Experimental studies about cartel formation and preference theories

Abstract

This dissertation consists of three experimental studies: the first two research projects discuss cartel formation in a market under antitrust regulation, and the third research compares preference theories using portfolio selection.

- Chapter 1: Strategic Delegation and Collusion: An Experiment

The assumption that firms maximize profit has been widely used in economics to explain firm behavior and market outcomes. But the profit maximization assumption may lead to incorrect predictions when firms engage in strategic delegation between owners (e.g., shareholders) and managers (e.g., company executives) whose incentives may differ. This research examines firms' collusion under the assumption that firms engage in strategic delegation versus profit maximization. The experiment incorporates cartel fines for firms' managers as well as owners to more closely align with the United States antitrust regime. In addition, this study examines the effects of communication on cartel formation under strategic delegation. The experiment yields three main findings: (i) strategic delegation does not increase the total number of cartels with communication but may increase implicit cartels without communication; (ii) cartel formation occurs in two distinct ways, with firms simultaneously choosing a low output for collusion or periodically switching off between high and low outputs to evade cartel fines; and (iii) cartels are more likely to be formed when firms have different incentive schemes for managers instead of the same incentive schemes for managers across all firms.

- Chapter 2: Leniency Policies and Cartel Success: An Experiment (with Charles Noussair)

Cartels are often fought by granting leniency, in the form of forgiveness of penalties, to whistle-blowers. This study employs a laboratory experiment to compare leniency programs that differ with respect to fine size and whether a second whistle-blower may apply for leniency. The results show that leniency does not affect the probability that a cartel forms but is effective in exposing cartels and thereby inhibiting cartel success. Higher fines are more effective but allowing leniency to a second whistle-blower is no more effective than granting leniency to only one whistle-blower.

- Chapter 3: Experiments on portfolio selection: A comparison between quantile preferences and expected utility decision models (with Luciano de Castro, Antonio Galvao, Gabriel Montes-Rojas, and Jose Olmo)

This paper conducts a laboratory experiment to assess the optimal portfolio allocation under quantile preferences (QP) and compares the model predictions with those of a mean-variance (MV) utility function. We estimate the risk aversion coefficients associated to the individuals' empirical portfolio choices under the QP and MV theories, and evaluate the relative predictive performance of each theory. The experiment assesses individuals' preferences through a portfolio choice experiment constructed from two assets that may include a risk-free asset. The results of the experiment confirm the suitability of both theories to predict individuals' optimal choices. Furthermore, the aggregation of results by individual choices offers support to the MV theory. However, the aggregation of results by task, which is more informative, provides more support to the QP theory. The overall message that emerges from this experiment is that individuals' behavior is better predicted by the MV model when it is difficult to assess the differences in the lotteries' payoff distributions but better described as QP maximizers, otherwise.