Reichman University
Tiomkin Economics School

Advanced Microeconomics
Confronting Decision Theory with Experimental Data and vice versa

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Course Description

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Course syllabus

In combining theory and experiments, we should have two objectives in mind. The first objective is to confront the theory with some data to see whether the theory is at all consistent with the behavior exhibited in the laboratory. Clearly, there is much that can be learned about the theory from the data, quite apart from any notion of "testing" the theory. We hope to learn whether the theory is useful in interpreting the data, of course, but we also expect to find out what extensions of the theory are required to make it compatible with the data.

The second objective is to confront the data with the theory. A theoretical framework is needed for two reasons. First, the data set generated by experiments can be extremely rich and the behavior predicted by the theory is sometimes complex and subtle. Any attempt to explain rich datasets in purely "behavioral" terms would require a large number ad hoc assumptions, which would render the "explanation" rather uninformative. The second reason is that, without a theoretical framework, it is impossible to draw general conclusions that go beyond the particular setting of the experiment. The course will consist of two segments: risk preferences and social preferences:

I. Risk preferences

Uncertainty is endemic in a wide variety of economic circumstances so models of decision making under uncertainty play a key role in every field of economics. The standard model of decisions under uncertainty is based on von Neumann and Morgenstern (1947) Expected Utility Theory (EUT), so it is natural that experimentalists should want to test the empirical validity of the Savage (1954) axioms on which EUT is based. Empirical violations of EUT provoke intriguing questions about the rationality of individual behavior and, at the same time, raise criticisms about the status of the Savage axioms as the touchstone of rationality. These criticisms have resulted in the development of various theoretical

alternatives to EUT, and the investigation of these theories has led to new empirical regularities in the laboratory. Developing appropriate methods for appropriately confronting the theory of choice under risk (known probabilities) and ambiguity (unknown probabilities) with experimental evidence will have implications in many areas of economic theory and policy.

Readings

1. Ahn, D., S. Choi, D. Gale and S. Kariv (2014) "Estimating Ambiguity Aversion in a Portfolio Choice Experiment." *Quantitative Economics* **5**, pp. 195–223
2. Choi, S., R. Fisman, D. Gale and S. Kariv (2007) "Consistency and Heterogeneity of Individual Behavior under Uncertainty." *American Economic Review* **97**, pp. 1921-1938.
3. Choi, S., S. Kariv, W. Müller and D. Silverman (2014) "Who is (More) Rational?" *American Economic Review* **104**, pp. 1518–1550.

Other readings

1. Halevy, Y. (2007) "Ellsberg Revisited: An Experimental Study." *Econometrica* **75**, pp. 503-536.
2. Harless, D. and C. Camerer (1994) "The Predictive Utility of Generalized Expected Utility Theories." *Econometrica* **62**, pp. 1251-1289.
3. Hey, J. and C. Orme (1994) "Investigating Generalizations of Expected Utility Theory Using Experimental Data." *Econometrica* **62**, pp. 1291-1326.
4. Holt, C. and S. Laury (2002) "Risk Aversion and Incentive Effects." *American Economic Review* **92**, pp. 1644-1655.
5. Polisson, M., J. Quah and L. Renou (2020) "Revealed Preferences over Risk and Uncertainty." *American Economic Review*, **110**, 1782–1820.

II. Social preferences

Social, or distributional, preferences shape individual opinions on a range of issues related to the redistribution of income – examples include social security, unemployment benefits, and government-sponsored healthcare. These issues are complex and contentious in part because people promote their competing private interests, but they also often disagree about what constitutes a just or equitable outcome, either in general or in particular situations. We therefore cannot understand public opinion on a number of important policy issues – or evaluate the extent to which observed policies deviate from optimal ones – without understanding the individual distributional preferences of the

general population. Yet social scientists have barely begun to scrutinize the sources and nature of individual-level distributional preferences, and the role of such preferences has only recently been incorporated into traditional models of public finance. A theoretical and empirical analysis of distributional preferences therefore has implications not just for economic policy but also for policy in a host of other areas. Economic theory raises intriguing questions about the rationality of social preferences. Insofar as social preferences are rational, then the techniques of economic analysis may be brought to bear on modeling and predicting behavior governed by these preferences.

Readings

1. Fisman, R., P. Jakiela and S. Kariv (2015) "How Did Distributional Preferences Change During the Great Recession?" *Journal of Public Economics*, **128**, pp. 84–95.

2. Fisman, R., P. Jakiela, S. Kariv and D. Markovits (2015) "The distributional preferences of an elite." *Science*, **349**, pp. 1300.

3. Fisman, R., S. Kariv and D. Markovits (2007) "Individual Preferences for Giving." *American Economic Review* **97**, pp. 1858-1876.

4. Li, J. W. Dow, and S. Kariv (2017) "Social preferences of future physicians." *Proceedings of the National Academy of Sciences* **114**, pp. 10291-10300.

5. Li, J. L. Casalino, R. Fisman, S. Kariv, and D. Markovits (2022). "Experimental Evidence of Physician Social Preference." *Proceedings of the National Academy of Sciences* **119**, pp. 1-11.

Other readings

1. Andreoni, J. and J. Miller (2002) "Giving According to GARP: An Experimental Test of the Consistency of Preferences for Altruism." *Econometrica* **70**, pp. 737-753

2. Charness, G. and M. Rabin (2002) "Understanding Social Preferences with Simple Tests." *Quarterly Journal of Economics* **117**, pp. 817-869.