

# Factors that Influence Crisis Management in Yemeni Organizations: The Mediating Effect of Decision-making Styles

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Crisis management plays an essential role in assisting organizations to handle a crisis whilst day-to-day activities are being carried out. However, choosing the proper leadership and decision-making styles is the main challenge to avoid the consequences of a crisis. The aim of this study is to examine the direct and indirect effects of rational and intuitive decision-making styles on the relationship between a transformational leadership style and crisis management as well as the influence of a crisis communication strategy on crisis management in Yemeni organizations during the crisis. Data was collected from 239 large private organizations in Yemen, through the self-administered questionnaire procedure. Partial Least Squares-Structural Equation Modelling (PLS-SEM) was employed in the data analysis. The findings indicate that a transformational leadership style has a positively significant influence in crisis management. Likewise, crisis communication strategy has a positively significant relationship in crisis management during the damage containment stage. The result also indicates that rational and intuitive decision-making styles have a positively significant impact on crisis management. Further, the mediating effect of rational decision-making between transformational leadership and crisis management is proven. The results also reveal that the intuitive decision-making style significantly mediates the relationship between transformational leadership and crisis

management. In particular, the research successfully reveals that transformational leaders have the ability to transfer their enthusiasm, high power and inspirational motivation to their subordinates, which leads to better interaction during a crisis. Furthermore, the rational and intuitive decision-making styles are the right styles during damage containment and for successful crisis management. Moreover, crisis communication strategy, as a first response strategy, plays an essential role, during the damage containment stage, to reduce the consequences of the crisis. It is recommended that researchers focus on the mediating and moderating roles of the factors that influence crisis management during a crisis situation in the future.

**Key words:** *Crisis management, Transformational leadership, Decision-making styles, Crisis communication strategy.*

## **Introduction**

The 2011 crisis in Yemen adversely impacted employment, large, small and medium-sized enterprises (SMEs), product and food prices and basic services in public and private institutions in Yemen. It is estimated that 15 percent of all private sector workers and 30 - 40 percent of factory workers lost their jobs, while the salary of most employees was reduced by around 20 percent and unpaid leave was extended by up to six months (UNDP, 2013). Therefore, crisis management is essential to minimize economic losses and to ensure companies' survival (Sfakianaki, Iliadis, & Zafeiris, 2015; Gisore & Jepchumba 2017). An effective crisis management can minimize the impact of the crisis on organizations (Spillan, Parnell, & de Mayolo, 2011). A review of the previous literature has revealed that in times of crisis, effective leaders have taken crucial actions to reduce the concerns of the organization members and informed member on how the crisis could affect them (Yukl, 2010). DuBrin (2013) stressed that, to mitigate the consequences of the crisis, transformational leadership is the best choice. It works perfectly in the immediate and post-crisis stages. In a crisis situation, transformational leadership has been identified by researchers as the most comprehensive and effective approach. Transformational leadership styles have been extensively and intensely studied, whereas a transformational leadership style, during the crisis, still needs to be explored (Alkhawlani, Bin Bohari, Haderi, Ahmed, & Rahim, 2016). Specifically, studies on transformational leadership during a crisis situation, are still scant, according to Pillai (2013), who advocated that there is still much to learn about the effectiveness of transformational leadership across cultures during a crisis situation.



Although decision-making is important for effective crisis management, effective decisions can help mitigate a crisis, while inappropriate decisions can aggravate the impact of a crisis (Sommer & Pearson, 2007; Baron & Agustina, 2017). In addition, efficient crisis management depends on the leader's ability to evaluate possible sources of the crisis and make appropriate decisions (Valackiene, 2010). Further, Murawski (2011) recommended that, to enhance the ability to respond to crisis situations by implementing effective crisis management, further research is needed, specifically to study leadership and decision-making in a crisis situation.

Another factor that has been proven to play an important role in crisis confrontation is crisis communication, which is a vital and fundamental part in the process of crisis management (Coombs, Frandsen, Holladay, & Johansen, 2010; Gyebi, Owusu & Etroo 2013). Many studies have explained the importance of crisis communication for a successful crisis management process, such as David and Chiciudean (2011), who argued that crisis communication frequently plays an important role in organizational efforts to control, contain and resolve a crisis situation. In addition, as stated by Valvi and Fragkos (2013), the selection of a crisis communication strategy is essential to confront the crisis situation. According to the discussion above, there is a lack of empirical studies that have investigated the important factors that affect crisis management, especially during crisis confrontation, such as leadership style, crisis communication strategy and decision-making styles. The gap still remains and justifies the need for empirical studies to investigate the right response to the ongoing crisis in Yemeni organizations. Therefore, this study introduced a model, including the factors proven to have influence in crisis management, which will assist the Yemen organization to overcome the crisis or at least to reduce the consequences of the impact of the crisis. Specifically, the main objective of this study is to examine the mediating effect of decision-making style on the relationship between transformational leadership and crisis management (damage containment), and further, to examine the relationship between crisis communication strategy and crisis management (damage containment). The next section explains in detail the review of literature on the concepts of transformational leadership, crisis communication strategy, decision-making styles and crisis management.

## **Literature review**

### ***Transformational leadership***

It is a fact that crisis and leadership are inextricably related. Every follower looks up to the leader during a crisis situation and expects them to do something (Zhang, Jia, & Gu, 2012). In a crisis situation, a transformational leader can lead the organization towards a better future by encouraging the organizations members to express their ideas on how to cope with the

crisis and work collaboratively, to either manage or avoid crisis situations (Harwati, 2013). Transformational leadership is, “a set of interrelated behaviors, including idealized influence, inspirational motivation, intellectual stimulation and individual consideration” according to Bass (1985), cited from Dust, Resick, and Mawritz (2014). The model of transformational leadership developed by Bass and Avolio (1994), include four primary factors: “idealized influence, individualized consideration, intellectual stimulation and inspirational motivation”. Table 2.2.1 summarizes the Bass and Avolio (1994) transformational leadership components.

**Table 2.2.1:** The transformational leadership (TFL) components

TL components	Description
Idealized influence	<ul style="list-style-type: none"><li>• Instilling pride and respect for the leader; shares a vision and sense of mission.</li><li>• Representation of a trustworthy leader and acts as role model for the follower.</li></ul>
Individualized consideration	<ul style="list-style-type: none"><li>• Leaders treat each subordinate differently according to his or her particular needs and capabilities.</li></ul>
Intellectual stimulation	<ul style="list-style-type: none"><li>• Leaders “stimulate followers’ efforts to be innovative and creative by questioning assumptions, reframing problems, and approaching old situations in new ways”.</li></ul>
Inspirational motivation	<ul style="list-style-type: none"><li>• Leaders “behave in ways that motivate and inspire those around them by providing meaning and challenge to their followers’ work”.</li></ul>

**Source:** Rowold and Heinitz (2007)

Transformational leadership has been studied extensively; several studies have reported that the transformational leadership style has been associated with numerous variables, such as organizational learning (Mirkamali, Thani, & Alami, 2011); employee effectiveness (Srithongrung, 2011); creative flexibility (Sharma, Nagar, & Pathak, 2012); communication competency (Çetin, Karabay, & Efe, 2012); leadership effectiveness (Zhang *et al.*, 2012); and employees’ job satisfaction (Munir, Rahman, Malik, & Ma’amor, 2012). Only very few empirical studies have focused on the relationship between transformational leadership and crisis management, such as Hasan and Rjoub (2017), who examined the association between leadership styles and crisis management in the Ministry of Planning in Erbil, Iraq; the findings reveal that transformational leaders can predict crisis management. Similarly, Sarkar and Ray (2015) examined the role of transformational leadership style in crisis management, targeting the correctional officers of the West Bengal organizations and found that transformational leadership style has a significant association with crisis management. In addition, previous research has mentioned the requirement for more research on the association between transformational leadership and crisis management for better

understanding (Cho & Tseng, 2009; Pillai, 2013; Zhang *et al.*, 2012). Thus, responding to the recommendation in previous research, the hypothesis is as follows:

**H1:** There is a positive relationship between transformational leadership and crisis management in terms of damage containment.

### ***Crisis Communication Strategy***

Crisis communication has established itself as a new academic discipline and is set to become an independent research area (Frandsen & Johansen, 2011; Habib & Mucha 2018). In addition, crisis communication is growing as a field of study due to the frequency and high profile nature of recent crises, such as 9/11, Anthrax and bioterrorism in the mail, the tsunami in Southeast Asia and Hurricane Katrina. Crisis communication plays a critical part in organizational endeavors to control, contain and resolve the crisis (David and Chiciudean (2011). Therefore, successful crisis management incorporates crisis communication, that can alleviate or manage the crisis, and sometimes, restore the organization’s reputation that it had before the crisis (Fearn-Banks, 2016). The most commonly utilized model is the situational crisis communication model (SCCM), which was originally presented by Coombs (1995) and updated by Coombs (2007).

**Table 2.3.1:** Coombs’ (2007) crisis response strategies based on the Situational Crisis Communication Theory,(SCCT)

<b>Crisis Response Postures and Explanations</b>	<b>Crisis Response Strategies</b>
Denial Posture: Attempts to remove any connections an organization had with a crisis.	<ul style="list-style-type: none"> <li>• Attacking the accuser</li> <li>• Simple denial</li> <li>• Scapegoating</li> </ul>
Diminishment Posture: Attempts to reduce attributions of organizational control and reduce negative effects of the crisis.	<ul style="list-style-type: none"> <li>• Justification</li> <li>• Excuse</li> </ul>
Rebuilding Posture: Try to enhance the organization’s image.	<ul style="list-style-type: none"> <li>• Compensation</li> <li>• Apology</li> </ul>
Bolstering Posture: Enhance a positive relationship between the corporation and its public.	<ul style="list-style-type: none"> <li>• Reminding</li> <li>• Ingratiation</li> <li>• Victimizing</li> </ul>

**Source:** Ki and Brown (2013)

Studies have identified the predictors that have been examined and reported to have correlations with crisis communication strategy, such as: judgment of crisis responsibility,

impression of the organization, sympathy toward the organization and trust (Lee, 2004); organization size and level of autonomy delegation (Cloudman & Hallahan, 2006); and trust and relational commitment (Huang, 2008). However, only very few studies have linked crisis communication strategy to crisis management, such as Al-Akwa'a (2012). Therefore, this study hypothesizes that:

**H2:** There is a significantly positive relationship between crisis communication strategy and crisis management in terms of damage containment.

### *Decision-making style*

The word, 'decision', is defined as, "an answer to some question, a choice between two or more alternatives" (Rowe, Boulgarides, & McGrath, 1984). Scott and Bruce (1995) defined decision style, "as the learned habitual response pattern exhibited by an individual when confronted with a decision situation; it is not a personality trait but a habit-based propensity to react in a certain way". Previous research has classified decision-making styles into various categories. The most dominant style, according to Scott and Bruce (1995), is composed of five styles: intuitive, dependent, rational, spontaneous and avoidant, which was originally developed by Harren (1979) with three dimensions, namely: intuitive, dependent and rational. Table 2.4.1 summarizes Scott and Bruce (1995) general decision-making style.

**Table 2.4.1:** Scott and Bruce's (1995) General Decision-Making Styles

Decision-making Style	Explanation
Rational style	"Logical process of considering all available options before making a decision". "Emphasizes the use of analytical techniques, models and decision tools to assist in the decision-making process".
Intuitive style	The means by which experience is converted into action, unsystematic information processing and reliance on premonitions and feelings.
Dependent style	Characterized by an over reliance on others to make decisions. "Is indicative of the lack of intellectual and practical independence of decision-making and guidance on the protection and support of others when making decisions".
Avoidant style	Characterized by an unwillingness to make decisions or a tendency to withdraw from decision-making.
Spontaneous style	A tendency towards making decisions quickly rather than exerting any serious effort to evaluate alternatives.

**Source:** Scott and Bruce's (1995)

Previous studies have identified the effect of decision-making during crisis situations and uncertainties (Ahmad, Alkharabsheh, & Alkharabsheh, 2013; Rachel Dinur, 2011; Sayegh, Anthony, & Perrewé, 2004; Schraagen & Van de Ven, 2008; Sommer & Pearson, 2007). In addition, Yap *et al.* (2014) argued that decision-making has a potential to resolve issues in crisis management; and decision-making technique should be implemented in crisis management. However, the efficiency of crisis management depends on the manager's ability to evaluate possible sources of the crisis and make appropriate decisions (Valackiene, 2010). Moreover, Ozcan (2015) suggested studying the decision-making process under crisis circumstances. Further, Bartošíková, Bilíková, Strohmandl, Šefčík, and Taraba (2014) explained that decision-making is an integral part of crisis management. Therefore, this study hypothesizes that:

- H3:** There is a positive relationship between rational decision-making style and crisis management in terms of damage containment.
- H4:** There is a positive relationship between intuitive decision-making style and crisis management in terms of damage containment.

Leadership and decision-making are very much related issues because effective decision-making actually requires effective implementation and it is important to know how leaders see a decision through implementation (Vroom, 2003). Verma, Bhat, Rangnekar, and Barua (2015) studied the leadership and decision-making styles of Indian manufacturing executives; the study reveals that transformational leaders are rational in making decisions. However, Al-Al-Omari (2013) recommended that more studies are needed regarding leadership and decision-making styles. Therefore, this study hypothesizes that:

- H5:** There is a positive relationship between transformational leadership style and rational decision-making style.
- H6:** There is a positive relationship between transformational leadership style and intuitive decision-making style.

However, previous researchers have explained the important role of decision-making as a mediator in the relationship between leadership style and performance (Amir, Auzair, & Ismail, 2014); and the relationship between job characteristics and job outcomes (Hamwi, 2009). It can therefore be inferred that none of the previous studies has focused on the mediating effect of decision-making style in the relationship between transformational leadership style and crisis management. Therefore, this study hypothesizes that:





- H7:** Rational decision-making style mediates the relationship between transformational leadership and crisis management in terms of damage containment.
- H8:** Intuitive decision-making style mediates the relationship between transformational leadership and crisis management in terms of damage containment.

### *Crisis management*

The word, ‘crisis’, comes from the Greek word, “krisis”, that means judgment, selection or decision; it depends on how the word is being used (Preble, 1997). “Crisis is unexpected, dramatic and unprecedented events that send an organization into chaos and must be addressed expediently and decisively” (Prewitt, Weil, & McClure, 2011), further, crisis has a harmful result on the organization stability that leads to the serious question, whether or not organizations would be able to continue after crisis situation (Seeger, Ulmer, Novak, & Sellnow, 2005). Therefore, crisis management has been established to efficiently and effectively prevent and reduce the negative consequences of the crisis situation.

Crisis management has been extensively studied during the past three decades and defined by many different authors. There is no single definition that is commonly agreed upon for the term, ‘crisis management’ (Coombs, 2007). Santana (2004) defined crisis-management as, as an ongoing integrated and comprehensive effort that organizations effectively put into place in an attempt to first and foremost understand and prevent crisis and to effectively manage those that occur, taking into account each and every step of their planning and training activities as well as their stakeholders’ interests”. Numerous models of crisis management have been developed by researchers, such as Coombs (2007); Cronstedt (2002); Fink (1986); Jaques (2007); Loosemore and Teo (2000); Myers (1993); Smith (1990). In addition, Mitroff, Pauchant, and Shrivastava (1988); Mitroff, Shrivastava, and Udwadia (1987) developed a crisis management model, which includes five mechanisms that need to be in place: “signal detection; prevention/preparation; damage containment (limitation); recovery and learning”. This model represents the holistic crisis life cycle that stimulates action throughout the crisis situation, and not only during the pre-crisis or post-crisis period, like other models. Previous studies have identified the factors influencing crisis management, such as Mostafa, Sheaff, Morris, and Ingham (2004) - long-term strategy, internal and external strategic orientation and crisis readiness; Rousaki and Alcott (2006) - organization size, job level crisis experience and crisis readiness; Parnell, Koseoglu, and Spillan (2010) - management experience and crisis readiness; Ritchie, Bentley, Koruth, and Wang (2011) - organizational type, organization size, organization age and crisis preparedness; Long and Myers (2010) - corporate social responsibility and crisis management; and Spillan *et al.* (2011) - strategy innovation, strategy on low costs and crisis readiness. According to the discussion above,





numerous empirical studies have focused on crisis readiness and crisis preparedness. This study examines the factors that influence crisis management at the damage containment stage (Feher and Reich, 2016).

## **Methodology**

### ***Sample and data collection method***

This study was carried out in Yemen. The target population is large private organizations under the Ministry of Industry and Trade in Yemen. The top management are representative of the population of the current study. These respondents met the requirements of the study by providing valid and accurate views of their organization. The Krejcie and Morgan (1970) Table was used for determining the sample size of the present study, which is 281 large private organizations in Yemen. Simple random sampling was used to select the respondents. Out of the 281, only 239 questionnaires were returned. The questionnaire was adapted from previous studies (Alkhawani *et al.* (2016); Cronin (2015); Hilliard, Scott-Halsell, and Palakurthi (2011); Sadeghi and Pihie (2012); Spicer and Sadler-Smith (2005). The instrument had been validated by earlier researchers and deemed to be ideal for the current study. A five-point Likert scale was used to measure the four variables, namely transformational leadership style, decision-making style, crisis communication strategy and crisis management in terms of damage containment. A cover letter attached to each questionnaire explained the objective of the survey and assured the respondents of the confidentiality of their responses (Guluta and Rusu, 2016).

## **Results**

The Partial Least Squares-Structural Equation Modeling (PLS-SEM) approach was employed in data analysis in this study. Hair, Hult, Ringle, and Sarstedt (2017) recommended that PLS analysis involves two stages for reporting the results: the assessment of the measurement model in the first stage; and the assessment of the structural model in the second stage.

### ***Assessment of Measurement Model***

The key criteria used to evaluate the measurement model are internal consistency reliability, and convergent and discriminant validity (Hair *et al.*, 2017). To evaluate convergent validity of reflective constructs, researchers consider the outer loadings of the indicators and the average variance extracted (AVE). The recommended values for the outer loadings, according to Hair, Black, Babin, Anderson, and Tatham (2006), are  $\geq 0.5$ , and preferably  $\geq 0.70$ ., the average variance extracted (AVE) should be  $> 0.5$  and the composite reliability

(CR) should be  $> 0.7$ . The researcher conceptualized transformational leadership style and crisis communication strategy, as second order constructs, which is consistent with theoretical concept and supported by Hair, Hult, Ringle, and Sarstedt (2014), who recommended reducing the number of relationships in the model. Thus, the method suggested according to Hair *et al.* (2017) in PLS-SEM is the repeated indicator approach for the second order construct. Table 4.1.1 shows the results of convergent validity exceeds the recommended values, that indicate sufficient convergent validity.

**Table 4.1:** Convergent Validity Analysis for the first and second order constructs

Constructs		Item	Loadings	AVE	CR
Second Order Construct	First Order Constructs				
TFLS				0.541	0.949
	TFLSII		0.831	0.790	0.938
		TFLIIA3	0.867		
		TFLIIA4	0.896		
		TFLIIB5	0.888		
		TFLIIB6	0.903		
	TFLSIM		0.785	0.804	0.942
		TFLIM10	0.897		
		TFLIM11	0.926		
		TFLIM12	0.903		
		TFLIM9	0.881		
	TFLSIS		0.836	0.806	0.943
		TFLIS13	0.913		
		TFLIS14	0.921		
		TFLIS15	0.896		
		TFLIS16	0.885		
	TFLSIC		0.835	0.805	0.943
		TFLIC17	0.884		
		TFLIC18	0.900		
		TFLIC19	0.903		
Table 4.1.1 (continued)		TFLIC20	0.901		
	DMSRA			0.794	0.939
		DMRA1	0.901		
		DMRA2	0.920		
		DMRA3	0.899		
		DMRA4	0.843		
	DMSINT			0.823	0.949



		DMINT10	0.882		
		DMINT6	0.928		
		DMINT7	0.897		
		DMINT8	0.920		
CCOM				0.501	0.941
	CCDN		0.742	0.864	0.950
		CCDN2	0.930		
		CCDN3	0.935		
		CCDN4	0.924		
	CCDIM		0.835	0.820	0.948
		CCDIMIN5	0.875		
		CCDIMIN7	0.908		
		CCDIMIN8	0.915		
		CCDIMIN9	0.924		
	CCARB		0.702	0.824	0.949
		CCARB15	0.891		
		CCARB16	0.911		
		CCARB17	0.917		
		CCARB18	0.912		
	CCBOL		0.838	0.766	0.942
		CCBOL10	0.869		
		CCBOL11	0.904		
		CCBOL12	0.901		
		CCBOL13	0.872		
		CCBOL14	0.829		
	CMDC			0.727	0.949
		CMDC15	0.888		
		CMDC16	0.849		
		CMDC17	0.864		
		CMDC18	0.850		
		CMDC19	0.856		
		CMDC20	0.845		
		CMDC21	0.816		

**Notes,** TFL= transformational leadership style, DMSRA = rational decision-making style, DMSINT = intuitive decision-making style CCOM= crisis communication strategy, and CMDC=crisis management- damage containment, AVE = Average Variance Extracted CR = Composite Reliability

The second criterion, to examine the measurement model, is discriminant validity. There are several methods to calculate discriminant validity; one of the highly recommended methods is related to the Fornell and Larcker (1981) criterion. It compares the square root of the AVE values with the latent variable correlations. Specifically, the square root of each construct's AVE should be greater than its highest correlation with any other construct. This criterion is considered as a more conservative method to assess discriminant validity (Hair *et al.*, 2014). Table 4.1.2 shows the results of the Fornell-Larcker criterion, which achieves the required criteria.

**Table 4.1.2:** Fornell-Larcker Criterion for second order constructs

	CCOM	CMDC	DMSINT	DMSRA	TFL
CCOM	<b>0.708</b>				
CMDC	0.258	<b>0.853</b>			
DMSINT	0.249	0.538	<b>0.907</b>		
DMSRA	0.197	0.534	0.808	<b>0.891</b>	
TFL	0.162	0.392	0.466	0.457	<b>0.735</b>

Notes, TFL= transformational leadership style, DMSRA = rational decision-making style, DMSINT = intuitive decision-making style, and CMDC=crisis management- damage containment.

### *Assessment of PLS-SEM Model Results*

To assess the structural model, Hair *et al.* (2017); Valérie (2012), recommended that the primary evaluation criteria for PLS-SEM results are the coefficients of determination ( $R^2$  values) as well as the size and significance of the path coefficients. The  $f^2$  effect sizes, predictive relevance ( $Q^2$ ), and the  $q^2$  effect sizes give additional insights into the quality of the PLS path model estimations, followed by the mediating effect. The result of bootstrapping illustrated in Table 4.2.1 and Figure 4.2.1 shows the estimates for the full structural model.

**Table 4.2.1:** Results of Hypotheses Testing

Hyp	Relationship	Beta	SE	T-value	p value	Findings
H1	TFL -> CMDC	0.146	0.068	2.141	0.016	Supported
H2	CCOM -> CMDC	0.127	0.063	2.010	0.023	Supported
H3	DMSRA -> CMDC	0.255	0.090	2.839	0.002	Supported
H4	DMSINT -> CMDC	0.232	0.101	2.289	0.011	Supported
H5	TFL -> DMSRA	0.457	0.068	6.690	0.000	Supported
H6	TFL -> DMSINT	0.466	0.063	7.352	0.000	Supported



decision making ( $\beta = 0.466$ ,  $P= 0.000$ ). Therefore, hypothesis five (H5) is supported. The result of hypothesis six (H6) shows that transformational leadership style is positively related to intuitive decision making ( $\beta = 0.457$ ,  $P= 0.000$ ). Therefore, hypothesis six (H6) is also supported.

Next, the mediating effect of rational decision making style on the relationship between transformational leadership and crisis management in terms of damage containment was tested by conducting bootstrapping procedure, as suggested by Hair, Black, and Babin (2010). The results show that the confidence interval of the indirect effect of transformational leadership on crisis management is ( $\beta =0.117$ , CI= 0.045 Lower to 0.192 Upper), which means that lower and upper confidence intervals do not include zero, which indicates that rational decision-making style significantly mediates the relationship between transformational leadership and crisis management. The results also show that the direct effect of transformational leadership on crisis management is significant and the indirect effect is also significant ( $\beta = 0.117$ ,  $t = 2.610$ ,  $p < 0.005$ ), which indicates that rational decision-making style is a partial mediator in the relationship between transformational leadership and crisis management. Thus, it can be concluded that hypothesis seven (H7) is supported with partial mediation.

The result of the mediating effect of intuitive decision-making style on the relationship between transformational leadership and crisis management is illustrated in Table 4.2.2, with values of confidence interval of the indirect effect of transformational leadership on crisis management ( $\beta =0.108$ , CI= 0.031 Lower to 0.200 Upper), which mean that lower and upper confidence intervals do not include zero, which indicates that intuitive decision-making style significantly mediates the relationship between transformational leadership and crisis management. The results also show that the direct effect of transformational leadership on crisis management is significant and the indirect effect is also significant ( $\beta = 0.108$ ,  $t = 2.132$ ,  $p < 0.017$ ), which indicates that intuitive decision-making style is a partial mediator in the relationship between transformational leadership and crisis management. Therefore, it can be concluded that hypothesis eight (H8) is also supported with a partial mediation.

**Table 4.2.2:** Mediation results

Hyp	Relationship	Beta	T-value	p-value	Indirect Effect		Findings
					Lower 2.5%	Upper 95%	
H7	TFL -> DMSRA -> CMDC	0.117	2.610	0.005	0.045	0.192	Supported
H8	TFL -> DMSINT -> CMDC	0.108	2.132	0.017	0.031	0.200	Supported



Notes, TFL= transformational leadership style, DMSRA = rational decision-making style, DMSINT = intuitive decision-making style, and CMDC= crisis management- damage containment

## **Discussion & Conclusion**

### ***Discussion***

The main objective of this study is to examine the mediating effect of decision-making style on the relationship between transformational leadership and crisis management (damage containment), and further, to examine the relationship between crisis communication strategy and crisis management (damage containment). Specifically, the first research objective is to determine the influence of transformational leadership on crisis management. The result in Table 4.2.1 explains that for every unit increase in transformational leadership, there is an expected increase of 0.146 in crisis management in terms of damage containment. Further, transformational leadership style is considered as idealized influence as leaders become a role model for the followers, whether they exhibit certain personal characteristics or "charisma" often seen as being high on morality, trust, integrity, honesty and purpose. Also, leaders tend to be admired, respected and trusted; so, followers determine and follow their leaders. This result is consistent with previous studies, such as Cho and Tseng (2009); Hasan and Rjoub (2017); Kirkbride (2006); Zhang *et al.* (2012).

The second research objective is to determine the relationship between crisis communication strategy and crisis management in terms of damage containment which is confirmed by the result in Table 4.2.1 ( $\beta = 0.127$ , T-value = 2.010), which indicates a positively significant relationship. This finding is consistent with the previous studies, such as Al-Akwa'a (2012). Further, crisis managers could perceive such strategy responses in terms of denial, diminish, rebuilding and bolstering as a first response strategy to confront the crisis, especially in large private organizations in Yemen. The third research objective is to determine the relationship between rational decision-making style and crisis management in terms of damage containment. The result in Table 4.2.1 indicates a positively significant relationship. This result is consistent with Bartošíková *et al.* (2014) who explained that decision-making processes are an integral part of crisis management. The fourth research objective is to examine the relationship between intuitive decision making and crisis management in terms of damage containment. The result in Table 4.2.1 shows a positively significant relationship. This result is supported by Oredein (2010) who explained that principals' decision-making determines crisis management in south-west Nigerian schools.



The fifth objective of this study is to examine the direct relationship between rational decision-making style and transformational leadership, which is confirmed, according to the result ( $\beta = 0.457$ , T-value = 6.690), which indicates a positively significant relationship. This finding is consistent with previous studies, such as Verma et al. (2015), who stated that transformational leaders are rational in making decisions. It is also consistent with Hariri, Monypenny, and Prideaux (2014); Rehman and Waheed (2012). The sixth objective of this study is to examine the direct relationship between intuitive decision-making style and transformational leadership. The result in Table 4.2.1 ( $\beta = 0.466$ , T-value = 7.352) indicates a positively significant relationship. This finding is consistent with previous studies, such as Cronin (2015); Hariri *et al.* (2014); Rehman and Waheed (2012).

The seven-research objective of this study is considered as one of the main contributions of this study, which is to examine the mediating role of rational decision-making style in the relationship between transformational leadership and crisis management. According to the result shown in Table 4.2.2, hypothesis seven is supported. This study shows the indirect effect of transformational leadership on crisis management is partially mediated by rational decision-making style. It emphasizes the significance of rational decision-making style for the success of crisis management, which means that to a certain extent, the effect of transformational leadership style on crisis management during crisis confrontation is due to rational decisions taken during the crisis situation. In addition, the finding of this study is consistent with Bartošíková *et al.* (2014); Yap *et al.* (2014). As a result, of the rational decision-making style being taken during the crisis confrontation, the damage is controlled and the consequence of the crisis reduced.

Another main contribution of the present study is regarding objective number eight which is to examine the mediating role of intuitive decision-making style in the relationship between transformational leadership and crisis management ( $\beta = 0.108$ , T-value = 2.132). This result shows that the eighth objective is achieved as well. This study result shows the indirect effect of transformational leadership on crisis management is partially mediated by intuitive decision-making style. It emphasizes the significance of intuitive decision-making style for the success of crisis management. Therefore, the more precise the intuitive decisions taken during the crisis confrontation, the more successful the crisis management. This will lead to better control and the reducing of the consequences of the crisis.

### **Limitations**

Firstly, the findings of this study cannot be generalized to a wider context across cultures of other countries since the data collected for this study is limited to Yemeni large private



organizations. Different cultures and different educational environments may furnish different impacts of transformational leadership style on crisis management. Secondly, the questionnaire has no qualitative data. Interviews with managers of the companies included in the sample would have improved the quality of the study. Future research should therefore include both quantitative and qualitative data in order to obtain a more complete overview of the relationships evaluated in this research. Furthermore, it is recommended that researchers focus on the mediating and moderating roles in the relationship of the factors that influence crisis management during a crisis situation in future.

### **Conclusion**

This paper contributes to the growing body of knowledge on the crisis management field, specifically during the damage containment stage, which plays an important role in crisis management during the crisis situation. The current study reveals that transformational leadership style, crisis communication strategy and decision-making styles are important factors that can help organizations to confront the crisis situation. The partial mediating effect of rational and intuitive decision-making styles in the relationship between transformational leadership and crisis management expands and validates the crisis management theory. In addition, crisis communication strategy can be considered as the first response strategy that assists the organizations to protect their reputation. Therefore, this study has achieved its objectives, and it is important for leaders in the large organizations in Yemen to employ the results of this study during crisis confrontation in order to respond more effectively to a crisis situation.

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