

Consumers' risk perceptions after BSE: A look across the border

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Overview

- Background
- Objectives
- Methodology & estimation
- Results & conclusions

Background

- Canadian consumers concerned about food and environmental risks even prior to 2003 (Veeman and Adamowicz 2004)



Objectives

- evaluate impact of food safety concerns and risk perceptions
- US (Montana) vs. Canada (Alberta)



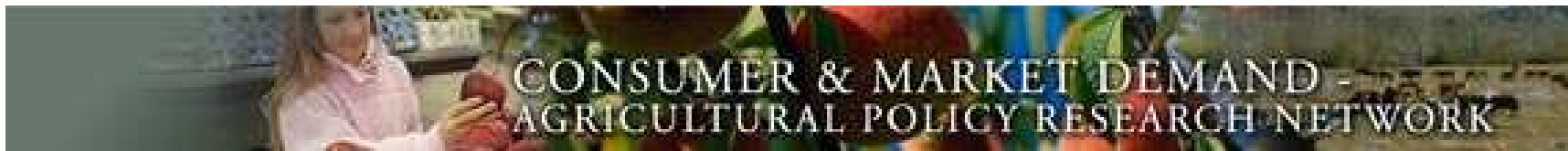
Methodology & estimation

- Focus groups & **web-based survey** in *March/April 2006* in both Alberta and Montana (**N = 419**)
- **choice experiment** (Louviere, Hensher, Swait 2000) – beef steaks: evaluate regular beef steak, and consider trade-offs with other beef steaks
- Ratings and ranking questions: **ordered probit**



Descriptive stats?





Variable	Mean	Std.Dev.
1=URBAN 2=RURAL	1.56086	0.496876
1=male 2=female	1.62053	0.485836
1= under 20; 2= 20-24; 3= 25-29; 4= 30-39 ; 5= 40-49; 6= 50-59 ; 7= 60-69 ; 8= 70 and over	4.97613	1.57869
1= Elementary 2= High School 3= College 4= University 5= Graduate School	3.34845	1.12935
Regular smoker 1=yes 2=no	1.86158	0.345758
Exercise regularly 1=yes 2=no	1.3389	0.473902



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Variable	Mean	Std.Dev.
1= Less than \$24,999 2= \$25,000-\$49,999 3= \$50,000-\$99,999 4= More than \$100,000	2.97375	1.35434
1= Less than 5 years 2= more than 5 years	1.94272	0.995955
married 1=yes 2=no	1.31265	0.464127

Q1: What **type of media do you rely on as a source of information on food-safety related issues (food poisoning, BSE, genetically modified organisms). Please rank ...**

Q2: Please rank the following information sources, in terms of your **perception of how much negative news related to food safety (food poisoning, BSE, genetically modified organisms) **is transmitted by each!****

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QUESTION 1	RANK						
	1	2	3	4	5	6	7
Magazines and newspapers	126	102	46	39	0	44	62
TV and radio	120	118	68	38	2	33	40
Internet	71	64	106	74	8	47	49
Family, friends, colleagues at work	44	61	50	136	3	63	62
Telephone helpline	37	40	74	78	55	72	63
Health professionals	17	25	58	45	97	113	64
Labels on package	4	9	17	9	254	47	79



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QUESTION 2	RANK				
	1	2	3	4	5
	Magazines and newspapers	136	143	72	46
TV and radio	150	146	56	40	27
Internet	89	80	157	61	32
Family, friends, colleagues at work	37	43	85	205	49
Health professionals	7	7	49	67	289



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MODEL SPECIFICATION

Ordered probit model as following:

$$U^* = XB + \varepsilon$$

$$\text{Prob}(U=0|X) = \Phi(-XB)$$

$$\text{Prob}(U=1|X) = \Phi(\mu_1 - XB) - \Phi(-XB)$$

$$\text{Prob}(U=2|X) = \Phi(\mu_2 - XB) - \Phi(\mu_1 - XB)$$

$$\text{Prob}(U=3|X) = \Phi(\mu_3 - XB) - \Phi(\mu_2 - XB)$$

.....

$$\text{Prob}(U=J|X) = 1 - \Phi(\mu_{J-1} - XB)$$

$$\text{And } 0 < \mu_1 < \mu_2 < \dots < \mu_{J-1}$$

(J alternatives, μ_i are cut-off points)

Q3: How concerned are you about the following risks? Please **rate these risks as you think they are affecting you personally, ...**



Key findings Q3 (risks affecting you personally?):

Age <20 significant except for

- Smallpox vaccination
- Use of genetically modified organisms,
- expired food
- nuclear technology.

Age <20 positive in most models, except for mobile phone.

=> **younger consumers** consider **food safety issues** such as Salmonella in eggs, E.coli in beef, pesticide residues, E.coli in produce **more important** than consumers in other age groups

Key findings Q3 (risks affecting you personally?):

Compared to US consumers (Montana), Canadian (**Albertan's**) appear to be **LESS concerned about risks** such as

- Salmonella in eggs,
- E.coli in beef and produces,
- heavy metals in food,
- pesticide residues,

(**negative** & significant coefficients for Alberta)

male more concerned about the risks of E.coli in beef, E. coli on produce, heavy metal in food

Q4: How concerned are you about the following risks? Please rate these **risks as you think they are **affecting others** **in society**, by selecting one box for each risk factor:**



Key findings Q4 (risks affecting others in society?):

- Age <20 significant and positive impact on
 - pesticide residues,
 - releasing genetically modified organisms into the environment,
 - nuclear technology
- BUT age between 20 & 50: opposite perception on the same issues.
- rank of **pesticide residue concern** increases from 2nd in question 3 to 1st in question 4

Conclusions

- significant differences between Alberta and Montana consumers
 - Salmonella in eggs,
 - E.coli in beef and produces,
 - heavy metals in food,
 - pesticide residues
- Age < 20
- Pesticide residues of key concern

Thanks !

