

Information Economics, Fall 2016

Final Project

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For the final project, students need to apply what they learn in this course to write a research article for a self-selected topic. There is no restriction on the research topic, as long as it is broadly related to the scenario described below. There is also no restriction on the research scope. However, to make sure that your topic is “good,” i.e., challenging enough while doable, you are strongly encouraged to discuss with the instructor about your project. Students should form teams to do the project. Each team should have *two to three* students.

1 The scenario

In recent years, crowdfunding has been a trend in capital raising for firms in their early stage. Many people launch their projects on several famous crowdfunding platforms, such as Kickstarter in the U.S. and FlyingV in Taiwan. More than ten million people have backed projects through the Kickstarter online platform with pledged over 2.2 billion dollars.¹ Moreover, without capital cost and inventory risk, firms are motivated to create their project on crowdfunding platforms before any product is physically made. All of these advantages make crowdfunding popular in today’s economy.

While crowdfunding is attractive to small firms and individuals with funding problems, it is inevitably of a lot of risk. In particular, many projects cannot complete their production schedule as promised and thus delay the shipment, typically due to a disruption at the supply side. For example, a famous project CatFi on the Indiegogo online platform underestimated its operational capital level and failed to fulfill their shipments with delaying by more than nine months.² Taiwanese record-breaking team Flux, who makes highly customizable and extendable 3D printers, also suffered from unexpected massive production problems. It finally completed the project six months later than the originally promised deliver time.³

As this supply disruption may harm investors, potential investors may be hesitate to invest in crowdfunding projects. This motivates project initiators to design reward plans and announce the estimated production schedule by taking information asymmetry into consideration. For example, as investors may be heterogeneous in their degree of risk aversion or the willingness to receive a early delivery, some initiators allow investors to buy a refund option at an additional cost. Similarly, some initiators invite investors to pay more to guarantee an early delivery. Some initiators mix the two kinds of offers. This is to *screen* investors. Some people also believe that an initiator’s choice about reward plans and announced delivery time reveals the ability of making deliveries as promised. In this sense, an initiator tries to *signal* some of its hidden characteristics. Finally, how to run a successful crowdfunding platform is also an interesting issue. The key should be to mitigate information asymmetry between initiators and investors, to incentivize them to join the platform, among others.

In this final project, you are invited (actually forced) to study a problem related to crowdfunding. As we list above, there are so many issues to investigate! Please take a look at current practices, form your own research topic, and apply the knowledge and techniques you learn in this course to study it.

2 Tasks and their due times

Students should sign up by providing the names of team members and preferred presentation date to <https://goo.gl/forms/lw0nJRuwzmEzgb6p2> by **23:59, November 20**. Students who do not sign up

¹<http://www.kickstarter.com>.

²<http://www.indiegogo.com/projects/bistro-a-smart-feeder-recognizes-your-cat-s-face#/story>.

³<http://www.kickstarter.com/projects/2117384013/flux-all-in-one-3d-printer-unlimited-elegant-simpl>.

by the due time will be teamed up and assigned a presentation date by the instructor. If too many teams select the same date, the allocation will be determined randomly.

A proposal must be uploaded to CEIBA by **23:59, November 27**. Each team needs to submit one **report** and give one **presentation** on either **December 19 or 26**. Students need to make slides for their project presentations. Reports and slides should be uploaded to CEIBA. The due time of slides is **8:00 AM** of the presentation day. The due time of reports is **8:00 AM** of the day after the presentation day.

3 Proposal and problem selection

Each team must write an **at-most-two-page** proposal to describe the problem they want to study in the final project. First, the motivation and background of the problem should be introduced. Then the problem should be defined in words. If possible, they should explain why the problem is interesting, i.e., challenging and important. Real-world observations are good for motivating your study.

The problem should have the flavor of decentralized decision making, information asymmetry, or both. Though you do not need to provide a complete model for your problem, you should identify where in your problem people make decisions in a decentralized manner with, if any, asymmetric information. Game-theoretic models and/or the principal-agent model should be applied to analyze the problem.

The proposal should contain at least two sections: “introduction” for describing the problem, and “expected results” for describing the possible findings of your study. Beside them, a tentative model that describes the problem may also be included.

4 Project, report, and presentation

Each team should write a research paper as their final project. In the paper, one should introduce the problem, list related works, formulate a model that describes the problem, analyze the model to find equilibria, and finally make interpretations about the results. Numerical studies may help if analytical solutions cannot be obtained. The problem needs not to be the same as that in the proposal.

Please do not forget to do a literature review for your project. You do not need to read 100 papers before you write your paper. However, you need to provide a list of roughly five to ten papers that address similar issues as yours. More importantly, you need to contrast your paper with theirs and specify what is new in your paper.

You may write your report in English or Chinese. In either case, please make sure that it is readable. As a researcher, you should write professional reports. Some general suggestions for formatting your report can be found on the course website. Limit your report to **twelve pages**, including everything.

Each team needs to do a presentation for the final project. The presentation should be given with slides. The length of each presentation, though typically around 15 minutes, will be determined after the number of teams are fixed. You may do your presentations in English or Chinese. In either case, please make it comprehensive and interesting.

5 Grading

1. 10% for proposal report. As long as a team submits the report in time, it gets full credits.
2. 60% for project quality, including the selection of the topic, the completeness of the analysis, and the contribution of the findings.
3. 30% for project presentation. A presentation will get good grades if it is clear, interesting, well-organized, and under a good time control.