

Reverse Outline of the Paper "Equilibrium uniqueness in entry games with private information"

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1 Introduction

1. Understanding firms' market entry decisions is a key element of economic policy and regulation.
2. We study equilibrium uniqueness in static binary-action entry games with single- dimensional private information.
3. We characterize firms' equilibrium behavior using a simple index, called strength, sum- marizing a firm's ability to endure competition.
4. Our proposed framework encompasses static entry models commonly used in applied work.
5. Some theoretical literature on market entry.
6. Some empirical literature on market entry.
7. Why it is important to allow for private information in entry models.
8. The structure of the article.

2 An illustrative example

1. Second-price auction with entry costs.
 - (a) Set up.
 - (b) Strategies, payoffs, and equilibrium.
2. Strength and herculean equilibrium.
 - (a) Definition 1 (Strength).
 - (b) Lemma 1.
 - (c) Definition 2 (Herculean Equilibrium).
3. Auctions with two potential bidders.
 - (a) Proposition 1.
 - (b) Proposition 1 establishes the existence of a herculean equilibrium, confirming the intuition that an equilibrium in which the strong bidder plays a lower entry cutoff should exist.
 - (c) Proposition 1 provides a sufficient condition on the CDFs' shape for the game to have a unique equilibrium.
 - (d) Lemma 2.
 - (e) Lemma 2 further characterizes sufficient condition.
 - (f) Example 1 (Log-normal valuations).
 - i. Uniqueness under sufficiently high entry costs.
 - ii. Multiplicity and uniqueness under symmetry.
 - iii. Asymmetric auctions.
 - (g) Auctions with n potential bidders.
 - i. Lemma 3.
 - ii. Proposition 2.
 - iii. Asymmetric bidders.
 - iv. Ordered bidders.

- v. Definition 3 (Ordered Auction).
- vi. Lemma 4.
- vii. Example 2.
- viii. Proposition 3.

3 A model of market entry

1. The baseline model.
 - (a) Set up.
 - (b) Main assumptions.
 - i. A 1 (Monotonicity).
 - ii. A 2 (Substitutes).
 - iii. A 3 (Costly and Interior Entry).
 - iv. A 4 (Affiliated Signals).
 - (c) Example 3.
 - i. Linear model.
 - ii. SPA with partial information.
2. Strategies, payoffs, and equilibrium.
 - (a) Payoffs and strategies.
 - (b) Strength and herculean equilibrium.
 - (c) Definition 4 (Strength).
 - (d) Lemma 5.
 - (e) Definition 5 (Expected Profit Gain).
3. Uniqueness with two groups of firms.
 - (a) Proposition 4.
 - (b) Proposition 4 extends the existence of a herculean equilibrium result to the general framework in the two-group model.

- (c) Proposition 4 also provides four conditions that need to be satisfied for equilibrium uniqueness—two conditions per group.
- (d) Corollary 1.
- (e) Example 4.
 - i. Linear model.
 - ii. SPA with partial information.
- (f) Extensions.
 - i. A weaker sufficient condition.
 - ii. N groups of ordered entrants.

4 Concluding remarks

1. This article studies equilibrium uniqueness in static entry games with single-dimensional private information.
2. This article focuses on entry games when firms' entry decisions are strategic substitutes.
3. The focus of this article is on static entry games with private information.

Note

I constructed the reverse outline manually. Papers in Economics in general have very clear and strict structures. It begins with an introduction, followed by some illustrative examples to help understand the theoretical models if any. Then formally introduce the model. Present empirical results if any and end it by conclusions.