#### Wendy Bradley, HEC Paris

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#### November 16, 2016

Dear Denis Healy and application committee,

I am applying to the graduate student tutorial hosted by the NBER project on the Economics of Digitization, held March 1-3, 2017, at Stanford University.

As a PhD Candidate in the dissertation phase, my research interests are reflected by my most recent work, "Digital Disruption: Supply & Demand of Movie Piracy" (abstract below) and include, more broadly, the economics of copyrights; online media markets in transition (such as the market for digital video); measurement of the digital economy; and digitization and innovation.

Currently working with Thomas Åstebro (HEC), as well as professors Scott Stern (MIT) and Shane Greenstein (HBS), I specialize in the collection of large, novel datasets; and causal, econometric modeling of digital products. I hope that my empirical research will help guide public policies regarding intellectual property and help describe the impact of copyright infringement on firm decision-making.

If chosen to participate in the NBER Digitization Tutorial, I hope to learn more about this frontier area of Digitization, as well as gain insight on the direction of this research from face-to-face interactions with leading scholars in the field.

My application is divided as follows:

- 1. Paper abstract
- 2. Coursework completed
- 3. Dissertation committee and expected graduation date

#### 1. Paper abstract

#### **Digital Disruption: Supply & Demand of Movie Piracy**

Not long ago Time Warner CEO Jeff Bewkes told investors, "Game of Thrones is the most pirated show in the world. Now that's better than an Emmy." In a world where piracy has been consistently shown to cannibalize industry profits, why would leaders at Time Warner be excited about the piracy of their products? Depending on the market, microeconomic theory and empirical research show that changes in competition can either positively or negatively affect industry innovation rates. Disruptive technology can also affect competition and, subsequently, the level of complementarity between paid and unpaid content. In 2001, major media industries, particularly those for movies and music, were heavily disrupted by BitTorrent technology, which allowed the fast and efficient transfer of large data files at low costs. As a result, for any given movie that has been released, there are multiple and often hundreds of versions of the same copyrighted content to choose from on BitTorrent websites. The major differences among versions include the technical compression (quality), size of the file, source of the original media (camcorder, stream, or disc), and availability (number of peers currently sharing). However, since then, it has remained unclear which factors matter most for the demand-side of pirated movies and how firms—movie studios or distributors are reacting (via price setting or investment) to these preferences for digital products. Through a unique panel dataset of illegally uploaded and downloaded digital video from 2004-2013, this is the first paper to *directly* measure the supply and demand of pirated movies, from black and white classics to new releases. Preliminary results indicate a surprising preference for old or "classic" films, rather than new releases, in addition to an unsurprising increase in the overall supply and quality of pirated movies with the improvement of digital technology over time.

# 2. Coursework completed (comprehensive list at: <u>wendyb.us</u>)

Methods	Instructor
Microeconomics	Itzhak Gilboa
Probability Theory	Veronika Czella (EDHEC)
Econometrics 1 – Introduction to regression models	Walid Alissa
Econometrics 2 – Policy evaluation	Walid Alissa
Econometrics 3 – Non-linear Estimation Methods	Bo Huang
Advanced Econometrics (Paris School of Economics)	Alain Trognon
Survey Methods	M. Schulte & S. Worm
Social Networks – Theories, Methods & Applications	Corey Phelps
Experimental Methods	Selin Atalay
Experimental Methods	Selin Atalay

### Strategy, Innovation and Entrepreneurship

Empirical studies of Innovation & DigitizationShane Greenstein (HBS)Entrepreneurship TheoryThomas ÅstebroInnovation and TechnologyDenisa MindrutaInstitutional AdvantageRodolphe DurandStrategy: Industry and CompetitionG.P. de AlmeidaStrategy: Organizations and LearningK. Dahlin & K. De ValckEconomics of StrategyT. Obloj & G. di Stefano

## 3. Dissertation committee and expected graduation date

HEC Paris	MIT
Thomas Åstebro	Scott Stern
Denisa Mindruta	Entered HEC Paris: Fall 2012
G.iada di Stefano	Expected graduation: 2017

<u>Dissertation description</u>: The first two essays of my doctoral dissertation investigate how uncertainty in the market for technology drives firms to add patents to patent pools, and how this patent introduction affects the direction of future industry innovation and competition among technological standards and firms. My paper on movie piracy (see abstract above) will become the third essay of my dissertation and my job market paper.

Thank you for considering my application.

Regards, Wendy Bradley