

Examination of Product Recalls In Terms of Attribution Theory in the Marketing Context: A Qualitative Meta-Analysis*

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ABSTRACT

The product recalls have become a common practice for many firms in various industries since the number of defective and dangerous products are increasing. Even though this action – product recall – should aim to assure the well-being of consumers, it also creates opportunities to restore the damaged reputation of the corporation; by influencing the perceptions and expectations of the stakeholders. Understanding attribution theory and its applications may help scholars and marketers to choose the appropriate post crisis response strategies, to adjust messages and press releases, in order to shape the consumer attributions, which as a result may create opportunities to minimize the possible damage. The aim of this meta-analysis is to review the current global and Turkish literature in the light of attribution theory from the marketing context and propose a model. Results of this study show that there are number of factors that affect the consumer reactions to the product recalls.

Keywords: Product Recalls, Attribution Theory, Consumer Behavior, Meta-analysis

JEL Classification: M31

Ürün Geri Çağrımaların Atıf Teorisi Yönünden Pazarlama Bağlamında İncelenmesi: Nitel Meta Analizi

ÖZ

Arizalı ve tehlikeli ürünlerin sayısı arttıkça, ürün geri çağrımalar, çeşitli endüstrilerdeki birçok firma için yaygın bir uygulama haline gelmiştir. Her ne kadar bu eylemin – ürün geri çağırma – tüketicilerin sağlığını korumayı hedef alması gerekse de; bu eylem sayesinde şirketler, paydaşların algı ve beklentilerini etkileyerek hasar gören itibarlarını düzeltmek için de fırsatlar yaratmaktadır. Bu sebeple, atıf teorisini ve uygulamalarını anlamak, akademisyenlere ve pazarlamacılara, kriz sonrası müdahale stratejilerini seçmede, şirket mesaj ve basın bültenlerini belirlemede yardımcı olarak, tüketici algılarını etkilemek ve olası zararı en aza indirmek için fırsatlar yaratabilecektir. Bu meta-analizin amacı, mevcut ulusal ve uluslararası literatürü, pazarlama bağlamında ve atıf teorisi ışığında gözden geçirmek ve bir model önermektir. Bu çalışmanın sonuçları, ürün geri çağrımalara yönelik tüketici tepkisini etkileyen birçok faktörün bulunduğunu göstermektedir.

Anahtar Kelimeler: Ürün Geri Çağırma, Atıf Teorisi, Tüketici Davranışları, Meta Analizi

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I. INTRODUCTION

The product recalls have become a common practice for many firms in various industries since the number of defective and dangerous products are increasing. In order to deal with product harm situations, where products pose threat to the health of the consumers, organizations generate recalls and withdraw the product from the market partially or entirely. Product recalls are used as a crisis response strategy and has been discussed in crisis communication research. Even though this action –product recall- should aim to assure the well-being of consumers, it also creates opportunities to restore the damaged reputation of the corporation; by influencing the perceptions and expectations of the stakeholders (Coombs and Holladay, 1996: 280).

The increasing number of recalls led researchers to focus on the various aspects of recalls in order to create awareness and insights both for managers and academicians. Having extensive consequences for all the stakeholders (board, employees, government, consumers, distributors, sellers, shareholders), some aspects of product recalls still require further attention. A detailed and systematic analysis of the literature from a marketing point of view is necessary in order to determine the unexplored area of studies for a prospective researcher. Furthermore, this meta-analysis is necessary since there is also a lack of product recall studies in the Turkish literature.

As a response to the aforementioned gap in the literature, the aim of this meta-analysis is to review the current global and Turkish literature in the light of attribution theory from the marketing context, assess how existing studies define, measure and conceptualize product recalls, which variables are measured as dependent and independent variables, how attribution theory is used in explaining the outcomes, which concepts are examined in regards to consumer reactions and conceptualize those factors in a proposed model. By proposing a conceptual model, we aim to provide practitioners and researchers with a detailed picture of the use of attribution theory in recall situations. There are also review studies (Jackson and Morgan, 1988; Boedecker, Morgan and Saviers, 1998; and Cleeren, 2015) on product recalls, but those studies investigated the relationship of product recalls only with certain concepts such as advertising strategy; pricing strategy; effect of legal environment; and influence of public policies in managing the recall process. The comprehensive nature of this study creates a clear direction for future studies, since there isn't any meta-analyses which systematically analyzes the product recall situations.

II. LITERATURE REVIEW

A. Product Recalls

Product recalls occur as a result of product-harm crisis (Wei, Zhao, Wang, Cheng, Zhao, 2016: 114) Dawar and Pillutla (2000: 215) define product harm crisis as “discrete, well-publicized occurrence wherein products are found to be defective or dangerous”. Even though not every product harm crisis is followed by a product recall; product recalls are one of the most known and preferred

response methods that how a company handles these crises. A product recall can be defined as the “request by the manufacturer to return the part or the whole batch of the product (Kumar, 2014: 5324), either voluntarily or mandatory, when there is a risk associated with the consumption (De Matos and Rossi, 2007: 109). US Food and Drug Administration states that, a recall might involve the removal of the product from the market or a correction to the product in order to avoid the possible harm (“What is a recall?” <https://www.fda.gov/AboutFDA/Transparency/Basics/ucm194885.htm>, Retrieved on 28.02.2017). A product recall might generate negative consequences both for the organization and its stakeholders; and without any doubt, negative publicity and press will also elevate the level of the threats (Hsu and Lawrence, 2016:62).

The starting point in order to start a product recall is the detection of a defect in a product. As a result of this deficiency, a need for correction occurs, and companies withdraw the defective products from the market and recall them from the consumers (Magno, 2012: 1310). In average, four products are recalled every day; and any manufacturer in any industry faces the possibility of being exposed to an unfortunate product recall incident (Hsu and Lawrence, 2016: 62). With the increased global production and complexity of products; consumer requirements for more safe and higher quality products are also elevating, which as a result will escalate the number of future recalls (Wei et al., 2016: 115). It is known that, recalls have destructive consequences for organizations, but the minimization and prevention of those damages are also possible if the organization chooses to act in a socially responsible way (Siomkos and Kurzbard, 1994: 32).

The recall is a breach of agreement between the stakeholder and the firm because the defective product fails to fulfill its promise and doesn't meet the expectations of the stakeholders (Zavyalova, Pfarrer, Reger and Shapiro, 2012: 1082). In a product recalls situation, the performance of the product is questioned, and stakeholders make inferences about the quality of the products. These doubts about quality lead to questions about the safety, and as a result customers may feel obliged to switch to competitors' products. Also as the expectation level of consumers increase, their reactions to these incidents become more severe (Rhee and Haunschild, 2006: 103).

The reactions of the consumers to the crisis are affected by many factors such as brand loyalty, pre-crisis category usage and advertising, attributions of responsibility and blame. The most important factors that affect consumers' responses are (Vassilikopoulou et al., 2009: 66):

- The company's reputation and social responsibility: Reputation may act as a shield during crisis, and a company acting in a socially responsible way may decrease the negative effects of the incident.
- The company's response to the crisis: Product recalls correspond to company's way of handling the crisis, and there are four

identified ways of response types: denial, involuntary recall, voluntary recall and super effort

- The number and degree of injuries: This factor indicates the severity of the recall; as the consumers perceive the crisis more severe, their responses will change accordingly
- The external effects during and after the crisis: This factor corresponds to external factors such as media, industry and legal environment. Media's handling of the crisis, framing of the articles and stories are influential in shaping the behavioral intentions.

Cognitive constraints of the consumers are also important, since their understanding and processing of the relevant information about the crisis is affected by their cognitive capabilities and limits (Wei et al., 2016: 115).

In terms of consequences, recalls are expected to damage the reputation and financial value of the firm, induce legal costs, damage the sales, increase the manufacturing costs (Hsu and Lawrence, 2016: 60), affect the consumer attitudes (Carvalho, Muralidharan and Bapuji, 2015: 651), harm the strength of a brand (Korkofingas and Ang, 2011: 961) and negatively impact the wealth of shareholders (Jarrell and Peltzman, 1985: 512). Also, if the blame related to the failure of the product is attributed to the firm, it will generate anger, negative word of mouth, and a desire for a refund and apology from the firm (Korkofingas and Ang, 2011: 965).

The human nature drives individuals look for the answers and explanations of every situation. Like any other event, recalls also generate a search for "who or what is responsible for that negative incident". As a result of this search, people assign responsibility and blame and shape their reactions. In order understand this process, a closer look to attribution theory is required.

B. Attribution Theory

Fiske and Taylor (1991: 158) define attribution theory as "people's way of processing information to arrive at a casual explanation for events". Attribution theory is concerned with "what information is gathered and how it is combined to form a causal judgment". In simple terms, this theory is concerned with how people explain behaviors and events.

Individuals look for the underlying causes of events (Settle and Golden, 1974: 181) and try to understand the reasoning behind the behaviors and situations (Cort, Griffith, and White, 2007: 11). Many researchers from different fields, especially psychologists, aimed to explain how people interpret the information and how they react based on the past events (Manusov and Spitzberg, 2008: 38). Attribution theory was developed as a result of these attempts on explaining the reasoning behind consumer reactions.

Heider's work (1958) laid the foundation for the attribution theory research, and most studies has been conducted in social psychology field (Settle and Golden, 1974: 181). It was later developed by Jones and Davis (1965), Kelley

(1967) and Bem (1972) and applied to marketing research in order to understand the consumer behavior (Burnkrant, 1975: 465). The researchers' main motivation was simply to better comprehend the causes of events, evaluate them and predict how every human being responds to real world situations (Jones, 1976: 300). The attribution process also helps consumers to better understand the real factors behind an event, and this understanding will assist them in adjusting their behavior for the forthcoming situations.

Attribution theory has been a very striking research area (Bemmel, 1991: 548), became the focus of many scholars, and has been widely used in marketing such as; understanding both individual and organizational behavior (Cort, et al., 2007), evaluating the crisis communication strategies and associating the responsibility during the organizational crisis (Schwarz, 2012), explaining the stakeholder attitudes (Coombs, 2007), examining the effects of different crisis response strategies and negative word-of-mouth (Chang, et al., 2015), focusing on customer complaints, service failures and secondary satisfactions (after recovery efforts) (Maxham III and Netemeyer, 2002), assessing the interaction between advertising and selling (Swinyard and Ray, 1977), investigating the decision making process in discipline arbitration (Bemmel, 1991) and the perception of the advertisements (Sparkman and Locander, 1980).

C. Use of Attribution Theory in Product Crisis Situations

Attribution theory has also been used in order to deepen the understanding of product/service failure and crisis situations. According to the scholars, since human beings are rational, during a product crisis/failure, they will try to rationalize the incident and find the underlying cause of the event. As a result, consumers' perception of the crisis and failure will shape their post-failure behavior (Folkes, 1984: 398). As mentioned above, researchers and managers are interested in the question of 'how do consumers interpret the information and how do they act on it?' To be clearer, consumers will try to understand the real reason about the product failure. For example, if a purchased food is gone bad before its expiry date, he/she will look for an answer about the failure: the food was already bad when it was purchased, he/she forgot to store it in the refrigerator, or his/her refrigerator is broken. Davis (1994: 874) describes the attribution development pattern in five stages:

"An individual:

(1) is exposed to, comprehends and encodes a set of stimuli (such as overt behaviors, language, etc.). These stimuli are labeled as "the antecedent event",

In this stage behavior/incident is observed and this observed behavior/incident is the initiator event. Such as, malfunctioning of a television.

- (2) *constructs or infers a tentative set of attributions which are felt to be the most probable explanation for the reasons or motivations underlying or causing the observed stimuli,*

In the second stage, possible explanations for the observed behavior/incident are evaluated. Such as, user mistake, electrical problems in the house or in the city, damage during the delivery or installation, or television company's faulty production.

- (3) *evaluates the tentative attributions in light of additional information, observations or past knowledge,*

In the third stage, previous experiences, knowledge and other information is used in order to make the right attribution. Such as, news about the consumers who have experienced the same problem, user comments on the review boards, company press releases about the problem, governmental enforcements.

- (4) *modifies or adopts the attributions,*

In the fourth stage, the real reason behind the observed behavior/incident is realized and an attribution is made. Such as, company press release about the problem which indicates that one of the outsourced parts used in televisions had a faulty design.

- (5) *stores the attribution in memory. The final stored attribution serves both as a "filter" through which future, related events are interpreted and as a basis for determining how to respond to the observed events".*

In the fifth and final stage, the attribution is saved in the memory in order to be used in future events and incidents. As in the example, it is now known that the company outsources some of the parts and as a result faced with product failure situation. This information will be saved in consumers' minds, and may negatively influence consumers' attitudes; unless company will take necessary measures to correct the failure.

In summary, attribution theory suggests that, individuals try to understand why an event/action/behavior occurred; and whether the motive behind that event/action/behavior is intrinsic (internally motivated) or extrinsic (situational) (Ketrone, 2016: 34). Individuals go through the same mental process during the crisis situations. When a crisis occurs, stakeholders try to assign responsibility and blame by understanding the true nature of the events. Especially in situations where there is an ambiguity about the crisis, people become uncertain about who was responsible for the event (Schwarz, 2012: 436). Employing attribution theory may help organizations in shaping consumer attributions by using appropriate post crisis response strategies, adjusting messages and press releases; and as a result organizations may minimize the possible damage.

D. Damage to the Organization During/After the Crisis

A crisis is obviously a threat to an organization because of its destructive consequences. A crisis first shows its negative effects in the form of reputational

damage which, in time, may turn into financial damage, and as a result, threatens the survival of the organization (Coombs and Holladay, 1996: 280). Extant literature identified several damaging factors which occur as a result of product crisis incidents. Since product recalls are part of product crisis situations, in this study, all those factors are listed under ‘potential damages’.

III. METHODOLOGY

In order to conduct this meta-analysis, nine databases (Elsevier, Emerald, JSTOR, Sage, Springer, Taylor & Francis, Wiley, Google Scholar and YÖK) were searched in between the time frame of 1980 to 2016. The following keywords were used to search the databases:

- (1) “product recalls” (in the title, in the abstract, and in the keywords);
- (2) “product harm crisis” (in the title, in the abstract, and in the keywords) which use product recalls in their methodology;

This search resulted with one hundred and twenty six articles; however after a careful review, only studies with marketing concentration are included, and articles on other research areas such as production management, accounting, logistics, finance are excluded from this analysis. Final list of articles consists of fifty five product recall studies in thirty five journals, one proceeding, and one Turkish thesis study; where most studies were published in *Public Relations Review* (6), *Journal of Marketing Research* (4), *Advances in Consumer Research* (3), *Business Horizons* (3) and *Journal of Business Ethics* (3) (See Table 1). It can be stated that, especially years after massive product recalls, number of product recall studies have also been increasing. For example after a series of recalls from different industries (2007 Mattel toy recalls, 2007 cat food recalls, 2008 baby formula recalls, 2008 Kraft food recalls, 2008 child crib recalls), eight studies were published in 2009; after the 2009-10 Toyota brake pedal recall, seven studies were conducted in 2011; and after 2013-14 airbag recalls and 2014 GM car recalls, there were five studies in 2015 and five studies in 2016.

Table 1: Product Recall Articles in Marketing Context (1980-2016)

Journal	# Publications	Cumulative	Percent
Public Relations Review	6	6	11%
Journal of Marketing Research	4	10	18%
Advances in Consumer Research	3	13	24%
Business Horizons	3	16	29%
Journal of Business Ethics	3	19	35%
Journal of Communication Management	2	21	38%
Journal of Public Policy & Marketing	2	23	42%
Marketing Science	2	25	45%
Journal of Marketing Management	2	27	49%
Journal of Retailing and Consumer Services	1	28	51%
Australian Marketing Journal	1	29	53%
Journal of Marketing Communication	1	30	55%

International Journal of Research in Marketing	1	31	56%
European Journal of Marketing	1	32	58%
Journal of Business and Industrial Marketing	1	33	60%
Journal of Product and Brand Management	1	34	62%
British Food Journal	1	35	64%
Management Science	1	36	65%
Organization Science	1	37	67%
Academy of Marketing Journal	1	38	69%
Australian Journal of Management	1	39	71%
Journal of Targeting, Measurement and Analysis for Marketing	1	40	73%
Marketing Letters	1	41	75%
Journal of Promotion Management	1	42	76%
Asian Journal of Communication	1	43	78%
Journal of Risk Research	1	44	80%
Erciyes İletişim Dergisi	1	45	82%
International Journal of Consumer Studies	1	46	84%
Corporate Social Responsibility and Environmental Management	1	47	85%
Risk Analysis	1	48	87%
Journal of Business and Psychology	1	49	89%
Corporate Reputation Review	1	50	91%
Journal of Consumer Behavior	1	51	93%
Journal of Business and Technical Communication	1	52	95%
Journal of Marketing	1	53	96%
8th International Strategic Management Conference	1	54	98%
Turkish Thesis Study	1	55	100%

In the second step, among those fifty five studies, the ones with Attribution Theory focus are selected. For that purpose, all fifty five studies are examined with the key words attribution and attribution theory. For the final analysis, our final article pool consists of eleven studies:

Table 2: Product Recall Articles with Attribution Theory Focus

Journal	Name of the Article	Author(s)	Year
Advances in Consumer Research	Further Information on Consumer Perceptions of Product Recalls	Mowen	1980
Advances in Consumer Research	Product Recall Communications: the Effects of Source, Media, and Social Responsibility Information	Jolly and Mowen	1985
Journal of Marketing Research	Impact of Product-Harm Crises on Brand Equity: The Moderating Role of Consumer Expectations	Dawar and Pillutla	2000

Business Horizons	How should a company respond to a product harm crisis? The role of corporate reputation and consumer-based cues	Laufer and Coombs	2006
Australasian Marketing Journal	Why say sorry? Influencing consumer perceptions post organizational crises	De Blasio and Veale	2009
Corporate Reputation Review	Impacts of Reputation for Quality on Perceptions of Company Responsibility and Product-related Dangers in times of Product-recall and Public Complaints Crises: Results from an Empirical Investigation	Grunwald and Hempelmann	2010
Journal of Marketing Management	Product recall, brand equity, and future choice	Korkofingas and Ang	2011
Journal of Marketing Research	Base-Rate Information in Consumer Attributions of Product-Harm Crises	Lei, Dawar and Gürhan-Canli	2012
Journal of Communication Management	An attributional analysis of corporate reporting in crisis situations: The 2010 Toyota recall	Tennert	2014
Journal of Business Ethics	Corporate Social 'Irresponsibility': Are Consumers' Biases in Attribution of Blame Helping Companies in Product-Harm Crises Involving Hybrid Products?	Carvalho, Muralidharan and Bapuji	2015
International Journal of Research in Marketing	The role of social media and brand equity during a product recall crisis: A shareholder value perspective	Hsu and Lawrance	2016

In the final list of eleven articles; as a data collection method, experimental technique is used in eight articles, case study technique and secondary data is used in one study; and one study is a descriptive study, therefore no data collection method is used. For the data analysis method, ANOVA is employed in three studies, MANOVA in two studies, regression analysis in two studies, t-test in one study, and content analysis in one study. One of the articles used both regression analysis and ANOVA for analysis.

IV. RESULTS

After reviewing the articles, first, how attribution theory is used in explaining product recall situations is identified. The analysis reveals that, attribution theory is used (a) in explaining organizational responsibility and blame, (b) in evaluation of the crisis, and (c) in explaining consequences of the crisis. Second, by using those identified factors, a model was proposed to better understand the recall situations and their effects on organizations.

A. How Attribution Theory is used in explaining Product Recall Situations

(a) *In Explaining Organizational Responsibility and Blame*

According to Hsu and Lawrance (2016), attribution theory indicates that a firm's previous crisis history increases the level of organizational responsibility and negatively influences the firm value.

Tennert (2014) also focused on attributional analysis of "perception of the responsibility" in his study. He employed a case study methodology in his research and focused on Toyota's 2010 global product recall crisis. He implied that by using attribution theory, attribution of cause and responsibility can be understood; and mass media's role on influencing those attributions can be comprehended. The study investigated how media handled the Toyota recall incident, and how they see the cause of the crisis. According to Tennert, the media saw the crisis as self-originated and placed responsibility of the crisis to the Toyota Company.

Carvalho, Muralidharan and Bapuji (2015), questioned the factors that affect the attribution of blame. They used experimental study (2X2X2X2) methodology and conducted a survey on undergraduate students in a North American university; and concluded that attribution of blame is affected by the country of origin image, brand familiarity and reason for the product defect. Effect of brand familiarity on perceived responsibility is also stated in Mowen's (1980) and Hsu and Lawrance's (2016) study. Mowen used an experiment with 2 X 2 X 2 full factorial design and concluded that familiarity with the company and corporations' responsible behavior may decrease the attributed level of responsibility. Similarly, by using an event study methodology, Hsu and Lawrance stated that weak brands experience more negative effects whereas strong brands are more resilient during product recall incidents. Overall, they emphasized the significance of building brand equity and concluded that brand equity is an important, intangible asset for a firm.

Korkofingas and Ang (2011) conducted two experimental studies in order to evaluate the factors affecting the attribution of blame. They stated that while more severe crisis generated more negative consequences; timely response of the company has less negative effects. In their descriptive study, Laufer and Coombs (2006) tried to give insights to practitioners by using previous literature and real life crisis examples; and they concluded that reputation of the company, severity of the crisis, gender and county/culture of the consumers affect the blame attributions of the consumers; which as a result will negatively influence the purchase intentions.

Grunwald and Hempelmann (2010) conducted an experimental study in Germany with a 3X2-between-subject design on an online sample of 600 customers. They stated that a high reputation can decrease the attribution of blame and responsibility; but severity of the crisis may increase the negative effects on both factors.

A study by Lei, Dawar and Gürhan-Canli (2012) employed two experiments, where they questioned the effect of base-rate information (industry frequency) on attribution of blame. They emphasized that if the crisis in the

industry are similar, then attribution of blame and responsibility will be less directed to the organization. They also stated the importance of consumer's prior beliefs about the brand and concluded that prior beliefs affect the level of attribution and blame.

(b) In Evaluation of the Crisis

De Blasio and Veale (2009) conducted a two-stage study, in which the first stage uses a focus group technique and the second stage incorporates an experimental methodology with five different scenarios (1X5). They employed attribution theory in their study and stated that evaluation of the crisis incident is influenced by the perceived level of organizational responsibility. They concluded that, response strategies should focus on repairing consumers' impression and trust.

Another important factor is, informing consumers about the socially responsible behavior(s) of the organization during the recall. This action may decrease the negative associations of the situations (Jolly and Mowen, 1985). This 2X2X2 between groups factorial experiment study also emphasizes the importance of media type (newspaper, radio, tv) and source of the recall information (government, company press release) during recalls (Jolly and Mowen, 1985). According to the results, governmental sources and print media found to be more trustworthy

(c) In Explaining Consequences of the Crisis

In terms of consequences of the crisis, Dawar and Pillutla (2000) conducted two experiments in order to evaluate the effects of consumer expectations on crisis consequences. They stated that consumer responses are negatively affected if the crisis is perceived as internal and controllable rather than as external and uncontrollable; in accordance with the attribution theory.

After examining 185 product recall announcements in their study, Hsu and Lawrance (2016) expressed that previous crisis history of an organization has a direct negative effect on firm value.

Tennert's (2014) content analysis of German print media resulted that media handling of the Toyota 2010 crisis affected how people perceived the situation, and consequently influenced the company image. Carvalho et al., (2015) emphasized the importance of blame attributions on the damage to corporate reputation in their experimental study.

B. Proposed Model

As a result, our findings reveal that:

- (a) *organizational responsibility and blame* is affected by previous crisis history, mass media's reporting, country of origin image, brand familiarity, source of the fault (external/internal), severity of the crisis, gender, county / culture of the consumers, reputation, reason for the product defect, base-rate information (industry frequency);

- (b) *evaluation of the crisis* is affected by perceived level of organizational responsibility/blame, socially responsible behavior, media type, source of the recall information;
- (c) *consequences of the crisis* is affected by previous crisis history, source of the fault (external/internal), severity of the crisis, perceived level of organizational responsibility/blame, evaluation of the crisis, timely response of the organization.

Therefore, we propose the following model as a guide to better understand the attribution theory and its application to product recall situations:

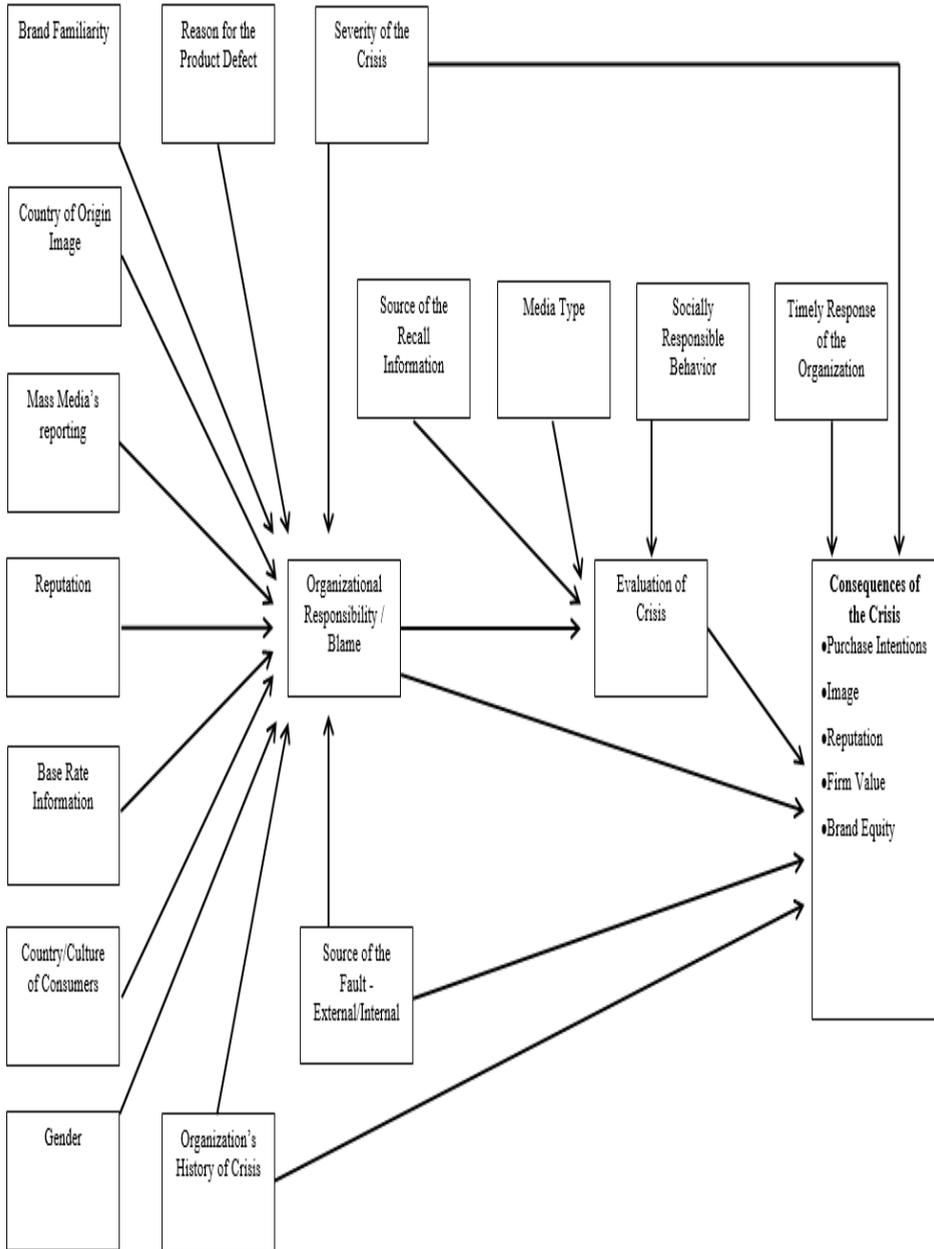


Figure 1: A model for explaining the Product Recall Incidents

DISCUSSION

This study aims to review current global and Turkish marketing literature with an attribution theory focus, and to reveal how existing studies focus on product recalls, which variables are measured, what outcomes of the recalls are examined, how those outcomes are explained, how attribution theory is used in accordance with the outcomes and concepts in regards to consumer reactions and as a result propose a model to better understand attribution theory and its application to product recall situations. This review demonstrates that during product recalls, stakeholders look for a cause to attribute the responsibility and blame, where this attribution of responsibility and blame shapes evaluation of the crisis and consequently damages the organization either directly or indirectly. This study reveals that, there are number of factors which affects the organizational responsibility and blame, such as brand familiarity, country of origin, organizational reputation, severity of the crisis, reason for the defect and etc.; which all can be seen on the proposed model. These factors affect how people attribute the responsibility and blame during the recall incidents. Along with the responsibility and blame, there are other factors that affect the stakeholders' evaluation of the crisis: source of the recall information, media type, socially responsible behavior of the company, and how the organization responds to the recall incident. All those factors jointly shape the consumer reactions to the product recall crisis. Those reactions appear as decrease in purchase intentions or purchases, loss of reputation, decreased firm value, and damage to the brand equity.

This study also gives implication for both academicians and practitioners. By exploring the current product recall studies, this research creates a guideline for future studies. On the other hand, our proposed model helps practitioners and managers to comprehend the possible factors that affect the consumer judgments while they ascribe responsibility and blame; and also guide them in order to prevent or decrease the possible negative consequences of the recall incidents.

V. LIMITATIONS AND FUTURE RESEARCH

This study examined product recall studies from an attribution theory perspective. While, attribution theory is frequently used in investigating the product and service failure situations, there are other theories which were employed in product recall studies; such as Situational Crisis Communication Theory, Image Repair Theory, Framing Theory, Regulatory Focus Theory, and Prospect Theory. In the future, a comprehensive review/analysis, which embraces all theories that are used to explain recall situations, would create a good guideline to understand the product recall situations.

Also, there are only limited number of variables and concepts that were investigated in previous studies. Future studies may involve factors such as; various types of company involvement and response during recall incidents (i.e. effect of response strategies); language and frequency of the recall messages; hypothetical versus real brand comparisons; different industry or product categories; and effect of different consumer characteristics. Finally, many studies

use students as participants in the surveys and experiments. Even though student samples are acceptable in modelling attitude-behavior relationships (Yavas, 1994: 41) future studies that use samples with wider demographic characteristics will increase the generalizability of the results.

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