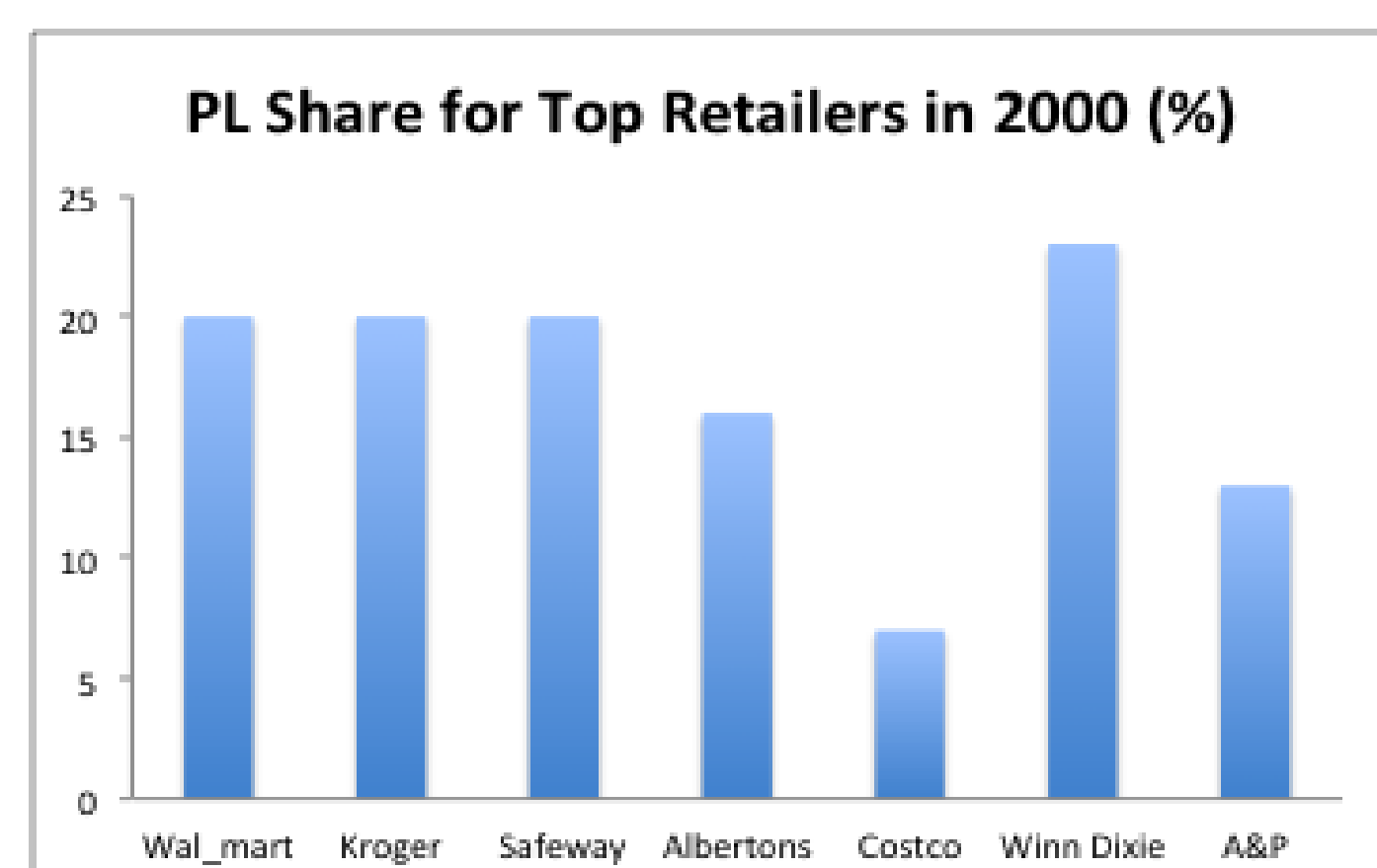


Introduction

- Retailer private Label Brands (PL) ----> Increased competition for National branded food manufacturers (NB).



42 %	PL substitute for NB
37 %	Quality PL = quality NB
36 %	Some PL of higher quality than NB
33 %	PL as good as NB
18 %	PL have cheap looking packaging
10 %	PL not suitable when quality matters

- Chintagunta (2002): PL introduction increases retailers' margins for national manufacturers, but preference for NBs are unaffected.

- Steiner (2004): consumers' welfare is maximized when PL and NB compete vigorously.

- Consumers have developed preference for PLs over NBs and recognized the quality of PL.

- Increasing quality differentiation of PLs

1. enter high-quality segments occupied by NBs

→ PLs as bargaining tool against NBs

2. increase consumer loyalty

→ Increasing retail gross margins

- Brand level differentiation driven by consumer demand for health and wellness. PL brands focus on nutritional properties

- Absence from current literature

1. PL effects on both retailers and manufacturers
2. How these effects are working considering health attributes differentiation

Research Question

How does health-related differentiation of PLs affect the competition between retailers and manufacturers?

Objective

Analyze statistically the demand, pricing, promotional strategies, and degree of differentiation nutritional composition (e.g. sodium) of PL and NB products

Analyze the effects of product differentiation in health-related attributes on the demand for PL and NB

A) Investigate the role of nutritional product composition in the competition between PL and NB brands **AND**

B) vertical competition between the retailer retailers and NB manufacturer

Data

- Retail store-level scanner data (Canada, 74 stores) (SIEPR-Giannini Data Center)

TIME: Week 01/2004 to week 22/2007 (178 weeks)

INFO: price, discounts, sales quantity, wholesale price, retail gross and net margins

LINK: <http://are.berkeley.edu/SGDC/>

- Mintel Global New Product Database (GNPD)

TIME: Year 2000 to 2008 across North America

INFO: Detailed product information (brand, packaging, nutrition facts, ingredients, etc)

LINK: <http://gnpd.mintel.com/>

Case Study

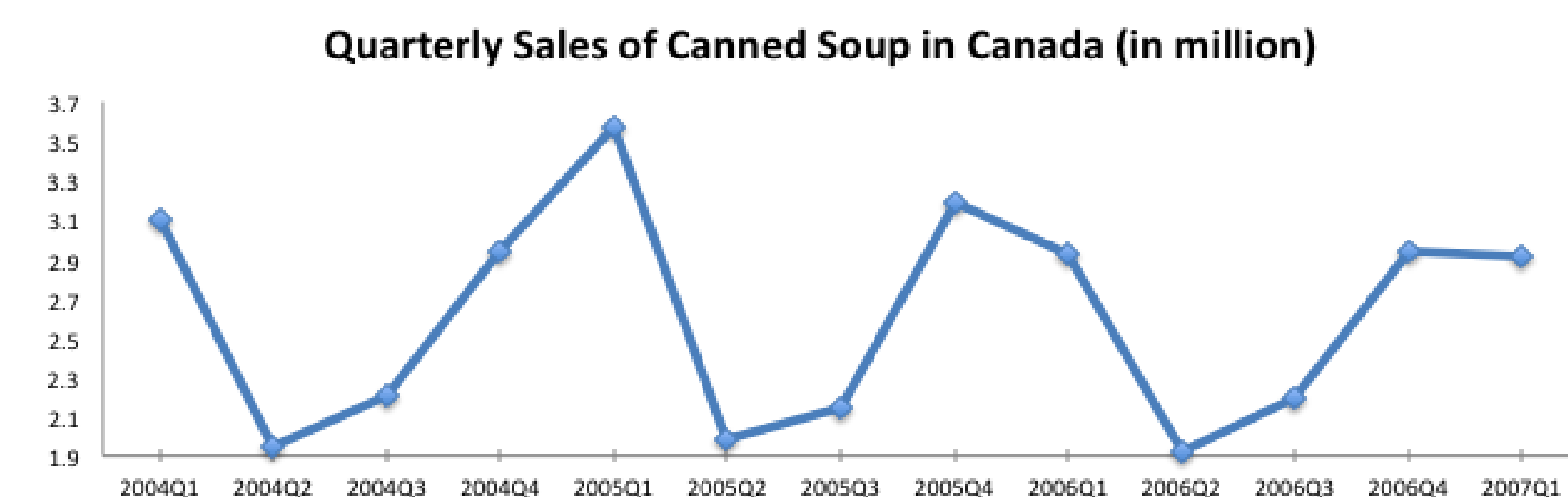
- Canned Soup Category

- PL penetration: Marketside (Wal-Mart), Select (Safeway), No Name& President' Choice (Loblaws), etc.

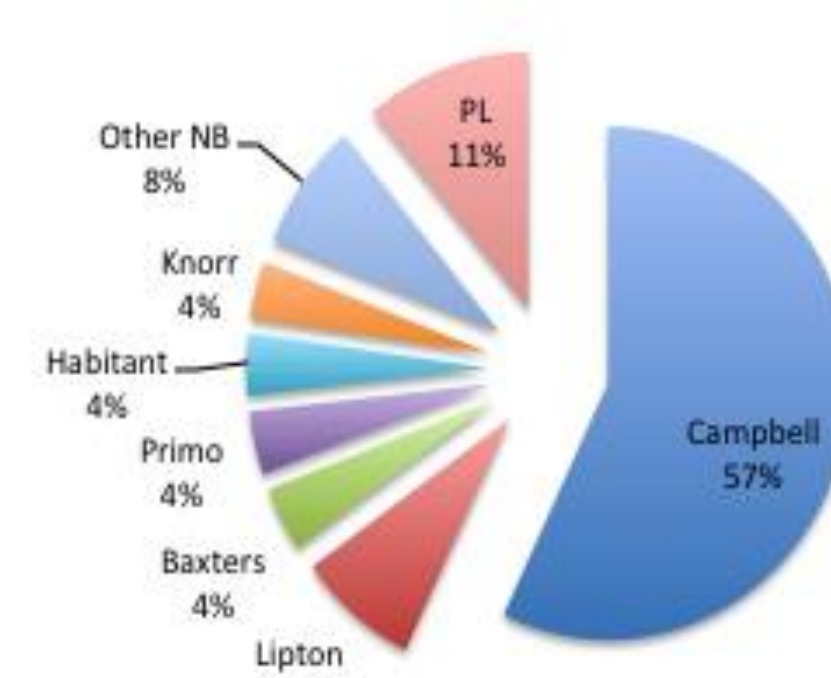
- Market Concentration: some leading NBs and PLs

- Retailers dominating sales: 70.2% of soup sold in supermarkets.

- Both PL and NB focus heavily on their food nutritional properties

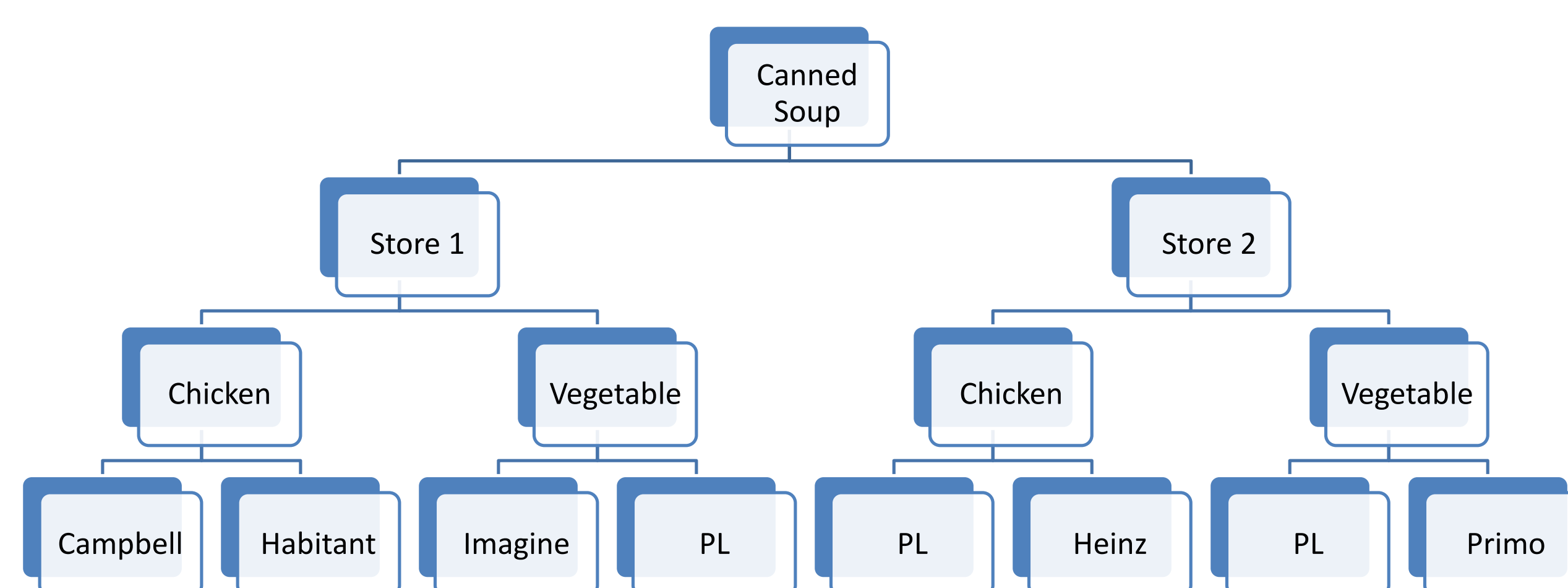


Brand share of canned soup in Canada 2010



Approach

- Consumers make hierarchical purchase decisions
- Substituting among brands & flavors within one store is easier than substituting among stores within one brand or flavor



Methodology

Distance-Metric (DM) approach (Pinkse, et al., 2002)

- A multi-dimensional method to identify products' location in their attribute space.
- Four dimensions included in the attribute space:
 - ① store
 - ② brand
 - ③ flavor
 - ④ nutrition facts (calories, fat, sodium, carbohydrate, protein, etc)

- Demand functions for PL&NB

- Assumptions:

- ① Consumers maximize their purchasing utility
- ② Hierarchical purchase decisions (seen in Approach section)
- ③ Product differentiation depends on distance in attribute space

- Nested Logit Models (DM/NML) derived from individual mean utility function (Berry, 1994; Richards, et al., 2010)

$$U = f(X, p, \xi) \longrightarrow s = f(X, p, s_c, \xi)$$

- Prices are adjusted to account for variations in product differentiation in key attributes to represent consumers' assessment.

- Cost functions jointly estimated with estimates in DM/NML

- Assumptions:

- ① Bertrand-Nash equilibrium
- ② Profit maximization for both retailers and manufacturers
- ③ Constant fixed cost for retailers & manufacturers

- Gross margins for retailers and manufacturers can be derived to quantify the vertical distribution of market power.

U: consumer's mean utility

X: vector of product attributes

p: adjusted shelf price

s: market sale share

s_c : conditional sale share

ξ : random error

Findings and Outlook

- Current key findings:

- PL soups emphasize health differentiation through nutrition facts
- NB soups emphasize health differentiation through nutritional labeling
- Brand margins for PL are always larger than for NB (12.8% higher on average)

- Outlook

- Estimate DM/NML demand model to find effects of product differentiation on demand for both PL&NB
- Derive the cost functions, jointly with estimates in DM/NML demand model, to investigate the role of product health composition in vertical competition of PL and NB

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