

**CONSUMER PERCEPTIONS OF PUBLIC AND PRIVATE SECTOR
CERTIFICATIONS FOR BEEF PRODUCTS IN THE UNITED STATES AND THE
UNITED KINGDOM**

By

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Abstract

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Focus groups 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 credibility 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 in food

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.

products (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, the subsequent hysteria it caused in Europe, and concerns about GMOs 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 animal welfare or process-verified characteristics (Hobbs, 2002; Dickinson and Bailey, 2002).

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 how additional information may affect 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 do 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 were conducted in both 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 but, this was an objective way to inform participants with publicly-available information

about certifications for specific labels. 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. One demographic type consisted of students, one of school support staff, one of academic faculty, and one of local farmers.³

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 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

³ In each country, eight focus groups were conducted. One initiated focus group and one uninitiated focus group with each of the four demographic types.

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).

Finally, each focus group participant 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). Participants also provided basic demographic information about themselves (see Table 2).

Friedman Test

A nonparametric test, the Friedman test, was used to test for differences in the rankings the various certifying agencies and brand names received in the focus groups’ ranking exercise. This test was developed originally by 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).⁴

⁴ Detailed information about the Friedman test is provided in the full paper but is omitted here to meet length requirements for the paper.

Results

Rankings Within the Focus Groups

The test for differences in rankings among the certifying agencies and brand names in the US and UK are presented in Table 3. 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 3). Based on this, multiple comparisons were made between the US certifying agencies for both the initiated and uninitiated focus groups (Table 4) and for the initiated focus groups for the brand names (Table 5). Comparisons were made for both types of focus groups in the UK for both certifying agencies (Table 6) and brand names (Table 7).

While USDA inspection (USDA in Table 4) 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 4) 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 5 clearly displays that US manufacturer brand names (FL, CR, TC, and EA) are preferred in terms of quality and food safety to US store brands (SM, MA, and AL). However, the US focus groups were basically indifferent regarding which manufacturer brand name they preferred. This suggests that in the US store brands were perceived as being lower quality than the manufacturers' brand 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 6). 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 7 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.

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 AD, SW, and 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 manufacturer 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.

Most Trusted and Least Trusted Certifiers

Tables 8 and 9 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 for food safety government agencies (either the federal or state

government) are the most trusted certification agents in the US (Table 8) while private certifications (private companies, producers, and retailers) are the most trusted certification agents in the UK (Table 9). 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 the 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, and social and environmental responsibility in the US than there was for food safety.

Logistical regressions⁵ 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

⁵ 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.

beef products and other characteristics such as animal welfare, and social and environmental issues.

Based on data collected from focus groups 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. In the UK, the private sector is more trusted than the public sector to make food safety certifications.

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

| US | UK |
|--|--|
| Certifying Agencies: US Inspection (USDA) USDA Process Verified (PV) Certified Angus Beef (CAB) Organic (OB) Natural Beef (NB) | Certifying Agencies: British Farm Standard (FS) Freedom Foods/RSPCA (FF) British Meat (BM) Fair Trade Federation (FT) Soil Association Organic Standard (SA) |
| 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 | Brand Names: Sainsbury's (SB) Tesco (TS) ASDA (AD) Somersetfield (SF) Safeway (SW) |

^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.

Table 2. Average Demographic Characteristics of US and UK Focus Group Participants.^a

| Variable | US Participants | | UK Participants | |
|-------------------------|-----------------|------|-----------------|------|
| | IN | UN | IN | UN |
| Age (years) | 41 | 33 | 36 | 43 |
| % Female | 31 | 42 | 60 | 42 |
| Family Size (number) | 4.0 | 2.85 | 2.45 | 3.00 |
| % Married | 76 | 60 | 36 | 53 |
| Income: ^b | | | | |
| % Low | 18 | 35 | 27 | 21 |
| % Low to Medium | 35 | 35 | 54 | 58 |
| % Medium | 53 | 20 | 36 | 37 |
| % High | 35 | 10 | 18 | 5 |
| Education: | | | | |
| % High School | 18 | 5 | 18 | 26 |
| % Some College | 24 | 40 | 9 | 16 |
| % Bachelors Degree | | | | |
| Graduate | 29 | 15 | 9 | 26 |
| Observations | 17 | 20 | 11 | 19 |

^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+.

Table 3. Friedman Test Results for US and UK Focus Groups.

| 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 $k_1=(k-1), k_2=(k-1)(b-1)$ where k is the number of agencies/brand names being considered and b is the number of focus groups.

* 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 4. US Focus Group Multiple Comparison Rankings for Certifying Agencies.^a

| Agency | CAB | 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 See Table 1 for definitions and categories.

^b > = is preferred

Table 5. US Focus Group Multiple Comparison Rankings for Brand Names.^a

| Brand | FL | 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 See Table 1 for definitions and categories.

^b > = is preferred

Table 6. UK Focus Group Multiple Comparison Rankings for Certifying Agencies.^a

| Agency | FT | FS | FF | BM | SA |
|---------------------------------|----|-------------------------------|------------------|------------------|------------------|
| Initiated Focus Groups | | | | | |
| FT | | FS \succ FT*** ^b | FF \succ FT* | BM \succ FT* | SA \succ FT** |
| FS | | | FS \succ FF** | FS \succ BM** | FS \succ SA* |
| FF | | | | FF \succ BM | SA \succ FF |
| BM | | | | | SA \succ BM |
| SA | | | | | |
| Uninitiated Focus Groups | | | | | |
| FT | | FS \succ FT*** | FF \succ FT* | BM \succ FT*** | SA \succ FT*** |
| FS | | | FS \succ FF*** | FS \succ BM* | FS \succ SA |
| FF | | | | FF \succ BM* | SA \succ FF*** |
| BM | | | | | SA \succ BM*** |
| SA | | | | | |

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

^a See Table 1 for definitions and categories.

^b \succ = is preferred

Table 7. UK Focus Group Multiple Comparison Rankings for Brand Names.^a

| Agency | TS | SW | AD | SB | SF |
|---------------------------------|----|------------------------------|------------------|------------------|------------------|
| Initiated Focus Groups | | | | | |
| TS | | TS \succ SW** ^b | TS \succ AD** | SB \succ TS** | TS \succ SF*** |
| SW | | | SW \succ AD | SB \succ SW*** | SW \succ SF* |
| AD | | | | SB \succ AD*** | AD \succ SF |
| SB | | | | | SB \succ SF*** |
| SF | | | | | |
| Uninitiated Focus Groups | | | | | |
| TS | | TS \succ SW*** | TS \succ AD*** | SB \succ TS*** | TS \succ SF*** |
| SW | | | AD \succ SW | SB \succ SW*** | SW \succ SF** |
| AD | | | | SB \succ AD*** | AD \succ SF** |
| SB | | | | | SB \succ SF*** |
| SF | | | | | |

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

^a See Table 1 for definitions and categories.

^b \succ = is preferred

Table 8. 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 | | 5 | | | | | | |

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

Table 9. 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 |

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