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The influence of country-of-origin stereotypes on consumer responses to food safety scandals: The case of the horsemeat adulteration

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Abstract

Food safety scandals are recurring events in the food industry worldwide and companies are not immune to these incidents. However, there is a paucity of studies that examine how consumers evaluate and respond to brands involved in food crises and how consumers' prejudicial views about brands may bias these responses. Following attribution theory, the current study analyzes the psychological mechanisms through which consumers form judgments about a brand's culpability in the aftermath of a food safety scandal. Furthermore, this study assesses how the dimensions of a brand's country-of-origin (perceived competence and perceived warmth) affect the mechanism of blame attribution.

A real food crisis, the 2013 European horsemeat adulteration scandal, provides the framework for an experimental study with 816 Italian consumers. The results show that perceived country-of-origin warmth diminishes consumers' perceptions of internal locus, stability, and controllability of the food incident, thus decreasing consumers' attributions of blame toward the faulty brand. Perceived competence increases consumers' perceptions of the controllability of the harmful behavior which leads to higher attributions of blame. Higher blame attribution leads to lower intentions to buy the brand in the future. Furthermore, when consumers perceive the food scandal as highly severe and when they are highly ethnocentric, perceived competence diminishes consumers' perceptions of internal locus and stability of the food incident.

The theoretical contribution of the study and practical implications for food brand managers are addressed.

Keywords

Food crisis, food safety scandal, attribution of blame, country-of-origin, national stereotypes, experimental research.

1. Introduction

Food safety incidents – well-known events related to food safety issues or harm associated with some food brands – are recurring occurrences in the food industry worldwide (Food SENTRY, 2013; European Commission, 2015; New York Times, 2016). Nestlé’s contaminated milk powder (The Guardian, 2013b), the E. coli outbreak in Taco Bell’s lettuce (CNN, 2006), Sanlu’s melamine-contaminated baby formula (BBC, 2008), the European horsemeat adulteration (BBC, 2013) and the Caraga candy poisonings (ABS-CBN, 2015) represent a few examples of food safety scandals. Food safety incidents not only result in serious injuries to people’s health (Röhr, Lüddecke, Drusch, Müller, & Alvensleben, 2005), they also represent threats to brands because they can dramatically damage consumers’ confidence in the safety and quality of their products (Berg, 2004; Liu, Pieniak, & Verbeke, 2014) and affect consumers’ attitudes and purchase intentions toward the faulty brands (Verbeke, 2001).

The severity of these negative effects calls for a deep understanding of consumers’ responses to food crises, and especially of the psychological processes through which consumers attribute responsibility to the agent brands and blame them for the negative event (Bánáti, 2011). However, there is a paucity of studies examining how consumers perceive and respond to food crises and what variables may influence the psychological process of blame attribution (Regan et al., 2015). Consumers’ prejudicial views about a brand may indeed bias consumers’ attributions of blame and subsequent purchase behaviors (Barnett et al., 2016). In this regard, a limited number of studies have specifically examined how consumers’ pre-existing predispositions toward a brand’s country-of-origin may influence their attributions of blame in ambiguous food crises (Laufer, Gillespie, & Silvera, 2009; Xu, Leung, & Yan, 2013). These studies have investigated how brands associated with a negative (positive) country image receive harsher (more favorable) evaluations in case of product failure.

Our study attempts to extend this research by (i) analyzing the psychological mechanisms through which consumers form judgments of blame – and subsequent behavioral outcomes – toward brands involved in food safety scandals, (ii) assessing whether consumers’ cognitive and affective predispositions toward a company’s country-of-origin (i.e., perceived competence and perceived warmth) influence the psychological mechanism of blame attribution, and (iii) exploring boundary conditions under which these mechanisms occur. More specifically, drawing from the stereotype content model (Fiske, Cuddy, Glick, & Xu, 2002) and the attribution theory (Folkes, 1984; Weiner, 2000), we analyze how perceived country competence (i.e., consumers’ perceptions of a country’s efficacy and efficiency) and perceived country warmth (i.e., consumers’ perceptions about a country being friendly, cooperative and well-intentioned) influence consumers’ perceptions of the locus, stability, and controllability of the food incident, consumers’ overall attribution of blame and, ultimately purchase intentions toward the faulty brand. Additionally, we explore how this mechanism is moderated by consumer characteristics such as consumer perceptions of the severity of the food incident and consumer ethnocentrism.

To this end, we present the results of an experimental study conducted in Italy, investigating consumer responses to brands – with different, manipulated countries-of-origin – involved in the 2013 horsemeat adulteration scandal, a real, well known product-harm crisis that has spread to thirteen European countries and has impacted several international leading companies (The Guardian, 2013a). Foods advertised as containing beef were found to contain undeclared horsemeat (BBC, 2013; The Guardian, 2013a). In addition to religious and ethical issues (horsemeat is considered a taboo food in many countries), the scandal revealed potential food safety concerns because of a major breakdown in the traceability of the meat supply chain and, therefore, some risk that sports horses could have entered the meat supply

chain, and with them harmful ingredients which are banned in food animals (BBC, 2013; Euractiv, 2013; The Times, 2013).

This study provides scholars and brand managers operating in the food industry with answers to relevant questions such as “How do consumers form attributions of blame toward brands involved in a food scandal?”, “Do consumers’ prejudicial views about a brand’s country-of-origin competence and warmth affect their evaluations and behaviors toward the brand?”. Knowledge gained from this study is essential for academics because it sheds light on the psychological mechanism through which consumers consider a brand blameworthy for a food incident. These insights are also essential for brand managers operating in the food industry because it informs on specific brand’s attributes (i.e., brand’s origin dimensions of competence and warmth) that can be leveraged to build more effective post-crisis communication strategies, and obtain more favorable consumer responses in the aftermath of a food scandal (Coombs, 2007; Laufer, Gillespie, & Silvera, 2009; Xu, Leung, & Yan, 2013).

The rest of the paper is organized as follows. We first review the literature and develop our research hypotheses. We then outline the research methodology. Next, the research results are described and discussed. Finally, theoretical and practical contributions of the research are presented, and conclusions are drawn.

2. Background

2.1 Consumer responses to food crises and attributions of blame

In this section, we present theoretical work on how consumers judge brands involved in food crises (Bánáti, 2011; Barnett et al., 2016; Berg, 2004; Yamoah & Yawson, 2014).

Consumers’ evaluations of brands involved in a food crisis are based on attributions of blame

(Folkes, 1984), that is, the process through which consumers spontaneously construct attributions of responsibility to harmful brands (Gupta, 2009; Regan et al., 2015). Weiner's (2000) model is widely used to analyze consumers' reactions in product-harm crisis settings (for a review, see Weiner, 2010). Weiner's model conceptualizes three causal dimensions of attribution that lead to an overall judgment of blame: the (i) locus, (ii) stability, and (iii) controllability of the harmful behavior (Lei, Dawar, Gürhan-Canli, 2012). *Locus* refers to the extent to which consumers perceive that the brand (i.e., internal locus), rather than other parties (such as suppliers, trade associations, organizations, government regulators – i.e., external locus), is the direct source of the food crisis. When the undesirable act is perceived as being caused directly by the brand, consumers are more likely to blame the company, with the opposite being the case when consumers consider the undesirable action to be associated with an external actor (Gupta, 2009). *Stability* refers to the extent to which consumers perceive the cause of the negative event to be temporary or permanent, that is, whether consumers perceive the negative event to be ascribed to a stable cause. When consumers perceive that the brand's involvement in the food crisis is an isolated event, they are less likely to blame the brand, with the opposite being the case when consumers perceive that the brand is recurrently involved in a series of irresponsible behaviors (Klein & Dawar, 2004). *Controllability* points to consumers' evaluations of the undesirable outcome as attributed to causes that the brand can or cannot control (Weiner, 2010). When consumers perceive that the company could have predicted the incident, they tend to assess more blame to the brand, with the opposite being the case when consumers perceive that the food incident is unpredictable and uncontrollable. Hence, the more consumers perceive the locus of a food crisis to be internal and the company's behavior to be stable and controllable, the more they tend to attribute responsibility to the agent company and blame it for the food scandal (Figure 1).

In addition, the theory of cognitive consistency (Abelson, 1968) posits that individuals seek to maintain congruity between thoughts and actions. Empirical findings offer compelling evidence that consumers' overall judgment of blame affects their consumption behaviors. When individuals perceive that a brand is blameworthy, they are less likely to purchase the faulty brand in the near future (Klein & Dawar, 2004; Laufer, Silvera, & Meyer, 2005). Hence, consumers' judgments about whether the company is culpable affect their willingness to purchase the products of the company in the future (Figure 1).

2.2 The roles of a brand's country-of-origin

Previous research posits that consumers' judgments about the culpability of a brand involved in a product-harm crisis are also influenced by their pre-existing beliefs about the brand (Laufer & Gillespie, 2004). This section analyzes how consumers' cognitive and affective predispositions toward a brand's country-of-origin influence their evaluations of and responses to the company when it is involved in a food scandal (Laufer, Gillespie, & Silvera, 2009; Xu, Leung, & Yan, 2013).

In accordance with Verlegh and Steenkamp (1999), country-of-origin is a mental network of cognitive and affective associations connected to a specific country. Hence, consumer predispositions toward the country-of-origin of a brand include both cognitive and affective dimensions (Bennett & Hill, 2012). This perspective is grounded in social psychology theories such as Fiske, Cuddy, Glick and Xu's (2002) stereotype content model, which maintains that consumers' attitudes about a nation are based on two dimensions: perceived competence and perceived warmth. Competence refers to consumers' perceptions of a country's efficacy and efficiency, originating from its degree of modernity, innovativeness, technology sophistication, and economic development; thus, it represents the cognitive component of consumers' attitudes toward a nation. Warmth captures perceptions about a

particular country in terms of whether it is considered friendly, cooperative and well-intentioned; thus, it represents the more affective dimension (Xu, Leung, & Yan, 2013).

Previous research has demonstrated that a brand's country-of-origin has a stereotyping effect, that is, an influence or bias resulting from the country-of-origin (Roth & Diamantopoulos, 2009). The more consumers hold positive predispositions toward a country, the more positively they evaluate the country's products (brands) and the more likely they are to purchase the country's products (brands) (Laroche, Papadopoulos, Heslop, & Murali, 2005; Verlegh, Steenkamp, & Meulenberg, 2005). Empirical research on food consumption has indeed shown that positive country-of-origin images influence consumers' purchase of meat (Bernués, Olaizola, & Corcoran, 2003; Furnols *et al.*, 2011; Schnettler, Ruiz, Sepúlveda, & Sepúlveda, 2008; Verbeke & Ward, 2006), olive oil (Dekhili, Sirieix, & Cohen, 2011), and fruit and beer (Profeta, Balling, & Roosen, 2012; Yeh, Chen, & Sher, 2010).

With respect to the country-of-origin dimensions of competence and warmth, Heslop and Papadopoulos (1993) posit that the companies with the best evaluations are those that come “from countries whose industrial prowess we respect [a trait clearly akin to competence] and whose people we like and admire [a trait clearly akin to warmth]” (p. 67), thus emphasizing that both the cognitive dimension and the affective dimension of country-of-origin correlate with consumers' evaluations and purchasing behaviors (Herz & Diamantopoulos, 2013).

In addition to the effects of country-of-origin on food evaluations and consumption behaviors in ordinary consumption settings, consumers' evaluations of a company's country-of-origin – and, specifically, of a country's competence and warmth – may also have an influence on their responses in extraordinary, negative consumption settings such as food scandals. According to the “discounting principle” (Kelley, 1972), which maintains that individuals discount or minimize their attribution of blame to an actor according to their pre-existing beliefs about that actor, there might be a bias in favor of a brand that is associated

with a favorable country-of-origin and, specifically, to a country that elicits favorable images of competence and warmth. Previous research – albeit limited – has provided early evidence in this regard. Laufer, Gillespie, and Silvera (2009) examine how country-of-origin impacts observers' assessment of blame in a food scandal when information is unclear as to a firm's culpability for the crisis, and find that a negative country-of-origin increases blame attributions to the company in biasing consumers' evaluations of a brand's harm-doing. In addition, Xu, Leung, and Yan (2013) examine how stereotypes of a country's competence and warmth impact observers' assessment of overall blame in food crisis and find that positive (negative) national stereotypes of perceived competence and perceived warmth lead to brands associated with the evaluated country to be positively (negatively) evaluated in the case of brand failure.

However, none of the previous studies have investigated the influence of a brand's country-of-origin competence and warmth on the causal variables of attribution of blame (locus, stability and controllability) and subsequent evaluative (overall judgment of blame) and behavioral outcomes (brand purchase intention) in a food crisis setting. The current paper addresses this issue. Combining attribution theory (Folkes, 1984; Weiner, 2000), country-of-origin and national stereotypes frameworks (Fiske, Cuddy, Glick, & Xu, 2002), this paper posits that consumers' perceptions of a company's country-of-origin, and specifically of a company country's competence and warmth, affect the causal dimensions of blame attributions (locus, stability and controllability) and the consumers' overall judgment of blame toward a company involved in a food scandal. Furthermore, based on the aforementioned theory of cognitive consistency (Abelson, 1968) this paper posits that consumers' overall judgment of blame affects their consumption behaviors such as consumers' intention to purchase the faulty brand in the near future. Hence, we hypothesize that (Figure 1):

H₁: A brand's country-of-origin competence and warmth affect consumers' perceptions of the locus as internal (H_{1a} and H_{1b}), the stability (H_{1c} and H_{1d}), and the controllability (H_{1e} and H_{1f}) of the food incident.

H₂: The three dimensions of the attribution process (locus, stability, and controllability) mediate the relationship between a brand's country-of-origin competence (H_{2a}) and warmth (H_{2b}) and consumers' general attribution concerning a brand's blame for the food crisis.

H₃: Blame affects consumers' intention to purchase the faulty brand in the near future.

2.3 The moderating effects of perceived severity of the food scandal and consumer ethnocentrism

Consumers' evaluations of a brand's country-of-origin, and of its influence on the process of blame attribution, may vary across different consumer segments. This section addresses whether, and to what extent, the hypothesized conceptual model (Figure 1), and specifically the relationships between a brand's country-of-origin competence and warmth and the variables of causal attribution, might be moderated by consumers' characteristics such as perceived severity of the food scandal and ethnocentrism.

Consumer perceptions of the severity of the food scandal can be defined as the degree of physical harm (e.g., potential illness, injury, or death) and financial loss that consumers associate with the food incident (Laufer, Silvera, & Meyer, 2005). Based on the defensive attribution hypothesis, Laufer, Gillespie, McBride, and Gonzalez (2005) posit that the more consumers perceive the crisis as severe, the more blame they assess to a firm, regardless of a brand's nationality. Similarly, based on dual-process theories of thinking, Gao, Knight, Zhang, and Mather (2013) maintain that the more perceptions of crisis severity increase, the lower the activation of automatic, heuristic, and stereotype based information processing

systems (i.e., experiential system) is. This supports the notion of consumers placing less importance to a company's country-of-origin when the severity of the food scandal increases.

Finally, consumer ethnocentrism is defined as the beliefs held by consumers about the appropriateness, indeed morality, of purchasing foreign made products (Shimp & Sharma, 1987). Jiménez and San Martín (2010) found that country-of-origin cues have a larger effect on foreign products evaluations for highly ethnocentric consumers. These individuals pay more attention to a brand's country-of-origin because they perceive the purchase of imported products as socially undesirable and unpatriotic (Balabanis, Mueller, & Melewar, 2002). This supports the notion of highly ethnocentric consumers placing more importance to a company's country-of-origin also in the case of a company involved in food scandals (Schnettler, Miranda, Lobos, Sepulveda, & Denegri, 2011; Verlegh, 2007).

Based on the literature reviewed above, we hypothesize that:

H₄: The effect of a brand's country-of-origin competence and warmth is weaker for highly severe than for lowly severe food scandals (H_{4a}), and for low ethnocentric than for high ethnocentric consumers (H_{4b}).

(Figure 1)

3. Methods and materials

3.1 Research design

A brand's country of origin was manipulated by creating a 2 (competence: high vs. low) X 2 (warmth: high vs. low) between-subjects experimental design. Ireland (high competence,

high warmth condition), Spain (low competence, high warmth condition), Germany (high competence, low warmth condition), and Romania (low competence, low warmth condition) were chosen based on the results of a pre-test in a sample of 92 Italian consumers (gender: 56.5% women; age: 48% 18-25 years old, 30% 26-45 years old, 22% over 46 years old; education: 12% junior high school; 48% high school diploma; 40% bachelor or master's degree). Perceived competence was measured by using Aaker, Vohs, and Mogilner's (2010) three-item, 5-point Likert scale (1=totally disagree, 5=totally agree). Perceived warmth was measured by adapting Fiske, Cuddy, Glick, and Xu's (2002) three item, 5-point Likert scale (1=totally disagree, 5=totally agree) (Table 1a and Table 1b). The ANOVA results indicate Ireland (M=4.25, SD=.88) and Germany (M=4.28, SD=1.12) as significantly ($p<.001$) more competent than Spain (M=2.93, SD=1.18) and Romania (M=2.69, SD=1.25). Furthermore, Ireland (M=3.76, SD=1.07) and Spain (M=3.85, SD=1.10) are perceived as significantly ($p<.001$) warmer than Germany (M=3.21, SD=1.13) and Romania (M=3.01, SD=1.30).

We developed a scenario in which respondents were told about a brand involved in a horsemeat adulteration scandal. As advocated by previous literature (Herz & Diamantopoulos, 2013), in order to preclude any connection to existing brands and to avoid confounding effects of brand awareness (Jiménez & San Martín, 2010), brand familiarity (Laufer, Gillespie, & Silvera, 2009), and brand trust (Chattalas, Kramer, & Takada, 2008), we used a fictitious brand (i.e., "BeefMeat"). We set this scandal in the four different countries selected in the pre-test. Hence, the scenario described the involvement of "BeefMeat", an Irish (Spanish/ German/ Romanian) food company, in the 2013 horsemeat adulteration scandal. Narratives of the full scenarios are reported in Appendix A.

3.2 Research instrument and participants

The main study involved a survey that was conducted with Italian adult consumers. Respondents were recruited via a market research agency and invited into the study via email. They were asked to complete an online, self-administered questionnaire. The questionnaire took approximately 15 minutes to complete. The questionnaire consisted of four sections. The first section explained the aim of the study and the guidelines for completing the questionnaire. The second section presented the horsemeat scandal scenario and the measurement scales for the model variables. Respondents were randomly assigned to one of the four experimental conditions. The last section included manipulation checks, controls and marker variables for the common method variance assessment, recorded socio-demographic data, and thanked the participants.

A total of 845 Italian consumers agreed to participate in the study (42% response rate) and 816 fully completed the questionnaire ($n_{\text{Ireland}}=233$; $n_{\text{Spain}}=208$; $n_{\text{Germany}}=202$; $n_{\text{Romania}}=173$). Table 2 reports the socio-demographic composition of the samples. A chi-square test detected no significant socio-demographic differences at $p < .05$ between consumers responding to the four scenarios.

(Table 2)

3.3 Measurement scales

The model constructs were measured using multiple item scales drawn from the extant literature (Table 1a). To measure internal causal locus, respondents were asked to rate the likelihood of the brand being the direct source of the scandal on seven-point Likert scale (1=not at all likely, 7= very likely), based on Bergkvist and Rossiter's (2007) findings that single-item measures were equally predictively valid as multiple-item measures of concrete singular object. Klein and Dawar's (2004) four-item, 7-point Likert scale (1=not at all likely,

7=very likely) was used to measure stability. Klein and Dawar's (2004) three-item, 7-point Likert scale (1=not at all, 7=very much) was used to measure controllability. The overall evaluation of company blame was measured using Klein and Dawar's (2004) four-item, 7-point Likert scale (1=not at all, 7=very much). Grewal, Krishnan, Baker, and Borin's (1998) three-item, 7-point Likert scale (1=totally disagree, 7=totally agree) was used to measure consumers' intention to purchase the brand in the near future.

The manipulation checks were measured as to in pre-tests (Table 1b). A company's country-of-origin competence was measured by using Aaker, Vohs, and Mogilner's (2010) scale. A company's country-of-origin warmth was measured by adapting Fiske, Cuddy, Glick, and Xu's (2002) scale.

With respect to the moderators (Table 1b), consumers perception of the severity of the food safety scandal was measured by three-item, 7-point Likert scales (1=not at all, 7= very much), adapted from Lei, Dawar, and Lemmink's (2008) scale. Ethnocentrism was measured by a four-item, 7-point Likert scale (1=totally disagree, 7=totally agree) version of the CETSCALE (Shimp & Sharma, 1987), as employed by a number of previous studies (Batra, Ramaswamy, Alden, Steenkamp, & Ramachander, 2000). Finally, we included direct experience with the country as covariate control and we measured it by asking respondents the degree of their personal, direct, experience with the country (1=no, 2= Yes, I have visited [Country name] for a few days, 3= Yes, I have been in [Country name] for a long time) (Table 1b).

(Table 1a)

(Table 1b)

4. Statistical analysis and results

4.1 Manipulation checks

Confirming the results of the pre-tests, Ireland (M=3.90, SD=1.26) and Germany (M=4.09, SD=.93) are perceived as significantly ($p<.01$) more competent than Spain (M=2.55, SD=.9) and Romania (M=1.89, SD=.94). In addition, Ireland (M=3.82, SD=1.22) and Spain (M=3.93, SD=1.02) are perceived as significantly ($p<.01$) warmer than Germany (M=3.02, SD=.99) and Romania (M=1.92, SD=1.11). Finally, the food scandal described in the scenario is perceived as equally ($p>.10$) severe across the four experimental groups (Ireland: M=5.27, SD=1.68; Spain: M=5.42, SD=1.47; Germany: M=5.62, SD=1.48; Romania: M=5.62, SD=1.65).

4.2 Measurement assessment

Before testing our hypotheses, we ran confirmatory factor analysis (CFA) for our measures by use of LISREL 8.80 (Jöreskog & Sörbom, 2006). The results show that both global fit and local fit indices are adequate (Bagozzi & Yi, 1988). The model explains 84.73% of the total variance. RMSEA is lower than .08, NFI, NNFI, and CFI are all greater than .95 (Table 1a). All standardized item loadings significantly load onto their constructs ($p<.01$), and the factor loadings are greater than .60, ranging from .72 to .98. Cronbach's alphas for all constructs are greater than .70, ranging from .88 to .95 (Nunnally, 1994). Cronbach's alpha for the causal locus construct was not computed because causal locus was measured by a single item. The composite reliability is always greater than .60, ranging from .88 to .97. The average variance extracted (AVE) is always greater than .50, ranging from .65 to .97. Discriminant validity is confirmed, as the shared variance between pairs of factors is always less than the corresponding AVE (Fornell & Larcker, 1981). The bivariate correlations

between the components range from -.05 to .69 (Table 3). These findings combined show that the hypothesized measurement model is valid and reliable.

(Table 3)

4.3 Common method variance assessment

We followed Podsakoff, MacKenzie, Lee, and Podsakoff's (2003) procedures to control for evaluation apprehension and common method variance. Ex ante, to prevent evaluation apprehension, respondents were assured of the questionnaires being anonymous and that they should answer as honestly as possible. Ex post, we investigated common method variance statistically by applying the "marker variable" technique. All coefficients that are significant in a bivariate correlation analysis also remain statistically significant after we controlled for the marker variable ("I prefer brands endorsed by celebrities" – 7-point Likert scale). Therefore, we conclude that common method variance does not represent a threat in our data.

4.4 Results

The effect of a brand's country-of-origin competence and warmth on locus, stability and controllability (H_1), and the mediating role of locus, stability and controllability on the relationship between competence and warmth on the one hand, and blame on the other (H_2), was tested using the Baron and Kenny (1986) approach. First, the effects of competence and warmth and their interaction on locus, stability and controllability was tested. Then, the effects of competence and warmth on blame was tested, taking locus, stability and controllability into account as covariates. If, in this last test, the covariates have a significant effect on blame, and none of the effects of competence and warmth is significant, full

mediation occurs. If some of the effects of competence and warmth are still significant, there is partial mediation.

In addition, we also tested the moderating effects of two variables – perceived severity of the food scandal and ethnocentrism – on this mediation process (H_4), by adding them one by one to the model. Perceived severity and ethnocentrism are metric variables. Their moderating effect was tested by means of moderated regression analyses. Furthermore, in all models we controlled for consumer direct experience with the country by adding it as a covariate.

Finally, we tested the influence of blame on consumer intentions to purchase the faulty brand in the future (H_3) by means of correlation analysis.

4.4.1 The effects of a brand's country-of-origin competence and warmth on locus, stability and controllability, and consumers' attribution of blame

First, the effects of a brand's country-of-origin competence, warmth, and their interactions on locus, stability and controllability were tested. Results are reported in Table 4a. Results show that a brand's country-of-origin warmth has a main effect on locus ($F(1,811)=6.50$, $p=.01$), stability ($F(1,811)=10.39$, $p<.01$) and controllability ($F(1,811)=6.55$, $p=.01$). Consumers attribute higher internal locus ($M=5.69$), stability ($M=4.73$), and controllability ($M=4.59$) to brands associated with cold countries than to brands associated with warm countries-of-origin (locus: $M=5.28$; stability: $M=4.33$; controllability: $M=4.33$). With respect to controllability, besides the main effect of warmth, also country-of-origin competence has a significant main effect on this variable ($F(1,811)=6.42$, $p=<.01$). Companies associated with competent countries are perceived to have higher control over the food scandal ($M= 4.58$) than those associated with incompetent countries ($M=4.30$). Moreover, the main effects of competence and warmth on controllability are qualified by a significant interaction effect

($F(1,811)=6.79, p<.01$). A brand associated with a competent and cold country scores higher on controllability than the other three types of country-of-origins (Figure 2).

Finally, a model was tested with competence and warmth as independents, blame as the dependent, and locus, stability and controllability as covariates, next to country experience. Results are reported in Table 4b. Locus ($F(1,808)=438.41, p<.01$), stability ($F(1,808)=71.51, p<.01$), and controllability ($F(1,808)=21.57, p<.01$) all have a highly significant positive effect on blame, and also warmth has a significant effect on blame ($F(1,808)=6.22, p=.01$). Companies associated with cold countries are more blamed ($M=5.56$) than those associates with warm countries ($M=5.04$). Locus, stability and controllability partly mediate the effects of warmth and competence on blame.

Figure 2

(Table 4a)

(Table 4b)

Since previous research (albeit rather inconsistent – de Tavares Canto Guina, & de Moura Engracia Giraldi, 2015) investigated how age and gender impact consumers' evaluations of a brand's origin (Balabanis, Mueller, & Melewar, 2002; Bieberstein & Roosen, 2015; de Moura Engracia Giraldi, & Ikeda, 2009) and consumers' responses to product-harm crisis (Laufer and Gillespie, 2004; Laufer, Silvera, & Meyer, 2005; Silvera, Meyer, & Laufer, 2012), we also tested possible moderating effects of age and gender on the impact of country stereotypes on the process of blame attribution. Results reveal that neither age nor gender moderate the hypothesized relationships¹.

¹ Age does not moderate any of the effects of competence and warmth on locus (competence: $F(1,807)=.01, p=.95$; warmth: $F(1,807)=1.04, p=.31$), stability (competence: $F(1,807)=.06, p=.80$; warmth: $F(1,807)=.70,$

4.4.2 *The effects of a brand's country-of-origin competence and warmth on locus, stability and controllability, and the moderating effect of perceived severity of the food scandal*

Three regressions analyses were carried out with locus, stability and controllability as the dependents, and competence, warmth, severity and their two-way interactions, and country experience (covariate) as independents (Table 5a). Next, a regression analysis was carried out with blame as the dependent, competence, warmth, severity and their two-way interactions, and country experience, locus, stability and controllability as independents (Table 5b).

Results show that all four models are significant ($p < .01$). Severity has a significant main positive effect on locus ($b = .62, p < .01$), stability ($b = .26, p < .01$), and controllability ($b = .26, p < .01$) (Table 5a). The more severe the crisis is, the more consumers perceive the locus as internal and the brand's harmful behavior as stable and predictable. More importantly, severity moderates the effect of competence on locus ($b = -.09, p < .01$) and stability ($b = -.10, p < .01$), but not on controllability. The more severe a crisis is, the lower the internal locus and the stability of the food incident that consumers attribute to a company associated with a competent country. Country experience significantly affects locus ($b = -.08, p = .01$) and stability ($b = -.16, p < .01$) (Table 5a).

Table 5b shows the results of the second step of the mediation analysis. There is a significant main effect of perceived severity on blame ($b = .15, p < .01$). Locus ($b = .50$), stability ($b = .23$) and controllability ($b = .11$) influence blame significantly ($p < .01$). In addition, there is a significant moderating effect of perceived severity on the effect of warmth ($b = -.09, p < .01$).

$p = .40$), and controllability (competence: $F(1,807) = 3.01, p = .08$; warmth: $F(1,807) = .05, p = .82$). Furthermore, none of the effects of age is significant ($p > .05$) in moderating the impact of the attribution variables on consumer blame. Gender does not moderate any of the effects of competence and warmth on locus (competence: $F(1,807) = 1.33, p = .25$; warmth: $F(1,807) = .32, p = .57$), stability (competence: $F(1,807) = 1.46, p = .22$; warmth: $F(1,807) = .98, p = .32$), and controllability (competence: $F(1,807) = .45, p = .50$; warmth: $F(1,807) = 1.01, p = .31$). In addition, none of the effects of gender is significant ($p > .05$) in moderating the impact of the attribution variables on consumer blame.

Companies associated with cold countries are blamed less the more severe the crisis is.

Hence, locus, stability and controllability partly mediate the effects of warmth, competence and severity on blame.

(Table 5a)

(Table 5b)

4.4.3 The effects of a brand's country-of-origin competence and warmth on locus, stability and controllability, and the moderating effect of consumer ethnocentrism

Finally, we tested the moderating effect of consumer ethnocentrism, using the same procedure as for perceived severity of the food scandal. Ethnocentrism has a significant main effect on locus ($b=.126, p=.04$). The more consumers are ethnocentric, the higher the internal locus attributed to the company (Table 6a). More importantly, ethnocentrism moderates the effect of competence on locus ($b=-.13, p=.01$) and stability ($b=-.17, p<.01$). The more ethnocentric people are, the less they perceive the locus as internal and the food incident as stable if the company is associated with a competent country. Again, competent but cold countries score higher in controllability than other types of countries ($b=.15, p=.01$), but this interaction effect is not moderated by ethnocentrism. Country experience significantly affects locus ($b=-.13, p<.01$) and stability ($b=-.17, p<.01$).

Finally, Table 6b shows the results of the second step of the mediation analysis. Locus ($b=.56$), stability ($b=.23$) and controllability ($b=.12$) influence blame significantly ($p<.01$). No other significant effects occur. Hence, locus, stability and controllability fully mediate the effects of warmth, competence and ethnocentrism on blame.

(Table 6a)

(Table 6b)

4.4.4 Summary of main findings

A brand's country-of-origin warmth diminishes consumer perceptions of internal locus, stability and controllability of the food incident. Contrary to our hypothesis, a company's country-of-origin competence increases consumer perceptions of the controllability of the company's harmful behavior. A significant interaction effect between competence and warmth also indicates that consumers attribute the highest controllability of the food incident to companies associated with competent but cold countries. Hence, H_{1b}, H_{1d}, H_{1e} and H_{1f} are confirmed, while H_{1a} and H_{1c} are not.

The three variables of attribution mediate the relationship between country-of-origin competence and warmth, on the one hand, and blame, on the other hand. Additionally, brands associated with cold country-of-origins are blamed more than companies associated to warm countries. H₂ is confirmed.

Blame significantly affects consumer intention to purchase the faulty brand in the near future ($b = -.46, p < .01$). Hence, H₃ is confirmed.

Both perceived severity of the food scandal and consumer ethnocentrism moderate the effect of competence on locus and stability. A company's country-of-origin competence diminishes consumer perceptions of the internal locus and the stability of the food incident when the crisis is perceived as highly severe or consumers are highly ethnocentric. Hence, H_{4a} and H_{4b} are partly confirmed.

5. General discussion

5.1 Discussion of results

The current study assesses the impact of the cognitive and affective dimensions of a brand's country-of-origin on the causal dimensions of blame attribution, the overall judgment of blame, and the purchase intention toward a brand involved in a food scandal such as the 2013 horsemeat adulteration incident. The results show that both the cognitive dimension and the affective dimension of a brand's country-of-origin influence consumers' assessment of a brands' culpability. A brand's country-of-origin stereotypes influence consumers' evaluations and consumption behaviors not only in ordinary consumption contexts, as widely found in previous literature (Bennet & Hill, 2012), but they also play a pivotal role in affecting consumers' evaluations and behaviors in extraordinary, critical consumption settings such as food scandals (Laufer, Gillespie, & Silvera, 2009).

Furthermore, and most importantly, our results reveal different psychological mechanisms through which perceived competence and perceived warmth affect consumers' attributions of blame toward the faulty brand via the mediating role of locus, stability and controllability. A brand's country-of-origin warmth diminishes consumer perceptions of the internal locus, the stability and the controllability of the food incident. When consumers identify the brand's origin with a warm country, they tend to perceive the locus as more external, and the food incident as a more occasional, unpredictable occurrence in the brand's life. Thus, they tend to blame the brand to a lesser extent. These results are consistent with Xu, Leung, and Yan's (2013) findings maintaining that the often ignored affective dimension of the origin country is even more important than the well-studied cognitive dimension in influencing consumers' evaluations and behavioral responses in critical, uncommon consumption settings such as food scandals.

A brand's country-of-origin competence represents a remarkable driver of blame attribution. Contrary to our hypothesis, perceived competence increases consumers'

perceptions of the controllability of the food incident, which in turn enhances consumers' judgments of blame toward the faulty brand. The more consumers identify the brand's origin with a competent country, the more they believe the brand could have predicted and controlled the food safety incident. Consumers may believe that brands from (and operating in) competent countries (i.e., countries with a high degree of modernity, innovativeness, technology sophistication and economic development) should have taken advantage of such a background to predict and control the food incident, but they did not. Thus, they blame the brand for the food scandal to a greater extent. Interaction effects also reveal that the highest scores of controllability occur when consumers identify the brand's origin with a competent and cold country. These results corroborate the findings of the stereotype content model literature (Fiske, Cuddy, Glick, & Xu, 2002). Countries associated with national stereotypes of high competence and low warmth (e.g., Germany) may raise emotions of envy which in turn lead consumers to highly severe evaluations of a company associated with those countries (Bennett & Hill, 2012).

In more severe scandals, perceived competence diminishes consumers' perceptions of the internal locus and the stability of the food incident. Under these conditions, consumers rely more on the positive stereotype of competence, while the effect of perceived warmth becomes not significant. Similar results are found for highly ethnocentric consumers. These findings enrich Laufer, Gillespie, McBride, and Gonzalez's (2005) results. While the authors have found that perceived severity enhances consumers judgments of blame regardless of a firm's country-of-origin, our results show that, as the crisis severity increases, the degree of a company's country-of-origin competence matters, because it diminishes consumers perceptions of controllability of the negative event.

Based on these results, food brand managers may consider relying on country-of-origin stereotypes to influence consumers attribution of blame in the aftermath of a food scandal

(Coombs, 2007). First, they may assess whether their target group associates the brand with specific country-of-origin stereotypes of competence and/or warmth (implied country-of-origin – Balabanis & Diamantopoulos, 2008). For instance, with respect to the 2013 horsemeat adulteration, Findus, Buitoni and Ikea food brand managers may explore which national stereotypes consumers associate with these brands. This preliminary information is essential to understand whether, and how, they may rely on the cognitive and the affective dimensions of country-of-origin to partially influence the different drivers of blame attribution (i.e., locus, stability, and controllability).

Next, if brands are associated with warm countries, food brand managers may consider emphasizing the friendly, cooperative and well-intentioned nature of the country in the contents of advertising claims and in post-crisis communication. Emphasizing the warmth dimension of a brand's country-of-origin may induce consumers to perceive the locus of the scandal as more external, and the food scandal as an isolated, unpredictable event. For instance, Giovanni Rana's 2013 advertising claims go in this direction. After the 2013 horsemeat adulteration, the brand, which has a strong implied Italian country-of-origin, has emphasized the friendly, warm and cooperative nature of its Italian employees, who prepare Italian meat sauces as if they were at home (e.g., <https://www.youtube.com/watch?v=e0JCs1EhvE4>). Buitoni and Star's beef lasagne 2013-2015 advertising campaigns go in a similar direction (e.g., <https://www.facebook.com/BuitoniUSA/videos/vb.172301906129743/10151750587709425/?type=2&theater>).

Furthermore, when the food scandal is highly severe (e.g., Sanlu's melamine-contaminated baby formula – BBC, 2008) or the brand is sold in highly ethnocentric countries, our results suggest emphasizing the degree of modernity, innovativeness and technology sophistication of the brand's origin and explaining how the company has taken

advantage of this context to achieve excellent food safety standards. Under these conditions, relying on the cognitive dimension of a company's country-of-origin in post-crisis communication may lead consumers to relieve the company of responsibility, and perceive the food scandal as an isolated event.

Finally, companies associated with incompetent and cold countries, should consider downplaying the brand origin information in advertising and emphasizing other brand attributes. Otherwise, long before any scandal, they may develop allies with brands that their target groups associate with warm (or competent and warm) country-of-origin stereotypes, in order to take advantage of the allied brand's country image (Aaker, Vohs, & Mogilner, 2010).

5.2 Contribution and guidelines for future research

Together, these results offer relevant contributions that advance theoretical and empirical knowledge in the field of product-harm crisis, country-of-origin, and national stereotypes. With respect to the product-harm crisis literature and its empirical contextualization in the food industry, this article investigates how consumers construct attributions of responsibility in the aftermath of a food adulteration incident. The understanding of the extent to which consumers blame the company for the food scandal is crucial because blame affects consumers' attitudes and purchase intentions toward the faulty food brand (Hussain & Dawson, 2013).

Furthermore, and most importantly, this study investigates how consumers form attributions of blame for the food scandal. This paper goes beyond the analysis of the overall judgment of blame and investigates how consumers form their overall evaluations of culpability through analyzing the mediating role of Weiner's (2000) causal variables of attribution: locus, stability and controllability. It reinforces the centrality of blaming as a response to critical events in the food industry and advances the understanding of the

psychological mechanisms through which consumers form attribution of blame of a brand involved in a food safety crisis (Melnyk, Klein, & Völckner, 2012).

With respect to the country-of-origin and national stereotypes literature, our study offers several relevant contributions. First, previous research has focused on assessing country-of-origin effects in ordinary consumption contexts (Bernués, Olaizola, & Corcoran, 2003; Dekhili, Sirieix, & Cohen, 2011; Furnols *et al.*, 2011), while recent research calls for more investigations of country-of-origin effects in new empirical contexts (Samiee, 2011). This study addresses this issue by investigating the effects of a brand's country-of-origin on consumers' evaluations of blame and consequent behavioral outcomes in an extraordinary, critical consumption setting such as the horsemeat adulteration incident. Studying the importance of country-of-origin in an extraordinary, critical setting presents a relatively new context in which country-of-origin has renewed salience.

Second, and most importantly, existing research on country-of-origin has frequently examined country competence characteristics to the detriment of perceived warmth (Profeta, Balling, & Roosen, 2012). The current study also includes the affective dimension of consumer predisposition toward a nation, thus considering both perceived competence and perceived warmth as important factors in shaping consumers' responses to a brand crisis. Xu, Leung, and Yan's (2013) work represents a notable contribution that advances the country-of-origin literature in this direction. However, the authors investigate the impact of perceived competence and perceived warmth on consumers' overall judgment of blame but not on consumers' perceptions of the locus, stability, and controllability of the harmful behavior.

Finally, none of the previous studies have explored the interactions between a company's country-of-origin cognitive and affective dimensions, consumers attribution of blame, and consumer characteristics. This study addresses this shortfall by testing whether, and to what extent, consumer characteristics such as age, gender, consumer ethnocentrism and the

perceived severity of the food scandal, enhance or weaken the influence of perceived competence and perceived warmth on the causal variables of attribution, and subsequent evaluative outcomes.

Based on these considerations, to the best of our knowledge, the current study is the first to use attribution theory to analyze the differential impact of distinct dimensions of country-of-origin (i.e., perceived competence and perceived warmth) on the causal variables of attribution (i.e., locus, stability, and controllability), consumers' overall judgment of blame, and consumers' consequent purchasing behaviors in the context of food safety scandals, across different consumer segments.

Despite these contributions, this paper has limitations that offer opportunities for future research. First, this work addresses a specific food crisis case, that is, the 2013 European horsemeat scandal. Additional research is invited to apply the conceptual model developed in this study to other food crises that may vary in terms of (i) the level of consumer involvement with the food product (i.e., high versus low involvement with food products), and (ii) the type of buying motivation (i.e., hedonic versus utilitarian food products). These variables may moderate the causal relationships hypothesized in this study (Gürhan-Canli & Maheswaran, 2000).

Second, this study focuses purposively on how consumers' prejudicial views of a brand's origin may influence consumer evaluations and behavioral responses toward a brand involved in a food scandal. To this end, we used an experimental design, and a fictitious brand to preclude any connection to existing brands and to avoid confounding effects of brand awareness, brand familiarity, and brand trust (Herz & Diamantopoulos, 2013). Additional research is invited to adopt a more holistic approach in order to explore the complex relationships between consumer perceptions of national stereotypes, (real) brands'

misconducts, the role of governments and government regulations (Gao, Knight, Zhang, & Mather, 2013).

Third, the sample involved in this study is purposive and is not statistically representative of the whole Italian population. When it is compared to the national census (ISTAT, 2011), the sample shows an over-presence of young respondents (18-44 years old=84% as compared with 42% in the Italian census), which is possibly due to the use of online surveys adopted to collect the data. This imbalance – despite the rather large sample size (n=816) – may potentially affect the results of the non-significant moderating effect of age. Additional research is invited to adopt statistical samples which are more representative of the Italian population's characteristics.

Finally, previous research has found that cultural dimensions (Finucane & Holup, 2005; Gürhan-Canli & Maheswaran, 2000) may influence consumers' evaluations of country-of-origin and risky events and, therefore, consumption decision regarding the brands triggering the food crisis. Future research is invited to include these variables to assess whether they moderate the hypothesized mechanisms.

6. Conclusions

A deep understanding of how consumers perceive and respond to food crises and what variables may influence the psychological process of blame attribution is of pivotal importance for scholars and practitioners. The present study offers a relevant contribution toward reaching this goal. It analyzes how – and under which conditions – national stereotypes of perceived competence and perceived warmth influence the psychological

mechanisms through which consumers evaluate and react to brands involved in a well-known food incident such as the 2013 European horsemeat scandal.

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