

# The Effectiveness of Crisis Management and its Role in Achieving Sustainable Competitive Advantage: A Survey Study of a Sample of Employees at the Northern Technical University

**Dr. Rafat Asai Hussein Al-Obaidi**

Assistant Professor, Northern Technical University / Technical College of Administration / Mosul

DOI:10.37648/ijps.v20i01.015

<sup>1</sup>Received: 19/07/2025; Accepted: 20/08/2025; Published: 10/09/2025

## Abstract

Crisis management is one of the important means that many organizations resort to in an attempt to reduce the damage that may be caused to them as a result of being exposed to the various types of crises that they may go through and then overcome their competitors in a way that benefits them and thus achieve a sustainable competitive advantage that enables them to withstand in the environment. The foreign ministry is changing very quickly, so this research attempt came to show the effective role of crisis management in achieving sustainable competitive advantage / a survey of a sample of workers at the Northern Technical University in an attempt by the researcher to identify the active role of university employees in managing crises and then achieving a sustainable competitive advantage. To benefit the university in particular and the higher education sector in general.

## 1. Introduction

Many organizations face diverse types of internal and external crises, which often create a state of slowdown in their vital activities and operations. Addressing such crises requires the engagement of multiple organizational actors through effective coordination and cooperation across departments and employees to ensure success and distinction from competitors. Given the dynamic changes at both internal and external levels, crisis management has been viewed as the backbone of preparing organizations to invest effectively and efficiently (Mesk, 2011, p.3).

An examination of the competitive business environment reveals that today's environment and its influencing factors are far more complex than in the past. Advances in information technology, production methods, and customer power are among the critical characteristics shaping crisis management and contributing to sustainable competitive advantage, conditional on effective interaction and cooperation between employees, organizations, and customers alike. In order to cover the research variables both theoretically and empirically, the study was structured into four sections: the first addressing methodology, the second the theoretical framework, the third the field study, and the fourth presenting conclusions and recommendations.

## 2. Chapter One / Methodology

**2.1 Research Problem :** Today's leaders, whether political, corporate, or civil society leaders, must operate within a unified dynamic system in order to confront work pressures and external risks. The challenge lies in their ability to transform such risks into opportunities and leverage them to enhance organizational resilience and reduce threats (Jams, 2017, p.12). This study arises from the observed problem of limited comprehensive leadership capabilities among many leaders, which prevents organizations from improving their performance and adapting effectively to surrounding external conditions. The study seeks to explore how crisis

---

<sup>1</sup>How to cite the article: Al-Obaidi R.A.H (September 2025); The Effectiveness of Crisis Management and its Role in Achieving Sustainable Competitive Advantage: A Survey Study of a Sample of Employees at the Northern Technical University; *International Journal of Professional Studies*; Jul-Dec 2025, Vol 20, 202-213; DOI: <http://doi.org/10.37648/ijps.v20i01.015>

management can be leveraged to build flexibility, exploit opportunities, and ensure sustainable competitive advantage.

**2.2 Research Importance :** The importance of this research lies in its dual contribution: first, by presenting a theoretical perspective derived from scholarly literature to clarify the role of crisis management in achieving sustainable competitive advantage; and second, by empirically demonstrating this role through field evidence that highlights the contribution of crisis management to sustainable competitiveness in the sampled organization, thereby benefiting both organizations in general and the case institution in particular .

**2.3 Research Objectives :** The main objective of this research is to emphasize the active role of crisis management in achieving sustainable competitive advantage by enhancing organizational operations to make the studied university a leader in its field relative to peer institutions. The research also seeks to identify practical methods for combating crises, including the COVID-19 pandemic, by ensuring continuity in the educational process and enabling students to pursue both theoretical and applied sciences without interruption, thereby aligning with global quality standards and classifications.

**2.4 Hypothetical Research Model :** To systematically address the research problem, a hypothetical model was designed to illustrate the relationship between crisis management (independent variable) and sustainable competitive advantage (dependent variable). The model assumes a unidirectional causal relationship; wherein effective crisis management influences the stages of achieving sustainable competitive advantage.



Figure (1): Proposed Research Model

## 2.5 Research Hypotheses

**H1:** There is a significant causal relationship between the steps of crisis management and the overall stages of achieving sustainable competitive advantage within the studied organization.

**H2:** There is a significant relationship between the steps of crisis management and each individual stage of achieving sustainable competitive advantage .

**2.6 Research Method :** The researcher adopted the analytical method, relying on literature reviews to build the theoretical framework, and employing a survey questionnaire to collect and statistically analyze field data.

## 2.7 Research Boundaries

- a. **Temporal Boundaries:** The research was conducted between January 12, 2021, and April 12, 2021.
- b. **Spatial Boundaries:** Northern Technical University was selected as the research site.
- c. **Human Boundaries:** The sample included deans, assistant deans, department heads, and faculty members.

**2.8 Data Collection Tools :** Data were collected using a structured questionnaire designed from the theoretical framework and expert feedback. A total of 210 questionnaires were distributed, with 206 valid responses (98% response rate). The questionnaire consisted of three parts: demographic data (age, gender, education), items on crisis management, and items on sustainable competitive advantage. A five-point Likert scale was used.

## 3. Chapter Two / Theoretical Framework

### 3.1 Crisis Management

#### 3.1.1 The Concept

The term *crisis* is an old concept in terminology and usage. In Arabic, it denotes hardship or drought, and it refers to any situation or event that leads to significant and serious positive changes in outcomes. A crisis may also be defined as an event or accumulation of unexpected incidents that affect the organization or part of it. Practically, it represents a complete or partial interruption of operations for a certain period whether short or long due to a specific cause, followed by a structural impact or transformation (Al-Louzi, 2015: 78) , Crisis management has been defined as the process through which an organization overcomes a crisis by utilizing various scientific and administrative tools to avoid its negative consequences while capitalizing on its positive aspects (Al-Khudairi, 2003: 11) , (Stewart, 2003: 1) pointed out that a crisis is an event, claim, or a set of unfavorable circumstances that threaten the safety, reputation, or very survival of an individual or an organization. It extends beyond the public's sense of security, safety, or abnormal circumstances, implying that the actual or potential damage inflicted on the organization is substantial and cannot be contained immediately by the organization alone. (Falkheimer and Heide, 2006: 181) emphasized that a crisis is essentially an extraordinary situation that threatens the operations, reputation, image, and relationships of an organization, causing harm to its clients.

(Al-Zaher, 2013: 54) argued that it is a disruption that materially impacts the entire system and undermines its fundamental assumptions. It results either from the accumulation of various influences or from a sudden breakdown affecting the core elements of the system, posing an explicit and direct threat to the survival of the organization or the system itself.

Many companies today operate in dynamic environments filled with risks that they continuously attempt to adapt to in order to keep pace with global developments. Thus, developing a well-designed strategic plan for business continuity and resilience can raise awareness of threats, prepare the organization for potential disruptions, and help ensure access to the necessary resources and information to manage such emergencies effectively (Hamidovic, 2013: 3).

#### 3.1.2 Characteristics of Crises

Crises that organizations experience, regardless of their type, are distinguished by several key characteristics, the most notable of which are (Mohammed, 2011: 50):

- i. **Suddenness and Complexity :** Crises often erupt abruptly and violently, carrying with them a serious threat to the existing situation.
- ii. **Rapid Escalation :** Events and their outcomes unfold quickly, generating immense pressure on the limited time available to respond, with potentially disastrous consequences reaching the point of destruction.
- iii. **Need for Swift and Decisive Action :** The necessity of making rapid, decisive, and creative decisions is critical in crisis contexts.
- iv. **Interconnectedness of Causes and Effects :** Crises involve entanglement between causes and outcomes, as well as between opposing and supporting forces, which further complicates the situation.
- v. **Atmosphere of Tension and Anxiety :** Crises are accompanied by states of tension, confusion, disorganization, and fear of losing control.

- vi. **Turning Point with Dual Nature** : A crisis often represents a pivotal moment that simultaneously carries both threats and opportunities.

### 3.1.3 Crisis Management System (CMS)

The demand for Crisis Management Systems has significantly increased over time, as crisis management entails the identification, assessment, and resolution of crisis situations. A CMS facilitates this process by organizing communication among all parties involved in crisis response. Moreover, the system is responsible for allocating and managing resources, while ensuring that authorized users can access relevant crisis-related information. The following figure illustrates the Crisis Management System (Liwees, 2011: 42).

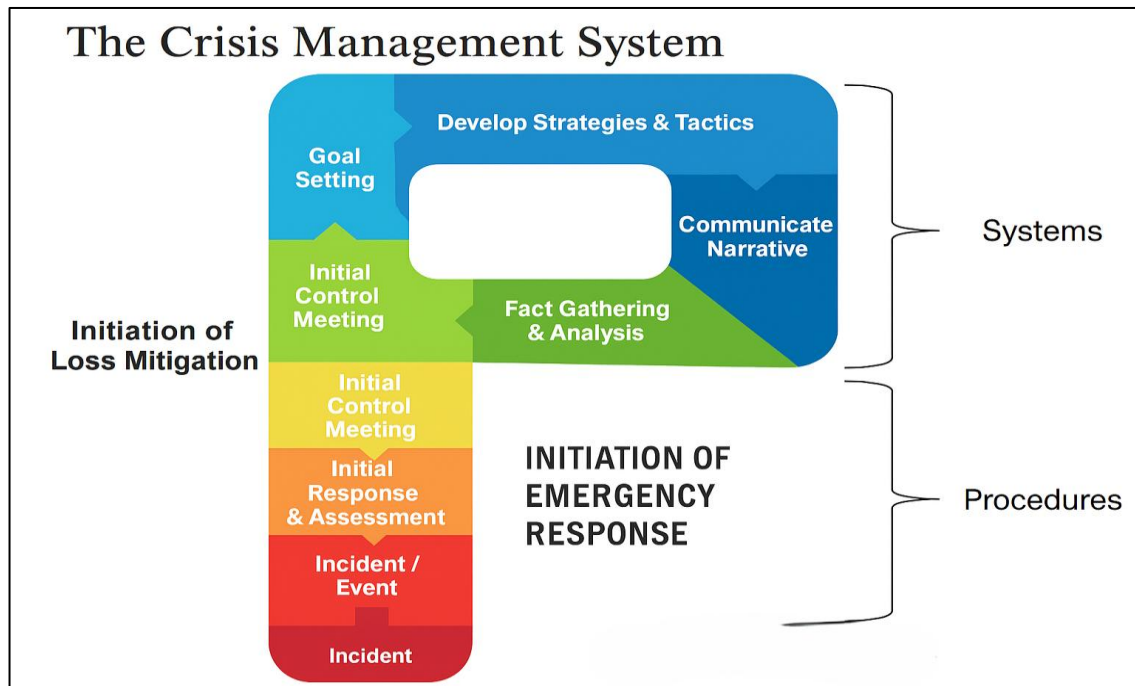


Figure (1) Crisis Management System

**Source :** Liwees , Jon , ( 2011 ) , Seven Dimensions of Crisis Communication Management : A Strategic Analysis And Planning Model, IAR Journal, Vol 15 , Munich , Germany . p 23.

### 3.1.4 General Objectives of the Crisis Management System (CMS)

The general objectives of a Crisis Management System can be summarized as follows (Peter, 2008: 21):

- Assisting in coordinating and managing the crisis.
- Ensuring that abnormal or catastrophic situations do not spiral out of control.
- Mitigating the crisis by addressing the situation with limited resources.
- Allocating and managing resources effectively.
- Identifying, establishing, and implementing tasks for the purpose of crisis management.

**3.1.5 Steps of Crisis Management** : Crisis management is not inherently negative as some may perceive it; rather, it is an effective approach to navigating turbulent situations and ensuring the organization avoids severe losses that could hinder the achievement of its goals. Suhail (2014: 53) emphasized that there are several steps organizations may adopt in managing crises they are likely to encounter:

- Maintaining Calmness** : Take a deep breath. When facing a public relations crisis, the first thing to do is to remain calm. Pause, close your eyes, and breathe deeply. Maintaining composure is essential, as it allows you to control the situation more effectively by keeping everyone around you calm as well.

- ii. **Preparing for Confrontation** : Get ready to face the situation. Take the necessary time to brief all employees who are in direct and frequent contact with customers (including public relations staff, social media teams, customer service representatives, etc.). Inform them about the developments and outline the steps that will be taken in response to the issue.
- iii. **Identifying the Causes of the Crisis** : Investigate the root causes of the crisis by informing employees about them. This significantly reduces questions and inquiries from staff. At this stage, it is crucial to gather a comprehensive understanding of the crisis: what exactly happened, how clients perceive it, and how external stakeholders view the situation (Liwees, 2011: 35).
- iv. **Assessing the Consequences of the Crisis** : Determine whether the crisis has direct impacts on the organization and what its long-term effects may be. Before issuing any response, it is vital to assess how the decisions made to address the crisis will influence business operations, revenues, and brand reputation. This step is particularly important when crafting the organization's message and public stance on the crisis.
- v. **Listening to the Public** : Use your public relations tools and social media monitoring systems to track media and public reactions. This step helps identify whether news of the crisis has reached customers or the media, allowing you to measure the scale of the crisis and determine how to address it. Often, hundreds of people may be discussing the crisis, but only a few may be genuinely concerned (Peter, 2008: 147).
- vi. **Organizational Positioning** : Define the organization's stance and message by reviewing all details of the crisis, its impact on operations, and the reactions received. This contributes to forming a clear idea of the position the organization should adopt.

### 3.2 Sustainable Competitive Advantage

- 3.2.1 **The Concept** : In today's highly competitive environment, many contemporary industrial organizations strive to gain a competitive advantage that distinguishes them from others operating in the same industry. This is achieved by offering unique products tailored to customer needs. Several scholars have emphasized that **sustainable competitive advantage** represents the set of actions undertaken by an organization to achieve its strategic goals, which include establishing a lasting profitable position and ensuring satisfaction for both internal and external stakeholders (Cushman, 2001: 28).
- 3.2.2 (Abu Bakr, 2006: 13) indicated that sustainable competitive advantage refers to an organization's ability to produce goods and services with high quality, reasonable prices, and timely delivery, thereby meeting customer needs more efficiently than other organizations. Similarly.
- 3.2.3 (Asli, 2011: 53) explained that sustainable competitive advantage essentially combines both competitive and strategic dimensions, as it reflects the organization's ability to meet current market needs while simultaneously considering the future demands of upcoming generations.
- 3.2.4 (Al-Bakri and Hamdan, 2013: 7) agreed that sustainable competitive advantage represents the highest level of organizational management. It is not confined merely to tangible or intangible resources, but goes far beyond by focusing on a deep orientation toward the organization's business processes. Sustainable competitive advantage is therefore tied to the organization's efforts to create and maintain advantages over the long term. It is influenced by three main factors: the size of the target market, increased access to resources and customers, and restrictions imposed on competitors' capabilities. Organizations can establish a sustainable competitive advantage through managerial commitment to implementing strategies based on characteristics that are not easily imitable (Hakkak & Ghodsi, 2015: 10). To further enhance sustainable competitive advantage, two critical aspects must be considered: first, the urgent need for new knowledge to develop and market innovative products, which requires access to diverse sources of supply; and second, the high risks associated with knowledge-sharing practices, which necessitate building inter-organizational trust to overcome opportunistic behaviors (Wang et al., 2018: 7)
- 3.2.5 **The Importance of Sustainable Competitive Advantage** : Many organizations resort to adopting multiple mechanisms in order to secure their presence in the market and outperform competitors. Hakkak and Ghodsi (2015: 299) stressed the necessity for organizations to pursue sustainable competitive

advantage by enhancing product quality and overcoming various crises they may face. The importance of such an advantage lies in the following aspects:

- i. Gaining market insights through understanding and forecasting economic factors.
- ii. Encouraging the organization to create unique products that competitors cannot replicate, thereby pushing the organization into an entirely new competitive market space.
- iii. Driving the organization to produce goods and services that appear more valuable to customers compared to those offered by competitors.
- iv. Defining the organization's distinctive capabilities that stem from behaviors lacking in other organizations, thus granting it a stable and enduring advantage.

(Abdulaziz & Khalil, 2017: 10) also highlighted that sustainable competitive advantage holds great significance, with positive implications for organizational performance, as it enables:

- i. Linking the organization's strategic orientations with its interaction with society and the broader external environment.
- ii. Conducting a systematic strategic analysis of the determinants of developing competitive strategies through the use of effective software systems.
- iii. Strengthening the organization's role in evaluating its performance from a strategic perspective and modifying plans in alignment with emerging challenges.
- iv. Providing data and information to support marketing decision-making, as well as formulating marketing strategies that align with the organization's objectives.

**3.2.6 Objectives Of Sustainable Competitive Advantage :** Sustainable competitive advantage is linked to the organization's efforts to create and maintain advantages over the long term. It is influenced by three fundamental factors: the size of the target market, increased access to resources and customers, and the constraints imposed on competitors' capabilities. (Hakkak and Ghodsi, 2015: 299) emphasized that organizations can generate a sustainable competitive advantage by having their managers implement strategies based on characteristics that cannot be easily imitated, while also gaining insights into the market. This advantage seeks to achieve several objectives, including:

- i. Ensuring the continuity of benefits through the application of unique value-generating strategies in a manner asynchronous with potential competitors who are unable to replicate such benefits.
- ii. Recognizing the differences between the organization's products and those of competitors, with such differences stemming from resources inaccessible to competitors.
- iii. Integrating organizational resources and employees' skills with core machinery and equipment competencies in a consistent and distinctive manner aimed at achieving superiority and success.

**3.2.7 Steps to Achieve Sustainable Competitive Advantage :** Organizations rely on a set of fundamental steps in their pursuit of sustainable competitive advantage, which include the following (Al-Bakri & Hamdan, 2013: 9):

- i. Supply Chain: The organization prepares administrative leadership aligned with its adopted orientations to improve employee performance and ensure compliance with environmental standards. This is achieved through the links of the supply chain and by building strong relationships and cooperation among all work units.
- ii. Climate and Energy: The organization seeks to minimize its negative environmental and climate impacts by ensuring that all production processes are environmentally friendly. To this end, it works on developing production operations and finding appropriate solutions.
- iii. Reuse and Recycling: The organization provides solutions, recommendations, and applications to its customers that enable them to reuse and recycle its products, in line with its environmental orientations and with the goal of reducing excessive depletion of natural resources.
- iv. Operations: The organization adopts an Environmental Management System (EMS) to assess and reduce the negative environmental impacts resulting from its operations. This helps make its processes environmentally friendly and also avoids penalties that may be imposed for violating environmental regulations.



- v. Employees: The organization adopts high standards of employee performance while promoting diversity within the workforce. It also establishes a healthcare system and provides a safe working environment, both of which support employees in carrying out their tasks effectively.
- vi. Products: The organization designs products and packaging in ways that reduce the consumption of natural resources and allow for recycling, while preventing environmental pollution.

#### 4. Chapter Three / The Empirical Aspect

In order to test the validity of the hypothetical research model and prepare for the subsequent stage of analysis, we conducted **Confirmatory Factor Analysis (CFA)** to examine the relationships linking the observed variables with their corresponding latent variables within the proposed model, as follows:

**4.1 Confirmatory Factor Analysis (CFA):** CFA provides a set of indicators known as *Goodness-of-Fit Indices*, which determine whether the indicators of the hypothetical model fall within acceptable ranges, thereby confirming its suitability and validity for testing the research hypotheses.

In the present study, the **Scale-Free Least Squares (SLS)** method was applied to conduct CFA instead of the **Maximum Likelihood (ML)** method, which requires several conditions to be met—most importantly, that the data must follow a normal distribution. Since this assumption was not satisfied in the current dataset, the SLS approach was adopted. This is demonstrated in **Figure (3)** and **Table (1)** below.

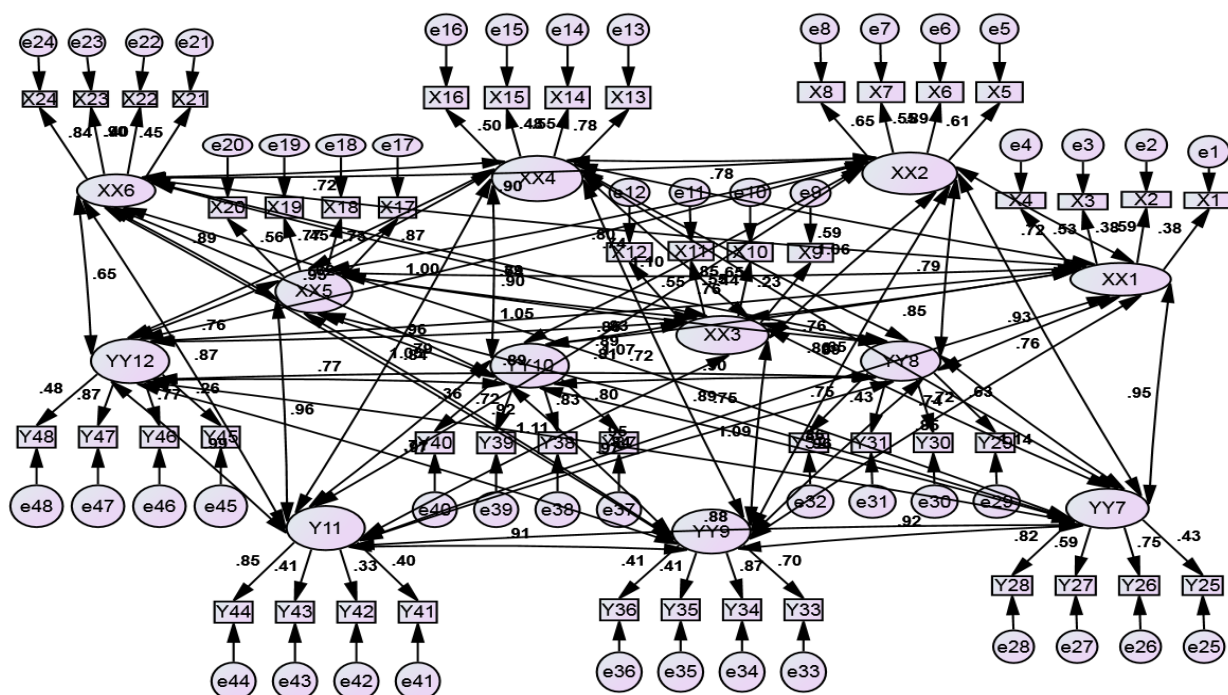


Figure (3): Preliminary Research Model Test Results

Table (1): Fit Indices for the Preliminary Research Model

Fit Index	Acceptance Threshold	Model Value	Result
<b>GFI</b>	GFI > 0.90 → Good Fit	0.967	Accepted
<b>AGFI</b>	AGFI > 0.90 → Better Fit	0.962	Accepted
<b>RMR</b>	Between 0.00 and 0.08	0.071	Accepted
<b>NFI</b>	NFI > 0.90 → Better Fit	0.962	Accepted
<b>RFI</b>	RFI > 0.90 → Data-Model Fit	0.957	Accepted
<b>CMIN/DF</b>	Between 1 and 3	2.641	Accepted

Source: Prepared by the researcher based on statistical software output.

The results of the confirmatory factor analysis for both independent and dependent variables, as presented in **Figure (3)**, demonstrated highly positive outcomes from the first trial. The model exhibited **strong factor loadings**, reflected in the high correlations between the observed items and their respective latent constructs. Moreover, the **goodness-of-fit indices** displayed in **Table (1)** confirmed that the model achieved values within the acceptable thresholds, thereby indicating a satisfactory overall model fit .. These findings provide evidence of the model's **construct validity and measurement reliability**, as the items successfully measured their intended latent variables. The positive outcomes can be attributed both to the realistic responses provided by the sample and to the researcher's application of the **Scale-Free Least Squares (SLS)** estimation method, which was more appropriate given the data characteristics. Consequently, the model was accepted **without the need for modifications**, rendering it valid and suitable for the subsequent stage of **hypothesis testing**.

**4.2 Hypotheses Testing :** After conducting the confirmatory factor analysis and verifying that our research model aligns with the field data while meeting the required goodness-of-fit standards, we proceeded to the testing of the research hypotheses, as follows:

**First Hypothesis:** *The impact of crisis management steps on the stages of achieving sustainable competitive advantage at the overall level :* To test this hypothesis, a structural equation model (SEM) was developed, as illustrated in Figure (4). The model's fit indices and path coefficients were examined to determine the statistical significance and validity of the hypothesized relationship. The results of these tests are summarized in Table (2)



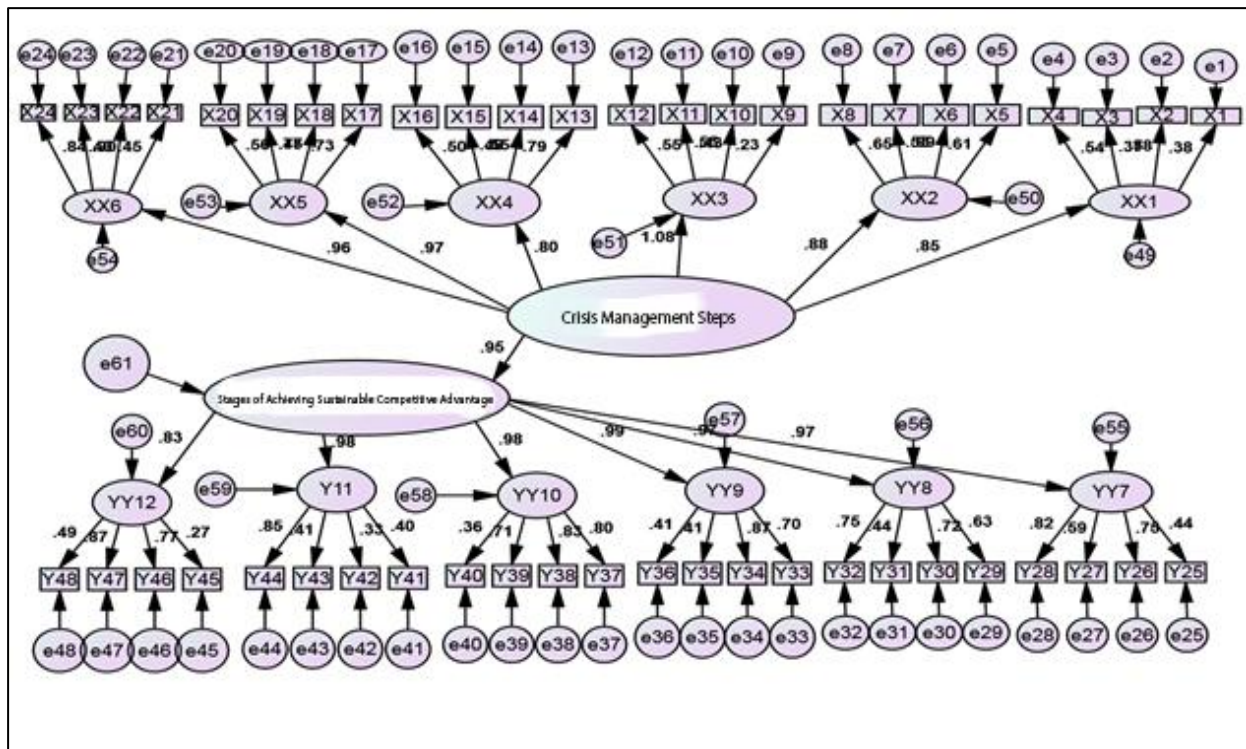


Figure (4) : Structural Equation Model for Testing the First Hypothesis

Table (2): Results of the First Hypothesis Testing

p-value	Lower	Upper	Estimate	Dependent Variable	Direction of Effect	Independent Variable
0.03	0.920	0.979	0.953	Sustainable Competitive Advantage	←	Crisis Management

The results presented in Table (2) indicate a positive and significant effect of crisis management steps on the stages of achieving sustainable competitive advantage. This is evidenced by the unstandardized regression coefficient (**Estimate**) of (0.953) . Moreover, the Upper value reached (0.979), which exceeds the critical value of 1.96 at the (0.005) significance level (**corresponding to a value of 2.58 at the 0.01 level**). This is equivalent to the *t*-value in a conventional regression test. Accordingly, the null hypothesis is rejected and the alternative hypothesis is accepted.

**Second Hypothesis:** *The impact of crisis management steps on each stage of achieving sustainable competitive advantage individually.* To test this hypothesis, a structural equation model (SEM) was constructed, as illustrated in Figure (5). The model fit indices and path estimates are presented in Table (3) to determine the statistical significance and validity of the hypothesized relationships.

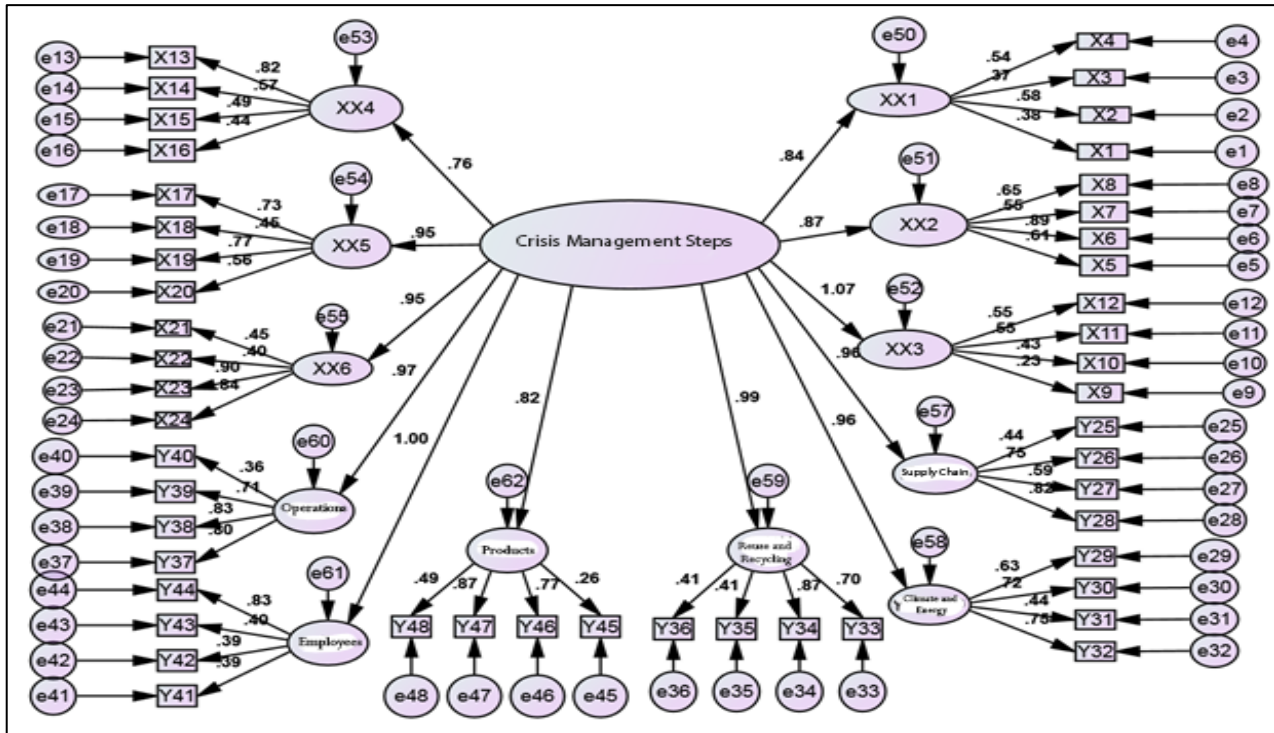


Figure (5): Model for Testing the Second Hypothesis

Table (3): Values of the Second Hypothesis Analysis

Independent Variable	Path Direction	Dependent Variable	Estimate	Upper	Lower	p-value
Crisis Management	→	Supply Chain	0.960	1.012	0.898	0.00
Crisis Management	→	Climate and Energy	0.960	1.040	0.847	0.02
Crisis Management	→	Reuse and Recycling	0.985	1.023	---	0.05
Crisis Management	→	Operations	0.967	0.995	---	0.16
Crisis Management	→	Employees	0.999	1.068	---	0.05
Crisis Management	→	Products	0.819	0.909	0.725	0.02

The statistical analysis results of the structural equation modeling confirmed the significance of the designed model for testing the **second main hypothesis**, as indicated by the positive indicators obtained and presented in **Table (3)**, as well as by the high factor loadings that exceeded **45%**, as shown in **Figure (5)**. Furthermore, by reviewing the values of the standard errors, it is evident that the strongest effect appeared in the (**Employees**) stage within the workplace, while the weakest effect was observed in the (**Products**) stage... Moreover, **Table (3)** also revealed a significant but inverse effect of crisis management on achieving sustainable competitive advantage, specifically in the **Operations** stage. This was supported by the unstandardized regression coefficient (**Estimate**) of (**0.967**), with a critical ratio (**C.R.**) of (**2.88**), which exceeds the critical value of **1.96** at the 0.005 significance level (**Equivalent to 2.58 at the 0.01 level**). This corresponds to the *t*-value in conventional regression testing. **Thus, H<sub>0</sub> is rejected and H<sub>2</sub> is supported.**

## 5. Chapter Four / Conclusions and Recommendations

### 5.1 Conclusions

1. The organization under study seeks to improve the performance of its operations in order to outperform competitors by adopting training programs that provide employees with advanced expertise and skills, enabling them to carry out their tasks effectively.

2. Environmental impacts are minimized by ensuring that all learning processes are executed in an optimal manner, alongside developing these processes in a way that achieves zero-error performance, thereby securing a sustainable competitive advantage.
3. The organization is keen on maintaining a qualified workforce with high levels of experience and skills to confront and overcome various types of crises, thus preventing the loss of any marketing opportunities.
4. The statistical analysis results revealed a relative importance of the crisis management variable in achieving sustainable competitive advantage. The Operations stage ranked first, followed by the Reuse and Recycling stage in second place. The Supply Chain and Climate and Energy stages came in third place respectively, while the Products stage was ranked fourth and last.

## 5.2 Recommendations

1. Intensify training and educational programs for employees on the various methods and tools for managing and addressing different types of crises, as an effective means to achieve the organization's objectives and adapt to its external environment.
2. The study recommends organizing seminars or conferences to guide managers and decision-makers on how to manage crises in an optimal way without undermining or disrupting the organization's operations.
3. Encourage and prepare employees to foster healthy and fair competition by introducing new incentive systems and overcoming resistance to change, thereby enabling the achievement of sustainable competitive advantage.
4. The organization under study should eliminate routine and repetitive practices in its operations and shift towards modern approaches that better serve both the organization and its stakeholders.

## References

- Abdulaziz, M. H. A.-B., & Khalil, D. M. I. (2017, December). *Marketing information systems as a contemporary factor for enhancing sustainable competitive advantage in metal furniture products* [Paper presentation]. 4th International Conference on Applied Arts, Helwan University, Cairo, Egypt.
- Abu Bakr, M. M. (2006). *Human resources: An approach to achieving competitive advantage*. Dar Al-Jamaica Journal.
- Al-Bakri, T., & Hamdan, K. (2013). The conceptual framework of sustainability and sustainable competitive advantage: A simulation of HP in adopting a sustainability strategy. *Al-Academia for Social and Human Studies*, (9), 11–30.
- Ali, N. (2018). Methods and models of crisis management. *Al-Nabaa Journal for Informatics*, (3). <https://m.annabaa.org>
- Al-Khudairi, M. (2003). *Crisis management: The science of exercising power in times of extreme weakness*. Al-Nile Arab Publishing Group.
- Al-Louzi, M. (2015). *Systemic development* (1st ed.). Wael Publishing House.
- Al-Zahir, M. A. (2013). Crisis and disaster management: Risks of globalization and international terrorism. *Journal of Public Administration*, 52(7), 145–168.
- Asli, K. (2011). The value of environmental management and green product design within sustainable development and competitive strategies of the companies. *African Journal of Agricultural Research*, 6(1), 1–9.
- Cushman, D. P., & King, S. S. (2001). *Excellence in communicating organizational strategy*. State University of New York Press.
- Falkheimer, J., & Heide, M. (2006). Multicultural crisis communication: Towards a social constructionist perspective. *Journal of Contingencies and Crisis Management*, 14(4), 180–189. <https://doi.org/10.1111/j.1468-5973.2006.00494.x>

- Hakkak, M., & Ghodsi, M. (2015). Development of a sustainable competitive advantage model based on balanced scorecard. *International Journal of Asian Social Science*, 5(5), 267–274. <https://doi.org/10.18488/journal.1/2015.5.5/1.5.267.274>
- Hamidovic, H. (2013). An introduction to crisis management. *ISACA Journal*, 5, 1–3.
- Jams, M. (2017). Crisis management. *John Wiley Journal*, 9(12), 45–52.
- Liwees, J. (2011). Seven dimensions of crisis communication management: A strategic analysis and planning model. *IAR Journal*, 15(2), 55–70.
- Misk, Z. M. (2011). *The reality of crisis management in public sector hospitals in the West Bank and strategies for addressing them from the perspective of employees* [Master's thesis, Hebron University].
- Mohammed, I. A. (2011). *Crisis management strategies: A conceptual framework from the Islamic perspective* [Master's thesis, University of Baghdad].
- Peter, W. (2008). Crisis management strategy utilized by the United States Department of Defense following the terrorist attack on America: A case study. *Journal of Contingencies and Crisis Management*, 4(2), 89–101. <https://doi.org/10.1111/j.1468-5973.2008.00540.x>
- Stewart, H. (2003). Effective crisis management: Tools and best practice for the new millennium. *Journal of Communication Management*, 7(4), 348–355. <https://doi.org/10.1108/13632540310807485>
- Suhail, A. (2014). Steps for crisis management and public relations. *Asda Al-Idara Journal*, (24), 88–105.
- Wang, H., Han, P., & Liu, W. (2018). How to improve sustainable competitive advantage from the distributor and the supplier networks: Evidence from the paper-making industry in China. *Sustainability*, 10(7), 2038. <https://doi.org/10.3390/su10072038>