# Yilun (Ivan) Li - Independent Study

### 1/28/2019

### **Outline:**

- Hypothesis: The literature on vertical mergers often talks compares two effects when analyzing a merger. The first is the gains in efficiency, often leading to the elimination of double marginalization. This is often compared with the anti-competitive effects, such as foreclosing rivals or raising rivals' costs. However, an often overlooked aspect of vertical mergers are the "partial horizontal effects" that is, the incentive for a vertically integrated firm to raise it's downstream prices because some of the diverted profits will be recaptured by the upstream firm. I want to write a quantitative model that captures and compares the partial horizontal effects to these other commonly studied vertical merger effects, and hopefully be able to find empirical evidence to test my model.
- Methods: Standard IO methods like demand estimation, as well as applying micro theory from ECON 681/682 and 712.
- Data: Simulation exercise, data may be searched for later
- Literature: Vertical Integration/Merger simulation
- Timetable: Preliminary working model with 2 upstream and 2 downstream firms (February) Full model robust to different assumptions about number of firms and firm conduct (April) Written thesis and hopefully some empirical evidence (Beginning of May)

## Summary of courses and grades

- I have taken Econ 101, 102, 103
- Transcript attached
- GPA: 3.93, Econ GPA: 4.00
- Majors: Economics, Mathematics (BA College); Statistics (BS in Economics Wharton)
- Courses:
  - 1. Econ 002 Luca Bossi
  - 2. Econ 101 Kenneth Burdett
  - 3. Econ 102 Guillermo Ordonez
  - 4. Econ 103 Francis DiTraglia
  - 5. Econ 104 Xu Cheng
  - 6. Econ 222 Petra Todd
  - 7. Econ 224 Francis DiTraglia
  - 8. Econ 681 Steven Matthews

## **Explanation:**

There are two main reasons why I want to pursue an independent study. They are the following:

- I'm not enrolled in a thesis class because the thesis class offered at Penn is inefficient for satisfying my course constraints. As a triple major across the Wharton and College (Econ, Math, Stat), I want to graduate in four years and taking the thesis class would mean an excessive workload (because it only counts as one econ credit across two semesters). However, I am very much interested in writing a thesis under some kind of structured environment and an independent study would be the best alternative.
- I also am pretty sure I want to do applied micro/IO research in graduate school. I did very well in ECON 681 (A+). I also sat in Dr. Nevo's Empirical IO class last semester (ECON 712) which is how I became interested in this topic. I feel like a hands-on project next semester with a tangible paper at the end will solidify learning at least one method commonly used in IO.

### Faculty Member

I have been in contact with Dr. Aviv Nevo about pursuing an independent study and he has agreed. He is the one that brought up this vertical merger simulation topic, and given his expertise in the areas of anti-trust, merger simulation, and empirical IO, I believe that he is the ideal supervisor for this project. We have met once this semester already to discuss the scope and first steps of the project.

### Penn ID

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