

The Impact of Leadership Styles on Project Management: A Field Study on Construction Projects in the Northern Region of Iraq

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Abstract

This research aims to define distinct leadership styles needed for project managers to accomplish construction project management successfully, and to assess the impacts of leadership styles on the efficiency and productivity of the project team, the research used three leadership styles (Transformational, Transactional and Autocratic) to examine in the construction sector so the populations for this research in general are going to be the expert project managers who works in the northern region of Iraq (Erbil, Dohuk, Sulaymaniyah and Mosul governorates), quantitative survey method was conducted in the [February](#) of 2025 via electronic google forms in both (Arabic and English languages) to ensure the inclusivity and minimized linguistic bias, the total number of valid responses was 144 answers. SPSS V.23 software program used in the statistical researches to analyze the data and obtaining results. The three leadership styles that have been tested in this study have shown a statistically significant positive relationship was found between the transactional leadership style and construction project management success in the northern region of Iraq, while no statistically significant relationship was found between the transformational or autocratic leadership styles and construction project management success in the same area. Accordingly, as the construction sector in Iraq rebuilds critical infrastructure, prioritizing transactional leadership traits training (emphasizing contingent rewards, active exception management and passive management by exception) could accelerate project timelines while maintaining quality benchmarks.

Keywords: Leadership Styles, Project Management, Transactional Leadership Style, [Contingent Rewards](#), [Autocratic Leadership Style](#), [Transformational Leadership Style](#).

1. Introduction:

In today's increasingly complex and interconnected business landscape, effective project management has become paramount to organizational success (Ekemezie & Digitemie, 2024). Project success is greatly influenced by leadership styles, which impact motivation, team dynamics, and communication. To promote cooperation and creativity, effective leaders adapt their strategies to fit the demands of the team and the specific project requirements. Project managers who understand various leadership philosophies are better equipped to foster an environment that encourages goal achievement and overcomes obstacles (Malachowsky, 2018). The literature on leadership acknowledges the diversity of leadership styles and their potential effects on management, organizational performance, and projects. A project's success depends on a variety of contextual elements as well as the chosen approach. According to an expanding body of research, leadership is one of the most important individual determinants of project performance and success (Siddiqui *et al.*, 2023).

Also, the manner in which leaders engage with their teams, make decisions, and motivate individuals profoundly influences the overall performance and cohesion of project teams (Ahmed, *et al.*, 2023). Each of the various leadership styles offers unique organizational and motivational concepts. When effectively applied within project teams, these approaches not only influence task productivity and efficiency but also enhance team members' intrinsic motivation and job satisfaction (Ahmed, *et al.*, 2023). Since project management is a general discipline applicable to all fields, there is no doubt that projects play a key role in achieving competitive advantage. Therefore, this study has significant implications for improving the performance of institutions in the construction sector, which will significantly contribute to improving the methods used by project managers in northern Iraq to manage residential projects, and as (Elegba, *et al.*, 2025) mentioned in his research, innovative approaches and concepts are needed in today's society to raise the caliber of project performance. Project managers have to quickly adjust to the rapidly shifting and frequently contradictory needs of their clients. They are always need looking for new methods to improve project quality performance since they need to remain competitive in a difficult economic climate. Additionally, since it greatly increases the likelihood that projects will be completed successfully, excellent leadership is essential in project teams. The leadership of a team is frequently blamed for its failure. Each position's effectiveness adds to the group's performance, indicating that team failures can result from both individual and collective incapacity to coordinate and align efforts. Because it has a significant impact on infrastructure, economic growth, and job creation, the construction sector is essential to the expansion of the country. However, great leadership is just as important to the success of construction projects as technical expertise and the availability of resources. This is because leaders set the direction, motivate teams, and make important decisions that can affect the project's conclusion. Hence the importance of this study, which will lay the base stone for the leadership styles that lead construction projects in the region to success. Thus, one of the study's objectives will be to identify the influential leadership style in managing institutions and organizations, and to know its traits and methods of developing it. In addition, this research will be a key to future research that studies the construction sector in northern Iraq or other industrial aspects, as we did not find similar researches were conducted in Iraq.

Leadership styles are important for both societies and organizations, as innovative business practices encompass all aspects of business and go beyond simply creating new products. Change, creativity, and the application of new concepts to the company, sector, or world are all components of innovation. While individuals can produce creative designs, organizational management plays a role in fostering creativity. Globalization has created complex, multicultural challenges for modern organizations. Innovative business practices are essential for companies to compete and thrive on a global scale. This is facilitated by an effective leadership style that encourages creative thinking and fosters cultures focused on new information, capabilities, and technologies (Khan, *et al.*, 2020). The significance of leadership style is crucial. because it emphasizes motivating and inspiring staff members to realize their full potential in addition to accomplishing organizational goals (Rojak, *et al.*, 2024).

The importance of our research also lies in its identification of critical factors that may cause project failure, such as a lack of information about the relationship between leadership styles and project success, including the timing and manner of applying the appropriate leadership style necessary for successful project completion (Adewuyi, 2023). Therefore, a project manager's leadership style is expected to significantly impact project performance (Kariuki,

2018). Furthermore, one of the main reasons for the failure of many projects is a lack of attention to project complexity (Mohamed & Tran, 2023). To address this issue, it is necessary to study project managers' leadership styles and evaluate their impact on project performance quality (Bonkoungou, *et al.*, 2022).

And according to (Abbas & Ali, 2023) Project success is impacted by leadership styles, while the associations between leadership styles and project success are mediated by other project level characteristics including project size and kind. also, one of the most crucial elements of an organization's success is its leadership. Organizational leadership must be sufficient to handle the challenges that arise as organizations undergo transitions. An organization's performance depends on its strategic leadership management. It has generally been believed that successful change requires strong leadership. Leadership affects how people behave and how organizational performance changes as a result (Nandasinghe, 2020).

The idea of this research was born as a result of several factors, including the lack of previous similar studies in northern Iraq, which would provide a prediction of the most successful leadership style in the region and Iraq in light of the circumstances of recovery from the crises that the country is experiencing. Also, avoiding the weaknesses in some previous studies inspired us to make the results more accurate, as the samples of respondents were selected with great precision from managers and experts of construction projects, which addressed the flaw recommended by (Abbas & Ali, 2023) in his research on the recommendation of the necessity of accuracy in choosing the demographic characteristics of respondents. Our research also sets a methodology for identifying the characteristics that constitute the most prominent features of a successful leadership style in projects and institutions and provides a plan for its sustainability through training and development programs, which is something that many studies have overlooked, such as the research's by (Siddiquei, *et al.*, 2025) and (Konkel, 2024).

2. Research Problem:

This research highlights a critical gap in understanding the relationship between leadership style and project success, particularly in the context of the construction sector in the northern region of Iraq. The common administrative and technical leadership styles in this region (transformational, transactional, and autocratic) were selected as the basis for the research problem. The focus was on presenting the key characteristics that distinguish each of these leadership styles to serve as a title for the chosen style, and then identifying how to activate and promote them in training courses and programs. The problem of the study lies in identifying the most effective and important style for leading the project and the organization to success. Thus, it emphasizes the need for project managers to adapt their leadership styles to align with the complexities of projects and team dynamics. Addressing the overlooked relationship between leadership style and organizational and project success is crucial to improving project outcomes and reducing the high rates of project failure, both locally and globally. The estimated project failure rate ranges between approximately 34% of successful projects and 66% of unsuccessful projects worldwide as shown in Figure No. (1). This failure can be attributed to organizations' inability to apply (Logikal, 2020, 6), appropriate leadership styles and project management techniques. Despite adequate budgets, resources, and timelines, many projects fail due to inappropriate leadership styles. Therefore, our study answers the main research question: What is the impact of leadership style on construction project management in the northern region of Iraq?

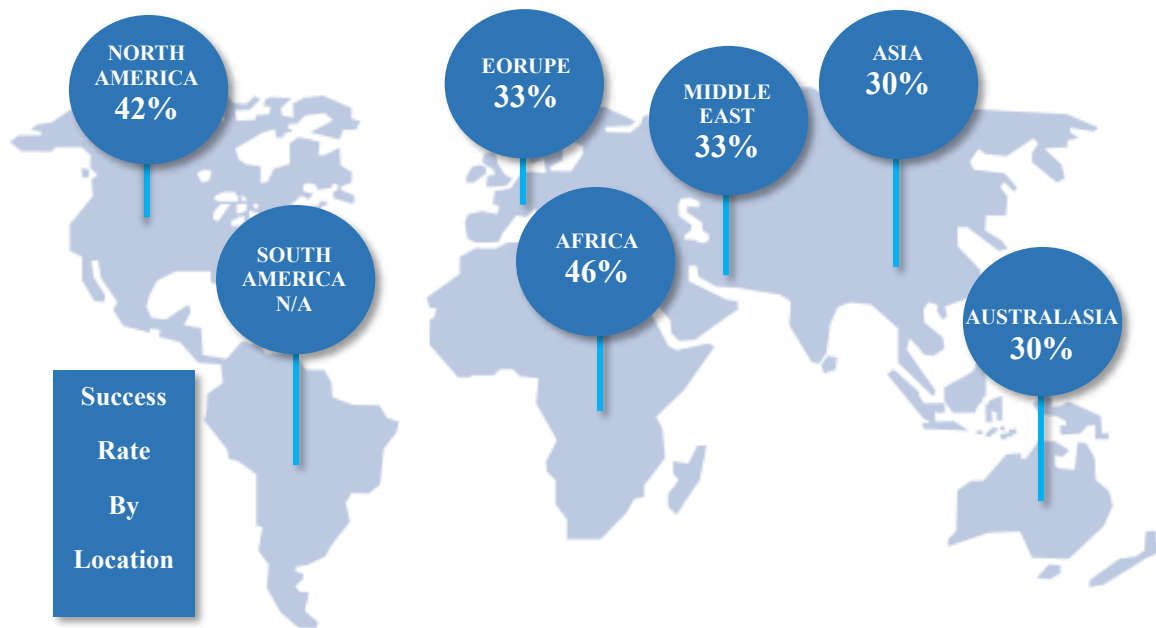


Figure No. (1) shows achieved or not completed all or most Projects across time, cost and quality objectives across world

3. Study Objectives:

Construction projects on Iraq one of the biggest work sectors on Iraq, so finding the best leadership style that should be implement by project managers will lead to improve the quality, saving cost, and reducing need time. Besides that, suitable leadership style will increase project's team productivities, performance, and efficiency. The research aimed to evaluates the suitable manager's leadership styles needed to accomplish project successfully, [the objectives](#) are stated as follows:

1. Determine the level of leadership styles.
2. Determine the effectiveness of project success.
3. Determine the impact of leadership on project management in order to successfully manage construction projects.
4. Determine how leadership style traits affect the project team's output and efficiency.

4. Importance of the Study:

The importance of the study lies in its attempt to identify the leadership style that managers should follow as leaders (Abu rumman, 2016). Leadership style studies are often debated in organizations due to their significance (Ali & Rasheed, 2020). The application of leadership methods is considered to be of scientific and practical importance in improving project performance. (Nazir, 2023). This importance can be summarized as follows:

Scientific Importance:

1. enhances knowledge of leadership style traits in areas impacted by conflict by using the Quantitative method study.
2. Identified suitable leadership style as a critical predictor of project success in the Iraq Northern construction sector.
3. Opening new horizons for other studies to develop leadership styles in managing institutions and companies in the northern region of Iraq.
4. Enhancing the methodological rigor of cross-cultural leadership studies using a bilingual survey.

Practical Importance:

1. provides guidance on how project managers can implement effective leadership styles that are suited to certain project requirements.
2. helps organizations enhance project results by coordinating team dynamics with leadership tactics.
3. promotes the creation of training programs centered on efficient leadership role in construction sector.

5. Conceptual and procedural Terms:

Our research is related to main key conceptual and procedural terms including the leadership term, which can be defined as directing and inspiring others to accomplish common goals (Van Wart, 2017). and the way a leader decides to motivate, guide, and carry out plans for his followers is known as his leadership style (Bilola, 2023). While the term leadership procedural concept describes the strategies and tactics used by leaders to achieve shared objectives within the framework of an organization or project. This idea includes the dynamic methods that leaders employ to motivate and guide their groups, modifying their approaches to fit certain project specifications and team dynamics.

6. Theoretical Framework:

The theoretical basis of our study is searching the impacts of a manager's leadership style on project management success, leadership styles vary in their types and prevalence, as the authors analyzed in detail the abstracts and keywords of the 90 articles in the 21 Leadership Journal, ten categories were evaluated, the following are the most common categories found in the articles analyzed in Table No. (1), (Hadziahmetovic, *et al.*, 2023).

Table No. (1) shows the Leadership “Topic Classifications” (Hadziahmetovic, *et al.*, 2023, 192).

Topic classification	Number of studies	Percentage
Authentic leadership	25	22%
Transformational leadership	40	36%
Servant leadership	14	13%
Transactional leadership	13	12%
Benevolent leadership	5	4%
Paternalistic leadership	5	4%
Charismatic leadership	4	4%
Autocratic leadership	3	3%
Collectivistic leadership	1	1%
Empathetic leadership	1	1%

The theoretical framework is rooted in various leadership theories and concepts, which can be included as follows:

6.1 Leadership Theories

According to the handbook of leadership styles, ([Çizmecci, 2020](#)), there are three modern theories of leadership styles. In this research, we address the authoritarian, transformational, and Transactional leadership styles from the perspective of these three theories, which are:

6.1.1 Trait Theory: There are several attributes that set a leader apart from their followers, according to the theory of traits. To identify these traits, there are essentially four different kinds of studies. The first aims to investigate the qualities and abilities required of someone who plans to be an informal group leader or seek a career in leadership. Finding out how a leader's skills and traits contribute to his performance in his current capacity is the goal of the second kind of inquiry. In order to identify the skills and traits of top candidates who merit a promotion, the third kind of research is a lengthy study that takes many years to complete. Comparing effective leaders is the goal of the fourth category of research. These studies examine the distinctions and parallels between managers who achieve success and the skills and traits of managers who are unable to advance in their careers ([Demirtas, et al., 2020](#)).

6.1.2 Behavioral Leadership Theories: The 1940s saw the start of the investigation into this idea. According to behavioral theory, leaders are best described by their actions, and this theory makes the assumption that certain behaviors are what set them apart. An individual's leadership style is demonstrated by the way they handle problems, demonstrate their skills, and approach tasks ([Mgallah, 2024](#)).

The behavioral theory of leadership places more emphasis on a leader's actions than on their innate qualities. According to him, there are three primary types of leadership behaviors: task performance, which involves the leader's efforts to focus on the team's more concrete goals, like work quantity, quality, and efficiency; group maintenance behaviors, which involve the leader's actions to maintain social stability, cooperation, and group cohesiveness; and participation and decision-making. According to this leadership idea, leaders can be distinguished from their followers by their actions. With the conviction that exceptional leaders are created, not born, it places more emphasis on the behaviors of leaders than on their inner states or mental attributes. According to this view, instruction and observation could help people develop their leadership skills ([Hussain, 2018](#)).

6.1.3 Situational Leadership Theories: The theory of situational management and/or leadership was introduced in 1969. Originally known as the "Life Cycle Theory of Leadership" the situational approach's main goal is to steer clear of generic managerial theories that are predicated on shaky assumptions. In actuality, this theory contends that there is no one ideal way to lead and that effective leadership behavior should be contingent on the circumstances. It also identifies task behavior and relationship behavior as two crucial aspects of leader behavior. Consequently, situational theory entails acknowledging that managers' efficacy and efficiency are contingent upon the relationship between their management style and the circumstances in which they functioned. This is how situational analysis of organizational behavior encourages a more unique and practical perspective on management issues. It starts by analyzing actual problem scenarios that are characterized by a series of cause-and-effect interactions, after which it analyzes the data. In other words, there are several options, one of which might be suitable for the specific circumstance, rather than a single, universally applicable, and ideal course of action ([Mbikoyezu, 2019](#)).

6.2 Leadership Styles for Project Management

The (Institute Project Management, 2023) website mentioned 10 types of leadership styles stated in the Figure No. (2). In this part from the chapter, the definition of the Autocratic, Transactional and Transformational styles that we select to use in our research will be explained.

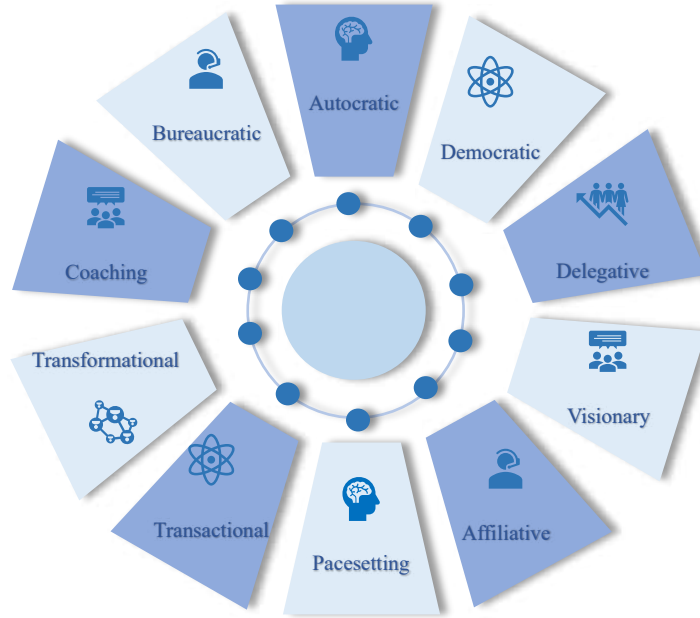


Figure No. (2) shows Most Common Leadership Styles (Institute Project Management, 2023)

6.2.1 Autocratic Leadership Style:

One of the most frequently-used types of leadership at all times from past to present. However, there are serious difficulties in defining the concept. The idea that autocratic leadership is an incorrect and dangerous management style in dictatorships and there is no place for authoritarian leadership in a democratic system causes organizations to avoid authoritarian leadership. These ideas are due to an incorrect understanding of the meaning of autocracy and the autocratic leadership notion. Autocratic leadership can be the right kind of leadership at times when there is a shortage of time and where quick decisions need to be taken. The concept provides benefits to organizations when it is used by the correct person at the correct place (Çizmeçi, 2020). Authoritarian leadership is most effective when a team is experiencing a crisis or when immediate action is required. This style is typically what people think of when they think of authority and leadership. It can lower morale and drive some of the best team members to look for opportunities elsewhere because it mainly depends on criticism and seldom emphasizes accomplishment. It is preferable to steer clear of or only briefly use this leadership style in the majority of organizational systems (Malachowsky, 2018); Nonetheless, autocratic leadership is abused and is perceived as authoritarian, domineering, and overbearing. As a result, team members get resentful of their inability to offer suggestions. Team members may become passively resistant as a result, necessitating constant pressure and guidance from the leader to complete tasks. Furthermore, a lack of innovative problem-solving skills brought on by authoritarian leadership can eventually hinder the group's success (Gandu, et al., 2018).

6.2.2 Transactional Leadership Style:

Transactional leadership underlies most leadership models, which focus on exchanges between leaders and followers. It is an extrinsic-based motivation process by which leaders achieve their

goals, while followers receive external rewards for job performance. An example of this type of leadership is the manager who offers rewards, such as promotions, extra pay, or time off, for employees who surpass their goals. Transactional leadership behaviors include interactive goal setting, contingent material reward, contingent personal reward and personal recognition (Xiangxing & Musonda, 2021). The emphasis of transactional leadership is on group performance, structure, and monitoring. Its foundation is a system of incentives and sanctions, whereby the team leader inspires team members to meet predetermined performance goals. This leadership approach works particularly well for reaching particular project objectives and benchmarks. Transactional leaders create well-defined organizational structures that specify roles, duties, and the team's line of command. They give clear directions, establish clear goals and performance expectations, and keep a careful eye on how activities are being completed. This can be especially helpful for projects with clearly defined tasks that leave little opportunity for error or ambiguity (Fokina, *et al.*, 2023).

6.2.3 Transformational Leadership Style:

The capacity to inspire and motivate team members to surpass their personal performance goals and realize a shared vision is a hallmark of transformational leadership, by establishing a compelling and distinct vision, coordinating it with the values and objectives of the team, and fostering a sense of dedication and purpose, transformational leaders motivate their groups. They are frequently dynamic individuals that set a good example and exhibit a great deal of enthusiasm and vigor for the endeavor. the ability of transformational leadership to promote innovation and excellent performance is one of its main advantages in project management (Korakis & Poulaki, 2025), Transformational leaders can encourage a culture of innovation and risk-taking by motivating and empowering their staff, which will allow them to investigate novel concepts and solutions. This can be especially helpful for intricate jobs that call for creative solutions. Additionally, transformational leaders place a high priority on mentoring and personal growth. They actively participate in the development of their team members, offering them feedback, encouragement, and support to help them grow and realize their full potential. This raises team morale and decreases turnover while also enhancing the team's capabilities and encouraging engagement and loyalty, additionally, transformative leadership can improve teamwork. These leaders can foster a sense of cohesion and collaboration within the team by encouraging common objectives and ideals. This can enhance communication and coordination and lessen conflict (Fokina, *et al.*, 2023), the transformational leader ensures that the transformation takes place when the required behavior is performed as a whole. When the leader applies these features and injects these features to the target audience, success will be inevitable and the transformation will be realized. The results obtained from the research show that there is a significant relationship between transformational leadership behaviors and organizational commitment and the hypothesis is confirmed. The target audience in transformational leadership is the focal point. If the target audience is endowed by the feeling that he/she is cared about, the dependence on the organization will increase and the “my mentality” will be completely transformed into “our mentality.”

In today’s world where technology is changing every day, competition is peaked and those who cannot keep up with innovation cannot survive, there is a need for transformational leaders who can pass this process successfully (Çizmecci, 2020).

6.3 Project Management Success Factors:

Leadership styles can influence construction projects success criteria, project leader is required to have the technical skills to deal with the scope and cost of the project (Sahasrabuddhe, 2024), Company management and quality produced strongly influence the success of construction projects (Wulansari, *et al.*, 2019), “Monitor & Control activities run throughout the project’s lifecycle” (European Commission,2023, 16) as shown in Figure No. (3). Time savings, resource optimization, and the creation, execution, and assessment of a business strategy all depend on decision-making and problem-solving skills (Idris, *et al.*, 2024), A project must meet the needs of end users and other stakeholders in addition to the three requirements of scope, money, and time in order to be successful (Mgallah, 2024).

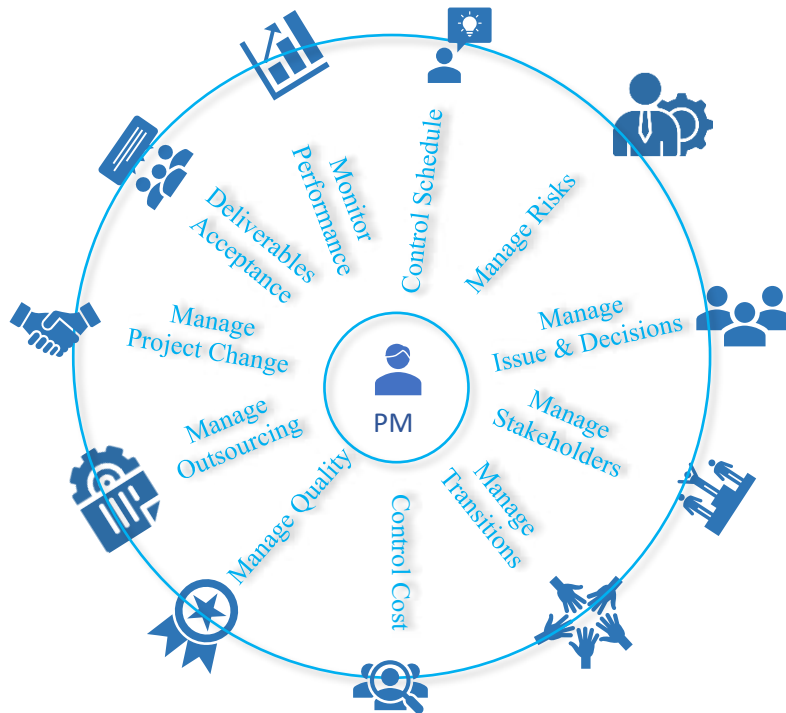


Figure No. (3) shows Monitor & Control activities (European Commission,2023, 17)

6.4 Cultural Behaviors

In various societies, culture has a significant impact on how people view what makes for effective leadership. It is obvious that cultures have a significant impact on the many opinions and expectations that members of a society have about how things should be done. The findings demonstrate that the traits of successful leadership are more likely to correspond with the prevailing command and control paradigm in each culture independently (Jogulu & Wood, 2008), and our study acknowledges the impact of cultural factors on leadership effectiveness, particularly within the context of the construction sector in northern region of Iraq.

7. Research Limits:

This research is targeting the engineering construction sector so the populations for this research in general are going to be the expert project managers who works in the northern region of Iraq (Erbil, Dohuk, Sulaymaniyah and Mosul governorates). In addition, this research has chosen the particular respondents to be the samples for the study, questionnaire was replicated across

various demographic categories before assessing validity and reliability of it, then survey was conducted in the February of 2025 via electronic forms (Google Form) distributed to 171 experts specializing in construction sector projects currently under construction or just completed, The approved answers were 144 respondents, while most of the remaining 27 samples did not answer, and there were two incomplete answers that were excluded.

8. Review of Previous Studies:

Studies prior to our study are divided into studies related to leadership, and others related to project management and success, (Nechouani & Machrafi, 2025) research which titled (Leadership Styles and Project Success) is seeks to explore the impact of different leadership styles on project success across various organizational contexts, it adopted a narrative literature review methodology, the study analyzed secondary sources instead of specific number of participants across multiple geographic locations, the research tool used was a qualitative synthesis of the selected studies, study concluded that leadership adaptability is crucial for project success and recommended that project managers adopt flexible leadership styles tailored to the specific needs of their projects. It emphasized the importance of continuous leadership development and encouraged further research into the interaction between leadership styles and different project contexts.

The conclusion and recommendation of the study were similar to our study whereas they are different methodology, population, location and research tools.

The study (Bonkougou, *et al.*, 2022) aims to examine the impact of project management approaches on project quality performance and adopted a quantitative research methodology, the research population consisted of 201 employees from a software company in Pakistan, study tool was a survey questionnaire, the study concluded that effective project management contributes positively to project success and recommended that project managers adopt structured and adaptive project management approaches to enhance project success, minimize ineffective management practices, and conduct further research on how project management strategies influence success across different industries.

Our research differs from the research of (Bonkougou, *et al.*, 2022) in the number of respondents, as our research used 144 samples, and in the type of respondents who represent an elite of construction project managers in Northern region of Iraq. Also, our research used the autocratic style instead of the laissez-faire style. While the two studies are similar in their use of the quantitative questionnaire method and the importance of project management in its success, there are similar recommendations for conducting other studies in other different sectors.

9. Methodology:

9.1 Research Design:

This study used the quantitative method (survey method) technique. This method includes many Hypotheses assembled and were examined. The Hypothesis of this research are formed according to the questions of research. This research employs a proportional stratified casual sampling method; it is considered as one of the potentials sampling designs, which each sole component in the population, has a determined and equal opportunity of being chosen as a matter.

Following stages were to consolidate and design the research. Firstly, choosing examined samples. In addition, put forth the measurement standard. After that, the questionnaires were directly distributed via internet to the respondents (samples). then data collection process starts

collecting the related data of the study. Lastly, the data were analyzed, and the findings were followed by results and conclusions to show the exact outcomes of the research.

9.2 Research Tools:

This research is conducted based on three independent variables and one dependent variable to be studied and tested. These three independent variables are the Transformational leadership styles, Transactional leadership style, and Autocratic leadership style. They are examined to find out the relationship between them and the dependent variable, which is the project management success. this study will use the questionnaire method in its work, the questionnaire means to organize and put questions together to be able to extract information from the participants to be analyzed. Another reason for employing the questionnaire is to [answer and test the research hypothesis](#).

H1. There is a significant relationship between the transformational style and the project management success.

H2. There is a significant relationship between transactional style and the project management success.

H3. There is a significant relationship between Autocratic style and the project management success.

The questionnaire tool consisted of [30 questions divided on four parts](#) as follows:

The First Section of the questionnaire will be about the demographic background, which included gender, age, level of education, and work experience. These questions are going to be asked to make sure that respondents came from different backgrounds as needed by the sampling method.

The Second Section of the questionnaire [Consist of 9 questions](#) about the three factors according to the transformational style's elements ([each factor 3 questions](#)) which are: Charisma or idealized influence, Inspirational motivation, and Personal and individual attention.

The Third Section of the questionnaire [Consist of 9 questions](#) about the transactional style's elements ([each factor 3 questions](#)) in terms of: Contingent Rewards, Active Management by Exception, and Passive Management by Exception.

The Fourth Section of the questionnaire [Consist of 9 questions](#) about the Autocratic style's factors and Autocratic style components ([each factor 3 questions](#)): Centralized Decision-Making, Its impact on creativity and initiative, and Potential for Low Morale.

The Last Section of the questionnaire [Consist of 3 questions](#) about the project management success as the dependent variable.

The participants who are the expert project leaders are advised to finish the whole questionnaire. In the 10 dimensions; the level of dimension is Likert scale from 1 to 5.

9.3 Data Analysis Method:

There is a very famous software program that has been used in the statistical researches to analysis the data needed. This software program is (SPSS). IBM SPSS Statistics 23 gives a researcher the ability to make complicated graphs and illustrations from statistical data. In this study SPSS program will be employed to implement the statistical analysis of the data which will be collected from the answerer's specialized project leaders of various construction projects in the North of Iraq. The relationship, correlation and multiple regressions will be employed for revealed statistics.

9.4 Reliability Analysis:

Questionnaire was replicated across various demographic categories before assessing reliability of it. The alpha coefficient, also referred to as Cronbach's alpha, is used in reliability analysis to evaluate a test's internal consistency. This dependability index assesses how well a scale's items relate to one another and is computed using traditional test theory. Through the analysis of differences between total item scores and overall scores, it aids in determining the dependability of measurements, (İnal, *et al.*, 2016). The estimation of reliability and validity of the pilot study was above (0.70) that specify a good internal consistency in the gathered data. The reliability test was connected with a specific end goal to guarantee that the results from the survey were solid and can rely on upon the outcomes of the investigation.

10. Results:

10.1 Reliability:

Table No. (2) shows Reliability test - Transformational style

Reliability Statistics	
Cronbach's Alpha	N of Items
.727	9

Table No. (3) shows Reliability test - Transactional style

Reliability Statistics	
Cronbach's Alpha	N of Items
.783	9

Table No. (4) shows Reliability test – Autocratic Style

Reliability Statistics	
Cronbach's Alpha	N of Items
.746	9

Table No. (5) shows Reliability test - project management success

Reliability Statistics	
Cronbach's Alpha	N of Items
.702	3

In our study, as shown in Tables No. (2, 3 & 4) the reliability test for independent factors is high level of internal consistency for the Transformational style, the Cronbach's alpha equals

(0.727), The reliability test for Transactional style has a good and acceptable level of internal consistency, the Cronbach's alpha equals (0.783), for Autocratic style has a good and acceptable level of internal consistency; the Cronbach's alpha equals (0.746), in [Table No. \(5\)](#) the reliability test for project management success variable (dependent factor) has a good and acceptable level of internal consistency; the Cronbach's alpha equals (0.702).

10.2 Demographic Data:

➤ Gender

[Table No. \(6\)](#) shows the frequencies of the research sample by Gender

		Frequency	Percent
Valid	Male	122	84.7
	Female	22	15.3
	Total	144	100.0

According to the survey the sample had a male percentage of 84.72% (n=122) compared with 15.28% (n=22) female. The majority of respondents are male where the female respondents have occupied an administrative position.

➤ Age

[Table No. \(7\)](#) shows the frequencies of the research sample by Age

		Frequency	Percent
Valid	20 - 30 years old	21	14.58
	31 - 39 years old	32	22.22
	40 - 49 years old	46	31.94
	50 years old and over	45	31.25
	Total	144	100.0

The age of majority is the group (40 - 49 years old) the sample comprised of 31.94% for this group (n=46), age group of (50 years old and over) comes second, one sample behind the majority category, it had a percentage of 31.25% and (n=45). age group of (31 - 39 years old) had a percentage of 22.22% and (n=32), and age group of (20 - 30 years old) had a percentage of 14.58%.

➤ **Years of Experience**

Table No. (8) shows the frequencies of the research sample by Years of Experience

		Frequency	Percent
Valid	5 years & less	21	14.58
	5-10 years	21	14.58
	11-20 years	39	27.08
	21 years & above	63	43.75
	Total	144	100.0

Years of experience demographic part shows that largest category percentage of the Target samples was with (21 years & above) which had 43.75% of the sample and (n=63), then the group of (11-20 years) that had 27.08% with (n=39), the group of (5-10 years) had 14.58% with (n=21), and the same repetition 14.58% with (n=21) is repeated for the group (5 years & less).

➤ **Educational Level**

Table No. (9) shows the frequencies of the research sample by Educational level

		Frequency	Percent
Valid	Diploma	0	0.0
	Bachelor	102	70.83
	Master	27	18.75
	Ph.D.	14	9.72
	Others	1	0.69
	Total	144	100.0

In educational level information, the sample had 70.83% of bachelor certificate holder (n=102), where the second educational level group was a master certificate holder staff by 18.75% and (n=27), the third group was a Ph.D. certificate holder staff by 9.72% and (n=14), the Others category had 0.69% and (n=1), and the last educational category represents Diploma had no percent 0.0% with zero sample (n=0).

➤ Type of Client

Table No. (10) shows the frequencies of the research sample by Type of Client

		Frequency	Percent
Valid	Special Sector	67	46.53
	General Sector	77	53.47
	Total	144	100.0

Type of Client ensures that most of the Respondents belong to (General Sector) group with 53.47% of the sample and (n=77), compared with group (Special Sector) that had 46.53% with (n=67).

10.3 Data Descriptive:

Table No. (11) shows statistical analysis of Data Descriptive

Descriptive Statistics			
	N	Mean	Std. Deviation
AVG_Transformational	144	4.1096	.38332
AVG_Transactional	144	4.3079	.35301
AVG_Autocratic	144	3.5826	.44488
AVG_Project_Success	144	4.1782	.45788
Valid N (list wise)	144		

Descriptive statistics are a representation that makes understanding easier method for characterizing and summarizing data using measures of central tendency (**mean**), dispersion (**standard deviation**), and distribution shape. It is used to first examine data before coming to intricate conclusions in domains including engineering, economics, social sciences, and healthcare research's (Amin, 2023), The highest mean score for transactional leadership style was (4.3) inferring that the respondents all things considered concur with the variable statement, in regards to the part of this style of administration in accomplishing the abnormal state of task administration achievement and undertaking group's profitability, productivity, and execution, the standard deviation for the subscale variable was (0.35). the lower mean score was for Autocratic style (3.58) which lies on (Neutral to Agree) and the Std. Deviation (0.44), the Transformational style mean was (4.1) with Std. Deviation (0.38), and finally (4.17) mean score for Project Success with Std. Deviation (0.45).

10.4 Correlation Test:

Table No. (12) shows Pearson correlation test

Correlations		AVG_Transform.	AVG_Transac.	AVG_Autocratic	AVG_Project_Success
AVG_Transforma.	Pearson Correlation	1	.391**	.338**	.114
	Sig. (2-tailed)		.000	.000	.175
	N	144	144	144	144
AVG_Transac.	Pearson Correlation	.391**	1	.307**	.389**
	Sig. (2-tailed)	.000		.000	.000
	N	144	144	144	144
AVG_Autocratic	Pearson Correlation	.338**	.307**	1	.112
	Sig. (2-tailed)	.000	.000		.18
	N	144	144	144	144

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

A correlation test is one of the SPSS analyze methods that yields a coefficient (r) that ranges from -1 to +1, indicating the direction and degree of the association between two quantitative variables. The significance (p -value) indicates if the link is non-random, and it is predicated on normality, linearity, and homoscedasticity (Kafle, 2019).

The correlation test has used in the study to determine the relationship between the independent variables and the dependent variable of the study. Pearson correlation has used to find out the relationship among the study variables. The obtained findings from the correlation test as follow; there is no clear significant relationship between Transformational leadership style and project management success, because Transformational leadership style and project management success factor correlation ($p \geq 0.01$), noting that there is a positive and significant relationship between transactional leadership style and project management success factor and correlation value is ($p \leq 0.01$), and there is not clear significant relationship between Autocratic leadership style and project management success factor the correlation value ($p \geq 0.01$).

It should be also noted that a moderate positive correlation was found between transactional leadership variable and project management success factor ($r=0.389$) followed by very weak positive relationship between Transformational leadership style and project management success factor ($r=0.114$), the relationship between Autocratic leadership style and project management success factor was ($r=0.112$) which indicate a very weak positive correlation.

10.5 Regression Test:

“Linear regression is a method for modeling data sets that may be partitioned into linear subsets and for establishing causality between variables. There are two main types of linear regression: simple and multiple” (Junaid, 2022, 5).

Table No. (13) shows Regression test (Model Summary)

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.391 ^a	.153	.135	.42591	.153	8.425	3	140	.000

a. Predictors: (Constant), AVG_Autocratic, AVG_Transactional, AVG_Transformational

b. Dependent Variable: AVG_Project_Success

Table No. (14) shows Regression test (ANOVA)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.585	3	1.528	8.425	.000 ^b
	Residual	25.396	140	.181		
	Total	29.981	143			

a. Dependent Variable: AVG_Project_Success

b. Predictors: (Constant), AVG_Autocratic, AVG_Transactional, AVG_Transformational

Table No. (15) shows Regression test (Coefficients)

Coefficients ^a										
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error				Zero-order	Partial	Part	Tolerance	VIF
(Constant)	2.125	.505		4.211	.000					
AVG_Transform.	-.055	.104	-.046	-.531	.597	.114	-.045	-.041	.794	1.259
AVG_Transac.	.526	.112	.406	4.703	.000	.389	.369	.366	.812	1.231
AVG_Autocratic	.004	.087	.003	.040	.968	.112	.003	.003	.850	1.177

a. Dependent Variable: AVG_Project_Success

A linear regression was tested to predict the project management success based on the type of leadership styles (transformational style, transactional style, and Autocratic style). The regression test results that shown in Tables No. (13, 14 & 15) show a significant regression equation was found ($F(3, 140) = 8.425, p < .001$), with R^2 of (0.153). F value Indicates that the

model as a whole (with independent variables) is statistically significant ($p < 0.05$) Where F is obtained from:

Mean Square Residual (MSE)/ Mean Square Regression (MSR)

$F = 1.528 / 0.181 = 8.425$

from the [Table No. \(15\)](#), its noticed that most of the leadership coefficients (Transformational & Autocratic) are statistically insignificant (Sig. > 0.05), indicating that they do not contribute significantly to the regression test model, whereas the (Transactional Leadership style) is the only variable that has a statistically significant effect on project success. and regarding the model quality a Sig. value in the ANOVA [Table No \(14\)](#) = 0.000 indicates that the model as a whole is statistically significant, due to the effect of AVG_Transactional leadership style. R^2 value = 0.153 (from the previous Model Summary [Table No. \(13\)](#)) means that the model explains 15.3% of the variance in project success.

The Coefficients in the [Table No. \(16\)](#) can be Interpreted as:

[Table No. \(16\) shows Interpretation of Coefficients](#)

Variable Coefficient	(B) Statistical	Significance (Sig.)	Interpretation
Constant	2.125	0.000	Value of successful project in the absence of all leadership variables (independent variables).
AVG_Transform.	-0.055	0.597	Each increase in transformational leadership reduces success by 0.055 (statistically insignificant).
AVG_Transac.	0.526	0.000	Each increase in transactional leadership increases success by 0.526 (statistically significant).
AVG_Autocratic	0.004	0.968	Almost no effect and statistically insignificant.

in the Linear Regression Plots, If the points are close to a straight line, this indicates that the data follows a normal distribution. If the points deviate from the line, this indicates a deviation from the normal, and you may need to transform the data or use non-parametric tests. and in our model the graph shows a clear relationship between the variables (with the ascending line), which confirms the existence of a significant effect of the independent variables on success. as for the scatterplot, which " You can plot any two of the following: the dependent variable, standardized predicted values, standardized residuals, deleted residuals, adjusted predicted values, Studentized residuals, or Studentized deleted residuals. Plot the standardized residuals against the standardized predicted values to check for linearity and equality of variances." ([IBM, 2022, 138](#)), and based on the regression equation for our model (Success = $2.125 + 0.526 \times \text{Transactional Leadership Success}$), the graph shows closely spaced and organized points, supporting the hypothesis that transactional leadership improves success.

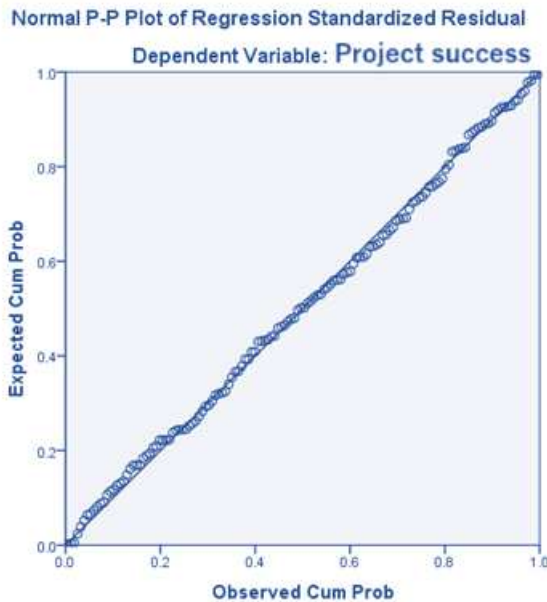


Figure No. (4) shows Normal P-P Plot of Regression Standardized Residual Figure No. (5) shows Scatterplot

10.6 Regression Equation

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3$$

Y= dependent variable (Project management success).

X= independent variable (Leadership style)

In our model (Transactional leadership style) has been included because the significant value was less than (0.05), the regression equation will be:

$$\text{P.M.S (Y)} = 2.125 + 0.526 (\text{AVG_Transactional style})$$

From [Table No. \(11\)](#) (data descriptive), the Mean of the AVG_Transactional is 4.3079 on Likert fifth scale.

$$\text{Project management success} = 2.125 + 0.526 \times 4.3079 = 4.390$$

A predicted value of 4.390 on a 5-point Likert scale suggests a high perceived level of project management success. with excluding other factors not included in the model that affect actual success (e.g. resources, technical complexities, etc...)

Thus, we can formulate the answer to our Hypothesis that explore the relationship as below:

H1. No statistically significant relationship was found between transformational leadership style and project management success ($p = 0.597$) at the 0.05 significance level.

H2. There is a significant relationship between transactional style and the project management success ($p = 0.000$) at the 0.05 significance level.

H3. No statistically significant relationship was found between Autocratic leadership style and project management success ($p = 0.968$) at the 0.05 significance level.

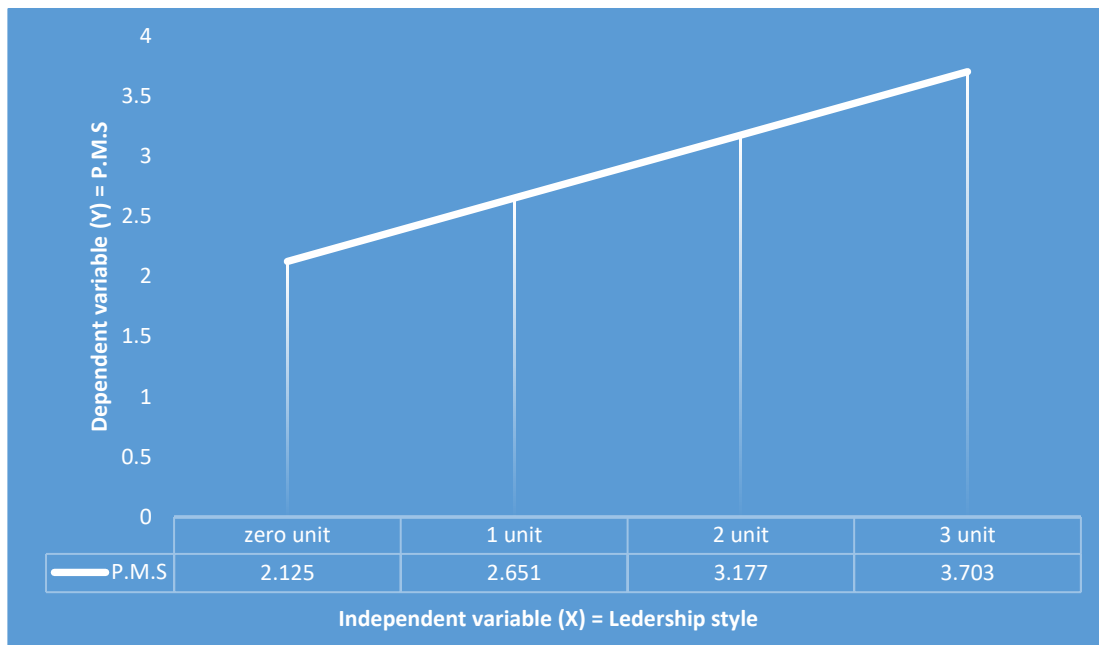


Figure No. (6) shows Regression Model

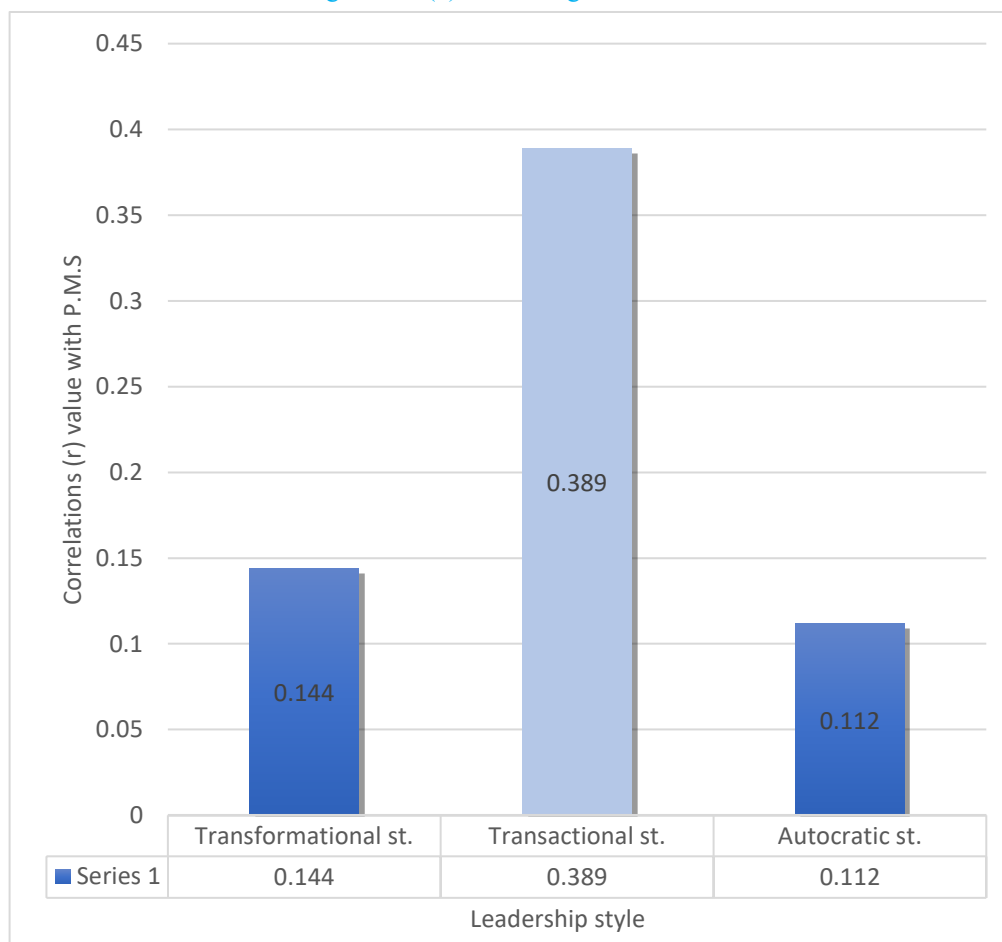


Figure No. (7) shows Leadership style effects ranking on P.M.S

11. Conclusion and Discussion of Results:

The analysis revealed transactional leadership as the most statistically significant predictor of project success ($\beta = 0.526$, $p < 0.001$). Conversely, transformational and autocratic styles showed limited direct impact, this may reflect decreasing to Iraq's centralized decision-making traditions and post-war recovery priorities.

Our results discussion starts with demographic data, as (Capaldo, 2021) agrees with our research in gender, whereas men participate in his research was 65.67% (23 Men in Italy & 21 in Poland) against 34.33% female percentage (5 in Italy & 18 in Poland). As for age data, (bin Abdul Kadir, 2020) study does not agree with our study, as the largest percentage of respondents to the questionnaire in his research were in the (30-35) age group, where their percentage was 39.6% (61 respondents out of a total of 154), while in our study it was in favor of the (40 - 49 years old) group, with a percentage of 31.94% (46 respondents out of 144). Our study did not agree regarding the years of project management experience, as we had in favor of (21 years & above) and a percentage of 43.75% (63 respondents out of a total of 144) compared to the study (Rehan, et al., 2024) in which the category (10-20 years) was the highest with a percentage of 39.4% (26 out of a total of 66 respondents). The sample of respondents to (Ghanbaripour, et al., 2020) was from the bachelor's category (57.7%, 80/139 respondents) which agrees to the highest category of education level in our research (bachelor's group - 70.83% - 102/144). The results of the study (Garg & Jain, 2013) did not agree regarding the type of client, as its samples were for both the public and private sectors with a participation rate of 50% (40 respondents for each sector), while in our research it was in favor of the public sector with a rate of 53.47% at a rate of (77/144 respondents).

When comparing the mean and standard deviation of our study of the independent factors (Transformational style : Mean 4.1096, Std. Deviation .38332; Transactional style: Mean 4.3079, Std. Deviation .35301 and Autocratic style: Mean 3.5826, Std. Deviation .44488) with their counterparts in the study (Wahyuwardhana & Wisesa, 2024), which tested more than one leadership style and the Autocratic transformational style was the highest Mean by 4.3580, Std. Deviation by .65580; the other style counterparts were not agree to our researcher data descriptive (Transformational style : Mean 4.1492, Std. Deviation .72929; Transactional style: Mean 4.2521, Std. Deviation .66038 and Autocratic style: Mean 4.2840, Std. Deviation .65545); While the dependent coefficient, which is project success in our research (mean: 4.1782, standard deviation: .45788) is not consistent with the study (Senyange, 2024) entitled "The Impact of Leadership Styles on Government Construction Project Success" which was (mean: 3.623, standard deviation: 0.886). As for the values of Pearson Correlation and Sig (2-tailed) in the Pearson correlation test Table No. (12), they were agreed with the results of (Mgallah, 2024) for transactional leadership, as he had ($r = 0.341$, $p = 0.002$) and our test have ($r = 0.389$, $p = 0.000$) and not agree in the transformational and authoritarian styles, whose values for Mgallah research were ($r = 0.289$, $p = 0.009$) and ($r = 0.405$, $p = 0.000$) respectively, while in our study for the transformational style ($r = 0.114$, $p = 0.117$) and for the authoritarian style ($r = 0.112$, $p = 0.180$).

As for multiple regression analysis Table No. (13), when compare with (Setiawan, et al., 2021) both studies agreed that leadership styles influence work success (our study: $R^2=0.153$; Setiawan, et al. study: $R^2=0.344$).

The Regression Model Metrics (df, F, Sig.) in the ANOVA Table No. (14) comparing with (Parson, 2020) thesis titled "Relationship Between U.S. Construction Project Managers' Leadership Styles and Construction Project Success", the both models are statistically

significant (Sig. = .000), agreeing the leadership styles impact outcomes. As for df regression (Degrees of freedom for predictors) our model contain 3 predictors differ with parson study which contains 2 predictors due to the different number of predictors and larger sample size (N=144 vs. N=78); the both df Residual values shows the similarity reflects comparable sample sizes and error estimation precision and both have sufficient residual df to ensure the model statically valid, our df (Residual) equal to 140 much larger than Parson study df which was 75; F-Value (Ratio of model variance to error variance) between the two studies was different due to the presence of variance and variable factors between the two studies. (Parson F-value 18.944 vs. 8.425 for our test).

To complete the Regression Coefficients discussion and compare the results of the values of (B and sig) for the [Tables No. \(15 & 16\)](#), where B is the stands for the unstandardized coefficient, and sig. refers to the p-value, which indicates whether the relationship is statistically significant, we will discuss these results with a [\(Otieno, 2019\)](#) study. Where the both studies agree on the positive role of transactional leadership in enhancing project success, also, there are notable differences regarding transformational and autocratic leadership. This disagreement may stem from variations in research contexts, sample demographics, or engineering construction specific factors, as for transformational leadership style our research notice no significant effect (B = -0.055, Sig. = 0.597) in the construction sector in the northern region of Iraq, while Otieno found a strong positive effect for this leadership style (B = 1.034, Sig. = 0.000); Both studies found transactional leadership to positively affect project success, ours was (B = 0.526, Sig. = 0.000), and Otieno's was (B = .175, Sig. = 0.011). in the Autocratic style our Research shows No significant effect was observed for it (B = 0.004, Sig. = 0.968) while Otieno's Research Found a strong negative effect (B = -0.653, Sig. = 0.000) which indicating that autocratic leadership hindered project performance and success.

as for comparing the Normal P-P Plot of Regression Standardized Residuals with the study [\(Muliana & Lahindah, 2025\)](#), we conclude that both charts' data spreads around the diagonal line and follows its direction, demonstrating that the data is normally distributed. Therefore, it can be said that the regression model satisfies the assumption of normality; and when we discuss the [figure No. \(5\)](#) that shows the scatter plot of the two variables, engineering construction project success and effect of (Transformational, Transactional and Autocratic) leadership styles. and since high scores on X are linked to high scores in Y, an upward trend in the scatter plot suggests a positive relationship [\(Sunga, 2025\)](#), Compared to the results of the [\(Nurfadillah, et al., 2025\)](#) study which mentioned that heteroscedasticity test is used to determine whether the regression model exhibits variance inequality between the residuals of different observations. If heteroscedasticity is absent, a suitable regression model can be used to test for it using a scatterplot in this study [\(Nurfadillah, et al., 2025\)](#), we conclude that both studies agreed that both scatterplot charts shows that the points on the Y axis dispersed at random, both above and below the zero mark. Therefore, it can be concluded that the regression model in this study does not exhibit heteroscedasticity, also Provides valuable information about the quality of the regression model and how well it fits the data. Finally, by comparing the regression equation $Y = a + b_1x_1 + b_2x_2 + b_3x_3 + e$ between our study and the study of [\(Arisanti, et al., 2023\)](#), we note that the two studies agree that leadership style is an important factor in improving performance, whether in the functional context or project management success.

[And here are brief summary points of our research results:](#)

1. Transactional Leadership has Significantly impact on project success ($\beta = 0.526, p < 0.001$)

2. Transformational Leadership has No statistically significant impact on project success ($B = -0.055, p = 0.597$)
3. Autocratic Leadership has Minimal effect on project success ($B = 0.004, p = 0.968$)
4. Maximum leadership Style Mean was Transactional style (4.3079).
5. Project Success Metrics has Mean score: 4.1782 (Std. Deviation: 0.45788).
6. Transactional leadership style explained 15.3% of project success in the regression model with variance ($R^2 = 0.153$).
7. ANOVA Significance Model has statistically significant ($Sig. = 0.000$).
8. Normality Assumption, Residuals followed a normal distribution (P-P plot).
9. Scatterplot confirmed no heteroscedasticity in the Homoscedasticity plot.
10. The most important traits that research has shown for transactional leadership are (Contingent Rewards, Active Management by Exception & Passive Management by Exception).

Transactional leadership style in this study was the outcome of our research conducted in the February of 2025 in the northern Iraq region by 15.3% of the variance in project success with predicted value of 4.390 on a 5-point Likert scale suggests a high perceived level of project management success taking in consideration the excluding of other external success factors, this study not only disproves the universal applicability of transformational paradigms but also offers a framework for contextualizing leadership frameworks in conflict-affected areas by fusing global leadership theories with empirical data particular to Iraq.

10. Recommendations:

1. Similar studies need to be carried out under different settings in different countries. Because it is the importance of leadership styles in project management consistent across various cultures.
2. Execute this study in different industries and compare the effects and finding in this Northern region of Iraq.
3. More research should be done on the relationship between project teams' effectiveness and adaptive leadership. Although it might not produce broadly applicable findings, this study demonstrated strong evidence of the influence of leadership styles, especially transactional leadership, on project success, emphasizing the value of modifying different leadership styles to attain favorable results.
4. Develop targeted training programs for Iraqi project managers focusing on transactional leadership traits (contingent rewards, active/passive management by exception).
5. Contextualize Global Leadership Theories by Adapt transformational leadership frameworks to Iraq's centralized decision-making culture. and Pilot hybrid models that blend between them.
6. putting a focus on transparency, milestone-based rewards, and structured governance to combat bureaucratic inefficiency.
7. Conduct qualitative follow-ups to investigate situations when centralized decision-making may still be crucial, even though autocratic styles have little effect (e.g., safety protocols, crisis response).
8. The remaining 84.7% of the variance in project success that cannot be explained by leadership styles alone may be explained by expanding future models to incorporate factors like supply chain resilience, resource allocation, and geopolitical stability.

9. Investigate the reasons for transformational leadership's poor performance in Iraq by supplementing quantitative surveys with focus groups and interviews. Record stories about a lack of trust, team spirit, or past opposition to change.
10. Encourage Iraqi authorities to include transactional leadership measures (such as exception management and reward systems) in national project evaluation frameworks.

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