This exam is comprised of two sections. The first section is for material covered in IO 220A taught in Spring 2014 by Ben Handel. The second covers material by Joseph Farrell taught in Fall 2013 and Fall 2014. There are two questions in section one, worth a combined 50 points. There is one question in section two worth 30 points. You should answer all questions.

Part 1

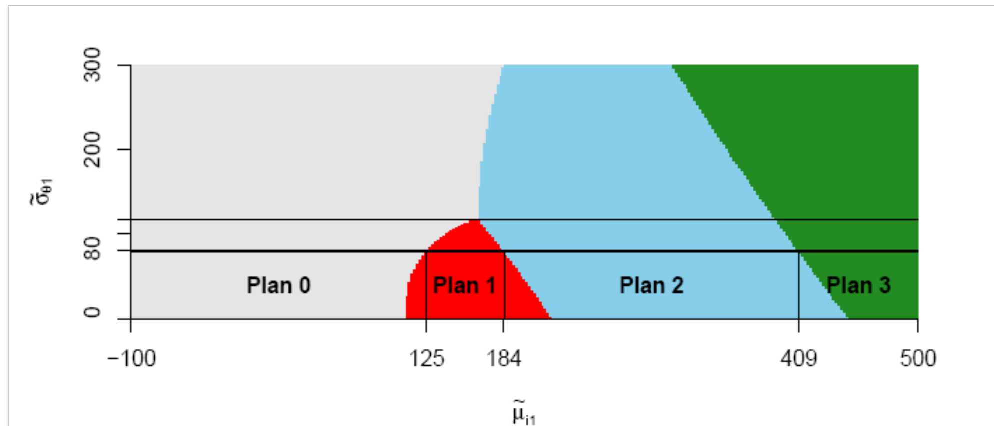
Question 1 (25 points)

In the Grubb and Osborne (2012) paper on cellular phone menu plan choice and design, the authors study micro-foundations of consumer choice and the implications of those micro-foundations for welfare and policy. Please answer the following questions about this paper and related work:

1. (5 points) Describe the data set used by the authors in detail. Approimately how many consumers do the authors observe making choices? What types of consumers are they? How many choices does each consumer make on average? Broadly, what features of this dataset are compelling, and what features of the dataset are less desirable for the questions the authors are trying to answer? Why?

2. (5 points) The figure on the next page describes identification of consumer beliefs about their upcoming monthly cell phone plan minutes utilization. Use this figure to describe identification of the key belief parameters being estimated by the authors.

3. (6 points) How does identification of beliefs in the Grubb and Osborne paper relate to identification of risk preferences in the structural literature on insurance choice, e.g. Handel (2013) or Cohen and Einav (2007)? Provide as much detail as possible to receive maximum credit, and explain what assumptions are necessary to justify the interpretations of these quantities in these papers. Write down two simple choice models to illustrate this comparison.



4. (4 points) How do Grubb and Osborne deal with consumer inertia in their framework? How is their approach different than that in Handel (2013)?

5. (5 points) Describe formally what Grubb and Osborne mean by "overconfidence"? What are the implications of overconfidence for consumer chocies? What are the welfare consequences of debiasing consumers?

Question 2 (25 points)

The Crawford and Yurokoglu (2011) paper that we read in class studies the implications of a counterfactual regulatory change in the cable television sector. Please answer the following questions regarding this paper:

1. (3 points) Draw a figure that describes the industry structure in the cable television market studied by the authors. Who are the key actors / agents in this market and on what dimensions does competition occur? Don't forget to consider consumers in this diagram.

2. (4 points) What is the central policy question being asked by the authors in this paper? Describe in detail the trade-offs inherent to the policy alternative being considered, relative to the status quo. What are the reasons why the alternative policy could be better than the status quo? Why might it be worse?

3. (4 points) The authors arrive at a somehwat surprising result the the alternative policy change that they consider could actually make consumers worse off, contary to popular opinion. What is the key ingredient / micro-foundation that the authors model that leads to this surprising result?

4. (6 points) The authors develop a structural model to describe the behavior or all the actors in the vertical market. Describe the 3 main components of the model in detail, including the actors involved and key assumptions made. Use equations as much as possible. Most importantly, describe with an equation the protocol used to govern bargaining in the model. How exactly does bargaining occur between key actors?

5. (3 points) What are the main conclusions of the paper for policy? Discuss in depth the trade-off between precise estimates and the credibility of estimates in the context of this paper. Give examples from the paper to highlight this tradeoff.

6. (5 points) What assumptions used in this paper are similar to those used in BLP (1995) and other papers on differentiated product competition? In BLP (1995) what are the primary instruments used to identify demand parameters?

Part 2

Question 3 (30 points)

Consider a monopolist M selling to a buyer B. An entrant E is poised to compete against M.

1. (10 points) Clearly explain the Chicago argument that an equilibrium contract between M and B in which B agrees not to buy from E (exclusive dealing) will not harm B or inefficiently limit competition.

2. (10 points) Expanding the model so that there are two symmetric buyers, B and C, rather than just B, explain a mechanism by which M may be able to use exclusive dealing contracts with buyers B and C to inefficiently exclude entry by E and thus harm both of the buyers and protect its own profits.

3. (10 points) Now expand the model still further to the case where the (direct) buyers B and C are not themselves consumers but are distributors who compete downstream to sell to consumers, and are the only such distributors. Explain a different mechanism by which M may be able to use exclusive contracts with B and C to protect its profits and limit competition, harming consumers.