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Organizational Culture and Project Performance in Ethiopian State-Owned Construction Enterprises

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Research Article

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Abstract

Organizational culture significantly influences project performance, especially in the construction industry, which involves heavy coordination, a tight schedule, and working with many people from diverse backgrounds. In state-owned construction companies in developing countries, bureaucratic organization, poor communication, and weak leadership hinder the effective execution of work and the achievement of project objectives. This study examines the effect of organizational culture on the project performance of the Construction Works Corporation (CWC) in Ethiopia, which is one of the large state-owned construction organizations in the country. The researcher employed mixed-method research, which included a survey of 73 employees across nine construction projects in Addis Ababa and interviews as well as focus group discussions held with managers and staff members of the construction projects. RII (Relative Importance Index), descriptive statistics, and multiple linear regression analyses were conducted to identify key project management organizational culture constraints and investigate their impact on project performance. RII results for rigid organizational structure (0.88), poor communication (0.86), ineffective leadership (0.71), and undefined organizational values and constraints have a significant impact on project delay, poor resource management, and dissatisfaction of the client. Results of the regression analysis show a positive relationship between organizational culture factors and organizational performance ($R=0.954$, $R2=0.910$, $p<0.05$), showing that structural, leadership, and communication factors have a significant impact on organizational performance, while diversity and inclusion have no impact on organizational performance. This research provides a contribution to the empirical study of the influence of organizational culture in the context of state-owned public construction companies in Ethiopia and suggests a practical framework with three steps to overcome the problems of organizational culture for state-owned construction organizations. The findings can guide policymakers, project managers, and leaders of public construction organizations to improve the project performance of organizations.

1 Introduction

Organizational culture is an important and relevant issue in current organizational theory and practice, especially for such an industry as construction. In such an industry with complicated operational systems and the requirement for a coherent human interface [1]. According to [2] corporate culture can be described as the shared assumptions, beliefs, norms, values, and knowledge of people and organizations, all affecting employee conduct and the organization. A vital factor impacting strategy implementation, task performance, and the decision-making process. Organizational culture cannot just remain as a concept but rather an influential factor affecting employee performance, morale, leadership effectiveness, and long-term sustainability in an organization, specifically within the construction industry, where conditions are constantly volatile and high-risk [3].

According to [4], the construction industry's intrinsic features—such as its project-centric framework, strict deadlines, reliance on interdependent multidisciplinary teams, and vulnerability to context-specific risks—amplify the impact of organizational culture on performance outcomes. Construction companies, in contrast to well-established industrial industries, frequently operate in dispersed, temporary project environments that impede the institutionalization of cohesive cultural norms. This problem is made worse in poor nations, where bureaucratic lethargy, centralized decision-making, inflexible hierarchical structures, and limited technological

integration are common characteristics of public sector building enterprises. Project execution and long-term organizational development are hampered by such cultural arrangements, which also tend to stifle innovation, interfere with effective communication, and prevent group learning [5], [6].

In the Ethiopian context, these difficulties are more than just theoretical. One of the biggest state-owned construction companies in the country, Ethiopian Construction Works Corporation (ECWC), is a prime example of how organizational culture can both reflect and reinforce structural inefficiencies. Even if the company has made significant contributions to the building of national infrastructure, an increasing amount of factual and anecdotal data indicates that the company's long-term efficacy is threatened by ingrained cultural flaws. Inadequate leadership communication, a strict hierarchical structure, a lack of strategic direction, and low employee engagement have all been linked to problems like project delays, resource misallocation, non-compliance with safety standards, and stakeholder discontent[7].

The importance of a strong organizational culture in promoting successful project management is highlighted by a sizable body of international research [8]. In particular, there is a constant correlation between increased work satisfaction, lower employee turnover, better stakeholder alignment, and increased creativity in cultures that exhibit transparency, trust, employee empowerment, and cross-functional collaboration. On the other hand, persistent project underperformance, compromised safety standards, and ethical transgressions are often linked to organizational cultures rooted in authoritarianism, rigidity, and poor communication. Although these international perspectives provide insightful advice, they frequently fail to capture the complex socio-cultural dynamics present in Ethiopian public sector construction environments and larger African contexts, where institutional inertia, politicized decision-making, and inadequate feedback mechanisms continue to be major obstacles [9].

Additionally, national cultural aspects like collectivism, strong power distance, and uncertainty avoidance have a significant impact on organizational behaviours in Ethiopian institutions [10]. These cultural tendencies frequently support hierarchical, top-down communication styles, limit employee autonomy, and justify opposition to change. As a result, under these situations, good leadership and open communication go beyond simple managerial duties to become essential cultural requirements. Many public construction organizations, such as the Ethiopian Construction Works Corporation (ECWC), lack formalized mechanisms to systematically evaluate or change their organizational culture, which exacerbates the persistence of structural and operational inefficiencies[11], [12].

Considering these complications, empirical research on the organizational culture of the Ethiopian Construction Works Corporation (ECWC) and similar organizations is desperately needed. In order to close a significant research gap, this study aims to methodically examine the organizational cultural dynamics inside ECWC. Through an integrative analysis of quantitative metrics and qualitative perspectives from both staff and leadership, the research seeks to identify major cultural barriers, such as poor leadership communication, ingrained structural rigidity, and unclear organizational values, and to evaluate their effects on performance indicators, such as project timeliness, cost effectiveness, client satisfaction, and employee engagement. Additionally, the study aims to create a contextually nuanced, practical, and long-lasting framework for cultural transformation by placing the investigation inside Ethiopia's distinct institutional, economic, and sociocultural backdrop.

2 Literature Review

2.1 Organizational Culture

Organizational culture is regarded as an essential variable, which is closely correlated with an employee's behavior, a leader's behavior, and the effectiveness of an institution[13]. The social construction that guides employees within an organization's framework and that enables the individual to make sense of his/her organization and, thus, how each person interacts with others and responds to internal difficulties and outside environmental requirements[14]. Organizational culture is a collection of deep, basic assumptions and beliefs that an entire group has learned and accepted, over time, in solving its problems of internal integration and external adaptation[15]. Such deeply shared assumptions become unwritten rules of interaction which guide new members in understanding their world, making sense of organizational realities, and coordinating their thoughts, feelings, and behavior with those of the other organization members. In addition to the assumptions, [16] regard culture as "collective programming of the mind," thus capturing the far-reaching effects that values and ways of thinking, which become internalized from childhood in the form of cultural knowledge and are still at play when people work, have on the behavior of people in the workplace. Moreover, [17] To this line of thought, it would be added that culture represents not only the common values held within the organization but also serves as a key indicator of flexibility, efficiency of the management, and sustainability of performance of the organization. All the arguments above indicate that organizational culture represents a social and strategic resource critical for the cohesiveness of the organization, its innovativeness, and overall competitive advantage[18].

Amongst the linked dimensions of organizational culture, there is that of observable products, articulate ideals, and assumptions that have been accepted and internalized [2]. For managing cultural change successfully, the knowledge of these levels should be acquired, particularly for vertical and/or project-oriented industries such as construction[19]. Leadership contributes to the embedding and strengthening of culture through a consistent pattern of behaviors and smart choices[20]. Organizational culture also affects key management functions such as the ways decisions are made, how conflict is resolved, and the change management strategy to name a few. All of these have a direct bearing on organizational performance[21].

[22] developed the Competing Values Framework (CVF), which conceptualizes organizational cultures into four different typologies, namely, market, hierarchy, adhocracy, and clan culture. Each culture type possesses strengths and weaknesses, and the level of balance between these various culture types greatly influences an organization's performance. Most construction companies currently display strongly hierarchical cultures, though there is a trend towards client-focused, project-based, and learning-oriented cultures, embodying characteristics of clan and adhocracy cultures[19]. The industry’s dependence upon accepted standards of operation, regulations, and formal procedures is the reason for this trend.

2.2 Organizational Culture in the Construction Industry

In the highly project-driven construction industry, organizational culture has the most significant influence, since the industry relies on strict timetables, substantial capital, and business exposure, and has highly transitory project teams[23]. [24] emphasized that culture in construction firms has been identified as the determining factor in many phenomena, including team performance and the quality of contractor/client

relations. Culture is also important in project-based organizations; it affects knowledge sharing and facilitates inter-departmental coordination and alignment with project goals[4].

According to [25], interpersonal relationships in construction, along with its physically intensive and inherently risky nature, have a huge impact on the culture in the industry and its differences. Such a complex relationship structure requires the adoption of a culture that respects transparent communication, flexibility, and trustworthiness. In contrast to that, many firms in construction tend to work in a hierarchical and risk-averse culture that would limit innovativeness and organizational agility[26].

Beyond these points, the manner in which these key matters, such as digital change, safety rules and regulations, and environmental standards, are treated in construction companies is affected by the culture in organizations. Cultural fit among partners in a project enhances performance, minimises conflicts, and encourages co-operation, since[27]. Hence, the sharing of a common culture throughout the cross-functional and inter-organizational teams is found to be critical for the execution of projects.

2.3 Cultural Determinants in Construction Organizations

One key factor affecting the culture of the organization is the style of leadership. Transformational leaders who involve their employees in the business through empowerment, motivation, and self-improvement are expected to create an innovative and cooperative culture[28]. Transaction leadership, however, is likely to maintain tight control of the culture, which might hinder innovation and commitment among employees through the mechanism of regular monitoring and conformance of the reward system[29].

The ways in which an organization communicates are an equal feature of its culture. Although miscommunication, poor motivation, and a lowering of performance standards are caused by poor communication, it is open, honest communication that will be reflected in high levels of trust between employees, the coherence of strategy, and an overall company atmosphere[30], [31]. In an area which, as [32] states, involves many teams working together, it is imperative to be able to communicate efficiently. Poor communication in the construction field has two adverse effects, both by increasing operating hazards and impedes the strong implementation of quality control measures [33].

Another large section is the extent to which employees are empowered or involved [34]. The dominant tendency among most firms pursuing extensive training and development programs is to promote values in the organization that encourage creativity and learning, as is indicated by [35]. Relatedly,[36] proposed that workers who have been empowered would display creativity, initiative, problem-solving, and increased synchronization with the organization's overall goal

Another important aspect of corporate culture is the culture of health and safety[37]. In the opinion of [38], a culture toward safety in an organization can be a direct indicator of other underlying cultural factors in that organization, while a poor safety culture can indicate deeper structural and systematic faults. Health and safety is but one element, and it should be emphasized that Diversity and Inclusion play an essential role in defining the organization's culture. As well as the idea of diversity, inclusiveness in an organization guarantees increased creativity, cohesion in a team, and fair inclusion of employees [39]. Moreover, an organization’s structure (e.g., the difference between a flat organization and a hierarchy) can strongly affect internal collaboration and the distribution of decision-making power [37].

As noted by [38], an organization's views on safety are merely an outward expression of an organization's deep-seated cultural values, and the weakness of safety culture is usually a sign of deeper problems within the structure and system. In addition, diversity and inclusion influence the way organizations develop culture, as an inclusive workforce ensures more creativity, solidarity within teams, and inclusivity[39]. Finally, structure and particularly the difference between flat and hierarchical structure have a high effect on interaction and distribution of power[40].

To develop cultural values and increase organizational performance, the reward and recognition programs that are aligned with the required behavior are important[41]. Without the appropriate incentive mechanisms, initiatives aimed at promoting an innovative culture will often fail[42]. Additionally, it is important to include digital technologies, such as Building Information Modeling (BIM), into the organizational culture to achieve high-performance competitiveness[43]. Businesses that maintain a high level of digital maturity and incorporate such technology in the corporate culture achieve superior performance to companies with a low level of technology uptake[44].

2.4 Impacts of Organizational Culture on Project Performance

Punctuality, cost, creativity, and client satisfaction are major project outputs that are affected by organizational culture [45]. Organizational culture with emphasis on employees' power, communication, trust, and a supportive work environment tends to have higher employee satisfaction and lower labor turnover [46]. Low levels of communication, Rigid hierarchies, and vague strategic focus reflect organizational environments that tend to cause client dissatisfaction, cost overruns, and delay [47].

As [48], indicates that new systems and processes could be greatly restricted due to resistant cultures, which were predominantly in traditional construction cultures. Conventional ideas and thinking, which are difficult to apply in the new, dynamic environment of projects, can cause such resistance. Correspondingly, [49] revealed that inflexible and hostile cultures can greatly suppress creativity and restrict the flow of information between groups and departments.

A negative culture in an organization might amplify moral issues and violations of safety and eventually affect the total structure of work in the workplace. It is proven in [50] that there is a direct relation between organizational spirit, the frequency of accidents, and the pervading safety culture within the organization. A positive culture of safety leads to a reduced number of accidents and a higher level of production in the organization [51]. Flexibility and reactivity, like creativity, and a culture of improvement, are a success factor in most complex projects [52].

In addition, agile cultures also enable more rapid adoption of advanced technology such as automation, data analysis, and Building Information Modeling (BIM) [53]. Therefore, speeding up the digital transformation processes. In this context, the company culture provides a mediating effect between technological capabilities and actual usage; the relationship seems to be a win-win one, and the organizational culture has a significant role, and it needs to be aligned with ever-changing project needs to keep the organization competitive [54].

3 Research Methodology

3.1 Research Design

The research used a mixed methods approach, which incorporated both quantitative and qualitative methods so as to obtain a comprehensive understanding of organizational culture at Ethiopian Construction Works Corporation (ECWC). The mixed method design was adopted so that both detailed insights into the cultural dynamics and empirical assessments of the prevalence and effects thereof could be attained.

During the qualitative stage, interpretive understanding was developed with regard to the shared values, communication patterns, leadership styles, and organizational rules of the management and employees. Such understanding was then enhanced by quantifying the pervasiveness and power of the organizational cultures found among the vast employee body, and testing it against organizational performance indicators such as job satisfaction, job performance, and job turnover.

The sequential design consisted of three stages. Stage one included an exploratory qualitative phase, during which key cultural elements within the organization were explored and identified. Stage two used a quantitative survey to measure the extent to which the factors had an effect on the outcomes of the organization. Stage three combined both stages in order to provide a practically oriented and specific framework to enable an improvement in the organization's culture.

3.2 Target Population

The target population consisted of personnel of ECWC involved in ongoing building construction projects in Addis Ababa. All levels within ECWC were present in the population being studied. That included management staff, including top executives who determine institutional culture and strategy, and middle-level management staff who are responsible for the coordination of the labor force and the implementation of operational procedures. In addition, technical and professional personnel, including engineers, planners, architects, and finance staff engaged in implementation, were involved in the study. Moreover, personnel such as HR staff, procurement, and general service staff are administrative and support staff in ECWC. Lastly, site staff, including foreman, technicians, and laborers, are involved because they are exposed directly to organizational culture, communication, and leadership.

The population was further restricted to employees working on nine ongoing ECWC projects, such as the ICT Incubation Center, Akaki Public Service Enterprise Building, three Public Service Depots, Attorney General Office Renovation, Abattoir Quality Center, Prosperity Party Office Maintenance, and the FDRE Documents Authentication and Registration Head Office (4B + G+21), to guarantee contextual relevance.

3.3 Sampling Size and Technique

A purposive sampling was used in both the qualitative and the quantitative stages so that individuals knowledgeable about ECWC's culture are included in the study.

3.3.1 Qualitative Sampling

It was required for participants to have at least two years of experience working at ECWC. A target of ten to twenty employees across all areas; department heads, supervisors, top management, and selected employees

were set. That number would be sufficient to be a thematic saturation as required for an organizational culture study.

3.3.2 Quantitative Sampling

A broader purposive sample of 78 workers from all nine project sites was chosen for the quantitative survey. The response rate was 93.6%, with 73 completed questionnaires being received. The participants came from varied professional areas and experience levels. Professionally, the breakdown was: 80% were engineers, 11% project managers, and 9% architects. By work experience, 73% of the participants had fewer than 5 years of work experience, 23% had between 5 and 10 years, and 4% of the participants had over 10 years of work experience.

3.4 Data Collection Procedures

3.4.1 Qualitative Data Collection

Semi-structured interviews and focus group discussions were used during the qualitative stage of the research. Senior managers, department heads, and the most experienced staff were interviewed individually for 45–60 minutes, while six to eight members of staff from various departments were placed in groups to conduct focus group discussions. The interview guides explored participants' perceptions of organizational strengths and weaknesses, individual employee experience, organizational values and norms, leader style, and communication channels. All the interviews were audio recorded and verbatim transcribed, after which they were thematically analyzed.

3.4.2 Quantitative Data Collection

A structured survey questionnaire was developed on the basis of results derived from the qualitative survey phase. The questionnaire included Likert scale items to measure important dimensions such as communication, leadership styles, understanding of company values, teamwork, supportive behaviors and employees’ commitment toward their organizations. The survey included items about the consequences of the organization. The survey measured outcomes such as job satisfaction, productivity and intention to leave. The survey was delivered electronically to guarantee the respondents' anonymity and make it easier to distribute the questionnaire.

3.5 Methods of Data Analysis

3.5.1 Qualitative Data Analysis

Data from focus groups and transcribed interviews were subject to thematic analysis. The data was coded in order to establish emerging themes with regard to organizational climate, communication problems, leadership actions and culture.

3.5.2 Quantitative Data Analysis

All the data from the survey were analyzed using SPSS software package. Standard descriptive statistics (frequencies, means and standard deviation) were performed to describe the socio-demographic and culture profiles of the survey participants. The Spearman's correlation was performed on all non-parametric variables

(organization structure, communication, leadership quality, and values fit). Multiple linear regression was used to evaluate the impact of the entire as well as the individual characteristics of the organization on the overall culture of the organization and this was assessed with coefficients of regression, ANOVA and R-squared value of the model. The results from both qualitative and quantitative stages of the research are integrated to form a conceptual framework which seeks to address the cultural inadequacies of ECWC.

3.6 Reliability and Validity

Various procedures were utilized to establish rigor. Triangulation was used by comparing data from focus groups, interviews and surveys to increase the validity of the results. Member checks were completed by showing preliminary qualitative interpretations to some of the subjects in order to have them corroborate findings. Reliability of the surveys was also tested. Cronbach alpha coefficients for the surveys showed they had a good degree of internal consistency (shown in Table 1).

Table 1
Cronbach Alpha Test Results

Construct	Items	Cronbach's α	Result
Factors affecting organisational culture	24	0.935	Excellent
Impacts of organisational culture	13	0.897	High reliability

These coefficients show that the measurement scales were reliable and appropriate for additional statistical examination.

3.7 Ethical Considerations

The College of Engineering and Technology Research Ethics Committee approved this research. All the ethical rules were followed during the research process. The participants were informed of the research's purpose, and took informed consent. The respondents' privacy and the anonymity of respondents' information were respected; the data were used for only academic purposes.

4 Results and Discussion

4.1 Factors Affecting the Organizational Culture of ECWC

Table 2
Poor Leadership Related Factors Affecting the Organizational Culture of ECWC Company

Poor leadership-related factors	Mean Value	RII	Rank	Significance Level
Leadership lacks clear direction and communication, leading to confusion.	3.57	0.71	1	High
Employees feel demotivated due to ineffective leadership practices.	2.89	0.58	2	Average
Poor leadership within our construction company	2.84	0.57	3	Average
There is a lack of trust and respect towards leadership within the organization.	2.47	0.49	4	Average

From the data in Table 2, it is evident that poor leadership has a significant influence on culture, with poor direction/communication rated the most influential (RII = 0.71). The findings suggest that it is not just inefficiency of management that is responsible, but perhaps a lack of a positive organizational culture within the organization itself. These findings echo the literature that identifies leadership as the principal force in shaping/reinforcing culture [55]. In the case of ECWC, it appears to be amplified by a number of characteristics of public service; centralised power and reduced management discretion make progressive leadership styles difficult to implement, and thus have possibly made the staff disillusioned/lose trust in leadership.

Table 3
Lack of Clarity in Values and Mission-Related Factors

Lack of Clarity in Values and mission-related factors	Mean Value	RII	Rank	Significance Level
Lack of clarity in company values and mission undermines the organizational culture.	2.41	0.48	1	Average
Employees are unsure of how their work contributes to the company's mission.	2.39	0.48	2	Average
Company values are inconsistently upheld, leading to confusion among employees.	2.37	0.47	3	Average
The company's values and mission are not aligned with employees' expectations.	2.30	0.46	4	Average

Table 3 shows a moderate and meaningful cultural barrier. Vague values and mission of companies (RII = 0.48). It implies that employees do not fully know how their work relates to the mission of the organization, which reflects a misalignment between individual tasks and organizational mission. These results align with the studies from[17], which emphasizes the importance of well communicated value on an organizational alignment and success. With the inconsistent enforcement of norms in the ECWC environment, there seems to be a communication and management problem that resulted in the cultural inconsistency.

Table 4
Unsupportive Work Environment Related Factors

Unsupportive Work Environment-related factors	Mean Value	RII	Rank	Significance Level
Safety standards are not prioritized, putting employees at risk.	2.96	0.59	1	Average
Employees feel unsupported and undervalued in their workspaces.	2.50	0.50	2	Average
The work environment stifles creativity and innovation among employees.	2.47	0.49	3	Average
The work environment in our company hinders collaboration and teamwork.	2.24	0.45	4	Average

As indicated by Table 4, an inadequate work environment, such as little consideration of safety (RII = 0.59), will affect organizational culture negatively. The results are also consistent with previous work [37], where the safety culture is among the important factors in organizational performance. Nevertheless, the not too strong RII values suggest that, even though it is significant, problems in the work environment are relatively less problematic compared to problems related to structure and communication in the given case.

Table 5
Lack of Diversity and Inclusion Related Factors

Lack of Diversity and Inclusion-related factors	Mean Value	RII	Rank	Significance Level
Employees from diverse backgrounds do not feel valued or included.	2.07	0.41	1	Average
Our company’s lack of diversity and inclusion negatively impacts the culture.	1.97	0.39	2	Average
Diversity of perspectives is not encouraged or respected within the organization.	1.97	0.39	2	Low
The workforce lacks representation from various ethnicities, genders, and backgrounds.	1.89	0.38	4	Low

The results presented in Table 5 show that diversity and inclusion-related variables had little impact (RII = 0.41 – 0.38) and did not achieve significance in regression analysis. This contradicts other studies, which highlight that diversity contributes significantly to innovativeness and team performance [39]. One explanation is that the institutional and cultural context of ECWC is rather homogeneous and therefore, the problem of diversity may not have been evident or acknowledged by the participants. This highlights the context-dependency of cultural variables.

Table 6
Lack of Communication Related Factors

Lack of communication-related factors	Mean Value	RII	Rank	Significance Level
Misunderstandings arise frequently due to poor communication practices.	4.30	0.86	1	Very High
Ineffective communication channels hinder positive interactions among employees.	3.67	0.73	2	High
Important information is not communicated effectively to all employees.	3.64	0.73	3	High
Employees feel left out of important discussions and decisions.	2.89	0.58	4	Average

Conversely, Table 6 indicates that the most significant factors that affect the corporate culture are communication factors. In this regard, frequent misunderstanding ranks first (RII = 0.86), largely reinforcing previous research [31], in which communication is identified as one of the crucial factors determining project success. In ECWC, it seems that communication problems are a root cause due to the hierarchical reporting mechanism and limited information disclosure. This reflects that improving the communication needs not only the technology approach, but also the transformation in corporate culture towards an open and involved culture.

Table 7
Organizational Structure Related Factors

Organizational Structure-related factors	Mean Value	RII	Rank	Significance Level
Decision-making processes are slow and inefficient due to the rigid structure.	4.39	0.88	1	Very High
Employees feel constrained by bureaucratic processes and hierarchies.	2.97	0.59	2	Average
The organizational structure stifles creativity and innovation.	2.60	0.52	3	Average
Communication of authority and responsibilities is unclear within the organization.	2.54	0.51	4	Average

The results presented in Table 7 support the statement that organizational structure plays an important role, as inefficient and postponed decision-making procedures were perceived to be the most important factor of all (RII = 0.88). This is aligned with [40], that claims tight organizational structures can restrict both flexibility and imagination. However, the current research extends previous findings by confirming that rigidity of structure is very ingrained within ECWC and reflects general trends of public sector governance, and the factor, therefore, appears to be a fundamental restriction on culture rather than an administrative obstacle.

Table 8
Top Five Factors Affecting the Organizational Culture of ECWC

Factors Categories	Top Five Factors Affecting the Organizational Culture of ECWC Company	Mean Value	RII	Rank	Significance Level
Organizational Structure	Decision-making processes are slow and inefficient due to the rigid structure.	4.39	0.88	1	Very High
Lack of Communication	Misunderstandings arise frequently due to poor communication practices.	4.30	0.86	2	Very High
Lack of Communication	Ineffective communication channels hinder positive interactions among employees.	3.67	0.73	3	High
Lack of Communication	Important information is not communicated effectively to all employees.	3.64	0.73	4	High
Poor Leadership	Leadership lacks clear direction and communication, leading to confusion.	3.57	0.71	5	High

Taking all of the data presented in Table 8, one may observe that communication and structure are arguably the two most vital dimensions of organizational culture in ECWC. It is interesting to note that communication-related items are among the most concerning items, and these factors may be related to information flow or the quality of communication among organizational members and in communication networks. These findings are especially significant in that, once again, cultural elements appear to interact with each other, such that, for example, structural inflexibility with communication failure can produce a multiplied negative effect on organizational performance.

4.2 Impacts of Organizational Culture in Ethiopia Construction Work Corporation

Table 9
Impacts of Organizational Culture In ECWC

Impacts of organizational culture in ECWC	Mean Value	RII	Rank	Significance Level
Project Delays	4.26	0.85	1	Very High
Waste and Poor Resource Mismanagement	4.24	0.85	2	Very High
Risk Management Failures	3.89	0.78	3	High
Client Dissatisfaction	3.24	0.65	4	High
Safety Incidents	3.04	0.61	5	High
Employee Disengagement	2.94	0.59	6	Average
Short-Term Focus	2.89	0.58	7	Average
Resistance to Innovation	2.70	0.54	8	Average
Low Quality Workmanship	2.64	0.53	9	Average
Lack of Compliance	2.61	0.52	10	Average
Ethical Breaches	2.50	0.50	11	Average
Environmental Damage	2.46	0.49	12	Average

As can be seen in Table 9, organizational culture poses a real threat as well. Resource mismanagement and project delays (both RII = 0.85) are strongly affected by organizational culture. This finding supports previous research works [56], which have already related poor organizational culture to project performance. In ECWC, it can be easily understood how this may have happened, as we have already identified the existence of structural drawbacks and inefficient communication. It seems obvious that there exists a cause-and-effect relation between the cultural issues and the consequences on performance.

4.3 Regression Analysis Results on the Impacts of Different Organization Culture Factors in ECWC

Table 10
The Model Summary

Model	R	R square	Adjusted R-squared	Std. error
1	0.954	0.910	0.901	0.1688

The correlations with organizational culture displayed in Table 10 reveal a strong positive correlation (R = 0.954) with some key constructs, including poor leadership, vagueness in ideologies, antagonistic environment, lack of diversity & inclusion, poor communication, and rigidity. With the R-squared value of 0.910, the factors as presented accounted for 91% of the variance in organizational culture. There is 9% accounted for in some other factors not included in this study, which would warrant future research for further insight. From analyzing the regression coefficients presented in Table 12 there is additional detail provided about the contribution and statistical significance of each cultural construct.

Table 11
ANOVA

Regression	Sum of Squares	Df	Mean Square	F	P-Value
	17.247	**6**	**2.874**	**8.654**	**0.000**
Residual	20.925	66	0.317		
Total	38.172	72			

The results of Table 11 with an F-statistic value of 8.654 indicate that the model of regression is highly statistically significant. It can thus be interpreted that the independent variables, more significantly, the top five variables, influence organizational culture greatly. Moreover, with a P value lower than 0.000 for the model it implies substantial evidence of the elements being very important to organizational culture; this explains why these elements identified are so important to ECWC's organizational environment and need to be addressed.

Table 12
Regression Coefficient Analyses of Variables

Model		Unstandardized Coefficients	Standardized Coefficients	t	P Value.	Result	
		B	**Std. Error**	**Beta**			
1	(Constant)	-1.007	0.259		-3.889	.000	
	Organizational Structure related factors	0.423	0.025	0.505	16.726	0.000	Significance
	Lack of Clarity in Values and Mission related	0.231	0.079	0.591	2.937	0.009	Significance
	Lack of Diversity and Inclusion related	0.087	1.165	0.077	1.627	.600	Not Significance
	lack of Communication related	0.251	0.022	0.375	11.67	0.000	Significance
	Poor Leadership related	0.293	0.031	0.294	9.490	0.000	Significance
	Unsupportive Work Environment related	0.157	0.042	0.113	3.76	0.000	Significance
a. Dependent Variable: Organizational Culture							

It can be seen from the results that organizational culture variables are strongly related to performance (R = 0.91). A value that shows strong explanatory ability but that could also indicate a high degree of common

variance among predictor variables such as structure, communication, and leadership, all being conceptually similar. Such a value has also been observed in the organizational literature when the constructs under study are interrelated[45]. It should be noted that this result should be interpreted carefully because it is based on self-reported data from one organization; thus, there is the possibility of the existence of common method bias and inflating the strength of the association. Notwithstanding this shortcoming, the convergence between quantitative and qualitative results makes the results strong. The results also showed that structure, communication, leadership, clarity of values, and the working environment have a significant positive effect on performance ($p < 0.05$), whereas diversity and inclusion do not have one ($p > 0.05$), which is consistent with past results.

4.4 Interview Results

The triangulation of thirty individual interviewees' opinions revealed several key themes which, when taken together, collectively demonstrate the multifaceted influence of the organization's culture on the performance of the construction project. Twenty out of the thirty participants were found to be primarily concerned with poor decision-making processes and insufficient communication processes. This generally poor communication among the team, and consequently operational inefficiencies and misalignment of expectations were usually cited as being caused by poor communication and decision-making processes. Meanwhile, five respondents were found to be mainly concerned with the lack of direction and poor leadership within the organization, and consequently, the demotivation of employees. The view here points to a more fundamental issue of leadership within the organization, impacting its ability to achieve unity within employees on a singular task. To further this, another subset of five interviewees complained about the deeply embedded nature of the problem in their organizational culture as the issue of disregarding safety regulations. The lack of due diligence toward safety protocol negatively affects not only the workers' well-being but also develops the mindset of complacency, which directly influences risk management, productivity, and other project operations.

Additional validation of these weaknesses was evident in the feedback received concerning the outcomes of these cultural dysfunctions. The most significantly represented view was held by 23 of the thirty respondents, whose response indicated the noticeable effects of organizational culture, mainly on waste management (which is a part of the operational process), and wasted resources. Moreover, on the topic of waste, most project delays were associated with the poor operation procedures within the organizations. These were considered to be an issue of culture within the organization. In addition to these two views held by most interviewees, another view supported by 7 respondents claimed that a key factor directly attributed to client dissatisfaction and increased numbers of accidents at construction sites was the corporate culture present within the organization.

4.5 Organizational Culture Mitigation Strategies Framework in Construction Projects

In consideration of the aforementioned cultural constraints: inflexible organizational hierarchy, poor communication channels, and poor leadership, the proposed approach, which is stepwise and context-specific, is tailor-made to the realities of ECWC. The approach, unlike other conventional change management paradigms, addresses specific conditions of public-sector construction organizations in developing countries,

which have the characteristic of being bureaucratic, hierarchical, and resource-limited. Figure 1 summarizes the proposed methodology and specific strategy actions.

The proposed framework consists of three consecutive intervention phases. In phase one, Structural and Communication Stabilization (0–6 months), the most severe operational restrictions identified in the study, slow decision making and communication failures, are dealt with. In this phase, project-level managers are given constrained decision-making power in order to decrease bureaucracy and response time. Simultaneously, official channels for communication are established by regularly scheduling coordination meetings, enforcing structured reporting procedures, and facilitating a centralized database. Transparent communication tools such as an intranet and a project dashboard are utilized to timely disseminate the latest project information to relevant stakeholders. It can be assumed that these interventions result in a quick and evident change of coordination and information flow: the critical problems encountered in the study (RII = 0.86). In phase two, Leadership and Cultural Alignment (6–18 months), the study focuses on strengthening leadership and aligning employee behavior with the company's values and vision. In this phase, leadership training is organized; the programs focus on communication skills, team leadership, and participative decision making. Simultaneously, seminars on company culture are organized to ensure common values, clarify the company goal and set the expected behavior within the company. For the latter, established communication feedback systems like employee questionnaires and complaint channels are employed so that upward communication and involvement are stimulated. In this way, the leadership weaknesses identified in the study, as well as a shift towards an interactive and adaptive culture from a hierarchical one, are taken into account. In phase three, Institutionalization and Continuous Improvement (18 + months), long-term cultural change is ensured by integrating proposed changes in systems and procedures. Here, cultural performance indicators are integrated into monitoring and reward systems. Training and development are aimed at building leadership, teamwork, and communication skills in employees. Integration through cross-functional teams and knowledge sharing platforms also plays a key role to promote long term learning and adaptability.

Traditional change models make certain assumptions about the fluidity and adaptability of organizational contexts. The proposed framework is developed with the assumption that state-owned construction companies operate under the assumptions of centralized decision making and bureaucratic inertia and have a low level of technological integration. By integrating the interventions into the context of the organization, a viable blueprint for organizational change in similar developing countries is produced.

The intervention framework is directly derived from the actual results of the study. The problems with the structure are answered with decentralization and simplification; the communication problems with formal communication systems, and the weaknesses of the leadership with specific training. Thus, the framework is not theoretical but evidence-based and problem-solving in nature. The proposed framework moves beyond simple models for change by establishing a structured and applicable framework for change in state-owned construction companies.

5 Conclusion

Numerous factors influence organizational culture in the construction sector, and this study focuses on those that affect the Ethiopia Construction Work Corporation's (ECWC) organizational culture. Poor leadership,

unclear organizational values and mission, an unsupportive workplace, a lack of diversity and inclusion, communication breakdowns, and organizational structure-related problems are the six main categories into which the research divides the numerous factors that have a significant impact on the organizational culture. In order to select the most important elements influencing ECWC's organizational culture, these categories were further examined and rated according to their relative importance index (RII). Fostering an organizational culture that promotes increased performance, innovation, and employee satisfaction inside the company requires the recognition and comprehension of these elements.

In the end, the study finds that delayed and ineffective decision-making processes—which are mostly caused by the organization's strict structural framework—are the most important elements influencing the organizational culture at ECWC. In addition to delaying decision-making, this rigidity frequently results in misconceptions because of poor communication skills at all organizational levels. Additionally, the investigation discovers that the organization's communication channels are insufficient, which prevents employees from interacting positively and from sharing crucial information. Employee confusion and disarray are further exacerbated by ECWC's leadership's lack of a defined strategic direction. Relative significance index (RII) scores for these characteristics were 0.88, 0.86, 0.73, 0.73, and 0.71, respectively, indicating their substantial influence on the corporate culture as a whole. Together with these results, the model's statistical significance (P-value < 0.05) indicates that the independent variables—such as organizational structure, communication breakdowns, and leadership practices—collectively have a substantial impact on the dependent variable, in this case, organizational culture. The conclusion that these elements are crucial in forming and impacting ECWC's organizational culture is well supported by the statistical data.

The study also highlights a number of significant effects that result from ECWC's current organizational culture. Significant project delays, waste and resource mismanagement, ineffective risk management procedures, inadequate internal communication, and rising customer discontent are some of these. Project delays, waste and resource mismanagement, risk management failures, communication problems, and client discontent all had RII values of 0.85, 0.85, 0.78, and 0.65, respectively. These results highlight the direct effects of an ineffective organizational culture, showing that these elements affect the company's external interactions with stakeholders and clients, as well as interfering with internal operations. The study emphasizes how urgently ECWC must address these crucial cultural elements in order to boost client happiness and operational effectiveness, which will eventually promote a happier and more productive workplace.

Declarations

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Conflict of Interest

The author affirms that they have no conflicting interests.

Consent to Publish

Not applicable.

Clinical Trial Registration

Not applicable.

Ethics Approval

All methods described above were carried out in accordance with the appropriate guidelines and regulations. Ethical clearance was gained for the study by the relevant institution. Informed consent was obtained from all subjects before their data were collected.

Consent to Participate

Every single participant in the study gave their informed consent. The goal of the study was explained to the participants, and their involvement was anonymous and voluntary.

Availability of Data and Materials

The anonymized dataset and supplementary resources are available at https://doi.org/10.5281/zenodo.19594784 on Zenodo. To preserve participant privacy, sensitive information has been eliminated.

Authors' Contributions

This work was written entirely by SG (Seifemichael Getachew). He created and planned the study, gathered and examined the data, and wrote the report. The final draft of the work was reviewed and approved by the author.

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Figures

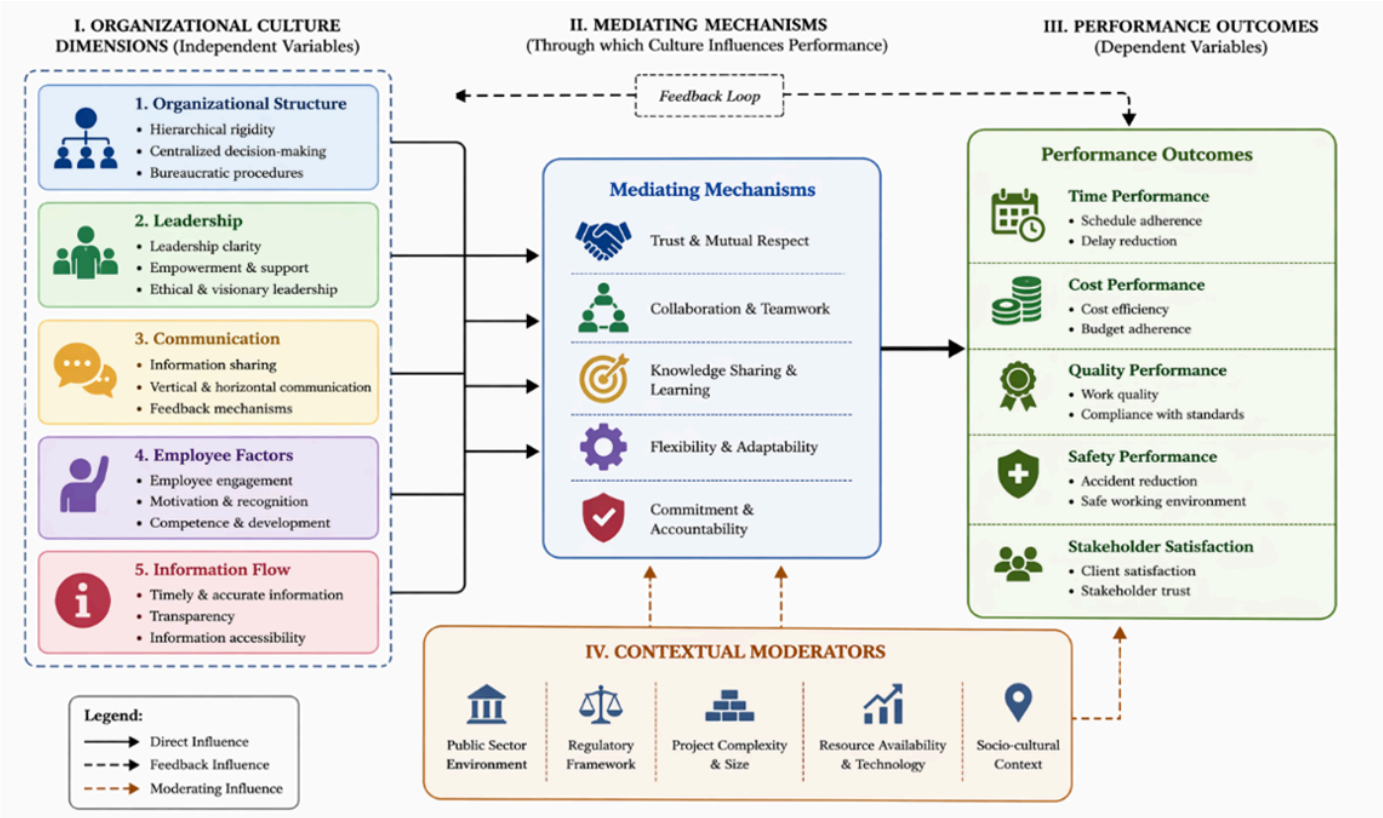


Figure 1

Organizational Culture Mitigation Strategies Framework

Supplementary Files

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- CronbachAlphaandspearmantestresult.docx
- resultsofanalysisSPSS.xlsx