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CRISIS MANAGEMENT IN IT COMPANIES: THE CASE OF SKOPJE

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Abstract

Crisis management presents a significant challenge for IT companies, yet its effective implementation is crucial for ensuring the organization's continued success and operational efficiency. Crisis management is a multifaceted process that integrates knowledge and theories from various fields. Research on crisis management within the IT sector is extensive, with scholars aiming to identify key issues and best practices for managing crises in this domain. This paper seeks to explore how crisis management is applied within IT companies, with a particular focus on those operating in Skopje. To achieve this, a narrative approach was employed, utilizing secondary sources of information. Additionally, empirical research the authors conducted through a survey questionnaire distributed to 30 IT companies in Skopje. The data collected were analyzed and visualized through tables and graphs, leading to conclusions and actionable recommendations. The findings suggest that crisis management in the IT sector in Skopje is still in its nascent stages. There is a lack of established, effective crisis management models to address emerging challenges, leaving companies vulnerable to unexpected crises. This paper highlights the need to develop robust crisis management strategies tailored to the specific needs of the IT sector.

Keywords: *Crisis, Crisis Management, Symptoms, Sources, Activities of Crisis Management, Bearers of Crisis Management.*

1 INTRODUCTION

The significance of managing organizational crises lies in the timely identification and resolution of potential threats, as failure to do so can lead to organizational decline and, ultimately, the failure of the enterprise. Crises are an inherent part of organizational life, and while they can disrupt a business's functioning, they also affect employees, often leading to psychosomatic disorders and stress-related health issues.

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Crisis phenomena have been studied across various academic disciplines, including economics, medicine, psychology, history, and politics. For instance, in psychology, a crisis may refer to a personal or identity crisis, while in medicine, it may relate to a health crisis, and in politics, a national crisis. This interdisciplinary interest underscores the complex nature of crises and their far-reaching impacts.

The organizational crises study has provided valuable insights essential for navigating such challenges. Scholars have approached the subject from diverse perspectives, leading to a variety of theoretical frameworks and understandings. However, synthesizing these varied viewpoints into a unified theory remains a challenge, as the causes and impacts of crises differ depending on the context and nature of the organization.

A key concept related to organizational crises is crisis management—a critical organizational function aimed at navigating and mitigating the impact of crises. In modern business environments, the inevitability of crises has become widely recognized, and organizations are increasingly focusing on developing crisis management strategies to address them when they arise. The role of crisis management is to steer the organization through periods of instability, ensuring both short-term recovery and long-term resilience.

For managers, effective crisis management requires identifying the root causes of crises and also implementing strategies that minimize their negative consequences. Proactive crisis management is essential for preserving the organization's stability, protecting its reputation, and ensuring its long-term viability.

2 MANAGING A MODERN CRISIS

Managing a modern crisis is a highly complex and time-consuming operation that involves multiple stakeholders, ranging from political figures to business leaders, and individuals directly impacted by the crisis. The primary objective of crisis management is to prevent the crisis from escalating and, ideally, to restore the organization to its pre-crisis state with minimal lasting consequences.

This goal is at the core of crisis management, which seeks to implement operational strategies aimed at achieving this outcome.

Academic literature offers many definitions and interpretations of what defines a crisis. Below, we focus on a selection of definitions that most effectively capture the essence of a crisis.

Sapriel (2003, p. 348) defines a crisis as "an event, revelation, allegation, or set of circumstances which threatens the integrity, reputation, or survival of an individual or organization".

Cater and Beal (2014, p. 65) describe a crisis as "a low-probability situation with significant consequences for the organization, a high degree of uncertainty, and a sense of decision-making urgency".

Shrivastava, Mitroff, Miller, and Miglani (1988, p. 285) offer a more in-depth definition: "An organizationally based disaster, which causes extensive damage and social disruption, involves multiple stakeholders, and unfolds through complex technological, organizational, and social processes".

Crisis, as a phenomenon, is intrinsically linked to the functioning of the organization. It is difficult to discuss the operational dynamics of any modern enterprise without considering the potential for crises. While some crises are inevitable regardless of the company's preparedness, recognizing and addressing early warning signs can significantly reduce their impact.

The definitions of crisis management also vary, reflecting different perspectives on how to address and mitigate crises. Here are several notable definitions that outline its essence.

Thomas and McNair-Connolly (2017) define crisis management as "the planning for, and management of a perceived risk, an unexpected disaster, or a business disruption."

Coombs (2007, p. 5) asserts that crisis management is the collective sum of activities aimed at preventing and minimizing real damage because of a crisis.

Bigley and Roberts (2001) describe it as involving "coordinating complex technical systems and designing an organizational structure to prevent, mitigate impact, and learn from crises."

Blythe (2002) outlines a crisis management process that includes: identifying potential weak points, assessing existing procedures, recognizing new procedures needed to eliminate these weaknesses, organizing a crisis management plan, utilizing the plan when needed, and continuously monitoring processes for new vulnerabilities.

Millar and Heath (2004) identify three essential elements for good crisis management: a clear plan of action, an early warning system to signal a potential crisis, and a trained crisis management team capable of effectively addressing the situation.

Crisis management encompasses activities designed to identify, plan for, respond to, and resolve crises. From a managerial perspective, crisis management involves actively engaging in processes to navigate situations that threaten the organization's survival. It requires managers to detect emerging threats in the external environment and act swiftly to mitigate risks.

In essence, crisis management can be viewed as a specialized form of enterprise management aimed at mastering all processes that could jeopardize the organization's survival. Mitroff (1994, pp. 101-102) notes, it is no longer a question of whether a crisis will occur, but when.

Crisis management is thus the highest priority for any enterprise aiming to prevent or overcome processes that might significantly disrupt operations or threaten the organization’s continued existence. If the goal of crisis management is to ensure the organization continues to meet its objectives, it may also involve restructuring, reengineering, or reorganization.

3 SYMPTOMS OF CRISIS

Identifying the early symptoms of a potential crisis is crucial for companies to avert more severe consequences. These symptoms are often not immediately visible and may manifest as subtle, underlying issues. Typically, the first signs include a decline in market share and orders. They are followed by a drop in sales and solvency. However, it is important to note that these signs do not always indicate an impending crisis; they can represent temporary challenges that may be resolved shortly. No company remains at the peak of success indefinitely, and such fluctuations are common in the business cycle. Nevertheless, they can serve as valuable signals for companies to initiate necessary changes, whether in human resources, organizational culture, or the technology and equipment used in production.

Some symptoms may be more pronounced than others, and this variance makes it particularly challenging for managers to distinguish between minor setbacks and genuine signs of an impending crisis. The most difficult task for managers is recognizing when these symptoms cross the threshold into a crisis. Early identification is crucial for implementing timely corrective actions and preventing the problem from worsening.

Sometimes, the signs of an impending crisis are not immediately visible in an organization's financial or operational results. While there may not always be clear indicators pointing to a crisis, it is essential to recognize the symptoms that suggest a crisis could be on the horizon. These symptoms can manifest in several ways, and different authors have identified a range of warning signs. Some key symptoms include:

- *Decreasing liquidity and an inability to meet financial obligations, especially to suppliers.*
- *Declining profitability, as indicated by a reduced rate of return on investments.*
- *Falling sales, shrinking market share, delays in product deliveries, and reduced incoming orders.*
- *Employee dissatisfaction, expressed through strikes, high turnover rates, or low morale.*
- *Rising production errors, increased waste, and declining capacity utilization.*
- *Reduction in investment for research and development, and growing inefficiency in business processes.*
- *Restrictive dividend policies.*
- *Delays in reinvestment, and a failure to update or improve business strategies.*
- *Resistance to external ideas or innovation, hindering progress and adaptability.*

Recognizing these symptoms is critical, but it is important to remember that some signs may reflect temporary setbacks rather than the onset of a crisis. Nonetheless, they provide valuable opportunities for companies to reassess their strategies, processes, and operations.

4 TYPES OF CRISIS MANAGEMENT

While there are various classifications of crisis management, in theory, two primary types are commonly recognized:

- *Active Crisis Management*
- *Reactive Crisis Management (Muller, p. 38)*

4.1 Active Crisis Management

Active crisis management refers to proactive measures taken to identify and mitigate potential crises before they occur. It involves early detection and the implementation of strategies that prevent crises from escalating. Active crisis management aims to address problems before they become significant, reducing the likelihood of a crisis unfolding.

Anticipatory Crisis Management: Involves preparing countermeasures in advance by creating contingency plans and scenarios to ensure a timely response if a crisis arises.

Preventive Crisis Management: It focuses on the planning, implementation, and control of strategies, based on early warning indicators, to prevent a crisis from developing.

4.2 Reactive Crisis Management

In contrast, reactive crisis management involves responding to crises after they have occurred. This situation demands swift and effective measures to mitigate damage and promptly restore normal operations. Reactive crisis management is focused on managing disruptions that have already affected the organization.

Responsive Crisis Management: a company applies it when a crisis has already occurred. The management leads the company through the crisis and acts towards a resolution.

Liquidation Crisis Management: This occurs when the organization faces a situation where recovery is no longer possible, and the focus shifts to minimizing losses and protecting stakeholders during the planned liquidation of the company.

Each type of crisis management requires different strategies and tools, depending on whether the crisis is imminent, ongoing, or irreversible.

5 CRISIS MANAGERS

The success of crisis management depends largely on the individuals or groups responsible for executing the strategies. These individuals, often called "crisis managers," play a critical role in planning, implementing, and monitoring the crisis management process.

5.1 Internal Crisis Management

Top management within the company often takes the lead in managing crises. However, the question arises: Can the same management team that led the company into a crisis also be responsible for navigating it? There is no single answer to this, but two main schools of thought exist:

- *Top Management Should Not Be Responsible:* Some argue that the same team responsible for the crisis cannot effectively lead the recovery, as their actions or decisions may have contributed to the situation.
- *Top Management Can Lead the Recovery:* Others believe that top management, being familiar with the company's internal workings, is best positioned to steer the organization out of the crisis, provided they take immediate and effective action.
- *Whether top management is suitable for crisis management depends on their actions.* If they are proactive, implement sound strategies, and take decisive measures, they may continue to lead the crisis management efforts. However, if their actions are passive or ineffective, they may lose credibility, and the company may need external assistance.

5.2 Tasks of Crisis Management Leaders

Top management, as crisis managers, must undertake the following tasks:

- *Initiating, preventing, or managing the crisis: Proactively addressing potential threats.*
- *Selecting and approving crisis management measures: Deciding on the appropriate actions to address the crisis.*
- *Human resource management: Ensuring the workforce is properly managed during a crisis.*

5.3 External Crisis Management Resources

In some cases, a company may require external help. That could involve hiring external advisors or crisis managers to provide an objective perspective or expertise in managing the crisis.

External Advisors: These consultants bring objectivity and independence to the crisis management process. They can provide valuable insights and help implement strategies that might be difficult for internal management due to emotional or organizational biases. However, external consultants face challenges, such as unfamiliarity with the company's internal culture, potential resistance from employees, and high costs. In some cases, these factors may hinder their effectiveness.

Crisis Managers: Often freelance professionals or former executives with expertise in crisis management, crisis managers are typically brought in when existing management is unable to resolve the crisis. They bring a fresh perspective, but their role can be contentious, as they may face resistance from employees and management. Crisis managers must be able to make tough decisions, analyze the situation objectively, and implement change rapidly.

When selecting a crisis manager, organizations should prioritize the following criteria:

- *Experience in crisis management: Proven track record in leading organizations through crises.*
- *Toughness and resilience: Ability to withstand pressure and make difficult decisions.*
- *Authority: The crisis manager must hold a certain level of influence within the organization.*
- *Analytical thinking: Strong problem-solving skills to understand the crisis and develop effective solutions.*
- *Confidence and assertiveness: A crisis manager must have the self-assurance to take charge and lead decisively.*

It is not necessary to find all these qualities in a single individual. Sometimes, a team of crisis managers can be assembled, with each member contributing different skills and expertise to form a balanced and effective leadership team.

6 RESEARCH METHODOLOGY

To collect data for this research, most surveys we conducted online. This method allowed the authors to distribute the questionnaires to a larger number of respondents in a shorter time frame and at a lower cost. Additionally, conducting the survey online ensured anonymity, which is known to increase the likelihood of receiving more honest and accurate responses. However, some questionnaires were also distributed in person to ensure a variety of responses.

Within the research, the following rules were accepted:

- *The survey was conducted among people born between 1975 and 2000.*
- *Only individuals with an academic education were included, regarding the level of education.*
- *To obtain relevant data and results, the authors determined that the sample size was above 30 respondents.*

The questionnaire consisted of two sections with a total of 10 questions:

- *Section 1* contained 3 demographic questions about the respondents' age group, gender, and level of education.
- *Section 2* included questions related to the functioning of IT enterprises in the Municipality of Skopje, particularly in relation to their ability to continue operations during a crisis.

The questionnaire utilized a Likert scale (1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree) to measure the respondents' opinions on various aspects of crisis management in IT enterprises.

The first table we constructed is related to the demographic characteristics of the respondents, in terms of gender, level of education, and age. Its content is presented in Table 1.

Table 1. Demographic characteristics of respondents

SEX	
Male	22
Female	12
LEVEL OF EDUCATION	
Graduated	30
Master	3
Ph.D.	1

AGE	
Under 25 years old	15
Between 25 and 30	12
Between 31-36	3
Between 37-41	2
Up 41	2

Source: Authors' original research

We constructed Table 2 based on the answers received and obtained a mean score.

The data from these demographic categories were used to better understand the respondents' backgrounds and their potential influence on perceptions of crisis management in IT enterprises.

When we collected the survey data, we analyzed the responses using descriptive statistics. We calculated the mean score for each question in Section 2, which provided insights into the respondents' overall views on the state of crisis management in IT enterprises in Skopje. This statistical approach helped us to identify trends, patterns, and significant differences in responses, which will be discussed in the following sections of the paper.

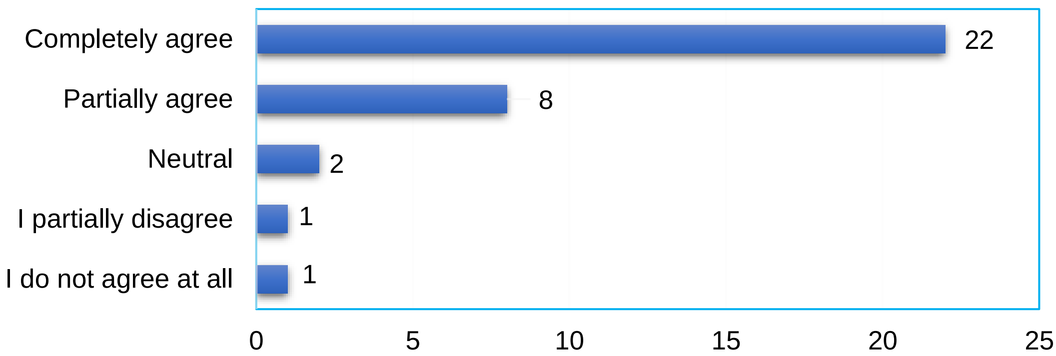
The last two questions are related to whether they have problems with AI and political issues, like war, political change, etc., in these sectors.

We can see the answers from graphs 1 and 2.

Table 2. Organizational questions related to the crisis

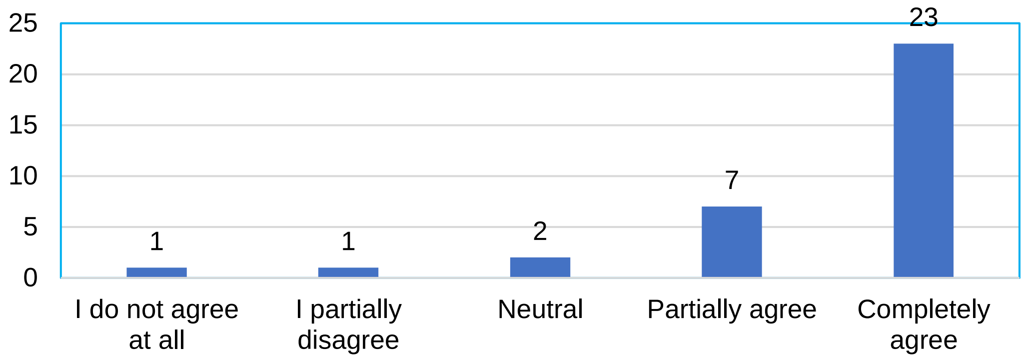
No.	Finding	Strongly Disagree **1**	Disagree **2**	Neutral **3**	Agree **4**	Strongly Agree **5**	Results
1.	We have not felt a crisis so far	0	0	3	10	21	4.53
2.	Do you anticipate the possibility of a crisis?	0	0	4	12	18	4.41
3.	Do you think that if there is a crisis in your business, it will be quickly overcome?	0	0	0	5	29	4.85
4.	Are you able to recognize the symptoms of a crisis in your company?	0	0	10	14	10	4.00
5.	There will be no hiding information if there is a crisis	1	3	4	18	8	3.85
6.	Do you think there are managers and leaders in your company who are ready to handle any crisis?	1	1	2	20	10	4.09
7.	Do you think outside experts should be hired if you get into a crisis?	18	16	0	0	0	1.47

Source: Authors' original research



Graph 1. Do you think the application of artificial intelligence will affect the emergence of a crisis in this sector?

Source: Authors' original research



Graph 2. Do world political and military changes contribute to a crisis in this sector?
Source: Authors' original research

7 FINDINGS AND CONCLUSIONS

The survey results reveal several key insights into how employees in the IT sector perceive crises and the sector's ability to handle potential crises:

- *Perception of Crisis in the Workplace:* Employees generally did not perceive an ongoing crisis in their work environment (average score: 4.53), but they felt confident in their ability to anticipate a potential crisis before it occurred (average score: 4.41).
- *Crisis Management Confidence:* There is strong agreement (score: 4.85) that, in the event of a crisis, the organization would swiftly address and overcome it. Employees also expressed confidence in recognizing the early symptoms of a crisis, which would enable them to respond appropriately.
- *Transparency in Crisis Communication:* Employees indicated a moderate level of trust (score: 3.85) that in the event of a crisis management would not conceal critical information. Instead, it would be shared with all employees, ensuring transparency and collective awareness.
- *Internal vs. External Crisis Management:* Most respondents (score: 4.09) believed that internal resources should be utilized to address crises, rather than hiring external crisis managers (score: 1.47). This suggests a preference for internal knowledge and problem-solving capabilities in managing crises.
- *Impact of Artificial Intelligence:* A notable concern among employees was the increasing use of artificial intelligence (AI), with 30 out of 34 respondents agreeing (either fully or partially) that AI poses a threat to their jobs. This reflects a broader apprehension within the sector regarding the evolving role of AI and its potential impact on employment.

External Factors Contributing to Crisis Risk: Political and military events were also identified as significant factors that could destabilize the sector. Such events may lead to the relocation of IT firms or the loss of contracts, resulting in job displacement and further economic uncertainty.

Based on the survey results, it is evident that the IT sector, while contributing significantly to the country's GDP and offering competitive salaries, is not immune to crises. The dynamic nature of the sector, driven by rapid technological advancements and external factors like political instability, requires a well-structured crisis management approach.

Employees in the sector are aware of the potential threats to their work, especially regarding AI and external geopolitical events. However, they also demonstrate a strong belief in their ability to detect early signs of crises and respond effectively, provided they are equipped with the right tools and knowledge.

A critical takeaway is the importance of timely crisis detection, not only for managers but also for employees. Both need to be capable of identifying symptoms of a crisis and taking proactive measures to mitigate its impact. Additionally, choosing the right crisis management strategy—anticipatory or reactive—is vital to prevent or minimize potential damage.

Furthermore, the selection of a crisis manager should not be rigidly confined to either internal or external candidates. The ideal crisis manager is a person who possesses the necessary expertise and qualities to resolve the situation at hand, regardless of their affiliation with the organization.

In conclusion, while the IT sector enjoys certain advantages, including a relatively high standard of living for its employees, it must remain vigilant. Crisis management, in theory and practice, must be an integral part of the sector's operational strategy to ensure its resilience and continued success in the face of unforeseen challenges.

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