CSR activities in the German poultry sector: differencing preference groups

RESEARCH ARTICLE

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Abstract

Corporate Social Responsibility (CSR) has long been an issue worldwide, and more and more industries are taking note. One important example is the poultry industry in Germany, which has become a focal point of public debate. Increasingly, consumers are demanding that firms take responsibility for their corporate actions. The goals of this study were, first, to analyze consumers' preferences for poultry firms' CSR commitment with the help of an adaptive conjoint analysis. Second, a cluster analysis is set out to define consumer groups according to their preferences. With regard to CSR, consumers in this study were most concerned with product quality, animal welfare and employee issues. TV, newspaper and product packaging are their most preferred information sources. Three clusters were identified. Firms should focus more on communicating what their firm's commitment comprises and should adapt their CSR activities and firm communication methods to the preferences of different target groups.

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1. Introduction

Corporate social responsibility (CSR) has been an important topic worldwide for a long time and is receiving greater attention – both in research and in practice. From the scientific perspective, Bowen (1953), Davis (1960) and Carroll (1999) carried out path-breaking work in describing and developing the concept of CSR. As they define it, CSR denotes that a firm takes responsibility for its operations and thereby to meet the expectations of the society. From a consumer perspective, firms' awareness of their social commitment is becoming increasingly essential. Consumers are focusing more and more on ecological and social aspects of supply chains and production processes when buying products (Hierholzer, 2010). But the mass media also plays an essential role in influencing public opinion and thus exerting pressure on companies for more transparency in their production and more social responsibility (Rommelspacher, 2012; Vanhonacker and Verbeke, 2014). Current research stresses the need for firms' CSR activities to secure the legitimacy of their operations and their societal 'license to operate' (Luhmann and Theuvsen, 2016; Ross *et al.,* 2015).

Various industries are focusing more and more on CSR as they put social concerns on their agenda (Ranängen and Zobel, 2014). One industry that has come under high social pressure is the agribusiness sector. Livestock farming in particular has become a critical issue for public debate. There are a variety of reasons for this. Growing urbanization is accompanied by society's growing estrangement from agricultural production (Albersmeier and Spiller, 2008; Böhm *et al.,* 2009). Today's agricultural value chains are characterized by high complexity that has caused information asymmetries for consumers. The non-communication of developments, especially in the meat industry, exacerbated by a number of food scandals, has created uncertainty for consumers and a widespread loss of trust in farmers and processors (Berk, 2012; Hierholzer, 2010; Spiller *et al.,* 2010). As a result, there is a risk of growing resistance on the part of society to animal-producing companies. One industry particularly affected by these developments and a focal point of public concerns is the poultry sector.

On the one hand, poultry production is a high-potential market. In 2015 the production volume in the EU-28 was 14.4 million tons of poultry products. Behind the USA and China, the EU is the third largest poultry producer in the world (Statista, 2016a). Germany is an emerging market in this regard. Consumption as well as production volume has been rising continuously since the 1990s. As a consequence, with a production volume of 1.51 million tons, Germany is now in fourth place in European poultry production – behind Poland (2.01 million tons), France (1.72 million tons) and the UK (1.69 million tons) (Federal Statistical Office, 2008; Statista, 2016b,c). Improvements in breeding, chicken husbandry and farm management have enhanced efficiency in production, leading to lower production costs than those involved in beef or pork production. The industry demonstrates a high potential for future competitiveness as well as the ability to meet future demand from the German market (BVDF, 2013; Spiller *et al.,* 2010; Veauthier and Windhorst, 2011). The German market for poultry is characterized by oligopolistic structures and dominated mainly by large, vertically integrated enterprises. Four companies hold a market share of 75% of the total revenue (Four-firm concentration-ratio: € 4.2 billion) (Afz, 2012; Niemann, 2012).

On the other hand, society is highly critical of poultry production. Protests against building new chicken barns and slaughterhouses or initiatives promoting higher animal welfare standards are accompanied by intense public and political debates. However, these developments in turn influence companies in the poultry sector to take ever greater responsibility for their actions (Berk, 2012; Niemann, 2012). As a result, companies in the poultry industry worldwide have become more sensitive to these issues and establish transparency campaigns or implement CSR strategies, through such means as focusing more on animal welfare, employee health and safety, supplier concerns, environmental issues and food safety (GNP, 2016; Heidemark GmbH, 2016; Keystone, 2016; PHW-Gruppe, 2016; Plukon Vertriebs GmbH, 2016). Despite the high relevance of the global poultry industry and the growing need to implement CSR strategies, scientific research in this area is still scarce. Amongst other things, there is a gap in research about consumers' preferences of these commitments by poultry producing firms. Therefore, one central question of this study is this: what do consumers demand from firms taking social responsibility; that is, just what CSR commitment do they want

poultry firms to make? To analyze consumers' preferences, we performed an Adaptive Conjoint Analysis (ACA) analyzing the CSR commitments favored by 250 consumers in Germany. Subsequently, a hierarchical cluster analysis is conducted to identify consumer groups with the help of their preferences regarding CSR commitments. Some initial management implications can be derived from the results.

The remainder of this article is structured as follows: a literature review is presented in Section 2, followed by the study design and a statistical evaluation in Section 3. Section 4 describes the sample and the results of the survey. The study concludes with a discussion of the findings and some managerial implications and ideas for further research in Section 5.

2. Literature review

CSR has the potential to help companies meet societal demands and criticism. It has been a research topic since the 1950s, when Bowen (1953), Davis (1960) as well as Carroll (1999) first described and defined the concept in the general management literature. But, despite several decades of research, there is no general definition of CSR or common understanding on what the concept covers (Dahlsrud, 2008). How companies perceive their responsibility towards society can vary considerably among sectors or within industries. More recently the concept has received growing attention by agricultural economists (e.g. Hartmann, 2011; Heyder and Theuvsen, 2012). Definitions concerning CSR in agribusiness widely parallel definitions from the common management literature on CSR (Luhmann and Theuvsen, 2016).

Earlier research has focused on the effects of CSR and the determinants of a firm's CSR commitment. Heyder and Theuvsen (2012) demonstrated that CSR efforts positively influence agribusiness firms' reputation. Empirical results are different concerning their effects of CSR on firm profitability. Some studies have found positive effects (Heyder and Theuvsen, 2012; Rodriguez-Melo and Mansouri, 2011; Ross *et al.,* 2015; Tang *et al.,* 2012), whereas others have observed negative effects (Ingram and Frazier, 1980; Vance, 1975) or no effects at all (Peloza and Papania, 2008; Surroca *et al.,* 2010). From a chain perspective, Hartmann (2011) identified various factors influencing an agribusiness firm's CSR commitment. Especially economic considerations, such as improved competitiveness, are important reasons for implementing a CSR strategy. Another important determining factor is the size of a firm; the larger a firm, the more likely it is to engage in CSR. Likewise, firms with a strong brand are keener to implement a strong CSR commitment to protect that brand (Hartmann, 2011). These concerns particularly apply to the poultry sector, where some large companies with strong brands are already taking social responsibility or have implemented a CSR strategy by emphasizing issues like environmental protection, animal welfare, transparency in production processes and responsibility for their employees in order to counter public criticism challenging their reputations (i.a. PHW-Gruppe, 2016; Plukon Vertriebs GmbH, 2016).

In this article, our understanding of CSR and the empirical analysis of consumer expectations follows Carroll's (1991) pyramid model. According to this model, a company is said be socially responsible when it policies meet the four levels of economic, legal, ethical and philanthropic responsibility. Following Carroll (1991), a firm's CSR is based on economic responsibility – establishing a strong market position, making profit or providing food products (Maignan, 2001; Maloni and Brown, 2006; Werner *et al.*, 2009). Legal responsibility builds upon economic responsibility, as a firm acts within the law – by, for example, complying with regulations (Maignan, 2001; Maloni and Brown, 2006). Ethical responsibility applies to society's norms and values. These requirements are expected by society. When a company does not comply with, it is sanctioned by society, resulting, among other things, in a deteriorating reputation. One important issue is animal welfare concerns for which societal demands surpass legal restrictions, such as not debeaking chicks, providing more freedom of movement than required and not shredding male laying hen chicks (Forsman-Hugg *et al.*, 2013; Maloni and Brown, 2006; Spiller *et al.*, 2015). On the top of the CSR pyramid stands the philanthropic responsibility. Companies are seen as 'good corporate citizens' when they use their resources to support the local community. A philanthropic responsibility is desired but not required. Hence, if a firm defaults it is not sanctioned by the public (Carroll, 1991). Carroll's (1979) pyramid model has served in

various studies as a basis for empirical research: in a study about CSR from a company's perspective by Aupperle *et al.* (1985), the four responsibility levels from Carroll (1979) can be empirically confirmed.

Research about CSR from a consumer perspective preferentially proves the general CSR perception of consumers. In most cases, studies analyze the influence of CSR on consumers' buying behavior. Such studies do not follow Carroll's (1991) pyramid model (cf. Berens *et al.*, 2005; Brown and Dacin, 1997; Sen and Bhattacharya, 2001). In contrast, Maignan (2001) examined the four responsibility levels from the consumer perspective and developed items – or rather statements – based on Carroll's research (1979). Maignan (2001) points out the various preferences for a firm's CSR commitment depending on consumers' country of origin. In a cross-country comparison of consumers from France, the USA and Germany, it was shown that, unlike people from the USA, consumers from Germany and France value commitments from the economic responsibility level less than the other three levels. German consumers rank the legal and ethical responsibilities of a firm as most important, followed by philanthropic responsibilities. Studies that focus on consumers and poultry production mainly examine individual aspects of a firms' CSR. This research shows that consumers' awareness focuses on food safety and risk perception (Badrie *et al.*, 2006; Lobb *et al.*, 2007; Stefani *et al.*, 2008; Verbeke and Viaene, 2000) and therefore also on food scandals (Bánáti, 2011). For consumers, the use of antibiotics, diseases such as avian influenza and the use of growth hormones are the most important factors influencing their uncertainty about food safety (Goldberg and Roosen, 2008). One factor plays an important role in societal debates about poultry production as well as in consumers' buying decisions: animal welfare (Burton *et al.*, 2016). Consumers rate animal welfare in poultry production lower than in pork or beef production (Verbeke and Viaene, 2000). Shared values based on a firm's CSR can help firms regain consumers' trust in the food system. Additionally, information about production systems – depending on who receives the information and the recipients' competence regarding it – is important for consumer's trust (Arnot *et al.*, in press). From the literature, it becomes obvious that consumers' are mainly concerned about ethical matters, such as animal welfare or production issues (e.g. product quality and safety). The literature offers no information on consumers' response to the philanthropic activities of poultry firms in their local community.

In summary, studies that focus on CSR from a consumer perspective seldom consider Carroll's (1979 and 1991) model of CSR. Research on consumers' perceptions with relation to the poultry sector in particular fails to offer a comprehensive understanding of CSR. Literature in this area has focused more on individual aspects of CSR, such as animal welfare issues. Thus, consumers' preferences for other CSR commitments on the part of poultry firms have not been investigated, indicating an important research gap.

3. Material and methods

Study design

In order to answer the research questions, we conducted an online questionnaire-based study in February 2013. We performed an ACA to evaluate consumers' preferences regarding CSR activities and then conducted a cluster analysis to distinguish groups from a heterogeneous entity (Backhaus *et al.*, 2008). The questionnaire comprised three sections: (1) demographic questions as income, age, housing situation and origin; (2) an ACA section comprising four steps to capture respondents' preferences for CSR activities by poultry firms; and (3) questions about consumers' knowledge about CSR and their attitudes toward and relation to agriculture or food production as well as their information behavior. The questionnaire contained mostly closed questions. A pretest was sent out first before the questionnaire was distributed to consumers all around Germany. 250 consumers completed the questionnaire. The demographic details – age, gender, education and origin – accord with the percentage distribution of the German population (Federal Statistical Office, 2012).

Statistical analysis

The general premise of ACA methodology is that a subject contains a number of attributes and attribute levels. The four responsibility levels from Carroll's (1991) pyramid comprise the attribute used to describe CSR: economic, legal, ethical and philanthropic responsibility. Through an extensive literature analysis, we explored 24 CSR commitments, which we then used in the form of statements to delineate each of the four responsibility levels. These CSR activities were operationalized as the attribute levels. For each CSR commitment, a part-worth utility was calculated, which shows respondents' preferences for each commitment (Baier and Brusch, 2009). The online survey was designed using ACA 8.2 from Sawtooth Software (Orem, UT, USA). The ACA comprised four steps: in the first phase, respondents evaluated all CSR activities conducted by poultry companies for each responsibility level. In the second step, the importance of each attribute level (namely, the responsibility level) was captured. In the third step – the paired comparison – the program estimated the importance of each attribute, namely, CSR commitment (e.g. 'Chicken meat has the quality I appreciate'). In the last step, the consistency of respondents' answers was verified (Dietz, 2007; Harth, 2006; Reiners, 1996; Sawtooth Software, 2007). Before analyzing the sample results, the preference data from the ACA were estimated using the hierarchical Bayesian method in SSI Web 8.2 (Sawtooth Software Orem, UT, USA). Afterwards, they were merged with the survey results, and all analyses were made using IBM SPSS Statistics 23 (IBM, Armonk, NY, USA) (Baumgartner and Steiner, 2009; Sawtooth Software, 2006). The part-worth utilities for the CSR activities were estimated for each individual. To be comparable, the part-worth utilities were normalized using the zero – centered diffs method. The utilities were centered on zero and ranged in this study from -45.87 to 40.26. These part-worth utilities are significant based on metric scaling as long as one of the utilities for a specific CSR activity is twice the number of another. The utilities indicate how much the CSR commitments are preferred. Thus, a negative value does not mean that respondents would refuse a specific CSR activity but that they prefer others (Harth, 2006).

Next, we conducted a hierarchical agglomerative cluster analysis to merge the respondents into homogenous groups. With regard to consumers' preferences the most preferred aspects as well as the least preferred commitments of a firm's CSR strategy (from each responsibility level) were used to separate the survey into groups; to this end, we included eight variables in the cluster analysis. At first groups with the lowest distance were combined using the single-linkage procedure; four outliers were identified, leaving 246 respondents in the sample. To identify the optimal cluster result, we used then the Ward method to combine respondents, which minimally increased the variance in the cluster group. The elbow criteria suggested three clusters. By using the k-means method, we determined the solution in six iterations. Finally, discriminant analysis confirmed that 98.8% of the cases had been classified correctly (Backhaus *et al.*, 2008). To characterize the sample, descriptive statistics such as frequency distribution, crosstab, mean (μ) and standard deviation ($\pm$) were used (Backhaus *et al.*, 2008).

Sample description

Of the 246 respondents to the survey, 124 were male, and 122 female. Five age groups are represented: 19.9% of the respondents are between 18 and 29, 17.5% are between 30 and 39, 24.8% are between 40 and 49, 21.1% are between 50 and 59 years old, and 16.7% are 60 or older. Of the respondents, 42.7% have a Certificate of Secondary Education and 30.1% a General Certificate of Secondary Education, while 27.2% finished school with an advanced technical college or university entrance qualification. These demographic details accord with the distribution of the population in Germany (Federal Statistical Office, 2012).

Most consumers (52.1%) in the sample live in mid-sized cities of up to 50,000 residents; 41.5% of the respondents live in larger cities of between 50,000 and 1 million residents; whereas only 6.5% of interviewees live in a metropolis with more than 1 million inhabitants. More than half the respondents in the survey (58.9%) live with a partner and/or with children.

Concerning meat consumption, 95.1% of the consumers in the survey eat meat[1]; 52% of them eat meat more than once a week, and another 30.1% say they eat meat exactly once a week. Pork is the preferred kind of meat (41.5%), with poultry in second place (37%). 14.2% of the interviewees say that they prefer beef the most.

4. Results

Descriptive results

Of the respondents, 40.7% state that they have no connection with agricultural production. When a meat scandal happens (e.g. antibiotic resistant germs in chicken meat), 21.1% of the respondents would trust a farmer as a source of information about the scandal. Most consumers (72%) would trust consumer protection organizations (e.g. the German organization *Stiftung Warentest*), but none agreed that politicians are trustworthy. If consumers want to know more about the CSR commitment of a chicken-producing firm, they prefer to watch a television documentary (61%), read a newspaper (59.3%) or read information on product packaging (45.9%).

One central goal in this study was to measure consumers' preferences for CSR commitment from poultry producing companies. Table 1 shows the part-worth utilities for each commitment according to the responsibility level.

From the ACA, it is clear that on the economic responsibility level, the respondents most valued the quality of the chicken meat, whereas they least valued that long-term business plans are important for a strong market position and to increase profit. On the legal responsibility level, they considered most important the absence of prohibited substances, such as dioxin or antibiotics, in the meat and least important that a firm have a no tolerance policy regarding corruption. Concerning ethical responsibility, the most favored was increased animal welfare beyond applicable law and the least preferred that chickens are completely utilized. On the philanthropic responsibility level, the support of employees returning to work after illness or pregnancy was most preferred by the respondents, whereas they least favored firms' support of culture and historical monuments. These eight CSR commitments – the most and least preferred commitments on each CSR level – were used to form the clusters that are described in the next section.

Results of the cluster analysis

Based on the descriptive results of the ACA, the cluster analysis distinguished three clusters. The results show that the groups differ in their preference structure and in some other characteristics. In the survey, we tested preferences for 24 CSR commitments – six from each CSR level. Below, the 12 most preferred commitments are shown for each cluster, and the clusters are described by their characteristics.

Cluster 1 contains the 88 respondents (35.8% of the sample) whose preferences are mostly in the economic responsibility level (Figure 1). For this group, activities on the economic responsibility level (cf. CSR commitments no. 2, 3, 6, 10) fall into the top preference category, followed by three activities from the ethical (cf. CSR activity no. 5, 7, 11) and three from the philanthropic responsibility level (cf. CSR commitments no. 1, 4, 12). From the legal responsibility level, two CSR activities (cf. CSR commitment no. 8, 9) were among the 12 most preferred CSR measures in this cluster group.

These respondents placed the most value on firms' commitment to support employees returning to work after illness or pregnancy (philanthropic responsibility), chicken meat having the quality consumers appreciate and that animals are both kept and slaughtered in Germany (both economic responsibility).

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[1] The sample size for information about meat or meat consumption was n=234.

Table 1. CSR commitments and part-worth utilities (n=246). [1]

Responsibility level	CSR commitments	Part-worth utility[2]	
		μ	±
Economic responsibility	Chicken meat has the quality I appreciate	40.26	27.95
	Keeping animals and slaughtering poultry takes place in Germany	21.73	32.41
	Long-term rather than short-term employment	9.08	28.42
	Availability of apprenticeships and jobs to strengthen the German employment market	2.86	28.75
	Cheap prices for chicken meat through the use of modern manufacturing	-30.32	34.42
	Long-term business plans for a strong market position and to increase profit	-43.62	26.91
Legal responsibility	No prohibited substances, such as dioxin or antibiotics, in the chicken meat	17.89	21.23
	Chicken health checks and meat inspections by a veterinarian	9.33	21.41
	Compliance with hygiene regulations	4.70	23.66
	Adherence to animal and environmental protection laws	1.13	22.26
	Chickens receive medications according to prescription	0.09	26.31
	No corruption	-33.14	30.90
Ethical responsibility	Increased animal welfare beyond applicable law	28.38	27.82
	Short transfer distances from farm to slaughterhouse	6.64	30.53
	Fair working conditions and wages for all employees	3.10	31.42
	Chicken barn with a minimum impact on the environment	-7.76	30.60
	Willingness to answer customers' questions and to make full disclosure about all parts of the production process	-12.03	33.57
	Preferably complete utilization of the chicken	-18.32	36.82
Philanthropic responsibility	Support of employees returning to work after illness or pregnancy	28.67	24.18
	Assistance for employees in education and training	24.65	21.46
	Free child care for employees' children during working hours	1.14	27.43
	Cooking classes in schools to provide responsible exposure to food	-0.47	31.56
	Support of people in need in the local community	-8.11	25.04
	Support of culture and historical monuments	-45.87	28.66

[1] CSR = corporate social responsibility.

[2] μ = mean; ± = standard deviation.
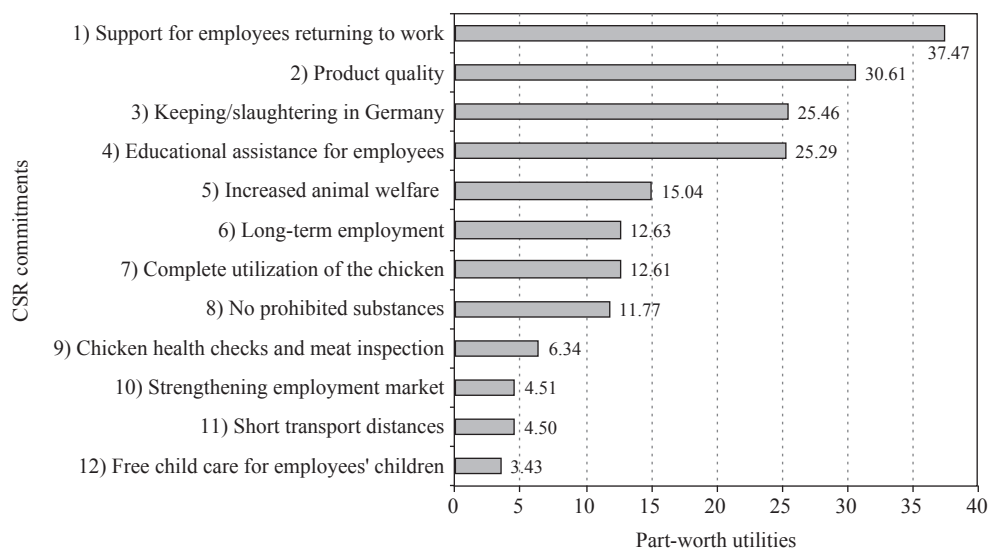
Figure 1. The 12 most preferred CSR activities by Cluster 1. CSR = corporate social responsibility.

Overall, Cluster 1 contains the youngest consumers. 44.3% of this group are under 40, and 25% under 30. For most of the respondents in this group, the total available income per month for the whole household is less than € 2,000. Only 19.3% of respondents in this group live alone; 61.5% live with a partner and/or children. More than half of this group is male (54.5%); a significant difference between the clusters regarding gender was observed[2] (0.004[**3]). Respondents in this cluster live mainly in mid-sized cities between 10,000 and 250,000 citizens (52.3%) and 17% have regular contact with some kind of agricultural production; 45.5% of them report that they have no connection with farming.

All respondents were asked about their knowledge of CSR. There was no significant difference within or between the three groups, but the findings still give an overall impression of available knowledge. In comparison to the other groups, respondents in this cluster knew the least about CSR: Only 23.9% of the respondents knew what CSR is or can define it. To inform them about CSR, there are various opportunities for respondents to choose. Most of the consumers in this cluster said they would prefer to watch television documentaries about a firm's commitment. There was a significant difference between the clusters concerning this source of information (0.009[**]). Their next preference was to read about CSR on product packaging.

The second cluster group contains 77 respondents (31.3%) and can be characterized by their focus on commitments on the legal responsibility level (cf. CSR activity nos. 3, 7, 8, 10, 11). These were followed by three activities from the economic (cf. CSR activity nos. 1, 4, 12) and two each from the ethical (cf. CSR activity nos. 2, 9) and the philanthropic (cf. CSR activity nos. 5, 6) responsibility levels. Figure 2 shows the part-worth utilities of the 12 most preferred CSR activities within this group, to which 77 respondents (31.3%) belong.

Overall, respondents belonging to Cluster 2 considered the most important CSR measures commitment to chicken meat having the quality consumers appreciate (economic responsibility), implementation of increased animal welfare beyond applicable law (ethical responsibility) and that no prohibited substances, such as dioxin or antibiotics, are in the chicken meat (legal responsibility).

Concerning age there is no significant difference between Cluster 2 and the other groups, but 45.5% of the respondents in this group are middle-aged (40-59). There was a significant difference in gender between the

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[2] Nominal scales' significances tested with Chi-square.
[3] Level of significance: $P<0.05$ significant[*]; $P<0.01$ very significant[**]; $P<0.001$ highly significant[***].
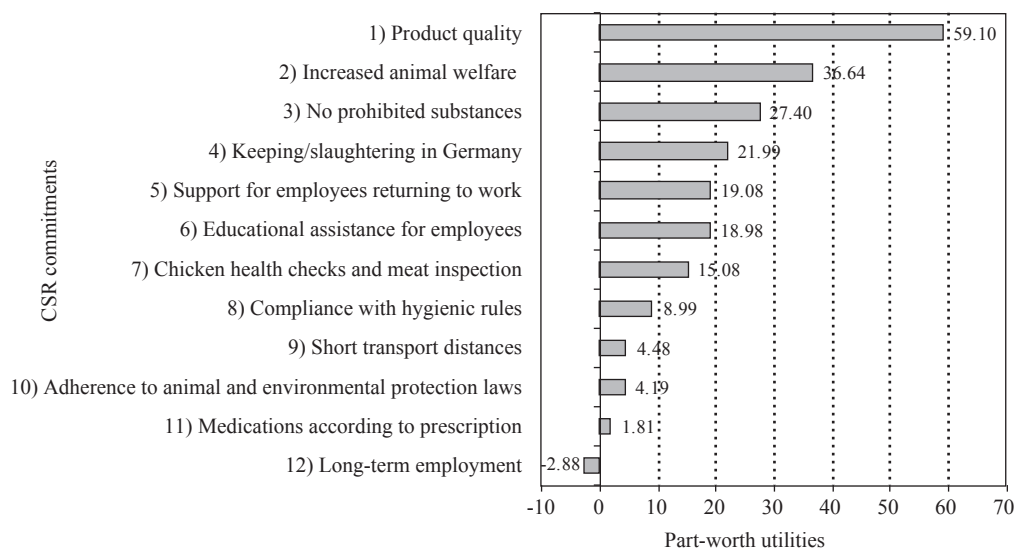

Figure 2. The 12 most preferred CSR activities by Cluster 2. CSR = corporate social responsibility.

three clusters (0.004**); much more than half of this cluster is female (64.9%). Respondents' income tended to be higher in this cluster compared with the other clusters; 52% had a total household income between € 2,000 and € 3,999, and 10.4% of interviewees in this cluster declared a monthly income of € 4,000 or more. Respondents in this cluster people also mainly live with a partner and/or with children (61.1%) and predominantly in smaller cities of less than 50,000 inhabitants, and 35.1% of this cluster live in cities with fewer than 10,000 people. In this group, more people have a connection with agricultural production; only 33.8% stated that they have no contact with agriculture. Of respondents in this cluster, 35.1% said they have friends or family members who are connected with agricultural production or even live on a farm, and 33.8% of this cluster stated they have visited a farm, go to farm shops or spend their holidays on farms. Moreover, 18.2% of them are regularly in contact with agricultural production.

All in all, respondents did not know much about the CSR concept. However, in Cluster 2, 32.5% of the respondents stated that they have an understanding of the concept. This is proportionally more than in all the other groups. They reported that they would not actively seek information about CSR. Most respondents in Cluster 2 would acquire information about CSR randomly, such as if they were to read something about it in the newspaper (0.032*). Their second preference would be watching a television documentary about CSR.

Cluster 3 contains 81 respondents (32.9%). Respondents in this group preferred most CSR commitments from the economic responsibility level (cf. CSR activity nos. 2, 6, 7, 10), followed by three CSR commitments from the ethical (cf. CSR activity no. 1, 5, 9) and three from the philanthropic responsibility level (cf. CSR activity no. 3, 4, 11). Two commitments came from the legal responsibility level (cf. CSR activity no. 8, 12). Figure 3 shows the part-worth utilities of the 12 most preferred CSR commitments for this group.

Consumers in this group most preferred that firms' focus on increased animal welfare beyond applicable law (ethical responsibility), that chicken meat has the quality consumers appreciate (economic responsibility) and that companies' focus on assistance for employees in education and training (philanthropic responsibility).

This group contains only older people; 50.6% of the group is 50 and older; 22.5% of Cluster 3 is 60 and older.

Of respondents in this cluster, 24.7% live alone, and 54.3% live with a partner and/or their children. The total income for more than half of this cluster (64.2%) lies between € 1,000 and € 2,999. Roughly a third
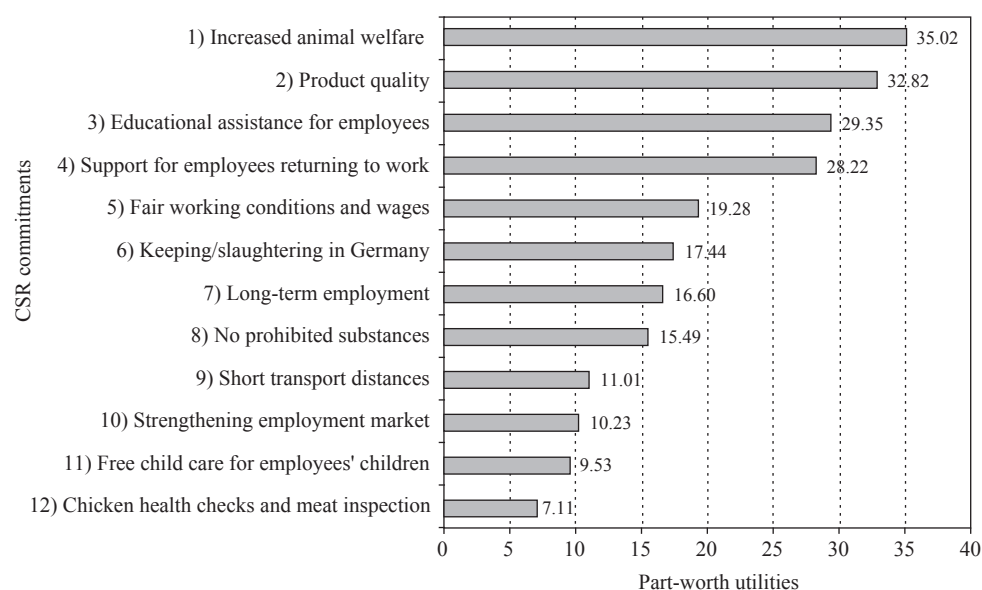

Figure 3. The 12 most preferred CSR activities by Cluster 3. CSR = corporate social responsibility.

(34.65%) of the respondents lives in larger cities of 250,000 inhabitants or more. In the third Cluster, 42% of respondents have some connection to agricultural production, but only 12.3% have regular contact as a farmer or through neighbors or going horseback riding.

Of respondents in Cluster 3, 70.4% know nothing about CSR and would most prefer to catch up on this topic by watching television documentaries (0.009^{**}) or, secondly, by reading something randomly in a newspaper about it (0.032^{*}).

5. Discussion and conclusions

The first goal of this study was to analyze consumers' preferences for poultry firms' CSR commitment. The results show in general that consumers focus mainly on the product quality but also on animal welfare aspects. This confirms previous consumer studies which have stated that features of product quality, such as fat percentage, color and country of origin as well as animal welfare are important factors in consumers' buying decisions (Burton *et al.*, 2016; Goldberg and Roosen, 2008). Another strong emphasis is employee-related issues, such as educational training or helping employees who are returning to work. These are new factors, which were not identified in earlier studies.

Considering the results of the ACA (Table 1), it can be stated that consumers do not rank the commitments from each CSR level equally. They rank measures from the economic level (product quality) first; in second and third place, they put commitments from the philanthropic level (support of employees); and in fourth place, they again place an economic consideration (country of origin of the products). CSR activities that do not directly affect respondents (e.g. long-term business plans to gain strong market position and maximize long-term profit) are preferred less. This indicates a discrepancy between the various CSR aspects derived from Carroll's (1991) framework and consumers' preferences for a firm's CSR obligation, but it is in line with Maignan's (2001) results from German consumers and their CSR perception. These results also support De Quevedo-Puente *et al.* (2007), who determined that CSR obligations are the result of a process of exchange between society's demands and a company's reaction. This process does not reach a consensus and, therefore, varies for each country and society.

The second goal of this study was to investigate different groups with the help of consumers' preferences for various CSR commitments made by poultry firms. This is a new focus in consumer studies and has not been studied in earlier research. High standard deviations showed up in the descriptive analysis, supporting the assumption that there were different groups in the survey sample. Hence, a hierarchical cluster analysis was performed and three groups were distinguished. All three groups preferred specific CSR commitments that were important to them with different foci on the various responsibility levels distinguished by Carroll (1991). Cluster 1, containing the youngest respondents, has a low average income and most favors firms' economic CSR commitment, especially what a firm does for its employees. The oldest respondents with a middle income are in Cluster 3. In its ranking of the CSR commitments, Cluster 2 differs from the other groups. By a wide margin, this group most prefers product quality commitments. Respondents in this group have the highest average income, are middle aged and especially value food quality and safety as well as animal welfare issues. This cluster contains mainly women. These findings parallel earlier research in such areas as consumer preferences for organic food and more animal welfare-friendly products. Beardworth *et al.* (2002), for instance, show that women are more aware of food quality issues and ethical concerns regarding production. Lueth (2005) confirms that social context highly influences preference for organic food, and income is especially suited for differentiating among the characteristics of various target groups. Hence, due to budget constraints, lower income groups often focus more on economic aspects than on process quality attributes such as organic or animal welfare-friendly. In contrast to earlier findings (cf. Lueth, 2005), Cluster 1 – the cluster with the lowest income – mostly focused on employee issues but also highly prefer issues regarding product quality and a firm's commitment to animal welfare.

Interesting implications can be derived from these findings for the design of CSR activities, not only in the poultry industry but also in other agribusiness subsectors. First, companies should tailor a communication strategy for their CSR commitments specifically for each target group. Furthermore, the results indicate that consumers focus mostly on a firm's commitment but not exclusively on one responsibility level. If a company has a product for a specific target group differentiated by age or personal development status, this company could focus its CSR activities most on what this age or development group prefers. Nevertheless, Carroll (1991) showed that it is important to fulfill all four responsibility levels. Therefore, a company should address all the responsibility levels but can target its activities or give preference to a particular responsibility level depending on its target market. What is also important for companies is to communicate their obligation. The findings show that CSR awareness is rather low throughout the entire sample. There is no relationship between group characteristics and knowledge of CSR. Consumers' knowledge influences how they perceive and search for information. In a broader sense consumers' attitudes and buying behaviors can be influenced (Alba and Hutchinson, 1987). In Wigley's (2008) study it can be shown how consumers' knowledge about a firm's CSR efforts their buying behavior. The greater consumers' knowledge about a company's obligation the more positive is respondents' attitude towards CSR. Reports or communication on websites can help increase the CSR knowledge of consumers and, thus, contribute to a more positive response to CSR activities. These information channels should be chosen specifically for each target group.

Studies' limitations stem first of all from the sample itself. First, the sample is biased to a certain extent because only consumers who could be reached online could participate. To minimize this bias, quotas were set to ensure a percentage distribution with regard to gender, age, education and place of domicile similar to that of the German population as a whole. Second, the sample size is comparatively small as it contains only 250 respondents. Therefore, results should be viewed as initial insights into the research topic, and future research is needed. Additionally, another framework for analyzing consumers' preferences could be used. For this study we adopted Carroll's (1991) four responsibility levels as our theoretical framework. It is a well-known framework for analyzing CSR, but it was developed in the context of US society. Since Schoenheit (2006) and Backhaus-Maul and Braun (2007) explain that CSR differs in relation to its social context and there are great cultural differences between the Anglo-Saxon and the Continental European context (Hofstede, 1984), future studies should try to better take into account the cultural context of CSR. Future research should also address in greater detail whether consumers' different preferences for CSR activities are sector-specific or whether distinctions between clusters are stable across various industry subsectors. Finally, it could be interesting to see to what extent the differences regarding preferences for CSR influence consumption patterns, consumers' willingness-to-pay for product attributes and actual buying behavior.

References

Alba, J.W. and J.W. Hutchinson. 1987. Dimensions of consumer expertise. *Journal of Consumer Research* 1: 411-454.

Albersmeier, F. and A. Spiller. 2008. Supply Chain Reputation in der Fleischwirtschaft. Discussion paper (0811). Department of Agricultural Economics and Rural Development, University of Goettingen, Goettingen, Germany.

Allgemeine fleischer zeitung (Afz). 2012. Die Top 150 der Fleischbranche. *Allgemeine fleischerzeitung* 38: 19-22.

Arnot, C., Y. Vizzier-Thaxton and C.G. Scanes. In press. Values, trust and science-building trust in today's food system in an era of radical transparency. *Poultry Science*. DOI: https://doi.org/10.3382/ps/pew168.

Aupperle, K.E., A.B. Carroll and J.D. Hatfield. 1985. An empirical investigation of the relationship between corporate social responsibility and profitability. *Academy of Management Journal* 28: 446-463.

Backhaus, K., B. Erichson, W. Plinke and R. Weiber. 2008. *Multivariate Analysemethoden: Eine anwendungsorientierte Einführung*. Springer, Berlin, Germany.

Backhaus-Maul, H. and S. Braun. 2007. Gesellschaftlichen Engagement von Unternehmen in Deutschland. Konzeptionelle Überlegung und empirische Befunde. *Rote Seiten – Stiftung und Sponsoring* 10: 1-15.

Badrie, N., A. Gobin, S. Dookeran and R. Duncan. 2006. Consumer awareness and perception to food safety hazards in Trinidad, West Indies. *Food Control* 17: 370-377.

Baier, D. and M. Brusch. 2009. Erfassung von Kundenpräferenzen für Produkte und Dienstleistungen. In: *Conjointanalyse – Methoden – Anwendung – Praxisbeispiele*, edited by D. Baier and M. Brusch. Springer Verlag, Berlin, Germany, pp. 3-18.

Bánáti, D. 2011. Consumer response to food scandals and scares. *Trends in Food Science and Technology* 22: 56-60.

Baumgartner, B. and W.J. Steiner. 2009. Hierarchisch bayesianissche Methoden bei der Conjointanalyse. In: *Conjointanalyse – Methoden – Anwendung – Praxisbeispiele*, edited by D. Baier and M. Brusch. Springer Verlag, Berlin, Germany, pp. 147-159.

Beardsworth, A., A. Bryman, T. Keil, J. Goode, C. Haslam and E. Lancashire. 2002. Women, men and food: the significance of gender for nutritional attitudes and choices. *British Food Journal* 104: 470-491.

Berens, G., C.B.M. van Ries and G.H. van Bruggen. 2005. Corporate associations and consumer product responses: the moderating role of corporate brand dominance. *Journal of Marketing* 69: 35-48.

Berk, J. 2012. Technik in der Geflügelhaltung. In: *Jahrbuch Agrartechnik 2012*, edited by L. Frerichs. Institut für mobile Maschinen und Nutzfahrzeuge, Braunschweig, Germany, pp. 1-9.

Böhm, J., F. Albersmeier, A. Spiller and A. Zühlsdorf. 2009. Zukunftsfaktor gesellschaftliche Akzeptanz: Kommunikation mit der Öffentlichkeit – Mehr als Krisen-PR. In: *Die Ernährungswirtschaft im Scheinwerferlicht der Öffentlichkeit*, edited by J. Böhm, F. Albersmeier and A. Spiller. Eul Verlag, Lohmar, Germany, pp. 5-16.

Bowen, H.R. 1953. *Social responsibilities of the businessman*. Harper and Row, New York, NY, USA.

Brown, T.J. and P.A. Dacin. 1997. The company and the product: corporate associations and consumer product responses. *Journal of Marketing Research* 61: 68-84.

Bundesverband der deutschen Fleischwarenindustrie (BVDF). 2013. Fleischverbrauch und Fleischverzehr je Kopf der Bevölkerung. Available at: http://tinyurl.com/gs3hhqs.

Burton, E., J. Gatcliffe, H.M. O'Neill and D. Scholey. 2016. *Sustainable poultry production in Europe*. CABI, Oxfordshire, UK.

Carroll, A.B. 1979. A three-dimensional conceptual model of corporate performance. *The Academy of Management Review* 4: 497-505.

Carroll, A.B. 1991. The pyramid of corporate social responsibility: toward the moral management of organizational stakeholders. *Business Horizons* 34: 39-48.

Carroll, A.B. 1999. Corporate social responsibility: evolution of a definitional construct. *Business and Society* 38: 268-295.

Dahlsrud, A. 2008. How corporate social responsibility is defined: an analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management* 15: 1-13.

Davis, K. 1960. Can business afford to ignore social responsibilities? *California Management Review* 2: 70-76.

De Quevedo-Puente, E., J.M. De la Fuente-Sabaté and J.B. Delgado-García. 2007. Corporate performance and corporate reputation: two interwoven perspectives. *Corporate Reputation Review* 10: 60-72.

Dietz, W. 2007. *Grundlagen der Conjoint-Analyse: Varianten, Vorgehensweise, Anwendungen*. AV Akademikerverlag, Saarbruecken, Germany.

Federal Statistical Office. 2008. Vom Erzeuger zum Verbraucher – Fleischversorgung in Deutschland Ausgabe 2008. Available at: http://tinyurl.com/ztltlkt.

Federal Statistical Office. 2012. Statistisches Jahrbuch 2012. Available at: http://tinyurl.com/gtzcqmc.

Forsman-Hugg, S., J.M. Katajajuuri, I. Riipi, J. Mäkelä, K. Järvelä and P. Timonen. 2013. Key CSR dimensions for the food chain. *British Food Journal* 115: 30-47.

GNP. 2016: Social responsibility. Available at: http://tinyurl.com/hvmnsgu.

Goldberg, I., and J. Roosen. 2008. Verbraucherbewertung der Qualität und Sicherheit von Geflügelfleisch. In: *Zukunftsperspektiven der Fleischwirtschaft*, edited by A. Spiller and B. Schulze. Universitätsverlag, Goettingen, Germany, pp. 341-352.

Harth, M. 2006. Multikriterielle Bewertungsverfahren als Beitrag zur Entscheidungsfindung in der Landnutzungsplanung unter besonderer Berücksichtigung der Adaptiven Conjoint-Analyse und des Discrete Choice Experiments. PhD thesis, University of Halle-Wittenberg, Halle, Germany.

Hartmann, M. 2011. Corporate social responsibility in the food sector. *European Review of Agricultural Economics* 38: 297-324.

Heidemark GmbH. 2016. Engagement. Available at: http://tinyurl.com/jqcdeyz.

Heyder, M. and L. Theuvsen. 2012. Determinants and effects of corporate social responsibility in German agribusiness: a PLS model. *Agribusiness* 28: 400-428.

Hierholzer, V. 2010. *Nahrung nach Norm: Regulierung von Nahrungsmittelqualität in der Industrialisierung 1871-1914 – Kritische Studien zur Geschichtswissenschaft*. Vandenhoeck and Ruprecht, Goettingen, Germany.

Hofstede, G. 1984. *Culture's Consequences: International Differences in Work-Related Values*. Sage, Newbury Park, CA, USA.

Ingram, R.W. and K.B. Frazier. 1980. Environmental performance and corporate disclosure. *Journal of Accounting Research* 18: 614-622.

Keystone. 2016: Corporate social responsibility. Available at: http://tinyurl.com/h43m7zw.

Lobb, A.E., M. Mazzocchi and W.B. Traill. 2007. Modelling risk perception and trust in food safety information within the theory of planned behaviour. *Food Quality and Preference* 18: 384-395.

Lueth, M. 2005. Zielgruppensegmente und Positionierungsstrategien für das Marketing von Premium-Lebensmitteln. PhD thesis, University of Goettingen, Goettingen, Germany.

Luhmann, H. and L. Theuvsen. 2016. corporate social responsibility in agribusiness: literature review and future research directions. *Journal of Agricultural and Environmental Ethics* 29: 673-696.

Maignan, I. 2001. Consumer's perceptions of corporate social responsibility: a cross-country analysis. *Journal of Business Ethics* 30: 57-72.

Maloni, M.J. and M.E. Brown. 2006. Corporate social responsibility in the supply chain: an application in the food industry. *Journal of Business Ethics* 68: 35-52.

Niemann, E. 2012. Die 'Hähnchenblase': Über die Krise der Geflügel-Agrarindustrie und eine erstarkende Bürgerbewegung. *Der kritische Agrarbericht 2012*: 122-125.

Peloza, J. and L. Papania. 2008. The missing link between corporate social responsibility and financial performance: stakeholder salience and identification. *Corporate Reputation Review* 11: 169-181.

PHW-Gruppe. 2016. Gesellschaftliche Verantwortung. Available at: http://tinyurl.com/jsdnk8o.

Plukon Vertriebs GmbH. 2016. Nachhaltigkeit. Available at: http://www.stolle.de/nachhaltigkeit.

Ranängen, H. and T. Zobel. 2014. Revisiting the 'how' of corporate social responsibility in extractive industries and forestry. *Journal of Cleaner Production* 84: 299-312.

Reiners, W. 1996. Multiattributive Präferenzstrukturmodelle durch die Conjoint Analyse. Diskussion der Verfahrensmöglichkeit und Optimierung von Paarvergleichsaufgaben bei der adaptiven Conjoint Analyse. PhD thesis, University of Muenster, Muenster, Germany.

Rodriguez-Melo, A. and S.A. Mansouri. 2011. Stakeholder engagement: defining strategic advantage for sustainable construction. *Business Strategy and the Environment* 20: 539-552.

Rommelspacher, M. 2012. *Corporate Social Responsibility aus Konsumentensicht*. Gabler Verlag, Wiesbaden, Germany.

Ross, R.B., V. Pandey and K.L. Ross. 2015. Sustainability and strategy in U.S. agri-food firms: an assessment of current practices. *International Food and Agribusiness Management Review* 18: 17-48.

Sawtooth Software. 2006. The ACA/Hierarchical Bayes v3.0. Available at: http://tinyurl.com/jm96tnr.

Sawtooth Software. 2007. The ACA/Web v6.0. Available at: http://tinyurl.com/jm96tnr.

Schoenheit, I. 2006. Corporate Social Responsibility – Deutsche und internationale Perspektiven am Beispiel China. In: *Corporate Social Responsibility – Verantwortung für nachhaltiges Wirtschaften in China*, edited by I. Schoenheit, W. Iwand and R. Kopp. Beuth Verlag, Berlin, Germany, pp. 9-24.

Sen, S. and C.B. Bhattacharya. 2001. Does doing good always lead to doing better? Consumer reactions to corporate social responsibility. *Journal of Marketing Research* 38: 225-243.

Spiller, A., B. Schulze and A. Cordts. 2010. Was essen wir in zwanzig Jahren? *DLG-Mitteilungen* 1: 20-23.

Spiller, A., M. Gauly, A. Balmann, J. Bauhus, R. Birner, W. Bokelmann, O. Christen, S. Entenmann, H. Grethe, U. Knierim, U. Latacz-Lohmann, J. Martinez, H. Nieberg, M. Qaim, F. Taube, B.-A. Tenhagen and P. Weingarten. 2015. Wege zu einer gesellschaftlich akzeptierten Nutztierhaltung. *Berichte über Landwirtschaft-Zeitschrift für Agrarpolitik und Landwirtschaft*, Sonderheft 221.

Statista. 2016a. Produktion der führenden Erzeugerländer und -regionen von Geflügelfleisch weltweit in den Jahren 2013 bis 2015. Available at: https://de.statistica.com.

Statista. 2016b. Produktion von Geflügelfleisch in der Europäischen Union nach Ländern in den Jahren 2012 bis 2015. Available at: https://de.statista.com.

Statista. 2016c. Produktion von Geflügelfleisch in Deutschland und in der Europäischen Union in den Jahren 1990 bis 2015. Available at: https://de.statista.com.

Stefani, G., A. Cavicchi, D. Romano and A.E. Lobb. 2008. Determinants of intention to purchase chicken in Italy: the role of consumer risk perception and trust in different information sources. *Agribusiness* 24: 523-537.

Surroca, J., J.A. Tribo and S. Waddock. 2010. Corporate responsibility and financial performance: the role of intangible resources. *Strategic Management Journal* 31: 463-490.

Tang, Z., C.E. Hull and S. Rothenberg. 2012. How corporate social responsibility engagement strategy moderates the CSR-financial performance relationship. *Journal of Management Studies* 49: 1274-1303.

Vance, S. 1975. Are socially responsible corporations good investment risks? *Management Review* 64: 18-24.

Vanhonacker, F. and W. Verbeke. 2014. Public and consumer policies for higher welfare food products: challenges and opportunities. *Journal of Agricultural and Environmental Ethics* 27: 153-171.

Veauthier, A. and H.-W. Windhorst. 2011. *Die Wettbewerbsfähigkeit der Deutschen und Niedersächsischen Geflügelfleischerzeugung – Gegenwärtige Strukturen und Prognosen bis 2020.* Vechtaer Druckerei und Verlag, Vechta, Germany.

Verbeke, W.A., and J. Viaene. 2000. Ethical challenges for livestock production: meeting consumer concerns about meat safety and animal welfare. *Journal of Agricultural and Environmental Ethics* 12: 141-151.

Werner, C., S. Janisch, U. Kuembet and M. Wicke. 2009. Comparative study of the quality of broiler and turkey meat. *British Poultry Science* 50: 318-324.

Wigley, S. 2008. Gauging consumers' responses to CSR activities: does increased awareness make cents? *Public Relations Review* 34: 306-308.