Retail Outlet Selection and Preferences for Private Labels: the Case of Milk

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Expanding choices

- Organic
  - Organic milk sales growth (8%) vs. non-organic (-2%) in 2010-11
  - Organic foods sold through mass market channels (55%) vs. natural market channels (38%) in 2011
- Local
- Private labels at various retail outlets
  - 56% of total milk market in 2011
  - Non-organic & organic

Objectives

- Examine consumer attitudes toward retail outlets & brand types in the case of milk
- Compare consumer valuation milk attributes by retail outlets and/or brand types

Related literature

- Demand/WTP for milk attributes
  - Organic (Bernard & Bernard, 2009; Akaichi, Nayga & Gil, 2012)
  - rBST-free (Chakraborty, 2005, 2011; Bernard & Bernard, 2009; Wolf, Tonsor & Olynk, 2011)
  - Local (Wolf, Tonsor & Olynk, 2011)
  - Varies by price, income, attitudes

Related literature

- Store choice
  - Store/pricing format (Bell, Ho & Tang, 1998; Fox, Montgomery & Lodish, 2004)
  - Varies by household demographics, price sensitivity & past purchase history (Dong & Stewart, 2012 and those cited within; Hansen & Singh, 2009)
    - Findings on consumer segments preferring certain store formats are not consistent

Related literature

- Brand preferences
  - Varies by perceived quality of brands (Richardson et al., 1994; Lonca, 2010)
  - Varies by store format (Hansen & Singh,2009)
  - Store image affects demand for store brands (Ngobo & Jean, 2012)
  - Varies between organic & non-organic buyers (Zhuang, Dimitri, & Jaenicke, 2009)

Choice experiment

- Refrigerated fluid milk products in half gallon cartons

Attributes	Levels
Brand types	Manufacturer brand, Retailer brand, Local brand
Retail store	General, natural
Production processes	Organic, rBST-free, no label
Price	\$3.85, \$3.25, \$2.65

Survey

- June 2012
- Online
- Randomly selected individuals nationwide by Research Now
  - Responsible for at least half of household grocery shopping
  - Households have purchased milk during the last 6 months
- 617 usable responses

Sample demographics

	Average
Gender (Female = 1)	0.67
Age	51.56
Education (Have bachelor degree)	0.36
Household income (\$1000)	91.74
Familiar with natural retail outlets (Have bought milk at least occasionally at health/natural supermarkets)	0.15
Familiar with local retail outlets (Have bought milk at least occasionally at farmers markets/local farms or locally owned grocery stores or food cooperatives)	0.31

Attitudes

- When deciding **which retail outlet** to shop for milk, how important to you are the following factors?

	Avg.score	Factor loading
Product availability	4.10	
Price	4.05	
Convenience of access	4.00	
Store values (such as commitment to the environment & community involvement)	3.07	0.79
Transparency in food-related information	3.06	0.81
Product mix that reflects my lifestyle & values	3.05	0.82
Store services (such as pharmacy & deli)	2.75	

Attitudes

- When choosing a milk product of **a particular brand,** how important to you are the following factors?

	Avg.score	Factor loading
Taste	4.49	
Quality of the product	4.45	
Price	4.21	
Trustworthiness of claims	3.85	
Business behind the brand	3.45	.82
Support for local economy	3.40	.84
Traceability of the product from farm to you	3.32	.81
Support for relatively small businesses	3.25	.84

Latent class logit model

- Greene & Hensher (2003)

Prob[choice j by individual i in choice situation t| class q] = logit model

$$U_{ij} = b_{0j} + b_1 Price_j + b_{2j} Natural_j + b_{3j} Organic_j + b_{4j} rBSTfree_j + e_{ij}$$

Prob[individual i belongs to class q] = multinomial logit

$$P_i = \vartheta_0 + \vartheta_1 Gender_i + \vartheta_2 Age_i + \vartheta_3 Edu_i + \vartheta_4 Income_i + \vartheta_5 Fprice_i + \vartheta_6 Fret_i + \vartheta_7 Fbrand_i + \vartheta_8 Famnatural_i + \vartheta_9 Famlocal_i + \varepsilon_i$$

Latent class logit model

- Number of latent classes = 3
- Average class probabilities
  - Class 1 = .693
  - Class 2 = .157
  - Class 3 = .150

Relative to: Manuf brands @ General store	Class 1	Class 2	Class 3
Manuf. brands @ Natural store	-0.43	-0.33	-0.86
Retail brands @ General store	-0.08	-0.29	-0.19
Retail brands @ Natural store	-0.08	-0.46	-0.74
Local brands @ General store	0.23	-1.31	-0.22
Local brands @ Natural store	-0.22	-1.04	-1.12
Organic on Manuf. brand	-0.17	1.88	-1.28
Organic on Retail brand	-0.18	1.36	-1.14
Organic on Local brand	0.12	1.95	-0.76
rBST-free on Manuf. brand	0.39	-0.15	-0.53
rBST-free on Retail brand	0.21	-0.14	-0.42
rBST-free on Local brand	0.25	0.16	-0.31
No buy	-4.87	-4.99	-3.41

Model for class membership

	Class 1	Class 2	Class 3
Constant	0.343	-1.595	-
Gender (1 = Female)	0.335	0.327	-
Age	-0.044***	-0.033**	-
Has Bachelor Degree	0.770**	0.255	-
Income	0.003	0.006**	-
Price Sensitive	0.262	-0.037	-
Values-Oriented Retailers	0.114	0.401**	-
Businesses Behind Brands	0.382**	0.389	-
Familiar with Natural Stores	0.287	1.161**	-
Familiar with Local Outlets	0.542*	0.115	-

- Younger, more educated, familiar with local outlets, seekers of brands that represent small & local businesses in the supply chain
  - Value local brands more than other groups
  - Regard private labels in both general and natural outlets the same
  - Value rBST-free products, but not organic
- Younger, higher income households, familiar with natural outlets, seekers of retail outlets that hold similar values
  - Discounts natural stores less than other groups
  - Value local brands at natural stores higher than those at general stores
  - Value organic products
- Older
  - Discounts natural stores more than other groups
  - Don't value rBST or organic attributes

Summary to date

- Consumers have different attitudes toward choices at different retail outlets and behave differently.
- Preferences toward natural retail outlets do not seem as strong in our sample as has been highlighted in the media
- Analyze responses by experience or factors