Managing product recalls: The effects of time, responsible vs. opportunistic recall management and blame on consumers’ attitudes

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Abstract

The number of defective, unsafe or dangerous products recalled from the market has been increasing markedly in the last few years, making product recalls recurring events in the current “new normal era”. As a consequence, every firm should develop a strategic plan to manage such crises. Nonetheless companies are still often unprepared to deal with such events and scientific knowledge on this issue is still scarce.

The purpose of this paper is to contribute to enhance our knowledge on this issue, by investigating through a comprehensive model the effect of the following four variables on consumers’ post-recall brand attitudes: the time taken to start the recall after the primary signals of potential injuries arose; responsible recall management; opportunistic recall management; the blame attributed to the company for the defective, unsafe or dangerous products. The model is tested through an experiment involving 217 subjects, showing that responsible recall management is positively related to post-recall brand attitude, while time, opportunistic recall management and blame have a negative relationship with post-recall brand attitude.

Some useful strategic insights are derived from the results of the study. In particular, to reduce the product recall’s negative effects, the company should react promptly to the first signals of product’s dangerousness, acting in a responsible way by underlying their sincere concern for their consumers’ health, and avoiding every opportunistic behavior (such as trying to make consumers buy the company’s newly released products).

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1. Introduction

The number of defective, unsafe or dangerous products recalled from the market has been rapidly increasing in the last few years (Dawar and Pillutla, 2000; Dawar and Lei, 2009). In 2010 in the European Union 2,244 notifications of measures taken against dangerous products were notified to the RAPEX (the EU rapid alert system for all nonfood dangerous consumer products) by State Members. In 2003 they were just 139. The recall of the involved products from the market was the most common measure adopted in such cases (RAPEX, 2011). A similar trend was registered by the Consumer Product Safety Commission (CPSC) in the USA, with 427 recall completed in 2010 (CPSC, 2011).

Hence recalling a product from the market has become almost “a natural episode” in the current “new normal” era. This phenomenon is mainly related to the complexity of products and markets, including e.g. the difficulty of

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controlling the quality of products and components produced under outsourcing agreements with partner located in other countries. At the same time companies are still often unprepared to manage such events strategically and the number of studies available on this issue is still scarce. Every firm should develop a plan or a protocol to manage such crises, and this plan should be the result of a close collaboration among legal, marketing, safety, distribution and sales functions (Siomkos and Kurzbard, 1994; Lee et al. 2007). Previous studies agree on the point that the company should take specific initiatives to reduce the magnitude of the negative effects of the recall on consumers’ attitudes (de Matos and Rossi, 2007; Vassilikopoulou et al., 2009). Additionally, previous research found that consumers appreciate the recall of the unsafe product if it is decided spontaneously by the company and not imposed by national authorities (Shrivastava and Siomkos, 1989; Siomkos, 1999).

The purpose of this study is to contribute to this stream of research by investigating the effects of three variables describing the firm’s recall management behavior on consumers’ post-crisis brand attitudes: the time taken to start the recall after the primary signals of potential injuries, the responsible recall management and the opportunistic recall management. Moreover, following previous studies (Souiden and Pons, 2009), the blame attributed to the company for the defective, unsafe or dangerous products is included as a further significant antecedent of the post-crisis brand attitudes.

2. Literature review and hypotheses

2.1. Product crises and product recall

A product-harm crisis occurs when products contain hazardous materials, can cause serious injury or death if used improperly, violates safety standards (Pruitt and Peterson, 1986). The increasing complexity of products and markets related, among the others, to the extension of production and distribution chains and to the growing use of outsourcing agreements with companies located in countries where product safety standards are less stringent), the activities of associations for consumer protection, the more stringent product safety legislation and the intervention of governmental associations such as the U.S. Consumer Product Safety Commission or the EU Rapid Alert System for all Nonfood Dangerous Consumer Products (RAPEX) have made product-harm crises recurring events (Patterson, 1993; Birch, 1994; Dawar and Pillutla, 2000). In addition, Luo (2008) showed that the growth of this phenomenon is attributable in part to a general moral degradation and a reduction of organizational controls.

Despite the growing number of product crises, companies are still often unprepared to manage them strategically and the number of studies investigating this issue is still scarce. In general, a company could react to the product crisis in several alternative ways ranging from denial to the assumption of responsibility and unconditional product recall and super effort (Siomkos and Kurzbard 1994). Available analyses show that withdrawal of dangerous products from the market and recalls of dangerous products from consumers are the measures most frequently adopted by companies involved in such crises (e.g. RAPEX, 2011). Additionally it should be remarked that in some cases product recalls are not resulting from a spontaneous effort of the company, but from an obligation to intervene by national authorities (Mowen et al. 1981). As a matter of fact the recall begins with the discovery of a defect either by a manufacturer, a distributor, an importer, a retailer, an end user or by a federal agency.

Siomkos (1989) suggests that the outcome of the product crisis is influenced mainly by three factors: the company’s reputation, external effects (e.g. the dissemination of news by the media) and the company’s response to the crisis. As regards the third factor, available studies on this issues often contain the suggestion of strategic guidelines for managing the product recall and reducing its negative effects (e.g., Schoeny, 1992; Siomkos and Kurzbard, 1994). At the same time there are a few studies investigating consumers’ reactions to product recalls (e.g., Souiden and Pons, 2009). Nonetheless understanding such reaction is essential to define proper action plans.

The purpose of this paper is to contribute to fill this gap, by suggesting and testing an overall model to register the effect of four variables describing consumers’ reaction to product recalls: the time taken to start the recall after the primary signals of potential injuries; responsible vs. opportunistic recall management; the blame attributed to the company for the defective, unsafe or dangerous products. Moreover the model is tested in the laptop category, thus extending available knowledge which is mainly related to the car industry (e.g., de Matos and Rossi, 2007). In the next paragraph the research hypotheses are set.

2.2. Research hypotheses

Although time is an important variable that influences consumers’ attitude toward the company involved in a product recall, there are a few studies on this topic (Vassilikopoulou et al., 2009). In the case of a product recall, the
variable “time” can have two different meanings: on the one hand, time indicates the difference between the year of sale of the product and the announcement of its recall; on the other hand time refers to the difference between the first signals of product dangerousness and the withdrawal from the market (Roth et al., 2008; Hora et al. 2011). According to this second meaning of “time”, Pranav (2011) argues that immediate action without hesitation can be seen by consumers as a responsible behavior. Following these studies we suggest that:

**H1:** The time taken to issue a recall after the signals of product dangerousness emerged is negatively related to the post-recall brand attitude.

A recall can represent a major crisis for a manufacturer and can seriously damage the brand integrity, the corporate reputation and profitability (Cheah et al., 2007). During a product crisis, consumers receive bad news about the company and its products so their attitude towards the company may deteriorate suddenly. Successful handling of the crisis is therefore essential. Some authors (Jolly and Mowen, 1985; De Matos and Vargas Rossi, 2007) argue that a firm can mitigate the negative effects of a product-harm crisis by implementing a voluntary recall and being socially responsible and showing real concern for consumers’ health (Souiden and Pons, 2009).

In particular, several studies show that consumers appreciate the case of voluntary product recalls (Shrivastava and Siomkos 1989; Siomkos 1999), as well as the so-called super-effort, consisting in starting an immediate product recall and all-out efforts, thus outlining a responsible and honest communication in the crisis (Siomkos and Kurzbard, 1994).

Other studies highlight that in product crises companies seek to use different impression management techniques to change the negative perception of consumers and present the company in a good light (Rhee and Valdez, 2009). In these cases, the consistency between the company’s identity and its image is fundamental.

Drawing on such findings, it has been suggested that consumers’ perception that the company behaved in a responsible manner (the company decided spontaneously the recall option, due to their sincere concern for their consumers’ safety, and demonstrated “extra-efforts”) is positively linked to the consumers’ post-recall brand attitude (Magno et al., 2010).

On the contrary the perception that the company behaved in an opportunistic way (e.g., trying to make consumers buy the company’s newly released products) is negatively linked to the consumers’ post-recall brand attitude (Magno et al., 2010). Hence, we set the following two hypotheses:

**H2:** Customers’ perception that the company has managed the product recall in a responsible way is positively related to the post-recall brand attitude.

**H3:** Customers’ perception that the company has managed the product recall in an opportunistic way is negatively related to the post-recall brand attitude.

During product-crisis companies are carefully observed by the stakeholders (Collins, 1989). In particular consumers seek to attribute blame and responsibility for what happened (Janoff-Bulman, 2004).

Several studies demonstrate that blame attributed to the company for the defect in the product is negatively associated to consumers’ post-recall attitudes (Matos and Vargas Rossi, 2007; Vassilikopoulou et al., 2009). In such cases, consumers think that the company did not take care enough for their customers, by verifying the quality of the products before selling them on the market. Hence we state that:

**H4:** Blame attributed by the customers to the company is negatively related to the post-recall brand attitude.

### 3. Method

An experiment was conducted to verify the hypotheses. In particular, a real letter of recall received in 2011 by the author of this article by the producer of a laptop she owned was used as a stimulus. 217 undergraduate students from a basic strategic management course took part in the experiment. Each participant was instructed to read an instruction page and was given the stimulus (the recall letter) and asked to think as s/he had received the recall letter as the owner of a computer potentially involved in the recall program. After that, participants completed a questionnaire which included the measurement of four independent variables (1. “time”, i.e. consumers’ perceptions about the time span between the primary signals of potential injuries and the date when the recall was issued; 2. Responsible recall management, 3. Opportunistic recall management; 4. Blame attribution to the company), and post-recall brand attitude as the dependent variable.
All the independent variables were rated on seven point agreement-disagreement Likert-type scales, based on previous studies (Vassilikopoulou et al., 2009; Magno et al., 2010). To test convergent and discriminant validity of the scales used to measure the independent variables, confirmatory factor analysis (CFA) with varimax rotation was employed. All items had substantial loadings (above 0.40) on the intended factors (table 1) and all the constructs had a Cronbach’s alpha value equal to or greater than 0.70, thus supporting both convergent and discriminant scales’ validity.

The dependent variable “post-recall brand attitude” was measured using a widely applied five-point semantic-differential scale including the following three items: bad/good; dislike/like; unpleasant/pleasant (Bergkvist and Rossiter, 2007). Cronbach’s alpha for this construct was equal to 0.85. Using different response formats for the independent and the dependent variables was motivated by the intention to reduce the common method bias that might occur because we obtained measures of the predictor and the criterion variable from the same respondent (Podsakoff et al., 2003). As a matter of fact, using the same scale formats for all the variables “may also increase the possibility that some of the covariation observed among the constructs examined may be the result of the consistency in the scale properties rather than the content of the items” (Podsakoff et al., 2003, p. 884).

Table 1. Results of the Confirmatory Factor Analysis. Rotation Method: Varimax

| Factor loadings          | Responsible recall management (α=0.94) | Opportunistic recall management (α=0.76) | Blame attribution (α=0.70) | Time (α=0.73) |
|--------------------------|----------------------------------------|------------------------------------------|---------------------------|--------------|
| The letter of [laptop brand] is a signal of a responsible behavior | .675                                   | [Laptop brand] is trying to make me buy a new battery for my laptop | .634                      | [Laptop brand] took too much time before starting the recall after they detected the defect | .665 |
| [Laptop brand] takes care of their customers                  | .848                                   | Through the product recall [laptop brand] is trying to increase their brand awareness | .757                      | [Laptop brand] didn’t react promptly to the problem | .812 |
| The product recall is a signal of the focus of [laptop brand] on product quality | .784                                   | The product recall is an opportunistic measure taken by [laptop brand] | .771                      | % of variance explained | 28.16 18.56 13.79 .719 |
| By recalling the product, [laptop brand] behaved in a responsible manner | .821                                   | [Laptop brand] is trying to make me buy one of their new laptops | .673                      |                      |                  |
| [Laptop brand] takes care of their customers’ well-being       | .869                                   | The product recall is a means of advertisement | .727                      |                      |                  |

4. Results

To test the suggested hypotheses we performed a linear regression, setting post-recall brand attitude as the dependent variable. The results of the analyses are shown in table 2 and highlight that all the suggested independent variables have significant effects on consumers’ post-recall brand attitude.

In particular, the first hypothesis suggested that consumers’ brand attitude after the crisis is negatively linked to the time taken to issue the recall. The findings support this hypothesis (β=.268, sig.=.000), which signifies that consumers’ attitudes will deteriorate if the company is not reactive and it does not start the recall immediately after the first signals of potential injuries.

Similarly, the positive relationship between responsible recall management and post-recall brand attitude (hypothesis 2) is significantly supported (β=.434, sig.=.000). This result indicates that consumers appreciate the company’s spontaneous and responsible effort to recall the product to safeguard consumers’ health.
On the contrary, consumers’ brand attitudes are negatively affected by the perception that the company is acting opportunistically ($\beta=-.218$, sig.=.000), e.g. starting a recall to induce consumers to buy their newly released products. Therefore hypothesis 3 is supported, as well.

As regards hypothesis 4, the findings confirm that if consumers blame the company for the product crisis, their post-recall brand attitude will deteriorate. Hence hypothesis 4 is supported.

In sum, the suggested independent variables were able to explain 31.3% of the variance in consumers’ brand attitudes after the recall.

Table 2. Linear regression analysis. Dependent variable: post-recall brand attitude, R squared: 0.313.

| Hypothesis number | Independent variables                  | Beta  | T     | Sig.  |
|-------------------|----------------------------------------|-------|-------|-------|
| Hp. 1             | Time                                   | -268  | -4.367| .000  |
| Hp. 2             | Responsible recall management           | .434  | 7.075 | .000  |
| Hp. 3             | Opportunistic recall management         | -218  | -3.557| .000  |
| Hp. 4             | Blame attribution                       | -.143 | -2.327| .021  |

5. Discussion and managerial implications

The findings show that the strategic directions selected by the company to react to a product crisis have a significant impact on consumers’ post-recall brand attitude. In particular, the relevance of the timing of the recall and of the responsible behavior emerges from the study.

As regards the importance of timing, the findings are consistent with the study by Hora et al. (2011), highlighting that the reduction of the recall time is essential for several reasons. In particular, the delay of the recall of a potentially dangerous product may increase the number of injuries and even death. Additionally, this delay can be perceived by consumers as due to the negligence of the company, making it more difficult to regain the lost reputation.

As for the responsible behavior, the findings suggest that transparency should be a crucial element of the strategic reaction plan. Transparency includes both a timely reaction as soon as a defective, unsafe or dangerous product is detected and a sincere interest in consumers’ wellbeing. Thus the results give an empirical support to the suggestion by Mowen et al. (1981) that the company making a product recall should emphasize that they are acting in a socially responsible manner. On the contrary denying their responsibilities or minimizing the extent of the product crisis are likely to damage consumers’ brand attitude.

From a strategic point of view, reacting in a responsible way may also represent an opportunity to reinforce the emotional bond and the trust between the company and their consumers. At the same time, the results make it clear that opportunistically exploiting the recall episode to increase sales or considering it as a mere means of advertising is likely to produce negative effects on the company-consumer relationship. In general it should be remarked that even if managers think that their companies are behaving responsibly in dealing with a product crisis, customers’ perception could be different, causing a long-lasting change in their attitude toward the company even after the crisis. For example, a recall regarding an “old” product may be interpreted by the consumers as an opportunistic tool used by the firm to make them buy a new version of the product.

As regards blame, the findings emphasize its dangerousness consistently with previous studies (e.g., Klein and Dawar, 2004). In the case of a product crisis, consumers are looking to assign blame for the incident based on information about the event (Weiner, 1980; Folkes, et al., 1987; Aaker, 1996). Consumers who attribute a large portion of blame to the company may trigger a negative word of mouth and discourage other consumers to trust the company, as pointed out also by other analyses (e.g., Vassilikopolou et al., 2011). On this point, it should be remarked that several companies involved in product crises are trying to attribute the blame for product defect to the environment, including their suppliers. In particular in case of production outsourcing, some companies try to limit their responsibility to design defects and to attribute manufacturing defects to their suppliers. Such a behavior is likely to even worsen consumers’ attitudes (Benaish and Bapuji, 2008). Through a transparent behavior and taking responsibility regardless of the type of problem (manufacturing or design), the company can avoid running into what Wagner et al. (2009) define corporate hypocrisy, consisting in claiming to be something that it is not.

In general the findings support previous studies (Siomkos and Kurzbard, 1994) suggesting that it is better for the company to have immediate recourse to voluntary product recall and to super-effort initiatives and to emphasize that they are acting in a socially responsible manner (Mowen et al., 1981). Anticipating the intervention of authorities and
demonstrating a spontaneous super-effort can reduce potential damages to the image of the company. On the contrary a behavior perceived as externally forced or artificial determines the risk to be perceived as opportunistic.

Finally, considering that the probability of incurring in product crisis has increased dramatically, the preparation becomes crucial: it is essential that firms develop plans to face a product crisis not in a traumatic way. Interestingly, some authors (Siomkos, 1999; Haunschild and Rhee, 2004) pointed out that a product recall can be considered as an opportunity for improvement and to increase the rate of learning.

6. Conclusions

The purpose of this paper was to suggest and test a comprehensive model to explain consumers’ brand attitude after a product recall. All the suggested variables (time, responsible recall management, opportunistic recall management, blame attributed to the company) were found to be significant. More interestingly three of such variables (time, responsible recall management and opportunistic recall management) are directly related to the way the company decides to manage the recall. Hence the results of this study provide useful insights to the companies to define accurate strategies to minimize the negative effects of a recall and even to reinforce the emotional and trust bond with their customers. Such results are also particularly valuable because the analysis is based on a stimulus (i.e. a real letter of recall by a laptop producer) related to a real and recent recall episode, while previous studies were mostly based on artificial stimuli.

Some limitations of this study should be mentioned. First of all, the use of an experimental setting was fundamental to isolate the effects of each of the suggested variables, but studying products recall in the real world would help to enrich our knowledge on this issue and to evaluate the impact of several other factors not included in the experiment. In addition the study analyzed the short-term reaction after the recall message, but an evaluation of the effects in the medium term could be useful, as well. Finally, it should be remarked that research about product recall is scarce as compared to the dramatic increase of such phenomenon. Hence new studies are needed to shed new light on this issue and to support companies in defining successful reaction plans.

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