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Effect of Product Harm Crises on Facets of Consumer Based Brand Equity: Asian Emerging Markets' Perspective

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Abstract

Consumer based brand equity (CBBE) is a complex, multi-faceted concept and the facets of CBBE capture consumers' brand related beliefs. From a managerial perspective, it is imperative to know the most damaging facet of CBBE in order to launch appropriate management strategies to safeguard that particular facet. Therefore, the purpose of the present study is to examine the effect of product harm crisis on facets of CBBE, with special reference to Chinese and Sri Lankan young consumers. Results based on independent samples t test, correlations and a series of one sample t tests showed that product harm crisis has a detrimental impact on facets of CBBE and country significantly shape consumer perceptions in this regard. Further study showed that out of main facets considered in the study, i.e., brand attitude, brand trust, perceived quality of the brand, perceived quality of the products of the brand and brand desirability; brand attitude is more detrimentally affected by the crisis in both countries. Therefore, from managerial perspective, in particular from multinational company's perspective, current study showed that it is more worthwhile to consider CBBE as separate facets rather than as a composite variable in a product harm crisis situation, as the overall picture of CBBE may not reflect the economic significance of CBBE.

Keywords: product harm crisis, facets of consumer based brand equity, brand attitude, brand trust, perceived quality of the brand, brand desirability.

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Introduction

When brand equity is considered from a consumer's perspective, it is called as consumer based brand equity (Keller, 1993) and it is a multi-faceted concept (Netemeyer et al., 2004). The effect of product harm crises on consumer based brand equity (CBBE) has been already documented in the existing literature (Dawar & Pillutla, 2000; Zhao et al., 2011). Moreover, past literature has repeatedly documented the facets of brand equity (Yoo et al., 2000; Dawar & Pillutla, 2000; Yoo & Donthu, 2001; Netemeyer et al., 2004; Burmann et al., 2009; Chieng and Goi, 2011). However, none of them considered how product harm crises shape the facets of brand equity. In addition, although the concept of brand equity has been widely used in the existing literature, the holistic concept of CBBE or its exact facets has not been identified yet. Therefore, to the best of our knowledge, it has been hardly known yet exactly that the effect of product harm crisis on facets of CBBE. Brand equity, "the added value endowed by the brand to the product" (Farquhar, 1989, p. RC7) or an "incremental utility or value added to a product by its brand name" (Yoo & Donthu, 2001, p.1) serves as a bridge that links what happened to the brand in the past and what should happen to the brand in the future (Keller, 2003). However, the universally accepted brand equity content and meaning has not been investigated yet keeping what it constitutes ambiguous. Therefore, brand equity concept becomes "blind man and elephant syndrome" (Ambler, 2003). Winters (1991, p.70) stated that "if you ask ten people to define brand equity, you are likely to get ten (may be 11) different answers as to what it means".

The dominant stream of research on CBBE has been grounded in cognitive psychology (Aaker, 1991; Keller, 1993). The definitions of CBBE according to different scholars vary keeping the CBBE concept and the facets it constitutes unclear. Keller (1993, p.2) defined CBBE strictly from a consumer psychology perspective as, "the deferential effect that brand knowledge has on consumer response to the marketing of that brand". Aaker (1991) suggested that consumer based brand equity consists of brand associations, (brand image), brand loyalty, brand awareness, and perceived quality. Lasser et al., (1995, p. 10) defined CBBE as "the enhancement of the perceived utility and desirability a brand name confers on a product". Christodoulides & Chernatony (2011, p.48) defined CBBE as " a set of perceptions, attitudes, knowledge, and behaviors on the part of consumers that results in increased utility and allows a brand to earn greater volume or greater margins than it could without the brand name." Vazquez et al., (2002, p. 28) defined CBBE as the "the overall utility that the consumer associates to the use of and consumption of the brand; including associations expressing both functional and symbolic utilities." Existence of different definitions makes the exact concept of CBBE unclear as well as the exact facets of CBBE unclear in the existing literature. Although flourishing studies have examined CBBE (French & Smith, 2013; Dawar & Pillutla, 2000; Pappu et al., 2005; Buil et al., 2008) endorsing Aaker's (1991, 1996b) dimensionality of CBBE, lack of agreement yet among researchers on what exact dimensions constitute CBBE. Therefore, exact conceptualization of CBBE is not clear and there is no common viewpoint emerged on the facets of CBBE. Several authors viewed in several ways. For instance, Aaker (1991) showed that brand attitudes, customers' likelihood of purchasing the brand, perceptions of quality, reliability, dependability, trustworthiness and brand desirability constitute facets of brand equity. Moreover, Aaker (1996b) showed that brand loyalty in the sense that brand's real or potential price premium and customer satisfaction based, perceived

comparative quality, perceived brand leadership, perceived brand value related to brand's functional benefits, brand personality, consumer perception of trustworthiness, admire or credibility of organization, perceived differentiated to competing brands, brand awareness and market position of the brand as main components of CBBE. Dawar and Pillutla (2000) considered CBBE as a dependent measure consisted of multiple – item scales of brand attitude, brand trust, perceived quality of the brand, perceived quality of the product, purchase intention and brand desirability. However, the common denominator of all dimensions seem one or more dimension of Aaker's model (1991, 1996b). Rego et al., (2009) considered consumers' awareness of the brand (familiarity) and the strength of positive (perceived quality and purchase consideration) and unique (perceived distinctiveness) associations with the brand in their minds as major components of CBBE. Understanding of consumer based brand equity accurately is about the understanding of consumer value toward the brand as all these definitions reflect consumer perceptions toward the brand. Consideration of the effect of crises on facets of CBBE is fruitful to reach to a managerial judgment of consumer based brand equity, as aforementioned, CBBE is a complex, multi-faceted concept and the facets of CBBE capture consumers' brand related beliefs. According to Expectancy Value Model (EVM) of attitude formation consumers evaluate products and services by combining their brand beliefs, the positive and negative, according to the importance (Kotler et al., 2009). Consumer based brand equity constitutes in consumers' beliefs and thereby susceptible to outsize and sudden shifts outside of managerial control. Therefore, it is an invaluable yet fragile asset and the fragility of it is less well understood among marketers and researchers. This alarms future risk of markets in managing this asset, in particular during the unexpected and sudden events such as product harm crises. A Product harm crisis is a highly publicized event caused by a product being found to be defective, contaminated or even harmful to consumers ((Siomkos & Kurzbard, 1994). For example, in China's 2008 milk scandal stemmed from milk being spiked with melamine; the potentially lethal chemical was added to artificially boost the protein level of milk. Babies fed on contaminated infant formula suffered kidney damage; at least six infants in China reportedly died.

In a product harm crisis context, it is expected that product harm crisis affects consumers' brand related beliefs (facets of CBBE) and thereby behavioral outcomes such as purchase intentions (Dawar & Pillutla, 2000). Therefore, from managerial perceptive, understanding the effect of a crisis on the facets of CBBE which it constructs provides useful guidance to manage individual components of CBBE in a fruitful way, rather than considering a CBBE as a single concept during crises. With respect to measuring of CBBE, Christodoulides & Chernatony, (2011) showed that indirect measures of measuring CBBE assess consumer based brand equity through its demonstrable dimensions and are superior from a diagnostic level. However, it may difficult to separate facets one another as they are highly correlated (Christodoulides & Chernatony, 2011). Nevertheless, conceptually present study treats facets of CBBE independently here with the objectives of assessing the impact of product harm crisis on the facets of CBBE.

In spite of understanding consumer perceptions in product harm crises vary across cultures (Laufer & Coombs, 2006; Taylor, 2000), the scarcity of cross cultural studies investigated the effect of product harm crisis on facets of CBBE, motivates this research to look into how culture shapes the facets of CBBE. Even though some cultural studies

are present in the existing crises literature (for instance, Laufer et al., 2005; Taylor, 2000; Laufer & Coombs, 2006), most of these studies are based on European and U.S context paying a very little attention to the Asian context. Therefore, majority of the existing theories are based on European and U.S consumers' view, and the existing theories based on Asian consumers' voice are scant. Hence, the applicability of these theories and concept toward Asian consumer seems questionable. Economic expansion coupled with globalization demands Asian consumers' voice in existing theories.

In order to fill these existing caveats in the product harm crises literature, current study tries to answer the following research questions that yet remain unanswered. How a product harm crisis shapes the facets of CBBE? Is there any significant difference between Chinese and Sri Lankan consumers in valuing the facets of CBBE in a crisis based on their beliefs? Do all facets of CBBE affect on consumer behavior in a same way or in a different way in a product harm crisis? Which component of CBBE will be severely damaged by a crisis? What is the most important facet of CBBE represents the overall value perception of a brand in a product harm crisis? These questions are of particular concern to marketers, since it seems eroding market share significantly, if not explored.

Therefore, the main purpose of the present study is to examine the effect of product harm crisis on facets of CBBE, with special reference to Chinese and Sri Lankan young consumers. That helps to spawn a number of important implications of CBBE. In fact, this study provides useful insight into find the most affecting facet of CBBE in a product harm crisis, so that marketers can adopt special techniques to safeguard that facet of brand equity in their crisis mitigating programs. Therefore, the ultimate aim of the present study is to keep manager's eye toward the protection of the most influential facet of CBBE in particular. Otherwise, crisis mitigation programs have little relevance if the underlying facet focused in the crisis mitigation plan, has been little damaged by a crisis but other neglected facet has been severely damaged. Therefore, this study may help to understand the exact place of the wound in CBBE in a crisis and, in turn, toward which components of CBBE a company should invest more in order to gain economic benefits.

Hypotheses development

Product harm crisis seems affecting differently the various components of brand equity, as 'firm response to crises may differently affect the various components of brand equity….' (Dawar & Pillutla, 2000, p. 216). Past literature contended the importance of considering facets of CBBE in order to launch fruitful brand management strategies (Netemeyer et al., 2004). Moreover, the existing literature showed that the facets of CBBE capture consumers' brand related beliefs and these beliefs are mainly guided by their respective culture (Kotler et al., 2009).Therefore, national culture seems significantly shaping brand valuation as well as valuing of the components of brand equity. For instance, considering Turkey and Spain samples Kocak et al., (2007) argued that consumers arrive at different evaluations of brands as a result of different cultural conditions. By using three independent samples of American, Korean, and, Korean Americans, related to multidimensional brand equity (MBE) consists of ten items reflecting the three dimensions of brand equity for example, brand loyalty, perceived quality and brand awareness/ associations, and a four -item unidimensional (direct) measure of brand equity (overall brand equity), Yoo & Donthu (2001) revealed that the

development of an individual -level measure of consumer based brand equity is reliable, valid, parsimonious, and draws on the theoretical dimensions put forward by Aaker (1991) and Keller (1993). Authors further argued that a strong and significant correlation between these two measures. Moreover, in their study in 2002, authors revealed the differences in these brand equity dimensions with respect to an invariant effect on brand equity across the US and Korean national cultures (Yoo & Donthu, 2002). In addition, related to UK and Spain consumers Buil et al., (2008) revealed that the hypothetical structure of their dimensions of CBBE was supported in both countries. Further, authors argued that the reliability of the adoption of an etic approach, which refers as the "simultaneous use of samples from multiple cultures (Christodoulides & Chernatony, 2011, p. 56) or robustness of present theoretical models across cultures" (Aaker & Maheswaran, 1997; Aaker & Williams, 1998). In addition, Erdem et al., (2006) proved the existence of cultural difference in consumer brand choice. By using survey and experimental data on orange juice and personal computers related to Asian, European, and North and South American respondents, authors showed that consumer perceptions on brand equity vary significantly among these countries due to the variation of Hofstede's (1980) cultural dimensions of uncertainty avoidance, collectivism, and power distance. Moreover, authors revealed that the brand credibility is the key construct of brand equity in economic brand approaches. Credible brands provide more value to the collectivist and high uncertainty avoidance consumers due to the higher quality and lower risk attached to these brands respectively (Erdem et al., 2006). In addition, brand knowledge, the antecedent of CBBE in Keller's (1993) model, is mainly guided by the national culture which it is developed and used (Brown et al., 1989).

Therefore, in the same vein, current study posits that consumers evaluation of facets of CBBE may vary based on their respective national ideologies. Yoo & Donthu (2001) attenuated that different cultures place different levels of importance on the dimensions of brand equity. Due to the presence of wide disparity in using the facets of CBBE in the existing literature, study focuses on the main facets of CBBE, as suggest by Dawar & Pillutla, (2000) in a product harm crisis context; brand attitude, brand trust, perceived quality of the brand, perceived quality of the products of the brand, and brand desirability. Therefore, it can be postulated that the consumer assesses these facets differently based on their specific national cultures.

H$_1$: There will be a significant difference between Chinese and Sri Lankan consumers in assessing the facets of CBBE, i.e., (a) brand attitude (b) brand trust (c) perceived quality of the brand (d) perceived quality of the products of brand, and (e) brand desirability in a product harm crisis

From a managerial perspective, it is imperative to know the most damaging facet of CBBE in order to launch appropriate management strategies. Which facet of CBBE will more seriously be affected by a product harm crisis? Which facet will come out first from consumer memory in a product harm crisis? According to Keller (1993), brand knowledge which conceptualizes based on associative network memory model, is the antecedent of CBBE. It comprises of brand awareness (brand recall and recognition) and brand image (set of associations linked to the brand that consumers hold in memory). As brand awareness is insignificant in a product harm crisis; by definition product harm crises are well publicized incidences (Siomkos & Kurzbard, 1994), brand image guides

the brand equity. Therefore, study assumes brand attitude will come first to consumers' mind in a product harm crisis because brand attitude conceptualizes as one of the various associations used in the formation of the brand image (Keller, 1993, p. 7). More precisely, brand attitude is one of the multiple dimensions of brand knowledge, adheres to brand image (Keller, 2003; Keller, 1993). Therefore, brand attitude represents brand image. Brand attitude defines as consumers' overall evaluation of a brand (Wilkie, 1986) and often forms the basis for consumer behavior, for instance, brand choice (Keller, 1993). Therefore, it is perfectly rational to consider brand attitude comes first in consumer memory and is responsible for consumer behavior. For instance, Keller (1993, p.2) stated that "CBBE occurs when the consumer is familiar with the brand and holds some favorable, strong and unique brand associations on memory." Brand attitude is one of these brand associations rooted by brand image (Keller, 1993, p.7). Therefore, brand image, which is highly associated with brand attitude and defined as "perceptions about a brand as reflected by the brand associations held in consumer memory" (Keller, 1993, p. 3). What are the drivers of brand image, which in turn drive brand attitude? Shankar et al., (2008) identified drivers of brand image as brand reputation, brand uniqueness, brand fit, brand associations, brand trust, brand innovation, brand regard and brand fame. Cognitive psychologists believe once information becomes stored in memory its strength of association decays very slowly (Loftus & Loftus, 1980). Therefore, it is perfectly rational to consider brand image stores in once memory and brand attitude is one of the main components of type of brand associations (attributes, benefits and attitudes) used in the formation of the brand image (Keller, 1993). Past scholars argued that brand attitude can be related to beliefs about product-related attributes (relate to product's physical composition or a service's requirements), functional (physiological and safety needs) and experiential benefit (sensory pleasure, variety and cognitive stimulation), consistent with perceived quality (Zeithaml, 1988) as well as related to beliefs about non-product-related attributes (price, packaging, etc.,) and symbolic (self-esteem, prestige, etc.) benefits (Rossiter & Percy, 1987). Therefore, it is perfectly rational to consider brand attitude comprises of almost an entire value of a brand which perhaps comes first to consumer's mind in a sudden and in an unexpected situation. Moreover, Faircloth et al., (2001, p.62) stated that "brand equity as biased consumer actions toward an object, brand image as perceptions related to the object, and brand attitude as an evaluation of the object". It further supports this notion. Therefore, it seems that brand attitude is the most important facet of CBBE from consumers' perspective. Moreover, as aforementioned, according to Expectancy Value Model (EVM) of attitude formation, consumers evaluate products and services by combining their brand beliefs, the positive and negative, according to the importance (Kotler et al., 2009).

Dyson et al., (1996), based in their proprietary brand equity model suggested that a person's self reported brand value is driven by his attitude toward the brand. Anderson (1983) claimed that a critical feature of human intelligence is how knowledge pertinent to a decision is identified and utilized. As previously noted, Keller (1993) presented a conceptual model of brand associations, which consists of brand attributes, brand benefits and brand attitudes. "Though different models of brand attitudes have been proposed, one widely accepted approach is based on a multi-attribute formulation in which brand attitudes are a function of the associated attributes and benefits that are salient for the brand" (Keller, 1993, p.4). "This model views brand attitude as multiplicative function of (1) the salient beliefs a consumer has about the product or service (i.e. the extent to which

consumers think the brand has certain attributes or benefits) and (2) the evaluative judgment of those beliefs (i.e., how good or bad it is that the brand has those attributes or benefits)" (Keller, 1993, p. 5). Aaker (1991) defined brand associations as "anything linked in memory to a brand". Therefore, brand attitude perhaps links in memory as a major component of brand image and comes out first in brand damage (in particular, in a product harm crisis). Moreover, the 'evaluating judgment' component of Expectancy Value Model of attitude (i.e., consumer perceptions of the favorability of an attribute) is both conceptually and empirically related to attitude importance (MacKenzie, 1986). In addition, Lutz (1991) contended that brand attitude functions as a 'filter' for how an individual perceives an object. Moreover, it is noteworthy that brand attitude can be formed by less thoughtful decision making (Chaiken, 1986; Petty & Cacioppo, 1986) which is imperative in a product harm crisis situation. In fact, brand attitude can be stored and retrieved in memory separately from the underlying attribute information (Lynch et al., 1988) that is also vital in a product harm crisis. Moreover, according to Choice theory, the unique feature offers diagnostic information toward preference among brands (Dhar & Sherman, 1996). Brand Attitude seems gaining this feature. Presumably, the brand's feature that comes first in consumer mind seems affecting more by sudden and unexpected events. Therefore, present study presumes, brand attitude comes first in consumers' mind in a product harm crisis, thereby affects more negatively than other facets of CBBE.

H₂: From Chinese Consumers' view, brand attitude will be more negatively affected by a crisis than (a) brand trust (b) perceived quality of the brand (c) perceived quality of the products of brand, and (d) brand desirability

H₃: From Sri Lankan Consumers' view, brand attitude will be more negatively affected by a crisis than (a) brand trust (b) perceived quality of the brand (c) perceived quality of the products of brand, and (d) brand desirability

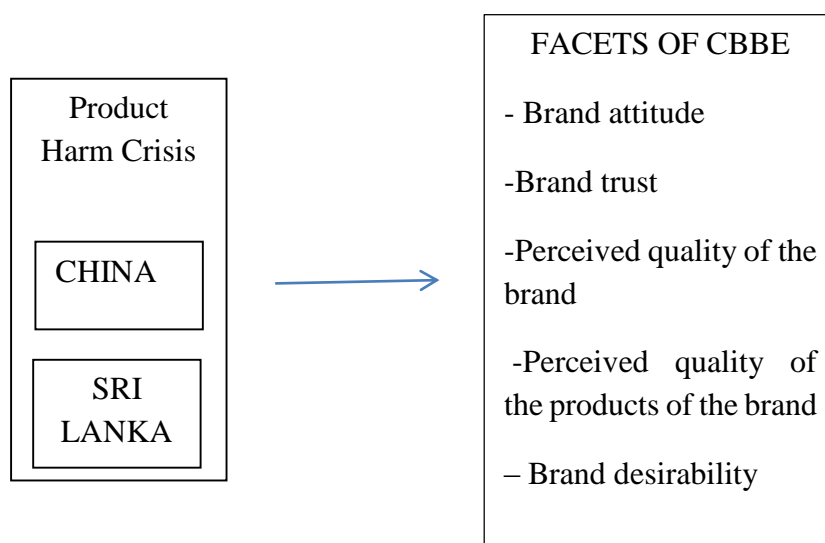Conceptual framework of the study is shown in figure 1

Figure. 1 Conceptual Framework

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Methodology

A self-administered, pre-tested questionnaire survey was administered to test the proposed hypotheses. Two versions of questionnaire; Chinese and English were used to capture responses from Chinese and Sri Lankans respectively. The English version of the questionnaire was translated into Chinese by bilingual researcher and back-translated by different bilingual researcher in order to maintain translation equivalence (Douglas & Craig, 1983). A fictitious crisis scenario explained a company culpable crisis situation. A fictitious yogurt brand "X" was used as the stimulus brand on the basis of pre-test. A pre-test comprised of a mixed sample of 40 students of Chinese and Sri Lankans showed that majority of the respondents preferred yogurt. All subjects rated their mean likeability above 5. Pre-test confirmed that there were no significant country specific differences or gender specific differences among respondents related to the likeability of yogurt ($p >$ .05). Moreover, there was no significant difference on the average likeability of the yogurt between Chinese and Sri Lankans (China=5.45, Sri Lanka=5.78; F=1.52, p=0.22). Nor did the two countries differ from each other on any pair of individual consumers. In addition, gender was insignificant with respect to the likeability of yogurt (male=5.49, female=5.75; F=0.94, p=0.34). Therefore, study concluded that any effect on the dependent variable was not attributable to differences in the importance of the product attributes for the two national cultures or genders. Hence, yogurt was selected as the product category in the final questionnaire.

Company culpable crisis (locus of the crisis is company, stable and controllable by the company) was used since Attribution theory predicts that consumers' attitudes are more likely to be negatively affected when the crisis event is perceived to be internal and controllable by the company than when it is external and uncontrollable (Weiner, 1986) and it has been proven in a product harm crisis context (Klein & Dawar, 2004). A fictitious brand and a fictitious crisis scenario were taken to avoid confounding effects due to consumers' potential relationships or experiences with existing brands and past product harm crisis situations (Siomkos & Kurzbard, 1994). Moreover, it helps to eliminate the potential effects of pre-existing brand attitudes (Till & Shimp, 1998) and to avoid the possibility of contamination of pre-existing brand associations- essentially, to minimize subject bias (Siomkos, 1999).

Sample and procedure

Study conducted two experimental surveys related to two samples of total 101 Chinese (n=51) and Sri Lankan (n=50) based undergraduate marketing and business management specializing students. Convenient sampling method was employed to select the sample. Independent sample t test, correlations and a series of one sample t tests were used as main methods of analysis. After questioning several demographic questions, the company culpable product harm crisis scenario was stated followed by questions to elicit perceptions of locus, stability, and controllability in order to understand whether consumers responses reflect correctly identified crisis situation (company culpable). Then questions related to facets of CBBE, namely, brand attitude, brand trust, perceived quality of the brand, perceived quality of the products of the brand, and brand desirability were stated in order to understand how product harm shape these facets of CBBE. Questionnaires were randomly distributed among respondents in classroom sessions. It is

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important to note that before the completion of questionnaires, respondents were informed that the scenario is imaginary in order to encourage them to read the fictitious scenario carefully and then answer the questions that followed (Vassilikopoulou et al., 2011). Study performed a convenient sampling method since questionnaires can be easily and quickly collected and respondents are more corporative (Malhotra & Peterson 2006).

However, past scholars highlighted the threat of external validity and generalizability of the student samples due to the non-representativeness and unique characteristics of the population (Wells, 1993). As past scholars highlighted, our research argues that the use of student respondents is deemed acceptable and even desirable in some cases particularly when they constitute the major consumer segment for the selected product (Yoo et al., 2000). In addition, Yoo & Donthu (2001) used the word "student consumers" (pg.3). Most interestingly, past literature documented that well-matched (homogenous within and between cultures) samples are more useful than representative samples, because they allow more exact theoretical predictions and reduce the confounding effects of other factors in cross-cultural studies (Hofstede, 1991).

Experimental condition was preferred as experimental researches are essential to build evidence based- knowledge for crisis management (Coombs & Holladay, 2008). Moreover, experimental researches help to search important managerial implications, for instance, "moderating effects or mediating effects" (Baron & Kenny, 1986; Ro, 2012). In addition, Theofilou, et al., (2011) showed the significance of using imaginary scenarios as a valid method in a crisis management research.

Measures

The experimental survey instrument included measures of attributions, and facets of CBBE. The items used for attributions (locus, stability, controllability), (Zhou and Whitla 2012) were measured with 7- point Likert scale ranging from 1= "strongly disagree" to 7= "strongly agree". Measurements of CBBE were made at the individual consumer level (Yoo & Donthu (2001) and unidimensional CBBE was used to measure the facets of CBBE according to the suggestions of previous researchers (Yoo & Donthu (2001). Buil et al., (2008) showed that the hypothetical structure of their dimensions of CBBE is supported in both countries in UK and Spain consumers. Further, authors argued that the feasibility of the adoption of an etic approach, which refers to the "simultaneous use of samples from multiple cultures" (Christodoulides &Chernatony, 2011, p. 56) or "robustness of present theoretical models across cultures" (Aaker & Maheswaran, 1997; Aaker & Williams, 1998). Therefore, current study used five-item unidimension seven point semantic scale to measure the facets of CBBE. For instance, brand attitude was measured as 1= unfavorable, 7= favorable; brand trust was measured as, 1= not at all trustworthy, 7= very trustworthy; quality of brand 'X' was measured as, 1= low quality, 7= high quality; perceived quality of the products of the brand 'X' was measured as, 1= low quality, 7= high quality, and brand desirability was measured as, 1= not at all desirable, 7= very desirable. Respondents rated fictitious experimental situations as, 1= "not realistic at all" and 7= "very realistic" at the end of the scenario to ensure the plausibility.

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Analyses

Collected data were analyzed by using SPSS (version 20.0). Factor analysis identified the validity and reliability of the different items used in each construct measured the same underlying construct. The reliability of the scales was assessed by reliability coefficient, Cronbach's alpha.

Results and Discussion

Reliability, Validity analysis and Manipulation check

The analysis showed the average correlation among the items verifying the internal consistency. All indexes were above their respective thresholds, providing evidence for acceptable scale reliability (Table 1). Moreover, majority of the respondents in two countries recognized correctly the locus, stability and controllability of the product harm crisis as internal locus (96% Chinese and 96% Sri Lankan), stable (98% Chinese and 90% Sri Lankan) and controllable (96% Chinese and 90% Sri Lankan), which the experimental scenario needed to accentuate. In addition, majority of respondents in China (78 %) and Sri Lanka (92 %) stated that the experimental scenario was realistic.

Table 1: Validity and Reliability results of each constructs with measurement scales: company culpable crisis

variables	Items	KMO of Sampling Adequacy		Cronbach's Alpha	
		China	SL	China	SL
Locus	The cause reflects an aspect of the celebrity The cause is inside of the celebrity The cause is related to the celebrity's own responsibility	0.71***	0.77***	0.85	0.95
Stability	The event is stable overtime	-	-	-	-
Controllability	The cause is under the control of target celebrity The target celebrity is responsible for the control of his own action	0.50***	0.50***	0.74	0.88
CBBE	What do you feel about the attitude of brand "X"? What do you feel about the trust of brand "X"? What do you feel about the overall perceived quality of brand "X"? What do you feel about the overall perceived quality of the products of brand "X"? What do you feel about the desirability of brand "X"?	0.84***	0.86***	0.94	0.92

Note: Bartlett's Test of Sphericity, ***P< 0.001, SL refers to Sri Lanka. CBBE refers to consumer based brand equity (as a measure of consumer belief)

Hypotheses test results

Impact of crisis on facets of CBBE

The independent samples t test was used to test H1. Results revealed that brand attitude (t= 1.79, p=0.07) and brand trust (t=1.91, p=0.05) were marginally significant (Dawar & Pillutla, 2000, p. 221) between these two countries; China and Sri Lanka. Therefore, H1a and H1b are supported. Even though product harm crisis cause detrimental effect on these two facets (demonstrating low mean values on seven point Likert scale), Chinese consumers exhibited relatively higher values than their Sri Lankan counterparts (Means were 1.96 vs. 1.58 related to brand attitude and 2.20 vs. 1.84 related to brand trust in China and Sri Lanka respectively) revealing the cultural disparity in valuing these facets. It is interesting to note that perceived quality of the brand was significantly different between these two countries (Means were 2.44 vs. 1.96 respectively in China and Sri Lanka, t= 2.24, p= 0.03) verifying H1c. Therefore, respondents in these two countries perceive different "judgment about the product's overall excellence or superiority" (Zeithaml, 1988, p.3). Interestingly, perceived quality of the products of the affected brand was also marginally significant (Means were 2.54 vs. 2.14 in China and Sri Lanka respectively, t= 1.77, p= 0.08) whereas brand desirability is insignificant between these two countries (p> 0.05). Therefore, H1d is substantiated whereas H1e is not substantiated.

Hypothesis 2 posits that brand attitude will be more negatively affected by the product harm crisis than (a) brand trust (b) perceived quality of the brand (c) perceived quality of the products of brand, and (d) brand desirability with respect to Chinese consumers' view. It was tested through a series of one sample t tests (Table 4.3) and correlations were used to see the correlation between these facets. Table 2 depicts the results. It is clear from the table that all facets correlated significantly in both countries. From Chinese consumers' view, one sample t test showed that there is no significant difference between brand attitude and brand trust (p>.05). Therefore, H2a is not supported. There was a significant difference between brand attitude and perceived quality (PQ) of the brand. Brand attitude affected more negatively than PQ of the brand (means were 2.44 vs. 1.96 respectively, on 7 point Likert scale). Therefore, H2b is substantiated. The similar results were found related to the PQ of the products of the affected brand and brand attitude (means were 2.54 vs. 1.96 respectively, on 7 point Likert scale) substantiating H2c. However, there was no significant difference between brand attitude and brand desirability. Therefore, H2d is not supported. In sum, brand attitude affected more negatively by the crisis than perceived quality of the affected brand as well as perceived quality of the products of the affected brand in the Chinese context.

Next, the study examined these perceptions from Sri Lankan Consumers' view. Interestingly, as expected, a series of one sample t tests revealed that brand attitude affected more negatively than all other facets of CBBE verifying H3a, H3b, H3c and H3d. Therefore, brand attitude affects more negatively in the face of a product harm crisis in Sri Lanka, alarming the need of protection.

Table 2: Facets of CBBE: Correlations and differences (t tests) and means [a]

	CHINA					SRI LANKA				
	Atd.	Tr.	PQx	PQpx	Des.	Atd.	Tr.	PQx	PQpx	Des.
Atd.	1	0.70**	0.78**	0.78**	0.74**	1	0.78**	0.69**	0.70**	0.65**
Tr.	1.51	1	0.75**	0.79**	0.73**	2.59*	1	0.65**	0.71**	0.58**
PQx	2.62*	1.31	1	0.95**	0.70**	3.44**	1.09	1	0.80**	0.76**
PQpx	3.05**	1.79	0.53	1	0.71**	4.62***	2.47*	1.48	1	0.77**
Des.	1.13	-0.38	-1.89	-2.51*	1	6.12***	3.84***	2.80**	1.22	1
Mean	1.96	2.20	2.44	2.54	2.14	1.58	1.84	1.96	2.14	2.28

Note: [a] Above the diagonal, Pearson correlations; below the diagonal t values in Italic, *** $p<0.001$, ** $p<0.01$, * $p<0.05$, Atd.= Brand attitude, Tr.=Brand trust PQx= Perceived quality of the brand, PQpx = Perceived quality of the products of brand Des.= Brand desirability

Conclusion and implications

This article examines the effect of product harm crisis on facets of CBBE. Results revealed the parity and disparity between consumers in these two Asian Emerging markets; China and Sri Lanka. Product harm crises cause detrimental impact on facets of CBBE in both countries. National culture shapes how consumer values CBBE based on his beliefs during product harm crises. Consumers in China and Sri Lanka viewed brand attitude, brand trust, perceived quality of the brand, and perceived quality of the products of the affected brand, significantly different way in a product harm crisis. The detrimental effect is relatively lower with respect to Chinese, reflecting their national ideology of low uncertainty avoidance. They are belong to a culture with "low stress; subjective feeling of wellbeing" in uncertain situations (Hofstede, 1997). However, national culture is insignificant related to brand desirability perceptions in a product harm crisis. These results embellish past literature by showing the cultural significance of facets of CBBE (Yoo et al., 2000; Yoo & Donthu, 2001). It is important to note that brand attitude views as same as brand trust in the Chinese context revealing their low uncertainty avoidance cultural dimension. This seems reflecting their tendency towards relativism and empiricism (Hofstede, 1997). They may trust the brand by observing the attitude of it. Furthermore, brand attitude seems to be more negatively affected due to product harm crises in China and Sri Lanka, alarming the urgent of protection during crises. Therefore, crises managers should keep their eye toward the protection of brand attitude in particular. Protection of brand attitude means the protection of consumer's brand image through the protection of the brand knowledge. "By creating differential consumer responses and affecting the success of brand building marketing programs brand knowledge is the source of brand equity"(Keller, 2003, p. 596). Author defined brand knowledge in terms of personal meaning about a brand stored in consumer memory as "all descriptive and evaluative brand related information" (p. 596). How to enhance brand knowledge in a crisis? That should be the main question in crisis manager's mind. Crisis mitigation plan would encompass holistic perspectives toward the knowledge building of the crisis brand. Therefore, crisis response strategies should mainly focus on building a strong 'mental map' of the affected brand in order to avoid potential financial losses. In this way managers should find secondary sources of creating brand knowledge as well, such as

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celebrity endorsers (Keller, 2003), in order to inject consumer a new 'mental map' of the affected brand after the crisis.

Moreover, in particular in a product harm crisis situation, crises can severely harm a consumers' trust in a brand or a company when an organization is not able to handle a product harm crisis properly. It can result to in permanent damage to the reputation of a brand (Wix & Mone, 2007). Therefore, from managerial perspective, current study shows that it is more worthwhile to consider CBBE as separate facets rather than as a composite variable in a product harm crisis situation, as the overall picture of CBBE does not reflect the economic significance. This is more important in case of multinational companies. Economic development coupled with globalization demands companies to scrutinize crises situations in a culture- specific perspective.

Limitations and future research

Current study has several limitations that can seed future investigations. Main limitation of this research relates the use of hypothetical scenarios that limits the generalization of the conclusions drawn from the current research. Therefore, findings related to embellish past findings may change with the real product harm crisis incidence with the real brand. Further, current study considered only one brand, from one product category, yogurt. Therefore, these insights cannot be generalized to all other product categories in the same vain. While our sample is common to consumer behavior experiments, scenarios were created with a product frequently used by students (Vassilikopoulou et al., 2011). Therefore, caution is advised when extrapolating beyond the sample. Though, these limitations limit the generalization and the precision of the results obtained, these issues remain promising avenues for future research. Moreover, still it seems rational to ask what other cultural categories deserve attention as independent variable in the present research? Therefore, more research insights are needed in cross-cultural perspective in order to ensure culturally sound, universally acceptable, holistic framework of CBBE which is highly demanded by the present globalized marketing environment.

Moreover, as showed by correlation results, different dimensions of CBBE are likely to have interactive effects. How does one dimension of CBBE function as antecedent or consequence with respect to other dimension? How malleable or changeable are these different dimensions over time? As current research revealed high correlations between facets of CBBE, the interaction effect of these facets on purchase intention could be another fruitful extension.

Cultural variation of consumer behavior with respect to cultural dimensions proposed by Hofstede (1997) could be another research direction. Out of four main cultural dimensions by which countries could be differentiated in terms of cultural differences: power distance, uncertainty avoidance, individualism, collectivism, and masculinity-femininity; uncertainty avoidance seems fruitful in a crisis context as crises are uncertain events (Laufer & Coombs, 2006). However, it seems Hofstede's (1997) uncertainty avoidance cultural dimension is insufficient to differentiate these two cultures; China and Sri Lanka, as valuation of facets of CBBE is insignificant in some cases. Perhaps these dimensions can better explain the effect of product harm crisis on facet of CBBE in

different cultures. Therefore, future cross-cultural studies come up with different cultural dimensions are required in order to capture how product harm crisis shapes facets of CBBE in different cultures. Moreover, study demands intra-cultural dimension scale to measure cultures, because of the unavailability of any dimension to explain the disparity yielded in the current study between young Chinese and Sri Lankan consumers.

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