Impacts of crisis emotions on negative word-of-mouth and behavioural intention: evidence from a milk crisis

Oanh Dinh Yen Nguyen
College of Economics, Can Tho University, Can Tho, Vietnam

Jenny (Jiyeon) Lee
School of Marketing, University of New South Wales, Sydney, Australia

Liem Viet Ngo
School of Marketing, University of New South Wales, Sydney, Australia, and

Tran Ha Minh Quan
International School of Business, University of Economics Ho Chi Minh City, Ho Chi Minh City, Vietnam

Abstract

Purpose – The purpose of this study is to explore how emotions felt by the public during a crisis influenced consumer loyalty intention and negative word-of-mouth (WOM). Considering the context-specific nature of emotions, the existing crisis emotions were further validated in a product consumption situation. Drawing on the theories of attribution and social sharing, a conceptual model, positing that crisis-specific emotions [attribution-independent, external-attribution-dependent (EAD) and internal-attribution-dependent (IAD) emotions] influenced negative WOM through behavioural intention, was constructed and empirically tested.

Design/methodology/approach – Data was collected from 240 Vietnamese consumers by using a scenario-based survey related to a fictional milk crisis.

Findings – The study findings showed that all but one crisis emotion had negative effects on both WOM and loyalty intention. Of these emotions, EAD and IAD were the strongest predictors of negative WOM and behavioural intention, respectively. It was also found that all crisis emotions significantly affected negative WOM through behavioural intention.

Originality/value – Although some efforts have been made to identify crisis emotions, the validity of the existing scales have not been affirmed in other crises related to product consumption situations. The results of the present study, thus, made contributions by enhancing an understanding of crisis emotions and their impacts on consumer loyalty intention and WOM communications.

Keywords Crisis, Behavioural intention, Negative word-of-mouth, Attribution emotions

Paper type Research paper

1. Introduction

"Brand crises are happening at an alarming rate". – Crisp (2019), *The 2019 Crisis Impact Report*.

Crises are prevalent in all industries and companies (Deloitte, 2016). A global survey of more than 2,000 business executives indicated that 69% of them have experienced at least one corporate crisis within the past five years (PwC, 2019). A crisis is defined as an unforeseeable event that can cause disruption to business operations and undermine organisational reputations (Coombs and Holladay, 2007). It might result from defective performance or unethical business conduct and might lead to public outrage and negative consumer behaviours such as boycotts (Baghi and Gabrielli, 2019; Jeon and Baeck, 2016).

For example, 66% of consumers express the unwillingness to continue purchasing from a brand that responds poorly to a crisis and 40% of consumers tend to discuss and spread the news of a crisis on social media channels (Crisp, 2019).

Despite the prevalence of crises, companies still fall behind ineffective responses to crises and most are not fully prepared for the reaction from the public and the severe damages that crises disseminate (Crisp, 2019). Crises might not only affect the individuals particularly involving the incidents but also relate to multiple stakeholders including the public (Coombs, 2007). Thus, one possible cause of poor crisis management may be companies' failure to understand the complexity of how the public feels towards a crisis, which might lead to subsequently unfavourable behaviours (Jin *et al.*, 2014b).

Research on linking emotions to individuals' reaction towards a crisis has gained significant interests from both

academic and industry. In response to this, most prior research has largely focussed on understanding discrete emotions (e.g. anger and sadness) or the valence of emotions (i.e. positivity/ negativity) that individuals may exhibit during a crisis (Baghi and Gabrielli, 2019; Balaji *et al.*, 2017; Zhang *et al.*, 2018). In spite of an advance in research on crisis emotions, the existing findings are still inconclusive as to the relationship between the publics' emotional responses to a corporate crisis (Jin *et al.*, 2014b; Mak and Song, 2019). This may be attributed to the direct adoption of crisis emotions engendered in a specific situation (i.e. students' feelings during hypothetical university crises; Jin *et al.*, 2014a, 2014b) without confirming their validity across crises. Marketing scholars have underscored the context-specific nature of emotions (Lee, 2015; Richins, 1997), thereby requiring further examinations of emotions salient in other crises. With this in mind, the current research investigated the complexity of the publics' emotions elicited from a crisis by affirming the validity of the attribution emotions scale proposed by Jin *et al.* (2014b). This research further examined how these respective emotions affect consumer behavioural intention and its resultant outcome (i.e. word-of-mouth (WOM) communications) that may impact the bottom line of the involving firm.

What is more, the existing literature has not yet explored which processes underlying the sharing of negative emotional experiences from crises. In response, the current research examined the unexplored unique roles of behavioural intention and negative WOM that decode the complexity of how the public feels towards a crisis. That is negative WOM is proposed as the ultimate emotional response towards a corporate crisis through behavioural intention as a mediator.

Building on the theories of attribution and social sharing, this study proposed and empirically tested a conceptual model positing that the three types of crisis emotions – feelings elicited from a crisis itself (attribution-independent, AI), feelings towards the firm and its brand related to the given crisis (external-attribution-dependent, EAD) and feelings about consumers themselves during the crisis (internal-attribution-dependent, IAD) – adversely generate consumer responses (i.e. behavioural intention and negative WOM, respectively). This study extended Saavedra Torres *et al.*'s (2020) work by further investigating whether these separate emotions engender the publics' negative WOM through behavioural intention.

The current findings provide both managerial implications and theoretical contributions. In practice, this study gives practitioners some insight into how the public feels when a corporate (product consumption related) crisis happens. The findings also include the consideration of how such emotions affect consumer behavioural intention and its eventual outcome that can impact the firm adversely. In theory, this study advances the extant research on the publics' crisis emotions by adding credence to the validity of the attribution emotions scale in a product crisis context (Jin *et al.*, 2014b). The findings also contribute to research on WOM communication and behavioural intention by revealing empirical evidence of the influences of these product-crisis separate emotions on the publics' negative WOM through behavioural intention. The current study, therefore, responds to the scholarly calls for further investigation on the crisis emotions and their consequences from an attribution perspective (Jin *et al.*, 2014a, 2014b; Mak and Song, 2019; Saavedra Torres *et al.*, 2020).

The following sections provide a comprehensive review of the role of attribution emotions in a corporate crisis and propose relevant hypotheses. After presenting the method and findings, this study concludes by discussing its implications, limitations and future research directions.

2. Conceptual model and hypotheses development

2.1 Crisis emotions
Emotion has been at the core of modern psychology (Dixon, 2012; Witkower *et al.*, 2020). Nevertheless, no consensual definition of emotion exists after more than 100 years of psychological study because one definition might not fully reflect a wide range of emotions a person can experience (Edwards *et al.*, 2002; Izard, 2010). Just as there are a plethora of definitions in the literature, so a substantial diversity in emotional scales exists (Bedwell *et al.*, 2019; Lee, 2015). Some have conceptualised emotions by either bipolar valence (positive/negative; Balaji *et al.*, 2017) or tridimensional states of pleasure-arousal-dominance (PAD; Mehrabian and Russell, 1974). Others have focussed on

- identifying specific emotions elicited in consumption situations (anger, frustration, anxiety, contempt, sadness, fear, happiness, hope, courage, joy and shame; Witkower *et al.*, 2020);
- proposing the hierarchical structure of emotions such as superordinate-, basic- and subordinate-level (Laros and Steenkamp, 2005); and
- characterising emotions by external, situational and self (Petzer *et al.*, 2012).

Drawing upon attribution theory, recent attempts have approached attribution as a more fundamental factor to categorise negative/positive emotions and discrete emotions (Choi and Lin, 2009; Jin *et al.*, 2014a, 2014b; Mak and Song, 2019). This theory postulates that the publics' emotions associate with attribution and the public tend to interpret a crisis by developing the perception of outcomes such as the perception of causality and evaluation of why a particular incident happened (Weiner, 1972). Specifically, Weiner (1986) conceptualised the two types of emotions that people are likely to feel during a crisis: attribution-independent and attribution-dependent emotions. The former is engendered from the crisis's outcome rather than its cause whereas the latter is elicited by personal or situational causes. Both emotions can coexist and serve as motivations for action (Coombs, 2007). Choi and Lin (2009) extracted 11 discrete emotions from their analysis of 277 postings in online community boards for the Mattel product recalls and grouped them into the subcategories of emotions based on their association with attribution. Attribution-independent emotions include alert and confusion and attribution-dependent emotions encompass anger, surprise, worry, fear, relief and contempt.

Building on the Choi and Lin's (2009) scale, Jin *et al.* (2014a, 2014b) reclassified crisis emotions into three separate groups of emotions. The first cluster of attribution emotions (AI) – anxiety, fear, apprehension and sympathy – reflects how the public feels about a corporate crisis. The second cluster

(EAD) – disgust, contempt, anger and sadness – indicates how the public feels about the organisation related to a given crisis. The third cluster (IAD) – guilt, embarrassment and shame – demonstrates how the public feels about themselves when involved in a crisis. Specifically, Jin *et al.* (2014a) performed an exploratory analytical procedure to categorise nine negative descriptors extracted from the literature (anxiety, apprehension, fear, disgust, contempt, anger, embarrassment, guilt and shame) into the three aggregated emotions in six fictitious crisis scenarios within a university setting (i.e. bomb treat, riots, blizzard, disease outbreak, embezzlement and violent partying). In their subsequent study, these descriptors with additional items (sympathy and sadness) were reanalysed to confirm the validity of the factorial structure of crisis emotions. This classification helps a firm assess emotions provoked by organisational crises. Nonetheless, given the nature of emotions that are specific to contexts (Lee, 2015; Richins, 1997), it is unclear whether these emotions felt by students during hypothetical university crises are salient in other crises related to product consumption situations. The question regarding consumers' responses to crisis emotions also remains unanswered.

2.2 Word-of-mouth

WOM has been long acknowledged as a behavioural consequence of brand loyalty that shapes consumer attitudes and repeat purchases (Dick and Basu, 1994; Srinivasan *et al.*, 2002). WOM refers to the online or offline communication between non-commercial senders and receivers relating to brands, products and services (Lee and Suh, 2020). As a message regarding an organisation's products, services or the organisation itself, it can be feedback transferred amongst individuals about product performance, service quality, trustworthiness or operation (Karjaluoto *et al.*, 2016). In this sense, WOM is of paramount significance for a firm to customer service-related decisions, especially in determining expenditures for complaints, customer relations and service recovery (Chen and Yuan, 2020; King *et al.*, 2014).

WOM can be positive, negative or neutral (King *et al.*, 2014; Palmeira *et al.*, 2020). Both positive and negative WOM significantly impact the purchase probability and attitudes of consumers towards a product (Alexandrov *et al.*, 2013; Wallace *et al.*, 2014). While positive WOM is a cognitive construct stimulated by rational evaluation (Sweeney *et al.*, 2005), negative WOM is an affective construct largely driven by strong emotions (He *et al.*, 2019; Lee and Suh, 2020). Individuals might have different motives to spread positive and negative WOM transmission (Chen, 2017). Positive WOM driven by the need for social bonding acts as a benefit whereas negative WOM is motivated by the intention to help others and could emerge as a threat to the relevant organisation (Alexandrov *et al.*, 2013). Notably, negative WOM is more influential than positive WOM because the damage from negative WOM might not only limit individuals experiencing the crisis but also affect the publics (Chen and Yuan, 2020; Coombs and Holladay, 2007). Negative WOM transmission is quite detrimental while positive WOM communication has little impact (Palmeira *et al.*, 2020). Consumers, who spread their negative appraisals to reduce cognitive dissonance, release negative emotions, inform others or act in retaliation, usually display disloyal or

switching behaviour (Azemi *et al.*, 2020; Berger, 2014). Accordingly, it is conceivable that negative WOM is the publics' emotional response towards corporate crises. This study's argument draws on the following discussion.

2.3 Publics' emotional responses to a crisis: negative word-of-mouth and behavioural intention

This study draws on the theory of social sharing of emotions which demonstrates that people tend to recount their emotional experiences about catastrophes and unexpected incidents and share these emotions socially to pursue empathy, seek help, grasp social attention and strengthen social relations (Rimé, 2009; Zhang *et al.*, 2018). Applying this theory, researchers have explored the linkage of emotions on information transmission (Table 1). For example, Mak and Song (2019) found that online users use social media such as online forum and Facebook to share their emotions relating to a crisis. Baghi and Gabrielli (2019) suggested that consumers' negative responses to a faulty brand can be explained by negative emotions. An industry report also indicated that 33% of shoppers with bad feelings towards a retail experience spread their shopping concerns to four other individuals (The Verde/ Wharton, 2007). Indeed, negative emotions can provoke different goals of negative WOM such as comfort search, venting, advice search, bonding, entertaining, self-presentation, warning and revenge (Wetzer *et al.*, 2007).

A significant association of negative emotions with behavioural intention has been suggested in studies across contexts. For instance, Jin *et al.* (2016) demonstrated that the public who experienced negative emotions during a terrorist attack crisis had intentions to search for further information. Coombs and Holladay (2007) and Choi and Lin (2009) also showed a significant adverse impact of a certain negative emotion (i.e. anger) evoked during a crisis (a chemical explosion and product recalls, respectively) on the likelihood of consumer repurchase intention. In a study by Saavedra Torres *et al.* (2020), negative emotions engendered as a result of service failure were found to reduce consumer intention to patronage. Interestingly, Londono *et al.* (2017) reported that the greater negative emotions consumers felt, the less likely they shop for a hair loss (presumably, embarrassing) product only in a physical store but not through other distribution channels. Marchand and Filiatrault (2002) and Merchant *et al.* (2010) further found that donors' future intentions were closely linked to negative emotions elicited from charitable organisations' storytelling in their ads.

2.3.1 Negative word-of-mouth and behavioural intention in response to attribution-independent emotions

AI emotions consist of four emotional descriptors – anxiety, fear, apprehension and sympathy – reflecting how people feel about a *crisis* (Jin *et al.*, 2014b). The first AI emotion, anxiety, is a negative reaction to a threat (Japutra *et al.*, 2018). As people feel anxious during a crisis, poor incidents motivate the public to use negative WOM for anxiety reduction (Jin *et al.*, 2012). Likewise, apprehension is the "broadly based anxiety related to oral communication" (McCroskey, 1970, p. 270). Another AI emotion, fear, expresses uncertainty and strong attributions towards a situation (Su *et al.*, 2018). Fear is felt after a negative experience although it emerges less than other negative

Table 1 Research on emotions and negative WOM

Authors	Studied emotions	Context	Key findings
Mak & Song (2019)	Negative emotions (anger, confusion, disgust, contempt and sympathy)	Organisational crisis	Facebook followers expressed negative emotions during an organisational crisis
Schoofs et al. (2019)	Empathy	Organisational crisis	Public's affective empathy reduces reputational damage
He et al. (2019)	Anger	Service failure	Anger mediates the effect of social presence (versus no social presence) on vindictive negative WOM
Baghi & Gabrielli (2019)	Disgust, fear, anger, disappointment and sadness	Brand crisis	Emotions mediate the impact of crisis typology on negative WOM
Zhang et al. (2018)	Negative emotion arousals	Post-crisis social media engagement	Social media usage induces negative WOM through negative emotion arousals
Wakefield & Wakefield (2018)	Anxiety	Consumer brand experience	Consumers composing eWOM about a negative brand experience will face anxiety
Balaji et al. (2017)	Positive emotions (enjoyed, pleasure, joy and happiness) Negative emotions (enraged, incensed, furious, irate and distressed)	Service failure encounters	Service failure encounters stimulate emotional reactions (both positive and negative) that influence customers' satisfaction, which, in turn, affects negative WOM
Breitsohl & Garrod (2016)	Hostile emotions (anger, disgust and contempt)	Corporate crisis	Hostile emotions have a positive effect on negative WOM, which then reduces tourist destination loyalty
Grappi et al. (2013)	Contempt, anger and disgust	Ethical transgression and social transgression	Negative moral emotions directly influence negative WOM and protest behaviours
Romani et al. (2012)	Anger, discontent, dislike, embarrassment, sadness and worry	A wide variety of goods and service brands	Distinct brand-related negative emotions significantly predict particular behavioural outcomes such as switching, complaining and negative WOM
Gelbrich (2010)	Anger and frustration	Service failure	Anger enhances confrontative coping (vindictive negative WOM, vindictive complaining), while frustration triggers support-seeking coping (support-seeking negative WOM, problem-solving complaining)
McDonald et al. (2010)	Anger, fear, joy, surprise and sympathy	Corporate crisis	Fearful and angry respondents indulge in negative WOM
This study	Attribution-independent (AI), external-attribution-dependent (EAD) and internal-attribution-dependent (IAD) crisis emotions	Corporate crisis	Attribution emotions (AI, EAD, IAD) increase negative WOM through behavioural intention of consumers

emotions like anger (Wetzer *et al.*, 2007). Sympathy relates to the "other-oriented desire for the other person to feel better" (Eisenberg, 1991, p. 129) and is more positive (Kim and Niederdeppe, 2013). People are sympathetic towards victims of the crisis regardless of whether these victims are firms or individuals (Coombs and Holladay, 2007; Jin *et al.*, 2014b).

An expression of sympathy for a firm anchors a highly accommodative strategy and is as effective as an apology to reduce anger, protect post-crisis reputations and dismiss negative WOM intentions (Coombs and Holladay, 2008; Schoofs *et al.*, 2019). For internally caused crises, the public who experience fear is prone to negative WOM because they judge the corporate as more responsible (McDonald *et al.*, 2010). In the context of social advertising campaigns, the fear-evoking advertising message is found to be an effective way of enhancing behavioural intentions to prevent AIDS (Marchand and Filiatrault, 2002). Publics also experience apprehension along with anxiety when crisis information is transmitted via traditional media and a third-party source (Liu *et al.*, 2011). Similarly, the more anxious individuals feel in a terrorist attack, the more likely they are to seek information on the crisis (Jin *et al.*, 2016).

Therefore, it is presumable that angry, anxious and apprehensive publics not only are less likely to express behavioural intentions to patronage but also create and share negative WOM as a mean to ease these feelings. The following hypothesis is then put forward:

H1. AI emotions (a) increase negative WOM but (b) decrease behavioural intention of consumers.

2.3.2 Negative word-of-mouth and behavioural intention in response to external-attribution-dependent emotions

EAD emotions – disgust, contempt, anger and sadness – indicate how the public feels about the *organisation* in relation to a given crisis (Jin *et al.*, 2014b). Disgust, contempt and anger are conceived of as hostility emotions (Breitsohl and Garrod, 2016), negative moral emotions (Grappi *et al.*, 2013) or the triad of "related but distinguishable emotional reactions to the moral violations of others" (Rozin *et al.*, 1999, p. 575). Disgust is described as an emotional reaction triggered by immorality or absence of dignity such as hypocrisy, cruelty, fraud and betrayal (Tangney *et al.*, 2007). Contempt relates to negative evaluations that people and their actions are regarded as inferior while anger, more intensively, takes place when a negative experience occurs and might induce aggression (Witkower *et al.*, 2020).

Research shows that negative emotions elicited from an unethical business practice induce undesirable consumer behaviours (Breitsohl and Garrod, 2016; Grappi *et al.*, 2013; Romani *et al.*, 2012). For instance, sadness, depicted as totally unpleasant, might motivate individuals to engage in negative WOM communication (Schoefer and Diamantopoulos, 2008). Angry consumers are also more likely to seek revenge by spreading negative WOM (Breitsohl and Garrod, 2016; Coombs and Holladay, 2007; Wetzer *et al.*, 2007), complaining (Gelbrich, 2010) and unlikely intending to purchase (Coombs and Holladay, 2007). In a similar vein, Choi and Lin (2009) showed that anger, the most frequently expressed feeling by customers during the Mattel product recalls, was significantly related to damage the perceived brand reputation and less likely to purchase its product. Interestingly, Saavedra Torres *et al.* (2020), who examined whether the effect of service failure on customers' negative emotions was subject to brand attachment, found that aggregated discrete emotions such as disappointed, dissatisfied, frustrated and angry elicited in a hypothetical airline service failure situation impacted customers' WOM positively and, to a lesser degree, loyalty intention negatively, respectively. In a corporate crisis, both anger and sadness induced by new frames influence a person's information processing and evaluation (Kim and Cameron, 2011). Therefore, it is proposed that:

H2. EAD emotions (a) increase negative WOM but (b) decrease behavioural intention of consumers.

2.3.3 Negative word-of-mouth and behavioural intention in response to internal-attribution-dependent emotion

IAD emotions-guilt, embarrassment and shame-describe the publics' feeling about *themselves* when involved in a crisis (Jin *et al.*, 2014b). Consisting of a triad of negatively valenced "self-conscious" emotions, these emotions are distinguished effects, which are common to most people (Tangney *et al.*, 2007). Guilt involves a sense of regret and recovery actions like confessions, apologies or efforts to undo the harm, thereby leading to a negative assessment towards specific behaviours (Tangney *et al.*, 1996). For example, indulgence food consumption might induce unpleasant feeling such as guilt that when consumers have a goal of healthy food consumption but end up indulging, they might experience aversive feelings such as guilt (Hagen *et al.*, 2019). Storytelling in ads for charitable organisations is often intent on evoking guilt to enhance future donation intentions (Merchant *et al.*, 2010). Although shame and guilt are often used interchangeably, shame is related to the desire to escape or conceal because it is derived from more serious failures and offences of human (Tangney *et al.*, 1996; Witkower *et al.*, 2020). Less intense than shame, embarrassment results from relatively trivial wrongdoing or interactions and is a significant predictor of undesirable consumer outcomes like complaints or negative WOM (Krishna *et al.*, 2019; Romani *et al.*, 2012). In sum, IAD emotions might anticipate negative social sharing of information (Tangney *et al.*, 2007) and influence consumer behavioural intentions. Thus, it is hypothesised that:

H3. IAD emotions (a) increase negative WOM but (b) decrease behavioural intention of consumers.

2.4 Behavioural intention as a mediator

Loyalty is defined as "a deeply held commitment to rebuy or re-patronise a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour" (Oliver, 1999, p. 34). Going beyond repeat purchases, loyalty is the critical element for superior performance, enhanced core values and trustworthy organisations (Coelho *et al.*, 2019; Fernandes and Moreira, 2019). That is, brand loyalty leads to larger market shares and greater relative price for the brand (Chaudhuri and Holbrook, 2001; Khamitov *et al.*, 2019; Matzler *et al.*, 2008). Indeed, a 2016 survey of 25,426 consumers in 33 countries by Accenture revealed that loyal members of brands create 12 to 18% more incremental revenue growth than non-members each year (Wollan *et al.*, 2017).

Behavioural intention is regarded as one element of customer loyalty. Oliver (1999) conceptualises brand loyalty as a multidimensional, hierarchical construct: cognitive (i.e. belief and knowledge), affective (i.e. liking), conative (i.e. repurchase intention) and behavioural/action loyalty. Consumers who become cognitively loyal develop their preference for a brand through cumulative satisfaction. Such preference increases their repurchase intention through a stronger emotional commitment to the brand, which results in eventual patronage. Research has well documented the behavioural outcomes of consumer loyalty. According to Dick and Basu (1994), loyal customers are more likely to spread positive WOM. In an online business-to-consumer context, Srinivasan *et al.* (2002) found WOM promotion to be the most significant behavioural consequence of e-loyalty.

Emotions can act as information, judgement guidance and decision-making (Baghi and Gabrielli, 2019). Emotions can be a better predictor of behaviour than cognitive assessments (Allen *et al.*, 1992); therefore, such effects are viewed as effective antecedents to loyalty (Dick and Basu, 1994). Following this rationale and based on empirical evidence, this study proposes that negative WOM is the ultimate emotional response towards a corporate crisis through loyalty intention (Figure 1). That is, the three crisis-specific emotions (AI, EAD and IAD) reduce consumer product repurchase intention, which, in turn, leads to unfavourable WOM.

H4. (a) AI, (b) EAD and (c) IAD emotions, respectively, increase negative WOM through behavioural intention of customers.

3. Methods

3.1 Empirical setting

This study was to examine the publics' emotions, as well as their loyalty intention and behavioural consequence (negative WOM) using a scenario of a milk crisis. In 2017, drinking milk products in Vietnam recorded remarkable retail value growth of 10% and volume growth of 9%, reaching VND 44.3 trillion and one million tonnes (Euromonitor, 2017). Vietnam has previously experienced several publics' crises in the milk industry. In 2008, Chinese dairy products containing melamine sparked worldwide safety concerns. At least 300,000 Chinese infants and young children were affected and six died

Figure 1 Conceptual model
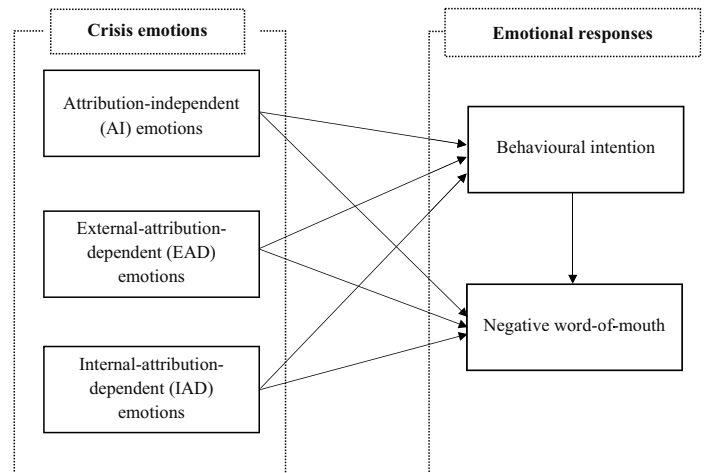
(Gossner *et al.*, 2009). The Ministry of Health of Vietnam had banned these imported milk products and requested importers to recall and destroy them. Further, an unusual increase in the number of Vietnamese children suffering from acute allergic reactions and breathing difficulties occurred shortly after a new fresh milk product supplemented with galactose-oligosaccharides was launched by a multinational company in 2009. Paediatricians attributed this to an allergic reaction to milk (Vo *et al.*, 2012). These scandals raised significant concerns for food safety in Vietnam, which led to boycotts of these milk products. Consumers have become more concerned about milk products (Euromonitor, 2017). Therefore, Vietnamese consumers and their reactions towards milk crises provided an ideal setting for this study to be conducted.

3.2 Measurement instruments
Publics' crisis emotions were measured using the scale proposed by Jin *et al.* (2014b). This scale comprises 11 items *reflecting* three emotional clusters: four items in AI and EAD, respectively, and three items in IAD. Breitsohl and Garrod's (2016) scales were adapted to measure both negative WOM (three items) and loyalty intention (two items). The participants were asked to report their agreement on a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree). The questionnaire was prepared in English and translated to Vietnamese and then backwards translated into English (Brislin, 1970). A comparison for conceptual equivalence was taken between the two versions.

3.3 Sample and data collection
Data collection included a two-stage pilot test and a follow-up survey containing a fictional scenario of a crisis situation. In the first stage of the pilot test, with a focus group of five participants clarifying the meaning of four scenarios, the two best ones were selected and adjusted. In the second stage, this research determined which of these could best provoke all crisis emotions for the interview of 30 respondents and in-depth analysis, resulting in the final fictitious scenario (Appendix). The pilot test also revealed several criteria upon which appropriate respondents were identified. Firstly, they must

have purchased drinking milk or formulated milk within the past one month. Secondly, pregnant women and parents of children under 6-year-old were identified as appropriate respondents for this study. Thirdly, as part of the convenient sampling method, office staffs who met the aforementioned criteria and could be reached via personal relationships with the interviewers were selected.

For the main survey, this research used convenience sampling in Ho Chi Minh City, Vietnam. In total 300 respondents were purposefully selected, of which 200 were officers, 50 pregnant women from a maternity hospital and 50 parents of children under 6-year-old from a paediatric hospital. Disqualified respondents were screened out by asking whether they had purchased either drinking or formulated milk within the previous month. A fictitious scenario concerning the food safety of a milk brand (Brand A) was presented to the respondents. Participants were then asked to rate their feelings, WOM and post-crisis behaviours to cope with the scenario. Their sociodemographic information was also collected.

After excluding 60 incomplete responses, a total of 240 completed questionnaires (an effective response rate of 80%) were collated. The respondents consisted of well-educated consumers with relatively high monthly incomes who frequently purchased milk (Table 2). Specifically, male and female consumers comprised 32.9% and 67.1% of the sample, respectively. Most respondents belonged to the age groups of 21 to 30 (65.8%), followed by 31 to 40 (28.8%). A majority of respondents had graduate and postgraduate education (82.9%). Reported monthly earnings varied from less than VND 10m (29.2%), VND 10m to 20m (22.5%) and more than VND 20m (13.8%) while a substantial proportion did not reveal their income (34.6%). More than half of the respondents (57.9%) purchased milk daily or at least four times per week.

4. Results

4.1 Construct validity and reliability tests
This research first tested the measurement model in PLS-SEM to confirm its satisfactory construct reliability and validity. Specifically, construct reliability was obtained as all composite

Table 2 Socio-demographic profile of respondents ($n = 240$)

Categories	Items	Frequency	(%)
Gender	Female	161	67.1
	Male	79	32.9
Age	Equal to or less than 20 years old	3	1.3
	21–30 years old	158	65.8
	31–40 years old	69	28.8
	41–50 years old	10	4.2
Education	High school or lower	17	7.1
*	Undergraduate	21	8.8
	Graduate	161	67.1
	Postgraduate	38	15.8
	No-disclosure	3	1.3
Monthly income (VND million)	Less than 10	70	29.2
*	10 to less than 20	54	22.5
	20 to less than 30	12	5.0
	More than 30	21	8.8
	No-disclosure	83	34.6
Purchase frequency	Every day	89	37.1
	4 to 6 times per week	50	20.8
	2 to 3 times per week	72	30.0
	Equal to or less than once per week	29	12.1

reliabilities (0.80 to 0.89) surpassed the threshold of 0.70 (Nunnally and Bernstein, 1994). Convergent validity was satisfactory as the average variance extracted (AVE) of all constructs (0.54 to 0.73) were well above 0.50 (Fornell and Larcker, 1981). The items with low factor loadings (< 0.40; sympathy and shame) were eliminated (Tabachnick and Fidell, 2001). Factor loadings of the focal constructs (0.57 to 0.92) were statistically significant (Hair *et al.*, 2010). Table 3 shows the results of the measurement model test.

Discriminant validity was established as the squared root of AVE values (0.73 to 0.85) were higher than the off-diagonal correlations (0.40 to 0.62) (Table 4; Fornell and Larcker, 1981). Another criterion of discriminant validity is the comparison of item loadings with item cross-loadings (Chin, 1998). Loading of each item on its assigned factor was larger than its loading on any other factor, indicating satisfactory discriminant validity of all constructs (Table 5). Because this study used self-reported data at one point in time, it is subject to common method bias. A Harman's single factor test was used to detect bias effects that might create spurious relationships amongst variables (Podsakoff *et al.*, 2003). As a single factor only comprised 39% of the variance, common method variance was not a key issue.

4.2 Endogeneity check
To ensure that potential endogeneity in the model was ruled out, this research used a two-stage least squares approach in STATA (Wooldridge, 2009). Age, gender and education were identified as the three instrumental variables because they were correlated with endogenous variables (AI, EAD and IAD emotions) in the first stage but not correlated with the dependent variable (negative WOM) in the second stage. Using the "ivendog" command in STATA, endogeneity was found not a problem (Durbin-Wu-Hausman Chi-squared test:

$\chi^2 = 0.20$, $p = 0.98$; Wu-Hausman *F*-test: F [3, 233] = 0.06, $p = 0.98$).

4.3 Testing hypotheses
Consistent with Jin *et al.* (2014b), this research conceptualised crisis emotions as a first-order, three-factor construct (i.e. AI, EAD and IAD emotions being co-varied). However, it has been noted that the factorial structure of crisis emotions has been inconsistent across studies [e.g. a single factor in Saavedra Torres *et al.* (2020) and a two-factor structure in Choi and Lin (2009)]. Therefore, additional tests were performed to compare the conceptual model (Model 1) with the models with a different emotional structure [Model 2 for the first-order, two-factor model where EAD and IAD are combined into AD along with AI; Model 3 for the second-order model with attribution emotions (a composite variable of AI, EAD and IAD)].

The three models were compared using PLSpredict (Shmueli *et al.*, 2019). This procedure is an effective and straightforward approach to evaluate the out-of-sample predictive capabilities of PLS path models. An examination of the RMSE statistics (i.e. root mean square error) in Table 7 revealed that Model 1 in comparison with other models had the lowest prediction errors in both behavioural intention (RMSE = 0.877) and negative WOM (RMSE = 0.796) (Shmueli *et al.*, 2019). Moreover, The Q^2 value for negative WOM in Model 3 was close to zero, thereby indicating its limited predictability (Hair *et al.*, 2017). The R^2 values of endogenous variables in Model 1 (26.2% for behavioural intention and 50.9% for negative WOM) also were higher than those in Models 2 and 3 (25.6% and 26.2% for behavioural intention and 50.6% and 5.4% for negative WOM in respective models), which is presented in Table 7. Notably, the paths to negative WOM both from attribution emotions and behavioural intention in Model 3 (β = 0.22 and −0.03,

Table 3 Measurement model test result

Construct	Factor loading	AVE	Composite reliability
Crisis emotions			
AI – (attribution-independent)		0.73	0.89
What happened in this situation make me feel...			
1. Anxiety	0.90		
2. Fear	0.78		
3. Apprehension	0.88		
EAD – (external-attribution-dependent)		0.54	0.82
What happened in this situation make me feel...			
1. Disgust	0.57		
2. Contempt	0.74		
3. Anger	0.85		
4. Sadness	0.73		
IAD – (internal-attribution-dependent)		0.73	0.84
What happened in this situation make me feel...			
1. Guilt	0.92		
2. Embarrassment	0.78		
Negative WOM		0.60	0.82
1. I would complain about this brand to other people	0.75		
2. I would say negative things about this brand to other people	0.82		
3. I would recommend other people not to buy this brand	0.75		
Behavioural intention		0.66	0.80
1. I would consider repurchasing this brand	0.73		
2. It is highly likely that I would repurchase this brand in the near future	0.89		

Table 4 Descriptive statistics and correlations ($n = 240$)

Construct	1	2	3	4	5
1. AI emotions	*0.85*				
2. EAD emotions	0.62	*0.73*			
3. IAD emotions	0.56	0.53	*0.85*		
4. Behavioural intention	−0.41	−0.40	−0.44	*0.81*	
5. Negative WOM	0.54	0.57	0.49	−0.59	*0.77*

Notes: Diagonals indicate the squared roots of AVEs of constructs. All correlation coefficients are significant at $p < 0.01$

Table 5 Items and cross-loadings

	AI	EAD	IAD	BI	NWOM
AI1	**0.90**	0.54	0.52	−0.41	0.49
AI2	**0.78**	0.51	0.42	−0.28	0.42
AI3	**0.88**	0.53	0.49	−0.37	0.49
EAD1	0.22	**0.57**	0.21	−0.06	0.28
EAD2	0.32	**0.74**	0.28	−0.24	0.36
EAD3	0.57	**0.85**	0.53	−0.43	0.52
EAD4	0.59	**0.73**	0.43	−0.32	0.46
IAD1	0.55	0.52	**0.92**	−0.42	0.50
IAD2	0.37	0.35	**0.78**	−0.31	0.31
BI1	−0.25	−0.13	−0.18	**0.73**	−0.38
BI2	−0.41	−0.46	−0.49	**0.89**	−0.56
NWOM1	0.49	0.40	0.33	−0.33	**0.75**
NWOM2	0.36	0.33	0.33	−0.48	**0.82**
NWOM3	0.41	0.56	0.45	−0.53	**0.75**

Notes: AI refers to attribution-independent crisis emotions, EAD indicates external-attribution-dependent crisis emotions, IAD is internal-attribution-dependent crisis emotions, BI is behavioural intention and NWOM is negative WOM

respectively, at $p > 0.05$) were statistically insignificant. Taken altogether, it was concluded that Model 1 had greater predictive capabilities than other competing models.

The proposed hypotheses were then tested using PLS-SEM, a non-parametric analysis based on principal component analysis, path analysis and OLS regression designed to maximise explained variance (Ringle *et al.*, 2015; Sarstedt *et al.*, 2019). Table 6 presents the results of testing for the hypotheses. *H1–H3* proposed that the stronger AI, EAD and IAD crisis emotions the publics experience, the more likely they spread negative WOM and the less likely they repurchase the brand. As reported in Table 6, AI emotions affected negative WOM positively ($\beta = 0.18$, $t = 2.80$) and behavioural intention negatively ($\beta = -0.16$, $t = 2.08$), thereby supporting *H1a-H1b*. To a greater extent, EAD emotions significantly stimulated negative WOM ($\beta = 0.26$, $t = 4.63$) but diminished repurchase intention ($\beta = -0.18$, $t = 2.32$), which provided empirical support for *H2a-H2b*. Interestingly, IAD emotions had a negative effect on behavioural intention ($\beta = -0.26$, $t = 3.94$), but no significant effect on negative WOM ($\beta = 0.08$, $t = 1.02$),

which partially supported *H3*. The three crisis emotions all together explained accounted for 26% of the variation in behavioural intention and 51% in negative WOM. Of these emotions, EAD emotions were the most influential predictor of negative WOM and IAD emotions were the strongest predictor of behavioural intention.

The subsequent test involved exploring whether negative WOM was linked with the three crisis emotions through behavioural intention. In addition to the estimation of the mediating effect of

Table 6 Results of hypotheses testing

Hypothesis	Path(s)	β	Indirect effect^2	Total effect^2	t-value	R^2	95% CI [LB, UB]	VAF
H1a	AI → negative WOM	0.18**			2.80	0.51		
H2a	EAD → negative WOM	0.26***			4.63			
H3a	IAD → negative WOM	0.08			1.02			
	Behavioural intention → negative WOM	−0.37***			7.79			
H1b	AI → behavioural intention	−0.16*			2.08	0.26		
H2b	EAD → behavioural intention	−0.18*			2.32			
H3b	IAD → behavioural intention	−0.26***			3.94			
H4a	AI → behavioural intention → negative WOM		0.06*		2.10		[0.001, 0.116]	0.25
H4b	EAD → behavioural intention → negative WOM		0.07*		2.18		[0.009, 0.130]	0.21
H4c	IAD → behavioural intention → negative WOM		0.10**		3.44		[0.049, 0.161]	0.56
	AI → negative WOM			0.24**	3.33		[0.104, 0.387]	
	EAD → negative WOM			0.33***	5.30		[0.187, 0.437]	
	IAD → negative WOM			0.18*	2.36		[0.040, 0.337]	

Notes: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$. 5,000 bootstrap samples

Table 7 Comparison of the models

Model	Endogenous variable	R^2	RMSE	MAE	Q^2_predict
I	Behavioural intention	0.262	0.877	0.682	0.245
	Negative WOM	0.509	0.796	0.629	0.383
II	Behavioural intention	0.256	0.881	0.689	0.233
	Negative WOM	0.506	0.797	0.629	0.382
III	Attribution emotions		0.008	0.006	1.000
	Behavioural intention	0.262	0.872	0.688	0.253
	Negative WOM	0.054	0.988	0.845	0.032

Notes: Model 1 posits that crisis emotions are a first-order, three-factor construct (AI, EAD and IAD emotions being covaried). Crisis emotions in Model 2 are conceptualised as a first-order, two-factor model where EAD and IAD are combined into AD along with AI. Crisis emotions in Model 3 are regarded as a second-order, single-factor model where attribution emotions are a composite of AI, EAD and IAD

behavioural intention, its significance was assessed using the variance accounted for (VAF). According to Hair *et al.* (2010), VAF represents the percentage of the indirect effect out of the total effect (i.e. no mediation if VAF is less than 0.20; partial mediation if VAF falls between 0.20 and 0.80; and full mediation if VAF is greater than 0.80). As also shown in Table 6, all indirect effects of crisis emotions on negative WOM via behavioural intention were found to be significant: 0.06 ($p < 0.05$, 95% confidence interval (CI) [0.001, 0.116]) for AI, 0.07 ($p < 0.05$, 95% CI [0.009, 0.130]) for EAD and 0.10 ($p < 0.01$, 95% CI [0.049, 0.161]) for IAD. The VAF values of these emotions fell between 0.21 and 0.56, which indicated partial mediation effects. The results provided empirical evidence in support of Hypotheses 4a-c that crisis emotions significantly impacted negative WOM indirectly through behavioural intention.

5. Conclusion

5.1 Research findings and theoretical contributions

The main purpose of this study was to explore the relationships amongst publics' emotions specific to a crisis, negative information transmission and behavioural intention to

purchase. Emotions are important as they may facilitate or deny the success of crisis response strategies (Baghi and Gabrielli, 2019; Lee and Suh, 2020). While the existing literature has studied emotional valence and discrete emotions (Balaji *et al.*, 2017; Saavedra Torres *et al.*, 2020; Wakefield and Wakefield, 2018), little efforts have been made to explore how attribution emotions can be used in effective firm response strategies. Building on attribution theory and theory of social sharing of emotions, this work integrates attribution emotions into the conceptual model positing that negative WOM and loyalty intention are consumer emotional responses in a corporate crisis situation. Instead of adopting emotional scales people experience in a physical environment, advertising or product consumption situations [Mehrabian and Russell's (1974) PAD, Izard's (1977) differential emotions scale, Plutchik's (1980) emotions profile index and Richins' (1997) product consumption emotions; see Lee's (2015) hedonic product consumption emotions], this research examined whether these emotions adversely influence consumer behaviour by extending the Jin *et al.*'s (2014a, 2014b) scale initially proposed to identify emotions in a crisis specific to a university setting.

Firstly, the study results indicated that all crisis emotions impacted loyalty intention negatively and negative WOM positively (except the path from IAD to negative WOM). These findings advance the existing literature that gives less concerted efforts to connect crisis emotions to consumer behaviour (e.g. behavioural intention and negative WOM). They also affirmed the validity of the attribution emotions scale proposed by Jin *et al.* (2014b) in a product crisis. In this regard, the present study is a response to a call for research that cross-validates and extends the "applicability [of the scale] to more general populations and a broader range of crisis situations" (Jin *et al.*, 2014b, p. 516).

Secondly, the current study contributes to the existing literature on WOM communication (Azemi *et al.*, 2020; He *et al.*, 2019) and brand loyalty (Khamitov *et al.*, 2019) by showing that customer repurchase intentions act as the underlying mechanism that crisis emotions ultimately turn into negative WOM communications. Drawing on the theory of social sharing of emotions, this research demonstrates that

individuals communicate openly to others about catastrophes and unexpected incidents, as well as their emotional experiences (Rimé, 2009; Zhang *et al.*, 2018). Prior studies have focussed primarily on the linkage between emotions and information transmission (Baghi and Gabrielli, 2019; Mak and Song, 2019; Nelson-Field *et al.*, 2013; Wetzer *et al.*, 2007). Building on these studies, the present research further contributes to the literature by demonstrating that behavioural intention plays a critical role in linking crisis emotions to negative WOM. This study explicitly uncovered the adverse impacts of public' crisis emotions on consumer behavioural intentions, thereby spreading negative WOM. That is, the stronger publics feel towards the firms, the crisis and themselves, the less likely they display their loyalty to the brand (i.e. reducing purchase intentions) and the more likely they communicate negative WOM.

Finally, the current study provides an indication of the relative importance of individual crisis emotion. The study findings showed that all but one crisis emotion had negative effects on both WOM and loyalty intention. Of these emotions, EAD and IAD were the strongest predictors of negative WOM and behavioural intention, respectively. To the best of our knowledge, this finding is refreshing because prior work has not examined the relative importance of individual crisis emotions on WOM and behavioural intention.

5.2 Managerial implications

The findings of this study provide several meaningful implications in guiding practitioners through crises. Firstly, the results suggest that understanding and measuring the publics' emotions is of critical importance. Product-related crisis emotions identified in this study include AI (anxiety, fear and apprehension), EAD (disgust, contempt, anger and sadness) and IAD emotions (guilt and embarrassment). This finding enables practitioners to understand what publics feel when a corporate crisis happens. This would be the first step that practitioners take to deal with the crisis (i.e. what message they are to communicate and must do so consistently).

Secondly, the current study presents a conceptual model that crisis emotions affect consumer behavioural intention and its resultant outcome that may impact the firm's financial performance in the end. The study findings show that consumer emotional responses to crises can lead to a significant impact on negative WOM. Specifically, the gravity of negative WOM transmission of a crisis is directly proportional to publics' emotions towards the relevant firms, the crisis and themselves. These emotions hinder "good" communication while triggering "bad" transmission. Thus, the publics' crisis emotions should be a top consideration for firms in crisis management. The results of this research further suggest that the external emotional experiences that the public feels towards a corporate are most influential to their WOM in a (dairy) product crisis. Publics experience strong, negative emotions, including disgust, contempt, anger and sadness towards the firms. The internal emotional experiences (i.e. publics feel towards themselves) also reflect such negative emotions. Publics experience guilt and embarrassment if most responsibility is attributed to the firm rather than the public. Furthermore, the publics experience feelings of fear, anxiety and apprehension towards the crisis itself. These emotions can diminish brand loyalty intention and then lead to negative WOM in a corporate crisis. Interestingly, the public does not tend to experience sympathy and shame in product crises mostly associated with high corporate responsibility.

5.3 Limitations and recommendations for future research

This study has several limitations that suggest avenues for future research. Firstly, the research focussed on a corporate crisis in the milk industry only. Future research may replicate this model by using other experiential and utilitarian products and services to see if the effects persist. Secondly, this study attempted to understand attribution emotions and their negative consequences in a corporate crisis from the publics' perspective. It disregarded the firms' attribution emotions in generating their reactions during crises. Therefore, a further examination concerning this approach would broaden understandings of relevant stakeholders' emotions and associated WOM communication and responses when an incident occurs.

Thirdly, this study used a scenario-based survey to achieve a minimal memory bias that may occur when recalling a crisis situation (Balaji *et al.*, 2017). This approach provides good internal validity but might lack external validity (Martin *et al.*, 2009). Using the survey with one scenario specific to milk incidents in this study might overlook other possible situations that trigger the three emotions differently. It has been suggested that emotions are context-specific (Lee, 2015; Richins, 1997); that is, the different types of emotions can be salient across study contexts. As such, future efforts should use all other possible scenarios with a larger, more diverse sample to enhance external validity. Moreover, Coombs and Holladay (2005) suggest that the publics' sympathetic feelings towards a firm are subject to its corporate responsibility practices, thereby resulting in negative post-crisis communication. Taking this into account, it is worthwhile to further investigate corporate responsibility as a potential moderator of the publics' emotional responses to corporate crises. Positive WOM to relatives and friends before crisis and customer responses to crisis management of the firm can be a possible moderator.

Moreover, future research is needed to generalise this research finding through cross-cultural examinations. Research shows that culture affects how the public perceive and react to a crisis (Baghi and Gabrielli, 2019; Zhu *et al.*, 2017). Consumers in a high individualism culture are more likely to act on their emotional states instead of subjecting themselves to the desire of the larger group (Baker *et al.*, 2013). Hence, further studies can explore cultural variations in the attribution of emotions instigating negative post-behaviours. This would help firms, especially multinational firms, advance their understanding of the publics' crisis emotions in different cultures. Managers could then adapt and implement more effective strategies that do not harm consumer loyalty towards their brands. Future studies should also include the measures of social desirability as it is possible to produce spurious correlations between variables in a self-reported research design. Finally, the extent to which customers respond to how well firms manage crises would be a fruitful avenue for further research.

References

Allen, C., Machleit, K. and Kleine, S. (1992), "A comparison of attitudes and emotions as predictors of behavior at diverse levels of behavioral experience", *Journal of Consumer Research*, Vol. 18 No. 4, pp. 493-504.

Alexandrov, A., Lilly, B. and Babakus, E. (2013), "The effects of social-and self-motives on the intentions to share positive and negative word of mouth", *Journal of the Academy of Marketing Science*, Vol. 41 No. 5, pp. 531-546.

Azemi, Y., Ozuem, W. and Howell, K.E. (2020), "The effects of online negative word-of-mouth on dissatisfied customers: a frustration–aggression perspective", *Psychology & Marketing*, Vol. 37 No. 4, pp. 564-577.

Baghi, I. and Gabrielli, V. (2019), "The role of crisis typology and cultural belongingness in shaping consumers' negative responses towards a faulty Brand", *Journal of Product & Brand Management*, Vol. 28 No. 5, pp. 653-670.

Baker, T., Meyer, T. and Chebat, J. (2013), "Cultural impacts on felt and expressed emotions and third party complaint relationships", *Journal of Business Research*, Vol. 66 No. 7, pp. 816-822.

Balaji, M., Roy, S. and Quazi, A. (2017), "Customers' emotion regulation strategies in service failure encounters", *European Journal of Marketing*, Vol. 51 Nos 5/6, pp. 960-982.

Bedwell, J.S., Cohen, A.S., Spencer, C.C. and Simpson, S.D. (2019), "Emotion experience and expressive suppression scale: psychometric properties and relationships with depression and schizotypy", *Personality and Individual Differences*, Vol. 142, pp. 145-152.

Berger, J. (2014), "Word of mouth and interpersonal communication: a review and directions for future research", *Journal of Consumer Psychology*, Vol. 24 No. 4, pp. 586-607.

Breitsohl, J. and Garrod, B. (2016), "Assessing tourists' cognitive, emotional and behavioural reactions to an unethical destination incident", *Tourism Management*, Vol. 54, pp. 209-220.

Brislin, R. (1970), "Back translation for cross-cultural research", *Journal of Cross-Cultural Psychology*, Vol. 1 No. 3, pp. 185-216.

Chaudhuri, A. and Holbrook, M. (2001), "The chain of effects from Brand trust and Brand affect to Brand performance: the role of Brand loyalty", *Journal of Marketing*, Vol. 65 No. 2, pp. 81-93.

Chen, Z. (2017), "Social acceptance and word of mouth: how the motive to belong leads to divergent WOM with strangers and friends", *Journal of Consumer Research*, Vol. 44 No. 3, pp. 613-632.

Chen, Z. and Yuan, M. (2020), "Psychology of word of mouth marketing", *Current Opinion in Psychology*, Vol. 31, pp. 7-10.

Chin, W. (1998), "The partial least squares approach to structural equation modeling", in Marcoulides, G. (Ed.), *Modern Methods for Business Research*, Lawrence Erlbaum: Mahwah, NJ pp. 295-358.

Choi, Y. and Lin, Y. (2009), "Consumer responses to mattel product recalls posted on online bulletin boards: exploring two types of emotion", *Journal of Public Relations Research*, Vol. 21 No. 2, pp. 198-207.

Coelho, A., Bairrada, C. and Peres, F. (2019), "Brand communities' relational outcomes, through Brand love", *Journal of Product & Brand Management*, Vol. 28 No. 2, pp. 154-165.

Coombs, W. (2007), "Protecting organisation reputations duing a crisis: the development and application of situational crisis communication theory", *Corporate Reputation Review*, Vol. 10 No. 3, pp. 163-176.

Coombs, W. and Holladay, S. (2005), "An exploratory study of stakeholder emotions: Affect and crises", in Ashkanasy, N., Zerbe, W. and Härtel, C. (Eds), *The Effect of Affect in Organizational Settings*, Emerald Group Publishing Limited, Bingley, pp. 263-280.

Coombs, W. and Holladay, S. (2007), "The negative communication dynamic: exploring the impact of stakeholder affect on behavioral intentions", *Journal of Communication Management*, Vol. 11 No. 4, pp. 300-312.

Coombs, W. and Holladay, S. (2008), "Comparing apology to equivalent crisis response strategies: clarifying apology's role and value in crisis communication", *Public Relations Review*, Vol. 34 No. 3, pp. 252-257.

Crisp (2019), "The 2019 crisis impact report", available at: https://s3.amazonaws.com/media.mediapost.com/uploads/2019CrispCrisisImpactStudy.pdf (accessed 10 May 2020)

Deloitte (2016), "A crisis of confidence", available at: www2.deloitte.com/global/en/pages/risk/articles/a-crisis-of-confidence.html (accessed 10 May 2020).

Dick, A. and Basu, K. (1994), "Customer loyalty: toward an integrated conceptual framework", *Journal of the Academy of Marketing Science*, Vol. 22 No. 2, pp. 99-113.

Dixon, T. (2012), "Emotion": the history of a keyword in crisis", *Emotion Review*, Vol. 4 No. 4, pp. 338-344.

Edwards, J., Jackson, H. and Pattison, P. (2002), "Emotion recognition via facial expression and affective prosody in schizophrenia: a methodological review", *Clinical Psychology Review*, Vol. 22 No. 6, pp. 789-832.

Eisenberg, N. (1991), "Values, sympathy, and individual differences: toward a pluralism of factors influencing altruism and empathy", *Psychological Inquiry*, Vol. 2 No. 2, pp. 128-131.

Euromonitor (2017), "Drinking milk products in vietnam", available at: www.euromonitor.com/drinking-milk-products-in-vietnam/report (accessed 10 May 2020).

Fernandes, T. and Moreira, M. (2019), "Consumer Brand engagement, satisfaction and Brand loyalty: a comparative study between functional and emotional Brand relationships", *Journal of Product & Brand Management*, Vol. 28 No. 2, pp. 274-286.

Fornell, C. and Larcker, D. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.

Gelbrich, K. (2010), "Anger, frustration, and helplessness after service failure: coping strategies and effective informational support", *Journal of the Academy of Marketing Science*, Vol. 38 No. 5, pp. 567-585.

Gossner, C., Schlundt, J., Embarek, P., Hird, S., Lo-Fo-Wong, D., Beltran, J. and Tritscher, A. (2009), "The melamine incident: implications for international food and feed safety", *Environmental Health Perspectives*, Vol. 117 No. 12, pp. 1803-1808.

Grappi, S., Romani, S. and Bagozzi, R. (2013), "Consumer response to corporate irresponsible behavior: moral

emotions and virtues", *Journal of Business Research*, Vol. 66 No. 10, pp. 1814-1821.

Hagen, L., Krishna, A. and McFerran, B. (2019), "Outsourcing responsibility for indulgent food consumption to prevent negative affect", *Journal of the Association for Consumer Research*, Vol. 4 No. 2, pp. 136-146.

Hair, J., Black, W., Babin, B. and Anderson, R. (2010), *Multivariate Data Aanalysis*, 7th ed., Pearson Education Limited Vectors, Essex.

Hair, J., Hollingsworth, C., Randolph, A. and Chong, A. (2017), "An updated and expanded assessment of PLS-SEM in information systems research", *Industrial Management & Data Systems*, Vol. 117 No. 3, pp. 442-458.

He, Y., Ju, I., Chen, Q., Alden, D.L., Zhu, H. and Xi, K. (2019), "Managing negative word-of-mouth: the interplay between locus of causality and social presence", *Journal of Services Marketing*, Vol. 34 No. 2, pp. 137-148.

Izard, C. (1977), *Human Emotions*, Plenum Press, New York, NY.

Izard, C. (2010), "The many meanings/aspects of emotion: definitions, functions, activation, and regulation", *Emotion Review*, Vol. 2 No. 4, pp. 363-370.

Japutra, A., Ekinci, Y. and Simkin, L. (2018), "Positive and negative behaviours resulting from Brand attachment", *European Journal of Marketing*, Vol. 52 Nos 5/6, pp. 1185-1202.

Jeon, J.O. and Baeck, S. (2016), "What drives consumer's responses to Brand crisis? The moderating roles of Brand associations and Brand-customer relationship strength", *Journal of Product & Brand Management*, Vol. 25 No. 6, pp. 550-567.

Jin, Y., Fraustino, J. and Liu, B. (2016), "The scared, the outraged, and the anxious: how crisis emotions, involvement, and demographics predict publics' conative coping", *International Journal of Strategic Communication*, Vol. 10 No. 4, pp. 289-308.

Jin, Y., Liu, B. and Austin, L. (2014a), "Examining the role of social media in effective crisis management: the effects of crisis origin, information form, and source on publics' crisis responses", *Communication Research*, Vol. 41 No. 1, pp. 74-94.

Jin, Y., Liu, B., Anagondahalli, D. and Austin, L. (2014b), "Scale development for measuring publics' emotions in organizational crises", *Public Relations Review*, Vol. 40 No. 3, pp. 509-518.

Jin, Y., Pang, A. and Cameron, G. (2012), "Toward a publics-driven, emotion-based conceptualization in crisis communication: unearthing dominant emotions in multi-staged testing of the integrated crisis mapping (ICM) model", *Journal of Public Relations Research*, Vol. 24 No. 3, pp. 266-298.

Karjaluoto, H., Munnukka, J. and Kiuru, K. (2016), "Brand love and positive word of mouth: the moderating effects of experience and price", *Journal of Product & Brand Management*, Vol. 25 No. 6, pp. 527-537.

Khamitov, M., Wang, X. and Thomson, M. (2019), "How well do consumer-Brand relationships drive customer Brand loyalty? Generalizations from a Meta-analysis of Brand relationship elasticities", *Journal of Consumer Research*, Vol. 46 No. 3, pp. 435-459.

Kim, H. and Cameron, G. (2011), "Emotions matter in crisis: the role of anger and sadness in the publics' response to crisis news framing and corporate crisis response", *Communication Research*, Vol. 38 No. 6, pp. 826-855.

Kim, H. and Niederdeppe, J. (2013), "The role of emotional response during an H1N1 influenza pandemic on a college campus", *Journal of Public Relations Research*, Vol. 25 No. 1, pp. 30-50.

King, R.A., Racherla, P. and Bush, V.D. (2014), "What we know and don't know about online word-of-mouth: a review and synthesis of the literature", *Journal of Interactive Marketing*, Vol. 28 No. 3, pp. 167-183.

Krishna, A., Herd, K.B. and Aydınoğlu, N.Z. (2019), "A review of consumer embarrassment as a public and private emotion", *Journal of Consumer Psychology*, Vol. 29 No. 3, pp. 492-516.

Laros, F. and Steenkamp, J. (2005), "Emotions in consumer behavior: a hierarchical approach", *Journal of Business Research*, Vol. 58 No. 10, pp. 1437-1445.

Lee, J. (2015), "Antecedents and consequences of discrete emotions in hedonic consumption situations", *Services Marketing Quarterly*, Vol. 36 No. 3, pp. 226-244.

Lee, S.B. and Suh, T. (2020), "Internal audience strikes back from the outside: emotionally exhausted employees' negative word-of-mouth as the active Brand-oriented deviance", *Journal of Product & Brand Management*, Vol. 29 No. 7, pp. 863-876.

Liu, B., Austin, L. and Jin, Y. (2011), "How publics respond to crisis communication strategies: the interplay of information form and source", *Public Relations Review*, Vol. 37 No. 4, pp. 345-353.

Londono, J.C., Davies, K. and Elms, J. (2017), "Extending the theory of planned behavior to examine the role of anticipated negative emotions on channel intention: the case of an embarrassing product", *Journal of Retailing and Consumer Services*, Vol. 36, pp. 8-20.

Mak, A.K. and Song, A.O. (2019), "Revisiting social-mediated crisis communication model: the lancôme regenerative crisis after the Hong Kong umbrella movement", *Public Relations Review*, Vol. 45 No. 4, pp. 101812.

Marchand, J. and Filiatrault, P. (2002), "AIDS prevention advertising: different message strategies for different communication objectives", *International Journal of Nonprofit and Voluntary Sector Marketing*, Vol. 7 No. 3, pp. 271-287.

Martin, W., Ponder, N. and Lueg, J. (2009), "Price fairness perceptions and customer loyalty in a retail context", *Journal of Business Research*, Vol. 62 No. 6, pp. 588-593.

Matzler, K., Grabner-Kräuter, S. and Bidmon, S. (2008), "Risk aversion and Brand loyalty: the mediating role of Brand trust and Brand affect", *Journal of Product & Brand Management*, Vol. 17 No. 3, pp. 54-162.

McCroskey, J. (1970), "Measures of communication-bound anxiety", *Speech Monographs*, Vol. 37 No. 4, pp. 269-277.

McDonald, L., Sparks, B. and Glendon, A. (2010), "Stakeholder reactions to company crisis communication and causes", *Public Relations Review*, Vol. 36 No. 3, pp. 263-271.

Mehrabian, A. and Russell, J. (1974), *An Approach to Environmental Psychology*, The MIT Press, Cambridge, MA.

Merchant, A., Ford, J. and Sargeant, A. (2010), "Charitable organizations' storytelling influenceon donor's emotions and intentions", *Journal of Business Research*, Vol. 63 No. 7, pp. 754-762.

Nelson-Field, K., Riebe, E. and Newstead, K. (2013), "The emotions that drive viral video", *Australasian Marketing Journal*, Vol. 21 No. 4, pp. 205-211.

Nunnally, J. and Bernstein, I. (1994), *Psychometric Theory*, 3rd ed., McGraw-Hill, New York, NY.

Oliver, R. (1999), "Whence consumer loyalty?", *Journal of Marketing*, Vol. 63 No. 4_suppl1, pp. 33-44.

Palmeira, M., Spassova, G., & Quoidbach, J. (2020), "You're not yelping your case: the unexpected social consequences of word of mouth", *European Journal of Marketing*, Vol. 54 No. 2, pp. 419-447.

Petzer, D., De Meyer, C., Svari, S. and Svensson, G. (2012), "Service receivers' negative emotions in airline and hospital service settings", *Journal of Services Marketing*, Vol. 26 No. 7, pp. 484-496.

Plutchik, R. (1980), *Emotion: A Pychoevolutionary Synthesis*, Harper & Row, New York, NY.

Podsakoff, P., Mackenzie, S., Lee, J. and Podsakoff, N. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903.

PwC (2019), "Crisis preparedness as the next competitive advantage: learning from 4,500 crises. PwC's global crisis survey 2019", available at: www.pwc.com/gx/en/forensics/global-crisis-survey/pdf/pwc-global-crisis-survey-2019.pdf (accessed 10 May 2020).

Richins, M. (1997), "Measuring emotions in the consumption experience", *Journal of Consumer Research*, Vol. 24 No. 2, pp. 127-146.

Rimé, B. (2009), "Emotion elicits the social sharing of emotion: theory and empirical review", *Emotion Review*, Vol. 1 No. 1, pp. 60-85.

Ringle, C., Wende, S. and Becker, J. (2015), "SmartPLS 3", available at: www.smartpls.com/ (accessed 10 May 2020).

Romani, S., Grappi, S. and Dalli, D. (2012), "Emotions that drive consumers away from brands: measuring negative emotions toward brands and their behavioral effects", *International Journal of Research in Marketing*, Vol. 29 No. 1, pp. 55-67.

Rozin, P., Lowery, L., Imada, S. and Haidt, J. (1999), "The CAD triad hypothesis: a mapping between three moral emotions (contempt, anger, disgust) and three moral codes (community, autonomy, divinity)", *Journal of Personality and Social Psychology*, Vol. 76 No. 4, pp. 574-586.

Saavedra Torres, J.L., Rawal, M. and Bagherzadeh, R. (2020), "Role of Brand attachment in customers' evaluation of service failure", *Journal of Product & Brand Management*, Vol. 30 No. 3, doi: 10.1108/JPBM-03-2019-2293.

Sarstedt, M., Hair, Jr, J.F., Cheah, J.H., Becker, J.M. and Ringle, C.M. (2019), "How to specify, estimate, and validate higher-order constructs in PLS-SEM", *Australasian Marketing Journal*, Vol. 27 No. 3, pp. 197-211.

Schoefer, K. and Diamantopoulos, A. (2008), "The role of emotions in translating perceptions of (in) justice into

postcomplaint behavioral responses", *Journal of Service Research*, Vol. 11 No. 1, pp. 91-103.

Schoofs, L., Claeys, A., De Waele, A. and Cauberghe, V. (2019), "The role of empathy in crisis communication: providing a deeper understanding of how organizational crises and crisis communication affect reputation", *Public Relations Review*, Vol. 45 No. 5, pp. 1-9.

Shmueli, G., Sarstedt, M., Hair, J., Cheah, J., Ting, H., Vaithilingam, S. and Ringle, C. (2019), "Predictive model assessment in PLS-SEM: guidelines for using PLSpredict", *European Journal of Marketing*, Vol. 53 No. 11, pp. 2322-2347.

Srinivasan, S., Anderson, R. and Ponnavolu, K. (2002), "Customer loyalty in e-commerce: an exploration of its antecedents and consequences", *Journal of Retailing*, Vol. 78 No. 1, pp. 41-50.

Su, L., Wan, L. and Wyer Jr, R. (2018), "The contrasting influences of incidental anger and fear on responses to a service failure", *Psychology & Marketing*, Vol. 35 No. 9, pp. 666-675.

Sweeney, J., Soutar, G. and Mazzarol, T. (2005), "The difference between positive and negative word-of-mouth – emotion as a differentiator", *Proceedings of the ANZMAC 2005 Conference: Broadening the Boundaries*, University of Western Australia, Perth, pp. 331-337.

Tabachnick, B. and Fidell, L. (2001), *Using Multivariate Statistics*, 4th ed., Allyn & Bacon, Needham Heights, MA.

Tangney, J., Stuewig, J. and Mashek, D. (2007), "Moral emotions and moral behavior", *Annual Review of Psychology*, Vol. 58 No. 1, pp. 345-372.

Tangney, J., Wagner, P., Hill-Barlow, D., Marschall, D. and Gramzow, R. (1996), "Relation of shame and guilt to constructive versus destructive responses to anger across the lifespan", *Journal of Personality and Social Psychology*, Vol. 70 No. 4, pp. 797-809.

The Verde/Wharton (2007), "Shoppers at risk: an annual study of retail dissatisfaction", available at: www.verdegroup.com/wp-content/uploads/2012/10/Shoppers-At-Risk-Exec-Summary_07.pdf (accessed 10 May 2020).

Vo, T., Le, N., Patel, M., Phan, L. and Tran Minh, N. (2012), "Acute allergic reactions in vietnamese children after drinking a new milk product", *Foodborne Pathogens and Disease*, Vol. 9 No. 2, pp. 156-159.

Wakefield, L. and Wakefield, R. (2018), "Anxiety and ephemeral social media use in negative eWOM creation", *Journal of Interactive Marketing*, Vol. 41, pp. 44-59.

Wallace, E., Buil, I. and de Chernatony, L. (2014), "Consumer engagement with self-expressive brands: brand love and WOM outcomes", *Journal of Product & Brand Management*, Vol. 23 No. 1, pp. 33-42.

Weiner, B. (1972), "Attribution theory, achievement motivation, and the educational process", *Review of Educational Research*, Vol. 42 No. 2, pp. 203-215.

Weiner, B. (1986), "Attribution, emotion, and action", in Sorrentino, R. and Higgins, E. (Eds), *Handbook of Motivation and Cognition: Foundation of Social Behavior*, The Guilford Press, New York, NY, pp. 281-313.

Wetzer, I., Zeelenberg, M. and Pieters, R. (2007), "Never eat in that restaurant, I did!": exploring why people engage in negative word-of-mouth communication",

Psychology and Marketing, Vol. 24 No. 8, No. 8, pp. 661-680.

Witkower, Z., Mercadante, E.J. and Tracy, J.L. (2020), "How affect shapes status: distinct emotional experiences and expressions facilitate social hierarchy navigation", *Current Opinion in Psychology*, Vol. 33, pp. 18-22.

Wollan, R., Davis, P., De Angelis, F. and Quiring, K. (2017), "Seeing beyond the loyalty illusion: it's time you invest more wisely", available at: https://www.accenture.com/t20170216T 035010Z__w__/us-en/_acnmedia/PDF-43/Accenture-Strategy-GCPR-Customer-Loyalty.pdf (accessed 10 May 2020).

Wooldridge, J. (2009), *Introductory Econometrics: A Modern Approach*, 4th ed., South-Western Cengage Learning: Mason, OH.

Zhang, X.A., Borden, J. and Kim, S. (2018), "Understanding publics' post-crisis social media engagement behaviors: an examination of antecedents and mediators", *Telematics and Informatics*, Vol. 35 No. 8, pp. 2133-2146.

Zhu, L., Anagondahalli, D. and Zhang, A. (2017), "Social media and culture in crisis communication: mcDonald's and KFC crises management in China", *Public Relations Review*, Vol. 43 No. 3, pp. 487-492.

Appendix. A fictitious scenario

"Some families reported that their children are sick after consuming milk. Initial investigation has shown a certain level of melamine in the children's blood. This proved that these children had consumed a large amount of melamine-contaminated products. After having the official testing result, the Ministry of Health announced publicly that Brand A milk has excessively high levels of melamine which can cause dangerous kidney and bone diseases in humans. Unfortunately, Brand A is your favourite brand of milk. And you have heard this news from the national TV channels and all newspapers".

About the authors

Oanh Dinh Yen Nguyen is a Lecturer at the College of Economics, Can Tho University, Can Tho, Vietnam. Her primary research interests focus on consumer behaviour and scarcity. She is currently a PhD Candidate in Marketing at UNSW Sydney, Australia. She has published in the *European Journal of Marketing, Asia Pacific Journal of Marketing and Logistics*.

Jenny (Jiyeon) Lee is a Senior Lecturer at the School of Marketing, UNSW, Sydney, Australia. Her research interests encompass services marketing and management and applied marketing science with a focus on linking key marketing metrics to firm financial performance. Her work appears in numerous journals across disciplines, including the *European Journal of Marketing, Services Marketing Quarterly, Journal of Travel Research, Journal of Travel and Tourism Marketing, etc*.

Liem Viet Ngo is an Associate Professor at the School of Marketing, UNSW Sydney. He has published in *International Journal of Research in Marketing, Journal of Service Research, Journal of Product Innovation Management, British Journal of Management, Industrial Marketing Management, European Journal of Marketing, Psychology and Marketing, Long Range Planning, Journal of Business Research, etc*. Liem Viet Ngo is the corresponding author and can be contacted at: liem.ngo@unsw.edu.au

Tran Ha Minh Quan is an Associate Professor and the Dean of the International School of Business, University of Economics HCM City, Vietnam. His works have been published in *Journal of Services Marketing, Journal of Retailing and Consumer Services, Journal of Brand Management, Advances in Business Marketing and Purchasing, Asia-Pacific Journal of Business Administration, Public Organisation Review, Marketing Intelligence & Planning, etc*.