



# The Impact of Sustainable Leadership in Project Management Success

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## Research Article

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## Abstract

The advancement of science, technology, and global societal structures necessitates ongoing examination of how businesses and organizations function, along side the individuals comprising them. Achieving set objectives effectively is a shared responsibility between employees and management. Moreover, competent leadership is deemed essential in inspiring, motivating, rewarding, and challenging employees to continually enhance their performance. Within the realm of project management, the presence of capable leadership becomes particularly critical due to heightened workplace pressures and the constant need to align employees with project goals and timelines. The overarching aim of this research is to explore the impact of leadership on the successful execution of projects. Specifically, the study seeks to identify the essential traits a leader must possess to inspire subordinates within the contemporary framework of project management utilized by businesses today. The research was conducted among 158 employees from companies located in Greece, utilizing a convenience sampling approach. The findings indicate that the Project Manager's role significantly influences various aspects of project completion. Notably, the Project Manager has a substantial impact on ensuring projects stay within budget, followed by adherence to timelines and realistic project planning. Conversely, the influence of the Project Manager on data recording and utilization for future project execution is comparatively lower.

**Keywords:** Sustainable Leadership; Management; Project Management

## Introduction

Leadership, particularly sustainable leadership, plays a crucial role in the success of project management [1]. Effective leadership provides clear vision, direction, and motivation, ensuring that project goals align with the organization's long-term objectives. Sustainable leadership, with its emphasis on ethical decision-making, stakeholder inclusivity, environmental stewardship, and resilience, enhances this impact by fostering a holistic approach to project execution [2]. By prioritizing long-term benefits over short-term gains, sustainable leaders ensure that projects are not only completed on time and within budget but also contribute positively to the broader community and environment [3]. This approach builds trust among stakeholders, encourages innovation, and enhances the organization's reputation, leading to more successful and sustainable project outcomes [4]. In essence, sustainable leadership in project management drives projects toward enduring success and creates value that extends beyond immediate project deliverables [5].

It is a fact that modern society characterized by constant changes in the environment, technology and sciences has highlighted even more the importance of having competent managers who will be able to inspire, motivate and reward the workforce so that the business goals [6]. The concept of leadership, according to many studies, should be combined with the characteristics of the manager so that the goals of businesses and organizations can ultimately be achieved to a greater extent [7]. However, the separation of the two concepts is not so simple, given that a large part of the scientific literature has dealt with the issue because the dividing lines between the two concepts are often indiscernible.

The management of businesses and organizations cannot but involve highly complex processes that need to be planned in an efficient way, while the corresponding responsibilities should be attributed to people capable of possessing the necessary qualifications to be able to manage the whole of the responsibilities assigned to them [8]. All projects, whatever their form, should use all the factors of production such as capital, labor and land in order to finally be realized. Therefore, every business or organization should dispose of a part of its productive factors so that it implements the required projects to maintain and improve its efficiency and sustainability. The goal of every organization is to be able to produce the best financial result through the best possible administration, organization and planning of the construction of projects [9]. Clearly, for the fulfillment of all of the above, the constant vigilance of the company's management is required so as to ensure at all times that the people who have undertaken the management of the projects are able to fulfill all the necessary actions to complete the

project with its parallel production optimal financial result.

From the above it becomes clear that project management is a business dimension that must be combined with competent managers and leaders so that the business or organization can finally take advantage of all the productive factors in the best possible way which clearly includes economic efficiency. The concept and characteristics of leadership have been studied in many cases, however it is observed that many researches do not focus on project management, which is now an important aspect of business in the modern globalized environment. The aim of the research is to investigate the effect of leadership and sustainable leadership on the successful implementation of projects. Thus, an attempt will be made to examine what are those characteristics of a leader - a sustainable leader, which can lead to the successful course of a management project.

## Literature Review

The concept of leadership has been discussed quite a lot at the global level through a multitude of definitions that can shape the way leadership is perceived [10]. Leadership can therefore be characterized according to the elements that make it up as visionary, classical, innovative, inventive, creative, inspirational, transformational, risk-taking leadership, while there are several more defining characteristics regarding the type of leadership [11]. Additionally, various theories have been expressed about leadership models as well as the basic characteristics of a leader. Leadership is the ability to guide, influence, and inspire individuals or groups toward achieving common goals. It involves setting a vision, making strategic decisions, and fostering an environment that motivates and empowers team members to perform at their best [12]. Effective leadership encompasses qualities such as communication, empathy, integrity, and adaptability [13]. Additionally, sustainable leadership has been developed recently as a concept and it refers to the management approach that emphasizes the long-term well-being of an organization, its stakeholders, and the environment [2,14]. It integrates principles of ethical decision-making, social responsibility, and environmental stewardship into leadership practices [15]. Sustainable leaders prioritize enduring success, fostering a culture of resilience, innovation, and inclusivity, while ensuring that their actions contribute positively to society and the planet. The above definitions convey in an integrated way the basic characteristics of leadership while at the same time one can assume all the benefits of the presence of the leader at work.

## Leadership

The multidimensional concept of leadership is an issue that has been extensively discussed by the available literature

as it is a critical factor for businesses and organizations because it is able to determine the behavior and degree of utilization of the potential of the parties involved and consequently the operation and their development [8]. The effectiveness of management executives depends significantly on their ability to lead and create favorable working conditions [16]. However, effective leadership should not be associated with power, authority and influence [17]. And this is because the above three elements, despite the fact that they are important in the exercise of leadership, are often the subject of confusion or even disorientation for leaders, but also for leadership scholars since they can be wrongly linked to the concept of effectiveness [17]. Additionally, effective leadership cannot remain static but should be a dynamic concept that means it is subject to changes that affect the style and form of leadership depending on the environment in which a company operates [18]. Previous studies have mentioned some basic characteristics that a leader should have, however, there are several leadership skills that can be considered primary in the sense that they are basic conditions for the development of leadership behaviors [19]. Such characteristics are the ability of the leader to model the way to others, to inspire a shared vision, to challenge the process, enable others to act and encourage the heart of the people involved in a project [20,1,11]. All the above characteristics are necessary for a person to possess or even try to develop them in order to be able to become a leader that will ultimately enhance the effectiveness of the work.

### **Sustainable leadership**

Multiple sources consider various viewpoints on the concept of "sustainability", highlighting its importance in how organizations implement this idea [3,21]. Sustainable leadership is a management approach that prioritizes long-term success, ethical behavior, and environmental responsibility [22]. It has been suggested that sustainable leadership practices enable organizations to respond quickly and resiliently, making them more competitive and attractive to stakeholders [23]. The foundation of sustainable leadership is sustainability itself, with both concepts sharing aligned goals. Additionally, it is evident that current leadership models need to evolve beyond solely aiming for profit maximization [15]. Concepts such as the triple bottom line reflect this shift in business philosophy. Sustainable leadership aims to ensure that organizations build on their current strengths to secure a viable and successful future, emphasizing long-term and holistic success rather than just financial gains [24]. Existing definitions of sustainable leadership highlight various characteristics and dimensions of the concept [25,15]. Thus, even though no single definition is universally accepted, common themes can be identified and will be explored within a conceptual framework. Based on previous studies, these characteristics or attributes include

the long-term Vision and Planning, the ethical and responsible decision-making, stakeholder Inclusivity, environmental stewardship and resilience and adaptability [26].

Specifically, analysing those characteristics, sustainable leaders focus on long-term goals and strategies rather than short-term gains. They prioritize enduring success and stability over immediate profits, considering the future impact of their decisions on the organization, stakeholders, and the environment [15]. Moreover, ethical considerations are at the forefront of sustainable leadership [7]. Leaders make decisions that are not only legally compliant but also morally sound. Sustainable leaders are committed to integrity, transparency, and accountability, ensuring that their actions positively impact employees, communities, and the planet. Additionally, sustainable leaders recognize the importance of engaging a broad range of stakeholders, including employees, customers, suppliers, and the community [2]. They value diverse perspectives and work towards creating value for all stakeholders, fostering collaboration and trust. Environmental responsibility is a core aspect of sustainable leadership. Leaders actively seek to minimize the environmental footprint of their operations by implementing sustainable practices such as reducing waste, conserving energy, and promoting biodiversity [27]. They often advocate for and invest in renewable energy and other green technologies. Finally, sustainable leaders are resilient and adaptable in the face of change and challenges [7]. They anticipate potential risks and uncertainties, and they are proactive in developing strategies to address them. This involves fostering a culture of innovation and continuous improvement, ensuring that the organization can thrive in a dynamic and evolving environment.

### **Project management**

Project management is a set of principles, methods and techniques for the effective planning of objective-oriented work in order to create a solid basis for effective planning, control and re-design by the management of the programs and projects to be implemented [4]. Essentially, project management enables an organization with powerful tools that improve the organization's ability to plan, organize, implement and control its activities and the ways it uses the people and resources it has available [28].

A project is a non-recurring activity usually characterized by discrete time, financial and technical performance objectives [29]. It is a concerted effort consisting of interrelated tasks performed in turn by various organizations. Through the tools and principles of project management that have been expressed, an effort is made to divide a project into tasks and individual tasks, the interdependencies between the various tasks are investigated, human and material

resources are allocated, an estimate is made for the overall duration of the project of the project as well as its budget and finally monitoring and control is carried out regarding the effectiveness of the project and its progress [30].

Projects of any kind need to use all available productive factors to be implemented, while businesses or organizations should have a part of their staff available so that the project can finally be implemented. Also, in the context of the administration of a project it is necessary to carry out proper financial management so that the economic unit can reap benefits [6]. However, the production of the optimal economic result requires the existence of effective management, organization and planning of the construction of the projects. The management of the project is charged with all the above functions, while in the modern era the narrowness of the available financial resources require the existence of competent executives who can plan, organize and execute projects of all kinds [31]. The adoption of scientific methods and modern techniques are a necessary factor for achieving effective project management [32]. Therefore, the importance of leadership in project management becomes clear [5]. The benefits that can be obtained by the company or the organization from the establishment of a project management unit that is also made up of a competent leader, are numerous and the combined existence of management and leadership cannot but become necessary [33]. The management of the project is clearly carried out through a manager who undertakes the organization, design, planning and implementation of the project through the effective management of available resources, defining its cost, schedule, functionality and objectives quality to be executed effectively [34].

Project management is the implementation process that aims to create a product or service with specific limitations [35]. These limitations should be taken into account by a leader who should inspire his team and optimize processes so that the work is not affected [36]. Thus, the project should be carried out through carefully selected activities in order to make optimal use of the resources and available time to achieve its goals. The leader should organize the project, define the objectives, plan the project, contribute to its management and control until its completion [9]. Moreover, each project may involve people from different departments of an organization or even from other businesses [37]. Because each project has its own characteristics and time to be implemented, leadership has a crucial role and importance [38]. In particular, leaders guide the behaviors of their team by setting a vision, the basic directions and processes while it must have an influence on the whole process of the project. Leadership can be seen as the art of the leader influencing others to achieve the desired result [39].

In Project Management a leader is very important to have effective teams and to create a context with specific directions urging them to focus on the goals that have been set [9]. It is essentially situational leadership and the leader should assess and analyze the team, motivations and responsibilities in order to be effective [38]. This particular leadership approach is different from others as a leader should change his style depending on the situation and depending on the task he/she has to manage [34]. In conclusion, leadership can have a particularly positive effect on the smooth implementation of projects, primarily because it creates in all employees the feeling that they belong to a group that works to achieve a common benefit that will be able to act rewardingly for them but and for the business.

### Research Methodology

This primary research is characterized as quantitative and will be conducted using a questionnaire, a tool commonly used in similar types of research. The aim of the research is to investigate the effect of leadership and sustainable leadership on the successful implementation of projects. In particular, the research aims to create a predictive model for determining project management success, with the characteristics of sustainable leadership as dependent variables.

Specifically, the objectives of the research are to investigate the following research questions:

**RQ1:** What is the connection between the characteristics of the sustainable leader and the traditional leadership characteristics?

**RQ2:** Which of the leader's characteristics predict the successful management of a project?

The questionnaire was chosen as the research data collection tool and was created based on previous research on leadership, sustainable leadership and project management success. In particular, the scales of Kouzes and Posner [40], Tideman, Arts and Zandee [14] and Avery and Bergsteiner [2] were used. The selection of the specific scales was made to serve the objectives of the research. More specifically, the questionnaire consist of 4 sections with the first one including the demographic data, while the other 3 were about traditional leadership attributes (30 items), sustainable leadership attributes (15 items) and project management success (7 items). All scale items were measured with a 10-points Likert scales. Finally, the scales were tested for validity and reliability. Specifically, a confirmatory factor analysis was carried out, with the KMO index being above 0.70, and a reliability analysis with the Cronbach's  $\alpha$  index indicating high reliability ( $\alpha > 0.70$ ) (Table 1).

	Cronbach's Alpha	N of Items
Model the way	.792	6
Inspire a shared vision	.810	6
Challenge the process	.754	6
Enable others to act	.965	6
Encourage the heart	.858	6
Promote Long-term vision and planning	.755	3
Promote ethical and responsible decision-making	.722	3
Foster stakeholder inclusivity	.805	3
Promote environmental responsibility	.853	3
Foster resilience and adaptability	.704	3
Project Management success	.808	7

**Table 1:** Reliability Analysis.

The final sample size regarding the questionnaires was 158 respondents, a number that is considered quite representative according to the g-power analysis carried out and the minimum sample was set at 105 participants. The simple random sampling method was used for the selection of the respondents, with the only inclusion criteria was to be able to read and understand English as a language, as the survey questionnaire was not available in another language.

Before the distribution of the questionnaires, a pilot phase of its administration was carried out, in order to establish its effectiveness as a tool, to point out its possible errors or shortcomings and to make some corrective changes. The specific test phase did not show any particular problems

and the questionnaire was judged to have the appropriate size, to be easy to read and its topic interesting enough for the respondents. Descriptive statistical analysis, Pearson's parametric test and regression analysis were used to analyze and present the results to answer the research questions.

## Results

Table 2 presents the demographic characteristics of the sample. The majority of the respondents were from 26 to 45 years old (67%), male participants (60.1%) that hold a bachelor degree (70.9%), while the mean years of professional experience were 10.57 (SD = 8.793).

Variable	Percentage	
Age	18-25	14.6
	26-35	33.5
	36-45	33.5
	46-55	18.4
Gender	Male	60.1
	Female	39.9
Educational Level	Bachelor Degree	70.9
	Master's Degree	21.5
	PhD	7.6
Years of professional experience	Mean	SD
	10.57	8.793

**Table 2:** Demographic data.

Table 3 show the mean scores of leadership and sustainable leadership. Specifically, among leadership

characteristics, higher levels presented for "inspire a shared vision" (M = 6.03, SD = 1.007) and "encourage the heart"

( $M = 5.89$ ,  $SD = 1.136$ ) while among sustainable leadership attributes higher levels presented for the “Promote ethical

and responsible decision-making” ( $M = 6.02$ ,  $SD = 1.062$ ) and “Foster resilience and adaptability” ( $M = 5.99$ ,  $SD = 1.142$ ).

	M	SD
<i>Leadership attributes</i>		
Model the way	5.92	.962
Inspire a shared vision	6.03	1.007
Challenge the process	5.59	1.038
Enable others to act	5.83	.917
Encourage the heart	5.89	1.136
<i>Sustainable leadership attributes</i>		
Promote Long-term vision and planning	5.84	.971
Promote ethical and responsible decision-making	6.02	1.062
Foster stakeholder inclusivity	5.54	1.005
Promote environmental responsibility	5.81	.941
Foster resilience and adaptability	5.99	1.142

**Table 3:** Leadership and sustainable leadership attributes.

### Project management success metrics

Table 4 presents the opinions of employees regarding the characteristics that define a successful project. According to the respondents, the most crucial characteristic of a successful project is its implementation within the budget ( $M = 4.25$ ,  $SD = .807$ ). This high mean score indicates that staying within the financial limits set for the project is the top priority for most employees, and the relatively low standard deviation suggests a strong consensus on this point. The next most important characteristic, as rated by the respondents, is the implementation within the scheduled timeframe ( $M = 4.19$ ,  $SD = 1.085$ ). This indicates that completing the project on time is also highly valued, although the slightly higher standard deviation compared to the budget indicates more

variability in how strongly this characteristic is prioritized among employees. Following closely is the importance of realistic project planning ( $M = 4.15$ ,  $SD = .691$ ). This suggests that employees place significant importance on the feasibility and practicality of the project’s plans. The lower standard deviation here implies that there is a general agreement among employees about the importance of having realistic and achievable project plans. In summary, the data indicates that employees believe a successful project is predominantly defined by staying within budget, meeting scheduled deadlines, and having realistic planning. These characteristics are seen as the key components that contribute to the overall success of a project, reflecting a balanced focus on financial management, timely completion, and practical planning.

Metrics	M	SD
Implementation within schedule	4.19	1.085
Implementation within budget	4.25	.807
Implementation within specifications	4.05	.815
Planning regarding the management of available resources	4.03	.730
Realistic project planning	4.15	.691
Identification and coverage of the necessary functional roles of the project	3.96	.756
Minimizing the risks that may arise from the implementation of the project	3.81	.694
Earlier recognition and treatment of problems that may arise	4.12	.835
Recording and utilization of all data for future project execution	4.04	.489
Overall project management success	4.05	.378

**Table 4:** Project management success metrics.

### Correlations between leadership and sustainable leadership attributes

Table 5 presents the correlations between various attributes of leadership and sustainable leadership. The correlations indicate the strength and direction of relationships between these attributes. Specifically, the table reveals that most attributes exhibit medium to weak correlations with each other. This suggests that while there are some associations between traditional leadership qualities and those emphasized in sustainable leadership, these relationships are generally not very strong. However, the data highlights two notably stronger relationships. First, there is a stronger correlation between the attribute “challenge the process” and “resilience and adaptability,” with a correlation coefficient ( $r$ ) of .498. This implies that leaders who are inclined to challenge existing processes and encourage innovation are also likely to be resilient and adaptable.

These qualities are crucial in sustainable leadership, where the ability to respond to change and overcome obstacles is essential for long-term success. Second, the attribute “inspire a shared vision” shows a stronger correlation with “long-term vision and planning,” with a correlation coefficient of .440. This indicates that leaders who are effective in inspiring a shared vision among their team members are also adept at long-term planning and maintaining a strategic focus. This alignment is critical in sustainable leadership, where the ability to engage and motivate others around a common goal supports the achievement of enduring, sustainable outcomes. In summary, while most attributes of leadership and sustainable leadership are only moderately or weakly related, the stronger correlations between “challenge the process” and “resilience and adaptability,” as well as between “inspire a shared vision” and “long-term vision and planning,” underscore the importance of these specific attribute pairings in fostering effective sustainable leadership.

	Long-term vision and planning	Ethical and responsible decision-making	Stakeholder inclusivity	Environmental responsibility	Resilience and adaptability
Model the way	.281**	.276**	.279**	.231**	.295**
Inspire a shared vision	.440**	.261**	0.105	.398**	.328**
Challenge the process	.287**	.273**	.223**	.357**	.498**
Enable others to act	.303**	.242**	.203*	.235**	.310**
Encourage the heart	0.105	.208*	0.152	.224**	.332**

\*\*Correlation is significant at .01

**Table 5:** Correlations between leadership and sustainable leadership attributes.

### Prediction of Project Management Success

A regression analysis was conducted to determine which variables among leadership and sustainable leadership attributes predict project management success. In this analysis, all leadership and sustainable leadership attributes

were considered as independent variables. The regression model developed can explain 52.1% of the variance in project management success, as indicated by an R-squared value ( $R^2$ ) of 0.521 (Table 6). As a result, just over half of the variation in project management success can be accounted for by the attributes included in the model.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.722	.521	.504	.49954

**Table 6:** Model Summary.

The analysis also revealed that the overall model is statistically significant, indicating that the independent variables collectively predict project management success ( $F_{(10, 291)} = 31.639, p < .05$ ). This significance suggests that at least some of the attributes considered have a meaningful impact on project success. More specifically, the

findings highlight that all sustainable leadership attributes significantly predict project success. This emphasizes the importance of sustainable leadership qualities in achieving successful project outcomes. In contrast, among the traditional leadership attributes, only one—“Inspire a shared vision”—was found to be a significant predictor of project

success. This underscores the particular value of inspiring a shared vision within traditional leadership practices for successful project management. Furthermore, the analysis checked for multicollinearity among the independent variables. Tolerance levels for all variables were above 0.2, and Variance Inflation Factor (VIF) values were below 10. These statistics indicate that multicollinearity is not a concern in this model, meaning the independent variables do not

excessively correlate with each other and each contributes uniquely to the model. In summary, the regression analysis demonstrates that sustainable leadership attributes are critical predictors of project management success, while among traditional leadership attributes, “Inspire a shared vision” stands out as particularly influential (Table 7). The model’s robustness is supported by adequate tolerance and VIF values, ensuring the reliability of these findings.

Model	Unstandardized Coefficients		Standardized Coefficients	t	p	Collinearity Statistics	
	B	SE	Beta			Tolerance	VIF
(Constant)	0.366	0.294		1.246	0.214		
Model the way	0.045	0.032	0.062	1.404	0.161	0.856	1.169
Inspire a shared vision	0.223	0.064	0.158	3.502	0.001	0.811	1.234
Challenge the process	0.09	0.067	-0.066	1.337	0.182	0.668	1.496
Enable others to act	0.052	0.029	0.092	1.785	0.075	0.622	1.609
Encourage the heart	0.08	0.048	0.09	1.66	0.098	0.556	1.797
Promote Long-term vision and planning	0.112	0.048	0.122	2.327	0.021	0.6	1.667
Promote ethical and responsible decision-making	0.212	0.041	0.246	5.21	0	0.74	1.351
Foster stakeholder inclusivity	0.193	0.042	0.228	4.582	0	0.666	1.502
Promote environmental responsibility	0.077	0.035	0.105	2.195	0.029	0.726	1.378
Foster resilience and adaptability	0.118	0.044	0.136	2.688	0.008	0.641	1.56

**Table 7:** Prediction of project management success.

## Discussion and Conclusion

The present study dealt with the effect of sustainable leadership on effective project management. As an introductory but also general conclusion of the study, it emerges that leadership is an important source of advantage in more effective project management. The current market conditions necessitate the existence of companies or organizations that can perform their functions in an efficient manner, correctly manage the available resources given the economic conditions that prevail in today’s era and finally

manage to complete the projects they undertake with the most beneficial way for the business, customers and employees. The leader seems to play a key role not only in project management but also in business management, with academic analysts pointing out important differences between managers and leaders. The existence of a competent leader is necessary in order for the employees to feel satisfied with their work while at the same time the company can reap all the necessary benefits from the leader’s actions. Leaders develop sustainability by how they approach, commit to and protect deep learning in their schools; by how they

sustain themselves and others around them to promote and support that learning; by how they are able and encouraged to sustain themselves in doing so, so that they can persist with their vision and avoid burning out; by how they try to ensure the improvements they bring about last over time, especially after they have gone; by how they consider the impact of their leadership on schools around them; by how they promote and perpetuate ecological diversity rather than standardized prescription in teaching and learning within their schools; and by how they pursue activist engagements with their environments.

Most leaders want to do things that matter, to inspire others to do it with them and to leave a legacy once they have gone. Mainly, it is not leaders who let their schools down, but the systems in which they lead. Sustainable leadership certainly needs to become a commitment of all school leaders. If change is to matter, spread and last, sustainable leadership must also be a fundamental priority of the systems in which leaders do their work. Sustainable leadership profoundly impacts project management success by integrating long-term strategic vision, ethical practices, and stakeholder inclusivity into the core of project execution. Leaders who practice sustainable leadership prioritize not only the immediate outcomes but also the future implications of their decisions, ensuring that projects contribute to the enduring success of the organization. This approach fosters a culture of resilience and adaptability, essential qualities for navigating the uncertainties and challenges inherent in project management. By emphasizing ethical decision-making and transparency, sustainable leaders build trust and engagement among team members and stakeholders, enhancing collaboration and commitment to project goals. Moreover, sustainable leadership encourages innovation and continuous improvement, driving projects to adopt best practices and cutting-edge solutions that ensure efficiency and effectiveness. Environmental stewardship, a key aspect of sustainable leadership, ensures that projects are conducted with a minimal ecological footprint, aligning with broader organizational goals of sustainability. This holistic approach not only helps in achieving project deliverables on time and within budget but also ensures that projects create lasting value, aligning with the triple bottom line of economic, social, and environmental performance. Ultimately, sustainable leadership equips organizations with the foresight and capabilities to deliver successful projects that meet the needs of today while safeguarding resources and opportunities for the future.

In addressing the research questions of this study, it has been found that the dimensions of traditional leadership are closely related to the dimensions of sustainable leadership. This relationship indicates that the qualities of a leader are interconnected and function as an integrated whole. The

prediction model developed in this research underscores this interconnectedness by showing that these leadership dimensions can significantly predict project success. Notably, the model reveals that a leader's ability to inspire a shared vision-essentially guiding the team towards a common goal-is crucial for project success. This finding aligns with a substantial body of existing research that emphasizes the importance of visionary leadership in achieving project outcomes.

Furthermore, the model highlights the critical role of sustainable leadership attributes in predicting project success. All sustainable leadership qualities combined contribute to a significant portion of the project's success rate. This underscores the importance of sustainable leadership, suggesting that its attributes are integral to effective project management. Consequently, the study suggests that while traditional leadership attributes remain relevant, the attributes of sustainable leadership are becoming increasingly vital. It can be tentatively concluded that sustainable leadership attributes are not merely supplementary but are gradually supplanting traditional leadership qualities. This shift reflects a broader trend towards integrating sustainability into all aspects of organizational management, ensuring long-term success and resilience in project outcomes.

### Research Limitations

Although the study ends up with some important outcomes, it also has some limitations. Firstly, the sample size, while sufficient for some statistical analyses, may not be large enough to generalize the findings to a broader population. This limitation is particularly relevant when considering diverse industries and organizational contexts where leadership practices and project management success criteria may vary significantly. Secondly, the study relies on self-reported data collected through questionnaires, which may be subject to biases such as social desirability bias, where respondents provide answers they believe are expected or favorable rather than their true opinions. Thirdly, the cross-sectional nature of the study captures a snapshot in time and does not account for changes in leadership styles or project outcomes over time. Longitudinal studies would be more effective in capturing the dynamic nature of leadership and project success. Finally, the specific cultural and organizational contexts of the participants were not deeply examined, which may affect the applicability of the findings across different settings.

### Future Research Developments

Future research should address the above limitations by expanding the sample size to include a more diverse range of

participants from various industries and geographic regions. This would enhance the generalizability of the findings and provide a more comprehensive understanding of the impact of leadership styles on project management success. Longitudinal studies should be conducted to observe how leadership practices and their effects on project outcomes evolve over time. Incorporating qualitative methods, such as interviews or focus groups, could complement the quantitative data and provide deeper insights into the nuances of how traditional and sustainable leadership attributes influence project success. Lastly, exploring the cultural and organizational contexts in greater depth would help to understand how different environments may moderate the relationship between leadership styles and project outcomes.

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