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Consumer Preferences for Public and Private Sector Certifications for Beef Products in the United States and the United Kingdom

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Abstract

Focus groups and street surveys are used in the US and the UK to determine consumer perceptions of the ability of different agencies, associations, and groups to certify beef products for quality, food safety, animal welfare, social responsibility, and environmental responsibility. US consumers see the role of the federal government primarily as assuring food safety but desire the private sector to make other types of certifications. UK consumers prefer the private sector to assure food safety. UK store brands are perceived as providing the highest quality but in the US participants identified manufacturer brand names as having the highest quality.

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Introduction

Issues relating to trust and creditability permeate discussions about food quality, safety, and assurance (e.g., Caswell, 1998). This was perhaps nowhere better illustrated than during the *Bovine Spongiform Encephalopathy* (*BSE* or Mad-cow disease) crisis in Europe during the late 1990s. At the beginning of the *BSE* crisis assurances were made by European governments that beef products were safe to eat. This led to a shattering of consumer confidence in the ability of government to impartially and correctly make these assurances when strong scientific evidence emerged linking the human disease, new Variant Creutzfeldt-Jakob Disease (vCJD), with the eating of *BSE*-contaminated beef (Baines and Davies, 1998). Although food recalls are relatively frequent and costly in the United States,¹ American consumers appear to maintain high levels of confidence in federal government inspections to make certifications about food (e.g., Loureiro and Umberger, 2002).²

Questions relating to whom consumers trust to make certifications for food safety and other assurances, such as beef quality, animal welfare, social responsibility, and environmental responsibility are important marketing questions since many consumers differentiate products based on various claims about meat. Examples of research confirming this includes willingness-to-pay studies for certifiable attributes (e.g., Lusk, Roosen, and Fox, 2003; Dickinson and Bailey, 2002; Lusk et. al., 2001). Labeling can also communicate information that generates utility to consumers and consequently influences how much they are willing to pay for products with certain certifications and attributes (Caswell, 1998).

However, the potential for confusion exists when different claims are made about food products. This is compounded when one considers that consumers are becoming more aware and concerned about the inputs used to make food products (e.g., Lusk, Roosen, and Fox, 2003, Bailey, Jones, and Dickinson, 2002; Baker and Burnham, 2001; and Lusk et. al., 2001). The *BSE* crisis and the subsequent hysteria it caused in Europe and concerns about GMOs, such as occurred during the recent StarLink corn crisis, suggest consumers place value on knowing about inputs and processes used to produce food. Indeed, recent research suggests that a significant number of American and Canadian consumers are willing to pay nontrivial amounts for information relating to meat products that have enhanced food safety protocols, animal welfare assurances, or process-verified characteristics (Hobbs, 2002; Dickinson and Bailey, 2002).

¹ The U.S. meat industry is vulnerable to large and expensive food recalls. A recent example is when contamination in ground beef prompted a 19 million pound recall of ground beef in July 2002 (quote from *L.A. Times*, July 20, 2002). Other examples of large scale food recalls are listed in Salin and Hooker, 2001.

² Hobbs, 2002 also reports a high degree of trust in the Canadian government on the part of Canadian consumers to certify food safety.

Not all information implied or inferred to consumers by advertising or labeling is necessarily true or accurate. In fact, McCluskey (2000) indicates that profit-maximizing producers have significant economic incentives to make false quality claims about their products. Even if one assumes that firms do not intentionally mislead consumers regarding certifications and guarantees, consumers may still have erroneous impressions and assumptions of what these guarantees actually are. Consequently, it is important to understand what consumers perceive is being guaranteed by different products and labels and what guarantees and certifications are actually being made.

This study examines consumers' perceptions about what is guaranteed by major public and private labeling protocols in the United States (US) and the United Kingdom (UK). This includes government inspection certification (e.g., USDA Inspection), private certifications (brand names (e.g., Sainsbury's), and private certifications (e.g., Certified Angus Beef). Consumers are asked to rank labels based on their beliefs about the quality and other beef attributes the label guarantees. The study also examines whom US and UK consumers trust the most and whom they trust the least to make certifications for beef product quality, food safety, animal welfare, social responsibility, and environmental responsibility. Animal welfare, social responsibility, and environmental responsibility were defined for participants in this study as the creditability of a certifying agency to make assurances that beef products did not adversely affect 1) the humane treatment of animals, 2) other humans besides the one purchasing the product, and 3) the environment, respectively.

Methodology

Focus groups and street surveys were conducted in both the US and the UK to ascertain consumer preferences for different agencies, associations, and groups to make certifications about beef products. There were two types of focus groups—initiated and uninitiated. Initiated focus groups were given information on the characteristics actually certified by different labels, while uninitiated focus groups were not given any outside information about the labels. The information provided to the initiated focus group participants was simply the Internet web site information established by the agency, association, or company associated with the label. Some web site information was more detailed than others were but this was an objective way to inform participants about certifications for specific labels with publicly available information. Having participants with different knowledge bases about the labels helped determine if consumer perceptions about what a label certified were different than what the label actually certified. It also provided some indication of whether additional information about the label affected consumer preferences for the beef products with that label.

Eight focus groups (four uninitiated and four initiated) were held in each country. The location for the focus groups in England was the Royal Agricultural College in Cirencester. In the US, the location was Utah State University in Logan, Utah. Focus group participants were recruited from four different demographic backgrounds in order to represent a broad spectrum of the general population. An individual focus group consisted of only one of the demographic types and was usually comprised of four to seven volunteers. Demographic types consisted of 1) students, 2) university support staff, 3) academic faculty, and 4) local farmers. To encourage participation in the focus groups, lunch and the equivalent of \$10 to \$15 in local currency were provided. In the UK as well as the US, an initial email was sent to a set of potential student, staff, farmer, and faculty participants. Due to a lack of response, it usually became necessary to recruit by personal invitation to obtain the four to seven participants needed to form each group.

Ten UK labels and 12 US labels were analyzed in the study (Table 1). The labels consisted of government certifications such as US Inspected; private labels/association labels, such as British Meat and British Farm Standard in the UK and Certified Angus Beef in the US; and store labels, such as Kroger (Smiths) in the US and Sainsbury's, Tesco, and Somerfield in the UK.

Focus group participants gave ordinal rankings to the labels based on their perceptions of the quality and food safety attributes certified by the labels. The focus group participants also provided demographic information and indicated from a list of potential government, private, and special interest groups (e.g., Green Peace, World Wildlife Fund, etc.) whom they trusted the most and whom they trusted the least to certify food safety, animal welfare, social responsibility, and environmental responsibility.

Focus Group Management

Each focus group began with a brief introduction to participants about the topic, explanation of the overall study, and an explanation of how their participation contributed to the study. Each participant was asked to describe, in one or two sentences, the characteristics he/she personally considered to be the best definition of a "quality beef product." With these qualities in mind, each participant was given a group of "flash card" labels for the certifying agencies considered in their country (Table 1). Each participant had the same set of certifying agencies for his/her country and was instructed to rank them (from highest to lowest) in terms of the ability of the agency to certify beef quality and food safety. After participants ranked the certifying agencies, they were given a set of name brand labels and asked to rank them in the same manner (Table 1).

Table 1. US and UK Certifying Agencies and Brand Names Analyzed in the Study

US	UK
<p>Certifying Agencies: US Inspection (USDA) USDA Process Verified (PV) Certified Angus Beef (CAB) Organic (OB) Natural Beef (NB)</p> <p>Brand Names: Farmland (FL) Chairman's Reserve (CR)^a Tender Choice (TC)^b E.A. Miller (EA)^c Smiths (SM)^d Albertsons (AL) Macey's (MA)^c</p>	<p>Certifying Agencies: British Farm Standard (FS) Freedom Foods/RSPCA (FF) British Meat (BM) Fair Trade Federation (FT) Soil Association Organic Standard (SA)</p> <p>Brand Names: Sainsbury's (SB) Tesco (TS) ASDA (AD) Somerfield (SF) Safeway (SW)</p>

^a Chairman's Reserve is an IBP brand name.

^b Tender Choice is an Excel brand name.

^c E.A. Millers is a local Swift product (ConAgra) and Macey's is a locally-owned retail grocery store.

^d Smiths is owned by Kroger.

A separate, short scoring exercise followed the ranking exercise. Every participant was asked to provide separate scores for each certifying agency and brand name from one (lowest possible score) to five (highest possible score) for the following characteristics: quality, food safety, animal welfare, social responsibility, and environmental responsibility. The ranking exercise identified how participants perceived the relative strengths of the certifications given by the agencies and brand names compared to one another while the scoring exercise determined an absolute score for each entity.

Finally, focus group participants completed a questionnaire that asked them to identify from a list the agencies/groups whom they trusted the most and trusted the least to certify each characteristic (quality, food safety, animal welfare, social responsibility, and environmental responsibility). Table 2 lists the agencies/groups considered for each country. Participants also provided basic demographic information about themselves (see Table 3).

Management of Street Surveys

Street surveys were used as a method to confirm the results of the focus groups. An approach similar to the mall-intercept method was implemented as a means of

Table 2. Certifying Agencies/Groups Considered in the US and the UK Analyses as Most Trusted or Least Trusted to Complete Food Quality and Characteristic Certifications.

US	UK
1. Federal government inspection	1. National government inspection
2. State government inspection	2. Local authorities/council inspections
3. Assurances by private companies other than food retailers	3. Assurances by private companies other than food retailers
4. Assurances by producers (farmers)	4. Assurances by producers (farmers)
5. Assurances by food retailers	5. Assurances by food retailers
6. Special interest groups	6. Special interest groups

Table 3. Average Demographic Characteristics of US and UK Participants in Focus Groups and Street Surveys.^a

Variable	US Participants			UK Participants		
	IN	UN	ST	IN	UN	ST
Age (years)	41	33	39	36	43	41
% Female	31	42	60	60	42	58
Family Size (number)	4.0	2.85	3.61	2.45	3.00	NA
% Married	76	60	NA	36	53	NA
Income: ^b						
% Low	18	35	31	27	21	30
% Low to Medium	35	35	46	54	58	49
% Medium	53	20	19	36	37	14
% High	35	10	16	18	5	6
Education:						
% High School	18	5	16	18	26	26
% Some College	24	40	47	9	16	37
% Bachelors Degree	29	40	26	45	32	16
% Post Graduate	29	15	10	9	26	16
Observations	17	20	150	11	19	69

^a Numbers are rounded unless decimals are added.

^b Income was categorical with the same ranges measured in dollars for the US participants and pounds for the UK participants. Low = less than 20,000, Low to Medium = 20,000 - 50,000, Medium = 50,000 – 80,000, High = 80,000+.

administering the survey randomly to the general population (Kumar, Aaker, and Day, 2001). This method was selected because it was important for the respondents to visually inspect one of the labels being analyzed and then complete questions regarding their perceptions about that particular label.

Each respondent to the street survey answered questions about only one of the labels considered by the focus groups. This was necessary in order to reduce the time required to participate in the survey and, thus, increase participation rates. The next respondent considered a different label than the previous respondent. For example, one person would be given a survey that considered only the British Farm Standard label and the next person would be given the same survey but with a different label to consider. Essentially, there were different surveys all having identical questions but different labels.³

The UK interviews were conducted outside retail food centers in several cities in southern England. The majority of the street surveys were conducted in Swindon and Cirencester. For purposes of simplicity and to minimize confusion, the street surveys were conducted on a face-to-face basis with the interviewer recording responses. Due to limited resources for travel and time constraints, it also became necessary to interview a few random participants associated with the Royal Agriculture College as well. Street surveys in the US were conducted with permission near meat counters inside retail food stores in Salt Lake City, Utah and Logan, Utah. All street surveys in both the US and the UK were conducted on an opportunistic and voluntary basis.

Friedman's Test

A nonparametric test called the Friedman test was used to test for differences in the rankings of the various certifying agencies and brand names received in the focus groups' ranking exercise. This test was developed originally by the Milton Friedman (1937) and is considered a two-way analysis of variance on rankings. The Friedman test was selected based on its ability to distinguish ordinal rankings among groups of independent observations (Conover, 1999).

Separate tests were done for certifying agencies and brand name labels in both the US and the UK. The sum of the ranks each certifying agency or brand name label receives across treatments (focus groups) can be described as follows:

$$(1) \quad R_j = \sum_{i=1}^b R(X_{ij}),$$

for $j = 1, 2, \dots, k$ where R is the average rank for the j^{th} certifying agency or brand name received in the i^{th} focus group for beef quality and food safety, k is the total

³ The street surveys collected between 6-10 observations for each of the labels being considered.

number of agencies or labels being ranked,⁴ and b is the number of focus groups. The Friedman test commences by using the following test statistic:

$$(2) \quad T_1 = \frac{12}{bk(k+1)} \sum_{j=1}^k \left(R_j - \frac{b(k+1)}{2} \right)^2,$$

Ties are sometimes encountered. If so, it is necessary to make adjustments by letting A_1 be the sum of the squares of the ranks and average ranks and letting C_1 be the correlation factor.

$$(3) \quad A_1 = \sum_{i=1}^b \sum_{j=1}^k [R(X_{ij})]^2$$

$$(4) \quad C_1 = bk(k+1)^2 / 4.$$

The adjustments the T_1 then becomes

$$(5) \quad T_1 = \frac{(k-1) \left[\sum_{j=1}^k R_j^2 - bC_1 \right]}{A_1 - C_1} = \frac{(k-1) \sum_{j=1}^k \left(R_j - \frac{b(k+1)}{2} \right)^2}{A_1 - C_1}.$$

According to Conover (1999, p. 370) the preferred statistic, because of its more accurate approximate distribution, is the two-way analysis of variance statistic computed on the ranks $R(X_{ij})$, which simplifies to the following function of T_1 given above

$$(6) \quad T_2 = \frac{(b-1)T_1}{b(k-1) - T_1}.$$

T_2 has an F distribution with numerator and denominator degrees of freedom equaling $k_1 = k - 1$ and $k_2 = (b-1)(k-1)$, respectively (Conover, 1999, p. 370). The null hypothesis is that the average ranking for each certifying agency and for each brand name label was equally likely within each of the focus groups. The alternative hypothesis is that at least one of the certifying agencies or brand names tended to be ranked differently than the other choices.

If the rankings are determined to be different, then it becomes necessary to analyze the rankings of pairs of certifying agencies and brand names. This comparison is accomplished using the following test:

$$(7) \quad |R_j - R_i| > t_{1-\alpha/2} \left[\frac{(A_1 - C_1)2b}{(b-1)(k-1)} \left(1 - \frac{T_1}{b(k-1)} \right) \right]^{1/2}.$$

If the difference between R_i and R_j , is larger than the critical value, then if R_j is larger than R_i , then j^{th} certifying agency or brand names is preferred to the i^{th} one (Conover, 1999, p. 371).

⁴ The quality and food safety rankings are averaged to reduce the number of comparisons and thus simplify reporting.

Results

Rankings within the Focus Groups

The test for differences in ranking of ability to certify food safety and quality among the certifying agencies and brand names in the US and UK is presented in Table 4. The Friedman test detected differences in rankings for quality and food safety in the initiated and uninitiated focus groups in the US and the UK for both certifying agencies and name brands. The one exception to this was for brand names in the US uninitiated focus groups where no statistical difference was found (Table 4). Based on this, multiple comparisons were made between the US certifying agencies for both the initiated and uninitiated focus groups (Table 5) and for the initiated focus groups for the brand names (Table 6). Comparisons were made for both types of focus groups in the UK for both certifying agencies (Table 7) and brand names (Table 8).

While USDA inspection (USDA in Table 5) was the most preferred certifying agency by the uninitiated US focus groups, there was basically equal preference expressed for USDA inspection and Certified Angus Beef (CAB in Table 5) by the initiated focus groups. This suggests the description for CAB given at the start of the initiated focus groups perhaps strengthened CAB's position with participants relative to the description given for USDA inspection. Table 6 clearly displays that US manufacturer brand names (Farmland (FL), Chairman's Reserve (CR), Tender Choice (TC), and E. A. Millers (EA)) are preferred in terms of quality and food safety to US store brands (Smith's (SM), Maceys (MA), and Albertsons (AL)⁵). However, the US focus groups were basically indifferent regarding which of the manufacturer brand names they preferred. This suggests that in the US store brands were perceived as being lower quality than the manufacturers' brands in general.

Only slight differences appeared to be expressed between the preferences (rankings) for the certifying agencies by the initiated and uninitiated focus groups in the UK (Table 7). The principal difference appeared to be weaker support for the Soil Association (SA) in the initiated focus groups compared to the uninitiated focus groups. The SA is an organic standard and participants may have been less sure about the quality and safety the SA would provide compared to other certifying agencies once they were more fully informed regarding the SA's program and agenda. Store brands are the principal name brands for meat in the UK. Table 8 demonstrates that UK participants in both types of focus groups had a strong preference for Sainsbury's (SB) with Tesco (TS) being the second most preferred brand name.

⁵ Brand names are listed as they are in their trademark. Consequently, the possessive form (including the apostrophe) is often omitted.

Table 4. Friedman Test Results for US and UK Focus Groups for the Ability of Certifying Agencies and Brand Names to Certify Quality and Food Safety

Group	Certifying Agencies		Brand Names	
	k ₁ and k ₂ ^a	T ₂	k ₁ and k ₂	T ₂
US:				
Initiated Focus Groups	k ₁ =4, k ₂ =12	4.181*	k ₁ =6, k ₂ =18	4.210*
Uninitiated Focus Groups	k ₁ =4, k ₂ =12	16.562**	k ₁ =6, k ₂ =18	1.273
UK:				
Initiated Focus Groups	k ₁ =4, k ₂ =12	4.698**	k ₁ =4, k ₂ =12	28.368**
Uninitiated Focus Groups	k ₁ =4, k ₂ =12	10.096**	k ₁ =4, k ₂ =12	11.420**

^a k₁=(k-1), k₂=(k-1)(b-1).

* Denotes rejection of the null hypothesis at the 95% level of confidence.

** Denotes rejection of the null hypothesis at the 99% level of confidence.

Table 5. US Focus Group Multiple Comparison Rankings for Certifying Agencies Ability to Certify Food Safety and Quality

Agency	CAB ^a	USDA	PV	OB	NB
Initiated Focus Groups					
CAB		CAB > USDA ^b	CAB > PV*	CAB > OB***	CAB > NB***
USDA			USDA > PV	USDA > OB**	USDA > NB**
PV				PV > OB**	PV > NB*
OB					NB > OB
NB					
Uninitiated Focus Groups					
CAB		USDA > CAB*	CAB > PV**	CAB > OB**	CAB > NB**
USDA			USDA > PV**	USDA > OB**	USDA > NB**
PV				PV > OB	PV > NB**
OB					OB > NB**
NB					

*, **, ***Indicate significance at .10, .05, .01 levels, respectively, for the Friedman Test on multiple comparisons.

^a Explanation of acronyms is given in Table 1.

^b > = is preferred.

Table 6. US Focus Group Multiple Comparison Rankings for Brand Names' Ability to Certify Food Safety and Quality

Brand	FL ^a	CR	TC	EA	SM	MA	AL
Initiated Focus Groups							
FL		CR > FL ^b	TC > FM	FL > EA	FL > SM***	FL > MA**	FL > AL
CR			TC > CR	EA > CR	SM > CR	***CR > MA	***CR > AL*
TC				EA > TC	TC > SM***	TC > MA***	TC > AL**
EA					EA > SM***	EA > MA***	EA > AL**
SM						MA > SM	AL > SM *
MA							AL > MA
AL							

*, **, ***Indicate significance at .10, .05, .01 levels, respectively, for the Friedman Test on multiple comparisons.

^a Explanation of acronyms is given in Table 1.

^b > = is preferred.

Table 7. UK Focus Group Multiple Comparison Rankings for Certifying Agencies

Agency	FT ^a	FS	FF	BM	SA
Initiated Focus Groups					
FT		FS > FT*** ^b	FF > FT*	BM > FT*	SA > FT**
FS			FS > FF**	FS > BM**	FS > SA*
FF				FF > BM	SA > FF
BM					SA > BM
SA					
Uninitiated Focus Groups					
FT		FS > FT***	FF > FT*	BM > FT***	SA > FT***
FS			FS > FF***	FS > BM*	FS > SA
FF				FF > BM*	SA > FF***
BM					SA > BM***
SA					

*, **, ***Indicate significance at .10, .05, .01 levels, respectively, for the Friedman Test on multiple comparisons.

^a Explanation of acronyms is given in Table 1.

^b > = is preferred.

Table 8. UK Focus Group Multiple Comparison Rankings for Brand Names

Agency	TS ^a	SW	AD	SB	SF
Initiated Focus Groups					
TS		TS > SW ^{**b}	TS > AD ^{**}	SB > TS ^{**}	TS > SF ^{***}
SW			SW > AD	SB > SW ^{***}	SW > SF [*]
AD				SB > AD ^{***}	AD > SF
SB					SB > SF ^{***}
SF					
Uninitiated Focus Groups					
TS		TS > SW ^{***}	TS > AD ^{***}	SB > TS ^{***}	TS > SF ^{***}
SW			AD > SW	SB > SW ^{***}	SW > SF ^{**}
AD				SB > AD ^{***}	AD > SF ^{**}
SB					SB > SF ^{***}
SF					

*, **, ***Indicate significance at .10, .05, .01 levels, respectively, for the Friedman Test on multiple comparisons.

^a Explanation of acronyms is given in Table 1.

^b > = is preferred.

Food retailing in the UK tends to be more class-oriented than in the US. Both SB and TS would be considered more upscale than ASDA (AD), Safeway (SW), and Somerfield (SF). As a result, UK participants showed clear preferences for SB and TS over the other brands. This indicates a significant difference in the US and UK meat marketing systems. In the US food manufacturers tend to take a leading role in assuring quality and food safety but, in the UK retailers take this role. As a result, some retailers in the UK are seen as setting the highest standard for food quality and safety but in the US food manufacturers are seen as setting the highest standards.

Scoring by Focus Groups and Street Surveys

The scoring results for the US and UK focus groups and street surveys are presented in Tables 9 and 10, respectively. Some of the basic results for the US are that food safety and beef quality tended to be scored lower for most labels in the initiated focus groups compared to the uninitiated focus group and the street survey (Table 9). This suggests that participants tended to have less confidence in labels when they were provided information from the Internet about what was actually guaranteed by the certifying agencies and brand names. This suggests that participants tended to place trust in labels without fully knowing what specific characteristics the label certified

Table 9. U.S. Average Scoring Results for Ability of Agencies and Brands to Assure Food Safety and Quality for Beef Products

	Quality			Food Safety			Animal Welfare			Social Responsibility			Environmental Responsibility		
	IN ^a	UN	ST	IN	UN	ST	IN	UN	ST	IN	UN	ST	IN	UN	ST
CAB	4.59	4.50	4.10	4.00	4.15	4.20	3.53	3.89	4.40	3.35	3.84	4.00	3.47	3.90	4.20
USDA	2.76	3.90	3.90	3.88	4.80	4.10	2.76	3.42	3.70	3.41	4.05	3.50	3.29	3.65	3.60
PV	3.00	4.00	3.44	4.18	4.65	3.67	2.76	3.32	3.44	3.35	4.00	3.44	3.29	3.55	3.11
OB	3.12	3.75	5.00	3.41	3.50	4.00	3.71	4.32	1.00	3.88	4.00	3.00	4.24	4.05	3.00
NB	3.12	3.25	NA	3.35	3.40	NA	3.94	3.89	NA	3.88	3.78	NA	4.24	3.80	NA
FL	3.53	3.85	3.67	3.47	3.90	4.00	3.06	3.84	4.33	3.24	3.95	3.67	3.59	3.85	3.33
CR	3.88	4.05	3.67	3.71	4.00	2.67	3.24	3.63	3.67	3.18	3.63	4.00	3.29	3.65	4.33
TC	3.88	4.00	5.00	3.82	3.85	4.50	2.88	3.68	2.50	3.24	3.58	2.50	3.12	3.35	2.00
EA	3.53	3.50	4.14	3.59	3.35	4.14	3.18	3.00	3.86	3.24	3.42	3.43	2.94	2.95	3.71
SM	2.88	3.20	3.50	3.06	3.30	3.75	2.41	3.00	3.00	2.82	3.16	2.88	2.88	3.10	2.88
AL	3.47	3.40	3.90	3.41	3.30	3.80	2.53	3.00	3.50	3.06	3.26	3.60	2.94	3.10	3.60
MA	3.12	2.80	3.73	3.18	3.05	4.00	2.47	3.00	3.64	3.00	3.21	4.09	2.76	3.10	3.73

Values are calculated averages using a scoring system of 1 to 5 (1 being the lowest possible score and 5 being the highest possible score).

^a IN=initiated focus group, UN=uninitiated focus group, and ST=street survey.

Table 10. UK Average Scoring Results for Ability of Agencies and Brands to Assure Food Safety and Quality for Beef Products

	Quality			Food Safety			Animal Welfare			Social Responsibility			Environmental Responsibility		
	IN ^a	UN	ST	IN	UN	ST	IN	UN	ST	IN	UN	ST	IN	UN	ST
FT	2.00	2.06	4.33	2.00	1.84	4.33	2.73	2.37	3.83	4.27	4.21	3.33	3.20	2.44	2.83
FS	3.55	3.56	4.25	3.64	3.26	3.88	3.73	3.32	3.50	3.36	3.16	3.25	3.64	3.35	3.75
FF	2.90	2.89	4.00	3.30	3.11	2.67	4.45	4.47	3.67	3.73	3.47	4.33	3.70	3.26	4.33
BM	3.45	3.00	3.80	3.36	3.05	4.00	3.18	2.95	3.00	2.82	3.11	2.80	2.73	2.68	3.40
SA	3.30	4.16	3.67	3.00	4.11	3.33	3.30	4.16	3.67	3.90	4.05	2.67	4.70	4.68	3.00
TS	3.45	3.61	3.67	4.00	3.95	4.00	3.45	3.05	3.33	3.64	3.00	3.33	3.45	2.95	4.00
SW	2.00	2.58	3.50	2.90	2.84	4.25	2.45	2.58	3.00	2.82	2.37	3.25	2.20	2.53	3.50
AD	2.27	2.89	3.50	3.30	3.26	4.13	2.64	2.68	3.00	3.00	2.63	3.13	2.36	2.53	3.00
SB	4.27	4.58	3.25	4.60	4.53	2.75	3.55	3.68	2.75	3.64	3.53	3.25	3.80	3.63	2.50
SF	2.00	2.21	2.83	2.80	2.47	3.33	2.45	2.42	2.50	2.73	2.53	2.67	2.20	2.11	2.67

Values are calculated averages using a scoring system of 1 to 5 (1 being the lowest possible score and 5 being the highest possible score).

^a IN=initiated focus group, UN=uninitiated focus group, and ST=street survey

The participants in the street survey tended to give higher scores in all categories (quality, food safety, animal welfare, social responsibility, and environmental responsibility) than did the focus group participants. CAB was given slightly higher scores for beef quality by the initiated focus group than the uninitiated focus group and the street survey suggesting that participants were swayed favorably by the Internet site for CAB. More significantly, participants' perceptions of the ability of the USDA (USDA in Table 9) to certify quality dropped dramatically between the initiated and uninitiated focus group scores indicating that many participants were not aware of what is actually certified by USDA inspection. However, USDA inspection remained near the top of the scores for food safety in all cases. This suggests that participants viewed USDA's role as principally assuring food safety, but have much less confidence in the federal government to assure food quality.

Perhaps not surprisingly, natural beef and organic beef (NB and OB in Table 9) tended to receive the highest scores for animal welfare, social responsibility, and environmental responsibility from the focus groups, although they were rated lower for these characteristics by the street survey participants (Table 9). US store brands (SM, MA, and AL) received almost uniformly low scores in all five categories and from all three types of respondents.

In contrast to the US results, many scores were higher in the initiated focus groups compared to the uninitiated focus groups for the UK. The exception to this was the lower score given to SA by the initiated focus groups compared to the uninitiated focus groups for food quality. This suggests that UK food retailers have made a greater effort than US meat manufacturers to inform the public via the Internet about specific certifications for their products. At least, participants in the UK focus groups appeared to be positively influenced by the Internet information provided by the agencies and companies. This would be expected given the larger controversies that have arisen in the UK about food safety than in the US and also given the more stringent animal welfare laws existing in the UK compared to the US. Pronounced differences existed among the UK food retailers in all five categories and for both focus groups. These differences were a bit less pronounced for the street survey participants.

Most Trusted and Least Trusted Certifiers

Tables 11 and 12 report the results for the groups the US and UK participants identified as the most and least trusted certifying agencies to certify food safety, animal welfare, social responsibility, and environmental responsibility, respectively. The results suggest, as expected, that government food safety agencies (either the federal or state government) are the most trusted certification agents in the US (Table 11). However, private certifications (private companies, producers, and retailers) were listed by the focus group participants as the most trusted certification agents in the UK (Table 12).

Table 11. Relative Frequencies for US Certifying Agencies as Most or Least Trusted to Do Specific Certifications

Agency	% Indicating Most Trusted				% Indicating Least Trusted			
	FS ^a	AW	SR	ER	FS	AW	SR	ER
Initiated Focus Groups N=17								
Federal Government	65	28	12	18	12	17	24	18
State Department of Agriculture	6	39	35	29	0	0	0	6
Private Company	18	6	24	6	24	22	12	18
Producer	0	6	24	18	12	11	0	0
Food Retailer	12	0	6	12	6	17	18	18
Special Interest Group	0	22	0	18	47	33	47	41
Uninitiated Focus Groups N=20								
Federal Government	80	21	20	10	5	26	15	10
State Department of Agriculture	5	5	20	25	5	0	10	5
Private Company	5	0	5	5	30	37	45	35
Producer	0	26	10	5	10	16	5	10
Food Retailer	5	5	5	5	35	16	15	20
Special Interest Group	5	37	40	50	15	5	10	20
Other	0	5	0	0	0	0	0	0
Street Survey N=150								
Federal Government	38	17	21	20	9	9	18	12
State Department of Agriculture	38	27	28	26	1	1	3	1
Private Company	5	3	8	4	20	20	17	23
Producer	8	18	15	11	10	10	21	14
Food Retailer	6	1	15	3	30	30	21	32
Special Interest Group	5	34	13	36	30	30	21	16

^a FS=food safety, AW=animal welfare, SR=social responsibility, and ER=environmental responsibility.

Table 12. Relative Frequencies for UK Certifying Agencies as Most or Least Trusted to Do Specific Certifications

Agency	% Indicating Most Trusted				% Indicating Least Trusted			
	FS ^a	AW	SR	ER	FS	AW	SR	ER
Initiated Focus Groups N=11								
National Government	9	9	0	9	45	27	27	18
Local Authorities/Councils	0	0	0	0	18	36	27	18
Private Company	45	36	36	36	9	9	9	9
Producer	18	27	18	18	0	9	0	0
Food Retailer	18	0	27	0	9	18	36	55
Special Interest Group	9	27	16	36	18	0	0	0
Uninitiated Focus Groups N=19								
National Government	16	0	5	11	26	37	32	26
Local Authorities/Councils	5	11	11	11	5	0	0	0
Private Company	11	37	16	11	11	16	5	11
Producer	37	21	21	11	11	5	5	5
Food Retailer	11	0	0	0	32	26	42	47
Special Interest Group	21	32	47	58	16	16	16	11
Street Survey N=69								
National Government	29	12	28	10	26	25	19	26
Local Authorities/Councils	10	6	13	10	14	10	10	12
Private Company	9	3	7	9	23	20	28	20
Producer	10	10	7	6	13	20	16	12
Food Retailer	13	3	10	3	13	22	22	22
Special Interest Group	29	67	35	62	10	3	6	9

^a FS=food safety, AW=animal welfare, SR=social responsibility, and ER=environmental responsibility

An equal number of UK street survey participants indicated they trusted special interest groups or the national government to certify food safety. In any case, the overall results were much weaker support for government certifications for food safety in the UK than in the US. Strong feelings existed among the US participants against special interest groups certifying food safety. But participants in the UK saw the role special interest groups might play in certifying food safety more positively than did US participants.

Participants in the US were widely split over which of the potential certifying groups should make certifications for characteristics other than food safety. However, there is clearly less support for government agencies to make certifications about animal welfare, social, and environmental responsibility in the US than there was for food safety.

Logistical regressions⁶ of the most trusted and least trusted agencies on demographic characteristics revealed that highly educated, high-income participants appear to place more trust in special interests groups to make certifications than do the other demographic groups. The results suggest that consumers perceive the role of government in certification very differently in the US and the UK. In the US, consumers see the government's primary role as certifying food safety. In the UK, consumers trust the private sectors to make certifications about food safety.

Conclusions

Due to recent food scares and recalls for beef in the US as well as in the UK, consumers may question the quality and safety of beef products. Additionally, there appears to be some confusion among consumers in both countries regarding what brand name products or food-certifying agencies guarantee relating to the quality and safety of beef products and other characteristics such as animal welfare, social, and environmental issues.

Based on data collected from focus groups and street surveys in the US and the UK, the analysis presented in this paper indicates that US consumers perceive manufacturer brand names to be superior in terms of quality and food safety attributes compared to food retailer, organic, and natural beef brands. Federal and local governments in the US are viewed as the most trusted organizations to certify food safety for beef products.

Consumers in the UK indicated that food retailers provide higher levels of quality and food safety than beef products certified by other groups. Unlike the US, organic beef in the UK was perceived as a premium product in terms of quality and food

⁶ These regressions are not reported here for the sake of brevity. Only a few demographic characteristics significantly influenced the selection of a certifying agency as the most or least trusted and those characteristics are discussed here.

safety. Private (special interests groups, private companies, and private producers) certifying agencies were selected as the most trusted agency to certify food safety in the UK.

US consumers are undecided as to which specific organization is trusted the most to make certifications for characteristics other than food safety. The private sector in both the US and the UK appears to be preferred over government agencies to make certifications for animal welfare, environmental responsibility, and social responsibility.

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