Innovations

Factors Affecting Project Performance: A Case of Ministry of Water Resources Development, Somaliland

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Abstract
This research paper aimed to investigate factors affecting the performance of projects implemented by the Ministry of Water Resources Development, Somaliland. In order to meet the objectives of the study, data collected through primary sources. The study employed descriptive research design and the information was gathered from the target population. Purposive sampling technique was used to select the respondents and 108 responses returned form the targeted 112 respondents, indicating a response rate of 96.5%. The researcher analyzed the data using statistical analysis such as descriptive and inferential statistics. Mean and Standard deviation were employed to explain the descriptive statistics while Pearson Product Moment Correlation Coefficient and Multiple Regression applied to explain inferential statistics. The findings revealed that, organizational culture, project management culture and project manager factors are the key factors that affect the performance of the projects in the ministry. They also revealed that these factors have a great positive significant effect on the performance of the projects. The study concluded that an improved situation in the independent variables is the source of increased project performance. Following that, the study recommends for the ministry to take the development of the organizational culture, the project management culture and the project managers into consideration to improve the projects' performance and produce productive outcomes. It also suggests for the project managers to encourage teamwork to keep staff focused on the value of collaboration by participating in the project and setting an example as the teamwork is essential to the project since many initiatives include the collaboration of numerous people or departments. Finally, the study recommends for the ministry to create records management system that stores projects' records for future use.
Keywords: Project Performance, Organizational Culture, Project Management Culture, Project Manager, Records Managemen

1. Introduction

In Somaliland, water is a key factor in both the economic and social growth of the nation. As a result, the Somaliland government acknowledges that the management and utilization of the country's freshwater resources are crucial to promoting public health, economic independence, good governance, and social peace. Wise mobilization and equitable use of water resources are crucial elements of socially and economically sustainable development. In this regard, the government is moving to create the required regulatory framework to allow for integrated management of freshwater resources and sustainable management of water services in the country through the Ministry of Water Resource Development. The Ministry of Water Resources Development is solely in charge of managing and developing the nation's water resources. The mandate of the Ministry is to develop, manage, and utilization of the country's water resources.

Project performance is a key component of the overall undertaking control strategy for handling task and program value analysis. It is a component of total project control, which provides step-by-step project analysis. It is a record that includes the three project components of degree, time, and cost as well as the work that is measured and engaged. The project's success is evaluated continuously from level to level so that it can be improved further. Ongoing evaluation of a project's performance enables the team members to set timely, attainable, and realistic goals (FZE., November 2018).

Performance improvement activities should start by concentrating on a set of interconnected issues, such as technology, organizational culture, project management culture, changing the nature of work and people, and managerial authority and power turnover(Alqahtani, Chinyio, Mushatat & Oloke, 2015). According to this study, organizational culture, project management culture, and the project manager are the primary factors that influence the performance and outcomes of a project. Organizational culture elements which are taken into account are mutual trust and integrity. Likewise, the project management culture elements that affect the performance of the project are top management support and communication. Elements of a project management that affect the project performance are knowledge, and leadership style.

1.1 Statement of the Problem

The Horn of Africa has experienced one of its driest stretches in recent memory, with the seasonal rains falling short for four years in a row in Somaliland and other parts of the region. In all drought-affected areas, the situation concerning food security has gotten worse, with food prices rising by a factor of two to three. Similar to how food prices have increased, most of the poor cannot afford water. Due to the destruction of livestock herds, hard-hit pastoralists have been compelled to move to towns and villages in quest of assistance. Malnutrition in adults and children older than five has increased. Many households are now living in poverty as a result of severe food and water shortages, rising food and water prices, and the loss of animals.

Authorities in Somaliland estimate that 1.4 million people, or nearly 40% of the 3.5 million people in Somaliland, have been impacted by the drought. In Somaliland, more than 55% of the people rely on livestock for their livelihood, and they are the ones most affected by the present drought. Additionally, by the end of 2011, Somaliland was said to be home to about 100,000 internally displaced people. Many of the causes of Somaliland's vulnerability to drought risks, as well as the constraints to improving livelihood and economic development in the country, are caused by poor development of water resources and management of those resources. Due to a lack of storage and poorwater management practices, the

majority of rainwater is not put to productive use. Groundwater is a limited resource that is extremely expensive to extract from deep wells of 200 to 400 meters in many parts of the country. Furthermore, increasing population, urbanization, irrigated farming, and industrial activities are putting strain on this scarce resource.

Almost every year, international donors support financially onwater projects which are implemented by the Ministry of Water Resources Development, yet some of these projects' performance is very low compared to their intended objective. An organization's many levels might be affected by poor project management. It may have an impact on the team's morale, resistance to change, or even a complete lack of accountability. Without enhancing the performance of these projects, the Ministry will not be able to achieve its goals.

1.2 Objectives of the Study
The following precise objectives served as the study's direction:
    I.   To investigate how organizational culture affects the performance of projects.
    II.   To examine the impact of project management culture on the performance of projects.
    III.   To examine how the project manager's knowledge and leadership style affects the success of the performance of the projects.

1.3 Research Questions
The following research questions were addressed in the study:
    I.   How does organizational culture affect the performance of the projects?
    II.   How does project management culture affect the performance of the projects?
    III.   How project manager's knowledge and leadership style, does affect the performance of projects?

2.   Literature Review

A.   Empirical Review
The lack of cultural integration among member companies was identified as a primary cause of corporate group failure (Weber & Yedidia Tarba, 2012). The high level of diversification leads to poor performance unless business managers establish an effective organizational culture. Many business executives agreed that an effective organizational culture is critical to their companies' success (Flamholtz & Randle, 2012). The findings of the quantitative study on organizational culture revealed the existence of a positive relationship between organizational culture and business performance (Han, 2012).

The findings of the qualitative study also revealed how business managers use an effective organizational culture to motivate employees, attract customers, improve operational effectiveness, and boost financial performance (Hartnell, Ou, & Kinicki, 2011). According to the study's results of (Ahmed& Anantatmula, 2017), the findings support the research hypotheses and show a significant relationship between project manager leadership competencies and project performance.

According to the formulation of research hypotheses, they tested each project manager's leadership competencywith overall project performance. The goal of testing each competency separately was to forecast changes in the dependent variable as a result of changes in each leadership competency - representing independent variables.

Top management support is one of the most frequently mentioned critical factors ranked at the highest level for projects across industries (Liu & Seddon, 2009). The intensity of top management support
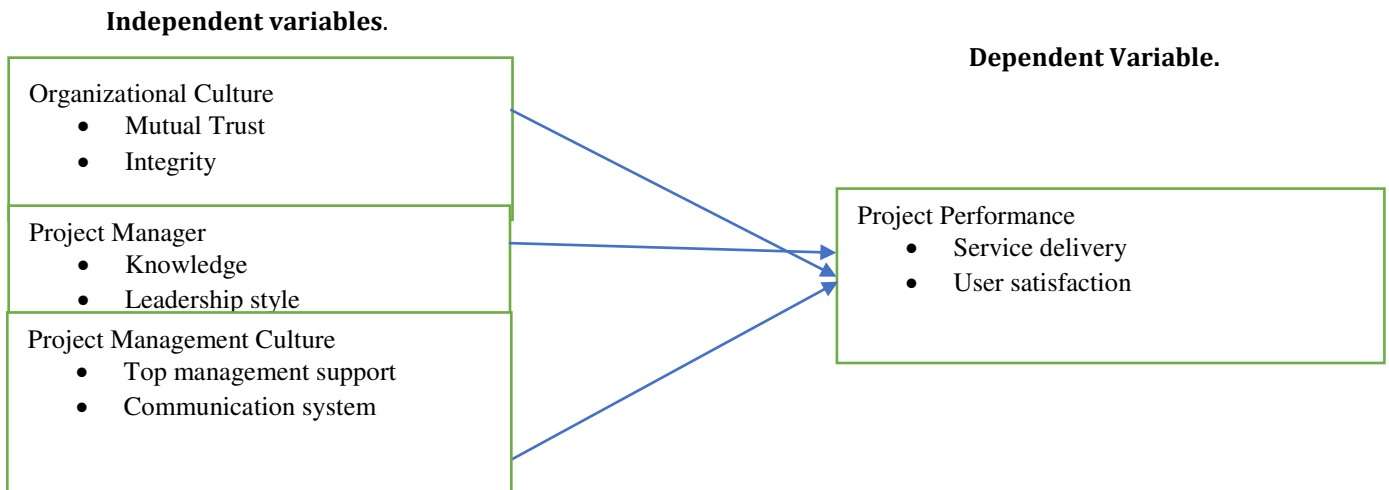
determines whether projects succeed or fail in organizations (Young & Jordan, 2008). The working environment in Pakistan differs from that of Western countries because, in Pakistan, top management is typically not actively involved in working processes due to a large gap in high centralization between management layers(Ahmed , 2016).

The appropriate messages are not conveyed to project managers from top-level management, and one of the most important reasons for project failure in public sector organizations is a lack of project leaders' leadership skills (Ahmed, 2016).

To ensure the likelihood of project success, project managers should have direct access to top management, and senior management must always support project managers by providing resources, delegating authority, providing crisis support, and developing competencies through training and development programs (Ahmed, 2016). As the above studies show, the significance of top management support in project management has been widely acknowledged.

B. Conceptual Framework

A conceptual framework is a basic structure made up of abstract blocks that represent the observational, experiential, and analytical/ synthetical aspects of a process or system under consideration. It is a collection of broad ideas and principles drawn from relevant fields of study that are used to structure a subsequent presentation. The independent variables in this study are organizational culture, project manager, and project management culture, while the dependent variable is the performance of Ministry of Water Resources Development projects as the under-noted diagram elucidates:

Independent variables.

Dependent Variable.

Organizational Culture
- Mutual Trust
- Integrity

Project Manager
- Knowledge
- Leadership style

Project Management Culture
- Top management support
- Communication system

Project Performance
- Service delivery
- User satisfaction

Figure 1: Conceptual framework of the study developed by the researcher.

3. Research Methods

3.1.   Research Design

A descriptive research design was used in this study. Descriptive research is more rigid than other research designs in that it aims to describe product uses, determine the proportion of the population that uses a product, or forecast future demand for a product. Before beginning data collection, descriptive research should define the questions and method of analysis. As a result, the researcher intended to collect detailed information through descriptions using a quantitative approach, which was more appropriate for this study.

3.2. Description of the Study Area

The Horn of Africa is where the Republic of Somaliland is located. The Republic of Somaliland's territory is made up of the land, islands, territorial water above and below the surface, the airspace, and the continental shelf. It is situated between Latitude 8' and 11' 30' north of the equator and Longitude 42' 45 to 49' east. The nation is 110,000 square miles in size.

3.3. Population of the Study

The target population of this study is 112 staff working in the project-related departments ofthe MoWRD in Hargeisa, Somaliland.

3.3.1. Sampling Design

In this study, the researcher useda purposive sampling of non-probability samplingbecause it provided a chance for the researcher to select the potential respondents according to the need of the study.

Since the population of the study was manageable, the researcher collects the required information from all the staff related to the project management.

The table below shows the project-related departments of the ministry and their staff.

Table 1Sample Size

Sections	Population (Frequency)	Percentage
Water Engineering Department	38	33.93
Water Supply Department	25	22.32
Monitoring and Evaluation Department	11	9.82
Water Research Department	15	13.4
Planning and Coordination Department	23	20.53
Total	112	100

Source: Ministry of Water Resources Development, Somaliland

3.4. Instruments of Data Collection

The researcher used questionnaire for data collection tool to obtain more reliable information from the chosen sources: To carry out the survey, close-ended format questions were prepared. The close-ended questions provide more structured responses to facilitate tangible recommendations. The closed-ended questions were used to test the rating of various attributes and this helped in reducing the number of related responses to obtain more varied responses.

3.5. Data Processing and Analysis

The collected data was edited coded, classified, and checked its consistency to facilitate data analysis. And then the collected data was analyzed using the Stata version 13. To deal with the performance of projects predicted by explanatory variables contained in this study, discussions based on descriptive statistics were held, and the multiple linear regression model was used to analyze the data.

i. Model Specification

The study used multiple linear regression analysis (OLS). To establish a relationship between the independent variables and the dependent variable by use of the following regression:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$

Where: Y= Dependent variable (project performance)

β_0=Slope

$\beta_1, \beta_2, \beta_3$=Beta Co-efficient of Determination

ϵ = Stochastic Error Term

X1=Independent variable (Organizational culture).

X2=Independent variable (Project management culture).

X3=Independent variable (Project manager).

In this study, the Variance Inflation Factor (VIF) has performed to determine the degree of linear correlations among the explanatory variables. VIF is defined by (Gujarati, Bernier, & Bernier, 2004)as follows:

VIF = $1/(1- R_j^2)$, where R_j^2 is coefficient of determination variable.

The variance inflation factor will be huge if R_j^2 is near to one.

The hypothesis testing procedure was as follows:

Ho: there is no association between the dependent and the explanatory variable.

Ha: there is an association between the dependent and the explanatory variable.

The statistics were as follows:

Comparing T-calculated and T- tabulation so each explanatory variable's T-calculated value is greater than T- tabulated value. By the procedure of testing hypothesis testing T- calculated greeter than T-tabulated we reject the null- hypothesis and accept the alternative hypothesis.

ii. Reliability

A reliability analysis had been carried out after gathering the data from all respondents. In this study, the reliability test of Cronbach's alpha score was 0.86.

4. Data Analysis and Interpretation

This section presents the results of the study analysis based on research questionnaire. It is sub-divided into descriptive and inferential analysis results.

4.1. Descriptive Analysis

4.1.1. Questionnaire response rate

Table1Response rate

Response rate	Frequency	Percentage
Respondents	108	96%
Non-respondents	4	4%
Total	112	100%

Source: Survey data, 2023

4.1.2. Descriptive statistics results for the Organizational culture factor

The researcher requested the respondents to rate the questions on the base of the five Likert's scale. To analyze the results, the researcher considered the percentage corresponding to the mean (M) and the standard deviation (SD) of the scale for analysis respectively. To interpret the five Likert's scale, the researcher adopted from (Sullivan & Artino,2013) as they allocated the value as follow: - 1.0- 1.49

Strongly Disagree, 1.5-2.49 Disagree, 2.5-3.49 Neutral, 3.5-4.49 Agree and 4.5-5 strongly Agree.

Table 2 Descriptive statistics results for the organizational culture

Organizational culture	Respondent's level of satisfaction					Central tendency	
Indicators	SD	D	N	A	SA	Mean	S/Deviation
Everyone knows and understands our objectives and priorities.	2	6	33	52	15	3.66	0.08
Our policies and procedures help us to provide the service our community wants and needs	2	5	18	58	25	3.91	0.06
People have access to timely and accurate information about what's happening in the organization and why	3	3	25	50	27	3.87	0.08
Decisions are most often made based on facts, not just perceptions or assumptions.	2	3	18	47	38	3.99	0.9
People feel that most changes are the result of pressures imposed from higher up in the organization.	2	5	14	55	32	4.01	0.08
People value and make use of one another's unique strengths and different abilities	1	5	18	60	24	3.98	0.08
Individuals and teams have clearly defined goals that relate to the goals or mission of the organization.	0	8	10	47	43	4.06	0.09
Employees who do the best job of serving the community are more likely to be recognized or rewarded.	1	0	18	40	49	4.25	0.07
Over all mean						3.97	0.07

Source: Survey data, 2023

The descriptive statistics in the above table shows that most of the respondents agreed on the indicators of organizational culture factor. The first indicator is about the popularity and clarity of the objectives and the priorities of the MoWRD and has a mean value of (3.66), the second indicator is about the policies and the procedures of the organization and has a mean value of (3.91), the third indicator about the accessibility of the information of the ministry and has a mean value of (3.87), the fourth indicator is about making decisions by the organization and has a mean value of (3.99), the fifth indicator changes in the organization and has a mean value of (4.01), the sixth indicator is about collaboration and cooperation and has a mean value of (3.98), the seventh indicator is goals of the individuals and teams

and has a mean value of (4.06), and the last indicator is employee recognition and appreciation and has a mean value of (4.25).These indicators affect the organizational culture in great extent as shown by the overall mean and standard deviation values (M=3.97, SD=0.07).

Organization members need to work together to understand the cultural values that exist in the organization in order to improve project performance and organizational effectiveness (Chipuluet al., 2014).

4.1.3. Descriptive statistics results for the project management culture factor

The researcher asked the respondents to rate the questions on the base of the five Likert's scale. To analyze the results, the researcher considered the percentage corresponding to the mean (M) and the standard deviation (SD) of the scale for analysis respectively.

Table 3 Descriptive statistics results for the project management culture

Project management culture	Respondent's level of satisfaction					Central tendency	
Indicators	SD	D	N	A	SA	Mean	S/Deviation
There is a culture of teamwork in the project.	6	11	16	54	21	3.67	0.10
Top management supports the project with commitment and encouragement	1	5	19	48	35	4.02	0.08
Strong Project Monitoring and feedback are given to top management	0	5	21	47	35	4.03	0.07
The communication plan is in place in the project	1	8	20	54	25	3.87	0.08
There is effective communication between project stakeholders	1	11	23	41	32	3.85	0.09
Team members have effective meetings which are well facilitated	5	0	29	47	27	3.88	0.08
The practice of overtime payment and other benefit packages is attractive	5	5	22	43	33	3.87	0.10
Teams often lack the authority needed to get the job done effectively.	3	7	26	39	33	3.85	0.09
Over all mean						3.88	0.08

Source: Survey data, 2023

The descriptive statistics in the above table shows that most of the respondents agreed on theindicators of project management culture factor. The first indicator is about teamwork culture in the project team and has a mean value of (3.67), the second indicator is about top management support and has a mean value of (4.02), the third factor is about project monitoring and feedback and has a mean value of (4.03), the fourth indicator is about communication plan and has a mean value of (3.87), the fifth indicator is about communication between stakeholders and shows a mean value of (3.85), the sixth indicator is

about effectiveness of team members meetings and has a mean value of (3.88), the seventh indicator is about the practice of overtime payment and other benefit packages and has a mean value of (3.87), the last indicator is about the lack of authority by teams and has a mean value of (3.88). These indicators affect the project management culture factor in a great extent as shown in the overall mean and the standard deviation values (M=3.88, SD=0.08).

According to Shore(2008)organizations that wish to be successful in developing new products must have a positive work environment with strong management leadership. In particular, organizations must foster a culture that encourages employees to exert maximal effort, and that makes them feel comfortable in dealing with unfamiliar situations and expressing their opinions. Shore suggests that management must establish clear goals, delegate authority, and encourage people to engage in decision making and the development of new ideas. Finally, when planning, top management must keep the long term in mind.

4.1.4. Descriptive statistics results for the project manager factor

The researcher asked the respondents to rate the questions about project manager on the base of the five Likert's scale. To analyze the results, the researcher considered the percentage corresponding to the mean (M) and the standard deviation (SD) of the scale for analysis respectively.

Table 4 Descriptive statistics results for the project manager

Project manager	Respondent's level of satisfaction					Central tendency	
Indicators	SD	D	N	A	SA	Mean	S/Deviation
Managers at all levels work together as a team to achieve results for the organization	3	12	14	55	24	3.78	0.09
The project manager has strong Coordinating ability and mutual relationship with stakeholders	2	4	14	44	44	4.14	0.08
The project manager has sufficient knowledge and experience required to manage the project	3	6	25	45	29	3.84	0.09
The project manager has the authority to take financial decisions, select key team members, etc.	2	11	22	41	32	3.83	0.09
The project manager is effective in monitoring and giving feedback	5	5	14	56	28	3.89	0.10
The project manager develops and maintains a short and informal line of communication among the project team	4	5	29	48	22	3.73	0.09
The project manager delegates authority to various members of his team	4	5	24	49	26	3.81	0.07

Project managers lack the interpersonal and technical skills they need to work effectively in teams	6	8	18	33	43	3.91	0.11
Over all mean						**3.87**	**0.09**

Source: Survey data, 2023

The descriptive statistics in the above table shows that most of the respondents agreed on the indicators of project manager factor. The first indicator is about cooperation of managers and has a mean value of (3.78), the second indicator is about coordination between the manager and the stakeholders which has a mean value of (4.14), the third indicator is about the project manager's knowledge and experience and shows a mean value of (3.84), the fourth indicator is about the authority of the project manager to make some decisions and has a mean value of (3.83), the fifth indicator is about the effectiveness of project manager's monitoring and feedback and has a mean value of (3.89).

The sixth indicator is about project developments of communication channel among project team by the manager and has a mean value of (3.73), the seventh indicator is about the delegation of the manager of some authorities to various members of his team which has a mean value of (3.81), and the last indicator is about the lack of technical and interpersonal skills of the project managers and has a mean value of (3.91).These indicators affect the project manager factor in a great extent as can be seen in the overall mean and standard deviation values (M=3.87, SD=0.09).

The effectiveness of a project is the degree to which the managers of the project make use of techniques which improve the efficiency of project execution (Bredillet, Tywoniak, & Dwivedula, 2015).

4.1.5.Descriptive statistics results for the project performance

The researcher also asked the respondents to rate the questions about the dependent variable which is project performance on the base of the five Likert's scale. To analyze the results, the researcher considered the percentage corresponding to the mean (M) and the standard deviation (SD) of the scale for analysis respectively.

Table 5 Descriptive statistics results for the project performance

Project performance	Respondent's level of satisfaction					Central tendency	
Indicators	SD	D	N	A	SA	Mean	S/Deviation
Deliverance of high-quality projects which satisfy the community	1	1	21	43	42	4.14	0.07
Projects are completed within the budget set	0	7	20	51	30	3.96	0.08
Occasionally, project delays occur	2	4	20	44	38	4.03	0.08
Over all mean						**4.04**	**0.07**

Source: Survey data, 2023

The descriptive statistics in the above table also shows that most of the respondents agreed on the indicators of the project performance. The first indicator is about deliverance of high-quality project to the community by the MoWRD which has a mean of (4.14), the second indicator is about the completion of projects within the planned budget and has a mean value of (3.96), and the last indicator is about if there is an occurrence of project delays and has a mean value of (4.03). Finally, these indicators affect the

project performance variable in a great extent way as shown by the overall mean and standard deviation values (M=4.04, SD=0.07).

4.2.Inferential Analysis
In this section, the results of inferential statistics were presented to assess the study's aims. Regression analysis and Pearson's Product Moment Correlation Coefficient were used. With the help of these statistical tools, conclusions were reached and decisions on the research hypothesis were made.

4.2.1. Pearson's Product Moment Correlation Coefficient
In this study, Pearson's Product Moment Correlation Coefficient was used to determine whether there is significant relationship between the independent variables (organizational culture, project management culture, and project manager) and the dependent variable (project performance). The following table presents the results of Pearson's Product Moment Correlation on the relationship between independent variables and dependent variable.

Table 6 Correlation between Independent Variables and the Dependent Variable

		Project Performance	Organizational Culture	Project Management Culture	Project Manager
Project Performance	Pearson Correlation Sig. (2-Tailed)	1			
Organizational Culture	Pearson Correlation Sig. (2-Tailed)	.7367** .000	1		
Project Management Culture	Pearson Correlation Sig. (2-Tailed)	.5255** .000	.4349** .000	1	
Project Manager	Pearson Correlation Sig. (2-Tailed)	.8096** .000	.6642** .000	.4314** .000	1

Source: Survey data, 2023

The Pearson's Product Moment Correlation Coefficient test were done to determine the relationship between organizational culture, project management culture and project manager factors as independent variable and project performance as dependent variable. According to Schober, Boer & Schwarte (2018) the correlation coefficients interpretation are as follows, 0.00–0.10 Negligible correlation, 0.10–0.39 Weak correlation, 0.40–0.69 Moderate correlation, 0.70–0.89 Strong correlation, and 0.90–1.00 Very strong correlation.

From the results of the analysis above, there was asignificant strong positive correlation between organizational culture and project performance since r=.7363 and p < .005, and the researcher can

conclude that organizational culture is explaining 54% of the variation in project performance that is, project performance increases as the organizational culture increase. There was also asignificant moderate positive correlation between project management culture and project performance since r= .5255 and p < .005, and the researcher concluded that project management culture explained 28% of the variation in project performance, that is, project performance increases as the project management culture increase. Finally, there was a significant strong positive correlation between project manager and project performance since r= .8096 and p < .005, and the researcher concluded that project manager explained 66% of the variation in project performance, that is, project performance increase with the increase of project manager.

4.2.2. Multicollinearity Test
When independent variables in a regression model are correlated, multicollinearity happens. Because independent variables ought to be independent, this association is problematic. If the degree of correlation between variables is high enough, it can cause problems when it fit the model and interpret the results. The variance inflation factor (VIF), which assesses the degree of correlation between predictor variables in a regression model, is the most used method for identifying multicollinearity.
For variance factor, a value of 1 indicates there is no correlation between a given predictor variable and any other predictor variables in the model. A value between 1 and 5 indicates moderate correlation between a given predictor variable and other predictor variables in the model, but this is often not severe enough to require attention. And lastly, a value greater than 5 indicates potentially severe correlation between a given predictor variable and other predictor variables in the model. The coefficient estimates and p-values in this instance's regression output are probably inaccurate.
The table below shows the result of the multicollinearity test of the study.

Table 7 Result of Multicollinearity Test

Variable	VIF	1/VIF
Organizational culture	1.88	0.531755
Project management culture	1.29	0.774537
Project manager	1.87	0.533723
Mean VIF	**1.68**	

Source: Survey data, 2023

The mean VIF of the independent variables is 1.68 which indicates that there is no multicollinearity problem in the regression model.
Moreover before conducting the multiple regression model the other major assumptions such as linearity, normality, and homoscedasticity tests were conducted and all of them were within the recommended limit.

4.2.3. Regression Analysis of the Factors
Regression analysis was used to determine the extent to which the explanatory factors explain the variance in the explained variable. The findings of such an analysis are detailed below.

Table 8 Regression Analysis Result

Model summary	R-Squared	Adjusted R-squared	Standard error of the estimate	No. of obs.	Prob> F
	0.7460	0.7386	1.315	108	0.000
P_ Performance (constant)	Coef.	Std. Error	T stat		P>|t|
Org_ Culture (X₁)	.32150	.06947	4.63		0.000
PM_ Culture (X₂)	.20743	.07311	2.84		0.005
Project Manager (X₃)	.55261	.07019	7.87		0.000

Source: Survey data, 2023

As can be seen in the table, predictors of the model are organizational culture, project management culture, and project manager and the predicted variable is project performance. These predictors are held constant. The R-Bar column shows the coefficient of determination, denoted as R^2 or r^2, this is the proportion of the variation in the dependent variable that is explained by the independent variables.

The unstandardized coefficients B column shows the coefficient of the independent variables in the regression equation including all the predictor variables. The organizational culture which is the first predictor of the model has a regression coefficient of 0.32150, the project management culture predictor has a regression coefficient of 0.20743, and the project manager predictor has a regression coefficient of 0.55261.

The Standard Error column displays the standard error of the estimate, this number shows how much variation, there is around the estimates of the regression coefficient. The t-value column displays the test statistic. Unless otherwise stated, the t value from a two-sided t TEST is the test statistic used in linear regression. It is less likely that the results occurred by accident the greater the test statistic. The P>\|t\| column shows the p value. This illustrates how likely it would have been for the computed t value to have come about by chance if the null hypothesis that the parameter had no influence were accurate.

In order to determine the relevance of the regression model, analysis of variance was also performed. The following table shows the result of the analysis of the variance.

Table 9 Analysis of Variance (ANOVA)

Source	Sum of squares	DF	Mean Square	F-statistics	Sig
Model	528.04	3	176.01	101.79	0.000
Residual	179.83	104	1.7291		
Total	707.87	107	6.6156		

Source: Survey data, 2023

Interpretation of Regression Analysis Results:

At 95% confidence interval, F-value of 101.79 and the corresponding significant value (p-value) of 0.000 was registered as shown in table 9, this shows that the regression model has a probability of value of 0.000 of giving the wrong prediction. Hence, the regression model used above is a suitable prediction model for explaining the factors affecting the performance of the project implemented by MoWRD.

In the model summary, the coefficient of determination (R- Squared) value is used to indicate the strength and direction of the relationship between the variables. The strength of the association increases as the value approaches 1. The coefficient of determination(R-square) of this model is 0.746 which indicates that about 74.6% of the variation in the dependent variable is explained jointly by all explanatory variables included in the model. The remaining 25.4% is the variation not explained by the model.

All the predictor variables produced statistically significant results p< 0.05. The model coefficients result show that t-tests have p-values less than 0.05 indicating that the predictors have statistically significant effect on performance. This can be interpreted to mean that those predictors above mentioned do contribute to improvement of projects performance in the MoWRD.

The first predictor is the organizational culture and it has a positive significant effect on project performance because it is significant at 1%, implying that a 1% increase in organizational culture increases project performance by 32%. The second predictor is the project management culture and it has a positive significant effect on project performance because it is significant at 1%, implying that a 1% increase in project management culture increases project performance by 20.7%. The last predictor is the project manager and it has a positive significant effect on project performance because it is also significant at 1%, implying that a 1% increase in project manager increases project performance by 55.2%.

The model also revealed that there is astatically positive relationship between the independent variable with dependent variable by using the t-test and calculated T-tabulation versus and T-calculated. According to the procedure of testing hypothesis by comparing T-calculated and T- tabulation, each explanatory variable's T-calculated value is greater than its T- tabulated value. By the procedure of testing hypothesis testing, as the T- calculated greeter than the T-tabulated, we reject the null- hypothesis and accept the alternative hypothesis.

5. Conclusion and Recommendations

5.1. Conclusion

The main purpose of the study was to seek a solution for the poor development and management of water resources in Somaliland. The study focused on the enhancement of the performance of the water projects. Therefore, based on the findings the following conclusions are drawn:

As the first objective of the study was to investigate how organizational culture affects the performance of projects, the findings demonstrated that organizational culture has a positive impact on project performance. Different literatures argued that effective organizations develop a clear and comprehensive set of values so that everyone is aware of and can be contribute.

The second objective was to examine how project management culture affects the performance of projects and the findings of this study revealed that it has a positive impact on project performance. Good project management culture generates reciprocal goodwill and support, which contributes to increased team spirit, mutual loyalty, cooperativeness, shared responsibility, and team resilience. All of these team characteristics result in more mutually rewarding and long-lasting connections between the team members and between the organizations its stakeholders.

The last objective was also to examine what kind of effect the project manager would have on project

performance, the findings show that project manager also has positive effect on project performance. Project managers manage relationships across a project's initiating, planning, executing, monitoring, and closing phases, in this case, good knowledge, leadership style and personal traits of the project manager contribute to the success of the project.

The above finding implies that the improved situation in the independent variables is the cause of the improvement of performance of projects. Hence, appropriate consideration of these issues and situations composes a necessary initial point and is a means to the formulation of policies, designing of suitable in evolvement strategies and realistic steps by the organization in order to decrease water shortage, and to endorse continuing development at the national water sector.

5.2. Recommendations

The following recommendations are forwarded based on the major findings obtained and the conclusions reached, for the affecting factors of projects' performance:

➢ According to this study findings, organizational culture has an important role to enhance the projects' performance of the organization. Therefore, the researcher recommends for the ministry to take organizational culture into consideration to improve the projects' performance and produce productive outcomes that are in line with the strategy of the ministry.

➢ A culture of mutual trust must be created as it helps to establish the groundwork for high-performing teams. Without trust, it is impossible for a team to perform well. Even if it is accomplished, it cannot be sustained over time.

➢ Building a recognition culture in which gratitude and appreciation are offered often and in real time also improves theministry's resiliency. What is recognized is repeated, and leaders who use recognition as a daily tool for cultivating a strong culture will outperform organizations that fall flat on culture.

➢ One way for leaders to improve organizational culture is to give employees some control over culture. Allowing employees to speak up when they disagree with a company's conduct, for example, or to take on new projects that they are enthusiastic about, can contribute to the development of an empowered culture.

➢ In addition to that, employees should be encouraged to prioritize work that they are enthusiastic about and where they believe they can add the most value. If an employee likes to talk with clients, adding responsibilities that allow for face-to-face encounters might make their job more interesting. Top management have to seek feedback and assist employees who want to branch out in these ways.

➢ The researcher recommends improvement of the communication at work place, knowing when and how to communicate successfully at work can help prevent miscommunication, boost collaboration, and create trust. Teams that understand how to successfully communicate about work are better prepared for difficult situations.

➢ The researcher also recommends for the project managers and the engineering managers to seek appropriate support from top management to increase project performance because of the significant and beneficialproject performance and top management support.

➢ The researcher suggests for the project managers to make solicit feedback by directly asking for it or by sending follow-up emails and surveys. Feedback from teams and stakeholders can assist a project manager in identifying significant project variables that they may have overlooked during the course of the project.

➢ Project managers must also encourage teamwork to helps keep employees focused on the power of working together by participating in the project to set an example. Teamwork is important to the project because many projects require the efforts of multiple people or departments working together.

➢ Finally, as one of the biggest constraints of the study was the lack of secondary data resource, the researcher advises the Ministry to establish a library or archive that is authorized for record

management. Record management is the creation of the projects' records, maintaining them, and storing them properly. This will help access to the projects' records for future use.

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