

Professor: Ahmed Khwaja

Title: The Role of Firm Alliances in Market Structure: An Analysis of Competition Between Small and Large Firms in the Home Improvement Retail Industry

Description:

Using a detailed data set on retail locations of all major home improvement stores in the US from 2005-11 we plan to analyze dynamic strategic (game theoretic) considerations about entry, exit and location choice between oligopolistic firms as well as the effect of the recent recession on business activity in the retail firm category. We are looking for a student to help us clean, manage and prepare the dataset for analysis. Familiarity with Stata is required and knowledge of Matlab would be a plus.

Summary:

There were three main phases in the project. In the first phase, I used Stata, Excel, and R to study the entry-exit dynamics of the home improvement stores, using three-way tables and maps. We determined two main ways the big players in the industry competed: either by using large stores and leveraging brand names, or by forming cooperatives with other, smaller stores.

In the second phase of the project, I researched the home improvement sector to identify supply and demand factors that would affect the decisions of the stores to enter and exit markets. The goal was to append the extra data to the existing location data. The Yale librarians were an invaluable resource for this step. I found approximately 20 such factors from sources such as the BLS, Census, Federal Reserve, etc.

In the third phase of the project, I worked to identify smaller markets in which we could study entry-exit patterns more carefully. We credit the approach for identifying small markets to Bresnahan and Reiss (1990) in their paper on competition between car dealerships. We tuned the numbers to reflect both the increase in population since then and also the difference in the nature of competition with home improvement stores. I used JAVA to quickly generate lists of towns that counted as small markets.

I would like to thank Professor Khwaja for this great opportunity to work as a research assistant. I found the SRO very rewarding, as it gave me insight into the work that goes into economic research, which is an area I want to pursue as a career. It gave me opportunities to apply both the economic theory and software experience I have learned in school to a real-world project. I strongly recommend the SRO to any student, who like me, is interested in economic research.