

Modeling the Impact of New Information on Consumer Preferences for Specialty Meat Products

Xi Wang, Kynda Curtis, and Klaus Moeltner



Overview

- ▶ Increasing demand for organic, natural, and local foods in US
- ▶ Do consumers really understand the differences between organic and natural products versus traditional products?
- ▶ How might new information, or advertising affect consumer WTP?
 - Will pre-existing knowledge (or perceived knowledge) make a difference?

Research Questions

- ▶ Will consumer knowledge of organic and natural grass-fed production processes affect their willingness to pay (chosen bid) for organic and natural grass-fed beef and pork?
- ▶ Is the effect different across various types of beef and pork cuts?
- ▶ If consumers are provided with additional information regarding organic and natural grass-fed production processes, will this new information modify their choices for organic and natural grass-fed beef and pork?

Previous Studies

- ▶ Information effects significant for WTP for environmental goods (Bergstrom, Dillman, and Stoll, 1985; Bergstrom, Stoll and Randall, 1989)
- ▶ Information effects stronger for goods unfamiliar to consumers (Cameron and Englin, 1997)
- ▶ New information has less influence for goods used commonly (Boyle, 1989)

Previous Studies

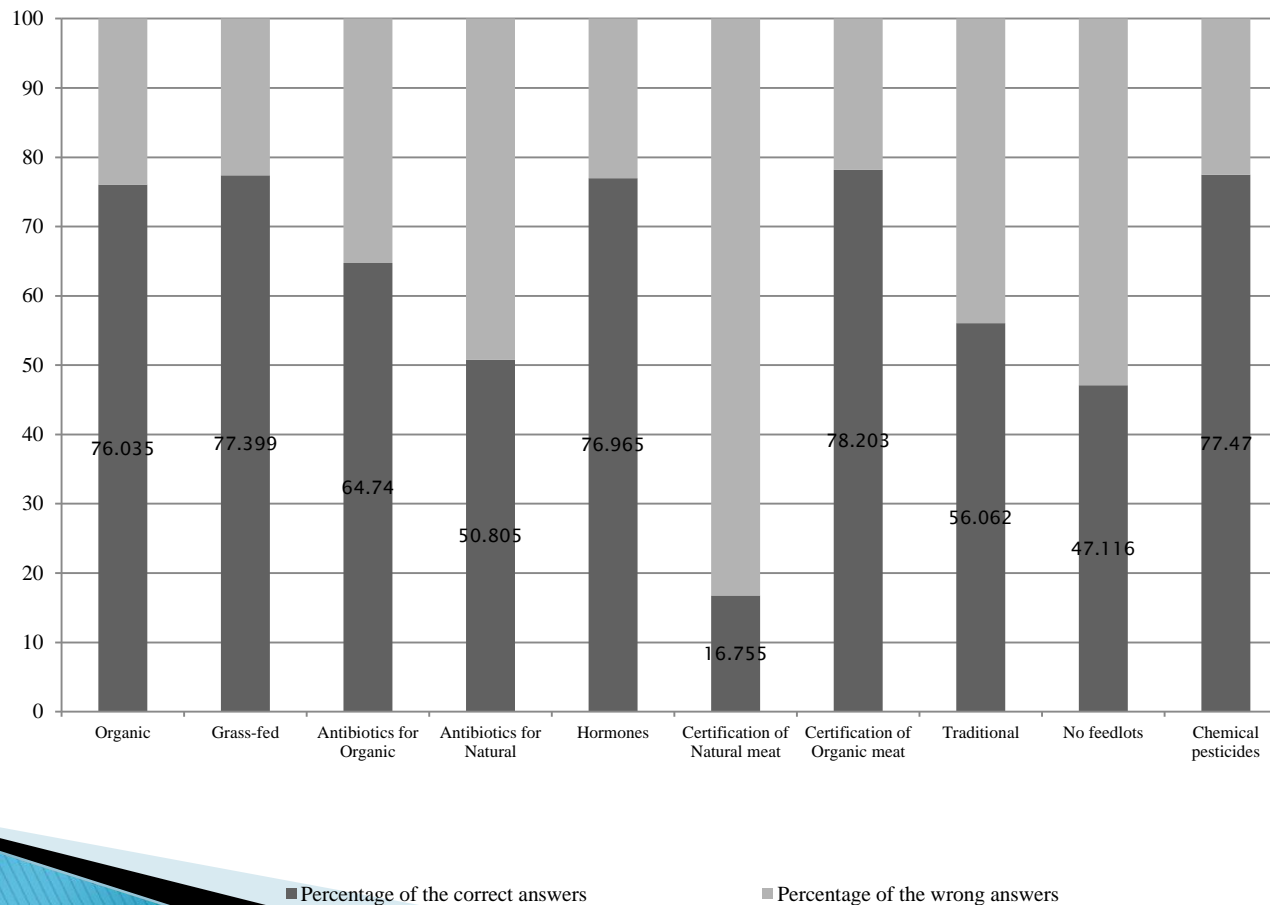
- ▶ Plethora of past studies on consumer WTP for organic, grass-fed meats (Umberger et al., 2009; Curtis et al., 2010)
- ▶ Few studies focus on knowledge and new information impacts to consumer WTP for specialty food products
- ▶ Gil and Soler (2006) – knowledge has impact on consumer WTP for organic olive oil

Data

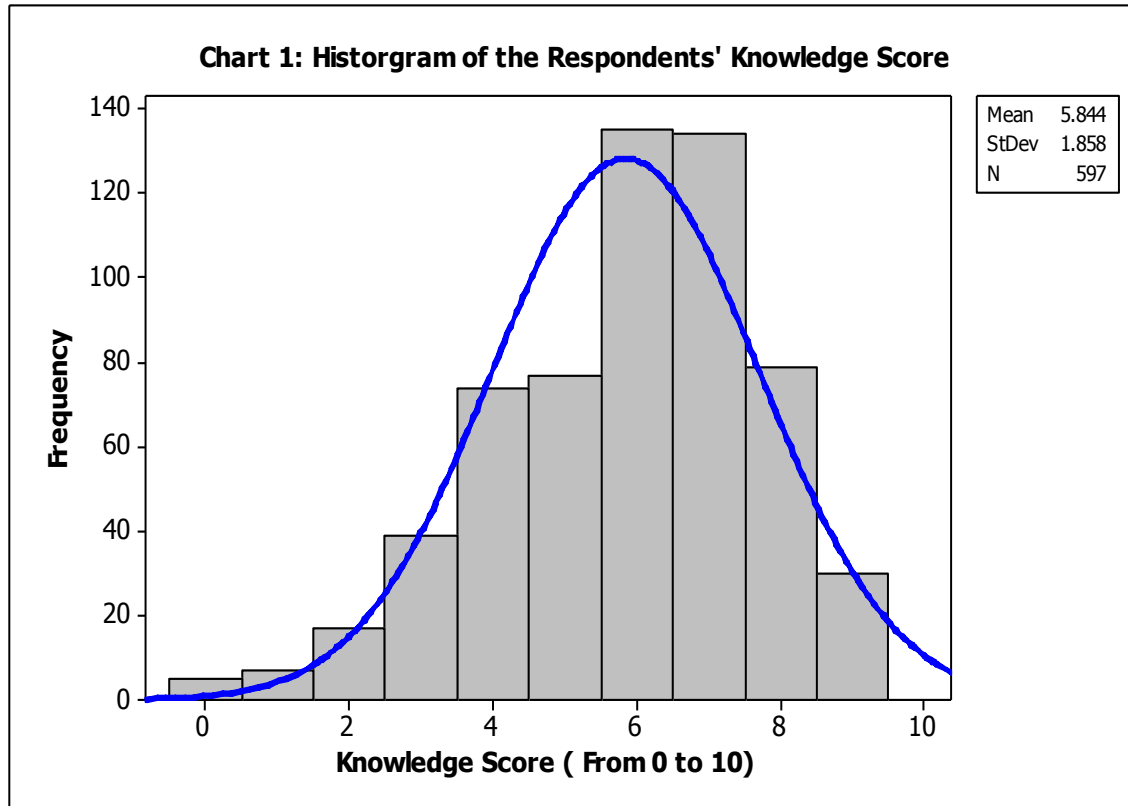
- ▶ In-person consumer survey, Reno and Carson City, NV
- ▶ 31 interviewers
- ▶ 597 surveys completed
- ▶ 20 versions–bidding structure
- ▶ Meat attributes
- ▶ Past purchase history
- ▶ Test of knowledge– organic/natural production
- ▶ Four choice experiments– new info given in 2–4 choice

Consumer Knowledge

Appendix 2: The Percentage of the correct and incorrect answers on the valid answers of meat-related questions



Consumer Knowledge



Meat Preferences

- ▶ Consumers asked to rank 18 meat attributes from 1–5 (not important to extremely important)
 - Example...freshness, tenderness, flavor, marbling, etc.
 - Food safety, taste/flavor, and freshness ranked the highest
- ▶ Factor analysis of 18 attributes reduced to 2
 - Trust toward environment production (organic, natural, origin, environment, humane)
 - Preference for freshness and taste (freshness, tender, leanness, taste)

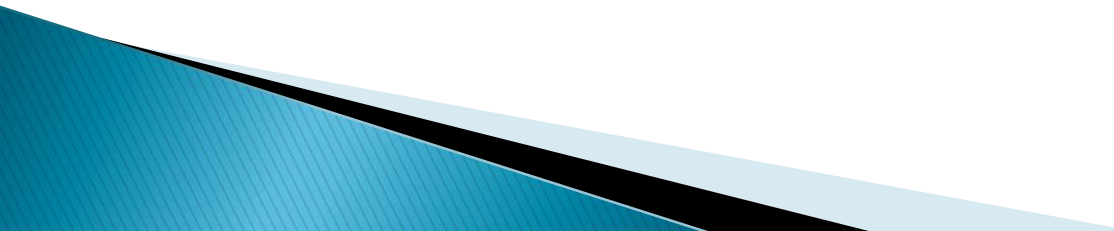
WTP Bidding

- ▶ First round, no information is given – Choice based on their own preferences and knowledge
- ▶ Second round, information about the differences on livestock feed used for conventional, natural and organic meat production
- ▶ Third round, information about the use of antibiotics and hormones
- ▶ Fourth round, the differences among certification for organic and naturally produced products are emphasized

Mean Bids Across Rounds

Round		Mean	St. Dev	Median
1st round : No information provided (N=330)	natural	6.502	1.813	6.418
(N=199)	organic	6.539	2.06	6.192
2nd round: information about livestock feed (N=321)	natural	6.691	1.981	6.697
(N=192)	organic	6.332	1.978	5.99
3rd round: information about the use of antibiotics and hormones (N=297)	natural	6.666	1.776	6.733
(N=174)	organic	6.459	1.732	6.345
4th round: information about the overall differences among certification (N=290)	natural	6.777	2.02	6.846
(N=184)	organic	6.482	1.633	6.345

Model

- ▶ Multinomial probit model with random utility
 - ▶ 3 unordered choices, traditional, organic, and natural grass-fed
 - ▶ 4 separate models, prime rib, tri-tip, ground beef and pork chops
 - ▶ No IIA issues
 - ▶ Can make product and price choice simultaneously
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Prime Rib Results

Natural

- ▶ Female
- ▶ Married
- ▶ Neg attribute
- ▶ Trust (env. prod)
- ▶ Information
- ▶ Purchase (5+ lbs in 30 days)
- ▶ Mid income

Organic

- ▶ 1-2 family
- ▶ Female
- ▶ Neg attribute
- ▶ Trust

Tri-Tip Results

Natural

- ▶ Female
- ▶ Neg attribute
- ▶ Trust
- ▶ Information
- ▶ Mid income

Organic

- ▶ Female
- ▶ Neg attribute
- ▶ No purchase
- ▶ Mid-income

Ground Beef Results

Natural

- ▶ Non caucasian
- ▶ Married
- ▶ No children
- ▶ High school ed
- ▶ Neg attribute
- ▶ Trust
- ▶ Purchase

Organic

- ▶ Trust

Pork Chop Results

Natural

- ▶ Hispanic
- ▶ Small family
- ▶ High school ed
- ▶ Few children
- ▶ Neg attribute
- ▶ Trust
- ▶ Purchase

Organic

- ▶ None

Conclusions

- ▶ Information effect only significant for prime rib
- ▶ Pre existing knowledge no different
- ▶ Previous purchases significant
- ▶ Higher income significant for high cost cuts
- ▶ Preferences for environmentally friendly production significant
- ▶ Meat attribute preferences significant negative effect
- ▶ Small family, no children significant for several meat types

Contact....

Kynda Curtis

Associate Professor

Utah State University

kynda.curtis@usu.edu