

Information Economics, Fall 2014

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 may either do an *individual* project or form a team with *two or three* students to do a group project. Doctoral students and students in the instructor’s lab are expected to do individual projects. Each team needs to submit one *report* and give one *presentation* on either January 5 or 12, 2015. Students need to make slides for their project presentations. Each team must also individually meet with the instructor to discuss their *proposal* on December 8, 2014. Reports and slides should be submitted *electronically* by sending the files to the instructor’s e-mail box.

1 The scenario

In many cases, sellers of a product offers *warranties* for that product. Under the warranty protection, a consumer may get her broken product fixed by the seller at no charge (or a very low price). There are obviously some reasons for offering a warranty. The most traditional reason is to provide some insurances to consumers. Consumers, especially risk-averse consumers, are willing to pay for a warranty. Sellers may thus sell more products (or even sell the warranty itself) by offering warranties.

Interestingly, warranties also have their *informational* impacts. For example, when one’s degree of risk aversion is private, offering an optional warranty may help the seller to *screen* risk-averse consumers from risk-neutral one. When the product’s quality is private, offering a warranty may help a high-quality seller to *signal* its quality. Finally, once a warranty is offered, consumers then are “motivated” to use the product less carefully. The *moral hazard* problem then comes in.

In this final project, you are invited (actually forced) to study a problem related to warranties. A research question typically originates from observations in practice. Sometimes a warranty is offered with a specific warranty length; sometimes a warranty is a life-long one. Sometimes a warranty is free (or bundled with the product itself); sometimes a warranty can be purchased independently. Sometimes a manufacturer offers a base warranty; sometimes a retailer also offers its extended warranties. Firms may even compete on warranty offers. There are so many issues related to warranties! Please find one by yourselves 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 by **23:59 pm, November 30, 2014**.¹ Students who do not sign up by the due time will do individual projects and be assigned a presentation date by the instructor. If too many teams select the same date, the allocation will be determined randomly.

Each team will be allocated 10-15 minutes on **December 8, 2014**. An at-most-two-page proposal must be submitted by **23:59 pm, December 7, 2014**.

Each team will make a presentation in class on either **January 5 or 12, 2015**. Slides due time: **8:00am**, the day of your presentation. Reports due time: **23:59pm**, the day of your presentation.

¹Sign up at <http://Orz.tw/cEYS5>.

3 Proposal and problem selection

Each team must write a 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 eventually 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. Besides 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,² list related works, formulate the model that describes the problem, analyze the model to find equilibria, and finally make interpretations about the solutions. Numerical studies may help if analytical solutions cannot be obtained.

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. If you plan to write it in English, please make sure that it is readable.³ In any case, please type your report (with computers) instead of writing your report (with hands). As a researcher, you should write professional reports. Some general suggestions for formatting your report can be found in the accompanied file “suggestions for formatting your reports” on the course website. There is no page limit for the project report.

Each team needs to do a presentation for the final project. The presentation should be given with slides. The length of each presentation will be determined after the number of teams are fixed. You may do your presentations in English or Chinese, though English is preferred. If you plan to present it in English, please make sure that it is easy to understand.⁴

5 Grading

The project will be graded with the following grades breakdown:

1. 10% for proposal report and meeting. As long as a team submits the report in time and is not late for the meeting, 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.

²The problem studied in the project needs not to be the same as that in the proposal.

³Actually the same thing also applies to reports written in Chinese.

⁴Actually the same thing also applies to presentations given in Chinese.