1325 Indiana St, Unit 303
San Francisco, CA, USA
(650) 492-8252
bo_cowgill@haas.berkeley.edu

April 2, 2012

NBER Entrepreneurship Summer Boot Camp
1050 Massachusetts Avenue
Cambridge, MA, 01238, USA

Dear Sir or Madam:

I'm extremely excited to apply to your program. I believe the NBER Entrepreneurship Summer Bootcamp will benefit my career by develop my existing theoretical framework for understanding innovation, entry and early-stage finance.

The knowledge and exposure I would gain in this summer program would help me improve my research and develop topics and methods useful for theoretically grounded, applied research in the economics of entrepreneurship. In the fields I am most interested in, pre-eminent scholars are presenting at the NBER Entrepreneurship Bootcamp.

My statement and CV are attached, and my letter of reference will come from Professor John Morgan of Berkeley.

Sincerely,



Bo Cowgill

encl: Enclosures.

NBER Entrepreneurship Summer Camp Application

Bo Cowgill

April 2, 2012

My name is Bo Cowgill, and I am a 3rd year PhD student in the Business and Public Policy group at Haas School of Business, UC Berkeley. My research interests lie at the intersection of innovation, entrepreneurship and economics – and I believe that participating in your summer program would be extremely valuable in developing my research agenda, pipeline and broader knowledge of the

Much of my research agenda was inspired or related to my career before joining grad school. From 2003 until 2009 (when I joined Berkeley), I worked at Google, primarily for Chief Economist Hal Varian. When I started in 2003, Google had fewer than two thousand employees. Among my projects was launching an internal corporate prediction market for employees about company goals and sales metrics – this market grew organically, was the subject of my first academic paper (R&R recently at Review of Economic Studies), and turned out to be the largest internal corporate prediction markets I am aware of today.

After launching the prediction markets, I found myself leading many projects whose purpose was to place internal resources onto a market platform so that they could be traded actively by various product groups. One such project placed money and corporate resources in the hands of employees, to be distributed in an internal venture capital system designed to send resources to promising new projects. The process of watching my company manage growth, acquire startups, spawn entrepreneurs, experiment and innovate piqued my interest in studying innovation, entrepreneurship and venture capital in using more precise mathematical and statistical methods.

Three aspects of entrepreneurship and innovation that are particularly interesting to me and that are the subjects of my current set of related projects. First – I am interested in the phenomena of herding and social learning within venture and angel investing. During and after my career at Google, I have been involved with several startups as an advisor and have helped Google assess many young firms as acquisition targets. My experience with venture capitalists suggests that they are very interested in the consensus view of other venture capitalists, and that the process of social learning and herding effects which new ventures are are funded and become successful.

With this in mind, I am developing a field experiment whose purpose is to induce herding towards randomly selected early stage startups among angel investors in a geographic area with lots of angel investors. The field experiment utilizes a heavily-used regional institution for investors to publicly express interest new startups. With some help from the institution's organizers, I'll be able to increase the probability that investors' interest in randomly selected startups is shared with other investors. The project is still in planning, but my goal is to measure the effect of my treatment on the subsequent fundraising success of these startups (compared against a control group). My project relates to Kerr, Lerner, and Schoar (2010), which uses a regression discontinuity research design to show that startups' success with angel investors was predictive of future funding success. This project would provide some details about the mechanism through which this phenomena occurs using an experimental setting.

Second: I am interested in the institutional arrangements that larger firms use to encourage innovation and keep entrepreneurship inside of existing firms. I am currently working with a large engineering firm on a patent-bonus field experiment in which some engineers are exogenously given larger bonuses for patenting. I am also planning to extend the bonus to engineering managers for having patent-producing employees, and to perform an experiment to give higher rewards for engineers whose patents are related to key strategic initiatives or are used in lawsuits or licensing deals.

Lastly: I am interested in learning by companies through experimentation. Why don't firms experiment more often? What are the characteristics of firms and industries that experiment most heavily? What employees within firms drive experimentation? I would like to address these questions using a unique dataset. In recent years, internet companies have been using specialized infrastructure to automate experiments in prices, product features and site design. I have data from a company that provides this infrastructure that has about twenty-five thousand clients – ranging from early stage startups to Fortune 500 companies – and the HR records of one of the firms using the infrastructure. This project is in early stages (I only recently gained access to the data), but I am hoping it will yield insights about what the patterns of experimentation within firms and industries.

The NBER Entrepreneurship Summer Bootcamp will benefit my career by develop my existing theoretical framework for understanding innovation, entry and early-stage finance. In the fields I am most interested in, pre-eminent scholars are presenting at the NBER Entrepreneurship Bootcamp. I believe the knowledge and exposure I would gain in this summer program would help me improve my research and develop topics and methods useful for theoretically grounded, applied research in the economics of entrepreneurship.

Bo Cowgill

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(650) 492-8252, bo.cowgill@berkeley.edu , http://bocowgill.com

Education

University of California, Berkeley, Berkeley, CA, USA
PhD, Business and Public Policy (Business Economics), 2009-present.
MS, Business Administration (Business Economics), 2011.

Stanford University, Stanford, CA, USA
MS, Statistics, 2007-2009 (on leave). Sponsorship: Google.
BA, Public Policy, 2004. Undergraduate Senate Chair, Byrd Scholar.

Academic Papers

Using Prediction Markets to Track Information Flows: Evidence from Google. With Justin Wolfers and Eric Zitzewitz. *Revise and resubmit, Review of Economic Studies.*

Mood Swings at Work: Stock Price Movements, Effort and Decision Making. With Eric Zitzewitz. *Working Paper.*

Do Incentive Stock Options Incent?. With Eric Zitzewitz. *Working Paper.*

Other Writing

Good Bet: Can Markets Forecast Election Results? With Cass Sunstein. The New Republic. November 21, 2006.

McKinsey Quarterly: The promise of prediction markets with Renee Dye, James Suroweicki, Todd Henderson and Todd Sverts. Second Quarter Edition, 2008.

Awards, Fellowships and Grants

IARPA Research Award: IARPA-BAA-10-05 (2011-Present): Grant from US intelligence research agency supporting research about economics of forecasting and information aggregation.

Departmental Fellowship (2009-2013), Haas School of Business, Business and Public Policy Department. University of California, Berkeley. Four-year PhD tuition and stipend.

Berkeley Distinguished Graduate Fellows (2010-present): Fellowship offering support for PhD

The Sylvan C. and Pam Coleman Memorial Fellowship: Research support for Berkeley PhD students.

Tokyo Foundation Sasakawa Fellowship (2009-2011). Fellowship offering research support and travel for social science PhD students.

Chicago Price Theory Summer Camp (2011). Invited participant.

Experience

Google, Inc, Mountain View, CA and Shanghai, CN **June 2003 – 2009**

Economics associate, reporting to Chief Economist Hal Varian. With Hal's guidance, I applied tools from economics and statistics to provide advice to Google management about auction design, antitrust, forecasting, sales strategy, public policy, employee compensation and innovation.

Classroom Teaching & Academic Talks

- *Kauffman Foundation* conference on Information Markets, hosted at Kansas University in 11/2007.
- *Google Faculty Summit*, 2007. Mountain View, CA.
- *Stanford MS&E Seminiar*: Seminar for management science PhD students about my research. Professor Ramesh Johari.
- *Northwestern University*: Guest lecture in Marco Ottaviani's MBA course in 3/2010.
- *Stanford Stats 252*: Data mining and business. Guest lecture, Spring 2007 and 2008. Professor Andreas Weigend.
- *MIT Sloan: Management 561*: Information Technology in Management. Guest lecture, Spring 2007 and 2008. Professor Tom Malone.
- *HBS Course 1550*: Managing in the Information Age. Guest Lecture, 2007 and 2008. Professor Andrew McAfee.

PATENTS

Corporate Equity Marketplace, #61/105,888. An internal corporate market for setting project funding levels, allocating resources and providing incentives to business units. Pending, filed in 2008.

COMPUTER SKILLS

Programming: C/C++, Java, Python, Perl, Linux shell scripting, Sawzall, MapReduce.
Extensive experience analyzing **datasets over 1 petabyte in size**.
Statistical Packages: R, Stata, SciPy, NumPy

SELECTED PRESS & CASE COVERAGE

Harvard Business School Case Study N9-607-088: Prediction Markets at Google. Peter A. Coles, Karim R. Lakhani, Andrew McAfee. May 30, 2007. link.

New York Times about research papers and Google internal marketplace.

- **At Google, Workers are placing their Bets** by Ian Austen. 11/26/2005. link.
- **Future Divined by the Crowd** by Joe Nocera. 3/07/2006. link.
- **Google's Lunchtime Betting Game** by Noam Cohen. 1/7/2008. link.

Financial Times: Table Talk by Tim Harford. 1/19/2008. link.

Businessweek: Workers Place your Bets by Rachel King. August 3, 2006. link.

Bloomberg: Google Gets Answers as Staff Bets on GMail, 'Star Wars' Success By Crayton Harrison, 7/10/2008. link.

BBC World Service (Radio): Business Daily: Feb 19, 2008 interview about markets inside of companies.