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The Impact of Leadership Skills on the Efficiency of Industrial Project Management in the Kurdistan Region, Iraq.

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Researcher

Acknowledgment

First of all, thanks to Allah for giving us health and synergy to reach this stage.

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Researcher

Abstract

This study objectives to know the impact of leadership skills on project management efficiency within the industrial sector in the Kurdistan Region of Iraq.

The study based on basic leadership skills, like communication and interpersonal skills, decision-making and problem-solving, motivation and team building, strategic vision and planning, adaptability and conflict resolution, and affect their relationship on project efficiency elements like: time, cost, and quality performance.

Used quantitative descriptive analysis design was adopted, distributing structured questionnaire and applied Likert scale to evaluate (140) valid responses were used for interpretation by reliability analysis.

The Project managers were found to display relatively strong leadership skills, mainly in the skills of communication and interpersonal, decision-making and problem solving, motivation and team building, and adaptability with relatively high levels of agreement (>60%) positively affecting to project results, while strategic vision and planning skills are comparatively lower indicating a need for more focus on long term planning.

However, quality standard performance which recorded the highest level of satisfaction by respondents, also time and cost efficiency shown lower-level performance, determined areas requiring improvement.

The study recommends that should industrial project investing in leadership development programs, improve strategic vision and planning, strengthen time and cost management mechanisms to enhance generally project efficiency, and studying more about leadership science and project management.

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Chapter One

1.1 Introduction:

Leadership skills are one of the most important organizational elements that contemporary organizations need in order to survive and continue operating in light of current developments and accelerated dynamic changes. These conditions have increased the need for leadership styles that emphasize personal skills, in addition to the ability to utilize leadership potential effectively to build positive relationships among employees. This shift reflects a move from a hierarchical leadership model to a soft leadership model that focuses on collaboration and positive interaction with subordinates.

Soft skills are essential for effective performance across all professional sectors. They have become a key focus of leadership, both now and in the future, and are considered a priority for achieving high performance. Soft skills are regarded as important and effective elements in the success of any organization. They also have a significant impact on employees' behavior, including discipline, commitment, and a sense of belonging to the organization, in addition to contributing to the achievement of organizational goals (Sadq, 2019).

In the Kurdistan Region, the industrial sector has grown continuously since 2003 across various industries. Although, many industrial projects yet face challenges concerned to delays on schedule, cost overruns, and inefficiencies. This condition lifts the question of how leadership skills influence the efficiency of industrial project management within this regional and economic context.

1.2 Problem Statement

1. Industrial development in the Kurdistan Region is continuously growing, still many projects are not developed as expected.
2. A number of industrial projects suffer from toxic work environments, which negatively impact on project outcomes.
3. Some projects fail to meet their proposed performance evaluations, partly referring to ineffective leadership practices.
4. There is insufficient understanding of how leadership skills affect project performance.

5. Project leaders and heads of management frequently lack strong leadership skills, which refer to weak project management efficiency.

6. This knowledge gap creates challenges in improving management practices and project success within the industrial sector.

1.3 Study Objectives

1-To identify the key leadership skills that are necessary and should be possessed by industrial head management

2-To analyze the relationship between leadership skills and project management efficiency within industrial projects.

3-To develop recommendations or propose a conceptual model aimed at enhancing leadership skill practices to improve project performance in the region.

1.4 Study Importance-Scientific & Theoretical

This Study is important for few academic, practical. It fills a knowledge gap in the Kurdistan Region, where few experimental research has explored how leadership skills affect the efficiency of industrial project management.

By focusing on the link between leadership skills and project results, this research giving valuable evidence that can support the theoretical understanding of leadership's skills in project outcomes success.

From a practical section, the outcomes will be advantageous to project managers, industrial sectors and by identifying some leadership skills that guide to higher level project efficiency.

These outcomes can inform the plan of targeted leadership skills development programs, upgrade recruitment criteria for project managers, and promote strategic decision-making processes across the industrial sector.

Further, the Kurdistan Region's growing industrial economy faces continual challenges, such as delays on schedule, budget overruns, and resource inefficiencies that often result from weak leadership skills.

The results of this study can be significant to improving project performance, resource utilization and general competitiveness of industrial projects in the region.

In the end, the study's outcomes can serve as a basis for further academic research in leadership and project management within growth markets and helping to link global theories with local practices.

1.5 Research Questions

This research looks up to answer the following key questions:

1. What leadership skills should be available to manage efficient project management in the Kurdistan region?
2. How do leadership skills influence project management efficiency?
3. Which leadership skills have the most important influence on enhancing project performance and project outcomes overview?
4. What strategies or scopes can be developed to get leadership effectiveness and project management performance in the Kurdistan region?

1.6 Research Hypotheses:

Based the research problem and Study objectives, the study suggests the following hypotheses:

- H1: There is a significant positive relationship between leadership skills and the efficiency of industrial project management in the Kurdistan Region.
- H2: Project managers with higher levels of interpersonal and communication skills get greater project management efficiency.
- H3: Decision-making and problem-solving skills of project managers have a significant impact on project coordination and goal achievement.
- H4: Motivation and team-building skills of project managers positively affect employee productivity result and over project performance.
- H5: Strategic leadership skills, such as vision and planning, significantly boost the sustainability and long-term success of industrial projects in the Kurdistan Region.

1.7 Theoretical Framework

This chapter is referred to explain the following key points:

- The problem of study refer to the issues was interfacing the industrial projects, negatively impact the results.
- The aims of the study to identify the key leadership, analyze the link between two variables, develop recommendations model to enhancing leadership skills in the industrial projects.
- The Study Importance fills a knowledge gap about how leadership skills affect the efficiency of industrial project management, the results will be useful to project managers, industrial sectors
- The Research Questions ask what leadership skills should be available in senior levels and what is influence project management efficiency and what strategies should develop to get leadership skills and project Management effectiveness.
- Research hypotheses are positive relationship available between leadership skills and the efficiency of project management, interpersonal and communication skills have more effect on senior management position, problem-solving and decision-making skills have impact on coordination and goal achievement, motivation and team-building skills of project head positively affect employee activity and project outcomes and strategic leadership skills affect long-term success of industrial projects in the Kurdistan Region.

Chapter Two

2.1 Introduction

This chapter allow a detailed literature review related to the study and collect the theoretical and conceptual frameworks upon which this research is established. This chapter objects to review current literature on leadership and project management efficiency, identify key variables and to highlight where research gaps exist which noted the current study.

The leadership skills is a crucial determining factor for organizational performance and project success in all investment sector. also, more part of the world's population works especially in industrial and construction project contexts.

The leadership skills can significantly impact if projects are delivered on schduale time, within budget and with required quality. Notwithstanding the international literature linking leadership skills to project outcomes, but there are few field-based studies from industrial sector of Kurdistan Region.

The chapter is distributed into two variables components.

First, it explains and discusses the dependent variable (project management efficiency), focusing on time, cost, quality saving and coordination.

Second, it explores the independent variable leadership skills, which it has focusing on some core competencies such us communication, decision-making, motivating others, the ability to see the longer-term strategy, and adaptability.

2.2 Dependent Variables

This study used Project Management Efficiency as its dependent variable like (Time, Cost, and Quality)

The efficiency of project management is in conformity with the framework indicated by Atkinson (1999), generally known as the “Iron Triangle” model.

In this model, the success of a project is measured on three points:

1. Time performance (commitment to schedule).
2. Quality performance (assembly technical standards).
3. Cost performance (on budget scope).

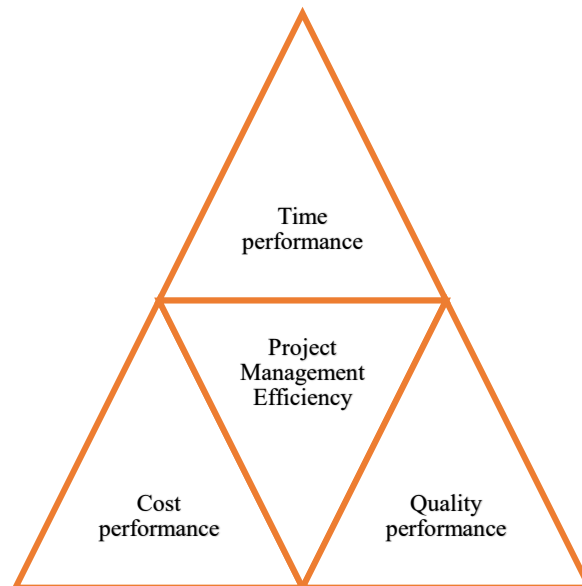


Figure 1 shows the project management components

2.3 Independent Variable

Independent Variable: Leadership Skills

Obtain from Transformational and Situational Leadership theories, leadership skills are deal into the following element:

1. Communication and interpersonal skills
2. Decision-making and problem-solving skills.
3. Motivation and team-building ability skills.
4. Strategic vision and planning skills
5. Adaptability and conflict resolution management skills



Figure 2 shows the leadership skills elements.

2.4 Summary and Discussion of Literature Review:

Leadership has direct impact and a critical influence on project success.

Various literature worldwide has studied how leadership styles, skills, and behaviors affect project performance and efficiency.

- Lateef et al. (2023) focused on the influence of three leadership styles on working environment at selected Small and Medium-sized Enterprises in Erbil city of Kurdistan Region, the results detected that there is a strong relationship between the working environment and the three different types of leadership styles (Democratic leadership, Autocratic leadership, and laissez-faire leadership) The study recommended it is necessary to know that several leadership styles have the potential to have a variety of impacts on the environment of the workplace, and those effects may also vary consist on the specific condition and circumstances of each small to medium-sized business.
- Jwmaa et al. (2022) That paper conclude there is an important positive combination between charismatic leadership style and the project development team's competencies and the study focused on five building projects in the Erbil.
- Neamat (2021) identifies the delay of the project completion is reasons to weak managerial leadership style to managing the Kurdistan construction building projects, postponement causes and proposed features were then inquiring by submitting questionnaire studies amongst construction specialists, Furthermore, the responses of this inspection offer scheme investors appropriate replays for disputing any delay.
- Ali (2020) also fund that leadership positively impacts business performance in Kurdistan, aimed of this study is to examine the effect of leadership and management on the performance of small businesses in the Kurdistan region of Iraq. The result refers to that there is a positive connection between the implementation of effective management and small business performance, that a lot of the small business in the Kurdistan, dissimilar the larger association do not have clear management strategies to guide future growth and A lot of skills and management resources presently in place are got towards achieving short-time objectives and goals.
- Neamat (2017) also highlights leadership skills and poor project management as contributors to cost and schedule inefficiencies, the research was observed and estimate the problem impacting the product performance in Kurdistan Region-Iraq, the study mention that the postponement in implementing of projects due to shortage and closure of materials; the workers' availability in their work according to project period, managing of construction projects and providing the skills of leadership.

Construction industry depends of many parts which result in a complexity in its nature, construction projects have a lot of drawbacks in measuring their time of the product, cost, and safety of the work. Additionally, the study recommended, a training program should be provided to progress the innovators in the construction industry construction projects. Organizations in the KR should assess the sharing of the market earlier than implementing projects.

- Müller and Turner (2010) found that project managers' leadership proficiency and high level of Emotional quotient sub-measures and intelligence quotient sub-measures and in all types of projects are key indicators of successful project results.
- Toor and Ofori (2008) founded that effective leadership improve cooperation and reduces project postponement and budget overruns, especially in complex construction and engineering projects because that projects are costly and technically demanding and the project manpower are large and diverse.

Thus, the need for effective leadership in construction project is even more acute, the effective leadership is the best solution to managing the constriction project issues especially in developing countries, and to this end, greater attention should be given to leadership development.

- Upon Bass and Avolio (1994) study the Transformational Leadership Theory established the role of leaders in inspiring commitment, promoting critical thinking, and driving employees to perform over expected outcomes, by the previous study the Transformational leaders enhance commitment, assist organizational culture, and improve performance result, the Transformational theory is spatially relevant in industrial project environments where motivation, innovation, and team unity are essential for meeting time, cost, and quality objectives.
- Ning Zhao et al.'s (2021) the transformational leadership have display a meaningful and positive effect on project outcomes.
- Hersey and Blanchard (1988) Situational Leadership Theory states that the effectiveness of leadership is dependent on the leader's ability to adjust his/her style based upon team members' competence and commitment, industrial projects are usually complex, requiring the collaboration of multiple disciplines in changing conditions, hence, adaptive leadership from directive/execution type to supportive ones is key to sustaining the coordination and efficiency in industrial centers.

The result of this research satisfies with international research by Zhao et al. (2021), Ahmed et al. (2017), and Müller & Turner (2010), support this globally leadership performance relationships while providing region specific empirical evidence.

The study is trying to fill gaps by observation research between leadership skills and project management competences.

Deposit these researches, there is remaining a gap of experimental study focusing especially on how leadership skills impact on managing industrial projects efficiency in the Kurdistan Region.

However, leadership skills like decision-making, communication, and emotional intelligence were highly rated by result, these findings are consistent with previous studies, and which confirm that leadership skills significantly influence project outcome success. Müller & Turner (2010).

2.5 Theoretical Framework of the Study

This chapter is explaining Independent Variable is a leadership skills are deal into the following element (Communication, Decision-making, problem-solving, Motivation, Strategic vision, and Adaptability skills) and Dependent Variable is Project Management (Time, Cost and Quality).

However, discussing about the Summary and Discussion of Literature Review in another literature in the worldwide about leadership and project management.

Chapter Three

3.1 Introduction

3.1 Introduction

This chapter focusing on the study methodology section to study the relationship between leadership skills and project management competence in the Kurdistan Region of Iraq especially in the industrial sector.

It explains the study design, study community, sampling characters, data gathering procedures, measurement tools.

The methodological framework was purposed to include objectivity, reliability, and validity in checking how leadership skills impact project performance outcomes.

By stratifying quantitative techniques, this chapter provides a designed path way for gathering and analyzing empirical data to assist the research objectives.

3.2 Research Design

This study design will using a descriptive, quantitative, analytical styling to inspect the relationship between leadership skills and the efficiency of project management efficiency.

The quantitative process tries for the collection of measurable data that can be statistically analyzed to identify types, engagement, and the strength of connections between leadership skills and project management outcomes.

A descriptive item is applied to explain demographic characteristics and variables type, while analytical mechanism (such as reliability testing and correlation) is used to answer the summited hypotheses.

3.3 Research Community

The study population contains of 140 employee's professionals participated in the different private sector and position levels in the Kurdistan Region of Iraq.

The paper focusses on projects performed between 2020 and 2025, a period described by industrial development and infrastructure growth on the three main city in the Kurdistan region.

3.4 Sample Characteristics

The questionnaire tools selected to collect stratified random samples and sheared the google form link between professional group community in specific platforms to cover representation for various domains of industrial project in Kurdistan Region, such as:

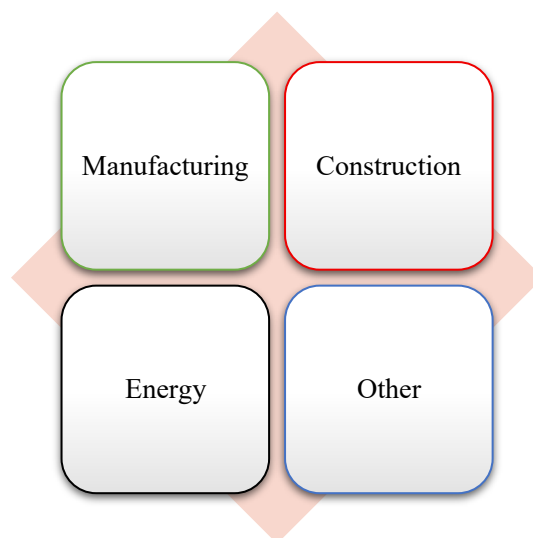


Figure 3 shows the type of industrial sectors.

The Participants included from high and medium levels postion such as project managers, engineers, and supervisors with various acadimic and professional experience levels backgrounds.

The outcome of sample collection contained of 160; we chosen 140 valid respondents pulled from industrial organizations in different location based such as:



Figure 4 shows the study location in Kurdistan Region.

The sample interpretation explained a medium levels career position controlled the manpower community and bachelor's degree qualifications, the explain increase the reliability of responses.

3.5 Sample Size Determination

The sample size was specified setup on accessibility to industrial projects and the readiness of professional employees to engage.

After data Checking and validation,140 participant receivable and usable questionnaires were gained and included in the final result analysis.

However, supposed the focused kind of the research and the professional identity of participant, the sample size is considered suitable for implementing descriptive statistics study, reliability analysis.

3.6 Data Collection Procedures

The core necessary data will be gathered during a structured survey designed and the two main dimensions surveyed:

1-Leadership Skills: including Strategic vision, Communication, Motivation, Decision-making and Problem-solving.

2-Project Management Efficiency: presented in items of (Time, Cost, Quality).

The questionnaire evaluation will use a model of a five-point Likert scale starting from (Strongly Disagree) to (Strongly Agree).

The questionnaires will be shared by media platform to filling the google forms electronically by respondent, participation will be voluntary, and saving moral considerations, confidentiality, anonymity and privacy data will be carefully saved.

❖ Part I: Demographic Information

In this section will collect background information data such as gender, age, years of experience, educational level, job title, and industry type that was necessary to knowing at our study. These variables assist to knowing the characteristics of participant and analyzing the respondent's diminution.

❖ Part II: Leadership Skills Scale

This division will evaluate the leadership skills of qualified project managers.

The indicator skills will be indicated based on established leadership models, firstly; Bass and Avolio's (1994) Transformational Leadership Model and Hersey and Blanchard's (1988) Situational Leadership Theory.

The proportions measure points are following:

- Strategic vision and planning.
- Adaptability and conflict resolution.
- Motivation and team-building.
- interpersonal and Communication skills.
- Problem-solving and decision-making and abilities.

❖ **Part III: Project Management Efficiency Scale**

This Part will evaluate the efficiency of industrial project management based on Iron Triangle model identify by Atkinson's (1999) centering on:

- Time (implementing at Schduale)
- Cost (on budget scope)
- Quality (Universal standards and customer satisfaction)

3.7 Study Scope and Limitations

❖ **Time Frame:** This study completed from Jan to March-2026.

This study will concern the projects implemented between 2020-2025, during considerable time is an industrial growth and economic expansion in the Kurdistan region.

However, that period allows for the understanding of modern leadership trends and their impact on industrial project efficiency throughout a duration of investment development.

❖ **Subject Frame:** The Study tries to provide generalizable overview of the leadership skills (Strategic vision and planning, Adaptability, Motivation, Communication, and decision-making skills) impact on the project qualification (Quality, Time, and Cost) into industrial project management across the Kurdistan region.

However, the research will focus on the managerial and leadership sections of project Evaluation of efficiency, rather than operational or technical aspects.

❖ **Place Frame:** the research focused on relationship between leadership competence and project management efficiency within the industrial sector of main three governorates of Kurdistan Region (i.e. Erbil, Sulaymaniyah, and Duhok).

❖ **Population Frame:** To achieve accuracy and reliable participants data the research and validated structured instrument will be used to collect data from industrial community and study will firstly target such as project managers and engineers, supervisors, and working in private industrial Sector.

3.8 Statistical Analysis Method.

❖ **Validity and Reliability**

- **Content Validity:** The leadership experts and project managers review the questionnaire context and structure to adequately measure the appropriate variables.
- **Construct Validity:** implement and conduct the theoretical framework of leadership skills and project management competency.
- **Reliability:** every structure will be measured by using Cronbach's Alpha model from (Strongly Disagree) to (Strongly Agree) to ensure internal consistency between elements.

Demographic Data

❖ **Gender**

Table 1 presents the distribution of the research sample according to gender.

Component	Frequency	Precent
Male	129	92.1%
Female	11	7.9%
Total	140	100.0

- The outcomes of gender indicate that most majority participants were male representing 92.1% of the total sample (n = 129). In difference, 7.9% of the sample (n = 11) showed female respondents.

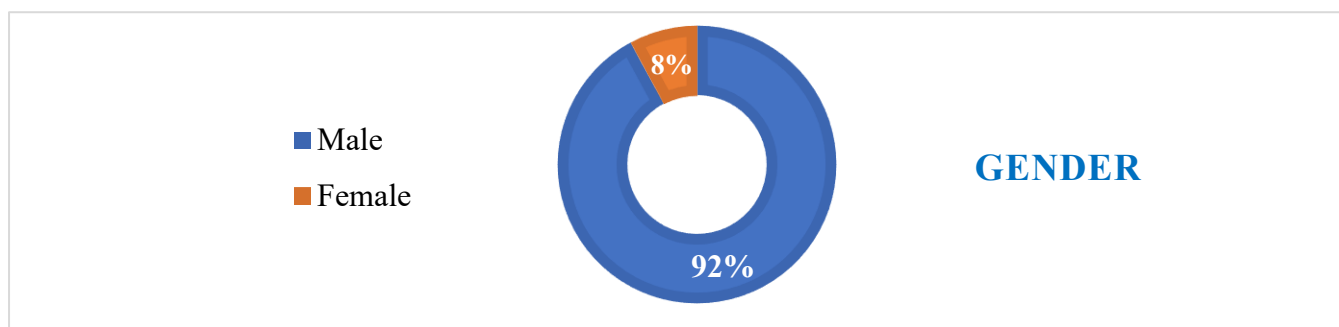


Figure 5 presents the interpretation of gender among the questionnaire participants.

❖ Age

Table 2 provides an overview of the sample distribution by age.

Component	Frequency	Precent
20-30 Years Old	60	42.9%
31-39 Years Old	57	40.7%
40-49 Years Old	13	9.3%
50 Years Old & Over	10	7.1%
Total	140	100.0

- The results indicate that the largest proportion of participants belonged to the 20–30 years age group, representing 42.9% of the total sample ($n = 60$).
- This was closely followed by respondents aged 31–39 years, who accounted for 40.7% of the sample ($n = 57$).
- Participants within the 40–49 years category constituted 9.3% of respondents ($n = 13$), while those aged 50 years and above also represented 7.1% of the sample ($n = 10$), making these the least represented age groups.
- These findings suggest that the sample is predominantly composed of young to mid-career professionals, particularly those between 20 and 39 years of age, who collectively account for 83.6 % of the respondents. This demographic structure reflects an active and professionally engaged workforce within the industrial project management sector, potentially characterized by both emerging leadership capabilities and evolving managerial experience.

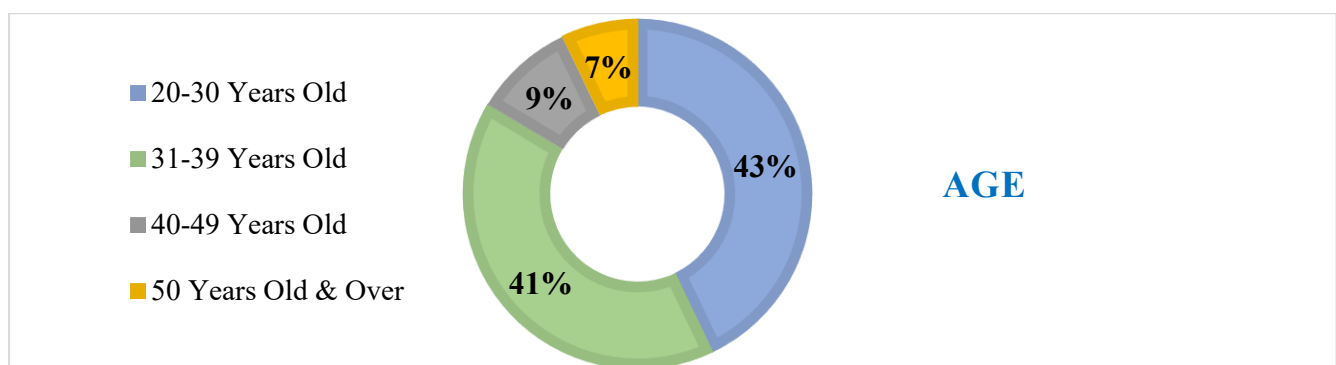


Figure 6 presents the interpretation of age among the questionnaire participants.

❖ Years of Experience

Table 3 summarizes the frequency of participant's categorized by years of experience.

Component	Frequency	Precent
Less Than 1 Years	5	3.6%
1-5 Years	44	31.4%
5-10 Years	43	30.7%
10-15 Years	27	19.3%
Above 15 Years	21	15%
Total	144	100.0

- Results: indicate that the largest ratio representing 31.4% of the overall sample (n = 44) of Respondents related to the 1-5 years of experience.
- The respondents of years 5-10 were closely followed by amount for 30.7% of the sample (n = 43).
- The participates within the 10–15 years range showed 19.3% of the sample (n =27), also years Above 15 represented 15% of the sample (n = 21), and Less Than 1 Years making the least represented years category amount of 3.6% of the sample(n=5).
- These results indicate propose that the sample 62.3 % of the Participants especially between 1-10 years of experience indicate that the participates experience class composed of med-level professionals manpower.

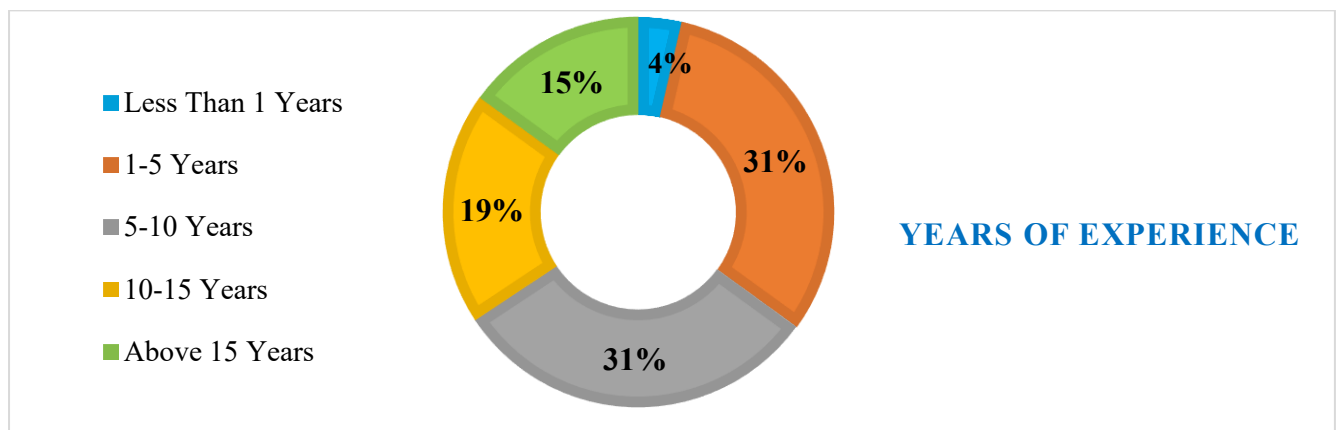


Figure 7 presents the interpretation of years of experience.

❖ Educational Level

Table 4 explanation the frequency of the research sample by educational level.

Frequency	Frequency	Precent
High School	21	15%
Diploma	27	19.3%
Bachelors	76	54.3%
Masters	13	9.3%
PhD	3	2.1%
Total	140	100.0

- Based on educational qualifications, the outcomes indicate that the Bachelor's graduate's holder represented majority of respondents, accounted 54.3% of the total sample (n = 76).
- This was followed by Diploma's degree holders, who accounted for 19.3% of participants (n = 27), however High school degree holders constituted 15% of the sample (n = 21), Master's degree participants represented 9.3% (n = 13), and the least participants represented category was PhD graduates, constituted for 2.1% of the sample (n = 3).
- These results explain that the sample is mostly composed graduate qualifications with highly educated academic background, and the respondents are having high level academic necessary competence to provide response evaluations regarding leadership practices and project management efficiency that responses was a reason to strengthens the reliability of the results.

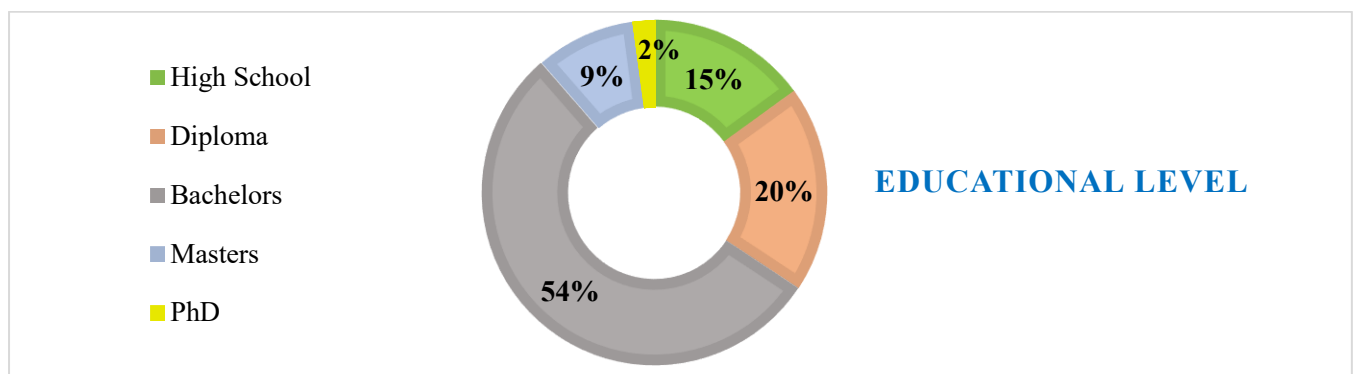


Figure 8 present the educational level.

❖ City/Province

Table 5 shows the distribution of the research sample by city.

Component	Frequency	Precent
Erbil	60	42.9%
Sulaymaniyah	43	31.4%
Duhok	36	25.7%
Total	140	100.0

The geographical division of participants indicates a concentration in all governance same, the Erbil accounted for 42.9.3 of the total sample ($n = 60$), well representing the large governance in the study, the respondents from Sulaymaniyah represented 31.4% of the sample ($n = 44$), however Duhok constituted the smallest proportion at 25.7% ($n = 36$).

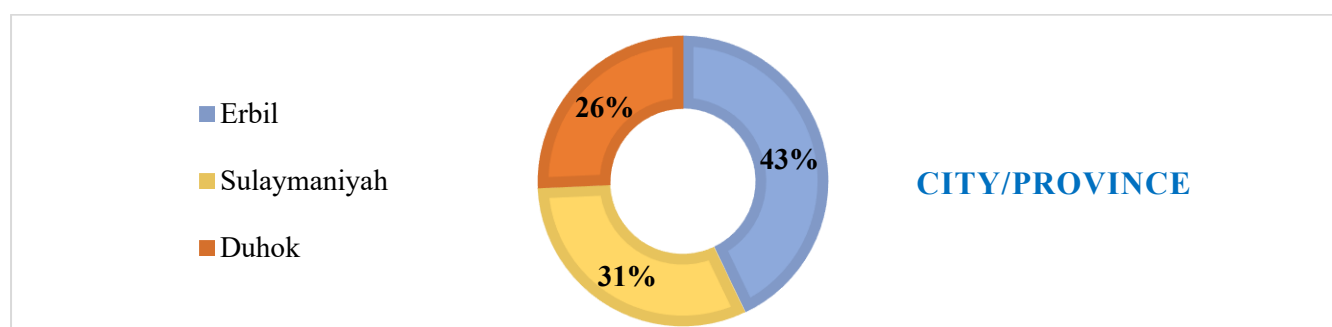


Figure 9 shows the city of study

❖ Type of Industry

Table 6 presents the frequency of the study sample by Type of industry.

Component	Frequency	Precent
Manufacturing	68	48.6%
Construction	23	16.4%
Energy	19	13.6%
Other	30	21.4%
Total	140	100.0

Regarding the type of industry, the findings indicate that the majority of respondents were employed in the Manufacturing sector, which constituted 56.9% of the total sample ($n = 29$). This was followed by the “Other” industry category, representing 27.4% of respondents. In contrast, participants from the

Construction sector accounted for 15.7% of the sample (n = 8), making it the least represented industry group in the study.

These results suggest that the sample is predominantly reflective of manufacturing-based industrial operations, thereby providing stronger empirical insight into leadership practices within manufacturing environments compared to other industrial sectors.

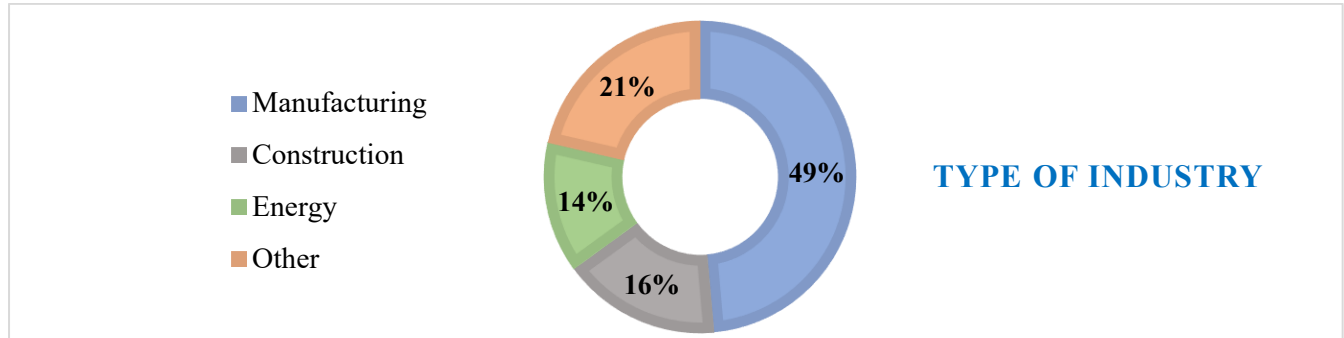


Figure 10 presents the interpretation of the type of industry.

❖ Questionnaire Questions.

Table 7 explain the questionnaire components and the Likert scale ratings used for evaluation.

Code	Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
A-Leadership Skills Scale						
I. Communication & Interpersonal Skills						
ACIS I 1	The project manager communicates goals clearly.	4%	11%	23%	45%	17%
ACIS I 2	The project manager encourages open dialogue.	4%	11%	21%	52%	12%
II. Decision-Making & Problem-Solving						
ADMPS II 1	The project manager makes timely decisions.	5%	8%	21%	50%	16%
ADMPS II 2	The project manager effectively resolves complex problems.	4%	11%	20%	45%	20%
III. Motivation & Team building.						

AMTB III 1	The project manager inspires team members.	5%	11%	18%	42%	24%
AMTB III 2	The project manager promotes teamwork.	4%	12%	24%	39%	21%
IV. Strategic Vision & Planning						
ASVP IV1	The project manager demonstrates clear long-term vision.	5%	14%	24%	37%	20%
ASVP IV2	The project manager aligns tasks with strategic objectives.	5%	8%	25%	44%	18%
V. Adaptability & Conflict Resolution						
AACR V1	The project manager adapts to changing conditions.	4%	11%	19%	51%	15%
AACR V2	The project manager manages conflicts effectively.	4%	11%	24%	44%	17%
B-Project Management Efficiency Scale.						
I. Time Efficiency						
BTE I1	The project is completed within scheduled deadlines.	4%	14%	25%	43%	14%
BTE I2	Project activities are executed according to the planned timeline without significant delays.	4%	10%	31%	44%	11%
II. Cost Efficiency.						
BCE II1	The project remains within the allocated budget.	3%	14%	26%	45%	12%
BCE II2	Project resources are utilized efficiently to prevent cost overruns.	5%	12%	31%	38%	14%
III. Quality Performance.						
BQP III1	The project meets required quality standards.	3%	10%	23%	44%	20%

BCP III2	Clients are satisfied with project outcomes.	3%	10%	25%	46%	16%
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Results of Leadership Skills and Project Efficiency Questionnaire

The questionnaire results provide insights into participants understanding of project managers' leadership skills and their impact on project management efficiency. The analysis is used Likert scale responses ranging from Strongly Disagree to Strongly Agree.

1-Leadership Skills Scale

❖ Communication & Interpersonal Skills

The major part of participants notifies positive perceptions of communication and Interpersonal skills.

- For item: ACIS I 1, 62% of respondents agreed or strongly agreed that project managers communicate goals well.
- For item: ACIS I 2, explain that 64% of participants agreed/strongly agreed that project managers encourage open dialogue.

This result shows 63% of participants agree or strongly agree that communication and Interpersonal competence an initial efficiency to project managers role, this competence generally perceived as effective, trust transparency, promoting, and active engagement between team members.

❖ Decision-Making & Problem-Solving

This outcome indicates a high level of agreement between the dimension, and a problem-solving and decision-making are strong effect to success the industrial projects.

- For item: ADMPS II 1,66% agreed with the statement that project managers make timely correct decisions.
- For item: ADMPS II 2,65% percentage agree to that the project managers proficiently and effectively resolve complex problems.

Around 65.5% of respondents agree or strongly agree that the project manager resolves complex problems efficiently and makes timely decisions, and this point importance of provides the senior of projects to ensuring smooth project implementation and addressing challenges that arise in industrial settings.

❖ **Motivation & Team Building**

- For item: AMTB III 1, 66% number of participants agreed that project managers motivate and inspire team members.
- For item: AMTB III 2, 60% of respondents agreed that they promote teamwork.

The results identify that 63% of respondents agreed that industrial project managers motivate their team members and positively promote teamwork, also indicated that motivational and collaborative leadership approaches are necessary for maintaining team moral, productivity, and enhancing team performance.

❖ **Strategic Vision & Planning**

- For item: ASVP IV 1, approximately 57% respondents agreed that project managers have a clear long-term vision.
- For item: ASVP IV2, around 62% participants agreed that they align tasks with strategic objectives.

Roughly 59.5% of respondents agree or strongly agree that industrial project managers focused on effectively align tasks with strategic goals and clear long-term vision.

Although this is positive response but these percentages are a little lower than those of another skills dimension, and that indicating the necessary for improvement a strategic vision skill.

❖ **Adaptability & Conflict Resolution**

- For item: AACR V 1, approximately 66% percentage of respondent agreed that project managers adapt to changing conditions.
- For item: AACR V 2, around 61% of participants agreed that project industrial managers manage conflicts effectively.

The outcome of this section indicates that 63.5% of participants suggests to good adaptability and conflict resolution management skills among project managers, also this confirms the role of flexible leadership practices in manage complex industrial environments and maintaining team unity.

2-Project Management Efficiency Scale

❖ **Time Efficiency**

- For item: BTE I 1, about 57% of participants agreed that industrial projects are completed within a deadline period.
- For item: BTE I 2, around 55% of respondent agreed that activities follow planned timelines.

These response show that 58% of respondents agree or strongly agree that average efficiency in time management, and while a majority respondents agree to time management as satisfactory, but there is still an area was need for improvement in ensuring consistent commitment to project schedules period, and mainly in complex industrial projects where delays may arise from resource amount or sudden operational challenges.

❖ **Cost Efficiency**

- For item: BCE III1, 57% of respondent's agreed that projects finished within the allocated budget.
- For item: BCE III2, approximately 52% of participants agreed that Project resources are efficiently used to prevent cost overruns.

Around 54.5% rate of respondents notify that industrial projects stay within allocated budget, however cost management efficiency suggests satisfactory performance but not optimal level.

This indicate that the financial management at moderate level across industrial projects, should be avoiding possible overruns cost, and indicating the need for enhanced cost monitoring strategies.

❖ **Quality Performance**

- For item: BQP III1, about 64% agreed that projects achieve the quality standards.
- For item: BCP III2, 62% of respondent's agreed that costumers are satisfied with results.

Around 63% of participants indicate the good level of customers satisfaction, and quality standards. However, indicate that the industrial projects in the Kurdistan region generally maintain a satisfactory levels of quality standard performance.

Chapter Four

4.1 Data Analysis

❖ Descriptive Analysis Summary

The demographic result indicates that:

- Gender: 91.2% of participants were male.
- Age: 20-39 years of age represent 83.6%.
- Experience: 62.3% had 1-10 years of experience.
- Educational degree: 54.3% held a Bachelor degree.
- Province: 42.9% were from Erbil city.
- Type of Industry: 48.6% percent were in the manufacturing project.

That result of questionnaire refers to the mostly represents of medium career level in industrial professionals with academic qualifications and professionals experience.

About the leadership skills, the results show normally high levels of agreement than 60% cover other dimensions, such as:

- Decision-making and problem-solving.
- Adaptability and conflict resolution.
- Communication and interpersonal skills.
- Motivation & Team Building.

However, slightly lower agreement level was observed in strategic vision and planning skill, indicating possibility areas for improvement.

Concerning project management efficiency:

- Quality performance recorded the highest level (~63%)
- Time efficiency and cost efficiency showed moderate levels (~55%).

Generally, the descriptive findings forward that leadership skills are comparatively strong, but need an improvement in efficiency related to dimensions, specially cost and time management.

4.2 Research Finding and Discussion

The study result confirms that leadership skills are a crucial factor of industrial project efficiency in the Kurdistan Region.

1. Correct decision-making and problem-solving (65.5%) effect on reduce project delays and budget overrun, these findings highlight that leadership skill supports smoother project implementing and successful, the ability to make timely and efficient decisions is essential.
2. Interpersonal and communication skills (63%) indicates that project managers are effective shearing information and collaboration between team members, that is a strong indicator for coordination and timely achievement, also refer to better collaboration and reduced misunderstandings between manpower.
3. Motivational and collaborative leadership improves workforce productivity, and enhancing team performance, and these approaches are necessary for maintaining team moral, productivity.
4. Adaptive leadership enhances resilience in dynamic industrial environments, also this confirms the role of flexible leadership practices in manage complex industrial environments and maintaining team unity.
5. Strategic vision skills support long term sustainability, but the result refer to that the project managers need to strengthen long-term strategic vision and alignment with organizational goals.
6. Quality performance (63%) obtained the highest rating of project components, referring to that Kurdistan region industrial projects mostly satisfied the customer expectations, and quality standards levels.
7. Time efficiency (58%) and cost efficiency (54.5%) were moderate, suggesting challenges in meeting deadlines and budget constraints, there is still an area was need for improvement in ensuring consistent commitment to project schedules period, and mainly in complex industrial projects where delays may arise from resource amount or sudden operational challenges, also necessary to enhanced cost monitoring strategies.

The findings approve that the leadership skills are a key factor to industrial project success, also necessary to improving the strategic planning and resource management to achieve maximum efficiency, but external factors like operational complexity, resource limitations, and planning execution may affect time and cost performance.

4.3 Research Recommendation

Based on the findings, the study recommends:

1. Industrial project should invest in training leadership development programs that focus on: Strategic vision, advanced decision making, problem solving, emotional intelligence, communication skills and project management.
2. The Industrial project should change manual tracking to Real-Time Project Management Software to eliminate delays and manage time efficiency.
3. To enhance cost control should be project apply accurate budgeting, cost monitoring techniques and train managers on advance financial management.
4. Focusing on leadership competency frameworks into recruitment and promotion systems.
5. Improve strategic vision and project objectives with long term organizational strategic planning.
6. Promote collaboration between universities and industrial sector to enhance leadership education.
7. Doing effective research on leadership science and project management in private sector.

4.4 References

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Appendixes

❖ Research Questionnaire

Research Title:

The Impact of Leadership Skills on the Efficiency of Industrial Project Management in the Kurdistan Region, Iraq

Research Purpose:

This survey aims to collect data to examine the effect of leadership skills on the efficiency of industrial project management in the Kurdistan Region, Iraq. All responses will remain confidential and anonymous and will be used solely for academic research purposes.

Thank you for your time and participation,

Researcher: Hasan Jabari

Demographic Information

1-Gender

- ☐ Male
☐ Female

2-Age

- ☐ 20-30 Years Old
☐ 31-39 Years Old
☐ 40-49 Years Old
☐ 50 Years Old and Over

3- Educational Level

- ☐ High School
☐ Diploma
☐ Bachelors
☐ Masters
☐ PhD

4-City/ Province

- ☐ Erbil
☐ Sulaymaniyah

☐ Duhok

5- Years of work experience

☐ Less than 1 year

☐ 1-5 years

☐ 5-10 years

☐ 10-15 years

☐ Above 15 years

6.Type of industry

☐ Construction

☐ Manufacturing

☐ Energy

☐ Other:

Job title _____

Section A: Leadership Skills Scale

This section examines the impact of the following leadership skills on project manager performance.

I.Communication & Interpersonal Skills

ACIS I 1

The project manager communicates goals clearly.

☐ 1 – Strongly Disagree

☐ 2 – Disagree

☐ 3 – Neutral

☐ 4 – Agree

☐ 5 – Strongly Agree

ACIS I 2

The project manager encourages open dialogue.

☐ 1 – Strongly Disagree

☐ 2 – Disagree

☐ 3 – Neutral

☐ 4 – Agree

☐ 5 – Strongly Agree

II. Decision-Making & Problem-Solving

ADMPS II 1

The project manager makes timely decisions.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

ADMPS II 2

The project manager effectively resolves complex problems.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

III. Motivation & Team building.

AMTB III 1

The project manager inspires team members.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

AMTB III 2

The project manager promotes teamwork.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

IV. Strategic Vision & Planning

ASVP IV1

The project manager demonstrates clear long-term vision.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

ASVP IV2

The project manager aligns tasks with strategic objectives.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

V. Adaptability & Conflict Resolution

AACR V1

The project manager adapts to changing conditions.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

AACR V2

The project manager manages conflicts effectively.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

Section B: Project Management Efficiency Scale.

This section measures the efficiency of industrial project management.

I. Time Efficiency

BTE I1

The project is completed within scheduled deadlines.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

BTE I2

Project activities are executed according to the planned timeline without significant delays.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

II. Cost Efficiency.

BCE III

The project remains within the allocated budget.

Mark only one oval.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree
- ☐ 5 – Strongly Agree

BCE II2

Project resources are utilized efficiently to prevent cost overruns.

- ☐ 1 – Strongly Disagree
- ☐ 2 – Disagree
- ☐ 3 – Neutral
- ☐ 4 – Agree

☐ 5 – Strongly Agree

III. Quality Performance.

BQP III1

The project meets required quality standards.

☐ 1 – Strongly Disagree

☐ 2 – Disagree

☐ 3 – Neutral

☐ 4 – Agree

☐ 5 – Strongly Agree

1. BCP III2

Clients are satisfied with project outcomes.

☐ 1 – Strongly Disagree

☐ 2 – Disagree

☐ 3 – Neutral

☐ 4 – Agree

☐ 5 – Strongly Agree

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ملخص

تهدف هذه الدراسة إلى معرفة أثر مهارات القيادة على كفاءة إدارة المشاريع في القطاع الصناعي بإقليم كردستان العراق.

استندت الدراسة إلى مهارات القيادة الأساسية، مثل مهارات التواصل والتفاعل، واتخاذ القرارات وحل المشكلات، والتحفيز وبناء الفريق، والرؤية الاستراتيجية والتخطيط، والقدرة على التكيف وحل النزاعات، وتأثيرها على عناصر كفاءة المشروع، كالوقت والتكلفة وجودة الأداء.

اعتمدت الدراسة تصميم التحليل الوصفي الكمي، حيث تم توزيع استبيان منظم وتطبيق مقياس ليكرت لتقييم (140) استجابة صالحة، وتم استخدامها لتحليل الموثوقية.

وخلصت الدراسة إلى أن مديري المشاريع يتمتعون بمهارات قيادية قوية نسبياً، لا سيما في مهارات التواصل والتفاعل، واتخاذ القرارات وحل المشكلات، والتحفيز وبناء الفريق، والقدرة على التكيف، مع مستويات موافقة عالية نسبياً ($<60\%$)، مما يؤثر إيجاباً على نتائج المشروع. في المقابل، كانت مهارات الرؤية والتخطيط الاستراتيجي أقل نسبياً، مما يشير إلى الحاجة إلى مزيد من التركيز على التخطيط طويل الأجل.

ومع ذلك، فقد سجل أداء معايير الجودة أعلى مستوى من الرضا من قبل المستجيبين، كما أظهر أداء كفاءة الوقت والتكلفة مستوى منخفضاً، مما حدد المجالات التي تتطلب تحسيناً.

توصي الدراسة بضرورة استثمار المشاريع الصناعية في برامج تطوير القيادة، وتحسين الرؤية والتخطيط الاستراتيجي، وتعزيز آليات إدارة الوقت والتكلفة لتحسين كفاءة المشروع بشكل عام، ودراسة المزيد حول علم القيادة وإدارة المشاريع.

أثر مهارات القيادة على كفاءة إدارة المشاريع الصناعية في إقليم كردستان العراق.

إعداد /

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