

# Spatial Competition in the French Supermarket Industry\*

Stéphane Turolla<sup>†</sup>  
INRA UMR SMART – Rennes

March 2011

## Abstract

This paper develops a structural model of spatial competition to analyze the competition intensity among large grocery stores. The model accounts for the effects of market geography on prices by relaxing the hypothesis that retail chains set uniform prices so that store prices depends on local market structure. Using demand parameter estimates, we recover stores' price-cost margin under alternative pricing strategies and determine the best pricing model by applying non-nested tests. The model is estimated for a French metropolitan area and uses a cross-sectional household survey containing detailed information on stores visited for the main food product categories. The results point out that stores set their prices without ownership consideration and exert, to a large extent, a significant local monopoly power even more important than their surrounding environment is weakly competitive. We then perform counterfactual policy experiments to simulate the entry of new competitors and quantify the expected benefits on consumer welfare and price level.

**Keywords:** Spatial competition, Structural model, Discrete choice model, Differentiated products, Supermarket industry

**JEL Classification:** C35, L13, L81

---

\*I am very grateful to Marie-Laure Allain, Kristian Behrens, Aurélie Bonein, Stéphane Caprice, Alain Carpentier, Claire Chambolle, Carl Gaigné, François Gardes, Marc Ivaldi, Jean-Louis Monino, Vincent Réquillart and Jacques-François Thisse for very helpful advices and discussions. Thank you to seminar participants at CORE, INRA ALISS, INRA SMART, University of Rennes, the AFIO-INRA seminar in Toulouse, the JMA 2007 conference, the Journées doctorales de l'ADRES 2008 and the ESEM 2008 conference in Milano for suggestions and comments. The data used in this paper were provided by the Chamber of commerce of Montpellier. Financial support from the Chamber of commerce of Montpellier is gratefully acknowledged. All remaining errors are mine.

<sup>†</sup>Address: INRA UMR 1302 SMART, 4 Allée Adolphe Bobierre, CS 61103, F-35011 Rennes Cedex (France). Email: [stephane.turolla@rennes.inra.fr](mailto:stephane.turolla@rennes.inra.fr)