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ARTICLE

Corporate Governance and Human Resource Management Practices: How Organisational Culture Drives Teamwork Performance in Ghana's Road Safety Authority

Seth Acquah Boateng [1*] , ***Bridgette Enimil*** [2]

[1] *Department of Data Science and Economic Policy, University of Cape Coast, Cape Coast P. O. Box 5007, Ghana*

[2] *Department of Procurement and Supply Chain, University of Cape Coast, Cape Coast P. O. Box 5007, Ghana*

ABSTRACT

The study examines the impact of organisational culture on performance in project teams in the National Road Safety Authority (NRSA) in Ghana. Quantitative methodologies and survey techniques have been adopted in analysing the types of organisational cultures, testing for effective teamwork, and exploring the linkage between cultural dimensions and project outcomes. Data collection involved a survey of 270 respondents in the NRSA through a structured questionnaire. Descriptive and inferential statistics techniques have been utilised in analysing collected data. The analysis included correlation, ANOVA, and regression techniques. Analysis revealed a predominantly clan-based characterised by high employee motivation, effective information dissemination, and a high level of reward and career development concerns. Analysis reveals a strong positive correlation between such a base and performance in terms of project teams, supported through effective collaboration techniques. Nevertheless, through its analysis, the study acknowledged areas for improvement, most prominently in aligning organisational objectives with project objectives. In contributing to current but narrow studies in the field of organisational culture in road safety organs in developing countries, and in offering actionable tips for enhancing performance in terms of project teams through cultural interventions, this study is significant and relevant not only for the NRSA but for any public sector institution dealing with critical social concerns, providing a model for leveraging organisational culture for

*CORRESPONDING AUTHOR:
Seth Acquah Boateng, Department of Data Science and Economic Policy, University of Cape Coast, Cape Coast P. O. Box 5007, Ghana;
Email: sethacquahboateng@mail.nwpu.edu.cn

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improving performance in terms of projects and, in a larger view, enhancing overall road safety programs.
Keywords: Organisational Culture; Road Safety; Teamwork; Project Outcomes; Innovation; Team Performance

1. Introduction

In contemporary work environments, companies increasingly rely on projects to deliver their strategic objectives and maintain competitive advantage. Successful delivery of such projects is critical for satisfying customer requirements, driving innovation, and success for the organisation [1]. Despite such prominence, a significant proportion of projects continues to underdeliver, incurring budget overruns, delayed timelines, and poor performance [2]. That such an issue prevails reflects an important reason for studying factors driving success in such projects, one critical in both academic and practice communities in current times. Central to organisational dynamics is a key feature, namely, organisational culture, a critical variable that underlies individual behaviour, attitude, and performance. Consistent with shared values, conventions, and practices, organisational culture sets out social and psychological structures through which workers function. In organisations focused on projects, with mixed-disciplinary groups working together towards specific objectives under specific timelines [3], such an aspect takes a critical role in driving performance, particularly in collaboration, effective communications, and adaptability in changing circumstances [4].

Organisational culture under a group can have a significant impact in terms of enhancing such factors, contributing value, and, in contrast, undermining value to such factors. Project leaders and leaders in general, therefore, have a critical role in strengthening such factors, and such awareness can contribute towards efficiency in groups and success in individual projects [5]. Project-based programs in numerous industries have become increasingly prevalent, and such an environment heightens the imperative to study such an issue in organisational culture. An increasing number of organisations have begun to apply project management approaches to deliver their programs, taking full advantage of their strengths in adaptability, efficiency, and multidisciplinary collaboration supported through working professionals' groups [2, 6]. Culture in organisations, in general, is a rigid and long-lasting feature, and must increasingly become considered a variable with a strong impact on work groups' cultures [7].

Culture in organisations forms work performance, decision-making, and relations between workers and between departments in working environments, defining values and normative standards for guiding workers' behaviour and for providing direction in collaboration, taking risks, innovation, and adaptability [8, 9]. With organisations increasingly relying on virtual groups consisting of geographically scattered workers, organisational cultures become even more important in environments with little face-to-face contact between workers and departments. In such environments, shared values in cultures become a basis for developing trust, supporting effective communications, and supporting coordination between workers [10, 11]. Having an awareness of the impact of organisational cultures in virtual groups can enable organisations to tailor approaches for developing strong, high-performance groups regardless of geographical distance [11].

The relationship between performance and organisational culture for a team has been a target of many studies, and an impressive wealth of academic studies has ensued [12, 13]. There have been studies conducted in many countries, industries, companies, and government agencies worldwide, investigating these relations. However, a significant lack of studies specifically focusing on organisational culture in road safety agencies, in general, and in developing countries like Ghana [14], can be seen. That problem is particularly important in view of the critical role played by road safety agencies in campaigning for and putting into practice interventions for preventing accidents and enhancing security on the roads [13, 15]. There is a critical necessity for knowing the impact of organisational culture on the behaviour and performance of a project team in such a sector, in terms of enhancing effective road security programs and enhancing overall organisational effectiveness.

Despite poor performance in some executed projects, little investigation into explaining the cause and effect between such failures and the National Road Safety Authority (NRSA) and similar agencies' organisational cultures in Ghana has been conducted. In an attempt to bridge such a

lack of information, the current study seeks to assess the current organisational culture at the NRSA, assess performance in terms of a project team, and assess any relation between performance and culture. The objectives include gauging dimensions of organisational culture in terms of dimensions at the NRSA, investigating group effectiveness, and investigating the relation between organisational culture and the performance of a project team. By studying such factors, such an investigation aims at producing useful information that could inform policies and interventions for enhancing success in a project in terms of improving performance at such an institution and similar entities working in similar environments.

The importance of such a study stems from its potential to promote a deeper understanding of the relationship between organisational culture and the performance of work groups in a specific case, namely, in the National Road Safety Authority in Ghana. By investigating in detail how organisational culture impacts workgroup performance in this institution, such a study can have the potential to expose factors in cultures that promote and hinder the practice of road safety programs[9, 16]. This information can inform the development of strategies and interventions geared towards creating a supportive environment for collaboration, innovation, and adaptability in project teams, and therefore, overall, contribute to enhancing road safety performance.

In addition, this study extends the meagre pool of studies in the field of studies of organisational culture and road safety in Ghana and developing countries at large. In filling the current gap in literature, the current body of knowledge in the field is thereby augmented by this study and provides a base for future research and a useful source for policymakers, researchers, and practitioners interested in road safety and organisational culture[17, 18]. Additionally, the understanding of specific dynamics and issues encountered in the delivery of road safety is augmented by the study, and the scope for future studies on organisational culture in public agencies and government departments in developing countries is increased. Overall, by its findings, the study may inform the development of interventions for building a favourable and positive environment that supports the ends and means of the road safety authority.

The creation of a work environment that promotes collaboration, innovation, and adaptability can contribute towards increased job fulfilment, talent attraction, and talent retention, and contribute towards overall productivity improvements[15, 19, 20]. All these improvements can go a long way in supporting an institution in its critical role of enhancing road safety. Findings developed in such investigations could make an important contribution to the creation of road security programs, whose effectiveness, in turn, could contribute to a drop in vehicular crashes and an improvement in security performance in Ghana and similar settings. This study represents the first empirical investigation of organisational culture's impact on project team performance within Ghana's National Road Safety Authority. While extensive research exists on organisational culture in various sectors globally, no previous study has systematically examined these dynamics within road safety institutions in Ghana or similar developing country contexts. This research fills a critical knowledge gap by providing the first quantitative analysis of cultural dimensions and their relationship to project outcomes in a Ghanaian public safety organisation. The novelty of this investigation extends beyond geographical boundaries, as it pioneers the application of established organisational culture frameworks to the understudied domain of road safety administration in sub-Saharan Africa.

Given the absence of empirical research on organisational culture in Ghana's road safety sector, this study addresses three objectives through quantitative analysis of NRSA employees. First, it assesses current organisational culture dimensions using established frameworks. Second, it evaluates teamwork effectiveness within project teams. Third, it examines the culture-performance relationship through correlation and regression analysis. The remaining sections contain five sections; section two provides the literature and theoretical framework, and section three provides the methodological framework of the study. Sections four and five discuss the results and discussion, and also the conclusion of the study and recommendations for policymakers.

2. Literature Review and Theoretical Framework

2.1. Theoretical Framework

This study integrates Organisational Culture Theory and Team Effectiveness Models to examine the connections

between culture and performance within Ghana's road safety organisation [21, 22]. Unlike previous applications of these theories within Western business environments, this research adapts them for African governmental transportation departments, where constraints on resources and hierarchical frameworks introduce distinctive cultural dynamics. The three-level culture model serves as a foundational concept for understanding how artefacts, espoused values, and underlying assumptions shape organisational behaviours [23, 24]. Nonetheless, existing investigations that prioritise private sector applications of these models often overlook the exploration of how these cultural dimensions manifest within governmental safety agencies. Although the relationships between culture and performance have been substantiated in commercial settings, such results may not inherently apply to mission-driven governmental institutions, where performance metrics encompass broader community value rather than mere profitability [25, 26]. The Team Effectiveness Model enhances cultural theory by delineating specific mechanisms through which culture influences performance outcomes. Identified as critical operational elements are individual characteristics, team processes, and the organisational environment [10, 27].

This study deepens the present theory by exploring relationships among these variables in a bureaucratic setting in Ghana, whereby hierarchical authority and traditional governance procedures are likely to influence relationships among culture and performance in a different way compared with Western models of organisations [28, 29]. The choice among four features of organisational culture, leader-based culture, communication, decision-making, and innovation, is based on their contemporary theoretical relevance in both models and practical usefulness in project environments. Leadership is a fundamental aspect in culture development processes, and communication and decision-making are identified as fundamental aspects in effectiveness models [30, 31]. Innovation serves as a cultural focus on innovation and flexibility, and it is most useful in organisations that face dynamic challenges in issues of road safety [32, 33]. The four measures, as a set, point both to the cultural content, the things valued in the culture, as well as the work-related aspects of culture, or cultural processes. Four individual project team performance measures, namely efficiency, effectiveness, stakeholder satisfaction, and innovation results, have been selected from public sector performance literature rather than from corporate common procedures [34, 35]. The distinction arises from the fact that the measures are most fundamental in public organisations in order to shape diverse stakeholder expectations and work in environments of resource constraints, and thereby produce performance dynamics hitherto undocumented within the culture-performance literature.

2.2. Organisational Culture: Definitions and Dimensions

Organisational culture consists of collectively-held assumptions, beliefs, norms, and values, which direct behaviours and decisions in organisations [8]. This culture reflects the collective personality and identity of the organisation and profoundly influences workers' perceptions as well as interactions among themselves and within the workplace. The outcome of project working groups could be intensely reliant on the prevailing organisational culture in the workplace [36]. Effective and nurturing company culture provides an environment in which people are respected, propelled, and urged to contribute [13]. A healthy and nurturing culture in an organisation stimulates teamwork, synergy, and effective communication among all employees and working unit members [37]. Literature verifies that organisations with strong cultural values, including adaptability, employee commitment, and a sense of purpose, tend to be successful in their project working activities [38].

Organisational culture, in addition, plays a primary role in shaping the behaviours and relationships among workers in a project-based workplace [39]. Organisational culture influences work approaches, procedures in making decisions, and interpersonal relationships among workers [40]. Development of a culture facilitating innovation, learning, and continuous development enhances the creative potential and problem-spotting capacity among workers in a working context involved in a project working scenario [12]. Varieties in forms of organisational culture were realised in the research, and different sorts and varieties were noted in the domain [41]. The comprehension of these particular types of company culture could provide valuable information on how they influence the effectiveness of project organisations [42].

2.3. Corporate Governance in Public Sector Organisations

Corporate governance principles, hitherto linked with the private sector, increasingly influence management plans in the public sector, particularly in project-based institutions like NRSA[43]. Organisational culture is profoundly affected by governance mechanisms through processes oriented towards facilitating transparency in communication, cooperation, and shared decision-making behaviours, thus having a bearing on the efficiency in the completion of projects[44]. Public institutions in safety domains establish systems of accountability within governance mechanisms that define the expression of organisational culture in day-to-day activities and the effectiveness of a project[45]. Governance processes, and especially those associated with monitoring and managing risks, form the basic template from whose platform confident cultures of innovations can arise[46]. The interface between governance principles and organisational culture is particularly significant in the public sector, where it is important to fit the multiple demands of the stakeholders with the need for business efficacy[47]. Strong systems of governance can potentially broker the equation between culture and project team performance by providing strict parameters within which to engage with risks and innovations[48].

2.4. Team Dynamics and Collaboration

Teamwork is characterised in terms of a joint activity with cooperation towards a shared goal[49]. It is a fundamental aspect of any winning campaign, facilitating effective use of resources, information and intelligence dissemination, and group decision-making processes[50]. Collaboration effectiveness is established through a multitude of significant aspects[20]. First, it is through establishing explicit aims and goals that are clearly comprehensible and valued by the people in a group[51]. Clearly established targets guide individual work and infuse a sense and orientation in the group participants[52]. Furthermore, unrestricted and clear information circulation among groups allows effective information dissemination and problem-solving to be maximised[53]. Trust and confidence among groups are a significant aspect of successful collaboration.

Trust among groups has to be fostered in terms of criticism, advice, and contribution, and no expectations of reprisal or nasty results. Trust allows for a friendly and cooperative climate with a high level of cooperation, calculated risks, and the development and introduction of new and different solutions[54]. Successful collaboration is, to a significant degree, a function of effective leadership. Through guiding, collaborating, and delegating, a competent group manager can optimise the group's performance[55]. Effective leaders with a high level of performance and intelligence establish a trustworthy climate, encourage a participatory behaviour, and make the group's contribution and advice accepted and valued. Through establishing effective collaboration, firms can optimise the work of employees[56]. Through cooperation, a joint goal, professional knowledge and information sharing, and contributions from all individuals, actors can overcome challenges, respond to changes, and attain success in activities.

2.5. Communication Patterns in Project Teams

Effective communication is a basic ingredient in groups' success, facilitating the unrestricted circulation, development, and circulation of feedback among the members[57]. Clearly stated and concise communications establish a mutual foundation in a group's goal, role, and expectations, thereby facilitating coordination and cooperation[58]. The relative effectiveness in the circulation of information, problem solving, and making decisions in a group relies on information, experiences, and observational interchange. Communication assumes a multiplicity of forms, namely verbal communication, written record, and non-verbal cues. Through verbal discussion, dialogues, or chats, humans have access to timely cues and clarification information[59]. Through reporting and documentation, archiving and reporting of information are carried out.

At the level of non-verbal communication, gestures and postures convey intense communications in interpersonal relations in groups[60]. Despite the medium utilised in presenting, transmitted messages should enjoy a significant level of transparency and simplicity. Concise and specific communication easily dismisses misunderstanding and vagueness[61]. Active listening is a cornerstone in realising effective communication in groups into action. Active listening, seeking clarification in case of uncertainty and participation in cue sheets constitute a vital habit in ensuring a robust information circulation in a grouping[62]. To achieve unrestricted

circulation in information, members in a grouping should be engaged in listening actively, seeking clarification in moments of uncertainty, and providing constructive cues [63].

Cross-cultural communication research entails further complexity. High context communication in Ghana [6] portrays likely communication problems in teams like NRSA if they adopt Western communication protocols. Still, there have not been studies regarding communication patterns in Ghanaian institutions regarding intra-national communication patterns.

2.6. Leadership as a Cultural Driver

Leadership is a critical linkage through which organisational culture influences project teams' execution, both as a product and a driver of organisational cultural development [26]. Leadership practices are a priority in organisational cultures promoting joint work and successful project outputs, whereby leaders use open communication and shared decisions in facilitating joint effectiveness [64]. Effective group managers enhance teamwork through the provision of direction, formation of cooperation, and allocation of tasks, as well as the development of trustworthy environments in support of shareable initiatives and the reward of participation by work groups. Transformational leadership, in particular, stimulates an innovation culture by permitting freer knowledge flows, experimental resource provision, and development of particular rules permitting informed risks, thereby empowering work groups in the extension of problem-dealing abilities [65]. Leadership provides the main linkage through which general organisational cultural values are translated into specific work groups' behaviour and execution results in project-based organisations. Inclusive leadership stimulates workplace execution through a considerable increase in work-based engagement and development dynamic and mentally secure workplaces [66]. Leadership style continues to play a major mediating role in linking culture and execution in modern organisational environments [9].

2.7. Innovation Culture and Risk-Taking Behaviour

Innovation, alongside the desire to take calculated risks, acts as a central motivator in driving the success among project teams and contributing significantly towards the success of an organisation [67]. Through its intrinsic definition, innovation involves the development and execution of original and nonconventional methodologies, techniques, and end-products designed towards generating improvement and overcoming prevailing issues [68]. Similarly, calculated risk involves the courageous undertaking of venturing into new and untrodden fields in order to seek new opportunities and garner desired results. In a project team, innovation, alongside ensuring competitiveness, serves as a springboard for transformation and creates opportunities towards generating innovative solutions that are specific and tailored towards certain challenges in a project [69]. Through defying age-old conventions, exercising critical analysis, and boldly venturing into untrodden spheres, there arises a culture facilitating innovation. Through empirical evidence, it emerges that organisations embracing and placing innovation on the priority agenda are increasingly likely to be successful in their undertakings [70]. Through ensuring an experimental environment that facilitates exploration into new ideas and undertaking audacious initiatives, alongside having an intrinsic perception about potential failure, it allows teams to develop problem-solving abilities and achieve tremendous breakthroughs [71].

Nevertheless, the quest towards innovation requires a sense of undertaking calculated risks; it necessitates overcoming age-old barriers, accepting uncertainty, and having confidence in arriving at well-informed decisions [72]. Risks are a part and parcel of venturing into new opportunities, exercising rationality in decision-making, and converting novel ideas into usable applications [73]. Successful project teams foster a culture that allows and facilitates the informed and judicious undertaking of well-calculated risks. This requires the development of a culture of psychological safety, whereby the members are willing to participate in risking and expressing their opinions without fear of negative consequences following from it [74]. Effective leaders assist in the formation of a culture of innovation and sanctioning calculated risks in a project team. Leaders can assure there is a culture of innovation by facilitating the freest possible circulation of ideas, providing resources and experimental opportunities, and sanctioning efforts by subordinates [75]. Leaders draw clear boundaries within which risks are taken and firmly stress the role of failure, including on purpose, and provide guidance and directions in the course of knowledge gained from failure and setbacks. Leaders are critical

in the mitigation of risks through evaluation, creating various scenarios, and executing error-minimising procedures. Through innovation and giant leaps within a project team, an organisation can reach a point that gives a sense of competitiveness [76].

2.8. Organisational Culture and Project Performance in Developing Countries

The culture and performance literature demonstrates routine positive relations in a range of settings, yet significant theoretical and empirical gaps remain [77]. Multiple settings' research shows that project performance significantly relies on organisational culture, yet existing research mainly focuses on the private sector and construction, thus leaving public safety organisations underscrutinized [78]. This research differs from previous work in three important ways. First, in contrast to research that has focused on construction companies, this work aims at a mission-driven public organisation, in which performance refers to social results, not a mere function of efficiency in operation [1]. Second, while previous work has examined software development environments, here the study examines software development in a specific technological and institutional context in Ghana, namely, in the area of road safety environments [79]. Third, prior work normally examines culture-performance relationships within a fixed organisational context, yet this study examines relationships in an organisation faced with dynamic changes in addressing issues in road safety and diminished resources.

The theoretical contribution is in applying clan culture theory in African public sector settings [80]. Earlier work hinted at cultural diversity impacting teamwork, but it dealt with international joint ventures and not organisational culture in a domestic context [81]. This study adds by exploring organisational homogeneity in a Ghanaian organisation and its impact on the effectiveness of teams, offering counterpoints on research on diversity [82]. The methodological contribution is in borrowing Western instruments of cultural measurement and applying them in the public sector in Africa. Since there are no instruments certified in Ghanaian public institutions, the contribution of this study is important in culture measurement in public sector settings with limited resources. The practical contribution goes beyond knowledge in the academy and into policy aspects [83]. Contrary to earlier work offering prescriptions for managers in the private sector, the work provides a basis for public sector reform in low-income countries. The study informs organisational development interventions on how public service delivery can be improved in settings in which management methods fail [17]. **Figure 1** shows the conceptual framework of the study.

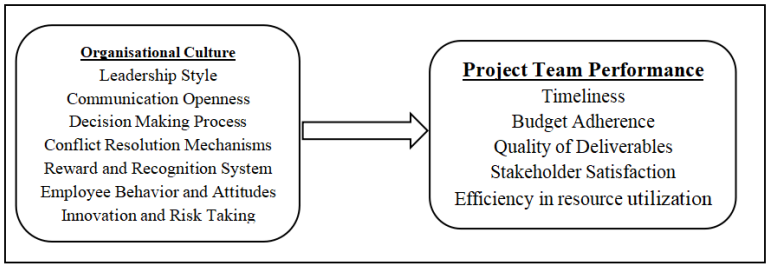

Figure 1. Conceptual Framework.

Source: Author's construct (2024).

3. Methodology

This research utilised a quantitative methodological framework for gauging dimensions of organisational culture, collaboration effectiveness, and the impact of organisational culture on group performance in a National Road Safety Authority (NRSA) executed project in Ghana. A cross-sectional study design was utilised, allowing for the collection of information at one point in time and providing a snapshot of current dynamics in an organisation in existence at the National Road Safety Authority [84]. Participants in the study included workers drawn from departments and hierarchical ranks in the National Road Safety Authority. 270 respondents were drawn through purposive selection, and enough diversity in terms of demographics and occupations (the purposeful selection to secure a range of experiences and view-

points in an institution[85]. The questionnaire was distributed to the respondents in person. Respondents completed the structured questionnaires independently while the researcher remained available to clarify questions if needed. Information was collected through a structured survey tool, a tool that is universally regarded for its effectiveness in quantitative information collection[86]. The survey tool was designed to collect information in four key dimensions: participant demographics, organisational culture in NRSA, effectiveness in collaboration, and performance in group work. In section three, when dealing with organisational culture, a 5-point Likert scale was utilised to evaluate participants' feelings about a range of dimensions in culture, such as leadership, communications, decision-making, and values to objectives[40].

To assess effectiveness in collaboration, a binary format (Yes/No) was utilised in rating several dimensions of collaboration, such as communications, trust, cooperation, and resolving conflicts[87]. Before actual collection, a pilot study was conducted to assess the survey tool for reliability. After collecting feedback, considerable improvements were incorporated in a redesigned, pilot-tested survey tool in a move to make questions posed to respondents more relevant and understandable. Data were collected through face-to-face administration of structured questionnaires at NRSA offices across different departments and hierarchical levels. The in-person approach ensured immediate clarification of questions and complete responses. To achieve the target sample size and account for potential non-response, 300 questionnaires were initially distributed to ensure adequate representation across all departments. The final sample comprised 270 completed questionnaires, representing a 90% response rate from those distributed. All returned questionnaires were complete with no missing data, eliminating the need for missing data handling procedures. The high response rate was facilitated by prior coordination with department heads, scheduled data collection sessions, and the voluntary nature of participation clearly communicated to all respondents.

To examine and reveal the correlation of project team performance and organisational culture, inferential statistical methods were adopted. Specifically, regression analysis applying the linear model was adopted to test how strongly organisational culture could predict project team performance[88]. The analysis involved calculating the coefficient of determination (R-squared) and F-statistic, and p-values produced by tests of significance and global model performance evaluation tests (level of significance tests). Besides, correlation analysis applying Pearson's r was adopted to test the direction and strength of correlation of organisational culture and project team performance[89]. To ensure stringent ethical requirements for the study, pre-consent from every individual involved in the study was acquired. Assurances of the anonymity of respondents and confidentiality of responses were given, and participation was entirely voluntary (see **Appendix A**).

3.1. Model Specification

The study employed a linear regression model to examine the relationship between organisational culture and project team performance[90]. The study employed simple linear regression to establish the foundational culture-performance relationship as the primary research objective. While demographic controls were collected, the exploratory nature within Ghana's road safety context prioritised identifying this direct relationship before introducing analytical complexity. Simple regression provides a clearer interpretation without confounding effects from multiple predictors, valuable given the limited existing research on organisational culture in Ghanaian road safety agencies[91, 92]. The model is specified as follows:

$$Y = \beta_0 + \beta_1 X + \varepsilon$$

Where:

- Y = Project Team Performance (dependent variable)
- X = Organisational Culture (independent variable)
- β_0 = Intercept (constant term)
- β_1 = Regression coefficient (slope)
- ε = Error term

This model allows us to estimate the effect of organisational culture on project team performance, controlling for other factors through the error term.

3.2. Variable Measurement

Independent Variable: Organisational Culture

Organisational culture was measured using a 5-point Likert scale questionnaire based on the Competing Values

Framework [93, 94]. The questionnaire included items assessing various aspects of organisational culture, such as:

1. Leadership style (1 = Strongly disagree, 5 = Strongly agree)
2. Communication openness (1 = Strongly disagree, 5 = Strongly agree)
3. Decision-making processes (1 = Strongly disagree, 5 = Strongly agree)
4. Conflict resolution mechanisms (1 = Strongly disagree, 5 = Strongly agree)
5. Alignment of organisational values with project goals (1 = Strongly disagree, 5 = Strongly agree)
6. Reward and recognition systems (1 = Strongly disagree, 5 = Strongly agree)
7. Employee behaviouurs and attitudes (1 = Strongly disagree, 5 = Strongly agree)
8. Organisational structure (1 = Strongly disagree, 5 = Strongly agree)

An overall organisational culture score was computed by calculating the mean of these items, with higher scores indicating a more positive organisational culture.

Dependent Variable: Project Team Performance

Project team performance was measured using a composite scale developed based on previous literature [55, 57]. The scale included items assessing various aspects of project team performance, such as:

1. Meeting project deadlines (1 = Never, 5 = Always)
2. Achieving project objectives (1 = Never, 5 = Always)
3. Quality of project outputs (1 = Very low, 5 = Very high)
4. Team member satisfaction (1 = Very low, 5 = Very high)
5. Stakeholder satisfaction (1 = Very low, 5 = Very high)
6. Innovation in project execution (1 = Very low, 5 = Very high)
7. Efficiency in resource utilization (1 = Very low, 5 = Very high)

An overall project team performance score was computed by calculating the mean of these items, with higher scores indicating better project team performance. These variables were measured through direct questions in the demographic section of the questionnaire.

3.3. Reliability and Validity

To ensure the reliability and validity of the measurements:

1. Cronbach's alpha was calculated for both the organisational culture and project team performance scales to assess internal consistency reliability.
2. A pilot study was conducted to test the face validity of the questionnaire items.
3. Content validity was ensured by basing the questionnaire items on established theoretical frameworks and previous literature.

4. Results and Discussion

4.1. Biographical Data on Respondents

This section discusses the background information of the respondents. All 270 questionnaires distributed were error-free, representing a hundred percent (100%) and thus appropriate for examination. The tables below show the demographics of the respondents. Gender, age, Educational Background and Years of Experience.

The demographic profile in **Table 1** of workers at the National Road Safety Authority (NRSA) reflects a predominantly male workforce, a relatively young workforce, and a high level of educational achievement with a mix of experiences. In detail, 60% of respondents report being male and 40% report being female, a strong gender imbalance in the institution, and possibly reflective of trends in governance in general and in road safety in general in Ghana specifically. The age distribution skews predominantly towards junior professionals, with a full 55.7% of respondents in the 26-35 age range and a further 25.7% in the 36–45 age range. As a reflection of a predominantly youth workforce, such an age distribution could introduce vigour and new thinking into an organisation, but at the cost of possibly representing a future need for programs designed to retain and develop experienced staff **(Table 1)**.

Respondents' educational qualifications are at a high level, with at least a bachelor's level cited by 85.9%, and a master's level by 38.8%. On such a high education achievement level, it is feasible to assume the NRSA has done well in attracting highly qualified professionals, and such may well rank as a competitive strength in tackling intricate road

safety issues. The scenario for years of experience distribution, however, presents an interesting contradiction, with almost half of the respondents (45.7%) having 1–3 years of experience. In conjunction with age distribution, such a situation may well create a launching pad for many junior professionals in terms of career progress, but at a price in terms of generating a need for proper knowledge transfer and mentoring programs to try and optimise the skill sets of 22.9% of staff with 10 years or years of service. The organisation needs to place career building and talent retention at the centre of its plans for it to have an optimal mix of new and veteran expertise in its staff base.

Table 1. Demographic Characteristics of Respondents.

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	146	60.0
	Female	124	40.0
Age	Less than 25 years	7	2.9
	26–35 years	150	55.7
	36–45 years	69	25.7
	46–55 years	31	11.4
	56 and above	13	4.3
Educational Background	Diploma	39	14.3
	Bachelor's Degree	127	47.1
	Master's Degree	104	38.8
Years of Experience	1–3 years	123	45.7
	4–6 years	46	17.1
	7–9 years	39	14.3
	10 years or more	62	22.9

Note: Total number of respondents (N) = 270.
Source: Field data (2024).

4.2. Nature of Organisational Culture at NRSA

The findings and analyses of the data gathered in accordance with the study's first research objective are presented in this part. In particular, the section covered the findings about the nature of the organisational culture present at the National Road Safety Authority. The results are shown in **Table 2** after being examined with descriptive tools like means (M) and standard deviations (S.D.).

The information provided in the table suggests that the organisation's beliefs and values align with the goal and aim of project teams, indicated by a mean score of 4.06 and a standard deviation of 0.657. The type of leadership exercised in the NRSA ensures an enabling environment for project teams, which is indicated by a mean score of 3.77 and a standard deviation of 0.765. The communication practices in the organisation include openness and an encouragement of inputs from every member of the project teams, indicated by a mean score of 3.71 and a standard deviation of 0.705. The organisational architecture of the NRSA facilitates the effectiveness and efficiency of project teams, and its mean score and standard deviation amount to 3.79 and 0.832, respectively. The behaviours and attitudes of employees in the organisation positively impact project team performance, and their mean score and standard deviation amount to 3.91 and 0.717, respectively.

The decision-making processes of the organisation are inclusive and facilitate inputs from project team members, indicated by a mean score of 3.29 and a standard deviation of 0.965. The reward and recognition structures set by the organisation act to motivate project team members and enhance performance, and their mean score and standard deviation amount to 3.06 and 0.961, respectively. The organisation has effective mechanisms for conflict resolution, and they enhance project team performance, with its mean score and standard deviation amounting to 3.04 and 0.984, respectively. The mean score overall for the nature of organisational culture stands at 3.58 with a standard deviation of 0.823. These results imply that the NRSA has an optimistic organisational culture that supports team performance. There may, nevertheless, be instances of improvement needed in particular pockets, and these include the decision-making processes and reward and recognition structures.

Table 2. Nature of Organisational Culture at NRSA.

Statements	Mean	Std. Deviation
The leadership style within the National Road Safety Authority promotes a positive environment for project teams.	3.77	0.765
Communication within our organisation is open and encourages feedback from all members of project teams.	3.71	0.705
The decision-making processes within our organisation are inclusive and consider input from project team members.	3.29	0.965
Our organisation has effective conflict resolution mechanisms that contribute to project team performance.	3.04	0.984
The values and beliefs of our organisation are aligned with the objectives and goals of our project teams.	4.06	0.657
Our organisation's reward and recognition systems motivate project team members and enhance performance.	3.06	0.961
The behaviours and attitudes exhibited by employees within our organisation positively impact project team performance.	3.91	0.717
The organisational structure of the National Road Safety Authority supports the effectiveness and efficiency of project teams.	3.79	0.832
Overall Mean	**3.58**	**0.823**

Source: Field data (2024).

4.3. Effectiveness of Teamwork at the NRSA

The demographic profile of workers at the National Road Safety Authority (NRSA) reflects a predominantly male workforce, a relatively young workforce, and a high level of educational achievement with a mix of experiences. In detail, 60% of respondents report being male and 40% report being female, a strong gender imbalance in the institution, and possibly reflective of trends in governance in general and in road safety in Ghana specifically.

Table 3 portrays the effectiveness of collaboration at the NRSA. According to the information, encouragement and practice of free communication in groups at the NRSA is well in place, supported by a 92.9% positive feedback rating of participants' agreement. Trust and confidence between group members stand out, with 88.6% reporting positive feelings towards such statements. In addition, a strong level of collaboration and cooperation in groups is in practice, with 88.6% reporting positive experiences with such statements. Conflicts experienced in group work are handled effectively and on time, with 55.7% of respondents reporting positive feedback about such statements. A significant portion of group members have complementary skill sets, a fact attested to by 98.6% of respondents having positive feelings towards such a statement. In addition, 90% of respondents concur in terms of collective accountability for group success (**Table 3**).

Table 3. Effectiveness of Teamwork.

Statements	Yes (%)	No (%)
Is open communication encouraged and practised within teams at NRSA?	92.9	7.1
Do team members at NRSA trust and depend on each other to fulfil their responsibilities?	88.6	11.4
Is there a strong sense of collaboration and cooperation among team members at NRSA?	88.6	11.4
Are conflicts within teams at NRSA resolved in a constructive and timely manner?	55.7	44.3
Do teams at NRSA comprise members with complementary skills necessary for the accomplishment of tasks?	98.6	1.4
Is there a shared sense of responsibility among team members at NRSA for achieving team goals?	90	10
Are team members at NRSA held accountable for their contributions to the team's objectives?	85.7	14.3
Is mutual respect among team members at NRSA evident in team interactions?	95.7	4.3
Is there a system in place at NRSA for measuring team performance and providing feedback to team members?	81.4	18.6
Average Percentage	86.36	13.64

Source: Field data (2024).

There is accountability for individual contribution to group success, supported by 85.7% of respondents having positive feedback for this statement. In addition, high consideration and respect among group members towards one another is exhibited, with a 95.7% level of positive feedback rating. There is an evaluation mechanism for gauging group performance, with feedback channels for group members, and 81.4% of respondents report positively about such statements. Overall, a mean proportion of 86.36% positive feedback rating for all statements has been documented. Thus, effective group work at the NRSA, with high values for open communication, trust, collaboration, and cooperation among its members, is supported in the present study. There seems, however, to be room for improvement regarding effective-

ness in resolving conflicts and feedback processes in group work.

4.4. Organisational Culture and Project Team Performance

This section clarifies the analysis and findings developed through data collected in conformance with the third objective of the study. Specifically, the discussion addresses the results regarding the impact of organisational culture towards a project team's performance. The findings have been represented in **Table 4** and have been subjected to inferential statistics, such as Regression and ANOVA.

Regression Analysis

The objectives of the study included developing a model of regression and explaining the variance between independent and dependent factors. Linear regression analysis was conducted, and its findings have been presented in detail in **Table 4**.

Table 4. Model Summary of Multiple Regression Analysis.

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
0.408[a]	0.166	0.154	0.517	0.166	13.578	1	68	0.000

a. Predictors: (Constant), Organisational Culture.
Source: Field data (2024).

The third objective in this current study involved testing for a relationship between a project team's performance and organisational culture at the NRSA. In an endeavour towards attaining this objective, a linear regression analysis was conducted, and the respective findings have been presented in **Table 4**. As represented in the table, a value for a coefficient of determination (R-squared) of 0.166 signifies that a 16.6% variance in a project team's performance can be explained through organisational culture. In addition, an F-statistic value of 13.578, with a respective level of 0.000, signifies the presence of a significant model for a model of regression analysis. Inferred through these, a positive relation between a project team's performance and a respective organisational culture at the NRSA is seen to have been determined through these findings.

Validation for a significant model for a model of regression ($F = 13.578$, $p < 0.001$) in **Table 5**, and confirmation for all respective included individual variables in a model of multiple regressions, strengthens its use in deciding for multiple regression analysis in explaining the role of a model of organisational culture in a model of a project team's performance. In more specific terms, it can be stated that the present study utilises several regression analysis tests to assess which organisational culture impacts performance in a project team working under the National Road Safety Authority (NRSA). At its heart is its Model Summary, in which its use of the statistic R takes form in a multiple correlation coefficient, an indication of a capacity for predicting a dependent variable with a variety of independent variables **(Table 5).**

Table 5. ANOVA and F Statistics.

Model		Sum of Squares	*df*	Mean Square	F	Sig.
1	Regression	3.624	1	3.624	13.578	0.000[b]
	Residual	18.148	68	0.267		
Total		21.771	69			

a. Dependent Variable: Project Team Performance.
b. Predictors: Organisation Culture.
Source: Field data (2024).

It varies between a range of -1 and 1, with positive values representing a strong relation between an independent variable and a dependent variable. In the tests for regressions, an R-value of 0.267 reflects a relatively strong relation between performance in a project team working in an NRSA environment and organisational culture. In addition,

a coefficient of determination (R^2) is useful in reporting proportionate variance in a dependent variable shed in terms of a regression model. In this case, an R^2 value of 0.166, with an accompanying adjusted value for R of 0.154, reflects that several dimensions of an organisational culture allow for its regression models to explain a 15% variance in performance in a project team working in an NRSA environment.

The regression analysis presented in **Table 6** reveals a statistically significant relationship between organisational culture and project team performance at NRSA. The model shows that organisational culture explains 16.6% of the variation in team performance ($R^2 = 0.166$). While this represents a moderate effect, it indicates that other factors beyond culture also influence performance outcomes. The analysis demonstrates that for every one-unit increase in organisational culture scores, project team performance increases by 0.346 units. This relationship is statistically significant ($p < 0.001$), meaning there is confidence that it is not due to chance. The 95% confidence interval ranges from 0.158 to 0.533, suggesting the true effect likely falls within this range.

Table 6. Coefficientsa.

Model		Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.803	0.346		8.105	0	2.113	3.493
	Org. Culture	0.346	0.094	0.408	3.685	0	0.158	0.533

Dependent Variable: Project Team Performance.
Source: Field data (2024).

The correlation analysis presented in **Table 7** confirms a moderate positive relationship between organisational culture and project team performance ($r = 0.408$, $p < 0.001$). This finding indicates that as organisational culture becomes more positive, project team performance tends to improve correspondingly. The relationship demonstrates moderate strength, meaning it is neither weak nor exceptionally strong but represents a meaningful association between the variables. The statistical significance of this correlation allows us to be highly confident that this relationship exists in the broader NRSA population. Organisations with stronger, more supportive cultures generally experience better project outcomes. However, since culture explains only 16.6% of performance variation, other factors such as resources, leadership quality, external constraints, and individual skills also play important roles in determining project success. This finding aligns with organisational behaviour theory, suggesting that performance outcomes result from multiple interacting factors rather than single variables.

Table 7. Correlations

		Organisational Culture	Project Team Performance
Organisational Culture	Pearson Correlation	1	0.408**
	Sig. (2-tailed)		0.000
	N	270	270
Project Team Performance	Pearson Correlation	0.408**	1
	Sig. (2-tailed)	0.000	
	N	270	270

**Correlation is significant at the 0.01 level (2-tailed).
Source: Author's construct (2024).

4.5. Discussion

The findings of this study are in line with prior research on organisational culture on multiple fronts, while contributing novel knowledge applicable to public institutions dedicated to road safety. Our study provides a significant positive relationship between organisational culture and the effectiveness of project teams, congruent with the theoretical perspective combining Organisational Culture Theory and Team Effectiveness Models [16, 26]. The higher levels of

cooperation, information sharing, and shared goals witnessed in the NRSA demonstrate characteristics of a clan culture, which previous research suggests is particularly effective in promoting project effectiveness in mission-oriented organisations [8]. Our findings support leadership, communication systems, and incentive mechanisms as keys in ensuring positive project results, thereby confirming prior research on organisational effectiveness [64]. The high alignment within the NRSA among organisational values and project targets demonstrates how a shared sense of mission serves as a unifying force overriding individual differences, thus lending support to the theory of goal congruity in public institutions [13]. This finding adds value to the knowledge repository by revealing the unique dynamics of operation in clan culture within public institutions without resources, as compared to private institutions in which most prior research was conducted.

The study presents a contribution to theory development by showing the applicability of Western organisational culture constructs in the African public sector case. Despite previous work highlighting the advantages of cultural diversity in increasing work by the team [80], the results indicate that in some areas, such as road safety, shared cultural beliefs could yield larger dividends than diversity in achieving meaningful mission objectives. This implication fits within the NRSA thrust on road safety as a collective organisational goal, stimulating joint efforts and higher work outputs [17]. Our study applied the culture-performance relationship from the private and building sectors to public safety institutions, thereby validating its application in government institutions for social welfare activities [1]. The NRSA's focus on improvisation, innovation, and improvement on a continuous basis hints at a need on the part of public institutions themselves to keep pace with dynamic technological and social landscapes in maintaining their basic mission focus [78].

But there are also aspects highlighted by the study which require improvement, and most notably in conflict management and reward system alignment. These established gaps indicate that, despite the NRSA having laid strong cultural foundations, a systematic emphasis on governance systems and communication processes could enhance a performance outcome [44]. The moderately-sized R^2 value (0.166) indicates that organisational culture explains only a small portion of the variance in team performance, highlighting the influence of other factors such as the availability of resources, external demands by stakeholders, and institutional settings that characterise public sector work in Africa and elsewhere in developing regions. The practical implications of this research are generalizable more broadly than within the NRSA, providing lessons in other public sector organisations in developing countries that face similar restrictions in resources and institutional challenges. The results guide the blending of governance ideals with culture efforts in enhancing the effectiveness of project deliveries without compromising accountability towards different audiences [47].

5. Conclusions

This study has uncovered an intertwined interrelationship between organisational culture, effective teamwork, and performance in a project team. The study's findings reveal a predominantly clan-like culture, characterised by a high level of employee engagement, free flow of communications, and a strong orientation towards development and reward for individual and group performance. This cultural base, in concert with strong teamwork, proves a key driving force for positive performance in both the organisation and in its respective project groups. Nevertheless, the study also identifies areas for improvement, most notably in aligning organisation and project objectives. To make it even more effective, the NRSA can strive to develop a yet more diverse organisation culture, combining an increased role for hierarchy for enhancing structure and adhocracy for increased adaptability and innovation.

5.1. Policy Recommendations

Based on these findings, several actionable recommendations emerge for NRSA leadership and policymakers. NRSA management should implement structured conflict resolution training programs to address the identified weakness in this area, while establishing quarterly alignment assessments between organisational and project objectives. The organisation should redesign reward systems to better motivate project teams and recognise collaborative achievements, and create formal mentorship programs to leverage the experience of senior staff (22.9% with 10+ years) for the

predominantly junior workforce. At the policy level, government officials should develop standardised organisational culture assessment frameworks for public sector agencies and establish performance-based incentive structures that reward cultural improvements in government institutions. Additionally, policymakers should mandate regular teamwork effectiveness evaluations in agencies handling critical public safety functions to ensure optimal performance in delivering essential services to citizens.

5.2. Study Limitations

This study has several limitations that should be acknowledged. The research was conducted within a single institution (NRSA), limiting the generalizability of findings to other road safety agencies or public sector organisations. The cross-sectional design prevents establishing causal relationships between organisational culture and performance. The modest R^2 value (0.166) indicates that organisational culture explains only 16.6% of performance variance, suggesting other unmeasured factors significantly influence team performance. Additionally, the predominantly young workforce (55.7% aged 26–35) may not represent the broader public sector demographic. Future research should employ longitudinal designs across multiple organisations and include additional variables such as leadership styles, resource availability, and external environmental factors to provide a more comprehensive understanding of culture-performance relationships in public sector contexts.

Author Contributions

Conceptualisation, S.A.B. and B.E.; methodology, S.A.B.; validation, S.A.B. and B.E.; formal analysis, S.A.B.; investigation, S.A.B. and B.E.; resources, S.A.B. and B.E.; data curation, S.A.B.; writing—original draft preparation, S.A.B.; writing—review and editing, S.A.B. and B.E.; supervision, B.E.; project administration, S.A.B. Both authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

Ethical review and approval were waived for this study due to the nature of the research involving organisational survey data from consenting adult employees, with no sensitive personal information collected, and all participation being voluntary and anonymous.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

The data presented in this study are available on request from the corresponding author. The data are not publicly available due to organisational privacy policies of the National Road Safety Authority (NRSA).

Conflicts of Interest

The authors declare no conflicts of interest.

Appendix A. Informed Consent Form

Research Study: The Role of Innovation Culture in Enhancing Road Safety Project Outcomes in Ghana

Principal Investigator: Seth Acquah Boateng

Institution: University of Cape Coast

Contact: sboateng013@stu.ucc.edu.gh

INVITATION TO PARTICIPATE

You are invited to participate in a research study examining organisational culture and project team performance at the National Road Safety Authority (NRSA). Please read this information carefully before deciding whether to participate.

PURPOSE OF THE STUDY

This study aims to understand how organisational culture influences project team effectiveness within NRSA. Your participation will help identify factors that enhance project outcomes and inform organisational development strategies.

WHAT PARTICIPATION INVOLVES

Complete a structured questionnaire (approximately 15-20 minutes)

Answer questions about organisational culture, teamwork, and project performance

No follow-up sessions required

VOLUNTARY PARTICIPATION

Participation is entirely voluntary

You may withdraw at any time without penalty

You may skip any questions you prefer not to answer

Non-participation will not affect your employment status

CONFIDENTIALITY AND ANONYMITY

All responses will remain completely anonymous

No personal identifiers will be collected

Data will be reported in aggregate form only

Individual responses cannot be traced back to participants

Research data will be stored securely and accessed only by authorised researchers

RISKS AND BENEFITS

Risks: Minimal risk involved; some questions may require reflection on workplace experiences

Benefits: Potential organisational improvements based on study findings; contribution to road safety research

USE OF DATA

Data will be used solely for academic research purposes

Results will be published in academic journals and may be presented at conferences

No individual or identifiable information will be disclosed

YOUR RIGHTS

Right to ask questions about the study

Right to receive a summary of study findings upon request

Right to withdraw consent at any time

CONTACT INFORMATION

For questions about this study, contact:

Seth Acquah Boateng: sboateng013@stu.ucc.edu.gh

CONSENT STATEMENT

By completing and submitting the questionnaire, I acknowledge that:

- ☐ I have read and understood the information about this study
- ☐ I understand that participation is voluntary
- ☐ I understand my responses will remain anonymous and confidential
- ☐ I consent to participate in this research study

Date: _____

Participant Signature: _____

Please retain a copy of this consent form for your records.

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