to better utilize the information currently collected by the platform.*

2- E-commerce and Firm Behavior in Export Markets: The Case of Manufacturers in the United States: Using US Census of Manufacturers' data, in this paper we would like to empirically assess the influence of manufacturers access to electronic commerce channels on their decisions about which markets to enter, which products to produce and which suppliers to supply from. It is widely known that Internet makes the process of initiating and doing trade easier, faster, and less expensive, reduces information costs, and makes some non-tradable to become tradable (e.g. R&D and services). Internet also creates a global exchange for goods, thereby reducing market-specific sunk costs of exporting. However, it is not exactly clear how E-

commerce affects international trade and what are the differences between firms, in terms of characteristics, with higher share of E-commerce trade compared to others. Despite the rapidly expanding online market in international trade, the properties of these markets are still relatively understudied. This project investigates the implications of E-commerce on firm's exporting and importing behavior and tries to answer questions such as: How does the new trade mechanism fit in the predictions of traditional trade theories? What is the contribution of E-commerce to firm's productivity, market structure, and price dispersion? How does E-commerce facilitates entry of new firms into the market? How does E-commerce affect firm's choice of export mode (e.g. direct or through intermediaries)? Internet access magnifies direct trade and, if anything, may diminish indirect trade and disintermediate the industry but why do we still see that wholesalers' shares are on the rise? Has Internet affected the composition of the goods handled by intermediaries? What is the effect of E-commerce on extensive and intensive margins of trade, innovation, and learning dynamics of the firms? One hypothesis is that given the reduction in the fixed cost of exporting, all but the smallest sellers export, and most exporters sell to a fairly wide range of foreign markets. This will be in contrary to predictions of traditional trade models.

One alternative hypothesis to be tested is that manufacturers with more intensive use of electronic channels produce a significantly more diverse set of products and begin implementing new technologies sooner and are more innovative and productive overall, leading us to believe that firms that interact more frequently with other firms and customers are more likely to adopt new technologies early on. This hypothesis, suggests that improvements to electronic trade channels may have important implications not only for diffusion of new technology but also for costs and efficiency of production.

Disparities in productivities of manufacturers across US have attracted attention of academia and industry. While many factors can potentially contribute to these disparities, an important possibility is that the observed variation in productivities reflects, in part, a lack of uniformity in the information the firms have about available markets, suppliers and technologies. In this paper, we empirically assess the influence of manufacturers access to electronic commerce channels on their decisions.

Because access to online trade channels is not randomly assigned-firms choose whether and when to initiate E-commerce-identifying the causal effects of online trade is challenging. Trade patterns of firms with E-commerce may look different from those with no electronic channels not due to any effects of the database itself, but rather due to differences in the types of firms who choose electronic commerce. Having this challenge in mind, one solution can be estimating effects on within-firm samples. In other words, we can estimate the impact of E-commerce by comparing a firm's own trade patterns as it's E-commerce intensity evolves over time.

We evaluate how firms access to electronic commerce affects production, and our paper thus contributes to work aimed at evaluating the impact of information technology on economic decisions of firms. Access to electronic commerce can improve the match quality between suppliers and producers and could also reduce costs by accelerating the adoption of newly introduced technologies. With access to the rich data set for firms, we will be able to answer, if not all, but at least few of the above questions. Given that the existing literature lacks any comprehensive examination of online global trade, answering any one of the above questions will

be a considerable contribution to the international trade literature. We further apply the insights from our research to understand the potential impact of several counterfactual trade policies on the operation of an online market for goods and commodities such as policies that impose restrictions on participation of foreign sellers in online markets, policies that put a quota on quantity or quality of foreign sellers, or policies that directly affect pricing.

3- The Value of Bilateral Reputation Systems: Case of Airbnb: In many marketplaces, the average public feedback and scores have remarkably increased over time. There are several hypothesis that can explain this rise: (1) changes in marketplace composition or (2) improved quality of goods (either by improved performance of surviving sellers or due to disproportionate exit of sellers who used retaliation in the past but no longer have that opportunity with introduction of new reputation systems, (3) disproportionate changes in cost structure of postings reviews in a way that posting a positive review costs less than posting a negative review. Any one of the above mechanisms or a combination of them can push the market toward an equilibrium with mostly positive reviews reducing the informativeness of reviews and welfare loss. This research uses two new features of Airbnb's review system to explain reputation inflation on Airbnb and to disentangle contribution of each of the above hypothesizes. Starting on June 2014, Airbnb introduced the simultaneous reveal (double blind) feature where reviews of guests and hosts are made public only after both parties submit their reviews. Also guests were given the possibility to post private feedback for hosts. These two new features will be exploited to measure the extent and causes of reputation inflation and to explain how individually rational choices about what feedback to leave can push the market towards an entirely uninformative equilibrium.