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Theoretical and Empirical Examinations of Decision-making under
Different Institutions

（異なる制度下の意思決定に関する理論・実証研究）

Institutional frameworks are important to consider because of the way in which they shape the incentive structures and types of trade-offs economic agents inherently face when making economic decisions. This dissertation studies, both theoretically and empirically, economic agents' decision-making when operating under differing forms of institutional environments. Two general forms of institutional environments are examined, one being an example of a non-market allocation environment, and the other an example of a market allocation environment. Each environment is studied separated in separate parts of the dissertation.

The non-market allocation environment is represented by the allocation methodology described by a contest structure, specifically modeled as a Tullock contest (Tullock 1980). Such contest forms are useful to study given that they have many applications, including R&D and patent contests, political elections and campaign, labor market hiring and promotion, athletic competitions, war and other geopolitical conflicts, and lobbying and rent-seeking activities.

Much of the Tullock contest literature analyzes effort provision levels under the assumption of a single prize administrator. However, many important political, economic and social decisions are made in committees. Hence in this research, I allow a committee to decide the winner of the contest, and study the impact of committee size on effort provision levels. While a small literature has previously considered committee administration under probabilistic voting in contests, including Congleton (1984) and Amegashie (2002), I present an extension to such results by analyzing the impact on effort provision that is produced under the conditions of heterogeneity amongst contestants.

To begin with, I find that increasing the size of the committee produces an ambiguous impact on total effort provision, with the heterogeneity of the contestants acting as the primary factor determining a resultant increase or decrease in efforts. Further, I consider the impact of modifications to the institutional environment of the contest structure, allowing for variation in the committee voting rule determining the contest winner. Bias is introduced by way of modification to the standard simple majoritarian voting rule. By way of such institutional modifications, we are able to observe the way in which contestant heterogeneity is exacerbated or attenuated by bias in the contest structure. Overall, my results extend previous analysis of effort provision under committee structures, indicating that under heterogeneity, aggregate effort provision levels under committee administration can be larger than, equal to, or less than those generated when a single administrator awards prizes. Such results allow for a richer understanding of the degree of effort provision generated when committees are responsible for conferring prizes.

The second part of the dissertation concerns an empirical study of agents operating within a specific market-based allocation environment; specifically, the Shanghai Stock Exchange. While there are many examples of market institutions, one advantage of the particular setting I consider is that financial markets in general can serve as useful representations of real-world "ideal" markets, given their size, lack of market power, liquidity and information dissemination systems. In this setting, I study share clustering. Clustering is the phenomenon wherein which prices settle on certain values more frequently than others. Recent studies have posited that clustering in China has different—and less rational—characteristics than clustering that occurs in other markets. My study considers clustering in China with a more targeted and updated data set than previously studied in the literature, using decade-long pricing data on twenty of the top-50 companies traded on the Shanghai Stock Exchange. I confirm the presence of clustering, and while I find cultural factors do play a role in share clustering in China, I argue this behavior is primarily partaken when there is (relatively) low impact to the value of the trade action.

Additionally, the prevalence of clustering on the Shanghai Stock Exchange appears to be driven in large part by factors relating to the presence of informational and bargaining costs that are at least partly determining by the unique institutional structure of the exchange. Changes in the environment—in particular, the lifting of the short sale ban in March 2010—appear to have reduced these costs and created an incentive structure where agents are more likely to price equities less coarsely, characterized by a lower prevalence of clustering.