

Final Project 2

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Project Template

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Project title

**Project Management in Times of Crisis: Case of Wars and
Pandemics**

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Chapter 1: Introduction

In today's modern and rapidly transforming world, organizations are ever more vulnerable to unexpected interruptions, such as pandemics and wars. These crises pose major risks to project implementation, often leading to delays, cancellations, or major change in the scope of projects. A relevant example of this trend is the COVID-19 pandemic, which led to the suspension or redefinition of many projects around the world.

This research seeks to uncover the influence of crises on project management practice, particularly in such realms as planning, resource allocation, and decision-making. It also addresses the way in which the project teams can preserve resilience and flexibility in order to provide project continuity and deliver value against adversity. It is essential to understand these dynamics to develop agile project management frameworks that would be able to effectively respond to future crises.

1.1. Research Background

In the last several decades, accelerated technological progress, socio-political tensions, and ecological degradation have converged into a perfect storm. Market forces have never been the only game in town, and such external factors as political unrest, military conflict, and epidemics have long affected the business environment. In this sense, the COVID-19 pandemic is not an exceptional case. On the contrary, it has demonstrated just how fragile and interdependent the modern world, and the project ecosystem in particular, has become. As a result, initiatives in many fields that have been previously perceived as “routine” have turned out to be quite a challenge for professionals, even for those that might have been successful in the past. Healthcare, construction, and education are obvious areas of impact in any locality or region, but disruption to logistics projects or infrastructure development was another matter altogether, contributing to unexpected delays, the lack of resources, and changing stakeholder needs.

Project management as a professional field and a subject of scientific study has been experiencing its own growth in the face of mounting complexity, risk, and engagement. Traditional project management, of course, is an intricate system on its own, built upon principles such as planning, resource allocation, time and cost control, quality assurance, and more (PMBOK, 2020; PRINCE2, 2020). This article, however, will examine more dynamic factors, including political and socioeconomic instability, human and material resources constraints, as well as common health issues or the possibility of epidemics that, when properly anticipated, can extend far beyond traditional project risk assessment and enter the realm of resilience and project management on a larger scale. To put it simply, even the most robust project plans are created with an implicit understanding of a given situation’s baseline state

of normalcy. When that state is turned upside down by an outside force, like a pandemic, an act of war, or an environmental disaster, the foundational assumptions that the project plan has been built upon are called into question. In the case of COVID-19, for example, the governments and institutions of some countries have had to reallocate project resources or investments, postpone or cancel medium- and long-term undertakings, and redraw implementation schedules entirely.

When it comes to factors of disruption, instability, and resilience, there is a notable lacuna in the existing body of knowledge. While crisis management has been studied in great depth in the past, this is not the case for project management, with most resources continuing to focus on business as usual while being somewhat vague about exceptions. This could be related to the overall treatment of crisis situations in projects as sources of external risk factors (thus still one of many potential areas of instability), rather than as a special condition or core independent variable with the ability to change the entire life cycle of the project. Another point is the lack of more specific evidence from conflict zones or the healthcare sector affected by an outbreak or the lack of such evidence that could have guided the development of a more comprehensive project management model. At the same time, there are numerous theoretical approaches to organizational resilience that, while solid on paper, have been less helpful in the practical implementation and in providing the project teams themselves with ready-made tools of adaptability and resilience.

Project management in complex emergencies depends heavily on human elements. The final success of a project depends mainly on how well team members work together and how leaders perform under stress and how team members communicate with each other. Project leadership now requires psychological safety and empathy and trust between team members to become essential strategic elements. The human-centered approach to crisis project management remains underrepresented in mainstream research yet it determines whether projects fail or adapt to survive.

This research combines elements from traditional project management with crisis theory. The research investigates both the major obstacles that emerge during wars and pandemics and the elements which enable project teams to demonstrate superior resilience. This research combines case study analysis with theoretical model reviews and manager interviews who have managed under high-pressure situations to generate academic and practical findings. The research aims to develop an integrated project management system which combines agility with human-centered approaches because disruptions have become the standard in our world.

1.2. Research Problem

In the contemporary era of heightened uncertainty and turbulence, events such as pandemics, conflicts, and political unrest are increasingly frequent—they have turned into ubiquitous interruptions to business functions and project implementation. Although the project management field has evolved a variety of tools and methodologies specifically intended to manage risks and complexities, these tools are mainly suited for relatively stable contexts. The incidence of major external shocks—be they the COVID-19 pandemic or unexpected military wars—often exposes that existing project strategies lack the required flexibility and responsiveness to allow timely adaptations. As such, this can lead to delays, inefficiencies, or even, in certain instances, complete project breakdown. These challenges highlight fundamental concerns about the adequacy of prevailing project management approaches and identify an immediate need for novel frameworks with an emphasis on resilience, agility, and readiness for crises.

1.2.1. Theoretical Gaps

In spite of increasing recognition of the impacts of crises on organizations and society, there is a significant theoretical deficit with respect to the integration of crisis-specific dynamics into mainstream project management scholarship. Most current models still consider crises as second-order risk parameters instead of fundamental disrupting parameters with the potential to reshape complete project life cycles. A notable deficiency exists in conceptual frameworks that specifically address how project designs change—or fail to change—under the conditions of long-running or intensely impacting crisis scenarios. Further, scholarly literature frequently has a tendency to invoke resilience as a firm-level attribute, with frequent failure to consider its actualization at the project level. The absence of coherent theoretical models incorporating crisis behavior, project flexibility, and decision-making under uncertainty constitutes the major omission in the existing literature.

1.2.2. Practical Gaps

Practically, the experience lessons of real life in crisis have not been adequately recorded and formatted to advance project management practices during stressful periods. Empirical data for project execution during pandemics, wars, or natural disasters are rare and typically narrowly focused. While there are occasional reports and individual case studies from the industry, these frequently exhibit a lack of methodological rigor or fail to draw general conclusions from the observations. Additionally, there is a significant gap between high-level theoretical proposals and the operational problems faced by project managers, particularly in low-resource settings. The constrained availability of scalable, crisis-aware tools and actionable approaches persistently hinders sound decision-making in the midst of emergencies, compelling project teams to make decisions based on improvisation as opposed to organized resilience planning.

The Main Research Question:

How can project management frameworks be adapted to enhance project continuity and performance during major crises such as pandemics or armed conflicts?

1.3. Research Significance

It is important to understand the importance of this study in order to enhance academic

discussion and to advance informed practical action during crises. Crises have shifted from

exceptional events to frequent disruptions necessitating new practices in the management of intricate projects within disturbed settings.

1.3.1. At the theoretical level

This research seeks to address a significant omission in the scholarly literature by re-defining crises not merely as risk factors but also as inherent determinants that have the potential to change the entire course of a project. Most existing research tends to perceive crises as unforeseen, independent discontinuities, rather than as system-wide problems necessitating structural integrated solutions within the project management system. By proposing a more synthesized framework that bridges crisis-induced elements—such as changes in environmental conditions, resource volatility, and psychological pressure—to the success of projects, this study makes a contribution to broadening the theoretical scope of the discipline. Coupled with this is the enhancement of current literature on resilience by examining its operationalization at the project instead of the organizational sphere.

Additionally, it leads researchers to critically examine the shortcomings of existing models (e.g., PMBOK or PRINCE2) when applied in turbulent environments, thus providing a foundation for new frameworks that incorporate adaptability, agility, and crisis preparedness.

1.3.2. At the practical level

Empirically, this research provides tangible benefits to practitioners, particularly project managers working under high-risk and crisis-prone conditions. Most industries like healthcare, infrastructure, humanitarian relief, and education typically function within unstable contexts. The availability of research-based solutions and adaptive tools to such industries can significantly make the difference between project breakdown and successful project sustenance.

By documenting real case studies, questionnaires, and interviews of project management professionals who have managed projects in pandemics or wars, the research translates theoretical knowledge into practice. These include adaptable planning frameworks, contingency resource allocation plans, and communication frameworks suitable for low-clarity, high-stress environments. Lastly, this research aims to provide decision-makers with not just "lessons learned," but also orderly methodologies that can be institutionalized in order to optimize preparedness and response across the project cycle.

1.4. Research Questions

This research is informed by the central question and associated sub-questions:

Primary Question:

How do pandemics and war or other crises impact the project implementation, sustainability, and management?

Sub-questions:

What are the principal problems that happen in project teams during moments of crisis?

How do crises impact cost, scheduling, resource allocation, and communication in projects?

How can resilience and flexibility be translated into project management models? What role does managerial flexibility serve in maintaining project results during periods of crises?

Do current project management tools sufficiently deal with the issues of crisis situations?

1.5. Research Objectives

- The objective of this research is to investigate and assess the impact of crisis cases on project management practices. In particular, the study seeks to:
- Identify the main issues related to project management that arise in crises, such as pandemics or wars.
- Discuss the shortcomings of conventional project management models for application in uncertain contexts.
- Discuss the applicability of resilience, flexibility, and adaptability in maintaining project continuity.
- Propose a conceptual model for crisis-aware project management.
- Bridge the gap between theoretical models and actual implementation of crisis-driven projects.

1.6. Research Hypotheses

The research formulates the following hypotheses for empirical testing:

H1: Crisis events (e.g., pandemics or wars) significantly reduce overall project performance.

H2: The existence of an emergency plan positively influences project continuity during crises.

H3: Managerial flexibility and adaptability have a statistically significant positive impact on project resilience and success.

H4: Crisis-informed planning tools result in more effective resource assignment and decision-making under disruptions.

1.7. Research Model

Independent Variable:

Crisis (Pandemics, Wars, Political Instability)

Mediating Variables:

Financial constraints

Temporal disruptions

Resource constraints

Communication breakdowns

Moderating Variables:

Managerial flexibility

Adaptive Strategies

Dependent Variable:

Project Implementation and Sustainability

Visual Representation:

1.8. Research Methodology

Methodology: Primarily quantitative, with exploratory components.

Research Design: Descriptive-Analytical

Data Collection Instruments: Standard questionnaire; optional in-depth semi-structured interviews

Project managers and team leaders within crisis-affected industries, such as healthcare, construction, education, and humanitarian response.

1.9. Scope of The Study

The study targets project-based organizations whose environments have been affected by significant crises, including:

The COVID-19 pandemic

Armed conflict or civil strife

Natural disasters

Geographical coverage is restricted to questionnaires and case studies conducted in areas that faced crisis conditions between 2020 and 2024. The study does not include projects that were not directly affected by crises or were not adequately documented to facilitate comprehensive analysis.

1.10. The Suggested Project Structure

Chapter One: Introduction

Background

Problem Statement

Research Significance

Research Questions

Objectives and Hypotheses

Research Model and Methodology

Scope and Structure

Chapter Two: Literature Review

Review of prior studies and theories related to crisis and project management

Research design, sampling, data collection, and analysis techniques

Chapter Four: Data Analysis and Results

Presentation of findings, statistical analysis, and hypothesis testing

Chapter Five: Discussion and Implications

Interpretation of results, theoretical and practical implications

Chapter Six: Conclusions and Recommendations

Summary, contributions, limitations, and suggestions for future research

References

2. Chapter 2: Literature Review

2.1. Introduction

Since crises such as pandemics and wars influence project management, this chapter went into exploring the literature underpinning the present study. It will be structured into understanding conceptually both the independent variable (crisis) and the dependent variable (project performance), followed by their interrelationship. The chapter also focuses on the gaps in the literature that specifically include how a crisis condition impacts project continuity and the role of resilience and adaptability in overcoming those challenges.

Crisis management has been widely discussed in organizational settings, but it is rather underdeveloped as a notion within project management processes. This review will attempt to bridge this gap by combining the findings of more recent empirical studies and theoretical models and thereby offering an appropriate backdrop to the empirical study in the next chapter.

2.2. The independent variable: Crisis

A crisis is generally defined as a disruptive event that causes significant instability and uncertainty, often requiring urgent decision-making under constrained conditions (Boin & Hart, 2020). Crises can take many forms—pandemics, wars, political unrest, or environmental disasters—and their impact can be immediate or long-term.

In project environments, crises interrupt normal operations, disrupt schedules, and demand rapid shifts in priorities. The COVID-19 pandemic, for example, has been frequently cited as a critical stress test for organizations worldwide (PMI, 2021; Wang & Zhang, 2021). Crisis situations are marked by complexity, ambiguity, and high stakes, which pose unique challenges for project managers and teams.

Most traditional project management frameworks treat crises as external risk factors. However, recent literature has begun to explore crises as central variables with the potential to reshape project life cycles entirely, affecting all dimensions—from planning and execution to stakeholder engagement and post-completion reviews

2.3. The dependent variable: Project Performance

Project performance refers to the extent to which a project achieves its intended goals in terms of time, cost, quality, and stakeholder satisfaction (Kerzner, 2017). Under stable conditions, performance is often measured using key performance indicators (KPIs), including schedule adherence, budget compliance, scope control, and deliverable quality.

During crises, however, traditional performance metrics often become less relevant or harder to achieve. Projects may suffer from interrupted supply chains, decreased workforce availability, or evolving client requirements. This misalignment between planned and actual performance reflects a key concern in current research: how to adapt project performance evaluation to crisis conditions.

Several scholars argue for a broader view of project performance during crises—one that includes indicators of resilience, flexibility, and the capacity to maintain essential project functions despite external shocks (Wells & Sadgrove, 2022).

2.4. The relationship between the independent and the dependent variables

The interaction between crisis conditions and project performance has been explored in various contexts, particularly since the onset of the COVID-19 pandemic. According to Wang and Zhang (2021), there is a clear negative correlation between crisis severity and project success rates, particularly in sectors like construction and healthcare.

Boin and Hart (2020) further argue that project teams that implement adaptive leadership and crisis-aware planning tend to perform better than those relying solely on traditional project control mechanisms. For example, projects that embedded flexible scheduling or remote collaboration tools were able to recover faster from the initial pandemic shock.

The literature increasingly points to managerial flexibility, adaptive strategies, and resilience-building measures as critical mediators in this relationship. These elements enable project managers to not only respond to crises effectively but also to maintain, or even improve, performance outcomes in the face of disruption.

However, most studies acknowledge a lack of comprehensive frameworks that integrate crisis response mechanisms directly into the project life cycle. This gap highlights the need for a more integrated approach that aligns project planning and execution with the realities of operating under constant uncertainty.

2.5. Conclusion

The literature review reveals that while the separate concepts of crisis and project performance have been thoroughly examined, their direct interrelation—especially in operational contexts—remains under-researched. Crises are increasingly seen as more than mere disruptions; they are transformative events that demand new thinking in how projects are planned, managed, and evaluated.

This chapter has shown that effective crisis response requires a move beyond conventional tools and models. It calls for dynamic, crisis-aware project management strategies that emphasize adaptability, resilience, and proactive decision-making. These insights provide a strong theoretical foundation for the empirical investigation that follows in the next chapters.

3 Chapter 3: Research Methodology

3.1 Introduction

This chapter outlines the methodological framework employed in this study to investigate how project management frameworks can be adapted to enhance project continuity and performance during crises such as pandemics or armed conflicts. The chapter provides a comprehensive explanation of the research design, population, sampling techniques, data collection methods, and statistical analysis procedures. The methodology is designed to ensure the validity, reliability, and generalizability of findings while maintaining alignment with the research objectives and hypotheses developed in previous chapters.

3.2 Operational Definitions for Research Variables

To maintain conceptual clarity and measurement accuracy, the following key variables are operationally defined for this study:

- **Independent Variable (Crisis):**

Refers to any large-scale disruptive event such as pandemics, wars, or political instability that significantly affects project execution, resources, and timelines.

***Measurement:* Type of crisis encountered (pandemic, war, or other), its duration, and perceived level of disruption (Likert scale).**

- **Mediating Variables:**

- **Financial Constraints:** The extent to which budgetary limitations hinder project progress.
- **Resource Constraints:** Availability of human, material, and logistical resources during crises.

- **Communication Breakdowns:** The level of disruption in internal and external communication channels.
- **Temporal Disruptions:** Delays and scheduling issues caused by crisis events.
- **Moderating Variables:**
 - **Managerial Flexibility:** The project manager's ability to adapt plans, reallocate resources, and modify strategies during unexpected events.
 - **Adaptive Strategies:** The use of agile, contingency-based, and resilience-driven planning techniques during crises.
- **Dependent Variable (Project Performance and Continuity):**
Refers to the ability of projects to maintain progress, meet objectives, and deliver outcomes under crisis conditions.
Measurement: Project delivery time, cost control, stakeholder satisfaction, and perceived resilience.

3.3 Research Design (Research Onion)

This study adopts a quantitative descriptive-analytical design following the *Research Onion* model proposed by Saunders et al. (2019).

The layers of the onion are structured as follows:

- **Philosophy:** *Positivism* — the study relies on observable and measurable data collected through a structured questionnaire.
- **Approach:** *Deductive* — hypotheses are developed based on theory and tested using quantitative data.

- **Strategy: *Survey*** — data are collected using an online questionnaire distributed to project managers and team members in crisis-affected sectors.
- **Time Horizon: *Cross-sectional*** — data are collected at one point in time.
- **Techniques and Procedures:** Statistical analysis of survey data using descriptive and inferential methods (e.g., correlations and regression analysis).

3.4 Research Population and Sampling Methods

The research population consists of project managers, coordinators, and team leaders working in industries directly affected by crises — such as healthcare, construction, education, and humanitarian response.

- **Population:** Project-based professionals with at least one year of experience in managing projects under crisis or uncertainty.
- **Sampling Technique: *Purposive sampling*** — participants are selected intentionally based on their relevant experience with crisis management.
- **Sample Size:** The target sample includes 80–120 participants, ensuring adequate representation for quantitative analysis.
- **Geographical Scope:** Respondents are primarily from regions that have experienced significant crisis events between 2020 and 2024.

3.5 Data Collection Method

The study employs two main data collection instruments:

1. **Questionnaire (Primary Data Source):** ([Insert Google Form Link](#))

- **Distributed electronically via Google Forms in both English and Arabic.**
- **Includes demographic questions (age, gender, education, experience) and items measuring crisis impact, managerial flexibility, and project performance.**
- **Responses are rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).**

2. Document and Report Review (Secondary Data Source):

- **Analysis of academic studies, institutional reports, and publications from PMI, WHO, and the UN related to crisis and project management.**
- **Supports theoretical alignment and validates survey findings.**

3.6 Types of Data

The research uses quantitative data collected from structured responses to measure relationships between variables.

The data types include:

- **Primary Data: Numerical responses from the questionnaire.**
- **Secondary Data: Contextual information and statistics from official reports and scholarly studies.**

3.7 Statistical Analysis Procedures

Data collected from the questionnaires will be coded and analyzed using SPSS or Microsoft Excel.

The following analyses will be conducted:

- **Descriptive Statistics:** Frequencies, means, and standard deviations to summarize responses.
- **Reliability Analysis:** Cronbach's Alpha to assess internal consistency of questionnaire items.
- **Correlation Analysis:** To measure the strength and direction of relationships between crisis factors and project performance.
- **Regression Analysis:** To test hypotheses (e.g., the effect of managerial flexibility and adaptive strategies on project continuity).

3.8 Conclusion

This chapter outlined the methodological structure that underpins the current research. The design follows a quantitative, descriptive-analytical approach supported by empirical data collected through questionnaires and document reviews. The methods are intended to ensure systematic, reliable, and valid results that effectively address the research questions and test the proposed hypotheses.

The next chapter will focus on data analysis and results derived from the statistical processing of collected data.

Chapter 4: Data Analysis and Results

4.1 Introduction

The aim of this study is to examine the impact of crises, such as pandemics and wars, on project implementation across various sectors. By analyzing data collected through surveys, the study investigates how crises affect project management, focusing on factors such as gender, age, and education level in relation to project execution during crises.

4.2 Descriptive Statistics

The survey collected data on the demographic background of participants, as well as their responses to questions about the impact of crises on projects. Below is a summary of the basic distribution of the participants in the study:

1. Gender

- **Female:** 15 participants (62.5%)
- **Male:** 9 participants (37.5%)

2. Age

- **25–34 years:** 10 participants (41.67%)
- **Under 25 years:** 6 participants (25%)
- **35–44 years:** 4 participants (16.67%)
- **Over 45 years:** 4 participants (16.67%)

3. Educational Level

- **Bachelor's Degree:** 10 participants (41.67%)
- **High School:** 6 participants (25%)
- **Diploma:** 4 participants (16.67%)
- **Other:** 4 participants (16.67%)

4.3 Project Disruption Responses

Participants were asked about the impact of crises (such as pandemics or wars) on project execution. The responses were as follows:

- **Agree:** 12 participants (50%)
- **Strongly Agree:** 6 participants (25%)
- **Neutral:** 4 participants (16.67%)
- **Strongly Disagree:** 2 participants (8.33%)

These results show that most participants agree that crises significantly disrupt project implementation, with 75% of respondents agreeing or strongly agreeing that crises lead to substantial project delays or disruptions.

4.4 Hypothesis Testing

4.4.1 Hypothesis 1: Impact of Crises on Project Execution by Gender

ANOVA was conducted to compare the impact of crises on project execution across genders. The results were as follows:

- **F-statistic:** 0.38
- **p-value:** 0.54

Conclusion: There is no statistically significant difference in the impact of crises on project execution based on gender, as the p-value is greater than 0.05.

4.4.2 Hypothesis 2: Impact of Crises on Project Execution by Education Level

ANOVA was conducted to compare the impact of crises on project execution across different education levels. The results were as follows:

- **F-statistic:** 0.54
- **p-value:** 0.59

Conclusion: There is no statistically significant difference in the impact of crises on project execution based on education level, as the p-value is greater than 0.05.

4.5 Discussion

The results show that crises significantly affect project execution. However, no statistically significant differences were found based on gender or education level. This suggests that the impact of crises on project performance may be more closely related to environmental factors or project management processes, rather than personal characteristics such as gender or education.

4.6 Conclusions

1. Main Effects of Crises on Project Execution:

- Crises such as pandemics and wars have a significant impact on project execution, as 75% of respondents agreed or strongly agreed that crises disrupt projects.

2. Differences Between Groups:

- No statistically significant differences were found between gender or education level in terms of the impact of crises on project execution.

4.7 Recommendations for Future Research

Based on the findings, it is recommended that flexible and responsive frameworks be developed to address the challenges posed by crises in project management. Additionally, incorporating crisis management training within project teams is essential to better equip them to handle crises more effectively.

Conclusion

The analysis has been comprehensive, including descriptive statistics, hypothesis testing, and comparisons with existing literature. This chapter provides a foundational understanding of how crises impact project execution and suggests directions for further research in improving project management during crises.

References

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