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The Relationship between the Risk Factors Present in Iraq and
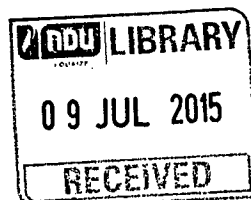Leadership Style, Time, Budget, and Performance

Case of Sima Baghdad

Submitted by: Rachel Boutros known as Peter Saliba

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The Relationship between the Risk Factors Present in Iraq and Leadership Style, Time, Budget, and Performance

Case of Sima Baghdad

BY

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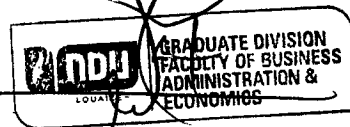
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DECLARATION

I hereby declare that this thesis is entirely my own work and that it has not been submitted as an exercise for a degree at any other University.

RACHEL BOUTROS KNOWN AS PETER SALIBA

ABSTRACT

Purpose: This study has two main purposes. The first is to identify what is the prevalent leadership style at Sima Baghdad and the most effective leadership style in a high-risk environment. The second is to recognize if there is a relationship between the effect of each risk factor on time, budget, and performance.

Design/methodology/approach: Participants of this study are employees at Sima Baghdad holding managerial positions (except administrative positions) and/or have a leadership role on site. The study used a quantitative descriptive approach as well as Spearman's Row to accept or reject hypotheses.

Findings: The results indicate that "team management" style is the prevalent leadership style at Sima Baghdad and is the most suitable leadership style in a high-risk environment. In addition to that, there is a relationship between the effect of "war" risk and "climate" risk on time, budget, and performance, but is not the case with the relationship between the effect of "tribal issues" risk on time, budget, and performance.

Research limitations/implications: The study was limited by three main factors: distance, language, and sample size.

Practical implications: The findings of this study allows Human Resource to choose the right candidate with the appropriate leadership style for the project in a high risk environment. Training can be given to the candidate based on the factors which constitute "Team Management" leadership style. Moreover, the knowledge of the risk factors and their relationship to time, budget, and performance allows for risk control.

Originality/value: The results of this study add to the existing body of knowledge of project management in the fields of risk, leadership, and project goals.

Keywords: Risk, leadership style, time, budget, performance, Iraq.

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Chapter 1

INTRODUCTION

1.1 <u>General Background about the Topic</u>

In the past few decades, project management has witnessed rapid growth as a means by which organizations achieve their objectives. Technically complex products and processes, vastly shortened time-to-market windows, and the need for cross-functional expertise have all together made project management a very important tool in the hands of organizations who understand its use (Pinto & Kharbanda, 1995).

As Meredith & Mantel (2009) state, life with projects is characterized with uncertainty. Even with the most carefully planned projects, factors like the time required to carry out an activity, the cost and the availability of resources, the wishes of the client, as well as the alteration of weather affect the turn out of projects. While it is possible to carefully prepare a plan to reduce uncertainty to some degree, yet it can never be completely eliminated.

Projects are known to be complex and multidisciplinary and have the same general objectives: performance (or scope), time, and cost (or budget); they are referred to as "direct" project objectives or goals (Meredith & Mantel, 2009). "Project Management Body of Knowledge" defines the basic principles behind project management approach, which are structured around nine knowledge areas: integration, scope, time, cost, quality, human resources, communication, risk, and procurement management (Project Management Institute, 2008). Yet, missing from the knowledge areas are competencies relating to project management leadership (Pomfret, 2008).

Risk is considered as one of the challenges in achieving desired project outcomes. Copertari (2002) explains that the project manager is challenged by the project construct, which includes distinct beginnings and endings that are restricted by

constraints and complicated by unforeseen and unplanned change and risk. Working in a high-risk environment increases the level of uncertainty and affects the three objectives of the project: time, budget (cost), and performance (scope). Moreover, in situations such as these, the leadership style of the managers in general and the project managers in particular, differs according to different context. Turner and Muller (2005) researched leadership style and project success, and proved that there is a specific relationship between leadership style and project success. Project managers who have outstanding leadership skills are more likely to lead the project team to success (Dulewicz & Higgs, 2005). Moreover, different leadership styles are appropriate in different contexts (Muller & Turner, 2007). This would suggest that different project management styles, and thus different competency profiles and leadership styles for the project manager would be appropriate for different types of projects (Muller & Turner, 2007). Accommodating significant change and risk is often at odds with the project management methodology (Pomfret, 2008), and one characteristic of a good leader is to diminish those obstacles.

One of the regions which has been facing risk and has increased drastically in its project risk management plans is the Middle East. According to Raven (2004), the following 27 countries are included in the Middle East: Afghanistan, Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Kyrgyzstan, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, and Yemen (as cited in Echezona, 2011).

Overview of SIMA Baghdad

SIMA Baghdad, based in Basra, Iraq, is a multidisciplinary, full-service contracting company with more than 250 qualified employees that are divided into experienced international employees with many years of experience in the field as well as locally hired skilled and non-skilled workers. SIMA Baghdad is renowned in its field and is registered Class A with the Ministry of Planning and Development Cooperation and Ministry of Trade. Its professional and qualified teams consist of project and operations managers, site engineers, surveyors and foremen spread across their main camp located in West Qurna.

SIMA Baghdad has operated, managed, implemented, and maintained more than 300 million dollars worth of contracts for the public and private sector, since 2003, including the Iraqi government and other international clients. They have also taken part of "Operation Rebuild Iraq" by the U.S. government whereby they provided construction and industrial design services, in addition to earthwork, life support, and the supply of a wide range of equipment.

The construction and engineering services SIMA Baghdad offers constitutes of the largest part of its projects. This sector varies from accommodation camps, road and highway construction, renovation of hospitals and schools, steel construction, and civil and electro-mechanical engineering. The other smaller part of their business includes supplies, earthwork, and life support. The range of supplies they provide includes but is not limited to the supply of all types of security fence, military supplies (uniforms, Kevlar helmets, body armor vests, boots, belts, tents, etc), security services (entry management automatic gates, road blockers, surveillance systems, barriers), medical equipment (rescue and resuscitation, emergency and first aid, consulting room, doctor's cabinets, operation rooms and related accessories). As for earthwork, starting from rapid mobilization and logistics, and moving to clearing, excavation, backfill, and compaction, SIMA Baghdad executes its work according to each project's requirements. Finally, SIMA Baghdad provides life support services. They have already catered to thousands, be it the U.S. army or multinational companies.

1.2 Significance of the Study

The project management field has witnessed tremendous growth and worldwide attention by officials or governments, corporations, academia among other organizations as they acknowledge the value of educated employees and common approaches to the execution of projects (Waddell, 2005). Furthermore, leadership is believed to be one of the most important factors to project success despite a limited number of studies on this particular topic.

First, hiring officials are always confronted with the issue as to what skills and abilities are necessary for a successful leader. They spend drastic amounts of money searching for the best candidate for a managerial position. It can cost a company thousands of dollars if the wrong candidate is chosen for a position. Therefore, organizational heads and human resource departments with a better understanding of the relationship between leadership style and project management in a risky environment will be able to use this understanding to choose the best leader for the project.

The question of which leadership style is most effective for a project in a high-risk environment needs to be addressed in further research. This type of research can allow employees in managerial positions to be selected to work on projects that most suits their leadership style. With the combination of the growth of attention in the project management field and the importance of leadership to project success, this study will explore how the two fields could be matched together to increase project success and stakeholder satisfaction, and decrease employee turnover and dissatisfaction.

Second, at the start of a project, knowing what are the risk factors present in Iraq and their relationship to time, budget, and performance, senior managers as well as project-managers will be better prepared to face the risks, thus reducing the degree of its impact.

Finally, mostly American researchers have studied leadership theory, project management and its factors, and risk; therefore, theories regarding the leadership styles of non-American managers and studies on risk and project management in the Middle East are virtually non-existent. Consequently, a study of a non-American Middle Eastern country like Iraq, would add to the existing research and literature done on project management and leadership.

1.3 **Purpose of the Study**

This study has two main purposes. First, the aim is to identify what the prevalent leadership style (authority-compliance, country-club, middle-of-the-road, impoverished, or team management leader) at Sima Baghdad and the most effective leadership style in a high-risk environment like Iraq. Secondly, it is to recognize if there is a relationship between the effect of each risk factor present in Iraq on time, budget, and performance.

Accordingly, the following hypotheses will be tested in this study:

H_a1: The "Team Management" leadership style is the prevalent leadership style at Sima Baghdad and is the most effective leadership style in a high-risk environment such as Iraq.

H_a2: There is a relationship between the effect of "war" risk on time, the effect of "war" risk on budget, and the effect of "war" risk on performance.

H_a3: There is a relationship between the effect of "climate" risk on time, the effect of "climate" risk on budget, and the effect of "climate" risk on performance.

H_a4: There is a relationship between the effect of "tribal issues" risk on time, the effect of "tribal issues" risk on budget, and the effect of "tribal issues" risk on performance.

1.4 **Definition of Terms**

One of the main challenges facing the investigation on the topic of leadership and project management is the variety of definitions. There literally seems to be as many definitions as writers. Yet, this diverse set of definitions and models provide an even broader set of theories to explore the topic of leadership from different perspectives and levels of analysis.

In order to minimize the broad variation of terms, the following definitions relate to words or terms with meanings unique to project management and leadership in the domain of project management.

Leadership: Leadership involves focusing the efforts of a group of people toward a common goal and enabling them to work as a team. In general terms, leadership is the ability to get things done through others (Project Management Institute, 2008).

Leadership in Project Management: According to Kodjababian & Petty (2007), characterization of leadership in project management is the ability to accomplish the following:

1. Motivate a diverse group of team members to follow the leader and build consensus on decisions that affect multiple groups,

2. See around corners and identify issues that need to be dealt with by the team to keep the project on track,

3. Anticipate and resolve people-oriented issues that may derail the project,

4. Keep executive leaders properly informed of what is going on and how much they should engage to make the project a success, and

5. Identify and manage project and business risks.

Project: In the words of Turner (2009), "a project is an endeavor in which human, financial, and material resources are organized in a novel way to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objectives."

Project Management: Project management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements. Project management is accomplished through the application and integration of the project management processes of initiating, planning, executing, monitoring and controlling, and closing. High quality projects are those that deliver the required product, service, or results, within scope, on time, and within budget. (Project Management Institute, 2004)

Project Manager: A project manager is the individual with overall responsibility for managing the project, also responsible for guiding the project towards the achievement of the desired objectives (Project Management Institute, 2008).

Project Success: Project success is being defined, for this purpose, as balancing the competing demands for project quality, scope, time and cost as well as meeting the varying concerns and expectations of the project stakeholders (Project Management Institute, 2008).

Risk: Risk is an uncertain event or condition that, if it occurs, has an effect on at least one project objective, which can include scope, schedule, cost, and quality (Project Management Institute, 2008).

Project Risk Management: Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, and monitoring and control on a project. The objectives of Project Risk Management are to increase the probability and impact of positive events, and decrease the probability and impact of negative events in the project (Project Management Institute, 2008).

1.5 Brief Overview of all Chapters

This study includes 5 main chapters, each having several sub-sections. Chapter 1 is an introduction into the study. It includes information about the purpose, significance and nature of the study, as well as definition of terms used. It also introduces the company that this research will perform its study on, Sima Baghdad located in Iraq.

Chapter 2 contains a literature review on the areas of leadership and leadership styles. It also discusses the previous studies on the three major objectives of a project: time, budget (cost), and performance (scope). Finally, it explains, what are the major risk factors present in Iraq.

Chapter 3 consists of the procedure and methodology that this study is based upon. It includes the research design, statement of the hypotheses and the variables, and an explanation of the methodology used which includes information about the sample, instrumentation and measure, data collection technique and data analysis method. Chapter 4 states the main findings of the analysis and research. A general description of sample demographics is included along with statement of the main results, discussion of findings, and discussion of hypotheses.

Chapter 5 mainly consists of the conclusion of the findings of the study as well as suggestions and managerial implications based on those findings. It also includes the limitation of the research.

Chapter 2

REVIEW OF LITERATURE

2.1 Leadership in project management

People throughout history have been trying to identify what makes excellent leaders (Turner & Muller, 2005). Most have quoted historical leaders like Plato, Machiavelli, Hobbes, and Locke from the West and Confucius and Xunxi from the East. Conger & Hollenbeck (2010) suggest that a perfect leader does not exist, and most studies and frameworks tend to direct the field of leadership into a rather idealistic trait construct of leadership. The hypothetical models of leadership are not likely to withstand the test of reality. The limits of human leaders need to be recognized.

Researchers have studied the concept of leadership in general and have sought to emphasize the importance of project leadership in particular as a key feature of project success (Turner & Muller, 2005; Sauer, 2011).

Competition in recent years has become increasingly intense between companies and organizations, thus resulting in higher organizational requirements. A greater demand in market conditions required a stronger focus on leadership, knowledge, and skills to guarantee project success. Consequently, the leadership competencies of managers and leaders are of utmost importance.

Leaders and managers play important roles in the success or failure of organizations, but there is little known about the relationship between leadership style and project management. In the review of the literature on project management, project types, project success factors, and the character and traits of a leader, it is apparent that the literature rarely includes or mentions project managers, or managers in general, and their leadership style and competence. This is in direct contrast with the general management literature, which considers effective leadership a key factor in organizations, and has shown that an appropriate leadership style can lead to better

performance (Turner & Muller, 2005). Zhang and Faerman (2007) stated that a research study by Cambridge University's School of Business and Economics concluded that projects failed 80% of the time because of poor leadership. The findings also suggested that poor leadership skills have been categorized as limited or no teamwork, inadequate communication, and an inability to resolve conflicts.

Critical Success Factors (CSFs) are currently very popular as a means of assessing project success within project management. Various measures have developed through the years that measure project success. Throughout the 1970s, 1980s, and 1990s, the determination of a successful project outcome was measured by the extent to which the project met the specific set of objectives, was within budget, on time, and with good quality. Today, in addition to the mentioned criteria, measurement of project success includes stakeholder satisfaction, product success, business and organization benefit, and team development (Atkinson, 1999). Crawford (2007) stated that leadership is the highest-ranking category among project manager competence, but it is not the highest-ranking category for project success. On the other hand, positive leadership contributed almost 76% to the success of projects (Zimmerer and Yasin, 1998). Negative or poor leadership contributed 67% to the failure of projects.

Moreover, according to authors, Brill, Bishop, & Walker (2006), among the eight competency categories, which are factors that represent important keys to project management success, leadership and problem-solving had the highest percentages of items rated "very important" or better (see table 1).

Category (n)	Not Important to Somewhat Important $1.00 \leq M < 2.00$ %	Somewhat Important to Moderately Important $2.00 \leq M < 3.00$ %	Moderately Important to Very Important $3.00 \leq M > 4.00$ %	Very Important to Extremely Important $4.00 \leq M \geq 5.00$ %
Problem-solving Expertise (9)	0.0	0.0	33.3	66.6
Leadership Expertise (16)	0.0	0.0	31.3	68.7
Context Knowledge (18)	0.0	0.0	44.4	55.6
Analytical Expertise (4)	0.0	0.0	75.0	25.0
People Expertise (8)	0.0	0.0	62.5	37.5
Communication Expertise (8)	0.0	0.0	50.0	50.0
Project Administration Expertise (12)	0.0	8.3	33.3	58.4
Tools Expertise (3)	0.0	0.0	100.0	0.0
TOTALS (n = 78)	0.0	1.3	44.9	53.8

Table 1: Percentage of importance of item ratings by competency category ((Brill, Bishop, & Walker, 2006)

Leadership expertise and problem-solving expertise were rated by 68.7% and 66.6% respectively of participants as "Very Important to Extremely Important". This shows how important leadership is in project management.

Today's organizations have come to increasingly rely on the use of teams to get things done (Barley, 1990; Devine, Clayton, Philips, Dunford, & Melner, 1999). In many organizations these teams have a formalized structure of some kind with a designated leader. Thus, it is essential to know how the team members in each organization structure react to each leadership style. Among his/her various roles, a project manager is responsible for leading the project team towards achieving the desired outcome of the project (Turner & Muller, 2005). A lot of research has looked at the effects of particular leadership behaviors, and many other studies have looked at the effects of specific leadership traits of managers. Sauer (2011) states that certain characteristics of a leader impact team members' reactions to certain types of leadership, and a style that works well for one incoming leader can have negative consequences for another. Chitayat & Venezia (1984) have shown that managers moving from a business to nonbusiness organization (and vice-versa) may have to adopt a new leadership style or may suffer from a transition period until their subordinates become accustomed to the new style of their manager or leader. Hannah & Avolio (2010) note in their article that the character of an individual or a leader for example is not just representative of the individual or leader per se, but it can also be representative of collectives such as teams and organizations. Groups, like individuals, develop collective norms that influence the moral thinking and action of other group members. Therefore, a leader's style will influence his or her corresponding team, consequently affecting the team's actions, which will ultimately affect the outcome of the project.

Another dimension to consider is that the performance of leaders is affected by their cultural preference. This consequently shows that different leadership styles are suitable in different cultural contexts (see Table 2).

Author	Cultural Dimension	Explanation
Hofstede	Power distance Individualism vs. collectivism Uncertainty avoidance Masculinity	Autocracy vs. democracy, range of influence Focus on individual or group Attitude toward risk, complexity and ambiguity Differentiation of male and female roles
Trompenaars	Universalist vs. particularist Specific vs. diffuse Neutral vs. emotional Short term vs. long term Achievement vs. ascription Attitudes to time Internal vs. external	Ethics and personal relationships Legal processes and trust Objective vs. emotional Perspective of investment returns and results Status, performance, assignment of rewards Emphasis on past, present and future Ego vs. society

Table 2: Cultural dimensions of leadership after Hofstede (1991) and Trompenaars (1993)

Both Hofstede and Trompenaars have shown that there are different leadership styles in different cultural context. For example, if masculinity is defined in a certain culture, then this will characterize a leader's action and performance. The leader will ultimately differentiate between male and female roles. Neutral versus emotional cultural dimension, for example, will ultimately be reflected in the leader's action and style. The leader will either be objective in his actions and decision-making, or emotional.

Different styles, as suggested by David Frame and then Turner, lead to better performance at different stages of the project life cycle (Turner, 2009). Consequently, Turner and Muller (2005) showed that a correlation exists between the cultural preferences of project managers and their performance in different contexts.

Authors have suggested the following in the literature review (Turner & Muller, 2005):

1. The project manager's competence is related to his or her success as a project manager.
2. Different project leadership styles are appropriate at each stage of the project life cycle.
3. Specific leadership styles are appropriate for multi-cultural projects.
4. Project managers have a leadership role in creating an effective working environment for the project team.
5. Project managers prefer task-oriented to people-oriented leadership styles.

6. The project manager's leadership style influences his or her perception of success in different situations.

Effective leadership, as stated by Gharehbaghi and McManus (2003), is vital in all construction projects, and leadership behavior is a very important variable that has a substantial effect on the success of project management (as cited in Limsila & Ogunlana, 2008). Many construction projects face problems, which are ultimately traced back to the project managers' lack of insufficient competencies, traits that do not fit with the nature of their work, or use of inappropriate leadership styles (Limsila & Ogunlana, 2009). To achieve maximum effectiveness of work and best performance from subordinates, the project manager should realize and engage in the appropriate leadership style.

Leadership research in the construction industry is gaining much attention since it can have a major effect on the success of the project and its outcomes. One of the most important industrial sectors in a developing country like Iraq is the construction industry. The appropriate leadership style for the right project is necessary to sustain such an industry. Research on project leadership is still limited though calls have been made for project leadership research within the field of project management for more than a decade. It is clearly noted in the general management literature that a manager's leadership style and competence are essential to the successful performance in business, and many studies have confirmed a correlation between these and the performance of organizations and companies. Although researchers in project management have identified leadership as a critical success factor in projects (Brill, Bishop, & Walker, 2006), the topic of leadership style and its relation to project management in a high-risk environment is still understudied.

2.2 Leadership Schools

Over the last seventy years, six schools of leadership theory have developed (Partington, 2003; Turner & Muller, 2005):

1. **The trait school (1940s):** It asserts that effective leaders share common traits, which they are born with, not made.

2. **The behavioral or style school (from 1940s till 1960s):** It assumes that leaders can be made when effective leaders adopt certain styles or behaviors.

3. **The contingency school (1960s and 1970s):** It suggests that what makes an effective leader would depend on the situation. One popular contingency theory is path-goal theory (House, 1971) whose idea is that the leader must help the team find the path to their goals and help them in that process.

4. **The visionary or charismatic school (1980s and 1990s):** It arose from the study of successful business leaders leading their organizations through change. Attention turned towards the identification of the personal abilities and characteristics of leaders who had a form of leadership that went beyond traditional ideas about the transactional role of a manager to those of transformational roles of a manager, who is able to unite leader and follower in the pursuit of a higher purpose, which transcends individual self-interest.

5. **The emotional intelligence school (since late 1990s):** It says that the leader's emotional intelligence has a greater impact on his or her success as a leader – and the performance of his or her team – than does the leader's intellectual capability.

6. **The competency school (since the late 1990s):** It emphasizes on identifying the competencies of effective leaders. It encompasses all the previous schools.

The behavioral theory and contingency theory form the basis of this research. Unlike the trait theory, which looks only at the traits of the leaders, the behavioral theory's primary objective is to highlight what leaders actually do in the job and how a certain choice of behavior and style can make up a leader. The contingency theory shows how different leadership styles are necessary in every situation. Consequently, when knowing what one's leadership style is, a useful tool to analyze how one may be trained to be a more effective leader can be provided. When additionally recognizing what the organization, situation, or project actually requires, a perfect match can be made which leads to success.

2.3 <u>Leadership Styles</u>

There have been many views on how to categorize and/or identify a leader. Each leadership school has added a new dimension to leadership and has broadened its research extensively. An interesting field is the various styles of leadership. The six schools of leadership suggest different leadership styles are appropriate in different situations in routine organizational contexts (Muller & Turner, 2007). The relationship between the leadership style and the organization itself or the context in which they operate is crucial, and this is the essence of the contingency theory (Dulewicz & Higgs, 2005).

Research has given a variety of styles each with a different name, yet most can be categorized into two major categories. Hackman and Johnson (2004) mentioned that "styles can be pared down to two primary models of communication: one model compares authoritarian, democratic, and laissez-faire styles of leadership communication; a second model contrasts task and interpersonal leadership communication" (as cited in Nauman and Khan, 2009). For this study, the first model will be called Model A, and the second model will be called model B.

Model A: Turner (2009) shows four styles of project manager: Laissez-faire, Democratic, Autocratic, Bureaucratic. According to Frame (2003), "autocratic management is associated with the traditional image of Boss (with a capital B). In this management style, Bosses make all the decisions. They exercise tight control over their staff and march around the office with grim expressions." "Laissez-faire management lies at the other extreme. With laissez-faire management, anything goes. Staff can do whatever they want. It might even be argued that laissez-faire management is non-management: nobody's in charge." "Democratic management is participative. Managers and staff make decisions jointly. Everyone is equal." "Bureaucratic managers do not struggle against the organizational current; rather, they go with the flow. Their authority is based precisely on an understanding of the importance of filling out the paperwork properly, meeting seemingly arbitrary due dates for project status reports, and knowing the details of the organization's procurement procedures."

Frame (2003) has shown how the four leadership styles: laissez-faire, democratic, autocratic, and bureaucratic are suitable for every stage of the project life cycle and with the different team structures (see Table 3).

Leadership Style	Stage	Team Type	Team Nature
Laissez-faire	Feasibility	Egoless	Experts with shared responsibility
Democratic	Design	Matrix	Mixed discipline working on several tasks
Autocratic	Execution	Task	Single discipline working on separate tasks
Bureaucratic	Close-out	Surgical	Mixed working on a single task

Table 3: Leadership styles, project team types and the project life cycle (Turner & Muller, 2005)

At the feasibility stage of the project life cycle, a laissez-faire leadership style is most suitable. At this stage, staff does not have much input in the project. The leader therefore does not need to put much pressure on staff. At the design stage, a democratic leadership style is best to be used. The leader should allow participation from all team and staff members. Decisions are made jointly. Autocratic leadership style is most suitable at the execution stage. At a stage where the execution of the project is implemented, the manager/leader should be taking all the decisions with tight control over staff and actions. Finally, the close-out stage is characterized with a lot of paperwork; therefore, the bureaucratic leadership style fits perfectly.

Other styles that are classified in the Model A category are included in the path-goal theory. The path-goal theory suggests that the primary activities of a leader are to make desirable and achievable rewards available to organization members who attain organizational goals and to clarify the kinds of behavior that must be performed to earn those rewards (Certo & Certo, 2005). It identifies four leadership behaviors: Directive leaders, Supportive leaders, Participative leader, and Achievement-oriented leaders (House, 1971).

Directive behavior is aimed at telling followers what to do and how to do it. The leader indicates what performance goals exist and precisely what must be done to achieve them. Supportive behavior is aimed at being friendly with followers and showing interest in them as human beings. Through supportive behavior, the leader demonstrates sensitivity to the personal needs of followers. Participative behavior is

aimed at seeking suggestions from followers regarding business operations to the extent that followers are involved in making important organizational decisions. Followers often help to determine the rewards that will be available to them in organizations and what they must do to earn those rewards. Achievement behavior is aimed at setting challenging goals for followers to reach and expressing and demonstrating confidence that they will measure up to the challenge. This leader behavior focuses on making goals difficult enough that employees will find achieving them challenging, but not so difficult that they will view them as impossible and give up trying to achieve them (Certo & Certo, 2005).

Similarly, five leadership styles, direction, negotiation, consultation, participation, and delegation have been defined by Bass and Valenzi. According to Bass, Valenzi, Farrow & Solomon (1975), directive leadership is defined as the "extent you attain desired ends by telling your subordinates what to do and how to do it", negotiative leadership as the "extent you employ political means and bargaining to gain desired ends", consultative leadership as the "extent you discuss matters with your subordinates before you yourself decide what to do to achieve your ends", participative leadership as the "extent you share a consensual decision-making process with your subordinates to achieve mutually agreed upon ends", and delegative leadership as the "extent you attain desired ends by leaving your subordinates free to make their own decisions".

Based on the fifteen leadership competencies defined in Table 4, three leadership styles emerged: goal-oriented, involving, and engaging, which are similar to the four styles of path-goal theory. The fifteen leadership competencies are divided into three groups as follows: seven emotional (EQ) competencies, three intellectual (IQ) competencies and five managerial (MQ) competencies. Each of the three leadership styles depicts difference competence profiles and has a different performance on different types of change products (Turner & Muller, 2005).

Group	Competency	Goal	Involving	Engaging
Intellectual (IQ)	1. Critical analysis and judgment	High	Medium	Medium
	2. Vision and Imagination	High	High	Medium
	3. Strategic Perspective	High	Medium	Medium
Managerial (MQ)	4. Engaging Communication	Medium	Medium	High
	5. Managing Resources	High	Medium	Low
	6. Empowering	Low	Medium	High
	7. Developing	Medium	Medium	High
	8. Achieving	High	Medium	Medium
Emotional (EQ)	9. Self-awareness	Medium	High	High
	10. Emotional Resilience	High	High	High
	11. Motivation	High	High	High
	12. Sensitivity	Medium	Medium	High
	13. Influence	Medium	High	High
	14. Intuitiveness	Medium	Medium	High
	15. Conscientiousness	High	High	High

Table 4: Fifteen leadership competencies as suggested by Dulewicz and Higgs, and the competence profiles of their three styles of leadership (Turner & Muller, 2005).

Goal-oriented leadership style demonstrates a set of behaviors in which the leader sets direction and behaves in a way in which he/she plays a significant role in directing others to achieve the key goals required to attain the performance required. Involving leadership style demonstrates a somewhat less leader-centric set of behaviours. The leader's focus remains on providing a strong sense of direction. However, there is a more significant focus on involving others in both setting direction and in determining how goals will be achieved. Engaging leader behaviours in this category are focused on facilitating others in achieving both nature of the direction and means of achieving the necessary goals. The leader is more concerned with developing the capability of others to achieve than with the close direction of the enterprise. In addition to that, through their study of 250 managers working on organizational change projects, Dulewicz and Higgs showed that goal-oriented leaders are best on low complexity projects, involving leaders are best on medium complexity projects, and engaging leaders are best on high complexity projects. Thus they were able to show that different leadership styles fit differently depending on the complexity of projects.

Model B: Chester Barnard, author of *The Functions of the Executive,* suggested the functions of a leader (as cited in Turner & Muller, 2005; Muller & Turner, 2007). Both managerial and emotional functions, which he called *cognitive* (guiding,

directing, and constraining choices and actions) and *cathectic* (emotional and motivational aspects of goal-setting, and developing faith and commitment to a larger moral purpose) respectively, should be found in an executive. This is similar to Aristotle's view of *pathos, ethos,* and *logos* according to which a leader must build relationships with those who are led, encourage a moral vision, and persuade by logic to manage actions (Turner & Muller, 2005). Bass (1990) identified two types of leadership style, transactional and transformational. The transactional leader emphasizes Barnard's cognitive roles and Aristotle's *logos*. The transformational one emphasizes Barnard's cathectic roles, and Aristotle's *pathos* and *ethos* (Turner & Muller, 2005).

According to the competency school different combinations of competencies can lead to different styles of leadership suitable to different circunstances, producing transactional and transformational leaders in situations of low complexity and in situation of high complexity respectively. In addition to that, competencies can be technical or intellectual in nature, emphasizing Barnard's cognitive roles, or emotional in nature, emphasizing Barnard's cathectic roles and the domains of emotional intelligence (Turner & Muller, 2005).

Six leadership styles have been identified in 2002 by Goleman, Boyatzis, & McKee: Visionary, Coaching, Affiliative, Democratic, Pacesetting, and Commanding (as cited in Turner & Muller, 2005). Through a survey of 2,000 managers, they identified situations in which each style is appropriate. The first four are best in certain situations, but are adequate in most situations that are medium to long-termed. The last two styles however are classified as toxic; they work well in turn-around or recovery situations, but if applied to medium to long-term they can poison a situation and demotivate subordinates.

Fiedler distinguishes between task-oriented and participative or relationship-oriented approaches to leadership. In very favorable situations and very unfavorable situations, he assigns *task-oriented leaders* to achieve effectiveness through a directive and controlling style. In moderately favorable situations, he assigns *participative* leaders for high effectiveness through interpersonal relationship orientation (Turner & Muller, 2005).

Leaders are characterized based on various parameters (Turner & Muller, 2005) including:

1. Concern for people or relationships
2. Concern for production
3. Use of authority
4. Involvement of the team in decision-making (formulating decisions)
5. Involvement of the team in decision-making (choosing options)
6. Flexibility versus the application of rules.

Most of the well-known studies for style-behavioral approach were conducted at Ohio State University and University of Michigan in the 1950s and 1960s. Multiple styles of leadership were suggested with the assumption that the best way to lead would be to be high along both dimensions of concern for task and concern for people. In other words, those studies have suggested that leaders who engage in both task and relationship behaviors are the most effective ones. One of the most popular approaches to understanding leadership based on style is Blake and Mouton's Managerial Grid.

Project leaders need both relationship and task oriented leadership styles to cope with the challenges of difference phases of a project (Slevin & Pinto, 1991). As it is shown in Table 5 below, the Blake and Mouton grid, which is part of the behavioral or style school, is a 2D grid, which is based on concern for people and concern for production (i.e. task) and covers authority.

Parameter	Blake and Mouton	Tannenbaum and Schmidt	Hershey and Blanchard	Bonoma and Slevin
1. People	2-D grid		2-D grid	
2. Production	based on 1 & 2		based on 1 & 2	
3. Authority	covering 3	1-D spectrum	covering 3	2-D grid
4. Decision-making		based on 3		based on 4 & 5
5. Decision-taking		covering 4 & 5		covering 3

Table 5: Models of leadership style based on five parameters (Turner & Muller, 2005)

The style a leader uses focuses on his/ her behavior and explains how he/she combines task and relationship behaviors to impact subordinates in their efforts to reach a goal. This task-versus-relationship categorization of the various styles has created a grid that comprises the key styles of leadership (Northouse, 2009). According to the Blake and Mouton managerial grid, five behaviors or styles have been established that are based on concern for results (task-oriented) and concern for people (people-oriented) (Northouse, 2009):

- **Authority Compliance:** Leadership behavior is highly concerned with production with a very low concern or people.
- **Country Club:** Leadership behavior has a high concern for people and a low concern for results.
- **Middle-of-the-Road:** Leader has an equal balance for both task and results
- **Impoverished:** Leader lacks concern in both task and people.
- **Team Leader:** Leader has a high focus on both people relationships and task efficiency.

The Blake and Mouton Grid will be described in details in the next section of this chapter.

Within project management, researchers have studied the concept of leadership extensively. Project management leadership style affects overall project performance. Enshassi and Burgess (1991) studied the relationship between leadership styles of construction site managers and their effectiveness in the Middle East (as cited in Limsila & Ogunlana, 2008). They found a strong association between the site managers' style and their effectiveness. The high-task and high-employee orientation style is the most effective style in managing multi-cultural workforces. Managers need to be friendly, accessible, and understanding of their subordinates' personalities and requirements, and they have to be task-oriented in order to have control over the work process and achieve the target (Limsila & Ogunlana, 2008).

"Team management" is believed to be the ideal leadership style since it has high concern for both people and production (Blake and Mouton,1964). According to Mustapha and Naoum (1998), "team management" style was chosen by all high performing site managers as their preferred management style (as cited in Limsila & Ogunlana, 2009). Also, Odusami *et al.* (2003) concluded that there was significant relationship between the project leader's professional qualification, his leadership style, team composition and overall project performance. The most appropriate leadership style identified in their research is "consultative autocrat" which is similar to "team management" used in Mustapha and Naoum's (1998) study (as cited in Limsila & Ogunlana, 2009).

It is crucial to make a balance between the "people" and morality side of leadership style, and "task" and strategic vision, performance, and productivity. Conger & Hollenbeck (2010) tell of a powerful example of a leader with great character and "people" skills who lead his organization to bankruptcy. The former president and chairman of Malden Mills, Aaron Feuerstein, demonstrated remarkable commitment and character, by sustaining his entire workforce— more than 3,000 employees— with full salary and benefits for the six months that it took to rebuild the factory after a fire burnt the factory down in 1995. However, the revenue losses, combined with the huge debt incurred to rebuild the factory and the predictable cash flow problems while basically starting the business from scratch again, eventually resulted in Malden Mill's bankruptcy in 2001 (Coltin, 2009). One of the first steps by the new creditors was to force Feuerstein to step down. While subordinates value the "character" or "people" side of a leader, research by Hogan, Curphy, & Hogan (1994) showed that superiors value competence and productivity.

We notice that the behavioral school balanced concern for people and concern for task such as the Blake and Mouton grid. Similarly, the contingency school identified three potential focus areas of leadership: task focus, people focus, and power focus. A task-versus-people focus has been a recurring theme in the leadership literature. Thus, the model used within this study is Model B, task versus interpersonal or people leadership.

2.4 The Blake and Mouton Managerial Grid

In 1964, Robert Blake and Jane Mouton developed a matrix called *The Managerial Grid*, *the Leadership Grid,* or *the Blake Mouton Managerial Grid* (see figure 1).
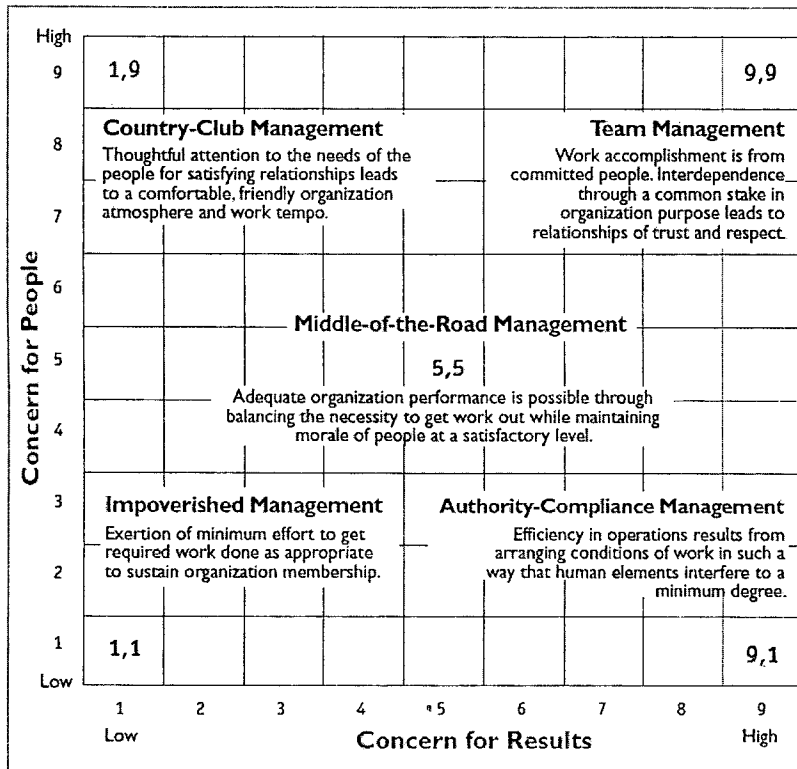
Figure 1: The Leadership Grid. Reprinted from Leadership – Theory and Practice (p.80), by Northouse, P. J. 2009, Thousand Oaks, CA: Safe.

It is a model that has been used extensively in organizational training and development (Northouse, 2009). Their grid uses two main axes on which the managerial grid is plotted: *Concern for production* is on the horizontal axis while *concern for people* is on the vertical axis. With that, five different styles of leadership are described and are plotted on the grid from 1 to 9 on the horizontal and vertical axes, 1 indicating a low level of concern and 9 indicating a high level of concern. The grid highlights how giving too much emphasis on one axis and disregarding the other would lead to lower productivity. Solely giving concern to production (attention to policy decisions, new product development, process issues, workload, and sales volume, to name a few) at the expense of the needs of those actually performing production would lead to dissatisfaction and consequently affect

performance; on the other hand, exclusive concern for people (building organizational commitment and trust, promoting the personal worth of employees, providing good working conditions, maintaining a fair salary structure, promoting good social relations concentrating on maintaining good relationships and avoiding conflicts) is destructive to the achievement of the organization's goals (Blake & Mouton, 1964).

The five managerial styles portrayed by the leadership grid are Authority-Compliance (9,1), Country-Club Management (1,9), Impoverished Management (1,1), Middle-of-the-Road Management (5,5), and Team Management (9,9).

Authority-Compliance (9,1)

The authority-compliance leadership style demonstrates a high level of concern for production and a low level of concern for employees within the organization, except that they are the tools, equipment, or living machines used to get the job done. There is little if any room for cooperation or collaboration. This type of leader is driven by corporate policies and procedures, schedules, efficiencies, results, quotas and considers people as tools used as a means to an end. The 9,1 leader is often seen as controlling, demanding, hard driving, and overpowering (Northouse, 2009). Companies on the edge of real or perceived failure often apply this dictatorial style, such as in Crisis Management (Zeidan, 2009). As figure 1 shows, efficiency in operations results from arranging conditions of work in such a way that human elements interfere to a minimum degree.

Country-Club Management (1,9)

The country-club management leadership style represents a low concern for production and a high concern for people i.e. interpersonal relationships within the organization. The personal, social, psychological and physical needs of the employee are of utmost importance, and it is made sure that they are met, with a hope that this will increase performance. A positive climate is created by being agreeable, fun loving, supportive, eager to help, and giving. If the case arises where a choice needs to be made between meeting production goals and the well being of employees, then the latter is always chosen (Roberson, 2005). The organization will end up being a friendly atmosphere, but not necessarily very productive (Zeidan, 2009). As figure 1

summarizes, thoughtful attention to the needs of the people for satisfying relationships leads to a comfortable, friendly organization atmosphere and work tempo.

Impoverished Management (1,1)

The impoverished management style is concerned neither with production nor with interpersonal relationships. According to Blake & Mouton (1964), this type of manager has psychologically withdrawn and detached himself from the organization because of a consistent pattern of actual or perceived defeat and/or frustration within the organization, and the detachment is a way for the manager to prevent and eliminate further disappointment and frustration. The 1,1 leader has little contact with followers and could be described as indifferent, noncommittal, resigned, and apathetic (Northouse, 2009). As figure 1 shows, exertion of minimum effort is used to get required work done as appropriate to sustain organization membership.

Middle-of-the-road Management (5,5)

The middle-of-the-road management style has a moderate level of concern for people as well as a moderate level of concern for production. This type of leader is always struggling to find a balance between the needs of people and production. As Roberson (2005) states, neither people nor production are optimized because of this constant give and take between the two forces. The 5,5 leader avoids conflict and stresses on moderate levels of production and interpersonal relationships to arrive to an equilibrium (Northouse, 2009). This type of leader is often described as motivating, fair-minded, negotiating, realistic, and expedient. As figure 1 summarizes, adequate organization performance is possible through balancing the necessity to get work out while maintaining morale of people at a satisfactory level.

Team Management (9,9)

The final management style in the Blake Mouton Grid is the team management style. It emphasizes on both people and production (i.e. task and interpersonal relationships) by involving employees in the work, decision-making process, and implementation, as well as motivating and promoting teamwork. According to Blake and Mouton (1964), this is the optimal management style and results in the greatest satisfaction of employees and the highest level of productivity within the

organization. According to Northouse (2009), the 9,9 leader is best described as follows: stimulates participation, acts determined, gets issues into the open, makes priorities clear, follows through, behaves open-mindedly, and enjoys working. As figure 1 summarizes, work accomplishment is from committed people, and interdependence through a common stake in organization purpose leads to relationships of trust and respect.

It is important to note that there is no one-fits-all type of leadership. Even though the team management leadership style is the optimal management style, however it is not always effective in every situation. Zeidan (2009) gives the following cases: If the company is going through some changes like a merger, a higher emphasis on people is needed than on production. Similarly, if the company is facing an economic hardship or risk, a greater emphasis will be on productivity and efficiency, at least for a short-term until things get back to normal.

2.5 Factors of time, cost, and scope

Successful project management deals with the three factors: time, cost (budget), performance (or scope). Projects are successful if they finish on time, within budget, and to performance requirements (Prabhakar, 2008). Time (indicated as a given schedule), cost (constrained by the budget), and performance (described as quality requirements for given specifications) are the three main project management dimensions (Meredith & Mantel, 2009).

Project success means different things to different people. Even though some writers consider time, budget, and performance (or scope) as predominant criteria for project success, others consider success to be something more complex (Chan & Chan, 2004). Each industry, project team, individual, owner, designer, contractor, consultant as well as sub-contractors have their own definition and criteria for measuring success depending on the situation. Time, cost and quality are the basic criteria to project success, and they are recognized and discussed in almost every article on project success (Chan & Chan, 2004). Atkinson (1999) called the three criteria (time, cost, performance or scope) the "iron triangle". However, he further

went on to suggest that while other definitions on project management have been developed, the iron triangle is always included in the alternative definitions.

"Time" refers to the duration for completing the project. In the construction industry, time is scheduled to enable the building to be used by a date determined by the client's future plans (Hatush & Skitmore, 1997). "Cost" is the degree to which the general conditions promote the completion of a project within the estimated budget (Bubshait and Almohawis, 1994). Chan & Chan (2004) state that cost is not only restricted to tender sum, but also to the total cost that a project incurs from initiation to completion. This includes any costs from variations, modifications during construction period, and cost arising from legal claims. Time and cost are variables that should be minimized. For the purpose of this study, cost and budget will be used interchangeably.

Copertari (2002) states that specifications are qualitative or quantitative descriptions of the deliverables as portrayed in the Statement of Work (SOW). The SOW is a list of the tasks or deliverables of the project organized as a hierarchy, where the key tasks are subdivided into a series of activities. In the construction industry, quality is defined as the totality of features required by a product or services to satisfy a given need; fitness for purpose (Parfitt and Sanvido, 1993). Songer *et al.* (1996) proposed that a way to measure quality would be that the contractor meets the technical specifications provided by clients and clients' representatives. In turn, those specifications are requirements to make sure that buildings are built to good standard and in the proper procedure. Freeman and Beale (1992) extended the definition of technical performance to also include scope and quality. Therefore, in this study, the terms performance, scope, and quality will be used interchangeably.

Time, cost, and performance are the three major project management objectives or targets (see Figure 2).
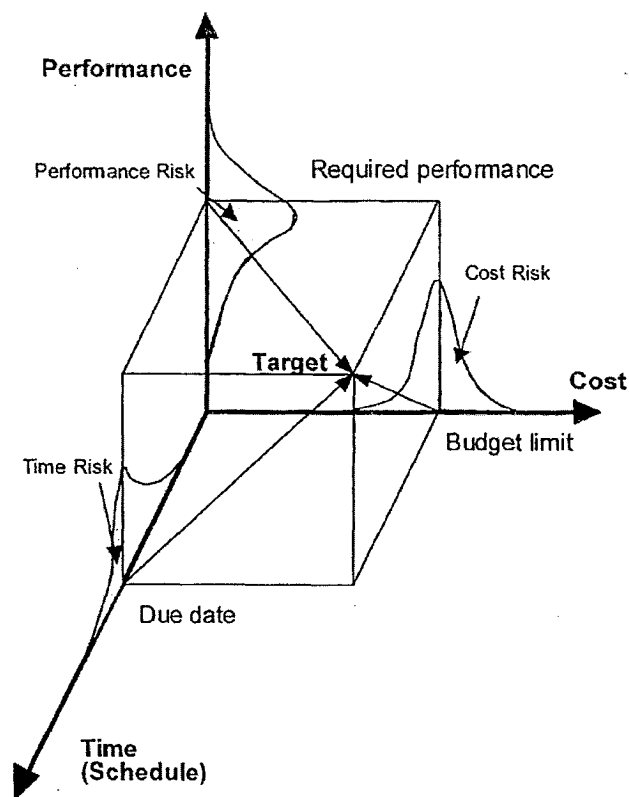
Figure 2: Time, cost and performance tradeoffs. Reprinted from Time, cost and performance tradeoffs in project management (p.17), by Copertari L.F. (2002).

Relationships among these dimensions vary from project to project, from time to time, and even within projects (Meredith & Mantel, 2009). The due date is the time at which the project should be completed. The probability of not completing the project according to schedule is the time risk. The budget shows the maximum allowed cost. The probability of having a cost greater than or equal to the budget represents the cost risk. As for performance, assuming its measurement as a type of specification to be exceeded, performance risk is the probability of having a performance less than the performance required (Copertari, 2002). More about risk and risk management will be discussed in the following section of this study.

2.6 The risk factors in Iraq:

Risk is a very important factor to consider in project management. As mentioned in Project Management Institute, 2008, project constraints include, but are not limited to scope, quality, schedule, budget, resources, and risk.

Each specific project will influence the constraints in different ways. The relationship among these factors is such that if any one factor changes, at least one other factor is likely to be affected. For example, if the schedule is shortened, often the budget needs to be increased to add additional resources to complete the same amount of work in less time. If a budget increase is not possible, the scope or quality may be reduced to deliver a product in less time for the same budget. Project stakeholders may have differing ideas as to which factors are the most important, creating an even greater challenge. Moreover, changing the project requirements may create additional risks. The project team must be able to assess the situation and balance the demands in order to deliver a successful project. (Project Management Institute, 2008).

Project risk always happens in the future. A risk may have one or more causes and, if it happens, one or more effect. A cause of risk may be a requirement, assumption, constraint or condition that creates the possibility of negative or positive outcomes (Project Management Institute, 2008). For example, in the case of Iraq, a cause could include the requirement to always have good relations with tribes. The risk event is that the tribes may not allow the company to perform its tasks on their land. If an uncertain event occurs, there may be an impact on the project cost, schedule, and performance (Project Management Institute, 2008). Risk conditions include aspects of the project or organization's environment that may contribute to project risk (Project Management Institute, 2008), such as war or sandstorms.

Conflict in the Middle East is a recurring theme in international politics, academic literature, and current news coverage. Over the past twenty-five years, the region has witnessed two of the wars with the most international participants (Iraq in 1991 and 2003), as well as the bloodiest interstate war of that period (Iran-Iraq, 1980-1988) (Sorli, Gleditsch & Strand, 2005). Thus, for the past twenty-five years Iraq has been undergoing war and political and social instability. This is a risk factor to consider in Iraq.

In addition to that, the weather in Iraq causes the climate to be considered as a risk factor. Iraq has two climatic seasons, summer and winter, with short transitional periods between them. Summer, which lasts from May to October, is characterized by clear skies, extremely high temperatures, and low relative humidity. In Baghdad, summer temperatures reach up to 51 °C. On the other hand, winters can be cold because of the region's high relief and the influence of northeasterly winds that bring continental air from Central Asia. Readings as low as −11°C have been recorded in Mosul. Northerly and northwesterly summer wind, the shamāl, affects all of **Iraq**. It brings extremely dry air, so hardly any clouds form, and the sun thus heats the land surface intensively. Another wind, the *sharqī*, blows from the south and southeast during early summer and early winter; it is often accompanied by dust storms. Dust storms occur throughout Iraq during most of the year and may rise to great height in the atmosphere. They are particularly frequent in summer, with five or six striking central Iraq in July, the peak of the season (Blake, Chambers, Kennedy, Khadduri & Woods, 1993). Iraq's climate, which is characterized with hot summers, cold winters, and frequent dust storms, causes projects to be on hold without prior notice.

The third and very important risk factor is the existence of tribes and tribal issues in Iraq, especially in construction areas. Tribes have played a major role in the history of Iraq and continue to do so today. Throughout the history of Mesopotamia, the Tigris and Euphrates Rivers exhibited various natural crises in the form of regular floods, course changes, and salinity fluctuations (Todd, Lang, Jr., King, Jackson, McFate, Hashim & Harrington, 2006). The areas around the marshes that have originated were consequently inhabited by tribes and were used for agricultural purposes. For nearly 600 years, between the collapse of the Abbasid Empire in the thirteenth century and the weakening years of the Ottoman era in the late nineteenth

century, government authority was weak and tribal Iraq was, in effect, self-governing. At the beginning of the twentieth century, Iraq's conflicting ethnic, religious, and tribal social groups showed little, if any, adherence to the central government. Both the Ottomans and the British failed to form fully centralized states and monopolies of authority (Todd, Lang, Jr., King, Jackson, McFate, Hashim & Harrington, 2006). As a result, tribal power has played a large role in shaping both the Iraqi people's day-to-day lives and Iraq's national character.

The Iraqi tribal history continues to affect Iraq today. West Qurna, Basra, is the area where Sima Baghdad's main construction work has been performed for the past 7 years as one of the contractors of Lukoil. The Russian energy company, Lukoil, with its Norwegian partner Statoil, are developing West Qurna Phase Two oilfield, partly crossing through farms where the Imara tribe live (Al Gamal, 2011). Tribes in that area live above some of the richest oil reserves in Iraq, and negotiating with them has become one of the latest challenges for international companies. Farmers and tribesmen prevent workers to operate in the field. One of the main reasons for that is that they request that companies hire workers from their tribe. Another reason is that during Saddam's rule over Iraq, the government had allowed the farmers to use the 'land around the oilfield to live and plant. The farmers are now asking for compensation for using the land (Al Gamal, 2011). This factor in itself is a major risk for projects because if the tribes do not allow the workers to perform their duties, the project could be put on hold for days, even weeks.

A majority of good project management involves good project risk management. Tight time, cost or performance targets increase time, cost or performance risks. Some may falsely consider that risk management mainly deals with removing or reducing the possibility of under-achievement. "Risk analysis is not a 'throwing a dice' situation, but rather an area of study in which a pro-active, creative, and intelligent prior planning approach is used, as opposed to entrenching in a defensive position" (Copertari, 2002).

Figure 3 provides an overview of Project Risk Management processes.
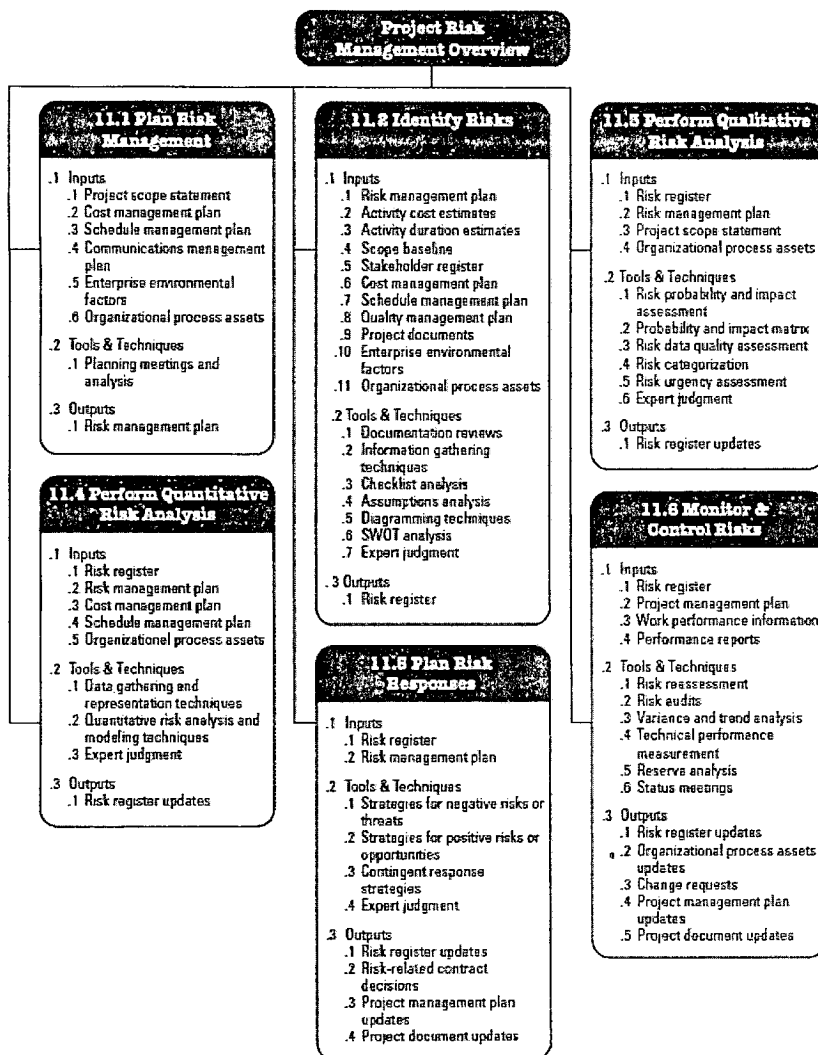
Figure 3: Project Risk Management Overview. Reprinted from A guide to project management body of knowledge (4th ed.) (p.274), by Project Management Institute, 2008, PMBOK Guide. Newtown Square, PA: PMI Publications.

11.1 Plan Risk Management—The process of defining how to conduct risk management activities for a project.

11.2 Identify Risks—The process of determining which risks may affect the project and documenting their characteristics.

11.3 Perform Qualitative Risk Analysis—The process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact.

11.4 Perform Quantitative Risk Analysis—The process of numerically analyzing the effect of identified risks on overall project objectives.

11.5 Plan Risk Responses—The process of developing options and actions to enhance opportunities and to reduce threats to project objectives.

11.6 Monitor and Control Risks—The process of implementing risk response plans, tracking identified risks, monitoring residual risks, identifying new risks, and evaluating risk process effectiveness throughout the project. (Project Management Institute, 2008).

When the organization and the project manager realize what Iraq's risk factors are, risk management can be implemented to minimize the impact of risk on the project's time, budget, and performance objectives.

2.7 Conclusion

It is evident that the relationship between leaders and their organizational context is a dynamic one. Changes in leadership behaviors are required as the organizational strategies differ. The opposite also stands true whereby a change in leadership behavior leads to change in the organizational strategy. In essence, a change in context requires a change in the way the leaders in the organization operate (Dulewicz & Higgs, 2005).

Working in a high-risk environment such as Iraq is definitely a new and out of the ordinary context. The surrounding risk factors such as war, climate changes, and tribal issues make it necessary to study how the project can be finished on time, within budget, and with a good performance according to scope. To accomplish that, certain leadership styles are a requirement for project success.

The following chapter provides the foundation for this study and includes a discussion of the research design, sample population, instrumentation and measure, data collection, data analysis, and validity and reliability.

Chapter 3

PROCEDURES AND METHODOLOGY

3.1 Introduction

As mentioned in the previous chapter, despite advances in the study and execution of project management methodologies, projects continue to fail, and one of the main causes of failure is the lack of effective leadership and/or the style of leadership applied by project managers. Moreover, project success has been a recurring theme in the construction management field. The review of journals on project success shows that cost, time, and quality are the three basic and most important performance indicators in construction projects (Chan & Chan, 2004).

Even though some studies exist in the area of project management, leadership, and the "Iron triangle" however, little if any show which is the most effective leadership style in a high-risk environment, or the relationship between risk present and time, budget, and performance.

Consequently, the objective of this research is to first identify the prevalent leadership style at Sima Baghdad and the most effective leadership style in a high-risk environment such as Iraq. Second, it is to recognize if there is a relationship between the effect of each risk factor on time, budget, and performance.

The objective was accomplished through the use of quantitative correlational research method as well as frequency analysis. The following chapter provides the basis for the procedures and methodology used within this study and includes a discussion of the research design, hypotheses, variables, and methodology used (sample, pilot test, instrumentation and measure, data collection, data analysis, and validity and reliability).

3.2 <u>Research Design</u>

Research methodology, as suggested by Creswell (2002), must consider the context of the research and the desired results in order to achieve meaningful research outcomes (as cited in Thompson, 2010).

Two research *families*, or general strategies exist for doing research: quantitative or qualitative methods; Quantitative research involves large-scale and representative sets of data. Qualitative research involves the collection and analysis of information in many forms, mainly non-numeric. It focuses on exploring in details smaller numbers of instances or examples, which are considered interesting or illuminating, and aims to achieve 'depth' rather than 'breadth' (Blaxter, 2010, emphasis in original). To accomplish this study's objectives, a quantitative correlational method, as well as frequency analysis, is chosen.

Two reasons lie behind the choice of using a quantitative method. First, this method allows for the exploration of relationships between variables through the testing of hypotheses (Gall, Gall, & Borg, 2007; Swanson & Holton, 2005, as cited in Thompson, 2010). Four hypotheses were used for the purpose of finding if a relationship exists between the study's independent and dependent variables. The Spearman rank correlation coefficient (Spearman rho) statistical method is for that same purpose. The findings are used to accept or reject the study's hypotheses. The frequency analysis results were also used to accept or reject certain hypotheses.

Second, quantitative research is used to minimize potential research bias and to decrease the need for subjective evaluation of data. According to Thies (2002), one of the major concerns in qualitative research is the possibility of researcher bias and influence produced by human inducement. Quantitative research on the other hand relies on objective means for collecting data, distancing the researcher from human influences (Neuman, 2003 as cited in Thompson, 2010).

A self-assessed survey using Likert-scale as well as open-ended and closed-ended questions is used for this study. This type of survey has a short turnaround in results, allows the administering of many surveys in a short period of time, and is inexpensive to implement.

3.3 Hypotheses

The main question that guided the research is "What is the relationship, if any, between risk and leadership style, time, cost, and performance?" The research sought to support this primary question by investigating the relationship between the effect of the risk factors of war, tribal issues, and climate present in Iraq on time, budget, and performance, and to recognize which is the prevalent leadership style at Sima Baghdad and which leadership style of the Blake and Mouton Grid is most effective in such an environment.

The following hypotheses were used to test the research question:

$H_0 1$: The "Team Management" leadership style is not the prevalent leadership style at Sima Baghdad nor is it the most effective leadership style in a high-risk environment such as Iraq.

$H_a 1$: The "Team Management" leadership style is the prevalent leadership style at Sima Baghdad and is the most effective leadership style in a high-risk environment such as Iraq.

$H_0 2$: There is no relationship between the effect of "war" risk on time, the effect of "war" risk on budget, and the effect of "war" risk on performance.

$H_a 2$: There is a relationship between the effect of "war" risk on time, the effect of "war" risk on budget, and the effect of "war" risk on performance.

H_03: There is no relationship between the effect of "climate" risk on time, the effect of "climate" risk on budget, and the effect of "climate" risk on performance.

H_a3: There is a relationship between the effect of "climate" risk on time, the effect of "climate" risk on budget, and the effect of "climate" risk on performance.

H_04: There is no relationship between the effect of "tribal issues" risk on time, the effect of "tribal issue" risk on budget, and the effect of "tribal issue" risk on performance.

H_a4: There is a relationship between the effect of "tribal issues" risk on time, the effect of "tribal issue" risk on budget, and the effect of "tribal issue" risk on performance

3.4 Selected Variables

3.4.1 The Independent variable(s)

The independent variables of this research are the risk factors: war, climate, and tribal issues.

3.4.2 The Dependent variables

The dependent variables of this research are leadership style, time, budget and performance.

3.5 Methodology used

3.5.1 Sample

The sampling frame included individuals who previously had or currently maintain a managerial position and/or have a leadership role on site at Sima Baghdad, not including administrative positions. These included the following positions: General manager, managing partner, project manager, operations manager, site manager, site supervisor, site engineer, and surveyor. All members of the sampling frame were

asked to participate in the study. Members of the sampling frame who agreed to participate in the study became the study's subjects.

The sample is representative of the population of managers and leaders at Sima Baghdad. The sample consists of a total of 36 participants. A 100% response rate was achieved.

3.5.2 Pilot Test

A pilot study was conducted for this research to test the instrument's reliability, consistency and validity of the survey instrument. The pilot study included five participants who are all employees at Sima Baghdad with managerial positions and/or leadership role on site (not including administrative positions) in Iraq.
From the responses of the participants, it appeared that there was no problem with the survey instrument's wording or understanding. Thus, the instrument's validity is confirmed. The length of the response ranged from 10 minutes to 15 minutes.

3.5.3 Instrumentation and Measure

After the pilot study was completed and its results showed that the survey questions are well understood, the survey questionnaire (attachment A and B) were sent via e-mail to all of Sima Baghdad's employees who hold a managerial position and leadership role on site (not including administrative positions). The survey was written in the English language and was then translated to the Arabic language, since some Iraqi employees do not know English. Both surveys, English and Arabic, were sent to every employee so that he/she has the freedom to choose his/her preferred language.

The questionnaire included an introductory note explaining the purpose of the study, a time estimate needed to complete the questionnaire, and an assurance that the survey is anonymous and used for research purposes only. The data was sought using a multi-question researcher designed survey. Questions 1 through 6 asked for information regarding the participant's demographics and managerial background using closed-ended questions. Question 7 included 18 statements to be answered

using a 5-point Likert-type scale. The question asks the extent to which the statements apply to the participant. Following are the options: 0 refers to "never", 1 through 4 refers to "sometimes" depending on intensity, and 5 refers to "always". The statements in this question are based on the Blake and Mouton managerial grid self-assessment questionnaire. Questions 8 and 9 were focused on identifying which is the dominant leadership style in construction project management and in Iraq. Questions 10 and 11 sought to show if indeed war, climate, and tribal issues were the main risk factors in Iraq, and to determine the level of occurrence of each factor. Question 11 used a 5-point Likert-type scale. Question 12 also used a 5-point Likert-type scale to determine which factors of time, budget, and performance are most affected by the risk factors mentioned in questions 10 and 11. Question 13 also used a 5-point Likert-type scale to determine how each risk factor (war, climate, tribal issues, or other factors) affects the project factors (time, budget, and performance). The final question in the survey, question 14, is an open-ended question.

3.5.4 Data Collection

A multi-sectioned researcher-designed questionnaire was devised for the purpose of this study. The questionnaire included open and closed-ended questions. It was written in the English language and translated to the Arabic language. An e-mail was sent from the Human Resource department at Sima Baghdad to all employees holding managerial positions and leadership roles on site (administrative positions not included) explaining the purpose of this study and a request to fill out the attached questionnaires. No names or sensitive information were collected or included in the study. Once filled out, the questionnaires are stacked on top of each other at a designated area at Sima Baghdad offices anonymously, to ensure that questions are answered honestly without hesitation or fear that the company will know what each person answered. Finally, the questionnaires are scanned all together and e-mailed back to the Human Resource department of Sima Baghdad and consequently, handed out to me.

The data collection method is used for three main reasons: it allows for self-administration, enables rapid data collection, and allows for the reach of employees who live in Iraq. Once the data is collected, it is stored in a form that can be easily used for data analysis.

3.5.5 Data Analysis

The hypotheses were tested to determine which is the prevalent leadership style at Sima Baghdad and the most effective leadership style in a high-risk environment, and to determine the relationship between the effect of each risk factor present in Iraq on time, budget, and performance.

The study is made up of one sample from a specified population; therefore a one sample non-parametric test of significance, using Spearman's rho, is used. The Spearman's rho test is used to accept or reject the above-mentioned hypotheses. The desired level of significance is 0.05 since this level is associated with a low risk of being incorrect. Graphs showing the results of frequency analysis are also used to accept or reject hypotheses.

The key variables examined are the dependent variables of leadership, time, budget, and performance and the independent variables are the risk factors of war, climate, and tribal issues. The data is uploaded into an SPSS database and the significance of the relationship between the variables is calculated.

3.5.6 Validity and Reliability

The identifying factor of a good research is the validity and reliability of the data and the results. Regardless of the approach, validity serves the purpose of checking the quality of the data and its results (Holton & Burnett, 2005). In quantitative research, this suggests that the researcher can draw meaningful inferences from the results to a population, and reliability indicates that participant scores are consistent and stable (Holton & Burnett, 2005).

The validity of the survey is confirmed using the pilot test. The results of the survey were loaded into SPSS (version 20) database and tested using Cronbach's alpha. Results of the test yielded a value of 0.861, confirming the survey reliability (See Table 6).

Case Processing Summary

	N	%
Valid	36	100.0
Excluded	0	.0
Total	36	100.0

Reliability Statistics

Cronbach's Alpha	N of Items
.861	9

Table 6 – Reliability Statistics of survey

3.6 Conclusion

The data collected and analyzed in this study will contribute as new knowledge to project management, particularly to leadership, risk and the factors of a project. The study is unique being the first study to examine the relationship between the effect of each risk present in Iraq on time, budget, and performance and to identify the most effective leadership style in a high-risk environment. The findings will benefit project management practitioners and academia.

The following chapter presents the findings from the data collected. It includes a discussion on the general description of the sample demographics, the main results, discussion of the findings and discussion of the hypotheses.

Chapter 4

FINDINGS

4.1 Introduction

This chapter is a presentation and analysis of the data that was collected to determine the prevalent leadership style at Sima Baghdad and the most effective leadership style in a high-risk environment such as Iraq, and to recognize the relationship between the effect of each risk factor of war, climate, and tribal issues on time, budget and performance. The objective of this study is to add to the existing body of project management and leadership research. The study used a quantitative correlational approach as well quantitative descriptive analysis.

4.2 General Description of Sample Demographics

The demographic questions are designed to obtain information from the participants in four general areas: Gender of participants; age of participants; the participants' work experience, managerial experience, and project management experience; and project team size. Thirty-six participants accessed the survey and a total of thirty-six participants completed the survey.

All the participants who took this survey are male.

Participant age is grouped into four categories: 20 – 30, 31 – 40, 41 – 50, and older than 50. The majority, 41.7%, of the participants are aged between 21 and 30, followed by 36% of the participants aged between 31 and 40, 19.4% aged between 41 and 50, and 5.6% aged above 50 years.

The majority of respondents, 41.7%, have between 11 and 20 years of work experience and between 2 to 5 years of managerial experience. A total of 30.6% of respondents have between 6 to 10 years of work experience and managerial experience (See Tables 7 and 8). Moreover, a total of 38.9% of respondents have less than 2 years of project management experience, followed by 27.8% having between 6 and 10 years and 22.2% having between 2 and 5 years of project management experience (See Table 9).

	Freq.	%
< than 2	3	8.3
2-5	4	11.1
6-10	11	30.6
11-20	15	41.7
> than 20	3	8.3
Total	36	100.0

	Freq.	%
< than 2	5	13.9
2-5	15	41.7
6-10	11	30.6
11-20	3	8.3
> than 20	2	5.6
Total	36	100.0

	Freq.	%
< than 2	14	38.9
2-5	8	22.2
6-10	10	27.8
11-20	3	8.3
> than 20	1	2.8
Total	36	100.0

Table 7 – Work Experience   **Table 8 – Managerial Experience**   **Table 9 – Project Management Experience**

The majority of responses, 27.8% came from participants who had worked on project teams of between 51 to 100 persons; 16.7% worked with project teams less than 5 persons, between 21 and 50 persons, and more than 100 persons; 11.1% worked with project teams between 5 to 10 persons and between 11 to 20 persons (See Table 10).

	Freq.	%
Less than 5	6	16.7
5-10	4	11.1
11-20	4	11.1
21-50	6	16.7
51-100	10	27.8
Greater than 100	6	16.7
Total	36	100.0

Table 10 – Project Team Size

4.3 Main Results

The results of the survey questionnaire were loaded into an SPSS database. The part related to determination of the leadership style of participants, the data was first inserted into the scoring section of the Blake and Mouton Managerial Grid Leadership Assessment Questionnaire (See Appendix C). Consequently, once the leadership style was determined for every participant, the data was then loaded into the SPSS database. Descriptive analysis using frequencies and cross-tabulations of the data were completed to summarize the variables and calculate standardized values. This section reports the main results.

The frequency analysis for the factor: prevalent leadership style at Sima Baghdad revealed that 86.1% of the participants have a "Team Management" leadership style; 5.6% of participants have "Authority Compliance" leadership style and another 5.6% have "Country Club" leadership style. Finally, only 2.8% of the participants have "Impoverished" leadership style. None of the participants have "Middle-of-the-road leadership style" (See Table 11).

	Freq.	%
Authority Compliance	2	5.6
Country Club	2	5.6
Impoverished	1	2.8
Team leader	31	86.1
Total	36	100.0

Table 11 – Prevalent Leadership Style at Sima Baghdad

The frequency analysis for the factor: dominant leadership style in construction project management revealed that 72.2% of participants agree that a leader who has "high concern for both people and task" is prevalent in construction project management; 11.1% of participants agree that a leader with "equal concern for task and people" is used in construction project management. Similarly, 11.1% of participants agree that a leader with "high concern for task and low concern for people" is used in construction project management. Only 5.6% of leaders in construction project management have "high concern for people and low concern for task" (See Table 12).

	Freq.	%
Equal Task People	4	11.1
High People Low Task	2	5.6
High Task Low People	4	11.1
High Task People	26	72.2
Total	36	100.0

Table 12 – Dominant Leadership Style in Construction Project Management

The frequency analysis for the factor: the leadership style that has achieved best results in a high-risk environment revealed that 61.1% of participants agree that a leader who has "high concern for both people and task" achieves the best results in a high-risk environment; 19.4% of participants agree that a leader with "equal concern for task and people" achieves the best results in a high-risk environment, followed by 16.7% for leaders with "high concern for people and low concern for task; only 2.8% of participants suggest that a leader with "high concern for task and low concern for people" achieves the best results in a high-risk environment such as Iraq (see Table 13).

	Freq.	%
Equal Task People	7	19.4
High People Low Task	6	16.7
High Task Low People	1	2.8
High Task People	22	61.1
Total	36	100.0

Table 13 – Most suitable leadership style in a high-risk environment

The frequency analysis shows that 44.4% of responses agree that war is a risk factor that "slightly low" to "moderately" occurs, 55.5% of responses agree that climate is a risk factor that "slightly low" to "moderately" occurs, 86.1% of responses agree that tribal issues is a risk factor that "slightly high" to "highly" occurs, and finally 88.9% of responses agree that the "other" factors never affect the project (See Table 14). Since the "other" factor has a minimal percentage of occurrence as shown in table 14, it will be discarded as a risk factor.

War Frequency

	Freq	%
None	7	19.4
Low	4	11.1
Slightly Low	7	19.4
Moderate	9	25.0
Slightly High	6	16.7
High	3	8.3
Total	36	100.0

Climate Frequency

	Freq	%
None	5	13.9
Low	4	11.1
Slightly Low	7	19.4
Moderate	13	36.1
Slightly High	5	13.9
High	2	5.6
Total	36	100.0

Tribes Frequency

	Freq	%
Low	1	2.8
Moderate	4	11.1
Slightly High	12	33.3
High	19	52.8
Total	36	100.0

Others Frequency

	Freq	%
None	32	88.9
Moderate	1	2.8
Slightly High	1	2.8
High	2	5.6
Total	36	100.0

Table 14 – Frequency analysis of frequency of occurrence of the risk factors in Iraq

The frequency analysis for the factor: the level of impact of the risk factors reveals that all three factors of the project: time, budget, and performance are affected by the risk factors of war, climate, tribal issues. Table 15 shows that 72.2% of the participants agree that the risk factors have a "slightly high" to "high" impact on "time", 63.9% of the participants agree that the that risk factors have a "slightly high" to "high" impact on "performance", and 55.6% of participants agree that the risk factors have a "slightly high" to "high" impact on "budget" (see Table 15).

Time Frequency

	Freq.	%
Low	2	5.6
Slightly Low	2	5.6
Moderate	6	16.7
Slightly High	9	25.0
High	17	47.2
Total	36	100.0

Budget Frequency

	Freq.	%
Low	4	11.1
Slightly Low	2	5.6
Moderate	10	27.8
Slightly High	10	27.8
High	10	27.8
Total	36	100.0

Performance Frequency

	Freq.	%
Low	2	5.6
Slightly Low	1	2.8
Moderate	10	27.8
Slightly High	8	22.2
High	15	41.7
Total	36	100.0

Table 15 – Frequency analysis of impact of risk factors on time, budget, and performance

The frequency analysis for the factor: the impact of each risk factor (war, climate, tribal issues) on the project criteria (time, budget, performance) reveals that war has a relatively moderate effect on time, budget and performance on average. For the effect of war on time, 52.8% of responses show a "moderate" to a "slightly high" effect. For the effect of war on budget, 55.6% of responses show a "moderate" to a

"slightly high" effect. For the effect of war on performance, 47.2% of responses show a "low" to "slightly low" effect and 30.6% of responses show a "slightly high" effect (see Table 16).

War vs. Time	Freq.	%
Low	8	22.2
Slightly Low	5	13.9
Moderate	9	25.0
Slightly High	10	27.8
High	4	11.1
Total	36	100.0

War vs. Budget	Freq.	%
Low	9	25.0
Slightly Low	4	11.1
Moderate	14	38.9
Slightly High	6	16.7
High	3	8.3
Total	36	100.0

War vs. Performance	Freq.	%
Low	8	22.2
Slightly Low	9	25.0
Moderate	4	11.1
Slightly High	11	30.6
High	4	11.1
Total	36	100.0

Table 16 – Frequency analysis of impact of war on time, budget, and performance

The frequency analysis for the factor: the impact of each risk factor (war, climate, tribal issues) on the project criteria (time, budget, performance) reveals that climate has a relatively moderate effect on time, budget and performance on average. For the effect of climate on time, 52.8% of responses show a "moderate" to a "slightly high" effect. For the effect of climate on budget, 55.6% of responses show a "moderate" to a "slightly high" effect. For the effect of climate on performance, 55.5% of responses show a "moderate" to "slightly high" effect (See Table 17).

Climate vs. Time	Freq.	%
Low	7	19.4
Slightly Low	5	13.9
Moderate	11	30.6
Slightly High	8	22.2
High	5	13.9
Total	36	100.0

Climate vs. Budget	Freq.	%
Low	7	19.4
Slightly Low	8	22.2
Moderate	11	30.6
Slightly High	9	25.0
High	1	2.8
Total	36	100.0

Climate vs. Performance	Freq.	%
Low	6	16.7
Slightly Low	5	13.9
Moderate	12	33.3
Slightly High	8	22.2
High	5	13.9
Total	36	100.0

Table 17 - Frequency analysis of impact of climate on time, budget, and performance

The frequency analysis for the factor: the impact of each risk factor (war, climate, tribal issues) on the project criteria (time, budget, performance) reveals that tribal issues have a relatively high effect on time, budget and performance on average. For the effect of tribal issues on time, 91.7% of responses show a "slightly high" to "high" effect. For the effect of tribal issues on budget, 80.6% of responses show a "slightly high" to "high" effect. For the effect of tribal issues on performance, 88.8% of responses show a "slightly high" to "high" effect (See Table 18).

Tribe vs. Time	Freq.	%
Low	1	2.8
Moderate	2	5.6
Slightly High	14	38.9
High	19	52.8
Total	36	100.0

Tribe vs. Budget	Freq.	%
Low	3	8.3
Slightly Low	1	2.8
Moderate	3	8.3
Slightly High	14	38.9
High	15	41.7
Total	36	100.0

Tribe vs. Performance	Freq.	%
Low	1	2.8
Slightly Low	1	2.8
Moderate	2	5.6
Slightly High	16	44.4
High	16	44.4
Total	36	100.0

Table 18 - Frequency analysis of impact of tribal issues on time, budget, and performance

4.4 Discussion of Findings

This section provides a discussion of the main results:

According to the frequency analysis results previously stated, the prevalent leadership style at Sima Baghdad is the "Team Management". Moreover, the leadership style that achieves best results in a high-risk environment should have high concern for people and low concern for task. Thus, "Team Management" leadership style is the most effective leadership style in a high-risk environment such as Iraq.

According to the frequency analysis results previously stated, the most frequent risk factor present in Iraq is "Tribal issues". It is highly important and highly affects time, budget, and performance. "Climate" is the following most frequent risk factor present in Iraq. It is moderately important and moderately affects time, budget, and performance. Similarly, "war" is low to moderately important and low to moderately affects time, budget, and performance (see Figure 4). The "war" factor is the least frequent risk factor present in Iraq.

■ War Frequency
■ Climate Frequency
□ Tribes Frequency
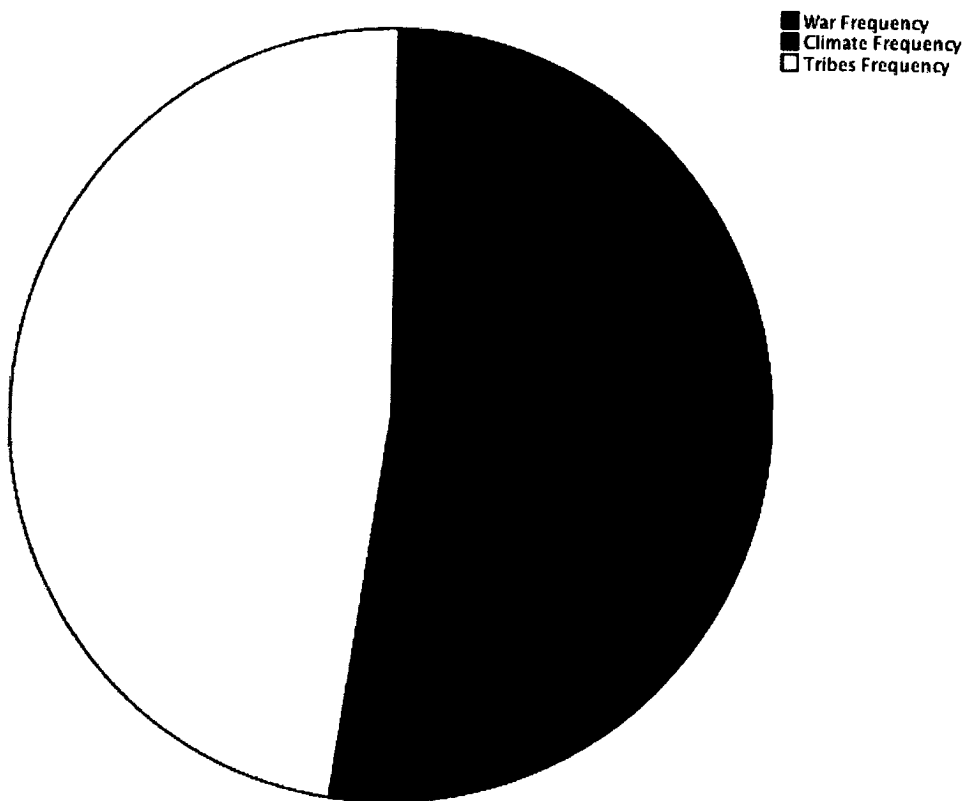
Figure 4 - Pie chart of the occurrence frequency of the risk factors

According to the frequency analysis results previously stated, "time" is the criteria most affected by the risk factors, closely followed by "performance", and then "budget".

4.5 Discussion of Hypotheses

$H_0 1$: The "Team Management" leadership style is not the prevalent leadership style at Sima Baghdad nor is it the most effective leadership style in a high-risk environment such as Iraq.

$H_a 1$: The "Team Management" leadership style is the prevalent leadership style at Sima Baghdad and the most effective leadership style in a high-risk environment such as Iraq.

The frequency analysis reveals that the "Team Management" leadership style is the most effective leadership style in a high-risk environment such as Iraq (see Figure 5), and is the most prevalent leadership style at Sima Baghdad(see Figure 6). Thus, null hypothesis is rejected.
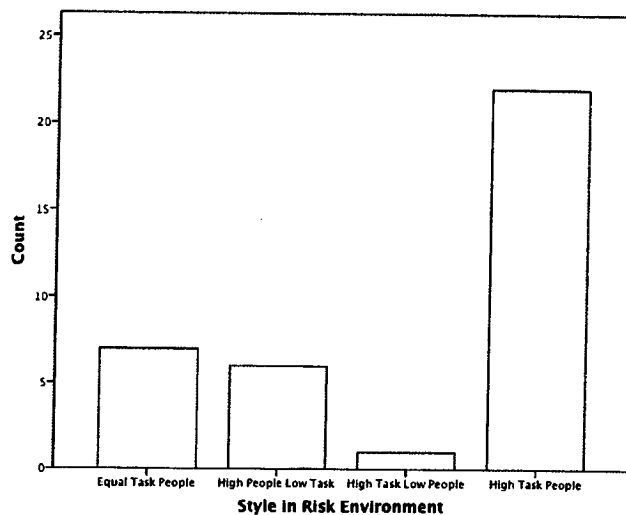
Figure 5 – Bar chart of the leadership style that achieves best results in a high-risk environment
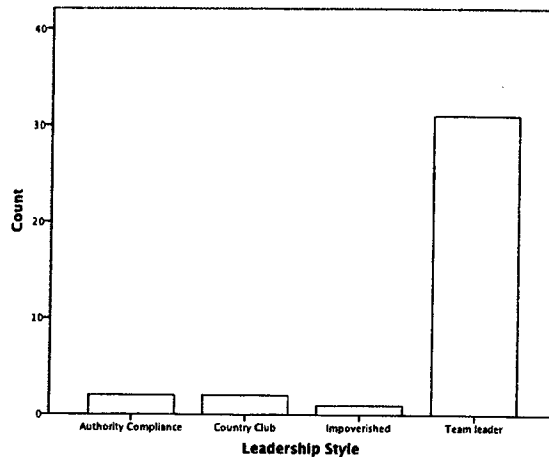
Figure 6 – Bar charts indicating the prevalent leadership style at Sima Baghdad

H_02: *There is no relationship between the effect of "war" risk on time, the effect of "war" risk on budget, and the effect of "war" risk on performance.*

H_a2: *There is a relationship between the effect of "war" risk on time, the effect of "war" risk on budget, and the effect of "war" risk on performance.*

The Spearman's rho reveals a significance level of 0.000 between "War vs. Time" and "War vs. Budget", between "War vs. Time" and "War vs. Performance", and between "War vs. Budget" and "War vs. Performance". Since the significance level is less than 0.05, the null hypothesis is rejected. The correlation coefficient also shows values of 0.846, 0.893, and 0.828 respectively. Since the results are close to 1, then there is high correlation between the effect of "war" risk on time, the effect of "war" risk on budget, and the effect of "war" risk on performance (See Table 19).

Correlations

			War vs. Time	War vs. Budget	War vs. Performance
Spearman's rho	War vs. Time	Correlation Coefficient	1.000	.846**	.893**
		Sig. (2-tailed)	.	.000	.000
		N	36	36	36
	War vs. Budget	Correlation Coefficient	.846**	1.000	.828**
		Sig. (2-tailed)	.000	.	.000
		N	36	36	36
	War vs. Performance	Correlation Coefficient	.893**	.828**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	36	36	36

**. Correlation is significant at the 0.01 level (2-tailed).

Table 19 – Spearman's rho measuring the relationship between the effect of "war" on time, budget, and performance

H_03: There is no relationship between the effect of "climate" risk on time, the effect of "climate" risk on budget, and the effect of "climate" risk on performance

H_a3: There is a relationship between the effect of "climate" risk on time, the effect of "climate" risk on budget, and the effect of "climate" risk on performance.

The Spearman's rho reveals a significance level of 0.000 between "Climate vs. Time" and "Climate vs. Budget", between "Climate vs. Time" and "Climate vs. Performance", and between "Climate vs. Budget" and "Climate vs. Performance". Since the significance level is less than 0.05, the null hypothesis is rejected. The correlation coefficient also shows values of 0.765, 0.792, and 0.719 respectively. Since the results are close to 1, then there is high correlation between the effect of "climate" risk on time, the effect of "climate" risk on budget, and the effect of "climate" risk on performance (See Table 20).

Correlations

			Climate vs. Time	Climate vs. Budget	Climate vs. Performance
Spearman's rho	Climate vs. Time	Correlation Coefficient	1.000	.765**	.792**
		Sig. (2-tailed)	.	.000	.000
		N	36	36	36
	Climate vs. Budget	Correlation Coefficient	.765**	1.000	.719**
		Sig. (2-tailed)	.000	.	.000
		N	36	36	36
	Climate vs. Performance	Correlation Coefficient	.792**	.719**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	36	36	36

**. Correlation is significant at the 0.01 level (2-tailed).

Table 20 – Spearman's rho measuring the effect of "climate" on time, budget, and performance

H_04: There is no relationship between the effect of "tribal issues" risk on time, the effect of "tribal issues" risk on budget, and the effect of "tribal issues" risk on performance.

H_a4: There is a relationship between the effect of "tribal issues" risk on time, the effect of "tribal issues" risk on budget, and the effect of "tribal issues" risk on performance.

The Spearman's rho reveals a significance level of 0.021 between "Tribe vs. Time" and "Tribe vs. Budget", a significance level of 0.071 between "Tribe vs. Time" and "Tribe vs. Performance", and a significance level of 0.028 between "Tribe vs. Budget" and "Tribe vs. Performance". The significance level is less than 0.05 for "tribe vs. time" and "tribe vs. budget", and "tribe vs. budget" and "tribe vs. performance". However, since the significance level is not less than 0.05 for "tribe vs. time" and "tribe vs. performance", then the null hypothesis is accepted. The correlation coefficient also shows values of 0.382, 0.305, and 0.367 respectively. Since the results are between 0.2 and 0.4 then there is low correlation between the effect of "tribe" risk on time, the effect of "tribe" risk on budget, and the effect of "tribe" risk on performance (See Table 21).

Correlations

			Tribe vs. Time	Tribe vs. Budget	Tribe vs. Performance
Spearman's rho	Tribe vs. Time	Correlation Coefficient	1.000	.382[*]	.305
		Sig. (2-tailed)	.	.021	.071
		N	36	36	36
	Tribe vs. Budget	Correlation Coefficient	.382[*]	1.000	.367[*]
		Sig. (2-tailed)	.021	.	.028
		N	36	36	36
	Tribe vs. Performance	Correlation Coefficient	.305	.367[*]	1.000
		Sig. (2-tailed)	.071	.028	.
		N	36	36	36

[*]. Correlation is significant at the 0.05 level (2-tailed).

Table 21 – Spearman's rho measuring the effect of "tribal issues" on time, budget, and performance

4.6 Conclusions

This chapter presented demographic data and an analysis of the study's hypotheses. Data was collected using a survey sent by e-mail to Sima Baghdad employees holding managerial positions (except administrative) and/or leadership positions on site. Frequency analyses are calculated to determine the demographics of the participants and the risk factors present in Iraq. The results obtained from the data reveal that the respondents agree that war, climate, and tribal issues characterize the risk factors present in Iraq. Four hypotheses were tested to determine which is the prevalent leadership style at Sima Baghdad and the most effective leadership style in

a high-risk environment such as Iraq, as well as the relationship between the effect of each risk factor present in Iraq on time, budget, and performance. The first hypothesis is measured using frequency analysis. As for the other three hypotheses, Spearman's rho is calculated to accept or reject the hypotheses. The results have rejected the second and third null hypotheses and accepted the fourth null hypothesis.

Next, chapter 5 presents a discussion of the implications of the findings and suggestions for further study.

Chapter 5

Conclusions and Suggestions

5.1 Introduction

It is accepted among academicians and practitioners of project management that risk affects projects. Despite some studies in the area of risk and project management, the extent to which risk affects leadership and project factors is not clear. The objective of this study is to add to the existing body of project management research. It emphasizes the relationship between the effect of each risk factor present in Iraq, specifically war, climate, and tribal issues on each of the three factors of a project: time, budget, and performance. The study uses a quantitative descriptive approach to determine the dominant leadership style in a high-risk environment such as Iraq and the prevalent leadership style at Sima Baghdad.

The theoretical framework for the study is based on:

1. The Project Management Institute defines project success as "A balance of competing demands for project quality, scope, time, and cost as well as the concerns and expectations of the project stakeholders (Project Management Institute, 2008).

2. The importance of relationship and task leadership styles: Project leaders need both relationship-oriented and task-oriented leadership styles to cope with the challenges of the different phases of a project (Slevin & Pinto, 1991).

3. The risk factors present in Iraq: War, climate, and tribal issues.

5.2 <u>Summary of Findings</u>

The findings of this study are based on a survey completed by employees at Sima Baghdad holding managerial positions (except administrative) and/or leadership roles on site. The findings support the conceptual framework that risk affects projects. The empirical information presented in the literature review suggested that "team management" is the most suitable leadership style, and that risk affects factors in a project including, but not limited to, time, budget, and performance.

Four hypotheses are identified to address the research objective. The first hypothesis aims to determine which is the dominant leadership style among Sima Baghdad employees and the most effective leadership style in a high-risk environment such as Iraq. The other three hypotheses aim to determine the relationship between the independent variable of the risk factors present in Iraq and the dependent variables of time, budget, and performance. The most common risk factors present in Iraq are recognized as war risk, climate risk, and tribal issues risk.

Frequency analysis is used to determine the dominant leadership style present in Iraq. Spearman's rho is used to determine the relationship between the effect of each risk factor present in Iraq on time, budget, and performance. The data provided by the sample population indicated a significant relationship between some variables. Below is a summary of the findings.

Hypothesis 1

Focused on identifying the prevalent leadership style among Sima Baghdad employees and the most effective leadership style in a high-risk environment such as Iraq, the analysis based on frequency analysis led to the rejection of the null hypothesis. The results revealed that "team management" leadership style is the dominant leadership style among Sima Baghdad employees, and "team management" is the most effective leadership style in a high-risk environment such as Iraq.

Hypothesis 2

Focused on identifying the relationship between the effect of "war" risk on time, budget, and performance, the empirical analysis led to the rejection of the null hypothesis. The results revealed a relationship between "War vs. Time" and "War vs. Budget", between "War vs. Time" and "War vs. Performance", and between "War vs. Budget" and "War vs. Performance".

The significance level is less than the required asymptotic significance level of 0.05. Moreover, the correlation coefficient also shows a value close to 1, indicating that there is high correlation between the effect of "war" risk on time, the effect of "war" risk on budget, and the effect of "war" risk on performance.

Hypothesis 3

Focused on identifying the relationship between the effect of "climate" risk on time, budget, and performance, the empirical analysis led to the rejection of the null hypothesis. The results revealed a relationship between "Climate vs. Time" and "Climate vs. Budget", between "Climate vs. Time" and "Climate vs. Performance", and between "Climate vs. Budget" and "Climate vs. Performance".

The significance level is less than the required asymptotic significance level of 0.05. Moreover, the correlation coefficient also shows a value close to 1, indicating that there is high correlation between the effect of "climate" risk on time, the effect of "climate" risk on budget, and the effect of "climate" risk on performance.

Hypothesis 4

Focused on identifying the relationship between the effect of "tribal issues" risk on time, budget, and performance, the empirical analysis led to accepting the null hypothesis. Since the significance level is not less than 0.05 (except for "tribe vs. time" and "tribe vs. performance"), the null hypothesis is accepted. It is important to note that since the significance level between "Tribe vs. Time" and "Tribe vs. Budget" and "Tribe vs. Budget" and "Tribe vs. Performance" is less than 0.05.

The correlation coefficient also shows values of 0.382, 0.305. and 0.367 respectively indicating that there is low correlation between the effect of "tribal issues" risk on time, the effect of "tribal issues" risk on budget, and the effect of "tribal issues" risk on performance.

5.3 Limitation of the Research

Three limitations affected this study. First, even though Sima Baghdad has more than 250 employees, only 36 of them hold managerial positions (except administrative) and/or have a leadership role on site. Thus, the number of subjects was limited to only 36.

Second, distance was also another limitation. Most of the participants who filled out the questionnaire reside in Iraq. Thus, communication with them was difficult due to long distance.

Finally, language was a barrier. This study is completed in the English language; however, most of the participants live in Iraq and do not know English. The questionnaire had to be translated to the Arabic language.

5.4 Managerial Implications

Effective leaders are not completely task or relationship focused in their action rather they maintain a balance between the two (Kerzner, 2003, as cited in Nauman & Khan, 2009). These findings augment this research that "team management" leadership style is the predominant style for effective project management. Indeed this style constitutes factors which are critical for effective project management like participative decision making, open communication, conflict management, delegation of power, task monitoring, time management, coaching, and team work. This knowledge allows the leader to undergo training in those areas to increase his leadership capabilities.

Knowing which leadership style is suitable in a high-risk environment allows to choose the best candidate with the required characteristics and style for a project management leadership role. Based on the results of this study, "Team management" is the most suitable leadership style in a high-risk environment. This allows the Human Resource department of a company to assess the employee's skills and fill the needed position with an individual having the appropriate leadership style.

Overall, the results of the study indicated a strong correlation between the effect of each risk factor and project factors of time, budget, and performance. Findings related to the survey questions that were not part of the hypotheses testing supported the view that risk affects time, budget, and performance. This study has shown that there is a relationship between the effect of "war" risk and "climate" risk on time, the effect of "war" risk and "climate" risk on budget, and the effect of "war" risk and "climate" risk on performance, yet indicates that the relationship between the effect of "tribal issues" risk on time, the effect of "tribal issues" risk on budget, and the effect of "tribal issues" risk on performance is not the same.

These finding aid managers in knowing what to expect from the project outcomes when working in a high-risk environment. Once the risk factors are assessed and once it is known which projects factors are affected, then risk control is made much easier, and project success is more likely.

5.5 Suggestions

In order to choose an appropriate project manager for a project, the project manager's leadership competencies and leadership style should be matched to the type of project. Doing so should increase the likelihood of the project being successful. In addition to that, projects are affected by risk. Controlling risk and its effect on project factors should increase the likelihood of the success of the project.

Previous research found in the literature review indicates that projects continue to fail despite the use of established project methods and techniques. Many factors are to be considered within project management, however, one important factor is risk. Based on the findings of this study, a risky environment affects projects on different levels, including but not limited to, leadership style, time, budget, and performance.

The study found an interesting correlation between the various risk factors present in Iraq and time, budget, and performance. It has shown that there is a relationship between the effect of "war" risk and "climate" risk on time, budget, and performance, but is not the case with the relationship between the effect of "tribal issues" risk on time, budget, and performance. To understand the reasons why would require a different research approach and one that is done within a much larger framework. Moreover, this research does not cover how the risk affects the project factors. It simply indicates whether or not there is a relationship. Those could be areas to be looked into for further research.

Furthermore, the sample of this study was selected from employees at Sima Baghdad. Further studies need to be done, using a larger sample, to determine if the results would be similar. Further studies could also examine findings from other organizations within different types of industries.

Risk, leadership, and the "iron triangle" will remain one of the most important aspects of project management, and, as a result, more researchers will continue studying this wide field.

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APPENDICES

APPENDIX A – SURVEY QUESTIONNAIRE IN ENGLISH:

Dear participant,

You are invited to participate in a research project to determine which factors of time, cost, and performance (or scope) are mostly affected in a high-risk environment such as Iraq, and to establish which is the best leadership style in such an environment.
The questionnaire will take approximately 10 – 15 minutes to complete.
Your feedback and honesty are very important to the success and results of this research.
This survey is anonymous and it will only be used for research purposes.
Thank you very much for your time and support

1. **What is your gender?**
    Male ☐ Female ☐

2. **In which age group do you fall?**
    20 – 30 ☐
    31 – 40 ☐
    41 – 50 ☐
    > 50 yrs ☐

3. **How many total years of work experience do you have?**
    < 2 ☐
    2 – 5 ☐
    6 – 10 ☐
    11 – 20 ☐
    > 20 ☐

4. **How many total years of managerial experience do you have?**
    < 2 ☐
    2 – 5 ☐
    6 – 10 ☐
    11 – 20 ☐
    > 20 ☐

5. **How many years of project management experience do you have?**

    < 2   ☐

    2 – 5   ☐

    6 – 10   ☐

    11 – 20   ☐

    > 20   ☐

6. **Approximate size of project teams with which you have worked with:**

    < 5   ☐

    5 – 10   ☐

    11 – 20 ☐

    21 – 50 ☐

    51 – 100 ☐

    > 100   ☐

7. **Below is a list of statements about leadership behavior. Read each one carefully, then, using the following scale, decide the extent to which it actually applies to you when working in a high-risk environment. The scale ranges from 0 to 5; 0 referring to never, 1 through 4 referring to sometimes (depending on intensity), and 5 referring to always. For best results, answer as truthfully as possible.**

Never			Sometimes		Always
0	1	2	3	4	5

a. _____ I encourage my team to participate when it comes to decision making time and I try to implement their ideas and suggestions.

b. _____ Nothing is more important than accomplishing a goal or task.

c. _____ I closely monitor the schedule to ensure a task or project will be completed on time.

d. _____ I enjoy coaching people on new tasks and procedures.

e. _____ The more challenging a task is, the more I enjoy it.

f. _____ I encourage my employees to be creative about their job.

g. _____ When seeing a complex task through to completion, I ensure that every detail is accounted for.

h. _____ I find it easy to carry out several complicated tasks at the same time.

i. _____ I enjoy reading articles, books, and journals about training, leadership, and psychology; and then putting what I have read into action.

j. _____ When correcting mistakes, I do not worry about jeopardizing relationships.

k. _____ I manage my time very efficiently.

l. _____ I enjoy explaining the intricacies and details of a complex task or project to my employees.

m. _____ Breaking large projects into small manageable tasks is second nature to me.

n. _____ Nothing is more important than building a great team.

o. _____ I enjoy analyzing problems.

p. _____ I honor other people's boundaries.

q. _____ Counseling my employees to improve their performance or behavior is second nature to me.

r. _____ I enjoy reading articles, books, and trade journals about my profession; and then implementing the new procedures I have learned.

8. **Which is the most dominant leadership style you have seen in construction project management? The leader who has:**

A high concern for task and a low concern for people ☐
A high concern for people and a low concern for task ☐
An <u>equal</u> concern for both task and people ☐
A <u>high</u> concern for both task and people ☐
A lack of concern for both task and people ☐

9. **From your experience, which of these styles of leadership has achieved the best results in a high-risk environment such as Iraq? The leader who has:**

A high concern for task and a low concern for people ☐
A high concern for people and a low concern for task ☐
An <u>equal</u> concern for both task and people ☐
A <u>high</u> concern for both task and people ☐
A lack of concern for both task and people ☐

10. **Which of the following risk factors present in Iraq affect the project most? (You may choose several)**

War ☐
Climate ☐
Tribal issues ☐
Other, please specify

_____

11. **From a scale of 1 to 5, 1 being the lowest occurrence frequency, and 5 being the highest, please rate the frequency of occurrence of each risk factor?**

| War | 1 | 2 | 3 | 4 | 5 |

| Climate | 1 | 2 | 3 | 4 | 5 |

| Tribal issues | 1 | 2 | 3 | 4 | 5 |

| Other | 1 | 2 | 3 | 4 | 5 |

12. **From a scale from 1 to 5, 1 being the lowest impact and 5 being the highest, please rate the level of impact the above-mentioned risk factors have on the following project criteria.**

Time (schedule)	1	2	3	4	5
Budget (cost)	1	2	3	4	5
Performance (scope)	1	2	3	4	5
Other	1	2	3	4	5

13. **From a scale from 1 to 5, 1 being the lowest impact and 5 being the highest, please rate the impact of each risk factor mentioned above on each project criteria.**

War vs. Time	1	2	3	4	5
War vs. Budget	1	2	3	4	5
War vs. Performance	1	2	3	4	5
Climate vs. Time	1	2	3	4	5
Climate vs. Budget	1	2	3	4	5
Climate vs. Performance	1	2	3	4	5
Tribal Issues vs. Time	1	2	3	4.	5
Tribal Issues vs. Budget	1	2	3	4	5
Tribal Issues vs. Performance	1	2	3	4	5
Other vs. Time	1	2	3	4	5
Other vs. Budget	1	2	3	4	5
Other vs. Performance	1	2	3	4	5

14. **Use this space for additional comments, clarifications, or suggestions.**

Thank you for your time.

APPENDIX B – SURVEY QUESTIONNAIRE IN ARABIC:

عزيزي المشارك،

ندعوك إلى المشاركة في مشروع بحث لتحديد أيّ من عوامل الوقت، والكلفة والأداء (أو النطاق) هي الأكثر تأثّرًا في بيئة شديدة المخاطر على غرار العراق، ومن أجل وضع أفضل أسلوب قيادة في بيئة مماثلة.
تتطلّب تعبئة استمارة الأسئلة حوالى 10 إلى 15 دقيقة.
إنّ معلوماتك في هذا الشأن وصدقك مهمّان جدًّا لنجاح هذا البحث ونتائجه.
هذه الدراسة التي لا تأتي على ذكر الأسماء سوف تُستخدم لأغراض البحث فقط.
شكرًا على تقديم وقتكم ودعمكم.

1 ـ ما هو جنسك؟

☐ أنثى   ذكر ☐

2 ـ إلى أيّ فئة عمريّة تنتمي؟

☐ 20-30
☐ 31-40
☐ 41-50
☐ < 50 عامًا

3 ـ كم هو مجموع عدد سنوات خبرتك في العمل ؟

☐ <2
☐ 2-5
☐ 6-10
☐ 11-20
☐ >20

4 ـ كم هو مجموع عدد سنوات خبرتك في العمل الإشرافي ؟

☐ <2
☐ 2-5
☐ 6-10
☐ 11-20
☐ >20

5 ـ كم عدد سنوات خبرتك في إدارة المشاريع ؟

☐	2<
☐	5-2
☐	10-6
☐	20-11
☐	20>

6 ـ ما هو الحجم التقريبي لفرق العمل في المشاريع التي عملتَ فيها؟

☐	5<
☐	10-5
☐	20-11
☐	50-21
☐	100-51
☐	100>

7 ـ تجد أدناه لائحة بيانات حول السلوك القيادي. إقرأ كلّ بند من هذه اللائحة بعناية، ثُمّ من خلال استعمال المقياس التالي قرّر إلى أيّ مدى ينطبق فعلاً عليك في خلال العمل في بيئة شديدة المخاطر. يتراوح المقياس من 0 الذي يشير إلى أبدًا، و1 إلى 5 الذي يشير إلى أحيانًا (بحسب شدّة المخاطر) و 5 الذي يشير إلى دائمًا. للحصول على أفضل النتائج الرجاء الإجابة بصدق قدر الإمكان.

دائمًا		أحيانًا			أبدًا
5	4	3	2	1	0

أ ـ _____ أشجّع فريقي على المشاركة في صناعة القرارات وأحاول تطبيق أفكارهم واقتراحاتهم.

ب ـ _____ ليس هناك من أهميّة أكثر من تحقيق هدف أو مهمّة.

ت ـ _____ أراقب الجدول الزمني عن كثب للتأكّد من إتمام المهمّة أو المشروع في الوقت المحدد.

ث ـ _____ أتمتّع بعمليّة تدريب الأفراد على مهام وأساليب جديدة.

ج ـ _____ بقدر ما تكون المهمّة تحديًّا بقدر ما أستمتع بها.

ح ـ _____ أشجّع الموظفين على الإبتكار في عملهم.

خ ـ _____ لدى مواجهة مهمّة معقّدة قيد الإنجاز، أتأكّد من أنّه تمّ اتّخاذ كلّ تفصيل بعين الاعتبار.

د ـ _____ أجد سهولة في تنفيذ مهام معقّدة عدّة في الوقت عينه.

ذ ـ _____ أتمتّع بقراءة المقالات والكتب والصحف التي تعالج مواضيع التدريب، والقيادة وعلم النفس؛ ومن ثمّ أطبّق ما قرأته.

ر ـ _____ عند تصحيح الأخطاء، لا أخشى تعريض العلاقات للخطر.

ز ـ _____ أدير وقتي بشكل فعّال جدًّا.

س ـ _____ يسرّني توضيح تعقيدات وتفاصيل مهمّة أو مشروع معقّد للموظفين.

ش ـ _____ تقسيم المشاريع الكبيرة إلى مهام صغيرة قابلة للإدارة هو أمر مألوف وطبيعي لدي.

ص ـ _____ لا شيء يضاهي أهميّة إعداد فريق جيّد.

ض ـ _____ أتمتّع بتحليل القضايا.

ط ـ _____ أحترم حدود وإمكانيّات الآخرين.

ظ ـ _____ أنا ملمّ بإرشاد الموظفين لتحسين أدائهم أو سلوكهم.

ع ـ _____ أتمتّع بقراءة المقالات، والكتب، والصحف التجارية المتعلّقة بمهنتي، ومن ثمّ تطبيق الأساليب الجديدة التي تعلّمتها.

8 ـ ما هو الأسلوب الأبرز للقيادة الذي لاحظته في إدارة المشاريع؟ أهو القائد الذي:

☐ يبدي اهتمامًا كبيرًا بالمهمّة واهتمامًا أقلّ بالأشخاص
☐ يبدي اهتمامًا كبيرًا بالأشخاص واهتمامًا أقلّ بالمهمّة
☐ يبدي اهتمامًا متساويًا بالمهمّة وبالأشخاص
☐ يبدي اهتمامًا كبيرًا بالمهمّة وبالأشخاص معًا
☐ لا يهتمّ بالمهام ولا بالأشخاص

9 ـ بحسب خبرتك، أيّ من أساليب القيادة حقّق أفضل النتائج في بيئة شديدة المخاطر؟ أهو القائد الذي:

☐ يبدي اهتمامًا كبيرًا بالمهمّة واهتمامًا أقلّ بالأشخاص
☐ يبدي اهتمامًا كبيرًا بالأشخاص واهتمامًا أقلّ بالمهمّة
☐ يبدي اهتمامًا متساويًا بالمهمّة وبالأشخاص
☐ يبدي اهتمامًا كبيرًا بالمهمّة وبالأشخاص معًا
☐ لا يهتمّ بالمهام ولا بالأشخاص

10 ـ أيّ من عوامل الخطر التالية القائمة حاليًا في العراق تؤثّر على المشروع أكثر من غيرها؟ (يمكن اختيار أكثر من عامل واحد)

☐ الحرب
☐ المناخ
☐ القضايا القبليّة
☐ عوامل أخرى، لطفًا التحديد

11 ـ على مقياس من 1 إلى 5، 1 هو أدنى نسبة تواتر الحصول، و 5 هي أعلى نسبة تواتر، الرجاء بتقدير نسبة تواتر حصول كلّ من عوامل الخطر التالية:

الحرب	1	2	3	4	5
المناخ	1	2	3	4	5
القضايا القبلية	1	2	3	4	5
عوامل أخرى	1	2	3	4	5

12 ـ على مقياس من 1 إلى 5، 1 هو أدنى نسبة تأثير، و 5 هي الأعلى، لطفًا تقدير نسبة تأثير كلّ من عوامل الخطر المذكورة أعلاه على المقاييس التالية للمشروع.

الوقت (الجدول الزمني)	1	2	3	4	5
الموازنة (الكلفة)	1	2	3	4	5
الأداء (النطاق)	1	2	3	4	5

13 ـ على مقياس من 1 إلى 5، 1 هو أدنى نسبة تأثير، و 5 هي الأعلى ، لطفًا تقدير نسبة
تأثير كلّ من عوامل الخطر المذكورة أعلاه على كل من المقاييس التالية للمشروع.

الحرب و الوقت	1	2	3	4	5
الحرب و الموازنة	1	2	3	4	5
الحرب والأداء	1	2	3	4	5
المناخ و الوقت	1	2	3	4	5
المناخ و الموازنة	1	2	3	4	5
المناخ والأداء	1	2	3	4	5
القضايا القبلية و الوقت	1	2	3	4	5
القضايا القبلية و الموازنة	1	2	3	4	5
القضايا القبلية و الأداء	1	2	3	4	5
عوامل أخرى و الوقت	1	2	3	4	5
عوامل أخرى و الموازنة	1	2	3	4	5
عوامل أخرى و الأداء	1	2	3	4	5

14 ـ يمكنك استخدام هذا المكان للمزيد من التعليقات أوالتوضيحات أوالاقتراحات.

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شكرًا لك على الوقت الذي أتحته لنا.

APPENDIX C – SCORING SECTION:

Scoring Section

After completing the Questionnaire, transfer your answers to the spaces below:

People	Task
Question	Question
1._____	2._____
4._____	3._____
6._____	5._____
9._____	7._____
10._____	8._____
12._____	11._____
14._____	13._____
16._____	15._____
17._____	18._____
TOTAL _____	**TOTAL** _____
X 0.2 = _____	X 0.2 _____
(Multiply the Total by 0.2 to get your final score)	(Multiply the Total by 0.2 to get your final score)