Cristián Figueroa

Prof. Ben Handel
Prof. Katherine
Prof. Jonathan Kolstad
Health Economics Research Boot Camp for Graduate Students
NBER

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11 October 2019
Dean Reviewers:

This letter is to express my special interest in attending the Health Economics Research Boot Camp for Graduate Students at the NBER on December 3-5, 2019, in Cambridge, MA. In the documents below, you will find, in the following order, the required documents:

- A curriculum vitae that includes a list of all current and completed Ph.D. courses at Boston College.
- A two-page essay explaining the rationale for attending the boot camp. Here you will find why I believe I am a good fit to the boot camp and how my future research is closely related with the topics covered in the boot camp.

Please let me know if you need anything from me. Thanks for your time and for organizing this incredible opportunity for PhD students.

Sincerely,

Cristián Figueroa

Cristián Andrés Figueroa

Personal Information

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Education

Ph.D. in Economics, Boston College — 2017 -

M.A. in Economics, Pontifical Catholic University of Chile — 2013 – 2014

B.A. in Economics, Pontifical Catholic University of Chile — 2008 – 2012

Research Interests

Quantitative Marketing, Health Economics, Empirical Industrial Organization

PhD Courses

First Year: Microeconomic Theory (Prof. Utku Unver, Prof. Uzi Segal, Prof. Hideo Konishi, and Prof. Marvin Kraus), Macroeconomic Theory (Prof. Susanto Basu and Prof. Fabio Schiantarelli), Econometric Theory (Prof. Arthur Lewbel and Prof. Zhijie Xiao).

Second Year: Industrial Organization (Prof. Julie Mortimer), Industrial Organization II (Prof. Charlie Murry and Prof. Michael Grubb), Topics in Behavioral IO and Environmental Economics (Prof. Michael Grubb and Prof. Richard Sweeney), Empirical Methods (Prof. Charlie Murry and Prof. Richard Sweeney), Labor Economics I (Prof. Daniele Paserman), Labor Economics II (Prof. Claudia Olivetti), Matching Theory (Prof. Tayfun Sonmez), Topics in Econometrics (Prof. Shakeeb Khan).

Working Papers

Earthquakes and Brand Loyalty: Beyond the short-term effects of Stockouts, with Andrés Musalem and Carlos Noton.

Presented in 2019 (by me or coauthors):

- Workshop in Management Science (Chile), ISMS Marketing Science Conference (Rome), Chicago Booth, Universidad Diego Portales.

Work in Progress

Platform Integration and Competition, with Fernando Luco.

Carbon Consumption, the Carbon-Based Ecosystem, and Output, with Rodrigo Harrison, Roger Lagunoff and Mario J. Miranda.

Research Assistance

Charlie Murry, Boston College 2019; Julie H. Mortimer and Sylvia Hristakeva (UCLA), Boston College 2017 - 2019; Gabriel Natividad (Universidad de Piura), PUC Chile 2016-2017; Rodrigo Harrison, PUC Chile 2015-2017; Carlos Madeira, Central Bank of Chile 2014-2016.

Past Employment

Economic Analyst, Research Division, Central Bank of Chile, — 2014 - 2016

External Researcher, Fontaine Consultores, — 2015 - 2016

Teaching

Teaching Assistant, Principles of Economics, Boston College 2019-2020

Econometrics and Numerical Methods using MATLAB, PUC Chile 2016

Teaching Assistant, PUC Chile 2012-2014

- International Economics, International Macroeconomics, Microeconomics, Econometrics, Finance II, Principles of Economics.

Computer Skills

Stata, MATLAB, R, Python, Julia, and LaTeX

Languages

Spanish (Native), English (Fluent)

Fellowships

Full Tuition Remission and Stipend, Boston College 2017 –

Summer Research Fellowship with Professor Julie Mortimer, Boston College 2018

Summer Research Fellowship with Professor Charlie Murry, Boston College 2019

Citizenship

Chilean, US F1 Visa.

References

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Cristián Figueroa

PhD Candidate in Economics at Boston College

Brief Research Statement

I am third year PhD Candidate in Economics at Boston College. My main research interests are Empirical Industrial Organization, Health Economics and Quantitative Marketing.

Why am I interested in Health?

- During the first year of my PhD, I was coauthoring a paper with Carlos Noton and, even though our paper is related with Quantitative Marketing, we discussed several times different questions related with Health Economics. Specifically, in Chile most private insurances are vertically integrated with hospitals, so I was curious of understanding the effects of that integration in prices, insurance plans and provider network. Carlos has a paper that tackles those questions using the framework of Ho and Lee (2017).
- In my second year I had my first real exposure to Health Economics. In my Industrial Organization course with Prof. Julie Mortimer, we read and presented Ho and Lee (2017). I was fascinated of how they are able to estimate these Nash bargaining weights and all the interesting questions that can be answered using this framework. Even though I understand now that this area of research might be a bit crowded, I still find myself sometimes reading related papers just out of pleasure (e.g., Ho and Lee (2019), Matt Grennan's papers on medical devices, etc…).
- The other class that gave me exposure to Health Economics was Behavioral IO by Prof. Michael Grubb. He made us read relevant papers at the intersection of Health Economics and Behavioral IO like Handel (2013), Handel and Kolstad (2015), and multiple papers from Amy Finkelstein and Liran Einav on Health Insurance. These papers were particularly interesting to me because I am curious to see if these biases are present in other markets as well, like in Chile, where health insurances are also complex enough to understand. I feel that this is an area, Behavioral Health Economics in other markets outside the US, that has not been sufficiently explored.
- Finally, and more personally, I have been exposed to the Health Industry my whole life. My dad, my brother and my sister are knee orthopedic surgeons while my mother was an obstetrician. My dad specifically is also an active academic researcher so we always end up discussing the intersection between Health and Economics. It would be exciting to maybe finally transform these simple discussions into actual research in Health Economics.

Current Research

My current research is not particularly related to Health Economics. The reason is that I like to explore other fields within IO as well, and also because my interest in Health Economics, as mentioned above, started mostly during my second year of the PhD, while I have been working on these papers since my first year of the PhD.

In a working paper titled "Earthquakes and Brand Loyalty: Beyond the short-term effects of Stockouts" coauthored with Carlos Noton and Andrés Musalem, (University of Chile), we exploit a Chilean earthquake that exogenously removed the top beer leading brands from the

retail stores for several weeks to study whether prolonged stockouts can erode market shares persistently. Using a discrete choice model with heterogeneous preferences, we find evidence that changes in the consideration set forced consumers to become increasingly aware of competing products with long-lasting effects in purchase behavior.

In my second project, jointly with Fernando Luco (TAMU), we are interested in studying the effects and efficiencies of integrating two competing exchange platforms in Chile. For that purpose, we estimate a demand model for brokers, where some brokers are present in both platforms while others only in one of them, along with a dynamic supply side (á la BBL) where brokers decide which platform to enter by paying fixed and variable fees.

Future Research

Once I started my third year, I have been looking for research ideas, exploring datasets and trying to learn the most I can about Health Economics. One area that I have been exploring lately is the medical device industry. Matt Grennan (and coauthors) has been the main exponent by publishing several papers on this. However, something interesting that he has not done yet is to study the relationships between manufacturers of medical devices and physicians. These are long-term relationships that come with payments (cash or in kind) for research or non-research activities. On the other hand, physicians have a tremendous influence in which devices the hospital will purchase from these companies, especially for *Physician preference items*.[1] Hence, something interesting would be to analyze how manufactures target physicians with large networks (so they can influence multiple physicians by reaching just one of them) and how this can explain the large dispersion on prices of medical devices across hospitals found by Grennan and Swanson (2019).

Why am I a good fit for the boot camp?

The above idea is just one of many ideas I am currently exploring. However, the literature in Health Economics is large and fast growing, so sometimes I feel I do not get exposed enough to other topics within Health Economics that I might find interesting but I just do not know well yet. As you can see from my statement, I have knowledge about some of the most famous papers in the field in the last 10 years, but I also have important gaps in other areas (e.g., Medicare, Medicaid) and in current research. In addition, at Boston College we do not have any faculty specialized in Health Economics so this is the perfect opportunity to connect with top health researchers, and also with students from other universities with similar interests.

The main reason I want to attend the boot camp is to have exposure to top health researchers who can guide us in understanding to what direction the field is going, and which areas might be interesting in the upcoming years. In addition, I like that students will need to read background papers so then I would feel prepare to go more into more specific topics.

[1] My knowledge of this comes, besides reading a bunch of papers in Economics and Medicine, from my dad, who actually has a relationship with one of these companies, and who also gets to decide which devices are going to be purchased in the hospital where he works.

BOSTON COLLEGE

Department of Economics

10/16/2019

To Whom it May Concern:

I warmly recommend **Cristian Figueroa** for the NBER Health Economics Research Boot Camp for Graduate Students. Cristian is a 3rd year student in our Economics PhD program at Boston College. I got to know Cristian last year when he took both of the IO courses that I co-teach (IO II and IO Topics). Cristian earned A's in both courses, and was a pleasure to have in class.

Cristian has been interested in Empirical IO since his time as a master's student in Chile, but has more recently been developing an interest in applying Empirical IO methods to Health Markets. This interest seems to arise at least in part because it is the main family business. While Cristian has been studying economics, his father, brother, and sister have all been working as orthopedic surgeons and his mother was an obstetrician. So apparently family conversation often lies at the intersection of the two family businesses in Health Economics. Moreover, Cristian is interested in exploring aspects of health markets outside the US, such as in his home country of Chile were market features often vary from the US case.

Cristian has a strong background in Empirical IO, having studied it as a masters student and taken all four IO classes offered at BC (IO I, IO II, IO Topics, and Empirical Methods). However, while both Julie Mortimer and I cover health IO papers in our respective courses, we lack a full Health Economics course at BC. As a result, the NBER health economics boot camp comes at a perfect time for Cristian, and could really help launch his dissertation research.

We all know that the beginning of the third year of graduate school is a common time for students to stumble as the transition from structured coursework to independent research can be challenging. Happily, however, I am very bullish on Cristian making this transition well for three reasons:

First, Cristian already has substantial experience writing papers. As a master's student in Chile, he co-authored two papers with faculty, the first with faculty in his department and the second with faculty at a neighboring university. The latter paper, "Earthquakes and Brand Loyalty: Beyond the short-term effects of Stockouts", exploits the natural experiment created when an earthquake stopped supply of the top brand beers in Chile. They find that when supply was restored, the top brands regained most of their market share, but not all of it---a share of consumers never switched back from the more expensive niche brands they had been forced to try in the interim.

Second, Cristian shows a lot of initiative in starting research collaborations. Not only did he begin work with faculty outside his university while a master's student, but as a PhD student at BC he

connected with Fernando Luco who was giving a seminar at BC, and the two now have work in progress related to the role of stock market platform integration on broker competition in Chile.

Third, Cristian and Kritika Goel, another BC third year student I am writing a letter for, are working together on generating research ideas with a lot of energy and initiative. At the start of the semester, the pair of the came to me with an interesting idea about over-entry by subway franchisees due to vertical contracting issues. That project is on hold, but already they have a second joint project idea inspired by Grennan and Swanson (2019). The project relates to the effect of payments between device manufacturers and doctors on market outcomes—something that Cristian has direct insight into through his father who receives such payments. The rapidity and depth with which both Cristian and Kritika are iterating over new ideas is encouraging. Each time they come to talk to me, I find they have already made concrete steps towards obtaining data. This all makes me optimistic that they will soon be off and running on a strong dissertation project, whether it is one of these ideas or another one—perhaps from an idea generated at the boot camp.

I very much hope you will accept **Cristian Figueroa** to the camp. If you do, you will not be disappointed. He will have read the papers, and be ready to discuss and engage. He is always a pleasure to have in class, and a great collaborator with his peers.

If you have any questions, please do not hesitate to contact me by phone or e-mail (below).

Sincerely,

Michael Grubb

Michael D. Grubb
Associate Professor of Economics
Boston College