



Ethiopian Civil Service University

Building Capacities in the Public Service



COLLEGE OF LEADERSHIP AND GOVERNANCE

DEPARTEMENT OF LEADERSHIP AND GOOD

GOVERNANCE

PROJECT LEADERSHIP AND MANAGEMENT PROGRAM

**THE EFFECTS OF LEADERSHIP STYLE ON
PROJECT PERFORMANCE: THE MEDIATING
ROLE OF TEAMWORK: IN CASE OF GOBA-
BERBERE-DELLOMENA BUILD AND DESIGN
PROJECT**

By

MOHAMMEDAWOL AHMEDNUR ABDI

JUNE, 2024

ADDIS ABABA, ETHIOPIA

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**MASTER'S THESIS SUBMITTED TO THE DEPARTMENT OF
LEADERSHIP AND GOOD GOVERNANCE IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTERS OF ARTS IN PROJECT LEADERSHIP AND
MANAGEMENT**


ADVISOR: ASSEFA BEYENE (PhD)

JUNE, 2024

ADDIS ABABA, ETHIOPIA

DECLARATION

This is to declare that the thesis “the effects of leadership style on project performance: the mediating role of teamwork: in case of Goba-Berbere-Dellomena build and design project”, submitted in partial fulfillment of the requirements for the degree of Master of Arts in Project Leadership and Management, Ethiopian Civil Service University, is a record of original work carried out by me and has never been submitted to any other institution to get any other degree or certificates. The assistance and help I received during the course of this investigation have been duly acknowledged.

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I hereby certify that I have supervised, read, and evaluated this thesis titled "the effects of leadership style on project performance: the mediating role of teamwork: in case of Goba-Berbere-Dellomena build and design project" by Mohammedawol Ahmednur prepared under my guidance. I recommend the thesis be submitted for oral defense.

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APPROVAL OF THESIS AFTER DEFENSE

As members of the board of examiners, we examined this thesis entitled 'the effects of leadership style on project performance: the mediating role of teamwork: the case of Goba-Berbere-Dellomena build and design project ' by Mohammedawol Ahmednur. We hereby certify that the thesis is accepted for fulfilling the requirements for the award of the degree of "Master of Arts in Project Leadership and Management".

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ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
ANOVA:	Analysis of Variance
CDF	Cumulative Density Function
CIDB	Construction Industry Developmental Board
CPI	Cost performance index
CV	Cost variance
ERA	Ethiopian Road Authority
EVM	Earned Value Management
FRLM	Full Range Leadership Model
GDP	Gross Domestic Product
HLM	Hierarchical Linear Modeling
ISD	Information System Development
KPI	Key Performance Index
LFLDR	Laissez-faire Leadership
MLQ	Multifactor Leadership Questionnaire
NGO	Non-Governmental Organizational
PE	Project Engineer
PM	Project manager
PMBOK	Project Management Body of Knowledge
PP	Project Performance
P-P	Percentile –Percentile
ROA	Return On Asset
SEM-PLS	Structural Equation Modeling-Partial Least Squares
SEM	Structural Equation Modeling
SPSS	Statistical Package for Social Science
SPSS-AMOS	Statistical Package for Social Science -Analysis of Moment Structures
SV	Schedule Variance
TPI	Time Performance Index
TRLDR	Transformational Leadership
TSLDR	Transactional Leadership
TW	Teamwork
VIF	Variance Inflation Factor

ABSTRACT

This study examined the effect of leadership styles on project performance, focusing on the role of teamwork as a mediator in the Goba-Berbere-Dellomena construction and design project. The full-range leadership development model served as the research's guidance. A mixed-method approach was used in the research, with both quantitative and qualitative data being collected and analyzed. There were 142 replies to the study, which used a sample size of 155 and a population of 260. Purposive sampling as well as stratified random sampling was used in the sample design. Descriptive analysis, inferential OF correlation analysis, regression analysis, mediation analysis using SPSS version 26, Sobel test, and structural equation modeling by SPSS-AMOS were all used to analyze the data. The validity and reliability by Cronbach's Alpha coefficient of 0.967 were checked. The results showed that transformational leadership (with mean of 3.73) was the most common type shown by project managers, with transactional leadership (with mean of 3.62) following in second while laissez-faire the least (with mean of 2.96). The project was operating under budget and on schedule, according to objective performance measures of Earned Value Management (EVM) and generally favorable feedback. Strong cooperation, communication, and a happy work atmosphere were all noted as positive aspects of teamwork practices, while there was still space for development in terms of team commitment. Correlation analysis showed strong positive relationships between transformational leadership ($r = 0.80$, $p < 0.01$) and transactional leadership ($r = 0.71$, $p < 0.01$) with project performance, while laissez-faire leadership had a weak relationship ($r = 0.298$, $p < 0.05$). Regression analysis further supported these findings, demonstrating significant impacts of transformational ($\beta = 0.601$, $p < 0.001$) and transactional leadership ($\beta = 0.241$, $p < 0.001$) on project performance, whereas laissez-faire leadership did not have a significant impact ($\beta = 0.071$, $p = 0.166$). SEM analysis indicated significant positive indirect impacts of both transformational (indirect effect = 0.649, $p < 0.001$), and transactional leadership (indirect effect = 0.393, $p < 0.01$) on project performance through the mediation of teamwork. The Sobel test confirmed the mediation effect of teamwork for transformational (Sobel test statistic = 9.89, $p < 0.001$) and transactional leadership (Sobel test statistic = 3.54, $p < 0.001$). Although laissez-faire leadership showed a significant indirect effect on project performance through teamwork (indirect effect = 0.173, $p < 0.05$), its total effect was not statistically significant (total effect = 0.141, $p > 0.05$). It was also discovered that the relationship between transformational, transactional, and project performance leadership styles is mediated by teamwork. By offering actual data on the crucial role that project manager leadership plays in promoting project performance and the mediating role that teamwork plays, the study adds to the body of literature. A balanced strategy that utilizes both transformational and transactional leadership characteristics is advisable for project managers to implement, as are practical suggestions like encouraging good collaboration among project staff. These realizations have the potential to raise the effectiveness of Ethiopian construction projects and improve project management procedures.

Keywords: transformational leadership, transactional leadership, laissez-faire leadership, teamwork, project performance

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Today, effective project management skills are crucial for navigating the rapidly changing environment to successfully achieve project goals. The project manager is the key to leading projects through these dynamic conditions. The 2024 Global Project Management Job Trends Report highlights the strategic importance of project management expertise and professional certification, providing companies and individuals with essential guidance amidst disruptive Artificial Intelligence (AI), economic instability, and rapid technological development (Management, 2024). In the current day, the need for effective project management has increased significantly, as evidenced by the Project Management Institute's Talent Gap analysis, which underscores the rising significance of skilled project leaders and managers (PMI, 2023).

Because of the rising demand for infrastructure and facilities construction worldwide due to rapid economic development, the construction industry is essential (Haron et al., 2017). The fundamental living circumstances required for the sustainability and advancement of human life on Earth are also supplied by the construction sector (Larionova & Smirnova, 2020). In many nations, there is a strong and growing demand for construction projects to address the growing population, land pressures, and economic activity (Zhang et al., 2014).

One of the main engines of national economies is the construction industry (Munaro & Tavares, 2023). It is seen as an important pillar of the economy that provides support as well as a significant development engine for other economic sectors (Khlaifat, Alyagoub, Sweis, & Sweis, 2019). Thus, infrastructure and building initiatives serve as the cornerstone of the country's development (Hajiani, Azizi, Eshtehardian, & Naseh, 2018).

The global economy is greatly aided by the construction and engineering sectors, which create a wealth of employment prospects for specialists (Musarat et al., 2024). Three main elements account for the close association with the construction industry and the economy as a whole: the industry's vast market size and capacity for investment, the public sector as a significant client, and the industry's high multiplier effect in producing jobs (Amoa-Abban & Allotey, 2014). According to Khlaifat et al., (2019), the internal hierarchical structure of the contractor's organization is one of the main causes of construction project failure.

By meeting the three key project success criteria of time, money, and quality, construction projects are vital to the growth of the economy. Despite some criticism, a number of studies have regarded adherence to these parameters— frequently identified as the "iron triangle"—as the benchmark for assessing the effectiveness of a project (Meredith, Shafer, & Mantel 2017; Papke-Shields, Beise, & Quan, 2010).

One of the biggest businesses in many developing nations, including Ethiopia, the construction sector is distinguished by its scale, unpredictability, and need for significant capital investments. In addition to being a significant economic sector, the construction industry contributes between 12 and 25 percent of the GDP in both developed and developing nations (Gaym, Berhan, Abadi, & Wubishet, 2004). In Ethiopia, for example, building accounts for over 58% of the national budget each year.

According to Gaym et al. (2004), the construction industry accounts for 3-8% of GDP and more than half of gross fixed investment creation in the majority of developing countries. The FDRE Planning and Development Commission (2021) reports that Ethiopia has a 10-year development plan for its construction industry, which aims to provide sustainable employment, encourage ethics, and set up effective mechanisms. The plan seeks to improve the domestic construction industry's contribution to the nation's rapid economic and social development by meeting local demand through domestic companies, replacing imports with local materials, increasing local firms' market share in the sub-region, and building capacity. The specific goals include increasing stakeholder satisfaction, decreasing conflict and accidents, enhancing public views of corruption, growing the market share of local businesses, cutting project timeframes, and creating

more jobs. Additionally, the plan aims to use domestic sources to meet most of the basic requirements for construction inputs.

Studying The effect of project managers' leadership styles on construction projects' performance is essential, especially in light of the global, African, and Ethiopian environment, and the critical role that teamwork plays in mediating desired outcomes (Oyaya, 2016; Turner & Müller, 2005; Wase & Jeyaprabha, 2022).

Effective project management is essential to the success of construction projects. One important component influencing the project's outcome is the project manager's leadership style. This literature study looks into how project managers' leadership styles transformational, transactional, and laissez-faire affect project performance in the context of road-building projects. The role of the teamwork as a mediator was also examined. The review considered disagreements and gaps in the literature at the local, national, regional, and international levels (Oyaya, 2016).

Using the full range leadership development model as a guide, this study looked at how different leadership styles affected project performance. Transformative leadership is defined as inspiring and encouraging subordinates to surpass expectations and produce extraordinary achievements. Studies show that transformative leadership improves project performance across a range of sectors (Bass & Riggio, 2006). The literature lacks of information about the precise impacts of transactional, laissez-faire, and transformational leadership in the road building industry, particularly when it comes to Ethiopia. Considering that scholars focused less on it (kassahun, 2021).

Transactional leadership emphasizes incentives and punishments based on performance, with a focus on interactions between the project manager and team members (Bass & Riggio, 2006). To fully grasp how much transactional leadership styles contribute to project performance in road construction projects in Ethiopia, more research is necessary. According to Bass and Riggio (2006), laissez-faire leadership is a style in which the leader takes a back seat and gives little guidance or supervision. The leaders abstain from decision-making, abdicate responsibility, and let's subordinate finish work and make decisions with little to no guidance. This type of leadership is marked by a great deal of follower autonomy combined with a dearth of direction and assistance from the leader. When opposed to more active and involved leadership styles, laissez-faire leadership has

been linked to lower levels of employee engagement, satisfaction, and performance as well as worse organizational outcomes.

Improving project performance necessitates teamwork since it fosters mutual trust, open communication, and cooperation among team members. Effective team building may enhance the positive effects of both transactional and transformational leadership styles on project performance, claim Shumiye and Ababa, (2019). Examining the specific processes through which teamwork mediates the link between leadership styles and project performance is crucial when it comes to road construction projects.

It is interesting, however, that the relationship between leadership styles and teamwork in the context of road construction projects and the Ethiopian Road Authority has not been the subject of significant research. This research is crucial given the challenges of poor performance, overspending, and delays in project completion that often arise in road-building projects managed by the Ethiopian Road Authority specifically Goba-Berbere-Dellomena Build and design project. While comparable research has been conducted in Ethiopia previously, it has mostly focused on other industries rather than construction specifically, particularly with regard to road-building projects (Aga, Noorderhaven, & Vallejo, 2016; Gemedda & Lee, 2020; Girma, 2016; Kebede & Demeke, 2017; Lagesse, Wang, Larson, & Kim, 2020; Shumiye & Ababa, 2019; Tilahun Tsehay Adviser, 2017; Tsigu & Rao, 2015b).

1.2 Statement of problem

Challenges such as poor performance, overspending, and delays in the Ethiopian Roads Authority's projects motivated this study. Effective leadership is crucial for positive project outcomes, as it involves all stakeholders in achieving shared goals and maintaining a positive environment (PMI, 2021).

Global studies have shown mixed results on the relationship between leadership styles and project performance. Zheng, Wu, and Xie (2017) and Ali et al. (2021b) emphasize the importance of transformational and transactional leadership in fostering creativity and success in projects. Ali et al. (2021) noted that transformational leadership directly contributes to project success, with teamwork as a mediator, while Zheng et al. (2017) highlighted its positive influence on project outcomes.

Gemeda and Lee (2020) found that transactional leadership boosts task performance, while transformational leadership enhances innovative behavior and engagement. Conversely, laissez-faire leadership negatively impacts productivity.

Ethiopian research has primarily focused on time and cost overruns in construction projects. Workneh and Mite; (2020) identified design flaws and financial difficulties as key factors in cost overruns in federal road projects. Shiferaw (2017) reported similar findings in the southern district, citing material price variations and poor planning. Fentahun (2020) categorized issues into time and cost overruns, highlighting psychological biases and poor project management as common causes.

Shumiye and Ababa (2019) found that transformational leadership positively impacts project success in HELVETAS Swiss Interco's operations in Ethiopia, while transactional leadership had a negative effect. Kassahun (2021) observed that transformational and laissez-faire leadership positively influenced the Mojo-Hawassa Road project, but transactional leadership had little impact.

Despite extensive research, the specific implications of leadership styles on project performance in Ethiopia remain underexplored. This study aims to fill these gaps by focusing on the Goba-Berbere-Dellomena Build and Design Project, providing a comprehensive understanding of the relationships between leadership styles, teamwork and project performance in the Ethiopian government construction industry.

1.3 Research Questions

The following research questions were the focus of the investigation:

1. What is the dominant leadership style exhibited by the project managers of the Goba-Berbere-Dellomena Build and Design project?
2. What is the level of project performance in the Goba-Berbere-Dellomena Build and Design project?
3. What is the status of teamwork practice in the Goba-Berbere-Dellomena Build and Design project?
4. Is there any significant relationship between the leadership styles exhibited and the level of project performance of the Goba-Berbere-Dellomena Build and Design project?

5. To what extent have the leadership styles exhibited affected the project performance level of the Goba-Berbere-Dellomena Build and Design project?

6. To what extent does teamwork mediate the relationship between project managers' leadership styles and project performance in the Goba-Berbere-Dellomena Build and Design project?

1.4 objectives of the study

1.4.1 General objectives

To examine the effect of leadership styles on project performance, considering the mediating role of teamwork within the context of the Ethiopian Road Authority, considering the Goba-Berbere-Dellomena Build and Design project.

1.4.2 Specific objectives

The specific objectives of the study are as follows:

1. To identify and analyze the dominant leadership style(s) exhibited by the project managers of the Goba-Berbere-Dellomena Build and Design project.
2. To assess the level of project performance in the Goba-Berbere-Dellomena Build and Design project.
3. To evaluate the current status of teamwork practices in the Goba-Berbere-Dellomena Build and Design project.
4. To determine the existence and significance of a relationship between the leadership styles exhibited by project managers and the level of project performance in the Goba-Berbere-Dellomena Build and Design project.
5. To investigate the extent to which the leadership styles exhibited by project managers have influenced the level of project performance in the Goba-Berbere-Dellomena Build and Design project.
6. To examine the extent to which teamwork mediates the relationship between project managers' leadership styles and project performance in the Goba-Berbere-Dellomena Build and Design project.

1.5 Significance of the study

In the Goba-Delomena road-building project, research examined how project managers' leadership styles affected project performance and the role that teamwork played as a mediator. The study was highly valuable since it shed light on the relationship between project performance and leadership styles as well as the mediating effect of teamwork. By using the findings as a guide, project managers and organizations were better equipped to choose and train project leaders and maximize project success. Furthermore, the research underscored the significance of cooperation and skillful team dynamics in attaining project achievement. Future project management techniques were guided and modified by the findings, which enhanced performance across the board for the road construction company.

1.6 Scope of the study

The research was conducted on the Goba-Berbere-Delomena build and design road project, which is currently under the direction of the Ethiopian Road Authority (ERA). In terms of time scope, the study was restricted to analyzing the Goba-Berbere-Delomena road project from October to May 2024, allowing for an analysis of project performance within a given timeframe. In terms of content scope, the investigation focused on the effects of leadership styles, particularly transformational, transactional, and laissez-faire styles, on project performance as guided by the Full Range Leadership model. Furthermore, the study examined the mediating role of teamwork. The study used a mixed-methods approach in its methodology, with a focus on convergent parallel design or concurrent mixed-method design. It combined qualitative and quantitative research methods to collect and analyze data thoroughly, taking into account concurrent analysis as well as descriptive and inferential analysis and Sobel test and effect analysis by structural equation modelling using SPSS-AMOS. This allowed for a thorough understanding of the research topic and offered useful insights for the ERA and other organizations of a similar nature.

1.7 Organization of the Study

There are four chapters in the research. In addition to offering a conceptual framework and pointing out gaps in earlier research, Chapter Two offers an extensive survey of the literature. In Chapter Three, the research methodology is covered in detail, including the study area, research design, data collection tools, and analytic techniques. There is also a discussion of ethical issues. The findings and discussions of the six objectives, together with demographic details and the response rate, are presented in Chapter 4. A summary of the results, conclusions, suggestions for the next study directions, and recommendations are given in Chapter 5.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Review of Concepts

2.1.1 Project and project management

A project is a short-term endeavor that is initiated to create a unique product, service, or result. It has allotted resources, a timetable, and well-defined objectives. Projects are distinguished from continuing operations by their intricacy and distinctiveness (PMI, 2017). Heldman (2018) distinguished between projects and operational activities by defining the former as transient in nature and the latter as continuing. Projects have a set timeline that is completed when the project's goals and objectives are met. When the goals and objectives cannot be achieved, projects may be canceled or terminated. However, operations entail work that is ongoing and frequently repeats the same procedure.

In the majority of sectors, projects represent the main motivation for many firms. Projects can be seen as society's attempts at transformation, and these efforts have been getting more and more drastic. Construction project schedule management could lead to enhanced productivity, better project predictability, more confidence from stakeholders, better communication, and a higher chance of project success (Gebreegziabher, 2019).

According to Cha et al., (2018) the life cycle is the only factor that sets projects apart from non-projects. The project's structure will be greatly influenced by the order in which its phases develop. As the project moves into the next phase, the work completed in each phase should be assessed to obtain effective feedback from the experience gained. Planning, organizing, and directing resources are the essence of management in order to successfully and efficiently accomplish predetermined goals. In order to guarantee the efficient conduct of operations, it focuses on tasks, procedures, and frameworks.

Project management, as defined by the Project Management Institute (2017), is the systematic and disciplined process of initiating, planning, executing, supervising, and concluding projects to achieve specific goals and objectives within predefined constraints of time, money, quality, and scope. It entails applying knowledge, abilities, instruments, and strategies to manage resources and stakeholders efficiently, reduce risks, and produce project outputs that are successful. Project management guarantees that tasks are performed within the allotted time, money, and scope while adhering to quality standards. In his book, Kerzner (2017) offers a thorough explanation of how to use dashboards, key performance indicators (KPIs), and project management metrics to measure and track project performance.

The project managers bear the responsibility of overseeing and directing the project team, making crucial choices, and guaranteeing the achievement of the project's objectives. The project manager assigns duties, plans and coordinates the project's operations, keeps track of the work, controls risks, and interacts with stakeholders. The way a project manager leads has a big influence on how well their team works and how well the project turns out (PMI, 2017).

2.1.2 Leadership and project leadership

Leadership is the process of inspiring and motivating others by skillfully applying one's own qualities, abilities, and behaviors. It is defined as influencing and directing individuals or organizations toward the accomplishment of common objectives (Northouse, 2021).

Establishing a project team with exceptional performance is the goal of effective leadership. High-performing project teams succeed for a variety of reasons. The list that follows is not all-inclusive, but it does highlight some important elements related to these teams (PMI, 2017). The capacity to lead and inspire a project team to accomplish project goals is known as project leadership. It entails establishing a distinct vision, giving guidance, and motivating team members to give their best work. According to Müller and Turner (2010), successful project leadership includes motivating team members, encouraging cooperation, and establishing a favorable work atmosphere.

2.1.3 Leadership styles

Khan, Ali, and Umar (2019) assert that the effectiveness of construction industry projects is dependent upon the leadership styles employed. The construction sector is well recognized for a few key components, despite being large and intricate. Project leadership is therefore crucial to this industry's success. A project manager's approach and demeanor in motivating and steering their team toward project objectives are referred to as their leadership style. Three types of leadership are taken into consideration in this situation: transactional, transformational, and laissez-faire. Bass and Riggio (2006), defines transformational leadership entails inspiring and encouraging team members to put the needs of the organization ahead of their own. With an emphasis on defining clear expectations, offering incentives for reaching milestones, and resolving performance concerns, transactional leadership promotes a more transactional connection between the team and the leader (Bass, 1985). Laissez-faire leadership is defined by a hands-off attitude, in which leaders give their subordinates a great deal of liberty while offering them little to no direction, advice, or support (Bass & Riggio, 2006).

2.1.4 Project performance

The assessment of whether a project has succeeded in achieving its goals and producing the desired results is known as project performance. Fulfilling project milestones, reaching targeted quality standards, adhering to financial and schedule restrictions, and fulfilling stakeholder expectations are just a few of its many facets (Kerzner, 2017).

The total success and accomplishment of the project's goals is referred to as project performance, which is assessed based on time, cost, and quality factors (Pinto & Slevin, 1987; Kerzner, 2013; Crosby, 1980). In the realm of project management, a project performance domain encompasses a collection of correlated activities that play a vital role in the successful delivery of project outcomes. These domains are characterized by their interactive and interrelated nature, as well as their interdependence, working together harmoniously to accomplish the desired project objectives (PMI, 2021).

According to the Institute (2013), project performance is defined as "the measure of how well a project is meeting its objectives, including the quality of the deliverables, the timeliness of completion, and the efficiency of the resources used" (PMI, 2013). Effective project performance requires a clear understanding of the project's objectives, scope, and timeline, as well as the resources available to achieve them. It also involves monitoring and controlling the project's progress, identifying and addressing issues and risks, and making adjustments as needed to ensure that the project stays on track.

Numerous measures are available for assessing project performance. To begin with, the schedule performance index (SPI) compares the project's actual and expected durations to determine how effective the timetable was. Second, by contrasting the project's actual and anticipated costs, the cost performance index (CPI) assesses how well the project's budget is working. Thirdly, by contrasting the actual quality with the intended quality, the quality performance index (QPI) assesses the caliber of the project's deliverables. Fourth, by contrasting the actual and planned scopes of the project, the scope performance index (SPI) calculates the degree to which the project's scope is being fulfilled. With the help of these measures, project managers may evaluate a project's performance in all important areas and make well-informed decisions that will guarantee the project's successful conclusion.

2.1.5 Teamwork

Teamwork refers to the collaborative efforts of individuals working together towards a shared objective. It involves effective communication, coordination, and cooperation among team members, where each individual contributes their unique skills, knowledge, and expertise to achieve superior outcomes that would be difficult to accomplish individually (Salas et al., 2015). Teamwork plays a crucial role in project success by fostering collaboration, trust, and open communication among team members. In this context, team building serves as an intermediary factor between the project manager's leadership style and project performance. According to Katzenbach and Smith (2009), "a team is a small number of people who are interdependent in their work and who share a common purpose, goals, and approaches." They argue that teamwork is essential for

achieving high-quality outcomes in organizations, as it enables individuals to bring their diverse skills and perspectives together to solve complex problems and make decisions.

In their study of successful teams, Katzenbach and Smith (2009) identified several key characteristics of effective teamwork. It is advisable that project teams strive to embody these characteristics. Firstly, teams should have a clear and shared understanding of the team's purpose and goals. Secondly, there should be a commitment to collaboration and mutual support among team members. Additionally, teams should focus on achieving collective outcomes rather than individual goals. Furthermore, teams should foster a willingness to engage in open and honest communication. It is also important to cultivate a culture of trust and respect where individuals feel comfortable sharing their ideas and opinions. Teams should also be open to trying out novel strategies and taking chances. Ultimately, there needs to be a commitment to ongoing education and development. These traits align with previous researchers' results, which emphasize the significance of cooperation, communication, and trust in successful teamwork (Hackman, 2002).

2.2 Leadership Theories

2.2.1 Full Range Leadership Development model:

The FRLD model developed by researcher Avolio (2011) includes laissez-faire, transactional and transformational leadership philosophies. While transactional leaders provide incentives and punishments, laissez-faire leaders take a hands-off approach and transformational leaders inspire and encourage. In this area, competent managers change their strategy in response to the needs of the team and the project.

Transformational leadership, the central concept of the FRLD model, was first introduced by James V. Downton Burns in 1978 and further developed by Bernard M. Bass in 1985 (Bass, 1985). This method places great emphasis on a leader's ability to inspire and motivate his followers to achieve great things. According to Bass (1985), transformational leaders inspire their followers to work toward a common goal by outlining a vision and giving them the necessary encouragement. Transformational leaders exhibit four key characteristics: idealized influence, intellectual stimulation, motivational drive, and individual concern (Bass, 1985).

According to Burns (1978), transactional leadership theory suggests that leaders influence their followers through transactional exchanges, where incentives and punishments are based on followers' behavior and compliance with rules. The goals of transactional leaders include achieving predetermined goals and maintaining organizational effectiveness. Bass and Riggio (2006) further explain that contingent incentives and management-by-exception are the two main practices of transactional leadership.

Northouse (2018) describes the laissez-faire leadership style, which is characterized by non-interference, independence, empowerment, and low commitment, where superiors give their subordinates significant latitude to make decisions and carry out tasks on their own. The FRLD model shows that transformational leadership is the most successful strategy for achieving exceptional performance and developing a sense of shared purpose and commitment, although transactional and laissez-faire leadership styles offer advantages (Bass & Riggio, 2006).

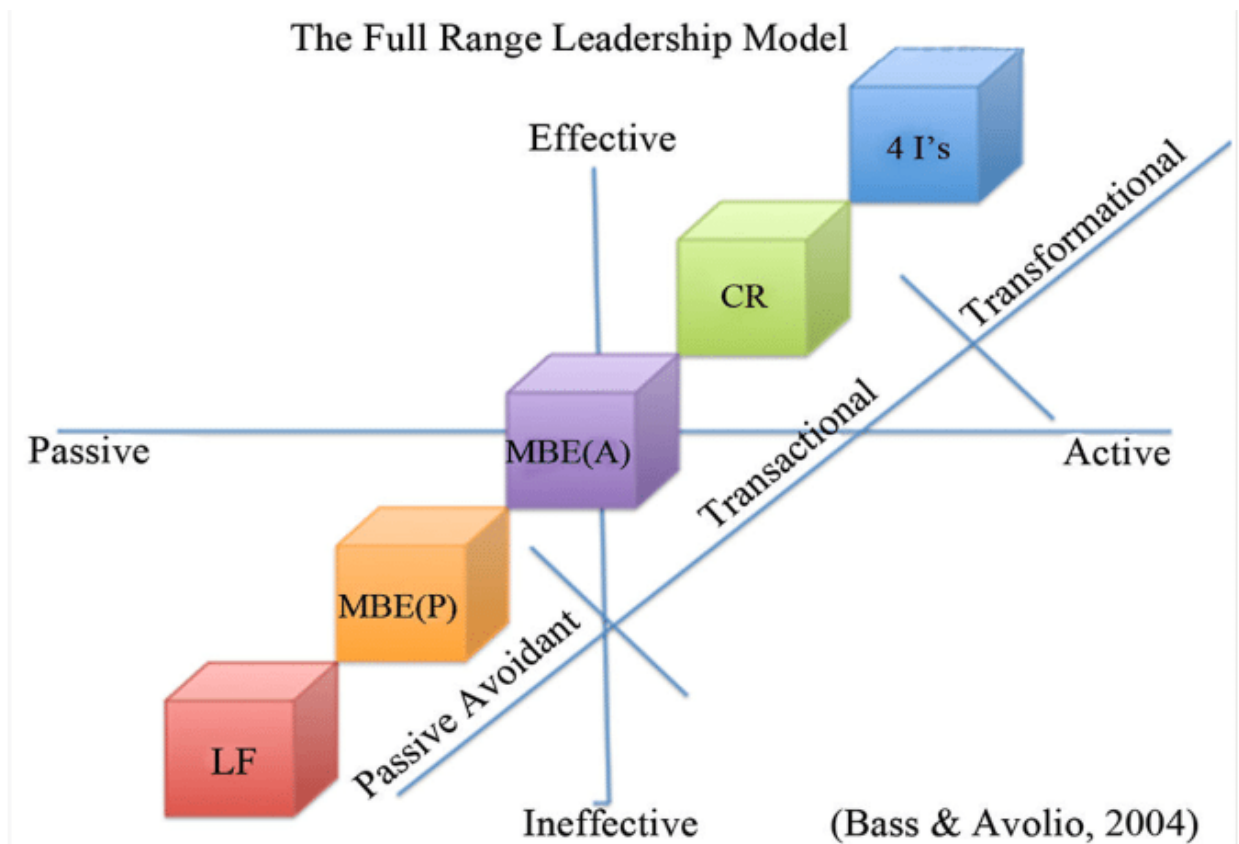


Fig.2.1 Full-range leadership model
Source: (Bass & Avolio, 2004)

The basic concept of Bass & Avolio's (2004) Full Range Leadership Model is that leadership styles can be categorized along a spectrum from passive/ineffective to active/effective. This provides a thorough foundation for understanding the many strategies that leaders could use.

Laissez-faire leadership is at the passive or ineffective end of the scale; It is characterized by a general avoidance of leadership tasks and a lack of commitment to managing employees.

The transactional leadership philosophies of Contingent Reward (CR), Management-by-Exception Active (MBE-A), and Management-by-Exception Passive (MBE-P) move toward the middle of the continuum. While MBE-A leaders keep a close eye on followers and take remedial action when standards are not met, CR leaders set clear expectations and reward acceptable performance with awards, and MBE-P leaders become involved only when major problems arise. Maintaining the status quo and achieving predetermined goals through a system of incentives and penalties are the fundamental goals of transactional leadership. Transactional behavior has its place in some organizational situations, but does not have the same impact as transformational behavior.

Transformational leadership practices include the “4 Is” – idealized influence in which leaders set an example of high moral standards; inspirational motivation, where leaders inspire followers with an appealing vision; intellectual stimulation, where leaders encourage followers to question assumptions and find new solutions; and individualized consideration, where leaders provide unique coaching and support to help followers grow – at the active/effective end of the continuum. Success in the workplace and improved performance are the result of transformational leaders' ability to nurture, challenge and provide personalized support to their mindset.

2.2.2 Project performance theory

One of the traditional views of project success is the "iron triangle" or "triple constraint," which focuses on the successful management of the three competing factors: scope, time, and cost (Meredith et al., 2017; Atkinson, 1999). However, this approach has

been criticized for its limitations, as it fails to consider additional factors that contribute to project success (Ika, 2009; Jugdev & Müller, 2005).

Perspectives on what constitutes project success have evolved beyond the iron triangle to include factors such as client satisfaction, team performance, and organizational impact (Shenhar & Dvir, 2007; Pinto & Slevin, 1988). Additionally, project performance is influenced by contextual factors, such as project type, complexity, and environment (Shenhar & Dvir, 2007), and aligning project management practices with the specific characteristics of a project is crucial for successful delivery (Shenhar & Holzmann, 2017; Bredillet, 2010).

The role of complexity and uncertainty in shaping project performance has been a topic of great interest (Remington & Pollack, 2016), and strategies for managing complex and uncertain projects that focus on adaptability and risk reduction have been developed (Geraldi, Maylor, & Williams, 2011). Stakeholder engagement and management also have a significant impact on project performance (Jepsen & Eskerod, 2009), and techniques for effective stakeholder identification, analysis, and communication are critical to project success (PMI, 2021). Finally, the influence of leadership styles and team behavior on project performance has been extensively studied (Müller & Turner, 2007; Hoegl & Gemuenden, 2001), and strategies for building high-performing project teams are critical to project success (DuBois et al., 2015).

2.3 Empirical Review of Literature

2.3.1 Dominant Leadership Styles in Construction Projects

Holzmann and Mazzini, (2020) conducted research in the creative industries to examine the relationship between project success and leadership style. According to their data, transactional leadership style is the second most suitable approach for successful initiatives after transformational leadership. The results showed a strong positive correlation between project performance and both transactional and transformational leadership styles.

Khan et al. (2019) examined the effects of several leadership ideologies on project performance in private construction firms, including transactional, spiritual, laissez-faire, and transformational leadership. Project managers, directors, supervisors, managers, and

team members made up the 320 randomly selected participants in the cross-sectional survey methodological research. The investigation's findings demonstrated a robust relationship between transformational leadership and project performance. Additionally, the contingent compensation and management by exception (active) components of transactional leadership showed a positive association, but the management by exception (passive) component had a negative correlation with project performance. Furthermore, it was demonstrated that project success was negatively correlated with laissez-faire leadership.

Tiwari and Raman (2022) carried out meta-analytic research to determine how transactional and transformational leadership affect project success. Their investigation looked at other project- and country-level factors as well as attempted to reconcile the inconsistent results about these relationships. 64 effect estimates from 41 primary research publications on initiatives to examine the suggested relationships were included in the study. The meta-analysis's conclusions showed that transformational leadership had a much greater positive influence on project performance than transactional leadership.

Liphadzi (2015) conducted a study to assess the leadership style practices of various project managers and executives in the construction industry in South Africa. The study also examined leadership development techniques used in the industry. The primary and secondary data sources used in this study were consulted. The secondary data was obtained through a careful review of relevant literature, while the primary data was obtained by responding to a structured questionnaire to 150 project managers and contractors in the South African construction industry. The results of the study showed that project and construction managers in the South African construction industry prefer transformational leadership over transactional and democratic leadership philosophies.

Based on a review of 64 effect sizes from 41 primary project studies, the results of the meta-analysis showed that transformational leadership had a greater impact on project success than transactional leadership. Successful project outcomes have been found to be more closely linked to transformational leadership than to transactional leadership, which focuses on setting clear goals and offering conditional incentives or corrections. Transformational leadership is characterized by inspiring and motivating team members Abbas and Ali, (2023).

2.3.2 Level of Project Performance in Construction Projects

Larsson, Eriksson, Olofsson, and Simonsson (2015) examined how project managers' leadership styles affected the way their projects performed. The study was conducted based on a questionnaire survey among 162 project managers working for Sweden's largest public infrastructure client. The results of the study show that the project manager's leadership style influences the budget, time and quality of the project. The results show a significant relationship between the project manager's leadership style and the overall success of the project.

Kariuki, (2019) investigated the relationship between project managers' leadership styles and the effectiveness of Kenyan water projects. Project time and cost were utilized to evaluate project performance, and leadership style was operationalized in the study using both transactional and transformational approaches. Utilizing hierarchical regression analysis, the researcher looked at data from 102 completed water projects between 2011 and 2014. The findings demonstrated a substantial correlation between project managers' leadership styles and their ability to complete tasks on schedule; transformational leadership philosophies were linked to superior project time results. The researcher attributed the study's absence of a significant relationship between project cost performance and leadership style to the use of fixed-price contracts, which set maximum allowable cost modifications and specified conditions for cost escalation.

The relationship between leadership styles and construction project performance has recently been examined. According to Ahmed et al. (2023), aligning leadership philosophies with project Performance can promote high performance, resilience, and creativity, all of which are necessary for long-term success in a highly competitive economic environment. Robbertse and Amoah (2022) recommend that project managers should demonstrate a charismatic, supportive, transformational and democratic leadership style to increase construction productivity and reduce costs and schedule overruns.

Additionally, Martin and Edwards, (2016) found that when management levels rise, leadership philosophies—particularly democratic and transformational ones—improve project performance, suggesting a greater correlation between management level and project success. Furthermore, Renzi, (2020) found that transformative leadership styles using emotional intelligence improve project implementation by motivating team

members and creating a psychologically safe environment. Lastly, Aga, (2016) showed that project participants can be inspired to innovate in construction projects when there is a strong congruence between organizational culture and transformational or transactional leadership styles.

2.3.3 The Status of Teamwork Practices in Construction Projects

Iqbal, Nawaz, and Bahoo (2017) carried out a research in Pakistan's higher education sector to look at how project teamwork affects project success. Four characteristics were included in their conceptualization of project teamwork: cohesion, communication, cooperation, and technical competence. 125 respondents provided survey data, which the researchers gathered using a quantitative research methodology. Least Squares Partial-Structural Equation All four project teamwork traits were positively and significantly connected with effective project outcomes, according to a modeling study of the data. This study highlights the importance of collaboration for project performance and recommends that project managers prioritize teamwork on par with personal leadership attributes.

Kalambayi, Onojaefe, Kasse, and Tengeh (2021) examined how different leadership philosophies impact employee productivity in Cape Town-based construction companies. The responses to the 456 questionnaires distributed at construction sites were examined using ANOVA tests, regression analysis, post hoc tests and correlation analysis. The results showed a statistically significant positive relationship between the leadership style of project managers and the performance of their subordinates. Based on these results, the researchers developed a conceptual framework for leadership development that included tools such as empowerment, training, coaching, delegation and engagement. The main objectives of this study were to improve employee performance, promote leadership development of local project managers and ultimately achieve successful project outcomes.

Aga, Noorderhaven, and Vallejo (2016) examined how team building can act as a mediator in the relationship between project managers' transformational leadership style and project success. They conducted a study of 200 development project managers employed by Ethiopian non-governmental organizations. The study found that

transformational leadership style had a positive effect on both team building and project success and that team building exercises had a positive effect on project success. Aga (2016) conducted a study to examine the impact of goal clarity on the relationship between transactional governance and project performance in development initiatives managed by non-governmental organizations in Ethiopia. Research results indicate a positive relationship between contingent rewards in transactional leadership and project success.

2.3.4 Relationship and influences of leadership styles on project performance

The effects of transformational and transactional leadership styles on project success have been well studied. These leadership approaches, coupled with the competence of the project manager, are widely recognized as potential factors contributing to successful project outcomes (Turner & Müller, 2005).

Andi, Sugianto, and Khoesasih (2021) compared transactional and transformational leadership paradigms in a study to examine the actual and expected leadership behavior of project managers in the construction sector. Using a survey of 63 members of construction teams working on active projects in Indonesia, researchers found that while a laissez-faire style was rarely expressed, project managers often exhibited both transactional and transformational leadership traits. In particular, the analytical hierarchy method revealed that the members of the project team expected a greater proportion of transformational leadership behaviors from their managers than transactional ones. This study highlights the value of transformational leadership in the construction industry by providing insights into the leadership strategies of construction project managers and the preferences of their project teams.

The effect of transactional leadership on the alignment of IT and business processes was examined by Wang, Toseef, and Gong in 2021. Based on the findings, entrepreneurs' contingent reward and management by exception practices have a significant impact on IT-business process alignment. Additionally, the researchers found that market and hierarchical cultures affect the relationship between transactional leadership behaviors and IT-business process alignment (Wang et al., 2021).

The study conducted in 2019 by Usman, State, State, and State (2019) revealed that transformational leadership styles had a noteworthy significant impact on behaviors that resulted in increased productivity within the construction industry. Additionally, the research revealed a favorable relationship between organizational commitment and a number of transactional and transformational leadership characteristics, with a greater effect from transformational leadership.

Karamunya (2017) conducted a study to look into how project managers' transactional and transformational leadership styles affected the success of county government programs in Kenya's North Rift area. The study's target audience consisted of 57 project managers, and it used an explanatory research design. The basic data, collected by questionnaires, were analyzed using multiple regression analysis and the Pearson correlation coefficient. The study's findings indicated that project success was highly influenced by both transformational leadership ($\beta_1 = 0.361$, $p < 0.05$) and transactional leadership ($\beta_2 = 0.457$, $p < 0.05$), indicating that both leadership styles had an effect on the completion of the county government projects under investigation.

Oyaya (2016) conducted research in the Westland's Sub-county of Nairobi County to examine the impact of leadership ideologies on the effectiveness of ongoing housing projects. The sample of respondents for the study consisted of project managers and employees of 78 ongoing construction projects in the study area. Using a descriptive survey technique, the researcher administered questionnaires with closed- and open-ended questions to 65 projects selected using stratified random sampling. Project performance data were collected from project records and analyzed using SPSS version 23. The results were then presented as percentages and frequency distribution tables using basic descriptive statistics. The results of the study showed that transformational leadership style had the greatest impact on the success of construction projects, with an overall mean of 3.73 then came the combined mean scores of 3.21 and 3.32 for team engagement and organizational culture, respectively. The transactional leadership style, however, had the least influence, with an overall mean of 3.19.

Lagesse, Lemi, and Alemu (2020) conducted research examining the relationship between leadership styles and organizational performance in Ethiopian commercial banks. Using a panel design, a causal research methodology and a multifactor leadership

questionnaire, the study found that both transformational and transactional leadership styles significantly increased banks' return on capital. Both transactional leadership, which provides clear direction and rewards, and transformational leadership, which encourages change and creativity, have been shown to have a significant positive impact on bank performance. This empirical evidence highlights the critical role of leadership philosophies in influencing project and organizational outcomes.

Mary (2018) conducted a study to examine how four aspects of leadership impacted the effectiveness of Compassion International's initiatives in Kitui County. The study targeted 160 people involved in the implementation of these initiatives and used a descriptive research approach. The sample size selected through stratified random sampling included 113 respondents. Email-based surveys were used to collect data from respondents. Quantitative data were examined using descriptive statistics such as means, frequencies, percentages, and standard deviations. To determine the relationship between the independent and dependent variables, multiple regression analysis was also carried out. Qualitative data were examined using content analysis. The results showed a strong relationship between leadership and project performance. In particular, the study found that project success was positively correlated with leadership styles, leadership control, and leadership experience and leadership skills. This verifiable information illustrates how important good leadership is to the success of a project.

kassahun (2021) conducted a study on Ethiopian road construction and examined the influence of leadership style on project performance. Due to the small population size, the study used a census survey in addition to a quantitative research method and an explanatory research design. Data were collected using self-administered questionnaires and analysis was performed using SPSS version 20. Descriptive statistics such as frequency, percentage, mean and standard deviation were used to summarize respondents' demographic data and opinions on the relationship between independent and dependent variables. Inferential statistics such as Pearson correlation and simple linear regression were used to determine the relationship between the variables and the effect of the independent variable (leadership style) on the dependent variable (project performance). The results showed that transformational and laissez-faire leadership styles had a significant and positive impact on the success of the Mojo-Hawassa Road project.

Furthermore, the Pearson correlation coefficient showed a positive relationship between project success and leadership philosophies. Leadership skills, knowledge or transactional leadership techniques did not have a significant impact on project performance.

2.3.5 The mediating role of teamwork between leadership styles and project performance

Numerous studies have examined the role of teamwork as a mediator between project performance and leadership styles. For instance, in Pakistan's construction companies, Saleem, Sajid, Aftab, and Malik (2021) looked at the role that team performance had as a mediator in the relationship between transformational leadership style and project success. The study used a random sample with 230 subordinates acting as respondents. Data were collected through offline distribution of reliable and validated questionnaires. The data was examined using SEM-PLS analysis and the results showed that transformational leadership significantly and positively influenced project success. Furthermore, a strong relationship was found between team performance and transformational leadership, which benefited project success. Overall, the study showed that transformational leadership influences project success both directly and indirectly.

Gemeda and Lee (2020) they conducted a comparative study to examine the relationships between information and communications technology (ICT) professionals in South Korea and Ethiopia in terms of leadership styles, professional commitment, and work outcomes. Using a self-assessment questionnaire, researchers collected information from 291 people in South Korea and 147 people in Ethiopia to assess innovative work behavior, task performance, job commitment and leadership styles. Multiple linear regression analysis was used to evaluate the theories. The results showed a strong positive correlation between innovative work behavior and work engagement and transformational leadership style. The transactional leadership style, on the other hand, showed a strong positive relationship with task performance. It is interesting to see that task performance has suffered significantly under a laissez-faire leadership style.

The study examined the mediating roles of teamwork quality and team development in the relationship between transformational leadership style and project performance. The

study uses a quantitative methodology and utilizes data from 374 information systems development project managers in Pakistan. The results show that transformational leadership increases project success through the sequential teaching of efficient team building techniques and superior teamwork. This highlights the critical role that team dynamics and leadership style play in achieving effective project outcomes and emphasizes the importance of communication, coordination and cohesion (Ali et al., 2021).

According to Aga, Noorderhaven, and Vallejo (2016), the relationship between transformational leadership and project performance is partially mediated by teamwork, as revealed by research from 200 NGO project managers in Ethiopia. Transformational leaders cultivate connections that are beneficial to projects through their team building exercises. This suggests that an important way transformational leadership improves performance is through team building. To ensure successful project implementation, the study highlights how important it is for project managers to take a transformative approach and focus on efficient team building.

A model that examines the relationships between stakeholder satisfaction, project performance, teamwork, and a project manager's leadership style was verified by Yang, Wu, and Huang (2013). Project managers who combine transactional and transformational leadership styles can improve teamwork and project performance, according to a study that used structural equation modeling and industry survey data. A high project success in terms of schedule, costs and quality leads to higher stakeholder satisfaction. Above all, the study highlighted how important leadership style and teamwork are for project success and stakeholder outcomes. In particular, teamwork plays a more mediating role in the relationship between project performance and leadership style.

Shokory & Suradi, (2018) conducted a study to examine the effects of a project manager's transformational leadership and the mediating role of work engagement on the extra-role performance of project team members. To examine the relationships, researchers used Monte Carlo analysis and hierarchical linear modeling (HLM) with data collected from 195 project team members across 39 construction teams. The results showed that the relationship between a project manager's transformational leadership and

team members' extra-role performance was mediated by work engagement. This study provides new insights into the consequences of transformational leadership and highlights the critical role that employee work engagement plays in understanding how transformational leadership influences the role-independent, discretionary behavior of project team members.

Kebede and Demeke (2017) examined how leadership philosophies affect satisfaction with academic work in higher education institutions in Ethiopia. In a cross-sectional study of academic staff at some public institutions, researchers used the Multifactor Leadership Questionnaire and the Job Satisfaction Study. The results of the study showed that transformational leadership had a positive impact on teachers' job satisfaction, although no significant relationship was found between employee job satisfaction and other leadership styles. This was determined using logistic regression analysis. In the context of Ethiopian higher education, this study highlights the significant influence of transformational leadership on job satisfaction of academic employees.

Girma's (2016) In federal and administrative sports organizations in Addis Ababa, Ethiopia, a study examined the relationship between subordinates' job satisfaction and transformational and transactional leadership styles. The researcher used SPSS to examine the data after surveying 242 people, 185 of whom were employees, who answered the Multifactor Leadership Questionnaire and the Job Satisfaction Questionnaire. Considering demographic characteristics such as job position, age, gender and work experience, the results showed that both transformational and transactional leadership styles had a positive influence on subordinates' job satisfaction in the Ethiopian sports organizations. This study highlights the impact of different leadership philosophies on employees' satisfaction with their jobs in Ethiopian sports management companies.

In their research, Tsigu and Rao (2015a) examined the relationship between leadership style and employment outcomes in the Ethiopian banking sector. 549 managers and bank employees were surveyed by researchers who divided leadership into two categories: transactional and transformational, and assessed work outcomes based on performance and enjoyment. The results of the correlation and regression analysis showed that the transformational leadership style had a greater impact on explaining the variance in job

satisfaction and job performance than the transactional leadership style. This study illustrates how different leadership philosophies impact employee outcomes in the Ethiopian banking sector.

Wase and Jeyaprabha (2022) conducted a study on the impact of multiple leadership philosophies on worker productivity in the education sector of Bole suburb in Addis Ababa, Ethiopia. Using transformational, transactional, and autocratic and servant leadership as independent variables, the researchers surveyed 110 respondents. They then analyzed the data using SPSS. The results showed that servant and transformational leadership styles had a positive and significant impact on employee performance, but transactional and authoritarian leadership styles had no significant effect. In the context of Ethiopian school education, this study provides an in-depth understanding of the differential impact of different leadership approaches on work outcomes.

2.4 Knowledge Gap

The literature emphasizes the crucial role of leadership styles in the success of their teams and projects. While extensive research has been conducted globally on this topic, local studies have yielded inconsistent results. Some scholars have found that both transactional and transformational leadership positively impact teamwork (Gemeda & Lee, 2020; Girma, 2016; Tsigu & Rao, 2015a). Others argue that transformational leadership has a more positive effect on teamwork and project performance, whereas transactional leadership has a negative or negligible impact. Laissez-faire leadership has shown both positive and negative associations with project performance in different studies (kassahun, 2021; Kebede & Demeke, 2017; Shumiye & Ababa, 2019; Tilahun Tsehay Adviser, 2017; Wase & Jeyaprabha, 2022).

Despite these findings, little research has explicitly explored the relationship between collaboration and leadership styles in the Ethiopian Road Authority and road construction projects. Given the recurring issues of poor performance, overspending, and delays in these projects, this research is particularly important. Although previous studies in Ethiopia have addressed similar issues, they have mainly focused on other sectors rather than road construction (Aga et al., 2016; Gemeda & Lee, 2020; Girma, 2016; Kebede &

Demeke, 2017; Igesse et al., 2020; Shumiye & Ababa, 2019; Tilahun Tsehay Adviser, 2017; Tsigu & Rao, 2015b).

This study examined the effects of leadership styles (transformational, transactional, laissez-faire) and teamwork on project performance using the Full Range Leadership Development model. It considered teamwork as a mediator between leadership styles and project performance, aiming to reconcile previous mixed results through modernized analytics. The research addressed knowledge gaps surrounding inconsistency in past studies, lack of local study in Ethiopia and the role of teamwork in the relationship between leadership approaches and project outcomes.

2.5 Conceptual Framework

The conceptual framework assumes that transformational, transactional and laissez-faire leadership styles (independent variables) influence project performance (dependent variable). Teamwork is included as a mediating variable, suggesting that it influences the relationship between leadership approaches and project outcomes. The framework presents both direct and indirect relationships and implies that leadership styles can influence performance directly and indirectly through teamwork. The conceptual model is based on the theoretical foundations of the Full Range Leadership Development (FRLD) model and the inclusion of teamwork as a mediating component.

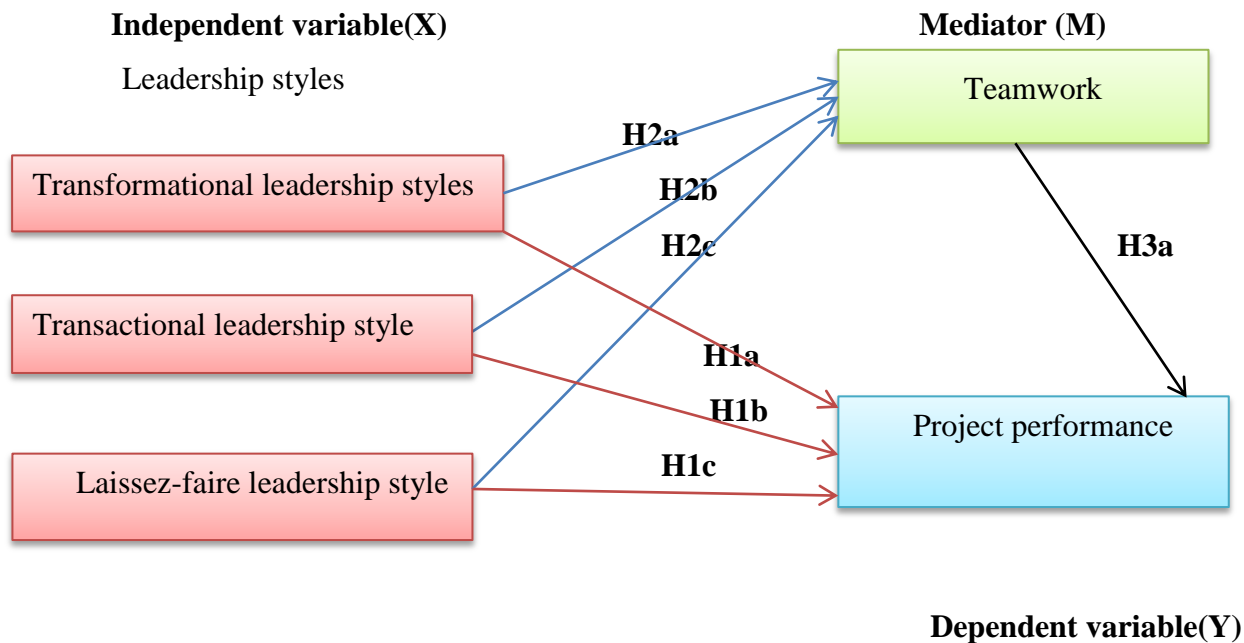


Fig. 2.2 Conceptual framework of the study

Source: own construction based on (Ali at el., 2016; Shumiye & Ababa, 2019; Bass & Avolio, 1994)

2.6 Research hypotheses

H1a: Transformational leadership has a positive direct effect on project performance.

H1b: Transactional leadership has a positive direct effect on project performance.

H1c: Laissez-faire leadership has a positive direct effect on project performance.

H2a: Transformational leadership has a positive effect on teamwork.

H2b: Transactional leadership has a positive effect on teamwork.

H2c: Laissez-faire leadership has a positive effect on teamwork.

H3a: Teamwork has a positive effect on project performance.

Indirect effect hypothesis:

H4a: Teamwork mediates the relationship between transformational leadership and project performance.

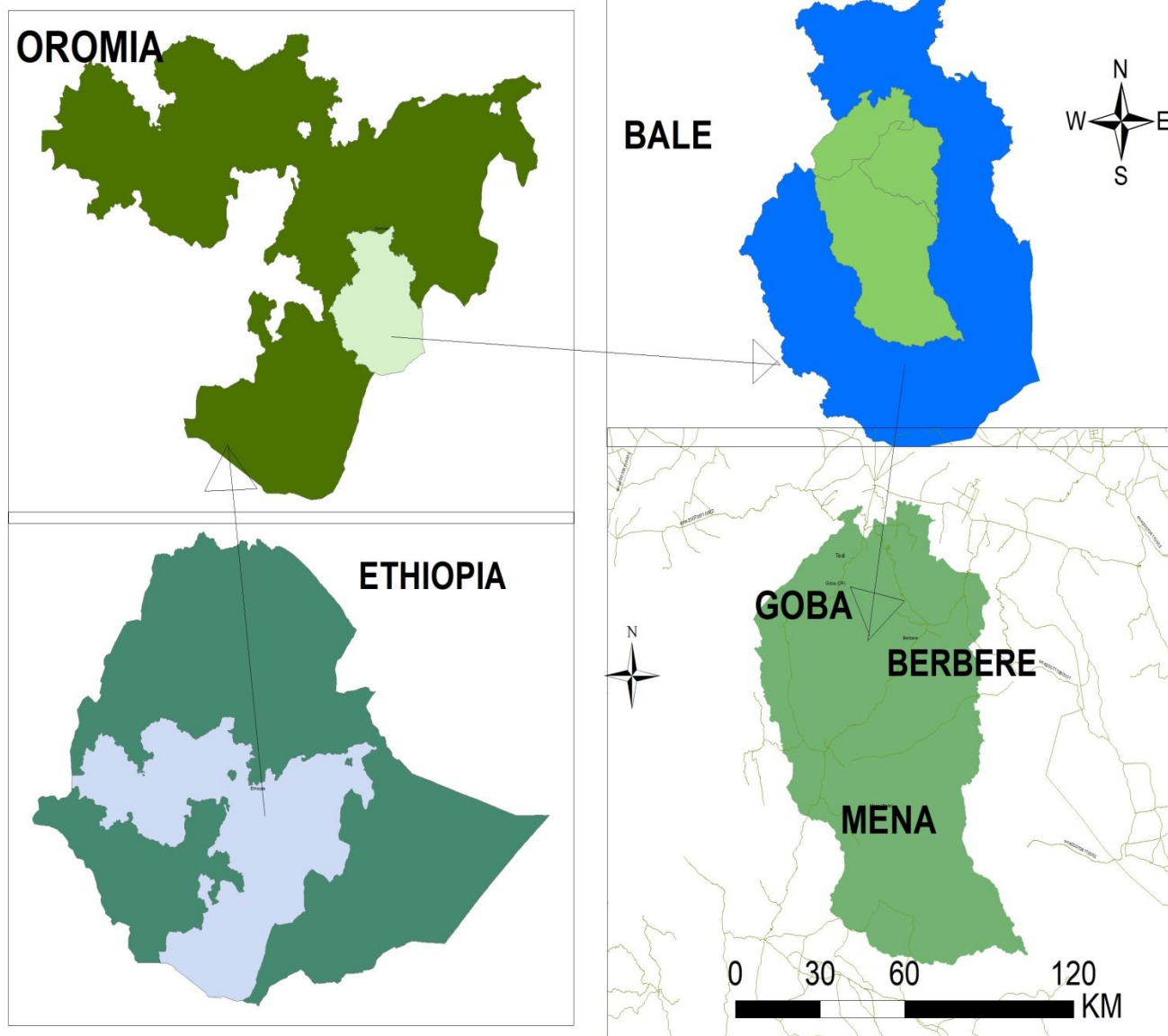
H4b: Teamwork mediates the relationship between transactional leadership and project performance.

H4c: Teamwork mediates the relationship between laissez-faire leadership and project performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Description of Study Area



Source: researcher (2024)

Fig. 3.1 Map of Ethiopia, Oromia, Bale, Goba-Berbere-Dellomena

In the Bale zone in the Oromia region of Ethiopia, the Goba-Berbere-Dellomena road project connects these three woredas (districts) with the Goba-Berbere-Dellomena area where the research was conducted. Named after the ancient kingdom of Bale, the coordinates of the Bale Zone are 6°44'59.99" north latitude and 40°14'60.00" east longitude. Goba is a town and separate woreda in Bale Zone. approximately 446 kilometers southeast of Addis Ababa. Its coordinates are 7°0'N 39°59'E and its altitude is 2,743 meters. Berbere, one of the woredas in Bale Zone, is located at latitude 6°39'59.99" N and longitude 40°09'60.00" E. It is flanked by other woredas. Delo Menna was formerly part of the Woreda Menna Angetu and is another woreda in the Bale Zone. Its coordinates are 6°24'59.99" north latitude and 39°49'59.99" east longitude (Wikipedia).

The study area encompasses the Goba-Berbere-Dellomena region, where the research project was conducted. These three woredas are interconnected by the Goba-Berbere-Dellomena road project, providing a transport link within the area. The Goba-Berbere-DeloMena Build and Design Project is a road construction initiative located in the Oromia Regional State of Ethiopia, aiming to create an approximately 134-kilometer-long AC standard road that will connect three Woreda Seats and fifteen Kebeles within the Bale Zone. The is expected to enhance the quality of life for the local community by improving access to market centers and stimulating economic growth (ERA).

3.2 Research Paradigm, Design and Approach

Researchers adopt a pragmatic research paradigm that allows for the use of both quantitative and qualitative methods to solve the practical research problem (Creswell & Clark, 2017). To provide a comprehensive knowledge of the relationships between leadership styles, teamwork, and project performance, the study used a convergent parallel design or concurrent mixed-methods design in which quantitative and qualitative data were collected and integrated simultaneously. The research approach was a mixed methods approach that involved combining quantitative techniques such as closed-ended and open-ended questionnaires and qualitative methods such as interviews to thoroughly examine the research problem from multiple perspectives.

3.3 Types and Sources of Data

Research utilized both quantitative and qualitative types of data. The data source was primary data. The primary data was collected during the ongoing project, as the researcher had access to the relevant respondents. Questionnaires pertaining to leadership styles, performance indicators, and teamwork were utilized to collect quantitative data from project managers and team members. Furthermore, the investigator gathered qualitative data by conducting interviews with significant informants in order to have a deeper knowledge of the connections among these variables.

3.4 Sampling Design

The researcher performed a sample survey on a subset of the population due to realistic constraints on time, resources, and effort that prevented them from examining the full population. Using the sample size calculation formula created by Krejcie and Morgan (1970), the sample size was found to be 155, whereas the intended population size was 260.

3.4.1 Population and Sampling Frame

The population consisted of 260 individuals, including project managers and team members actively involved in 2024 ongoing road construction projects in Goba – Berbere – Dellomena, representing the entire group of interest the sampling frame contains 59 project managers and 201 project team members. From this population, the researcher used a sample size of 155, selected through a combination of stratified random sampling from the project management database and purposive sampling of key informants, to conduct the study and make inferences about the population.

3.4.2. Sampling Unit

The sampling units in this research refer to the individual elements that make up the sample, which include project managers (35) - individuals responsible for leading and managing the road construction projects in Goba–Berbere–Dellomena, such as managers, supervisors, foremen, clients and other team leaders, as well as project team members

(120) - individuals actively involved in the execution and implementation of the projects, such as engineers, experts, technicians, operators and daily laborers.

3.4.3. Sample Size Determination

The sample size calculation formula established by Krejcie and Morgan (1970) was used to estimate the study's sample size (n = 155). The following is the formula:

$$n = \frac{X^2 NP(1 - P)}{d^2(N - 1) + X^2 P(1 - P)}$$

Here, n is the sample size.

X^2 = Chi-square at one degree of freedom for the given confidence level (in this example, the Chi-square value was 3.8416)

N is the population size, which in this study was 260.

P = Population Proportion; to have the largest sample size, assume 0.50.

d = The desired error margin, which is set at 0.05 or 5%.

Entering the values: $n = (3.8416)(260)(0.5)(0.5) / ((0.0025)(259) + (3.8416)(0.5)(0.5)) = 155$

thus, taking into account a 95% confidence level, a population size of 260, a population percentage of 0.50, and a targeted margin of error of 5%, a sample size of 155 was found to be adequate for the study.

Table 3.1 the project, population size, proportion, sample size and returned responses

S. No	project	Population size	proportion	Sample size	Returned responses
1	Goba-Berbere-Dellomena project managers	59	22.69%	35	31
2	Goba-Berbere-Dellomena project team members	201	77.31%	120	111
Total		260	100%	155	142

Source own survey on Goba-Berbere-Dellomena build and design project (2024)

3.4.4 Sampling techniques and procedures

The research used a combination of purposive and stratified random sampling methods. The sample size was set at 155 respondents, consisting of 35 project managers (leadership roles) and 120 randomly selected project team members (follower roles). A total of 155 questionnaires were distributed, which received 142 responses - 31 from project managers and 111 from team members. Furthermore, the researcher used a purposive sampling approach to select five key individuals, including two project managers and three team members.

3.5 Data collection instruments

The research process began by obtaining a support letter from the university. This letter was then used to contact the ERA (Ethiopian Road Authority) head office to request support and assistance in overseeing and collecting the data. The support letter obtained from the head office was subsequently used to approach the contractor's office to gather information.

The study utilized primary data, specifically cross-sectional survey data collected within a specific time frame from April 15, 2024, to April 30, 2024. The data collection instruments employed was self-administered questionnaires and interviews. The cover letter, attached as Annex I, politely requested the participation of project managers and team members, and identified their needs. Annex II consisted of general information about the respondents for both quantitative and qualitative data collection and used likert scale 1 strongly disagree to 5 strongly agree.

The questionnaire attached as Appendix III consisted of two parts: Part I contained closed-ended questions using a Likert scale from 1 “strongly disagree” to 5 “strongly agree,” and Part II consisted of open-ended questions. This provided quantitative data for statistical analysis, while the interviews attached as Appendix IV generated qualitative data for thematic analysis. Both Annex III and Annex IV focused on leadership style, teamwork and the performance of the Goba-Berbere-Dellomena construction and design project.

Once identified, respondents were given instructions on how to complete the questionnaire and details about the aim of the study. In order to address any uncertainties

or concerns that respondents have, the researcher has been provided with explanations of certain questions when answering the questionnaire.

3.6 Data validity and reliability

3.6.1 Validity

The focus on a single, homogeneous project context (the Goba-Berbere-Dellomena road project) increases the power of the study by enabling more robust and contextually relevant data collection. The researchers made concerted efforts to ensure that the data collection tools were easy to understand for respondents, thereby increasing the trustworthiness of the results. In addition, the researchers engaged five key individuals to provide constructive feedback, which was then used to adapt and verify the validity of the questionnaire in the specific organizational context. The research instrument was also evaluated and examined by the research consultant and senior project managers prior to data collection to further confirm the content validity and ethical appropriateness of the study. Finally, acknowledging all reference materials with proper citation demonstrates that researchers value academic integrity and transparency. Taken together, these actions taken by the research team strengthen the overall validity and rigor of the study.

3.6.2 Reliability

Reliability is the consistency of answers across a series of questions or a questionnaire. The internal consistency or reliability of a collection of items or questions is assessed using a statistical metric known as Cronbach's alpha. Better internal consistency is indicated by higher values of Cronbach's alpha coefficient, which ranges from 0 to 1. Enyia, Onuoha, Librarian, & Polytechnic (2003 as cited in George & Mallery, 2023) interpret the dependability scale as follows: Good (0.8 and above), Acceptable (0.7 and above), Questionable (0.6 and above), Poor (0.5 and above), Excellent (0.9 and above), and Unacceptable (below 0.5) are the five categories. Based on the research conducted, the total Cronbach's Alpha coefficient for all the items in this study was 0.967.

Table 3.2: Reliability coefficient for every item

No.	Individual variables	No. of items	Alpha value
1	Transformational leadership	16	0.951
2	Transactional leadership	12	0.801
3	Laissez-faire leadership	11	0.701
4	Teamwork	12	0.949
5	Project performance	5	0.889
Total items		56	0.967

Source own survey 2024

3.7 Methods of data analysis

Quantitative data analysis involves the use of numerical data to examine relationships and draw conclusions. The following sub-sections were outlining the key steps in quantitative data analysis.

3.7.1 Model specifications

The research involved model specification, which entailed identifying the theoretical framework and conceptual model for the study. This step remained the same in the concurrent design. It involved determining the variables and their relationships. In this case, the model specification included the project manager's leadership styles as the independent variables, teamwork as the mediator, and project performance as the dependent variable.

$Y = b_0 + b_1 (\text{Transformational}) + b_2 (\text{Transactional}) + b_3 (\text{Laissez-faire}) + b_4 (\text{Teamwork}) + \epsilon$ was the multiple linear regression equation.

Where: The dependent variable, Y, represented project performance. The independent variables, transformational, transactional, and laissez-faire, represented the various styles of leadership. The mediator variable: teamwork, and ϵ , error.

The y-intercept was represented by b_0 , while the unstandardized regression coefficients for the independent variables and the mediator variable were represented by b_1 , b_2 , b_3 , and b_4 .

When all other variables are held constant, the unstandardized regression coefficients show the change in the dependent variable Y associated with a one-unit change in the corresponding independent variable or mediator variable.

3.7.2 Measurements of variables

For the purpose of analyzing quantitative data, precise variable measurement was essential. The researcher had to choose the proper quantitative metrics in order to quantify the leadership styles, teamwork, and project performance. Descriptive statistics, such means, standard deviations, and frequencies, might be computed once the variables had been assessed in order to compile the data and provide preliminary understanding. Correlation analysis was one of the additional quantitative data analysis approaches used to assess the direction and intensity of correlations between the variables using correlation coefficients of Pearson's correlation. Using multiple regressions for numerous independent variables, regression analysis was utilized to investigate how independent factors predicted the dependent variable. Mediation analysis using regression analysis of Baron and Kenny steps, the Sobel test and structural equation model by SPSS-AMOS examined whether teamwork mediated the association between leadership styles and project performance.

3.8 Method of qualitative data analysis

The qualitative data analysis involved examining interview data using thematic analysis techniques.

3.9 Ethical considerations

Midha and Bhattacharjee, (2012) suggested that ethical considerations involve differentiating between right and wrong, acknowledging that unethical behavior may not necessarily be illegal. When the research was conducted, it was essential to address research ethics. Given the sensitive nature of this specific study, various ethical issues were taken into consideration. Participants were assured that their information would remain confidential. Both respondents and interviewees were volunteers, allowing them to freely respond to interview and questionnaire inquiries. The study's objectives and data collection process were clearly explained to participants. They received counseling and briefings to ensure accurate and honest responses, with the study's purpose explicitly

stated as being solely for academic purposes. The study's findings were reported objectively and without any false or biased information. Participants were typically informed about the research's purpose, procedures, potential risks and benefits, confidentiality measures, and their right to withdraw (Harriss et al., 2019). Upon entering the research field, the researcher introduced themselves to the participants and provided information about the study's purpose.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Demographic characteristics and response rate

4.1.1 Response rate of respondents

Project manager team response rate $31/35 = 88.6\%$, project team member response rate $111/120 = 92.5\%$. A total of 142 of the 155 sample size determined, which corresponds to a response rate of 91.6%. According to Mugenda and Mugenda, (2003), a response rate of 70% or more is considered very good, 60% is acceptable and 50% is adequate. This response rate reflects the population and meets its standards. Since the response rate of 91.6% is above the “very good” criterion, it was decided to carry out an additional study. Furthermore, this response rate is in the range of similar studies, such as that of (Aga, 2016; Shumiye & Ababa, 2019). The interview question also supports completed questionnaires.

Table 4.1: Respondents’ response rate

Questionnaires Distributed	Questionnaires Returned	Percentage
155	142	91.6%

Source: Own survey, 2024

4.1.2 Demographic information of the respondents

This section contains a demographic profile of the respondents. When assessing the personal profile, the respondent's gender, work position, educational background and professional experience were taken into account. Descriptive statistics on demographic variables were used to identify respondents.

Table 4.2: Respondents' demographic information

Gender		
categories	Frequency	Percent
male	102	71.8
female	40	28.2
Total	142	100
work position		
categories	Frequency	Percent
project manager	31	21.8
project team member	111	78.2
Total	142	100
Education		
categories	Frequency	Percent
Diploma	20	14.1
Degree	68	47.9
Masters	28	19.7
others	26	18.3
Total	142	100
Experience		
categories	Frequency	Percent
0-5yrs	64	45.1
5-10yrs	40	28.2
10-15yrs	28	19.7
15-20yrs	10	7
Total	142	100

Source: survey result, 2024

Based on the information presented in Table 4.2, the key insights are:

Gender Distribution: The sample is predominantly male, with 102 male respondents (71.8%) compared to 40 female respondents (28.2%). **Work Positions:** The majority of respondents, 111 individuals (78.2%), are project team members, while 31 respondents (21.8%) hold project management roles. **Educational Backgrounds:** The respondents have diverse educational backgrounds, with 47.9% holding bachelor's degrees, 19.7% holding master's degrees, 14.1% with diplomas, and 18.3% in the "other" category. **Work Experience:** The sample skews towards less experienced individuals, with 45.1% having less than 5 years of experience, 28.2% with 5-10 years, 19.7% with 10-15 years, and only 7% with 15-20 years of experience. Overall, the demographic information suggests a sample that is predominantly male, with a mix of project management and team

members, and a range of educational and experience levels, but with a higher proportion of less experienced individuals.

4.2 Findings, interpretations, and discussions

To answer all research questions, the researcher discuss and examine the objectives through gathered data by interviews and questionnaires. The SPSS 26.0 software, sobel test calculator and SPSS-AMOS software was utilized to process the 142 returned questionnaires, and the results were analyzed. Several analysis techniques were employed in the study in order to meet the research objectives. To accomplish the first three goals, descriptive analysis and interview thematic analysis were employed; inferential analysis was used to accomplish the fourth and fifth goals. The sixth objective also involved using mediation analysis to look at how mediator variables affected the dependent variable.

4.2.1 Result of first objectives: the dominant leadership styles

The first objective of this study was to identify and analyze the predominant leadership styles of the project managers of the Goba-Berbere-Dellomena Build and Design project. Under this topic, the researcher compiled the results for objective one. To summarize the status of transformational, transactional and laissez-faire leadership the mean and standard deviation were calculated. These results were then analyzed using descriptive analysis and interview analysis. Furthermore, the researcher used the guidelines suggested by Carifio and Perla (2007) to rank the identified leadership styles, teamwork and project performance according to a structured framework: 1.00-1.80: strongly disagree 1.81-2.60: disagree 2.61-3.40: Neutral 3.41-4.20: Agree 4.21-5.00: strongly agree.

4.2.1.1 Result of transformational leadership

Table 4.3: Result of transformational leadership in the form of mean and Std. Dev.

No.	Transformational leadership	N	Mean	Std. Deviation
1	The leader motivates team members to perform at their best.	142	3.69	0.86
2	The leader inspires a clear vision.	142	3.64	0.886
3	The leader encourages innovative thinking.	142	3.73	0.86
4	The leader provides valuable guidance.	142	3.72	0.878
5	The leader displays confidence in the team's abilities.	142	3.67	0.928
6	The leader promotes open communication.	142	3.68	0.978
7	The leader creates a positive work environment.	142	3.65	0.939
8	The leader appreciates team members' contributions.	142	3.79	0.806
9	The leader facilitates skill development.	142	3.7	0.867
10	The leader sets high-performance standards.	142	3.68	0.894
11	The leader demonstrates ethical behavior.	142	3.73	0.916
12	The leader encourages personal growth.	142	3.66	0.85
13	The leader values the opinions of team members.	142	3.82	0.793
14	The leader fosters teamwork and cooperation.	142	3.77	0.814
15	The leader provides constructive feedback.	142	3.9	0.775
16	The leader recognizes individual and team achievements.	142	3.94	0.702
	Aggregate mean value	142	3.73	.65

Source: Own survey, 2024

Depending on the data results provided in Table 4.3, the mean scores for the various transformational leadership behaviors range from 3.64 to 3.94, with an overall aggregate mean of 3.73. According to the Carifio and Perla (2007) interpretation framework, mean scores falling between 3.41 and 4.20 indicate that the respondents "agree" with the presence of these transformational leadership practices within their organization. The standard deviation values, ranging from 0.702 to 0.978, suggest a moderate degree of variability in individual perceptions. The aspect with the highest mean score of 3.94 is "The leader recognizes individual and team achievements;" while the lowest mean of 3.64 is "The leader inspires a clear vision." This indicates that respondents view the leader's ability to recognize accomplishments as a particular strength, but there may be opportunities to further enhance the leader's ability to inspire a clear vision for the team.

The results suggest that the organization exhibits relatively strong transformational leadership, with the majority of the aspects falling within the "agree" range of the interpretation framework.

Qualitative interview result: 1. Does the team motivation and inspires is good to project performance goals?

PE 1: "A motivated and inspired team is more likely to be engaged and productive, leading to better project performance." PE 2: "When team members are motivated, they go the extra mile, take initiative, and contribute to project success." PE 3: "Inspiration fosters a sense of purpose and commitment, driving the team to achieve exceptional results".

Interview combined answer: "Motivated and inspired teams are highly engaged, take initiative, and are committed to project success. This leads to exceptional project performance as team members go the extra mile and contribute their best efforts."

4.2.1.2 Result of transactional leadership

Table 4.4: Result of transactional leadership in the form of mean and Std. Dev.

No.	Transactional leadership	N	Mean	Std. Deviation
1	The leader communicates expectations clearly.	142	4.01	.714
2	The leader provides instructions.	142	4.01	.748
3	The leader rewards and recognizes good performance.	142	4.06	.712
4	The leader ensures resources are available.	142	3.99	.704
5	The leader maintains transparent communication.	142	3.92	.699
6	The leader holds team members accountable.	142	3.94	.788
7	The leader provides regular feedback.	142	3.94	.770
8	The leader sets specific objectives.	142	3.99	.753
9	The leader ensures fair rewards.	142	3.10	.622
10	The leader emphasizes meeting deadlines.	142	2.82	.440
11	The leader provides support when needed.	142	2.83	.519
12	The leader monitors progress effectively.	142	2.84	.406
	Aggregate mean value	142	3.619	.37432

Source: Own survey, 2024

According to the Carifio and Perla (2007) interpretation framework, the results presented in Table 4.4 for transactional leadership indicate that the respondents generally "agree" with the existence of these practices, as evidenced by the overall aggregate mean score of 3.6197, which falls within the "agree" range of 3.41-4.20. The highest mean scores were for "The leader rewards and recognizes good performance," "The leader communicates expectations clearly," and "The leader provides instructions," suggesting

these are perceived as key strengths of the transactional leadership approach. However, lower mean scores for "The leader emphasizes meeting deadlines," "The leader provides support when needed," and "The leader monitors progress effectively" fell within the "disagree" range, highlighting potential areas for improvement in the organization's transactional leadership practices.

Qualitative interview result: 2. Can you provide an example of how the project manager's give incentives to impacts project performance?

PE 1: "Offering bonuses or rewards for meeting project milestones ahead of schedule can incentivize the team to perform better." PE 2: "Providing opportunities for team members to lead sub-projects or take on additional responsibilities can increase their motivation and improve project performance." PE 3: "Creating a competitive environment with rewards for the best-performing team members can foster a sense of urgency and drive improved project outcomes."

Interview combined answer: "Incentivizing teams through bonuses, rewards, and opportunities for growth and leadership can significantly boost motivation and performance. By recognizing and rewarding achievements, fostering competition, and providing chances for professional development, project managers can drive teams to deliver exceptional results."

4.2.1.3 Result of Laissez-faire leadership

Table 4.5: Result laissez-faire leadership in the form of mean and Std. Dev.

No.	Laissez-faire leadership	N	Mean	Std. Deviation
1	The leader grants autonomy in decision-making.	142	2.92	.636
2	The leader allows independence in work.	142	3.11	.741
3	The leader provides flexibility in tasks.	142	2.96	.678
4	The leader encourages exploring new ideas.	142	3.02	.767
5	The leader trusts team members' abilities.	142	2.85	.634
6	The leader respects their expertise.	142	2.83	.412
7	The leader values initiative.	142	2.92	.636
8	The leader welcomes suggestions.	142	3.11	.745
9	The leader supports autonomy in decision-making.	142	2.96	.683
10	The leader fosters creativity.	142	3.03	.771
11	The leader respects work-life balance.	142	2.84	.637
	Aggregate mean value	142	2.9577	.33836

Source: Own survey result, 2024

According to the Carifio and Perla (2007) range interpretation framework, the results presented in Table 4.5 for laissez-faire leadership indicate that the respondents have a generally neutral perception of these practices, as evidenced by the overall aggregate

mean score of 2.9577, which falls within the "neutral" range of 2.61-3.40. The highest mean scores were for "The leader allows independence in work" (3.11) and "The leader welcomes suggestions" (3.11), suggesting these is perceived as relatively stronger aspects of the laissez-faire approach. However, the lower mean scores for "The leader respects their expertise" (2.83), "The leader respects work-life balance" (2.84), and "The leader trusts team members' abilities" (2.85) indicate potential areas for improvement, such as fostering a stronger sense of trust, expertise, and work-life balance among employees. Overall, the results indicate that the organization may need to consider strengthening certain aspects of laissez-faire leadership to better engage and empower their employees.

Qualitative interview result: 3. does the team autonomy in the project good for project performance?

PE 1: "While team autonomy can foster a sense of ownership and responsibility, it can also lead to a lack of coordination and inconsistent results." PE 2: "Excessive team autonomy can make it difficult for the project manager to maintain control and ensure that the project is completed successfully." PE 3: "Without proper guidance and oversight, team autonomy can result in missed deadlines, budget overruns, and a decrease in overall project performance."

Interview combined answer: "While team autonomy can empower teams and foster a sense of ownership, it must be carefully managed to avoid potential pitfalls. Excessive autonomy can lead to a lack of coordination, inconsistent results, missed deadlines, and budget overruns. Therefore, project managers should provide clear guidance and oversight while allowing teams the necessary autonomy to succeed."

4.2.2 Discussions of objective one

Based on the data analysis and interview results presented, the dominant leadership styles exhibited by the project managers of the Goba-Berbere-Dellomena Build and Design project appear to be a combination of transformational and transactional leadership approaches while addressing potential areas for improvement in laissez-faire leadership.

The organization exhibits relatively strong transformational leadership, with the majority of the transformational leadership aspects falling within the "agree" range. The leader's ability to recognize individual and team achievements is viewed as a particular

strength, suggesting this is a key aspect of the transformational leadership approach. However, there may be opportunities to further enhance the leader's ability to inspire a clear vision for the team.

In terms of transactional leadership, the respondents generally "agree" with the presence of these practices within the organization. The leader's ability to reward and recognize good performance, communicate expectations clearly, and provide instructions are perceived as key strengths of the transactional leadership approach.

The respondents have a generally neutral perception of laissez-faire leadership practices. While team autonomy can be beneficial, it may need to be carefully managed to avoid potential pitfalls, such as a lack of coordination, inconsistent results, missed deadlines, and budget overruns. Project managers should provide clear guidance and oversight while allowing teams the necessary autonomy to succeed.

The findings from the current study on the dominant leadership styles exhibited by the project managers in the Goba-Berbere-Dellomena Build and Design project can be compared and linked to the existing literature in several ways. The study's conclusions on the dominance of transformational and transactional leadership styles are consistent with the findings of Khan et al. (2019), who reported a robust relationship between transformational leadership and project performance as well as a positive association between certain transactional leadership components and project success. However, the current study also identified some elements of laissez-faire leadership, which Khan et al. (2019) found to be negatively correlated with project performance.

The meta-analytic research of Tiwari and Raman (2022) reinforces the current study's emphasis on the dominant role of transformational leadership, as their findings showed that transformational leadership had a much greater positive influence on project performance than transactional leadership. Moreover, the current study's findings on the preference for transformational leadership over transactional and democratic leadership styles align with the results of Liphadzi's (2015) study of project and construction managers in the South African construction industry. The existing literature suggests that aligning leadership styles, particularly transformational and charismatic approaches, with project requirements can promote high performance, resilience, and creativity (Ahmed et al., 2023; Robbertse & Amoah, 2022; Martin & Edwards, 2016; Renzi, 2020; Aga, 2016),

which is consistent with the current study's emphasis on leveraging the organization's strengths in transformational and transactional leadership to drive exceptional project performance.

4.2.3 Result of the second objective: the level of project performance

The second objective of this study was to assess the level of project performance in the Goba-Berbere-Dellomena Build and Design project.

Table 4.6: Result of project performance in the form of mean and Std. Dev.

No.	project performance	N	Mean	Std. Deviation
1	The project objectives are clearly defined to the team.	142	3.65	.869
2	The project consistently delivers high-quality work that meets expectations.	142	3.65	.884
3	The project adheres to the established schedule, consistently meeting milestones.	142	3.62	.831
4	The project effectively manages costs, staying within the approved budget.	142	3.73	.764
5	Stakeholders express satisfaction with the project outcomes.	142	3.80	.700
6	Aggregate mean value	142	3.6887	.67562

Source: Own survey, 2024

According to the Carifio and Perla (2007) range interpretation framework, the results presented in Table 4.6 for project performance can be interpreted as follows: The mean scores for the various project performance indicators range from 3.62 to 3.80, with an overall aggregate mean of 3.6887. Mean scores between 3.41 and 4.20 indicate that the respondents "agree" with the presence of this project performance practices.

The highest mean score is for "Stakeholders express satisfaction with the project outcomes" (3.80), suggesting this is perceived as the strongest aspect of the project performance. This high mean score within the "agree" range indicates that the respondents have a positive perception of the project's ability to deliver satisfactory outcomes for stakeholders.

Other high-scoring aspects include "The project effectively manages costs, staying within the approved budget" (3.73) and "The project objectives are clearly defined to the team" and "The project consistently delivers high-quality work that meets expectations"

(both with a mean of 3.65), further reinforcing the respondents' overall positive perception of the project performance in the organization.

The lowest mean score is for "The project adheres to the established schedule, consistently meeting milestones" (3.62), which, while still in the "agree" range, may indicate a relatively weaker aspect of the project performance compared to the other dimensions.

Questionnaire of open-ended result: Under this topic, the researcher discussed open-ended questions that contained information about the start date (2/3/2023) and finish date (24/8/2026) of the project, the start date (1/2/2023) and finish date (30/12/2026) in the contract, the contractual budget of the project, the physically performed work up to now in percentage, and the spent cost up to now in percentage; the provided information's are as follows:

The total project budget is 8.4 billion birr, and the total project duration is 4 years. Currently, the project has been ongoing for one year. The actual cost incurred so far is 20% of the total budget, and the earned value (work completed) is 25% of the total budget. The planned value for the first year is 25% of the total budget, which is 2.1 billion birr ($8.4 \text{ billion birr} / 4 \text{ years} = 2.1 \text{ billion birr per year}$).

Based on the Earned Value Management (EVM) calculations provided, the project is exhibiting strong performance indicators that suggest successful execution: The cost performance index (CPI) is 1.25, which means the project is performing under budget with costs well controlled. The schedule performance index (SPI) is 1.0, indicating that the work is progressing exactly as planned with no schedule delays. A cost variance (CV) of 0.42 billion birr suggests that the project is under budget with cost savings. A schedule variance (SV) of 0 billion birr shows that the project is on schedule with no delays. The estimated at completion (EAC) of 6.72 billion birr is lower than the original total.

The EVM metrics demonstrate strong project performance, with the project meeting or exceeding its schedule, cost, and duration targets. This suggests that the project management practices, including effective leadership, teamwork, and resource allocation, are contributing to the successful performance of the Goba-Berbere-Dellomena road project.

Qualitative interview result: 4. as a project manager tell me the level of performance in terms of cost, schedule, quality, scope, and stakeholder satisfaction.

PM 1: "Currently, the project is on track to be completed within budget and on schedule. We are meeting all quality standards and stakeholder expectations are being exceeded." PM 2: "Despite some initial challenges, the project is now progressing smoothly. We are working closely with stakeholders to ensure their satisfaction and deliver a successful outcome."

Interview combined answer: "Despite initial challenges, the project is now progressing smoothly and is on track to be completed within budget and on schedule. We are meeting all quality standards and working closely with stakeholders to ensure their satisfaction. We are confident in delivering a successful outcome."

4.2.4 Discussions of objective two

The key results from the descriptive, EVM, and interview analysis regarding the assessment of project performance in the Goba-Berbere-Dellomena Build and Design project are:

The descriptive analysis of project performance indicators shows that the respondents generally "agree" with the presence of strong project performance practices, with mean scores ranging from 3.62 to 3.80 on a 5-point scale. The highest-rated aspect was "Stakeholders express satisfaction with the project outcomes," suggesting a positive perception of the project's ability to deliver satisfactory results. Other high-scoring areas include effective cost management, clearly defined objectives, and consistently high-quality work. The relatively lower mean score for "The project adheres to the established schedule, consistently meeting milestones" may indicate a relatively weaker aspect compared to the other dimensions, though still within the "agree" range.

The EVM metrics further reinforce the positive project performance, demonstrating that the project is meeting or exceeding its schedule, cost, and duration targets. This combined

with the interview findings that the project is progressing smoothly and is on track to be completed within budget and on schedule while meeting quality standards and stakeholder satisfaction, suggests that the project management practices, including effective leadership, teamwork, and resource allocation, are contributing to the overall successful performance of the Goba-Berbere-Dellomena road project.

The current study's assessment of project performance in the Goba-Berbere-Dellomena project aligns with existing literature. The descriptive analysis shows respondents generally "agree" with strong project performance practices, consistent with prior research linking a project manager's leadership style to overall project success (Larsson et al., 2015; Kariuki, 2019). Furthermore, the EVM metrics and interview findings indicate the project is meeting schedule, cost, and quality targets, suggesting effective project management practices, including leadership, teamwork, and resource allocation. These results resonate with Wase and Jeyaprabha's (2022) findings on the positive impact of transformational and servant leadership styles on work outcomes in the Ethiopian education sector. Overall, the current study's assessment of successful project performance is supported by the existing body of knowledge on the critical role of leadership in driving project effectiveness.

4.2.5 Result of the third objective: status of teamwork

The third objective of this study was to assess the current status of teamwork practices in the Goba-Berbere-Dellomena Build and Design project.

Table 4.7: Result of teamwork in the form of mean and Std. Dev.

No.	Teamwork	N	Mean	Std. Deviation
1	Team members collaborate effectively.	142	3.68	.872
2	Team members communicate respectfully.	142	3.76	.899
3	Team members support each other.	142	3.66	.874
4	Team members trust each other's expertise.	142	3.56	.986
5	Team members actively listen to each other.	142	3.62	.865
6	Team members value diverse perspectives.	142	3.65	.826
7	Team members celebrate achievements.	142	3.67	.805
8	Team members handle conflicts constructively.	142	3.76	.952
9	Team members share information.	142	3.68	.847
10	Team members are committed to project success.	142	3.55	.919
11	Team members maintain a positive environment.	142	3.69	.818
12	Team members overcome challenges together.	142	3.66	.780
	Aggregate mean value	142	3.6614	.69836

Source: Own survey, 2024

According to the Carifio and Perla (2007) range interpretation framework, the results presented in Table 4.7 for teamwork indicate that the respondents have a generally positive perception of these practices, as evidenced by the overall aggregate mean score of 3.6614, which falls within the "agree" range of 3.41-4.20. The highest mean scores were for "team members communicate respectfully" (3.76) and "team members handle conflicts constructively" (3.76), suggesting these are perceived as the strongest aspects of the teamwork approach. Other high-scoring aspects include "Team members maintain a positive environment" (3.69), "Team members collaborate effectively" (3.68), and "Team members celebrate achievements" (3.67), further reinforcing the respondents' overall positive perception of teamwork in the organization. The lowest mean score was for "Team members are committed to project success" (3.55), which, while still in the "agree" range, may indicate a relatively weaker aspect of the teamwork practices compared to the other dimensions. Overall, the results suggest that the respondents have a generally positive perception of teamwork behaviors, indicating that the team is functioning well and effectively collaborating, communicating, and supporting one another to achieve their goals.

Qualitative interview result: 5. Can you provide an example of how the project team member's effective communication, work together and help each other and is good for project performance?

PE 1: "Effective communication allowed the team to quickly identify and resolve issues, leading to a smooth project execution and successful delivery." PE 2: "Collaboration and teamwork fostered a supportive environment where team members shared knowledge and expertise, resulting in innovative solutions and improved project outcomes." PE 3: "The team's willingness to help each other created a positive and efficient work atmosphere, contributing to a high level of project performance and stakeholder satisfaction."

Combined interview result: "Effective communication, collaboration, and teamwork were instrumental in the project's success. The team's ability to quickly identify and resolve issues, share knowledge and expertise, and support one another created a positive and efficient work environment. This led to innovative solutions, improved project outcomes, and high levels of stakeholder satisfaction."

4.2.6 Discussions of objective three

The descriptive findings and the interview-based combined answer both suggest that the Goba-Berbere-Dellomena project team exhibited strong teamwork practices, particularly in the areas of communication, conflict resolution, and collaboration, which contributed to the overall success of the project, as evidenced by innovative solutions, improved outcomes, and high stakeholder satisfaction.

The result aligned with Iqbal et al. (2017); the current study found that the Goba-Berbere-Dellomena project team exhibited strong teamwork practices, particularly in the areas of communication, conflict resolution, and collaboration. This aligns with the findings of Iqbal et al. (2017), who discovered that four key characteristics of project teamwork—cohesion, communication, cooperation, and technical competence—were positively and significantly related to effective project outcomes. The current study's results on the positive perception of teamwork practices, such as respectful communication and constructive conflict resolution, support the importance of these teamwork characteristics highlighted by Iqbal et al. (2017).

Furthermore, the current study's finding that effective communication, collaboration, and teamwork were instrumental in the Goba-Berbere-Dellomena project's success is consistent with the conclusions of Aga et al. (2016). Aga et al. (2016) found that transformational leadership style had a positive effect on both team building and project success, and that team building exercises had a positive effect on project success. The positive teamwork practices observed in the current study, such as maintaining a positive environment and celebrating achievements, can be linked to the team-building aspects highlighted by Aga et al. (2016) and their influence on project success.

4.2.7 Result of objective four

The fourth objective of this study was to determine the existence and significance of a relationship between the leadership styles exhibited by project managers and the level of project performance in the Goba-Berbere-Dellomena Build and Design project. To find the results of objective 4, the researcher used the Pearson correlation test.

An essential method for determining the relationship between variables is correlation analysis. Two-tailed tests of significance were employed for the correlation study. The outcome is as follows:

Table 4.8 Correlation analysis

Sr. No.	Variables	1	2	3	4	5
1	transformational leadership	1				
2	transactional leadership	.749**	1			
3	laissez faire leadership	.272**	.265* *	1		
4	Teamwork	.851**	.742* *	.329* *	1	
5	project performance	.800**	.709* *	.298* *	.946* *	1

** Correlation is significant at the 0.01 level (2-tailed). N =142, * p < .05; ** p < .01

1. Transformational, transactional, and laissez-faire are independent variables
2. Teamwork is mediator variables
3. Project performance is dependent variables

Source own survey result, 2024

When the correlation coefficient between two variables is +/-1, it indicates a complete positive association, meaning that any change in one variable will also affect the other by the same amount. In the case of a correlation of 0, there is none. This leads to the employment of Pearson's product-moment correlation.

The following pattern of (Evans, 1996) advice was used to assess the degree of correlation between the variables under investigation, and coefficients and linear regression were used to explore the relationship between the variables:

0.00 - 0.19="Very weak"

0.20 - 0.39 = "Weak"

0.40 to 0.59= "Moderate"

0.60 - 0.79 = "Strong"

0.80 - 1.00= "Very strong"

Depending on the result found in the above Table 4.8, the researcher discussed the relationship aspects as follows:

The correlation analysis results reveal several interesting insights. Transformational leadership has a very strong, positive correlation (0.800) with project performance, indicating that as transformational leadership behaviors increase, project performance improves significantly. Transactional leadership also exhibits a strong, positive relationship (0.709) with project performance, though not as strong as transformational leadership. In contrast, laissez-faire leadership shows a relatively weaker, positive correlation (0.298) with project performance, suggesting that this hands-off leadership style has a less significant impact on successful project outcomes. Notably, teamwork displays an exceptionally strong, positive correlation (0.946) with project performance, underscoring the critical role of effective teamwork in driving project success.

The analysis also reveals the mediating influence of teamwork, as the leadership styles demonstrate strong positive correlations with teamwork (transformational: 0.851, transactional: 0.742, laissez-faire: 0.329). This suggests that leadership behaviors, particularly transformational and transactional styles, can significantly impact project performance through their ability to foster effective teamwork. The correlation analysis, when interpreted using the Evans (1996) range, highlights the varying strengths and directions of the relationships between the key variables in the study.

4.2.8 Discussions of objective four

The findings emphasize the importance of transformational and transactional leadership, as well as the critical role of teamwork, in driving successful project performance. The correlation analysis reveals a significant relationship between the leadership styles exhibited by project managers and the level of project performance in the Goba-Berbere-Dellomena Build and Design project.

This aligns closely with the findings of Lagesse et al. (2020), who demonstrated the benefits of transformational leadership for driving profitability in Ethiopian banks. Similarly, Holzmann and Mazzini (2020) observed transformational leadership as the most suitable approach for driving creative project performance in their study.

However, an interesting divergence emerges when comparing the researcher's results to the work of Kassahun (2021) on Ethiopian road construction projects. While the researcher found a relatively weaker positive correlation (0.298) for laissez-faire leadership, Kassahun's study highlighted this leadership style, in addition to transformational approaches, as playing a significant role in driving project performance.

This complementary insight from Kassahun (2021) underscores the context-dependent nature of effective leadership, which was a key focus of the Goba-Berbere-Dellomena study's fourth objective. It suggests the optimal balance of leadership styles may vary based on factors such as the specific industry, organizational culture, methodology used, and project environment.

4.3 Linear regression assumptions

Before going to the results, interpretations, and discussions of Objective 5, the researcher tested the assumptions of linear regression to ensure the model was appropriately fitted.

4.3.1 Normality Test

The histogram displayed in Figure 4.1 shows the frequency distribution of the standardized residuals from the linear regression analysis. According to Gujarati and

Porter (2009), the histogram exhibits a bell-shaped curve, which is characteristic of a normal distribution. This suggests that the residuals, and by extension, the dependent variable (project performance), are normally distributed. The mean of the standardized residuals is close to 0 ($-6.95e-16$), indicating that the regression model is unbiased and the predicted values are, on average, close to the actual values. The standard deviation of the standardized residuals is 0.989, which is close to 1, further supporting the normality assumption. The majority of the residuals are concentrated around the center of the distribution, with fewer observations in the tails, as expected in a normal distribution. Overall, the histogram provides visual evidence that the normality assumption for the linear regression analysis is satisfied. The bell-shaped curve and the proximity of the mean and standard deviation to the expected values for a normal distribution suggest that the regression model is appropriate for the data and that the inferences drawn from it are

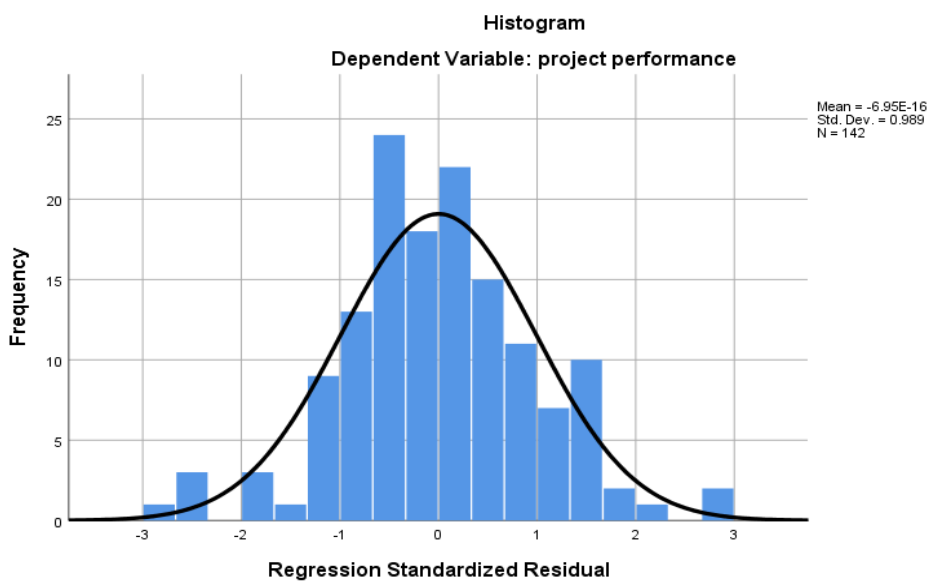


Fig. 4.1 Normality test
 Source: Own survey result, 2024

likely to be reliable.

4.3.2 Linearity test

The normal P-P plot of the regression standardized residual shown in Figure 4.2 supports the linearity assumption of the linear regression analysis. Key observations from the plot indicate that the linearity assumption has been satisfied. The observed residuals,

represented by the dots on the plot, closely align with the straight line, suggesting minimal or no deviation from normality. This alignment implies that the relationship between the independent variables (transformational, transactional, and laissez-faire leadership) and the dependent variable (project performance) can be accurately described by a straight line, fulfilling the linearity assumption.

While the relationship may not be perfectly linear, it is considered approximately linear as the mean values of the outcome variable for each increment of the predictor fall along a straight line. Furthermore, the close alignment of the observed residuals with the normal distribution line suggests that the normality assumption has also been met, further supporting the validity of the regression model (Tabachnick, Fidell, & Ullman, 2013). The normal P-P plot provides visual evidence that the linearity assumption has been satisfied, allowing the researcher to reasonably conclude that the regression model is appropriate for the data and the inferences drawn from it are reliable.

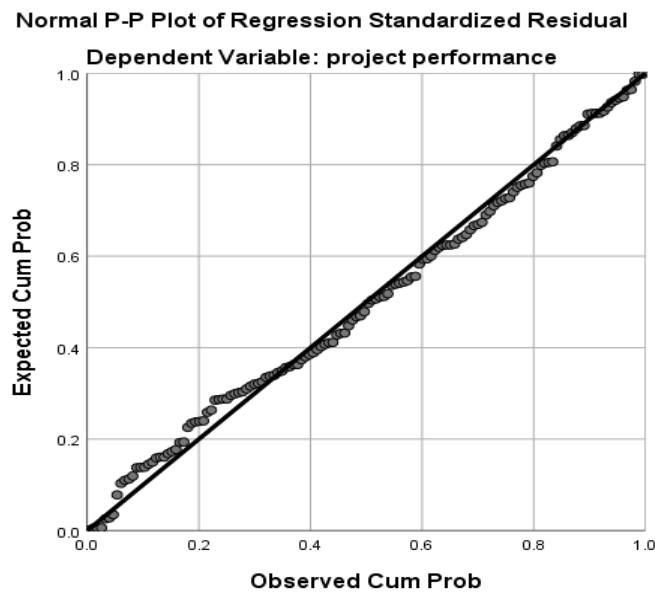


Fig. 4.2 Linearity test graph

Source: Own survey result, 2024

4.3.3 Homoscedasticity test

The scatterplot in the image represents the relationship between the regressions standardized predicted values (independent variable) and the regression standardized

residual (dependent variable) for the project performance data. The key aspect related to the homoscedasticity test is Homoscedasticity, which refers to the assumption that the residuals (errors) have constant variance across all levels of the independent variable(s), such that the scatter of residuals should be approximately the same across the range of predicted values. Visual inspection of the scatterplot shows that it does not exhibit a clear pattern or funnel shape, which would indicate the presence of heteroscedasticity (non-constant variance of residuals). Instead, the points are relatively evenly distributed across the range of predicted values, suggesting the assumption of homoscedasticity is met. Additionally, the scatterplot does not show any systematic patterns, such as a curved or funneling shape, which would suggest a violation of the homoscedasticity assumption. The residuals appear to be randomly distributed around the horizontal line at 0, further supporting the homoscedasticity of the data. Since the homoscedasticity assumption appears to be satisfied based on the visual inspection of the scatterplot, it indicates that the regression model is appropriate for the data and the standard errors and confidence intervals calculated from the model are likely to be reliable (Gujarati & Porter, 2009). The scatterplot of the regression standardized predicted values and residuals suggests that the homoscedasticity assumption has been met, supporting the appropriateness and validity of the linear regression analysis.

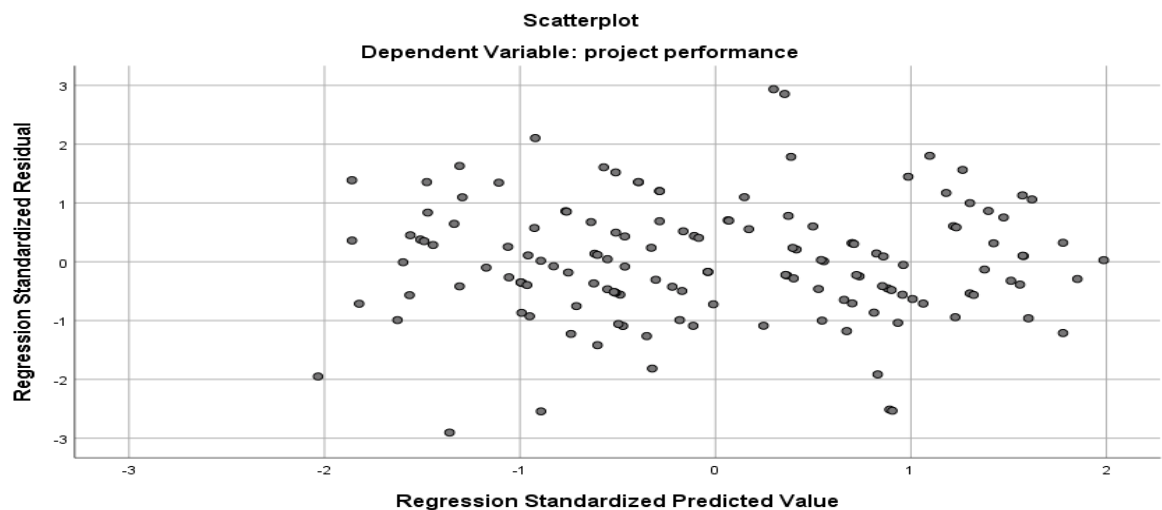


Fig. 4.3 Homoscedasticity test

Source: Own survey result, 2024

4.3.4 Test of independence

Table 4.9 Testing of independence

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Durbin-Watson
1	.820a	0.673	0.665	0.39079	.673	1.705
2	.946b	.896	.893	.22124	.223	2.170

a. Predictors: (Constant), laissez faire leadership, transactional leadership, transformational leadership

b. Predictors: (Constant), laissez faire leadership, transactional leadership, transformational leadership, teamwork

c. Dependent Variable: project performance

Source: Own survey, 2024

The results presented in Table 4.9 show two regression models with project performance as the dependent variable. In the first model, the multiple correlation coefficient (R) is 0.820, indicating a strong positive relationship between the independent variables (laissez-faire leadership, transactional leadership, and transformational leadership) and project performance. The R-squared of 0.673 suggests the three leadership styles explain 67.3% of the variation in project performance. The Durbin-Watson statistic of 1.705 for this first model falls within the acceptable range of 1.5 to 2.5, indicating no significant autocorrelation in the residuals and that the independence assumption is met.

In the second model, the addition of the teamwork variable results in a substantial increase in the multiple correlation coefficient (R) to 0.946, indicating a very strong positive relationship with project performance. The R-squared increases to 0.896, meaning the model now explains 89.6% of the variation in project performance. The Durbin-Watson statistic for the second model is 2.170, also falling within the acceptable range and confirming the independence of residuals.

Overall, the results suggest the three leadership styles and teamwork are strong predictors of project performance, with the inclusion of teamwork significantly improving the model's explanatory power.

4.3.5 Analysis Of Variance (ANOVA) Test

Table 4.10 Analysis of Variance of regression test result

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	43.287	3	14.429	94.483	.000b
	Residual	21.075	138	0.153		
	Total	64.362	141			

a. Dependent Variable: project performance

b. Predictors: (Constant), laissez-faire leadership, transactional leadership, transformational leadership

Source: Own survey result, 2024

Based on the information provided in Table 4.10: The linear regression analysis shows the model with laissez-faire leadership, transactional leadership, and transformational leadership as predictors explains a significant amount of variation in the dependent variable project performance. The regression sum of squares is 43.287 with 3 degrees of freedom, and the F-statistic of 94.483 is highly significant ($p < .000$). This indicates a strong linear relationship between the predictors and the dependent variable.

4.3.6 Multi-Collinearity Test

Multi-collinearity refers to a situation in multiple regression analysis where two or more independent variables are highly correlated with each other, which can negatively impact the credibility of the regression results (Kothari, 2004). To assess the presence and severity of multi-collinearity, researchers can examine the Pearson correlation coefficients between predictor variables, as provided in Table 4.7. Additionally, common methods to test for multi-collinearity include the Variance Inflation Factor (VIF) and Tolerance, where a VIF greater than 10 or a Tolerance value less than 0.1 indicates problematic multi-collinearity (Pallant, 2010). In the case of the data presented, the Pearson correlation coefficients suggest the variables are not highly overlapping, and

there does not appear to be a significant multi-collinearity issue that would limit the model's predictive capacity.

Table 4.11 Multi Collinearity Test

Coefficients			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	transformational leadership	0.434	2.306
	transactional leadership	0.435	2.298
	laissez faire leadership	0.917	1.09

a. Dependent Variable: project performance

Source: Own survey result, 2024

From Table 4.11, the VIF (variance inflation factor) values for all the independent variables are less than 10, and the tolerance values are greater than 0.1. This indicates that there is no multicollinearity problem among the predictors: transformational leadership, transactional leadership, and laissez-faire leadership. The absence of multicollinearity suggests these variables are not highly correlated with each other, which is a desirable property for the multiple linear regression models.

4.4 The result of objective five

The fifth objective of this study was to investigate the extent to which the leadership styles exhibited by project managers have influenced the level of project performance in the Goba-Berbere-Dellomena Build and Design project. To find the results of objective five multiple linear regression was used.

A statistical method for analyzing the connection between a dependent variable and many independent variables is called multiple linear regressions. $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \dots + \beta_aX_p + \varepsilon$ is the linear equation that should be created in order to best predict the dependent variable based on the independent variables. The reported findings demonstrate that this regression model explains the connection between the predictors and the dependent variable in a statistically significant way.

Table 4.12 **Hypothesis 1** leadership styles >> project performance

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.622	0.396		-1.572	0.118
	transformational leadership	0.621	0.076	0.601	8.123	0
	transactional leadership	0.434	0.133	0.241	3.258	0.001
	laissez faire leadership	0.141	0.102	0.071	1.393	0.166

a. Dependent Variable: project performance

Source: Own survey, 2024

Based on the provided information in Table 4.12, the regression equation is: $Y = -.622 + 0.621X_1 + 0.434X_2 + 0.141X_p + \varepsilon$. Transformational leadership (X_1) has a positive coefficient of 0.621 and a standardized coefficient (Beta) of 0.601, indicating it has a strong positive impact on project performance. This relationship is highly significant ($p < .001$). Transactional leadership (X_2) has a positive coefficient of 0.434 and a standardized coefficient (Beta) of 0.241, suggesting a moderately positive impact on project performance. This relationship is also significant ($p = .001$). Laissez-faire leadership (X_p) has a positive coefficient of 0.141 and a standardized coefficient (Beta) of 0.071, indicating a weak positive impact on project performance. In contrast, laissez-faire leadership had a weaker, non-significant positive relationship with project performance ($p = .166$).

4.5 Discussions of objective five

These findings are aligned with the results of other studies examining leadership styles in project management contexts. Andi, Sugianto, and Khoesasih (2021) found that while laissez-faire was rarely expressed, project managers in the Indonesian construction sector exhibited both transactional and transformational leadership traits. Interestingly, the project team members expected a greater proportion of transformational leadership behaviors from their managers, highlighting the perceived value of this leadership approach in the construction industry.

Similarly, Karamunya (2017) discovered that both transformational ($\beta_1 = 0.361$, $p < 0.05$) and transactional ($\beta_2 = 0.457$, $p < 0.05$) leadership styles significantly influenced the success of county government programs in Kenya. This indicates that both leadership philosophies affected the completion of the government projects under investigation. Lagesse, Lemi, and Alemu (2020) also found that transformational and transactional leadership significantly increased the return on capital for Ethiopian commercial banks, highlighting the critical role of leadership styles in driving organizational performance.

In contrast to the Goba-Berbere-Dellomena study, Kassahun (2021) found that transformational and laissez-faire leadership styles had a significant and positive impact on the success of the Mojo-Hawassa Road project in Ethiopia, while transactional leadership techniques did not have a significant effect. This suggests that the relative importance of different leadership styles may vary across specific projects and organizational contexts. Methodologically, this research uses a mixed-methods approach, unlike the previous study by Kassahun (2021), which employed only quantitative research methods. The mixed-methods approach is utilized in the current research to achieve a more comprehensive understanding of the phenomena under investigation.

4.6 The result of objective six

The objective of this research was to examine the extent to which teamwork mediates the relationship between project managers' leadership styles and project performance in the Goba-Berbere-Dellomena Build and Design project. To do this, the researcher used mediation analysis such as the four steps of Baron and Kenney (1986), the Sobel test, and structural equation modeling by SPSS-AMOS as follows:

4.6.1 The four steps of Baron and Kenny (1986)

Mediation analysis, as defined by Baron and Kenny (1986), is a statistical technique used to examine the mechanism or process by which an independent variable (X) influences a dependent variable (Y) through the inclusion of a third variable, known as the mediator (M). The key steps in the Baron and Kenny approach to mediation analysis are: First, the researcher demonstrates that the independent variable (X) is correlated with the dependent variable (Y). Second, the researcher demonstrates that the independent

variable (X) is correlated with the mediator (M). Third, the researcher demonstrates that the mediator (M) is correlated with the dependent variable (Y) when controlling for the independent variable (X). Finally, the researcher demonstrates that the effect of the independent variable (X) on the dependent variable (Y) is reduced (partial mediation) or becomes non-significant (full mediation) when the mediator (M) is included in the model.

Table 4.13 **Hypothesis 2** leadership styles >> teamwork

Coefficients						
Model	variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.045	0.353		-2.96	0.004
	transformational leadership	0.701	0.068	0.656	10.28	0
	transactional leadership	0.424	0.119	0.228	3.573	0
	laissez faire leadership	0.187	0.091	0.09	2.061	0.041

a. Dependent Variable: teamwork

Source: Own survey result, 2024

Step 1: Under Table 4.12, the independent variables of leadership styles (transformational and transactional leadership) significantly affect project performance. But laissez-faire is statistically insignificant.

Step 2: Based on Table 4.13, the independent variables, leadership styles, significantly affect the dependent variables, project performance.

The p-values for all three leadership styles (transformational, transactional, and laissez-faire) are highly significant ($p < 0.001$ for transformational and transactional, $p = 0.041$ for laissez-faire). This means that the positive relationships between each leadership style and teamwork are statistically significant. In other words, there is a very low probability (less than 0.1% for transformational and transactional and 4.1% for laissez-faire) that the observed relationships occurred by chance.

Table 4.14 **Hypothesis 3** teamwork >> project performance

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.337	0.099		3.419	0.001
	teamwork	0.915	0.026	0.946	34.605	0

a. Dependent Variable: project performance

Source: Own survey result, 2024

Step3: Based on table 4.14, the unstandardized regression coefficient for teamwork is 0.915, meaning that a one-unit increase in teamwork is associated with a 0.915-unit increase in project performance, holding all other factors constant. The coefficient is statistically significant, with a p-value of 0.000 ($p < 0.001$). In summary, the results suggest that there is a very strong, positive, and statistically significant relationship between teamwork and project performance. The regression model indicates that teamwork is a significant predictor of project performance.

Table 4.15 **Hypothesis 4** leadership styles >> teamwork >> project performance.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.622	0.396		-1.572	0.118
	transformational leadership	0.621	0.076	0.601	8.123	0
	transactional leadership	0.434	0.133	0.241	3.258	0.001
	laissez faire leadership	0.141	0.102	0.071	1.393	0.166
2	(Constant)	0.346	0.231		1.495	0.137
	transformational leadership	-0.028	0.058	-0.027	-0.486	0.628
	transactional leadership	0.041	0.079	0.023	0.52	0.604
	laissez faire leadership	-0.031	0.058	-0.016	-0.537	0.592
	teamwork	0.926	0.054	0.957	17.134	0

a. Dependent Variable: project performance

Source: Own survey result, 2024

Step4: Table 4.15 shows that when the mediator, teamwork, was entered in the regression analysis, transformational and transactional were no longer significant predictors of project performance ($a_1 = -0.028$, $t = -0.486$, $p > 0.05$, $a_2 = 0.041$, $t = 0.520$, $p > 0.05$), which confirms step 4: The four steps were fulfilled, which indicates that teamwork mediates the relationship between leadership styles (transformational and transactional) and project performance.

4.6.2 Sobel test

While Baron and Kenny (1986) proposed a three-step method to informally assess mediation, more statistically rigorous approaches were later introduced. Specifically, MacKinnon and Dwyer, (1993) and MacKinnon, Warsi, and Dwyer (1995) recommended formal statistical tests like the Sobel, (1982) test to evaluate mediation.

The Sobel test considers the unstandardized regression coefficients and standard errors for the relationships between the independent variable, the mediator, and the dependent variable. Simply observing a reduction in the relationship between the predictor and outcome when the mediator is included (partial mediation) or the relationship becomes non-significant (full mediation) is not considered sufficient by researchers Frazier, Tix, and Barron, (2004). More formal statistical tests are needed to properly assess the significance of the mediated effect.

Therefore, the Sobel test was employed to statistically confirm the significance of the mediated effect for both transformational and transactional effects, but laissez-faire cannot pass step 1, and the researcher left it to the Sobel test. The Sobel test was conducted using a Sobel test calculator from Google Online.

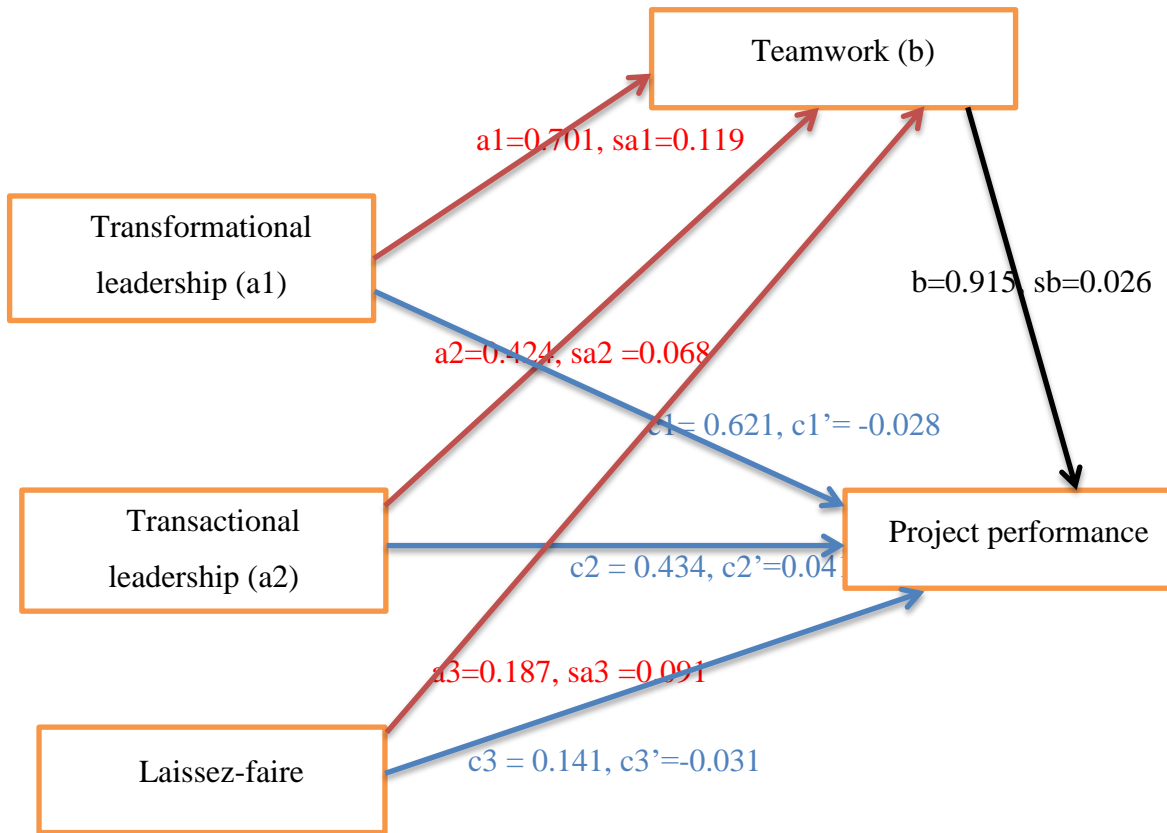


Fig. 4.4 Unstandardized coefficients and standard errors

Where, a_1 is unstandardized coefficients of transformational, and a_2 is unstandardized coefficients of transactional of IDV to M directly, a_3 is unstandardized coefficients of laissez-faire and b is unstandardized coefficients of teamwork of M to DV directly, c_1 is unstandardized coefficients of transformational, c_2 is unstandardized coefficients of transactional and c_3 is unstandardized of laissez-faire of IDV to DV directly. and c_1' , c_2' and c_3' were unstandardized coefficients of IDV to DV indirectly. IDV = independent variables, M = mediator, DV = dependent variables.

Table 4.16 Unstandardized coefficients and standard errors

	unstandardized coefficients(a, b)	standard errors(s)
Transformational(a1)	0.701	0.068
Transactional(a2)	0.424	0.119
Laissez-faire(a3)	0.187	0.091
Teamwork(b)	0.915	0.026

Table 4.17: Sobel's tests

Mediated effect		Test statistic:	Std. Error:	p-value:	Remark
teamwork plays as a mediator between project performance and transformational leadership	Sobel test	9.89310883	0.06483452	0	Mediation effect is statistically significant
	Aroian test	9.88943252	0.06485863	0	
	Goodman test	9.89678925	0.06481041	0	
		Test statistic:	Std. Error:	p-value:	
teamwork has a mediating effect between transactional leadership and project performance	Sobel test	3.54490313	0.11254752	0.00039276	Mediation effect is statistically significant
	Aroian test	3.54348737	0.10948536	0.00039487	
	Goodman test	3.54632059	0.10939789	0.00039065	
		Test statistic:	Std. Error:	p-value:	
teamwork has a mediating effect between laissez-faire leadership and project performance	Sobel test	2.05145071	0.08340683	0.04022308	Mediation effect is statistically significant
	Aroian test	2.05062582	0.08344038	0.0403034	
	Goodman test	2.05062582	0.08337326	0.04014279	

Source: Own survey result, 2024

Based on the result in Table 4.17 of the Sobel test, overall, the Sobel, Aroian, and Goodman tests consistently indicate that the mediating effect is statistically significant. This suggests that teamwork plays a significant role in mediating the effect of the independent variables of the three leadership styles on the dependent variable of project performance.

4.6.3 SPSS - AMOS for mediation analysis.

In structural equation modeling, key model fit indices include the Chi-Square (χ^2) statistic, which evaluates the difference between observed and expected covariance matrices (non-significant p-value indicates good fit); the Comparative Fit Index (CFI), which compares the model to a baseline (values ≥ 0.90 indicate good fit); the Root Mean

Square Error of Approximation (RMSEA), which assesses how well the model fits the population covariance matrix (values <0.06 are good, up to 0.08 acceptable); and the Standardized Root Mean Square Residual (SRMR), the standardized difference between observed and predicted correlations (values <0.08 are good), collectively providing a comprehensive assessment of a proposed structural equation model's adequacy in representing the observed data.

Table 4.18 Model fit indices

Model	Cut-off values	Result
Model chi-square (x2) test	Insignificant result (p>0.05)	
Root mean square error of approximation RMSEA)	Value between 0.08 and .10 (mediocre fit), <0.08 (good fit)	0.078
Standardized root mean square residual (SRMR)	Value <0.05	0.048
Comparative fit index (CFI)	Value ≥ 0.90	0.918
Tucker-Lewis Index (TLI)	value of 0.90 or higher indicates a good fit	0.928

The outputs of SEM SPSS-AMOS were found in appendix IV of this paper.

Table 4.19: The **hypothesis 4** output of SEM SPSS-AMOS

variables	Direct effect	Indirect effect	Total effect
TRFLDR>TW>PP	-0.028	0.649***	0.621***
TRSLDR>TW>PP	0.041	0.393**	0.434**
LFLDR>TW>PP	-0.031	0.173*	0.141

*p < 0.05 (significant at the 95% confidence level)

** p < 0.01 (significant at the 99% confidence level)

*** p < 0.001 (significant at the 99.9% confidence level)

TRFLDR (transformational leadership)

TRSLDR (transactional leadership)

LFLDR (laissez-faire leadership)

TW (teamwork)

PP (project performance)

Source: SPSS Amos version 26 output of Own survey, 2024

Based on table 4.18 of SPSS-AMOS, the analysis found that transformational leadership (TRFLDR) has a significant indirect effect (0.649***) on project performance (PP) through the mediating variable of teamwork (TW), but no significant direct effect. This suggests the positive relationship between transformational leadership and project performance is primarily explained by the mediating role of teamwork.

Similarly, transactional leadership (TRSLDR) has a significant indirect effect (0.393**) on project performance through teamwork with no significant direct effect. This indicates that the influence of transactional leadership on project performance is also predominantly mediated by teamwork.

Regarding laissez-faire leadership (LFLDR), the analysis found a significant indirect effect (0.173*) on project performance through teamwork. However, the total effect (0.141) was not statistically significant.

The asterisks denote the level of statistical significance, with *** representing the highest level ($p < 0.001$), ** representing a high level ($p < 0.01$), and * representing a moderate level ($p < 0.05$).

4.7 Discussions of objective six

To generalize the results, consider the following:

The Baron and Kenny steps indicated that teamwork mediated the relationship between transformational and transactional leadership styles and project performance, but not for the laissez-faire style.

The Sobel test, which is a more direct test of the significance of the indirect effect, suggested that teamwork did mediate the relationships between all three leadership styles and project performance.

The SEM results provided a more comprehensive understanding, showing that:

Transformational and transactional leadership styles had both significant indirect and total effects on project performance.

Laissez-faire leadership style had a significant indirect effect on project performance through teamwork, but no significant total effect.

In conclusion: the Baron and Kenny steps, Sobel test, and SEM results collectively suggest that teamwork mediates the relationships between transformational and transactional leadership styles and project performance.

For the laissez-faire leadership style, the findings were more mixed, with the Sobel test indicating a significant indirect effect, but the Baron and Kenny steps and SEM results not fully supporting mediation.

The SEM analysis provided the most comprehensive understanding, showing that transformational and transactional leadership styles had both significant indirect and total effects on project performance, while laissez-faire leadership style had a significant indirect effect but no significant total effect.

The findings indicate that the positive relationships between transformational and transactional leadership styles and project performance are predominantly explained by the mediating role of teamwork. Laissez-faire leadership also had a significant indirect effect on project performance through teamwork, but no significant total effect.

This study aligns with the findings from multiple previous studies, which have also found that team collaboration and team performance mediate the relationship between leadership style and overall project performance. Specifically, the Shumiye and Ababa (2019) study found that team collaboration mediated the link between leadership style and project outcomes.

The Saleem et al. (2021) study further supported the importance of team performance as a mediator, showing that transformational leadership positively influenced project success both directly and indirectly through team performance. Building on this, the Ali et al. (2021) study examined the sequential mediating roles of teamwork quality and team development in the relationship between transformational leadership and project performance. They found that transformational leadership enhances project performance through the development of effective teamwork and team building.

Finally, the Yang et al. (2013) study verified that project managers who combine transactional and transformational leadership styles can improve teamwork and project performance, again emphasizing the critical mediating role of teamwork. Across these multiple studies, a consistent theme emerges: team dynamics and leadership style are key

factors in determining successful project outcomes. The mediating influence of teamwork and team performance is clearly a critical mechanism underlying this relationship.

4.8 Summary of hypothesis test

Generally according to the result of data provided above through interpretations and discussions researcher summarizes and concluded hypothesis result as follows in table below:

Table 4.20 summary of hypothesis test

H. No.	Paths	P value	Remark
H1a:	Transformational leadership has a positive direct effect on project performance.	< 0.001	Supported
H1b:	Transactional leadership has a positive direct effect on project performance.	< 0.001	Supported
H1c:	Laissez-faire leadership has a positive direct effect on project performance.	> 0.05	Not supported
H2a:	Transformational leadership has a positive effect on teamwork.	< 0.001	Supported
H2b:	Transactional leadership has a positive effect on teamwork.	< 0.001	Supported
H2c:	Laissez-faire leadership has a positive effect on teamwork.	< 0.041	Supported
H3a:	Teamwork has a positive effect on project performance.	< 0.001	Supported
H4a:	Teamwork mediates the relationship between transformational leadership and project performance.	< 0.001	Supported
H4b:	Teamwork mediates the relationship between transactional leadership and project performance.	< 0.01	Supported
H4c:	Teamwork mediates the relationship between laissez-faire leadership and project performance.	> 0.05	Not supported

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Summary of Findings

The main purpose of the study was to investigate the relationship between leadership styles, teamwork, and project performance in the context of the Goba-Berbere-Dellomena construction project. The aim was to understand how different leadership approaches adopted by project managers influenced teamwork dynamics and ultimately impacted project outcomes.

The study utilized a mixed-methods approach, combining qualitative interviews with key informants and quantitative open-ended and closed-ended questionnaires distributed to project managers and team members. The researcher employed a sample survey with a target population of 260 individuals actively involved in ongoing road construction projects, determining a sample size of 155 and 142 responses returned using a combination of stratified random and purposive sampling.

The quantitative data analysis involved descriptive, earned value management, correlation, multiple regression, and mediation analysis techniques to predict project performance and examine the mediating role of teamwork. The thematic interview analysis was conducted. Joint Display Analysis (concurrent analysis) was used to gain deeper insights into leadership styles, teamwork, and project performance.

The key insight from Objective 1 is that the project managers in the Goba-Berbere-Dellomena project exhibited a dominant transformational leadership style. This was evident from the questionnaire data, which showed transformational leadership behaviors scoring highly in the "agree" range. Transactional leadership was also present to a significant degree. In contrast, the laissez-faire leadership approach was the least prominent of the three styles.

The key insight from Objective 2 was that the project was found to be performing strongly across various performance indicators. Questionnaire responses indicated generally positive perceptions of the project's performance, with high scores for stakeholder satisfaction and reasonable performance in terms of adhering to the budget and schedule. The objective Earned Value Management (EVM) metrics further corroborated this, showing the project was running under budget and on schedule. Interviews with project stakeholders also reflected an overall positive assessment of the project's performance.

The assessment of teamwork practices in objective 3 revealed a generally positive picture. Questionnaire respondents indicated strong teamwork in areas such as respectful communication, constructive conflict handling, and maintaining a positive work environment. The team members were also described as helpful, collaborative, and effective in working together during the interviews. However, there was some potential for improvement in further strengthening the overall commitment of the team members to project success.

The correlation analysis in Objective 4 revealed that transformational and transactional leadership styles exhibited strong, positive relationships with project performance. Transformational leadership, with its emphasis on inspiring and motivating the team, had the highest correlation (0.800), indicating it had the strongest link to improved project outcomes. Transactional leadership, involving clear goal-setting and contingent rewards, also showed a robust positive correlation (0.709) with project performance, though not as strong as transformational leadership. Interestingly, the more hands-off laissez-faire leadership approach exhibited a weaker, but still positive, correlation (0.298) with project success.

Building on these findings, Objective 5 examined the direct impact of the different leadership styles on project performance. The results demonstrated that both transformational and transactional leadership had significant positive effects on project performance. Transformational leadership, in particular, was found to be highly impactful in driving improved project outcomes, likely due to its ability to motivate, intellectually challenge, and provide individualized support to the team. Transactional leadership approaches also contributed positively to performance, though to a lesser degree than transformational. Interestingly, laissez-faire leadership did not have a statistically significant direct effect on project performance.

The key insight from Objective 6 was that the relationship between leadership styles and project performance was largely mediated through the team's collaborative behaviors and practices, i.e., teamwork. The analysis found significant indirect effects of both transformational and transactional leadership on project performance, channeled through the team's teamwork. This suggests that the project managers' leadership approaches influenced the team's ability to work together effectively, which in turn contributed to the project's overall success. Transformational leadership had a particularly strong indirect effect on performance through teamwork, highlighting the importance of inspirational and intellectually stimulating leadership behaviors in fostering productive teamwork and ultimately driving improved project outcomes.

5.2 Conclusion

This study's examination of the relationship between leadership styles, teamwork, and project performance offers valuable insights that resonate with the broader policy context in Ethiopia. The findings reveal that transformational and transactional leadership approaches positively impact project outcomes, while laissez-faire leadership has an insignificant effect. These results align with the guided theory of the full range leadership development model, which shows that transformational leadership exhibits high-efficiency performance, transactional leadership moderate efficiency performance, and laissez-faire leadership shows low efficiency, which can disrupt project performance.

Crucially, the mediating role of teamwork underscores the importance of fostering cohesive, collaborative, and well-coordinated project teams to amplify the benefits of

effective leadership. These findings align with the Ethiopian government's emphasis on good governance, capacity building, and the professionalization of the public sector. The policy focus on enhancing public sector efficiency and service delivery through improved project management practices provides a fertile ground for the application of this study's recommendations. By equipping project managers with the necessary leadership skills and promoting teamwork development, organizations can better align their efforts with the government's wider objectives.

However, the implications of this study extend beyond the immediate policy context. The findings offer valuable lessons for leadership development that can be extrapolated to diverse sectors and organizational settings, both within Ethiopia and globally. Effective project management is a critical component of successful development initiatives, and the insights generated here can inform capacity-building efforts in various industries, from infrastructure to healthcare and beyond. Moreover, the study's exposure of the mediating role of teamwork brightens the broader significance of fostering collaborative work environments. In an era of increasing complexity and interdependence, the ability to cultivate high-performing teams has become a strategic imperative for organizations seeking to navigate the challenges of the modern world. The recommendations stemming from this research can serve as a blueprint for organizations seeking to enhance their team-building capabilities and leverage the synergistic effects of transformational and transactional leadership.

5.3 Recommendations

Based on the findings and conclusions presented, here are the key recommendations:

It is advisable to prioritize transformational leadership development. The study's findings clearly demonstrate the significant positive impact of transformational leadership on project performance, both directly and indirectly through its influence on teamwork. Investing in training and development programs to cultivate transformational leadership skills among project managers is advisable to be a top priority.

It is advisable to complement transformational leadership with transactional approaches. While transformational leadership emerged as the most impactful, the study also highlighted the value of transactional leadership styles. Organizations are advisable to aim to foster a balanced leadership approach, where project managers can effectively combine transformational and transactional behaviors to drive optimal project outcomes.

It is advisable to emphasize teamwork and collaboration. The mediating role of teamwork underscores the importance of developing cohesive, collaborative project teams. Organizations are advisable to prioritize team-building activities, foster an environment of open communication and conflict resolution, and ensure project teams are committed to collective success.

It is advisable to align with national development priorities. Given the study's alignment with Ethiopia's policy focus on public sector efficiency and service delivery, the recommendations are advisable to be positioned within this broader context. Engaging with policymakers and aligning leadership and team development efforts with the government's objectives can maximize the impact and ensure the findings are effectively integrated into relevant initiatives.

It is advisable to expand the application beyond the construction industry. While the study was conducted in the construction sector, the insights and recommendations have broader applicability. Organizations in diverse industries should consider adapting and applying these principles to enhance their own project management practices and leadership development strategies.

5.4 Future research direction

The coming researcher advisable to focus on this;

- Expand the scope of the FRLDM beyond the construction industry in Ethiopia to explore its applicability in other sectors and cross-cultural contexts. This will help understand the generalizability of the findings and the influence of organizational and environmental factors.

- Conduct longitudinal studies to examine the dynamic and evolving nature of leadership development, teamwork, and project performance over time. This can provide insights into the long-term impact of leadership initiatives and the processes of organizational transformation.
- Investigate the moderating role of contextual factors, such as organizational structure, culture, and resource availability, to identify the boundary conditions that influence the effectiveness of the FRLDM in different settings.
- Integrate emerging leadership theories and frameworks (e.g., authentic, servant, ethical leadership) into the FRLDM to develop a more comprehensive understanding of the synergies and interactions between various leadership approaches and their impact on teamwork and project success.

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ANNEXES

Annex I: Cover letter

Dear Sir/Madam,

I am Mohammedawol, a graduate student at the Ethiopian Civil Service University, conducting research on "The Effects of Project Manager's Leadership Styles on Project Performance with a Mediating Role of Teamwork in the Case of the Goba-Berbere-Dello Mena Design and Build Road Project."

I kindly request your participation in completing the attached questionnaire, which will take approximately 30 minutes. Your input is essential for the success of this study.

I assure you that any information you provide will be treated with the strictest confidentiality and used solely for educational purposes. You have the right to refuse to answer any questions and withdraw from the research at any point.

The questionnaire consists of three sections, and I kindly request that you provide honest and genuine answers, as the success of our research depends on your input.

The findings of this study will be presented and reported to the Department of Project Leadership and Management at the Ethiopian Civil Service University

If you have any inquiries or require clarification or support, please feel free to contact me using the details provided below:

Mohammedawol Ahmednur

muhesecond@gmail.com

Phone Number: 0913515499

Thank you in advance for your cooperation.

Best regards,

Mohammedawol Ahmednur

Graduate Student, Ethiopian Civil Service University

Annex II: General information about the company, respondent and the project

1. Work position
 - 1 Project managers/leaders
 - 2 Project team member
2. Your experience in a company in years
 1. 0-5yrs
 2. 5-10yrs
 3. 10-15yrs
 4. 15-20yrs
 5. >20yrs
3. Sex
 - 1 male
 - 2 female
4. Education background
 1. Diploma
 2. Degree
 3. Masters
 4. Others
5. Areas of expertise of your company
 - Infrastructure
 - Transportation
 - Building
 - Industrial
 - Other.....
6. Type of the project
 - Infrastructure
 - Transportation
 - Building
 - Industrial
 - Other.....
7. Project ownership
 - Sole
 - Joint venture
 - Consortium
 - Other.....
8. Contract type
 - Unit price
 - Lump sum
 - Cost plus fee

Other.....

Annex III Questionnaire for respondents

Part I: Questionnaire for project managers and project team member judgement on project managers leadership styles

Instruction: Rate the following questions with regard to project managers judgement on project managers leadership styles for Ethiopian road authority in case of goba-berbere-dellomena design and build road construction project based on the following parameters. Please write a (√) under the number you suggest in the table box below.

Strongly Disagree (SD) = 1 Disagree (D) = 2 Neutral (N) = 3 Agree (A) = 4 Strongly Agree (SA) = 5

Table 2 questionnaire

A. Statement related to transformational leadership

1	The leader motivates team members to perform at their best.					
2	The leader inspires a clear vision.					
3	The leader encourages innovative thinking.					
4	The leader provides valuable guidance.					
5	The leader displays confidence in the team's abilities.					
6	The leader promotes open communication.					
7	The leader creates a positive work environment.					
8	The leader appreciates team members' contributions.					
9	The leader facilitates skill development.					
10	The leader sets high-performance standards.					
11	The leader demonstrates ethical behavior.					
12	The leader encourages personal growth.					
13	The leader values the opinions of team members.					
14	The leader fosters teamwork and cooperation.					
15	The leader provides constructive feedback.					
16	The leader recognizes individual and team achievements.					

B. Statement related to Transactional leadership

17	The leader communicates expectations clearly.					
18	The leader provides instructions.					
19	The leader rewards and recognizes good performance.					
20	The leader ensures resources are available.					
21	The leader maintains transparent communication.					
22	The leader holds team members accountable.					
23	The leader provides regular feedback.					
24	The leader sets specific objectives.					
25	The leader ensures fair rewards.					
26	The leader emphasizes meeting deadlines.					
27	The leader provides support when needed.					
28	The leader monitors progress effectively.					
C	Laissez-faire					
29	The leader grants autonomy in decision-making.					
30	The leader allows independence in work.					
31	The leader provides flexibility in tasks.					
32	The leader encourages exploring new ideas.					

33	The leader trusts team members' abilities.					
34	The leader respects their expertise.					
35	The leader values initiative.					
36	The leader welcomes suggestions.					
37	The leader supports autonomy in decision-making.					
38	The leader fosters creativity.					
39	The leader respects work-life balance.					

D. Statement related to team work

40	Team members collaborate effectively.					
41	Team members communicate respectfully.					
42	Team members support each other.					
43	Team members trust each other's expertise.					
44	Team members actively listen to each other.					
45	Team members value diverse perspectives.					
46	Team members celebrate achievements.					
47	Team members handle conflicts constructively.					
48	Team members share information.					
49	Team members are committed to project success.					
50	Team members maintain a positive environment.					
51	Team members overcome challenges together.					

E. Statement related to Project performance

52	The project objectives are clearly defined to the team.					
53	The project consistently delivers high-quality work that meets expectations.					
54	The project adheres to the established schedule, consistently meeting milestones.					
55	The project effectively manages costs, staying within the approved budget.					
56	Stakeholders express satisfaction with the project outcomes.					

Part II: open ended questionnaire

1. Start date of project.....
2. Finish date of project.....
3. Start date in the contract.....
4. Finish date in the contract.....
5. Contractual budget of the project.....
6. Physically performed work up to now in %.....
7. Spent cost up to now in %.....

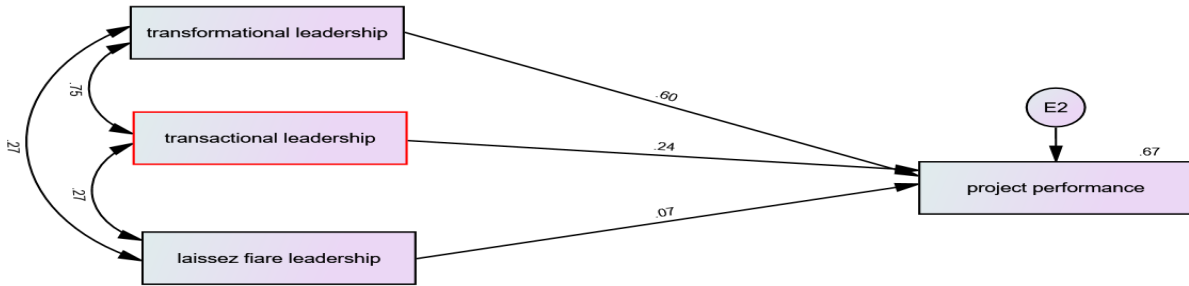
Annex IV: Interview questions

1. Does the team motivation and inspires is good to project performance goals?
2. Can you provide an example of how the project manager's give incentives to impacts project performance?
3. Does the team autonomy in the project good for project performance?
4. As a project manager tell me the level of performance in terms of cost, schedule, quality, and scope and stakeholder satisfaction?
5. Can you provide an example of how the project team member's effective communication, work together and help each other and is good for project performance?

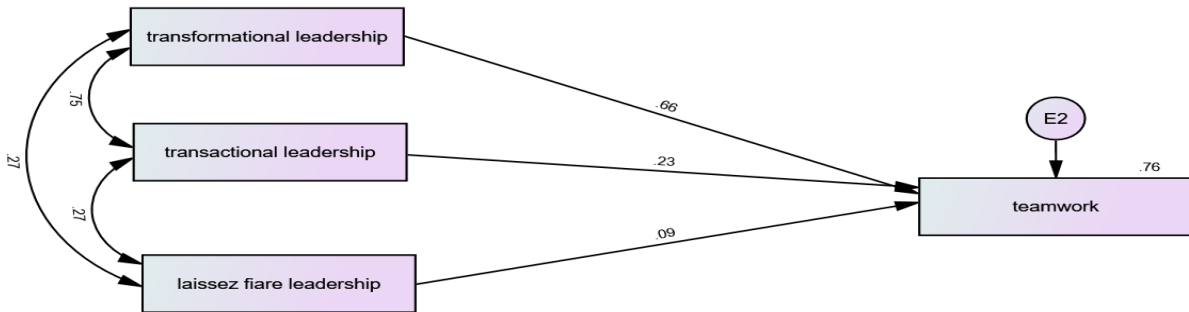
Thanks for your time!

Annex V: The result of mediation analysis by structural equation model

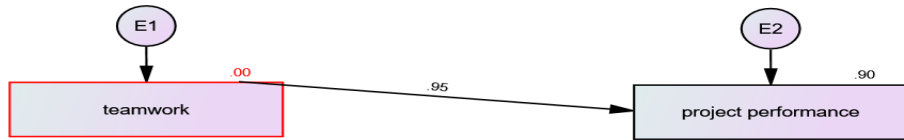
Standard coefficients of independent variables to dependent variables



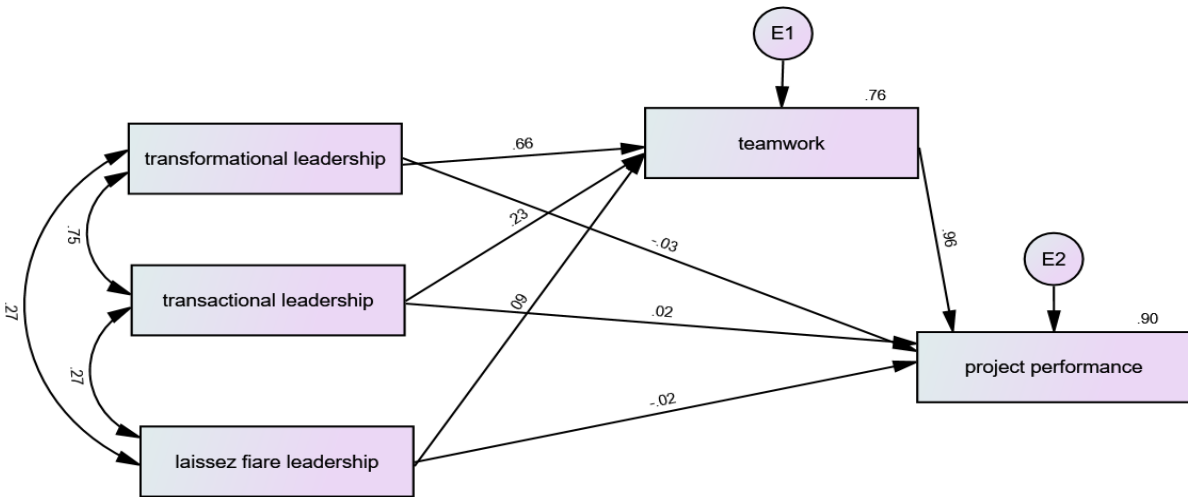
Standard coefficients of independent variables to mediator variables

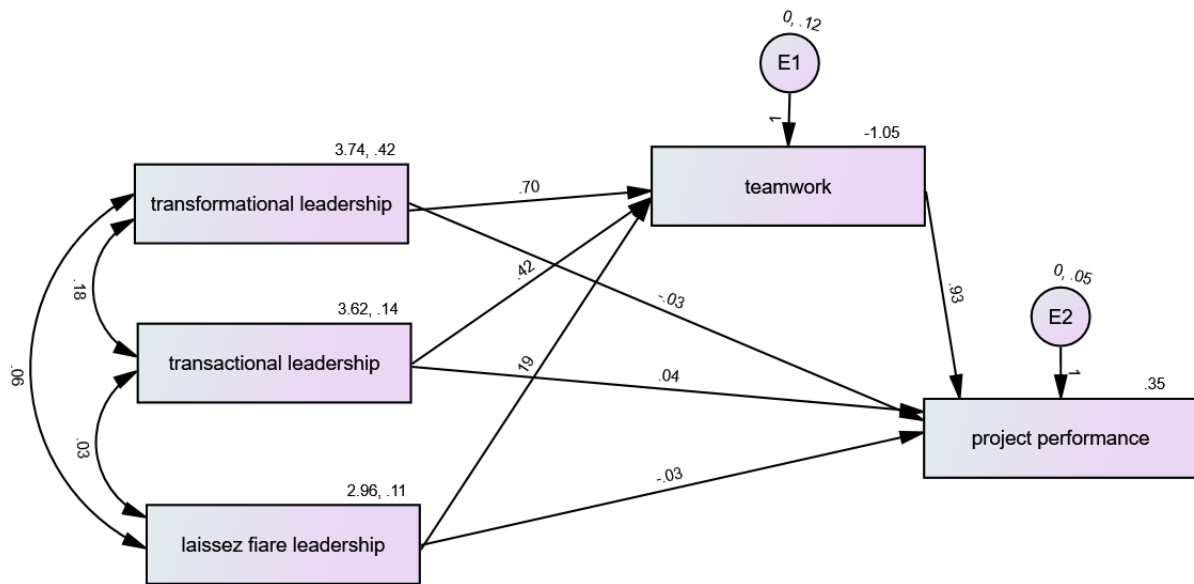


Standard coefficients of mediator variables to dependent variables



Standardized coefficients if teamwork mediates the relationship between leadership styles and project performance





Unstandardized coefficients

Total Effects

	Laissez-faire	Transactional	Transformational	Teamwork
TeamW	.187	.424	.701	.000
projectP	.141	.434	.621	.926

Total Effects - Two Tailed Significance

	Laissez-faire	Transactional	Transformational	Teamwork
TeamW	.010	.001	.001	...
projectP	.083	.003	.001	.001

Direct Effects

	LFLDR	Transactional	Transformational	Teamwork
TeamW	.187	.424	.701	.000
projectP	-.031	.041	-.028	.926

Direct Effects - Two Tailed Significance

	LFLDR	Transactional	Transformational	Teamwork
TeamW	.010	.001	.001	...
projectP	.542	.556	.646	.001

Indirect Effects

	LFLDR	Transactional	Transformational	Teamwork
TeamW	.000	.000	.000	.000
projectP	.173	.393	.649	.000

Indirect Effects - Two Tailed Significance

	LFLDR	Transactional	Transformational	Teamwork
TeamW
projectP	.012	.002	.001	...

Source: own survey, 2024