Investigating Iran Airline Customers' Responses in Crisis Situations and Identification of Adopted Strategies

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ABSTRACT

In fierce competition of airline industry, due to sensitive nature and vital rule of crisis management, viability of companies in this industry is highly depended on skillful handling of crisis situations. The aim of this study is to first determine the different strategies of airline companies in dealing with crisis situations in Iran and then to identify the effect of Customer's perception of danger on repurchase intention for Iran's airline industry. Data obtained from 500 survey questionnaire were analyzed using the structural equation modeling (SEM). The results revealed that Denial has a significantly negative effect on Customer's perception of danger. Involuntary product recall has a significantly negative effect on Customer's perception of danger. Voluntary product recall has a significantly positive effect on Customer's perception of danger. Supper effort has a significantly positive effect on Customer's perception of danger. Customer's perception of danger has a significantly positive effect on Repurchase intentions. In addition results show that Denial was the best negative predictor of their Customer's perception of danger and Supper effort was the best positive predictor of Customer's perception of danger.

Introduction

A crisis is a critical situation which, if mishandled, can inflict serious damage on the organization (Carley and Lin, 1995; Perrow, 1984; Arpan and Pompper, 2003). A crisis can strike any company at any time. If the company does not respond to the crisis immediately, then the crisis escalates into a catastrophe (Davies and Walters, 1998). The factor that determines how well a company will withstand a crisis is its ability to respond to that crisis. Effective crisis management can control the negative publicity and protects the company's image (Stafford et al., 2002). Product-harm crises are complex situations wherein products are found to be defective, unsafe or even dangerous (Dawar and Pillutla, 2000). Siomkos and Kurzbard (1994) define product-harm crisis as an ''abrupt break of the product life cycle''. Product-harm crises, which may erupt from various causes (e.g., manufacturer's negligence, product misuse, sabotage, etc.), could cause serious survival problems to the company. Regardless of their cause, product-harm crises result in vast financial costs for the company, negative effects on sales and even destruction of their corporate image (Siomkos, 1999). During a product-harm crisis, consumers often receive negative information about the product and the company. As a result, after a crisis consumer attitudes will change negatively (Siomkos and Kurzbard, 1994). In order for the company to be able to bring the customers back to purchasing its products, certain immediate actions are necessary. Proactive product recall, victim compensation and accept responsibility for liability are some of these actions met in the relevant literature (Siomkos and Shrivastava, 1993; Siomkos and Kurzbard, 1994; Siomkos and Malliaris, 1992).

According to Elliott et al. (2005), a possible weakness of crisis management literature is rooted on its organization centrism. Consumer perceptions associated with the organizational responses to the crisis have received little attention. Empirical examinations, have been mainly focused on investigating the most important factors influencing crisis management, such as the amount and intensity of media attention (Weinberger and Romeo, 1989), the type of media coverage (Jolly and Mowen, 1984; Weinberger et al., 1991), the amount and degree of injuries (Mowen, 1980; Mowen and Ellis, 1981), the attention from regulatory bodies (Weinberger, 1986), the company's reputation (Siomkos and Shrivastava, 1993), the crisis type (Coombs, 1995; Mitroff and Pearson, 1993), the company's message (Griffin et al., 1991; Jorgensen, 1994,1996) and the company's response (Siomkos and Kurzbard, 1994). Effective crisis management involves the consumer's approval of the organizational response and consumer's persuasion that the product is safe again as the company has overcome the crisis (Siomkos, 1999).

Furthermore ,organizational response has a major impact on consumers during product-harm crises. Shrivastava and Siomkos (1989) demonstrated that there are four basic organizational responses.(a) Denial: the company denies the responsibility for the harm and does not show any concern with consumers' welfare,(b) Involuntary recall: the company recalls its product after the order of an agency,(c) Voluntary recall: the company chooses to recall its product before the government or a governmental agency forces it to do so, and(d) Super effort: the company tries hard to communicate a responsible image.It recalls the harmful product immediately and compensates the victims. Moreover, the company informs the customers about how to return the defeat product and may offer specia ldiscounts and coupons of an other product Regarding the consequences of a product-harm crisis, most research studies have tended to emphasise consumer reactions, and thus, behavioural intentions of consumers, including purchase intentions of the defective

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product (Dawar and Pillutla, 2000; Klein and Dawar, 2004; Matos and Rossi, 2007).

On the basis of above issues the purpose of current study are twofold: 1) examining the impact of company's response strategies (i.e., denial, involuntary product recall, voluntary product recall and supper effort), on customer's perception of danger. 2) Examining the impact of customer's perception of danger on repurchase intention.

Literature review and research hypotheses

Company's response strategies (i.e., denial, involuntary product recall, voluntary product recall and supper effort) and customer's perception of danger During times of product-harm crisis, the affected company has a variety of response strategies (Siomkos and Kurzbard, 1994) that can be implemented in order to influence the perceptions of consumers (Kim et al., 2008). There is arguably an interdependent relationship between risk assessment and crisis response strategies (Lerbinger, 1997). Thus, another factor that could impact consumer perceptions of risk is the affected company's response strategies (Siomkos and Kurzbard, 1994). On the other hand, specifically in the context of product-harm crises, a stream of research studies (Siomkos and Malliaris, 1992; Siomkos and Shrivartara, 1993; Siomkos and Kurzbard, 1994; Siomkos, 1999) has examined the impact of four organizational responses, namely: denial, involuntary recalls, voluntary recalls, and super effort in consumer reactions. This categorisation adopts a more holistic approach from a managerial point of view that directs crisis managers in their response strategies; thus, it is most suitable for product-harm crises. The strategies of voluntary product recall and super effort, where the company shows great interest in consumer welfare, seem to be the most effective in reducing the perceived risk of consumers and rebuilding their confidence towards the affected company (Siomkos and Malliaris, 1992; Siomkos and Shrivartara, 1993; Siomkos and Kurzbard, 1994). More specifically, according to Siomkos and Shrivartara (1993) and Shrivastava and Siomkos (1989), the super effort response may also include the promotion of the product recall, the offering of special discounts and coupons, free samples of another product, etc. in order to recapture the company's public image and market share. On the other hand, strategies such as denial and product recall that take place according to the recommendations of regulatory agencies, where the company refuses its responsibility for the harm, produce high levels of risk and danger in the minds of consumers (Siomkos, 1999). Therefore, the following related hypothesis is stated:

Hypothesis 1: denial has a significant negative effect on customer perceptions of danger

Hypothesis 2: involuntary product recall has a significant negative effect on customer perceptions of danger

Hypothesis 3: voluntary product recall has a significant positive effect on customer perceptions of danger

Hypothesis 4: supper effort has a significant positive effect on customer perceptions of danger

Customer's perception of danger and repurchase intention

In a product-harm crisis, individual subjective perceptions of danger and risk seem to guide consumer behaviour (Bauer, 1967). When consumers are involved in dangerous situations (i.e. purchasing a defective product), they tend to be "risk averse" (Mitchell, 1999) and try to decrease the degree of danger in their minds (Paswan et al., 2007). For example, when consumers face an unexpected event such as a product recall, they lose confidence towards the affected company for a long

time (Barton, 1994) and stop purchasing the company's products.

The perceived risk appears to be a factor with significant impact on purchase intentions following a product tampering incident (Stockmyer, 1996). Pennings et al. (2002) have shown that buying a crisis-affected product is considered as highly risky. Furthermore, it has been found that changes in beef consumption were strongly related to the perceived risk of "mad cow disease" (Setbon et al., 2005). Moreover, Dawar and Pillutla, (2000) argue that purchasers of the brand in crisis are more sensitive to the response of the firm than to the risk of the defective product itself, contrary to purchasers of other brands who appear to focus more on product risk perceptions than on the firm's response. The perceived danger of the defective product is a significant predictor of behavioural intentions, that is the higher the danger perceived, the more unfavourable the behavioural intentions toward the company (de Matos and Rossi, 2007).

Hypothesis 5: Customer's perception of danger has a significant positive effect on repurchase intention

Based on the review of the aforementioned past studies, the conceptual model (Fig. 1) is proposed by the current study. This model indicates the causal relationships between the constructs of concern in the research.
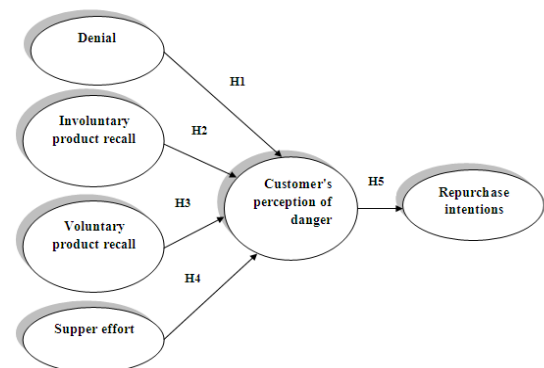

Fig.1. A proposed conceptual model

Research methodology
Measures

A self-administered questionnaire survey of airlines Customers in Iran was conducted to collect empirical data for this study. The questionnaire was designed based upon a review of the related literature. All items measured on the five-point Likert scale rang from "strongly disagree" to "strongly agree". Table 1 shows the measurement items of constructs used in this study.

Data collection

This study could be considered as a causal and cross-sectional study. The questionnaire of this study distributed among customers of airlines in Jun 2012. The study used a simple random sampling method. Customers were asked about their willingness to take part in the survey and if they answered yes then they were asked to complete a pencil and paper questionnaire under the guidance of the data collector. A total of 500 questionnaires were distributed from Jun to July, 2012. After deleting unusable questionnaire, 384 useful samples were obtained, yielding a 0.76 response rate. From the respondent profile, (59.33%) of the respondents were male. More than (46%) of the respondents were between the ages of 31 to 40. Nearly (70%) of respondents were married. The education profile indicates that more than (50%) of respondents were among academic graduates.

Data analysis and results

Assessment of measurement model

A confirmatory factor analysis (CFA) via Lisrel 8.50 was conducted to test the measurement model. Six common model-fit measure were employed to assess the models overall appropriateness, namely the ratio of chi-square to degrees-of-freedom (χ^2/d.f), goodness-of-fit index (GFI), adjusted goodness-of-fit- index (AGFI), normalized fit index (NFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA). As shown in table 2 all the model-fit indices exceeded their respective common acceptance level suggested by previous research (Bagozzi and Yi, 1988; Mulaik, James, Van. Alstine, Bennett, Lind and Stilwell, 1989). Therefore, the measurement model has a good fit with the data collected.

Reliability of each constructs was calculated by Cronbach's alpha coefficients. The Cronbach's alpha of all constructs exceeded the minimum requirement for reliability of 0.70, ranging from 0.71 to 0.93. The results of the reliability test indicated that multiple measurement items were highly reliable for measuring each construct (Table 3). Construct validity is the extent to which a set of measured variables actually reflects the latent construct they are designed to measure. Construct validity in established in this study by establishing the face validity and convergent validity. Face validity was established by adopting the measurement items used in the study from the existing literature and adapting the same to the present research context. Moreover before the questionnaire was finalized, some academic professional who are familiar with the subject of this study reviewed the questionnaire to assure face validity. Minor revisions were made based on their suggestions. Therefore, the face validity of the questionnaire was deemed as adequate.

Convergent validity was assessed by examining the factor loading and average variance extracted (AVE) of the constructs as suggested by Fornell and Larcker (1981). All the indicator had significant loading onto the respective latent construct (p< 0.05) with values greater than or equal to 0.50 (table 3). In addition, the average variance extracted (AVE) for each construct is greater than or equal to 0.50, which further support the convergent validity of the constructs (table 3). *Structural model*

Having established a reliable and valid measurement model, a structural model is used to test the causal relationships between constructs of the proposed conceptual model. The simultaneous maximum-likelihood-estimation procedures are used to examine the hypothesized relationships among Denial, Involuntary product recall, Voluntary product recall, Supper effort, Customer's perception of danger and Repurchase intentions.

The goodness-of-fit indices of the final estimated structural model include χ^2/d.f (508.85/303 =1.68), GFI (0.91), AGFI (0.83), CFI (0.97), NFI (0.93), and RMSEA (0.062), indicating that the structural model has a reasonable expiation of the observed covariance among the constructs of interest. Fig 2 shows the results of the estimated structural model.

Hypotheses testing

H1 to H5 were examined by using the structural equation modeling (using LISREL 8.50). Regarding the hypothesis tests, as shown in table 5 and fig 2 all of the structural path estimates are statically significant (p< 0.05). Denial has a significantly negative effect on Customer's perception of danger (γ1= -0.56, t-value= -6.70) thus H1 is supported. Involuntary product recall has a significantly negative effect on Customer's perception of

danger (γ2= -0.51, t-value= -5.40) thus H2 is supported. Voluntary product recall has a significantly positive effect on Customer's perception of danger (γ3= 0.53, t-value= 6.54) thus H3 is supported. Supper effort has a significantly positive effect on Customer's perception of danger (γ4= 0.94, t-value= 16.33) thus H4 is supported. Customer's perception of danger has a significantly positive effect on Repurchase intentions (γ5= 1.01, t-value= 4.90) thus H5 is supported.
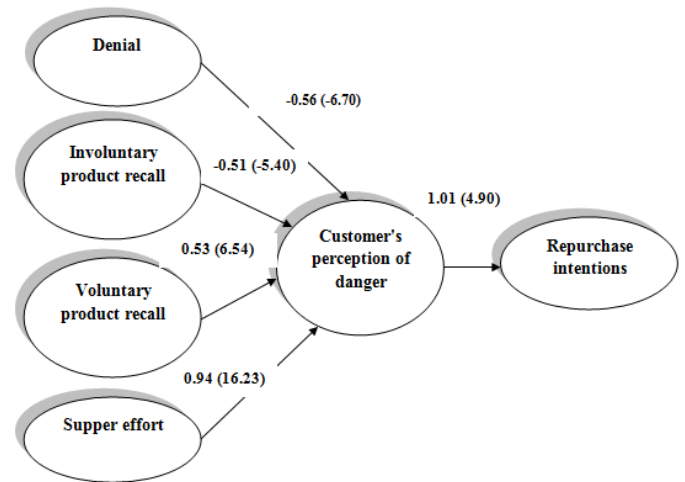

Fig.2. The estimated structural model

Discussion and conclusion

Van Heerde, Helsen, and Dekimpe (2007) use at ime-varying error correction model to assess a brand crisis on baseline sales and the marketing-mix effectiveness. Cleeren, Dekimpe, and Helsen(2008) study how consumer characteristics and advertising impact on consumers' decisions of the affected product after product harm crisis. Early scholars have discussed product harm crisis and its negative impacts from eight aspects: First, the classification of product harm crisis. Second, the perception of crisis. Third, consumers' complaint behaviors. Fourth, consumers' loyalty. The higher brand loyalty consumers have, the more likely they are able to maintain awareness of product value judgments for consumers. Fifth, consumers' consider set. Sixth, the purchase intention. Seven is the attitude of consumers. Eight is the brand assets.

Research on product-harm crises has focused on the antecedents that impact consumer responses. The most recognised antecedents of consumer attitudes towards the defective product are brand familiarity and reputation of the affected company (Mowen et al., 1980; Siomkos and Shrivartara, 1993; Siomkos and Kurzbard, 1994; Dean, 2004; Dawar and Lei, 2008), brand loyalty (Cleeren et al., 2006), external factors such regulatory agencies, interests groups, and media (Jolly and Mowen, 1985; Siomkos and Kurzbard, 1992; Siomkos and Malliaris, 1992; Siomkos, 1999), responses of the affected company to the incident (Wiener and Mowen, 1985; Shrivastava and Siomkos, 1989; Siomkos, 1989; Dawar and Pillutla, 2000), attributions of responsibility and blame (Mowen et al., 1981; Richins, 1983; Folkes, 1984, 1988; Griffin et al., 1991; Laczniak et al., 2001; Laufer and Coombs, 2006), perceptions of the severity of the product-harm crisis (Mowen, 1980; Mowen and Ellis, 1981; Tedeschi and Nesler, 1993; Kelly and Campbell, 1997; Laufer et al., 2005), pre-crisis category usage and advertising (Cleeren et al., 2006), corporate social responsibility (Klein and Dawar, 2004; Matos and Rossi, 2007), appearance of safety signals on the defective product (Griffin et al., 1992),Product-harm crises the number of product recalls that have been take place prior to the crisis (Matos and Rossi, 2007),

and prior expectations (Dawar and Pillutla, 2000).

Regarding the consequences of a product-harm crisis, most research studies have tended to emphasise consumer reactions, and thus, behavioural intentions of consumers, including purchase intentions of the defective product (Dawar and Pillutla, 2000; Klein and Dawar, 2004; Matos and Rossi, 2007), purchase intentions towards all the affected company's products (Griffin et al., 1991; Siomkos and Kurzbard, 1994; Matos and Rossi, 2007), re-purchase intentions (Folkes, 1984, 1988; Folkes and Kotsos, 1986), intentions to complain (Folkes, 1984, 1988; Folkes and Kotsos, 1986; Laczniak et al., 2001; Klein and Dawar, 2004), intentions to replace the affected brand (Folkes, 1984; Laczniak et al., 2001; Klein and Dawar, 2004), likelihood of buying a new product from the affected company (Mowen, 1980; Mowen and Ellis, 1981), and recommending the affected product or company to others – in other words, positive word of mouth behaviour (Matos and Rossi, 2007). Cleeren et al. (2006) considered the real volume of purchase behaviour regarding consumers of the defective brand and competitor brands.

Table.1 measurement scales used in the current study, related question number and variables in the questionnair

Variables/construct	Question number/Items	Source of the scale
Denial	1-2-3-4-5	George J.Siomkos&et., al,1992
Involuntary product recall	9-10-11	George J.Siomkos&et., al,1992
Voluntary product recall	6-7-8	George J.Siomkos&et., al,1992
Supper effort	12-13-14-15-16	George J.Siomkos&et., al,1992
Customer's perception of danger	17-18-19-20-21	George J.Siomkos&et., al,1992
Repurchase intentions	22-23-24-25-26	George J.Siomkos&et., al,1992

Table.2 fit indices for measurement model

Goodness-of-fit measures	Recommended value	Measurement model values
χ^2/d.f	≤3.00	990.28/452= 2.19
goodness-of-fit index (GFI)	≥0.90	0.96
adjusted goodness-of-fit- index (AGFI)	≥0.80	0.93
normalized fit index (NFI)	≥0.90	0.93
comparative fit index (CFI)	≥0.90	0.96
root mean square error of approximation (RMSEA)	≤0.10	0.056

Table.5 Measurement model results

Construct	Measurement items	Standardized factor loading	t-value	Cronbach's alpha	AVE
Denial	DEN1	0.65	10.25*		
	DEN2	0.62	11.81*		
	DEN3	0.63	9.60*	0.80	0.53
	DEN4	0.67	10.04*		
	DEN5	0.63	9.68*		
Involuntary product recall	IPR1	0.52	6.25*		
	IPR2	0.50	4.53*		
	IPR3	0.76	5.35*		
Voluntary product recall	VPR1	0.50	5.38*		
	VPR2	0.55	5.07*	0.71	0.54
	VPR3	0.60	5.34*		
Supper effort	SE1	0.72	9.94*		
	SE2	0.69	12.21*		
	SE3	0.79	13.70*	0.79	0.50
	SE4	0.66	11.70*		
	SE5	0.50	8.11*		
Customer's perception of danger	CPD1	0.50	7.12*		
	CPD2	0.84	16.71*		
	CPD3	0.84	16.87*	0.89	0.52
	CPD4	0.66	11.37*		
	CPD5	0.90	19.56*		
Repurchase intentions	RI1	0.50	6.27*		
	RI2	0.59	12.27*		
	RI3	0.86	20.63*	0.93	0.55
	RI4	0.87	20.93*		
	RI5	0.72	15.93*		

Table.5 Results of hypotheses testing

Hypotheses	Hypothesized path		Standardized path	t-value	Results
H1	DENCPD		-0.56	-6.70*	Supported
H2	IPRCPD		-0.51	-5.40*	Supported
H3	VPR	CPD	0.53	6.54*	Supported
H4	SE	CPD	0.93	16.23*	Supported
H5	CPD	RI	1.01	4.90*	Supported
Note: *implies significant at p< 0.05					

However, within the context of a product-harm crisis, no research study has holistically measured the reactions and behavioural intentions of consumers of the affected product and competitor brands in terms of the likelihood of current consumers: to remain consumers of the defective product; . To stop using the defective product, to remain customers of the affected company. To switch to competitor brands; To remain consumers of the competitor product; and to stop using the competitor product.

In all of above mentioned researches examining the direct effect of company's response strategies on customer's perception of a product-harm crisis is untouched; therefore the main aim of this study was examining the direct effect of company's response strategies (i.e., denial, involuntary product recall, voluntary product recall and supper effort) on customer's perception of danger.

The below results of current study can help managers for handling product harm crises in airline industry context very well and can be casual theatrical framework for future research. Regarding the hypothesis tests, as shown in table 5 and fig 2 all of the structural path estimates are statically significant ($p < 0.05$). Denial has a significantly negative effect on Customer's perception of danger ($\gamma 1 = -0.56$, t-value= -6.70) thus H1 is supported. Involuntary product recall has a significantly negative effect on Customer's perception of danger ($\gamma 2 = -0.51$, t-value= -5.40) thus H2 is supported. Voluntary product recall has a significantly positive effect on Customer's perception of danger ($\gamma 3 = 0.53$, t-value= 6.54) thus H3 is supported. Supper effort has a significantly positive effect on Customer's perception of danger ($\gamma 4 = 0.94$, t-value= 16.33) thus H4 is supported. Customer's perception of danger has a significantly positive effect on Repurchase intentions ($\gamma 5 = 1.01$, t-value= 4.90) thus H5 is supported.

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