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Original research paper

DO FOOD RECALLS HAVE A GREATER EFFECT ON CONSUMERS' TRUST WHEN THEY INVOLVE HEALTHY, ORGANIC AND PROTECTED DESIGNATION OF ORIGIN FOODS AND, IF YES, WHY?

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ABSTRACT: Food safety concern has dramatically increased in the past decade. Concerns have arisen due to the fact that contaminated food products can result in serious risk to the wellbeing and health of consumers, including but not limited to outbreaks of Listeria monocytogenes, Escherichia coli (E. coli), and Salmonella. It is commonly accepted that product recalls have a negative impact on brand confidence, sales and pricing and, in some cases, the public's perception of the food industry as a whole. Current consumer expectation towards food safety is on the increase and ranges from the assumption that food not only needs to be safe, but that nutrition shall also contribute actively to improve physical health condition and well-being. The aim of this paper is to investigate consumers' reactions to food recalls which involve different kinds of products, through a comparison of highly processed foods versus foods that claim to be "healthier" in nature (eg. health foods, organic products and protected designation of origin). It will focus on the loss in confidence of brand loyalty and market distrust. The study combines case history analysis with insights drawn from 270 Italians, framing a profile of consumers' expectation and reaction to food scandals. Research was conducted using an online questionnaire, in June 2018. It is evidenced that consumers are more tolerant when recalls involve heavily processed foods but tend to react more firmly when they involve foods and brands claiming to be "healthy" or organic products and protected designations of origins. Nowadays more than ever, consumer's trust is as much a function of sharing company values and having brand affinity. Our conclusion is that foods that share specific set of values with consumers, such as ethics, quality and health, result in a higher degree of brand loyalty. This can easily be a double-edged sword which can result in a far stronger disapproval when the brand fails to keep their promise of health and quality.

Key words: *food recall, reputation, impact, organic food, healthy food*

INTRODUCTION

There is a growing concern among consumers on healthy and safety issues on foods. On one hand, we are witnessing an increasing demand for the so-called health promoting foods, quality foods, super foods and protected designations of origin. Consumers seek nourishing solutions able to help them maintain a good health status and are truly convinced that food can have a positive impact on physical, mental, emotional and spiritual wellbeing. On the other hand, product recalls are likely to increase their frequency in the future for many reasons such as the globalization of production, the increasing complexity of product formulas, and the closer monitoring by both firms and institutions (Berman, 1999; Chen, 2009). A recall is a compulsory procedure of recovering hazardous foods from consumers. Nowadays European legislations ensures a relatively straightforward recall strategy based upon RASFF (Rapid Alert System for Food and Feed), providing specific and effective tools to act in response to health threats in case a hazardous food product have been already hesitated for consumption. The overall graphic (Figure 1) represents the increase of food safety original notification alerts transmitted thought RAFFS over the last five years, resulting in an increase of more than 61% of the alerts implying serious health risk of food products circulated on European market, that rose from 527 in 2013 to 859 in 2017.

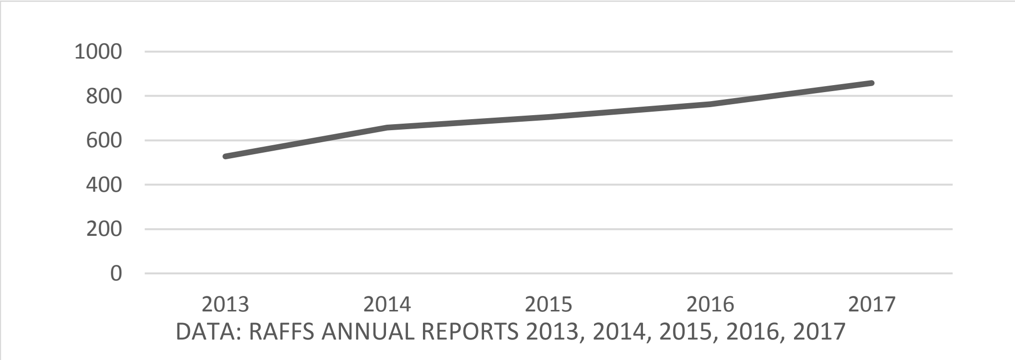

Figure 1. RAFFS food safety original notification alerts in the last five years 1st jan- 31 dec

No doubt that the RASFF notification Systems represents a key tool to warranty food safety and consumer's protection.

Product harm crises have been often defined "a firm's worst nightmare" (Van Heerde et al., 2007), and their impact on markets has been studied from many points of view, becoming a topic of considerable interest to economist, marketers, food technologist, sociologist and media experts. Previous literature has enlightened that recalls can have serious consequences on public health, cause consumers' panic, lead to very costly procedures and cause sell out, market-share and financial losses, together with trade bans and price fluctuations (Laufer and Coombs, 2006; Rhee and Haunschild, 2006; Siomkos and Kurzbard, 1994; Van Heerde, Helsen and Dekimpe, 2007; Chen et al., 2009). Moreover, recalls can ruin brand equity, spoil a company's reputation (Chen et al., 2009), severely affect consumer's loyalty, damage a firm image as well as the image of the food industry in general (Buzby, 2001; Verbeke, 2001). Some companies had experienced really severe consequences and in some cases the survival of the firm itself was at risk. Many elements can influence the extent of this impact such as the severity of the outbreak and the way the company manages the crisis. Some literature gives the evidence that the way a firm manages the recall affects its impact: companies able to respond quickly and efficiently (responding immediately to the first alarm, issuing speedy procedures, communicating extensively with media) might suffer less damages (Smith, Williams, et al. 2016; Chen et al., 2009). Proactive strategies can attenuate the effects of the crises or even turn it into the opportunity of enhancing the company ethic and positively influencing consumer's judgment and trust. Some studies indicate that a recall may either improve the company's image, if it adopts a socially responsible attitude and is consistent and coherent in its communication and transparent in its relationships with media and consumers (Mowen, 1980; Siomkos, 1989; Siomkos, 1999; Hammel, 2016; Magno, 2010; Magno, 2012). Nevertheless, the implications of recall-related managing strategies are ambiguous: studies based on event analysis (Chen,

2009) show that super-effort strategies may have negative repercussions on a firm value if the company involved is publicly traded in the stock market. This is probably because the stock market tends to interpreter proactive strategies as a signal of more severe hazard and great potential financial losses (Chen, 2009). Even the effect of food recalls on shareholder wealth has been investigated (Magno e cit) and associated to many different elements. Although it is commonly accepted that food harm crises have the potential to affect brand confidence, in many cases a recall effect on a company reputation and on consumer's trust is still unpredictable and theoretical and empirical evidence remain equivocal.

MATERIAL AND METHODS

Research was conducted using an online questionnaire in June 2018 in Italy. Access was open in a period when no recalls have been notified in Italy nor news about previous recalls appeared in the Italian mass-media. A link to the questionnaire, which was made available through the Internet, was sent to 450 panel members by email and telephone invitation. Panel was weighted to targets based on age, gender and residence area to mirror the total population. Total of 270 respondents filled out the survey within the timeframe of 3 days (at a response rate of 60%). A total number of 30 respondents that declared not to remember any recall over the past twelve months have been excluded some questions (Table 1).

Table 1. Respondents profile

Population by gender*			Respondant by gender		
Female		Male	Female		Male
52%		48%	52.8%		47.2%
Total population**			Total respondant		
Year 2017		60.483.973	June 2018		270
Population by residence**			Respondants by residence		
North	Centre	South and island	North	Centre	South and island
46%	20%	34%	64%	19%	17%
Respondant by age					
From 18 to 25			13.7%		
From 26 to 35			33%		
From 36 to 45			27%		
Over 46			26.6%		

*ISTAT data CENSUS 2012; ** ISTAT data, 2017

Questionnaire comprised 42 questions, including control questions, divided into three segments: the first part collects demographic data about the respondents and investigates on general buying motivation. We asked participants to indicate what level of importance they give to a set of characteristics when purchasing a food. Answers to this first set of questions (respondents 270 persons), are represented in the charts below (Figure 2), and allow us to better profile respondents to the next specific issues. The way consumers make food choices can be complex and very widely. In accord with previous cognitive studies (Zanoli and Naspetti, 2002), when studying general motivations for buying food products, European consumers consider many aspects:

taste and appearance, convenience and process often associated with health and well-being.

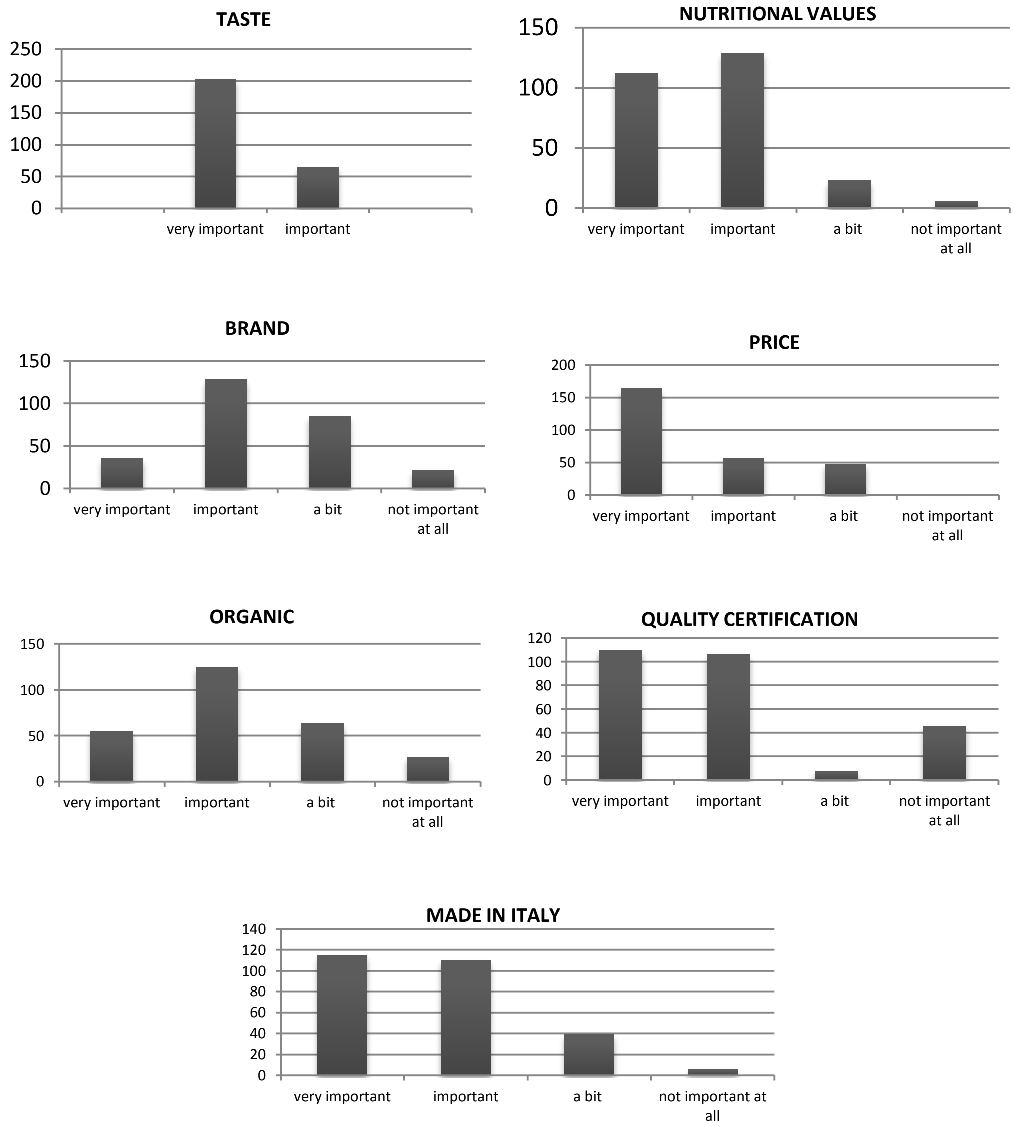

Figure 2. Importance given to a set of characteristics when purchasing a food

In Italy, as in many other Latin countries, above all the other elements the importance of the hedonic sensory motivations (represented by taste) is relevant. The second segment has been developed to test respondent's general interest on food safety and food recalls procedures, their general level of trust on food safety, memories of recent food recalls, main source of food safety information, and general effect of food recalls on buying decisions. The third section of the survey focused on consumers' expectation in term of safety for different food categories and consumer's judgement and concern in case of safety issues for the same categories.

RESULTS AND DISCUSSION

The results obtained are, in the opinion of the writer, of considerable interest and they provide a quite detailed picture of the subject. Knowledge of food safety basics is generally good. The majority of respondents know what a food recall is and can define correctly the aim of the procedure. The large majority of the survey participants are aware that recalls are due to potentially dangerous hazards to consumers' health. Only 19% of respondents do not associate recall procedures to a health risk, but to generic issues that is not necessarily hazardous to consumers' health. Also, attention to food safety events is quite high: only 11% of respondents said they did not remember any food recall episode happened during the last year. Among respondents who remember at least one food harm crises, information derives mainly from the Internet (50%) (Figure 3); safety news is also drawn from traditional media, official notification, retailers, friends and relatives. Results confirm previous literature (Lee et al., 2012) showing that the Internet is the most used source of food safety information. This question has been answered only by the 230 individuals that affirmed to remember at least one recall over the last year.

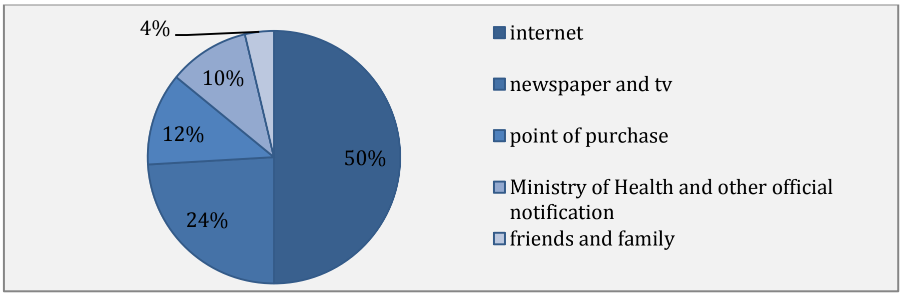

Figure 3. Main source of food safety information

Despite the general attention to the subject, safety is not a predominant concern for the majority of the participants: people are generally optimistic about the safety of food products and are confident that food products are controlled. The 13.7% of the respondents has a very high level of confidence in food safety and is convinced that the products on the market are pretty safe and controlled; the 63.7% has a good level of confidence in food safety.

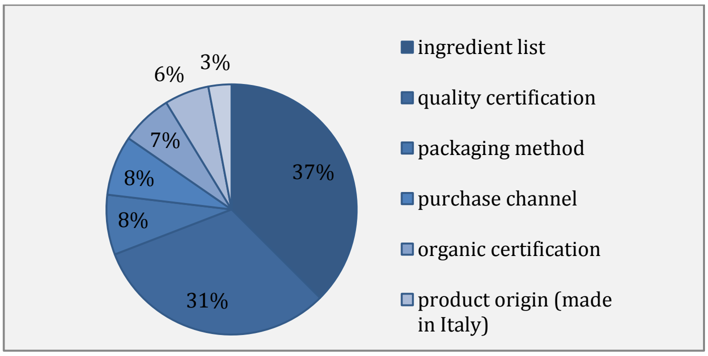

Figure 4. Factors positively influencing food safety

Only the 18.1% declares to have a low level of confidence in food safety (respondents in this group are persuaded that products are less sure than they appear) and the 4.5% declares to be generally unconfident regarding food safety issues. We investigated what are the main factors that in consumers' mind can affect positively food safety. The overall graphic represents the answers to the question "What do you think is the most important factor that influences food safety?" (Figure 4) In respondents' minds, safety is strictly linked to food composition: the 37.8% of respondents is convinced that food safety depends on the typology of ingredients included on food. But food safety is also linked to quality and to the presence of a quality certification, which is considered by 31% of respondents to be a guarantee of food safety. Presence of a quality certification seems to be more objective and appreciated by many. Packaging method, food purchase channel (supermarket, small independent stores etc.) and product origin are considered less important elements; only 3% of respondents considers brand credibility an element that can influence positively food safety. Compared to other elements, brand credibility seems not to be related to food safety. We then asked participants to indicate their general food safety perception, comparing tree groups of opposed food categories.

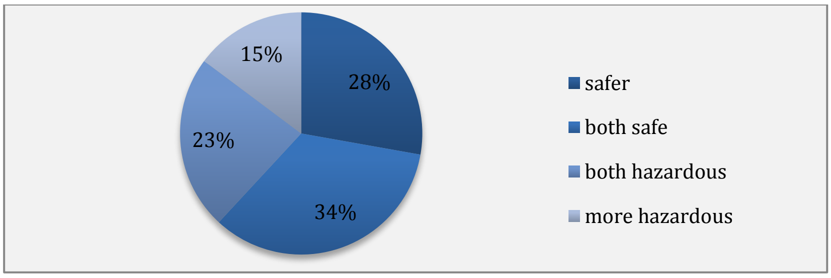

Figure 5. Industrial vs Artisanal food safety perception

Respondents' confidence safety of industrial processed food is quite high if compared to confidence in artisanal handmade foods. The 28% of participants perceive that industrial food is generally safer that artisanal and only the 15% believes that artisanal food is safer that industrial processed food (Figure 5).

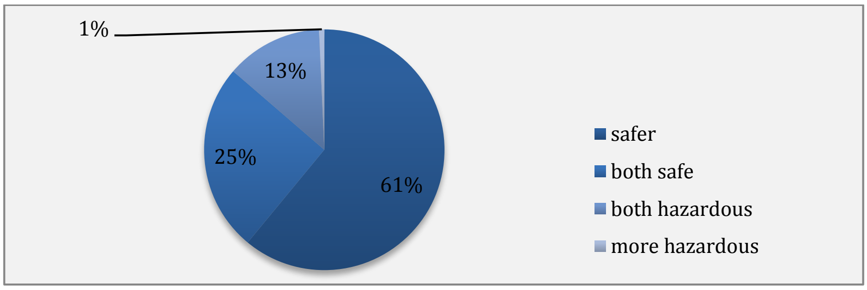

Figure 6. Made in Italy vs Imported food safety perception

The answers related to the perception of the safety of products made in Italy reflect the greater confidence in products of Italian origin (Figure 6): it is widely demonstrated country-of-origin affects globally brand trust and quality perception (Liefeld, 2004; Magnusson et al., 2011; Mattia, 2013; Rosenbloom et al., 2009; Roth et al., 1992). No surprise that the 61% of participants declared to consider made in Italy safer in comparison to foreigner food products: the “made in Italy” is known to be relevant not only among Italian consumers but worldwide and it often evokes attributes that positively characterize food quality facilitating the perception of safer and more controlled foods up to the point of being considered a brand itself (Temperini et al., 2016).

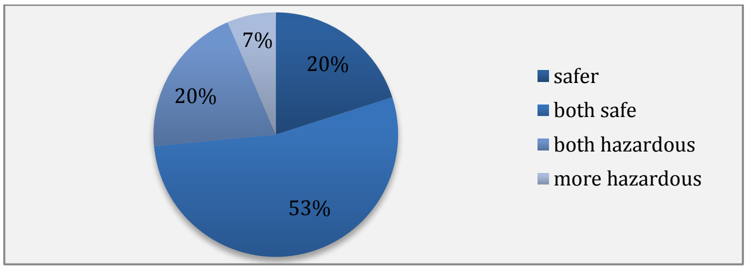

Figure 7. Supermarkets Bought vs small shops food safety perception

Apart from deciding what to buy, consumers choose the channel that better fits their skills and needs (Figure 7). We wanted to analyze if consumers channel choice is influenced by food safety perception and if they perceive big chains and small shops to be different in terms of food safety. A far less significant gap is seen in the perception of the safety of food products purchased in supermarkets, although it appears that respondents believe that safety of food is better in large chains are the 20%. The effects of food recalls on consumers behaviour can be distinguished as follows: temporary change in consumption patterns (reduction or elimination of the hazardous product and propensity to buy a substitute, till the crisis is over), permanent change (including reduction or elimination of similar products, because of the belief that the problem can be common to many others), no change in buying habits (Figure 8). The first effect is by far the most widespread among the participants (56%). 19% of respondents claim to have drastically changed their eating habits avoiding also other foods of the same category.

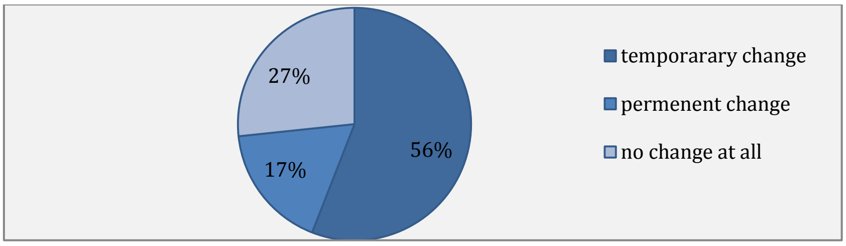

Figure 8. Food recalls effects on Purchasing habit

In the latter category of consumers, above all, 89% of the subjects who had declared to be generally unconfident in food safety belonged (4.5% of total respondents). Among those who claim to change permanently their eating habits as a consequence of food recall, avoiding also similar products to those subject to procedure, those who believe that safety is affected by the ingredient's category appear in a much higher percentage (68%) than in the average of respondents (38%). Moreover, 41% of them belong to the group that consider "organic" a determining element for their food choices (percentage over the total respondents is 21%). In most cases, the permanent effects seem to be associated to consumers that have a greater sensibility to organic products and generally concerned about food safety by default, that can be profiled as most propense towards 'healthy' consumption styles. In this context it is now worth mentioning the case of *E. coli* outbreak occurred in Europe in 2011. The event occurred due to the contamination of organic sprouted seeds as one of the most severe foodborne outbreaks in Europe that at least involved 15 countries and resulted in the loss of 53 lives and 857 cases of haemolytic uremic syndrome, which can lead to acute kidney failure (WHO, 2011). During the first two weeks of outbreak, losses for farmers in the fruit & vegetable sector were estimated at least 812 Million (Mio) € (source: Copa-Cogeca). In addition, a temporary export ban of vegetables to Russia occurred, constituting an annual value of 600 Mio €. The outbreak changed the eating habits of the majority of the population (DG SANCO, 2011), and it had enormous economic consequences, particularly for farmers producing fresh salad ingredients. Consumers had massively refrain from buying these vegetables because of uncertainty on the source and recommendations not to consume these products raw (DG SANCO, 2011) and because of a general loss of trust in the non-animal origin products. The European Commission supported the sector with exceptional measures on market intervention for a total value of 227 Mio Euro. Previous literature, from a public health perspective, states that consumer concerns about the safety of particular food products might hamper a healthy food choice. For instance, perceived risks associated with the consumption of fresh fish might impose barriers to consumption, whereas fish is generally believed to be an important component of the human diet (Verbeke et al., 2005). At the other extreme, the 27% of participants argue that they have not changed their habits at all. These respondents are those who are usually stating that their buying habits are influenced mainly by taste. We finally asked to participants "How much confidence do you, generally, have in the safety of the following product groups?" We selected some of the food categories and foods: veggies, fresh seafood, fresh meat and poultry, bakery products, chips and snacks, frozen foods, eggs, food supplements, water and baby foods. Answers were given on a scale from 1 to 5, where 5 represent the highest level of confidence and 1 represents the lowest level of confidence. Then, we asked respondents to indicate their level of concern when the same categories are involved in a food recall. Answers were given on a scale from 1 to 5, where 5 represent the highest and 1 represents the lowest level of concern. Organic Foods have above all, the highest level of expected safety, together with baby foods and water. At those levels of confidence correspond the highest level of concern if the same categories are involved in recalls. On the other hand, to lower levels of confidence correspond the lower levels of concern with the exception of fish. In particular, it is evidenced that consumers are more tolerant when recalls involve imported foods, heavily processed industrial food or food supplements but tend to react more firmly when recalls involve foods and brands claiming to be "healthy" such as organic products, protected designations of origins (DOP and IGP), baby foods and water (Figure 9).

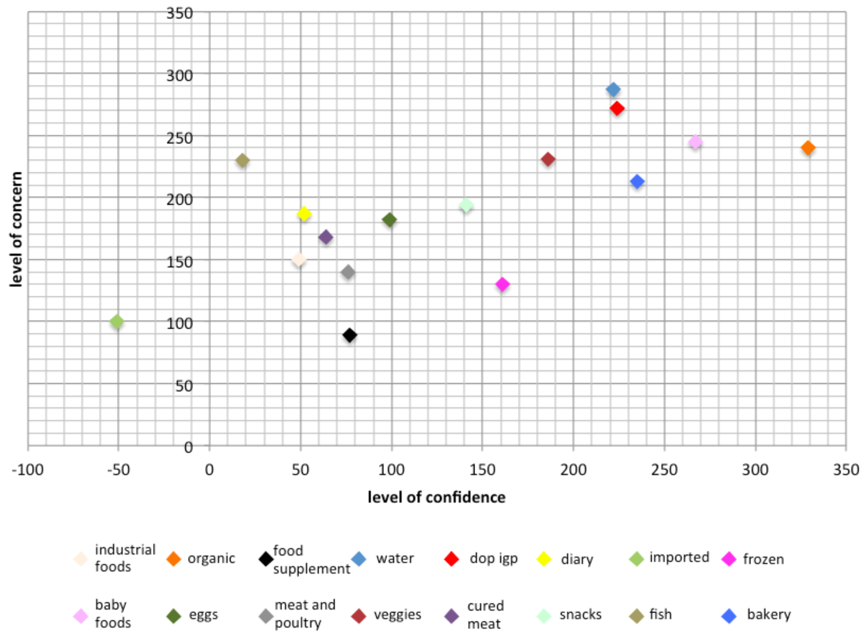

Figure 9. Food safety confidence and concern for different food categories

CONCLUSIONS

Food safety reputation (in terms of confidence and consumers' expectation) is strongly correlated with food category and its mainly related with ingredients and presence of a certification. Categories with a stronger safety reputation are typically those that own a certification (organic or designation of origin) because of the perception of high quality or those made by ingredients that are believed to be safer and essential to human nourishment such as flour, veggies and water. When high-reputation categories (e.g., organic, designation of origins, baby food, water) are involved in product recalls, their recalls may be perceived as a bigger aberration. Nowadays, consumer's confidence and trust in a category or an industry is as much a function of sharing values and expectations. Our conclusion is that foods that share with consumers specific set of values such as integrity, ethics, quality and health, result in a higher degree of confidence on safety. This can easily be a double-edged sword which can result in a far stronger disapproval and concern when the brand fails to keep their promise of health and quality. On the other hand, respondents seem to be less scared about the recalls involving imported food, heavily processed, diary or cured meat foods and, in the meantime, they expect these products to be more at risk. People expecting safer and healthier food feel threatened: trust is fragile. Once it is lost, it cannot easily be rebuilt. The results indicated that recall can have much more negative effect on the categories that are considered more trustworthy. The robustness of these results, and in turn any definitive conclusions, is subject to even further scrutiny across alternative model specification choices and more refined data about measuring food safety concerns which remain the topic of further investigation.

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