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# Business Continuity Management and Crisis Leadership: An Approach to Re-Engineer Crisis Performance within Abu Dhabi Governmental Entities

## Mohamed Naser. A.N. Alharthi<sup>1</sup> and Gamal S.A. Khalifa<sup>2</sup>

<sup>1</sup>Faculty of Business and Accountancy, Lincoln University College (LUC), Selangor, Malaysia <sup>2</sup>Faculty of Hospitality and Tourism, Lincoln University College (LUC), Selangor, Malaysia and Faculty of Tourism and Hotels, Fayoum University, Egypt.

> (Corresponding author: Gamal S.A. Khalifa) (Received 02 February 2019, Revised 31 March 2019 Accepted 20 April 2019) (Published by Research Trend, Website: www.researchtrend.net)

ABSTRACT: The current study aims to test a new approach to reengineer the crisis performance of Abu Dhabi Governmental Entities (ADGE), by testing the relationships among crisis leadership (CL), business continuity management (BCM) and organization crisis performance (OCP). A quantitative research approach has followed for this study and 328 valid respondents were answered questions from 500 questionnaires. The data analysis was performed using structural equation modeling via AMOS 22. After testing the direct relationships, the researchers had conducted indirect relationships measurements, such as the impact of CL on OCP via BCM. All the study's hypotheses were supported. The proposed model explained 62% of the variance in organization crisis performance. Theoretical and practical implications are also provided.

Keywords: Crisis leadership, BCM, Crisis Management, public sector, UAE.

#### 1. INTRODUCTION

Different sorts of crisis effects on organizational activities from little nearby not-for-profit associations to and even government organizations [1]. Consequently, in order to guarantee the accessibility of administration is kept up at unsurpassed, each association should dependably be arranged and plan to a more prominent degree than they customarily have, to counter all the potential dangers [2]. A previous study stated that it is the crisis manager who gets benefitted because of a situation of crisis. This is because of the systematic methodology of crisis management [3]. There has been a marked increase in the impact of crisis as it spreads out to wider communities. This has led to emergence of crisis management throughout the world [4, 5]. Currently, a wide spectrum of issues are now touched by man-made as well as naturally caused crisis, which includes environmental factors along with sociopolitical and technological issues [1, 6]. There has been a global need and demand for devising an effective crisis management tool and create theories in similar fields for better preparedness among the community people, government and organizations [7]. The study highlighted the need of a knowledge-based systematic approach that needs to considered as a pre-requisite in an organization so that it will assist them in preventing crisis [8, 9]. Crisis management has articulated in this study as an important role in the research model in order to place as a dependent construct. There are many studies has been investigated about crisis management in the literature. This study has addressed a very unique consideration with the effect of crisis leadership and business continuity management. This study's model itself a contribution to the theory and literature that utilize in the Abu-Dhabi governmental entities (ADGE).

Furthermore, Wong [10] has associated that fuse business continuity management (BCM) in their

strategic system for a particular competency over rivals as far as operational strength. It incorporates the quick recuperation of basic business capacities at predefined timeframe while limiting the antagonistic effects to their esteem and notoriety [11]. In addition, the availability of reacting to possibilities, for example, fire, avian influenza pandemic, terrorism, power control disappointment, and so forth is dependent on the inclusion of its administration in grasping the BCM [12]. Few thematic areas have been identified by Herbane [13], such as effective communication, relationship and clarity on one's vision. This showcases the ability of a manager to deal with the current crisis with the previous experiences and study of the failure outcomes. This will finally lead to an informed decision on part of the manager. In this study, business continuity management plays an important role as a mediating construct in order to practice business continuity by achieving the overall strength. Thus, business continuity management influence on crisis management. This kind of a relationship has not been reviewed in the past, and the current study focuses on the same.

To learn from the past experiences, there is a need for database in order to assess the situation of crisis. However, the database may not provide complete information regarding the previous crisis, or completely predict future crisis. Boin & Hart (2003) [14] realized the need of a crisis manager who can take the leadership role. Jaques (2012) [15] have identified four external parameters such as gathering of the information, conscience, preparedness with past experience, and leadership attributes, with respect to communication. However, these attributes do not have any link with the different phases of crisis. Thus, this model has been rejected by the current study. There are limited theories on crisis leadership. This study has addressed the crisis leadership as an essential role of the organization in order to influence business continuity management toward crisis

## **II. LITERATURE REVIEW**

#### A. Crisis leadership

Management of crisis situation or taking leadership role during the event needs amalgamation of required skills, knowledge, and abilities. This will lead to an effective crisis management with better plans and response [16]. Being an organization's voice, the crisis managers need not completely depend on corporate communication, this is because they have a positive influence on internal as well as external stakeholders. In addition to the crisis manager's role play during the crisis event, responsible behavior from the top management personnel is also demanded [17]. According to a study [18], three components relating to crisis leadership exists that ensures its effectiveness. These are as follows: effective leadership, resource planning and structure of the plan, and support from the public.

The author Fink (1986) [19] stated that for a crisis managers to reach on any decision needs to follow certain criterion, such as collection and analysis of information. . This is referred to as the Fink's theory of decision making. Nevertheless, as stated by other studies, the theory might be practically unrealistic. This is because there are many factors that influence the manager's decision [20, 21]. Chatterjee & Pearson, (2009) [22] stated that knowledge gained from past experience will be beneficial for the managers in dealing with the crisis in a systematic manner That will enable the manager to deal with the situation in confidence and more proactively [23]. Wooten & James (2008) [17] stated that past experience of managing crisis has presented effective plans and ways of managing future crisis in a more planned manner through all phases of crisis. However, no such research has been conducted that is in support of requirement of abilities, knowledge, or skills that would deal with such crisis situation. Thus, the current study states direct influence of crisis leadership on business continuity management in order to theoretical contribution in this relationship. Wong [10] has considered that crisis leadership has enhanced the business continuity in order to increase the business prosperity in terms of reducing crisis in a critical situation. On the other hand, crisis leadership indirectly influence on crisis management through business continuity management. There are little studies has been examined in according to this indirect relationship. To the best of author's knowledge the indirect relationship is the first attempt in the literature and suggests these hypotheses:

H1: Crisis leadership positively influence on business continuity management

H2: Crisis leadership positively influence on organizational crisis performance

#### B. Business Continuity Management (BCM)

The BCM method addresses the organization's employees as well as the processes that are critical for its survival [24] that ensuring continuity of critical processes. Rai & Mohan, (2006) [25] have considered the continuity model needed for the organizations to create formal BCM systems that would lead to development of business continuity planning (BCP). However, it is most critical that inherent in managing risk in ensuring the flow of inbound products and services as inputs to production [26].

Indeed, business disruptions of any sort that could have extremely damaging repercussions to an organization, not only in terms of tangible financial losses but also intangible effects on the corporate reputation and confidence [20, 27-29]. It is, therefore, a critical business imperative that a working plan should be established to ensure that in the event of an unforeseen disruption, critical business functions will be resumed as effectively and quickly as possible [10]. In case of disruption in the business due to crisis events, there needs to be protective measures for an organization who wants to stay in the competition. This can be done by increasing their resiliency [12, 30-38]. According to the previous research [10], the business houses that implement BCM get an edge over their competitors in terms of resiliency. This enables the business to get out from crisis and restart critical functioning with minimized impacts. However, according to recovery and critical functioning of the organization, BCM influence on crisis management. This relationship indicates an important millstone the organization staying with the competition with critical situation sometimes but crisis management will recover the crisis and uncertain risk. A little study has been investigated regarding BCM in different contexts and areas but it is going to clarify the main concept of public sector consequences.

H3: Business continuity management positively influence on organizational crisis performance

H4: Business continuity management mediates between crisis leadership and crisis management

#### C. Crisis Performance

Management of crisis, as mentioned above, needs specific skills and abilities [39]. Pforr & Hosie, (2008) [40] Researchers have stated high vulnerability of international organizations to crisis. This calls for a strategic crisis management plan. Gruman, Chhinzer, & Smith, (2011) [41] also stated limited research knowledge with relation to disaster preparedness, which highlighted the need for studying the impact of business features on preparedness for disaster. As per the Fink theory, crisis is not time bound, thus decision making process can have either unexpected or positive outcomes. Prewitt, Weil, & McClure, (2011) [42] offers proactive ways of dealing with crisis, if the business fails to address it.

Crisis can occur without any notice and in the most unexpected manner, thus creating havoc and damage. The damage is more when the decision is not actively taken [43]. According to Faulkner, (2001) [44] crisis can be stated as an event when the organization or the management fails to address or cope up with the sudden change [45-48]. In order to cope up with the crisis in an organization Glaesser, (2006) [49] suggested need for effective strategies, organizational processes, and preventive as well as post-crisis measures. Comfort, (2007) [50] focused on studying about the crisis-readiness phase. However, this constructs plays an important role based on other constructs effect. In addition, crisis leadership influences on business continuity management directly and BCM influence on crisis management. On the other hand, crisis leadership also directly influence on crisis management. To the best of theoretical debate and logic, this is a unique and new contributed model in the literature.

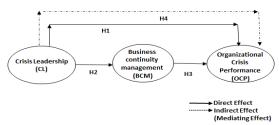


Fig. 1. The model of the study.

## III. RESEARCH DESIGN AND QUESTIONNAIRE DEVELOPMENT

The research design of this study is started as to follow the quantitative research approach for statistically identify and collect out the quantify data in order to use statistics for analyzing data set. Accordingly, in the quantitative research approach of study survey-based methods can collect large number of data sample quickly and efficiently [51]. Additionally, this research approach has successfully been used in the field of crisis management especially in the public sector [43]. The respondent's profile indicates the background, beliefs, motives, and attitudes provides by an effective survey design in the study field in the case of research, measure the perceptions of the employee. Therefore, this study needs a self-administrative questionnaire for assuming the responsibility of employee reading and responding to the questions. At first, the demographic profile was addressed the gender, age, educational level, position and tenure based on employee background. The questionnaire was divided into four steps; the demographic profile, crisis leadership items, business continuity management items, organizational crisis performance items. Accordingly, crisis leadership was adapted from [52], BCM was adapted from [53, 54], and organizational crisis performance was adapted from [52]. This study's constructs have adapted for the previous literature and used five-point Likert scale following strongly disagree (1)-strongly agree (7).

## A. Data collection and procedures

This study was conducted in the Abu-Dhabi governmental entities (ADGE) and data were collected with a self-administered survey from the ADGE's employees. The questionnaire was pre-tested several times to ensure that wording, format, and sequencing

of questions were appropriate. This research applies a survey-based methodology for gathering data, which has many advantages that mainly suitable for this study. Yin & Heald, (1975) [55] explained that surveybased methods give advantages for assembling a large amount of data about an individual respondent at one time and flexible for collecting data. This study sample size is decided in consideration of the following researcher connection. Flynn & Pearcy, (2001) [56] mentioned that an acceptable sample size with no simple and definitive rule an accurate sample size, which considerable debate in the research field. The questionnaire was distributed among the employees within the organization and 328 questionnaires distributed were valid questionnaires collected. The procedures of collecting data were contacted to the top management to collect data and conduct a survey with the employee. The questionnaire has given them for a prior time such as one week per collection and after collected from each Abu Dhabi Government Entities (ADGE) for six months. For the analysis of the research model using Amos22 in order to input data in SPSS. It needs a large sample which is less stable for estimation purpose, some researchers believe that PLS may use for sample size as small as 50 and large 5000 [57]. This study was used SEM for analysis technique in order to get the result for path, estimation and supported the hypothesis.

#### IV. DATA ANALYSIS AND RESULTS

## A. Descriptive Analysis

Demographic profile of respondents shows that 287 (87.5%) were male and 41 (12.5%) female. Most of the employees were aged between 30 to 39 years; this accounted for 50% of the responses followed by the age range of 40 years to 49 years at 28% of total responses. In terms of education background, 41.8% had a bachelor degree (the majority of participants), and most of the remaining 34.5% hold a postgraduate degree. Only 17.4% were holding Senior High School, and 6.4% like diploma. Employees' position show that, Close to 25.3% of the employees are Head of Department and most of the remaining 31.7% have other positions. Only 18.6% were Executive management, 17.1 are Supervisor and 7.3% are Top management. For work experience, 42.1% have work experience for 16 years and above, 25% are from 11 to 15 years, 23.5% are 5-10 years' experience, and 9.5% are less than 5 years' experience.

Frequency Valid Percent (%)

			7 and 1 0100 m (70)
Gender	Male	287	87.5
	Female	41	12.5
Age	Less than 30	44	13.4
	30 to 39	164	50
	40 to 49	92	28
	50 and above	28	8.5
Educational level	Senior High School	57	17.4
	Bachelor	137	41.8

Table 1: Demographic profile.

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	Postgraduate	113	34.5
	Others	21	6.4
Position	Top management	24	7.3
	Executive management	61	18.6
	Head of Department	83	25.3
	Supervisor	56	17.1
	Others	104	31.7
Tenure	Less than 5 years	31	9.5
	5-10	77	23.5
	11-15	82	25
	16 and above	138	42.1
Total		328	

## B. Measurement Model Assessment

Table 2 shows values for goodness-of-fit indices, which is above the recommended value as stated by previous research. The chi-square value was non-significant (p-value < 0.5). However, the model still fits

as the Chi-Square value rejected the model with huge sample, usually more than 200 [58-60]. The present study had a sample size of 328. Hence, based on the study, the psychometric properties of the model were examined.

Table 2: Measurement model stats.

Fit Index	Admissibility	Result	Fit (Yes/No)
X <sup>2</sup>		497.178	
DF		166	
P value	>.05	.000	No
X <sup>2</sup> /DF	1.00 - 5.00	2.995	Yes
RMSEA	<.08	.078	Yes
SRMR	<.08	.066	Yes
GFI	>.90	.911	Yes
AGFI	>.80	.835	Yes
NFI	>.80	.920	Yes
PNFI	>.05	.802	Yes
IFI	>.90	.945	Yes
TLI	>.90	.937	Yes
CFI	>.90	.945	Yes
PGFI	>.50	.687	Yes

As per the results, the  $\alpha$  value as well composite reliability (CR) value as was greater than 0.7 for all items taking into consideration the construct reliability [61, 62, 63] (Table 3). For determination of indicator reliability, factor loadings was adopted, whose value

was greater than 0.5 [64]. For determination of convergent validity, AVE was implemented, all AVE values were greater than the suggested value of 0.50 [65] (Table 3).

Table 3: Mean (M), standard deviation (SD), loading, cronbach's Alpha (α), CR and AVE.

Constructs	Item	Loading (> 0.5)	М	SD	α (> 0.7)	CR (> 0.7)	AVE (> 0.5)
Crisis Leadership (EL)	CL1 CL2 CL3 CL4 CL5 CL6 CL7	.697 Deleated .541 .829 .793 .742 .825	6.14	0.899	0.891	0.880	0.554
Business continuity management (AOC)	BCI1 BCI2 BCI3 BCI4 BCI5 BCI6 BCI7	.792 .878 .868 .896 .895 .884	5.88	1.015	0.951	0.950	0.733
Crisis	OCP1	.783	5.89	1.042	0.956	0.949	0.729

Management	OCP2	.755			
(CM)	OCP3	Deleated			
, ,	OCP4	.850			
	OCP5	.894			
	OCP6	.907			
	OCP7	.872			
	OCP8	.903			

Note: CR = Composite Reliability, AVE = Average Variance Extracted

- The measurement used is seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree).
- All the factor loadings of the individual items are statistically significant (p < 0.01)

Discriminant validity by results illustrated in Table 4 shows strong relation with indicators [66, 67] and good

discriminant validity [68]. Further, the correlation among exogenous constructs equals <0.85 [69].

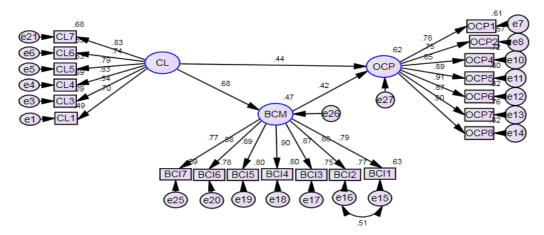
Tale 4: Fornell Larcker Criterion for discriminant validity.

	OCP	CL	BCM
OCP	0.854		
CL	0.727	0.745	
BCM	0.722	0.682	0.856

## C. Structural Model Assessment

In the current model, the values were stated as  $X^2/df =$ 

2.995, CFI = 0.945 and RMSEA = 0.078, which showed adequate fit of the model [60].



Key: CL: Crisis leadership, BCM: Business cuninuity management, OCP: Organizational Crisis Performance **Fig. 2.** SEM Results.

**Direct Hypothesis Tests.** Details of direct hypothesis tests have been presented in Fig. 2 as well as in Table 5. CL significantly predict BCM and organizational crisis performance. Hence, H1, and H2, are accepted with  $\beta=.790,\,\tau=10.161,\,p<0.001) \text{and}(\beta=.551,\,\tau=6.800,\,p<0.001)$  respectively. In addition, BCM significantly predict OCP.

Hence H3 is accepted with ( $\beta$  =.458,  $\tau$ =6.833, p <0.001). The standardized path coefficient states the relationship strength among the exogenous and endogenous constructs, which shows direct CL effect on crisis management by an organizational that has been marked to be stronger as compared to other variables.

Table 5: SEM Results.

Hypothesis		Relationship		Estimate	S.E.	C.R.	Р	Decision	R <sup>2</sup>
H1	BCM	<	CL	.790	.078	10.161	0.000	Supported	0.47
H2	OCP	<	CL	.551	.081	6.800	0.000	Supported	
H3	OCP	<	BCM	.458	.067	6.833	0.000	Supported	0.62

Key: CL: Crisis leadership, BCM: Business cuninuity management, OCP: Organizational Crisis Performance

CL is explaining 47% of the variance in BCM. In addition, CL, and BCM explaining 62% of the variance in organizational crisis performance.

Indirect Hypothesis Testing. According to the bootstrapping's analysis, there is a significant indirect impact in the relationship between CL and OCP via BCM with a t-value of 4.679 and p-value<0.001. as indicated by Preacher and Hayes, (2008) [70] that the

mediation effect exist when the indirect impact of SP and OUP via ESA with boot 95% C1: [LL = 0.164, UL = 0.398], doesn't straddle a zero in between. Hence H4 was supported (Table 6).

Table 6: Bootstrapping the indirect effectof BCM.

Н	Constructs	B-value	SE	t value	P value	decision
H4	CL -> BCM -> OCP	0.285	0.286	4.679	0.000	Supported

Key: CL: Crisis leadership, BCM: Business continuity management, OCP: Organizational Crisis Performance [70]

## V. DISCUSSION

The findings of the study have shown the validity and reliability was significant and supported in order to Cronbach Alpha value for each construct accordingly. Furthermore, the constructs relationships have shown in the results that crisis leadership is positive and significant influence on crisis performance on the basis of the direct and indirect effect. Additionally, an organization out of a difficult situation is to admit that it actually is in trouble. The significant influence of crisis leadership on crisis performance indicates that crisis leadership can decrease crisis or harmfulness or uncertain consequences by managing the crisis reason. Similarly, the indirect influence of crisis leadership of crisis performance through business continuity management positive and significantly shown the above result that BCM mediates between both variables. The mediation effect of BCM place to ensure the stability of the organization in order to follow the consistency for running in the market. Consequently, crisis leadership positive significant influence on BCM in order to BCM formalized structure and expression of an organization's crisis management values and practices with standards. The development of BCM states that in order to standardize the best practices of an organization, new opportunities might be seeked by it while diffusing these practices.

Moreover, the findings have suggested that BCM significantly influence on crisis performance. This relationship makes sense as BCM consist of the standard and regulations of the organizational practice and procedures where the crisis will be absorbed by the executives. The executives of an organization mostly have known about the uncertain and critical situation. So, BCM appropriately comprises crisis management with effective practice and followed procedures to reduce crisis troubles. The crisis managers need to be vigilant and make quick decisions on cost cutting of the organizational expenses, selling of the loss-making structures, looking for business opportunities, and dismissal of employees; however, they try their best to keep the morale of the staffs high [71].

## VI. IMPLICATIONS

This study has indicated two implications such as theoretical and managerial. Essentially, the study shows that the effects of crisis leadership and BCM on crisis management. First, the theoretical implication that stands for relationships among the constructs which uttered for possible outcomes forms the theoretical evidence. It indicates the result of the research that identified the model constructs relationship-based contributions. There is an imposing variety of theoretical rationales to sustain the

perspective that administrative settings provide a more fruitful venue for crisis leadership relationships. First, the influence of crisis leadership (directly) on crisis performance and BCM has indicated the theoretical form of evidence that leaders are willingly advance in taking actions in order to organizational uncertainty or financial collapse. This harmful situation can be reduced into appropriate crisis management. Crisis management is the process undertaken by organizations and individuals aiming to reduce the impacts communities experience from exposure to hazards during real-world incidents [72, 73]. The crisis leadership influences on BCM that provides a clear idea of this relationship. BCM practices, organizations pursuit in their structures and activities due to the influence by security, risk management and resilience agendas emanating from the stakeholders [11]. Finally, BCM influences on crisis performance in order to increase the organization's collaboration and riskfree zone by the following continuity.

Therefore, the practical implication includes the observations made for practical decisions to extent of organizational approach. Accordingly, relationshipbased suggestions require providing indications such as crisis leadership organize to the business continuity management in order to manage crisis performance procedures. It is suggested for the organization that crisis leadership must be an effective leader to adapt and practice for BCM. On the hand, BCM enhances crisis performance in order to reduce crisis for any uncertain situation in the organization. It is suggested that BCM and crisis management So, these findings suggest to the organization's executives to imply the findings for reducing crisis and increase the management capability for absorbing crisis and fill up for achieving long-run stability of the organization and improve performance for future success.

## VII. LIMITATION AND FUTURE INDICATIONS

There are many limitations to this study in order to conduct from the first stage to last. Crisis leadership has articulated in terms of crisis reductions but to identify different leadership accrues instead of crisis responses from the respondents. The main limitation was including a single industry and generalizing the outcomes to all other industries. There also might be response bias as the queries have been answered by one respondent. The sample size is also low, because of which rigorous statistical tests could not be performed. Future study can be conducted to gather data from another organizational context across another geographical area. Therefore, future research examine the proposed associations by incorporating contextual variables into the framework including industry type, ownership type, and intraregional variations to further investigation. Finally,

the further conceptualization and verification of the factors, testing of new hypotheses and theorization is needed.

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