# Comments on Howard Smith and Oyvind Thomassen A Demand Model for Grocery Categories

**Thierry Magnac** 

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## Motivation & set up

Multishopping demand model: feed in a market-level model to undestand pricing incentives of retailers.

#### Modelling Characteristics

- multistep optimization choosing your type of shopping (two shops vs one shop), the corresponding shops & the quantities purchased in each shop.
- shop choices depend on specific variables that do not affect directly the utility of consumed quantities but only through fixed costs. Related to each choice c = (j, j') in which j is a shop and j' can be empty. These variables are distances of the consumer to shop. What happens in the case of multiple shopping?
- product categories assumed additively separable.
- product categories perfectly substitutable across shops but the exchange value is not one to one (because of the range of available products within categories. Multiple shoppers purchase products one category only from one shop.

#### Estimation method

- Concentrate the objective function wrt to one set of parameters solving a moment equation
- Use GMM in a second step

### Questions

- 1. Why using data on quantities only and not data on choices of shop?
- 2. Identification: what is the identifying assumption of this model wrt to a one shop model?
- 3. The quantities purchased, quantities bought at shop j depend on the multiple/single shopping strategy?
- 4. Why concentrating the objective function first instead of one step estimation?
- 5. Endogeneity of prices?