Superstar Exporters:

Strategic Interaction in Export Markets

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Abstract:

Exports are highly concentrated among a few "superstar" firms: even in a small open economy such as Denmark, the top-5 firms account for more than 80 percent of exports in the typical industry. Investigating the behavior of large, oligopolistic firms is therefore important for understanding aggregate trade patterns and the workings of trade policy. Despite this fact, previous empirical studies on export market entry are built on a monopolistic competition set-up, and therefore do not take into account the interdependency of entry decisions.

We model the market entry decisions of firms as a complete information, simultaneous, discrete choice, static entry game. Compared to previous studies on export entry, the unit of analysis is not the individual firm but the market, defined as an industry-destination combination; and the outcome of interest is the market *equilibrium*, given by the vector of market-specific entry decisions of all potential entrants. A firm enters an export market only if it expects to make non-negative profits, which depends not just on firms' own characteristics but also on the presence of competitors. In the Nash equilibrium of the game, all firms are maximizing profits and no firm would want to unilaterally change its entry decision. In a discrete choice setting, this leads to an inequality condition for each firm and market. Crucially, the model can have multiple equilibria in the number and identity of entrants. Empirically, we only observe one of these outcomes, which poses problems for estimation because the likelihood function predicted by the model will sum to more than 1.

The approach in this paper builds on the methods developed in Ciliberto & Tamer (2009, Econometrica) to incorporate multiple equilibria in estimation without imposing any rules for equilibrium selection in the regions of multiplicity. We estimate this entry model using Danish register data on firm-level exports by industry and destination. Importantly, the econometric set-up allows for both positive and negative effects of competitor entry, such that both informational spillovers and competitive effects are potentially captured by the model. Empirically, results confirm that the latter type of effect dominates: competitor presence significantly reduces expected profits, and hence export participation in a given export market.

Our findings have important implications for trade policy. As trade is liberalized, positive effects on expected profits are counter-balanced by negative effects due to competitor entry. Estimates that do not take these competitive effects into account will therefore overestimate the entry response due to trade liberalization. We confirm this intuition by simulating the effects of a complete dismantling of trade barriers.