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DOES ORGANIZATIONAL CULTURE MODERATE THE RELATIONSHIP BETWEEN KNOWLEDGE MANAGEMENT PRACTICES AND SERVICE DELIVERY? EVIDENCE FROM SELECTED REGIONAL WATER SUPPLY AND SANITATION AUTHORITIES IN TANZANIA

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ABSTRACT

Knowledge Management Practices (KMPs) have been widely recognized as important drivers of organizational performance and service delivery. However, limited empirical evidence exists on how organizational culture conditions the effectiveness of KMPs in public water utilities, particularly in developing countries. This study examined the moderating effect of organizational culture on the relationship between KMPs and service delivery in selected Regional Water Supply and Sanitation Authorities (WSSAs) in Tanzania. A positivist philosophy and cross-sectional descriptive and explanatory designs were adopted. Primary data were collected from 286 employees across ten selected Regional WSSAs using a structured questionnaire and multistage sampling. Hierarchical multiple regression analysis was employed to test the moderating effect of organizational culture. The findings showed that KMPs significantly predicted service delivery, explaining 30.8% of the variance in service delivery ($R^2 = 0.308$, $p < 0.001$). The inclusion of organizational culture increased the explanatory power of the model to 47.0%, while the addition of the interaction term further increased the explained variance to 49.5%. The interaction between KMPs and organizational culture was negative and statistically significant ($\beta = -0.741$, $p < 0.001$), confirming that organizational culture significantly moderates the relationship between KMPs and service delivery. Although organizational culture had a positive direct effect on service delivery, the negative interaction effect indicates that the contribution of KMPs to service delivery becomes weaker at higher levels of the measured organizational culture construct. The study contributes empirical evidence on the contextual role of organizational culture in shaping the effectiveness of knowledge management practices in public water utilities in Tanzania.

Keywords: *Knowledge Management Practices; Organizational Culture; Moderation; Service Delivery; Regional Water Supply and Sanitation Authorities*

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INTRODUCTION

Improving service delivery remains one of the key priorities of public sector reforms across both developed and developing countries. In the water sector, efficient service delivery is fundamental to achieving Sustainable Development Goal Six (6), which seeks to ensure the availability and sustainable management of water and sanitation for all (World Bank, 2023). Despite substantial investments in water infrastructure, institutional reforms, and digital technologies, many public water utilities continue to experience persistent challenges, including unreliable water supply, delays in new water connections and response to customer complaints, operational inefficiencies, and declining customer satisfaction (World Bank, 2023; African Development Bank, 2021; OECD, 2020; Ojo & Sohail, 2024; Ishola, Maramura, & Gumbo, 2025; Controller and Auditor General, 2024; Nyathikala et al., 2023). These challenges have shifted scholarly and policy attention from physical infrastructure alone toward organizational capabilities that enable public institutions to deliver sustainable and high-quality services.

Among the organizational capabilities receiving increasing attention is knowledge management. Knowledge management is the way an organization creates, collects, stores, shares, and uses knowledge so that employees can learn and perform their work better (Armstrong, 2009). For example, in Regional Water Supply and Sanitation Authority, employees can get knowledge from training, experience, meetings, reports, customers, ICT systems, and colleagues. Knowledge Management is about making sure such knowledge is available and used effectively rather than being lost or kept by only one person (Ibid, 2009). Within public organizations, effective knowledge management practices facilitate the retention of institutional knowledge, strengthens employee competencies, improves coordination across departments, and supports evidence-based decision-making, all of which contribute to improved service delivery (Kianto, Sa'enz, & Aramburu, 2017; Donate & de Pablo, 2015). Knowledge management practices comprise several complementary organizational mechanisms through which knowledge is generated and utilized. Building on Heisig's (2009) knowledge management framework, this study conceptualizes knowledge management practices into three interrelated dimensions: human-oriented practices, technology-oriented practices, and organizational-oriented practices (Inkinen, 2016; Inkinen, Kianto, & Vanhala, 2015).

Although previous studies consistently reported positive relationships between knowledge management practices and organizational performance, empirical findings remain inconclusive regarding the mechanisms through which these practices generate superior organizational outcomes. While some studies reported strong positive effects of knowledge management practices on organizational performance (Andrea & Wanyoike, 2024; Nama et al., 2022; Ineye-Briggs, 2024; Ha & Lo, 2018; Kianto et al., 2017), others suggest that knowledge management practices alone do not automatically improve performance unless supported by favourable organizational conditions (Amayreh, 2023; Ugwu & Ejikeme, 2023; Muslim et al., 2021; Rashid & Yeop, 2020). These mixed findings suggest that the effectiveness of knowledge management may depend on contextual factors operating within organizations rather than on the existence of knowledge management practices alone.

Organizational culture has increasingly been identified as one of the most influential contextual factors affecting the success of knowledge management initiatives (Amayreh, 2023). It represents the shared values, beliefs, norms, and behavioral expectations that shape how employees interact, share knowledge, make decisions, and respond to organizational challenges (Robbins & Judge, 2013; Prasad, 2008). A supportive organizational culture encourages openness, collaboration, trust, innovation, and continuous learning, thereby creating an environment in which knowledge management practices are more likely to flourish. Conversely, rigid, bureaucratic, or risk-averse cultures may discourage knowledge sharing and limit employees' willingness to utilize organizational knowledge effectively. Therefore, organizations implementing similar knowledge management practices may experience different performance outcomes because their organizational cultures differ substantially.

The moderating effect of organizational culture has attracted growing scholarly attention in recent years. For example, Amayreh (2023) found that organizational culture strengthened the relationship between knowledge management and employee performance among Jordanian organizations. Similarly, Rashid and Yeop (2020) reported that supportive organizational cultures enhanced the influence of knowledge management on managerial performance within Dubai's public sector. Ugwu and Ejikeme (2023) also established that organizational culture positively reinforced the contribution of knowledge management to employee performance among university librarians in Nigeria. However, contrary evidence exists. Muslim et al. (2021), for instance, found that organizational culture did not significantly moderate the relationship between knowledge management and employee performance in Indonesian organizations. These contrasting findings indicate that the moderating role of organizational culture remains inconclusive and may vary across organizational settings and institutional contexts.

Besides, the existing literature also reveals several important gaps. First, the majority of previous studies have concentrated on private-sector organizations, including manufacturing, healthcare, education, and commercial service industries, with comparatively limited attention given to public utility organizations responsible for essential public services. Second, most studies have employed employee performance or organizational performance as the primary outcome variable, whereas service delivery remains underexplored despite being the principal mandate of public sector institutions. Third, although organizational culture has increasingly been examined as a moderating variable, empirical evidence from Sub-Saharan Africa remains limited, particularly within public water utilities operating under unique institutional, regulatory, and resource constraints. Therefore, how organizational culture conditions the relationship between KMPs and service delivery remains insufficiently understood in this context.

These gaps are particularly evident within Tanzania's Regional WSSAs. Over the past two decades, the Government of Tanzania has implemented substantial institutional reforms aimed at improving water service provision through policy reforms, regulatory strengthening, infrastructure investments, and digitalization initiatives. Nevertheless, many Regional WSSAs continue to face operational challenges associated with service interruptions, customer complaint handling, coordination, and institutional efficiency (Controller and Auditor General, 2024, EWURA, 2024). While considerable emphasis has been placed on technological investment and organizational reforms, relatively little empirical evidence explains the organizational conditions under which knowledge management practices translate into improved service delivery within these public utilities.

Drawing on the Competing Values Framework (CVF), this study treats organizational culture as a contextual condition that can alter the effectiveness of KMPs. The framework suggests that different cultural orientations shape employee behaviour, organizational learning, collaboration, innovation, and decision-making in different ways, thereby influencing how organizational resources are transformed into performance outcomes (Cameron & Quinn, 2006). Accordingly, organizations characterized by collaborative, innovative, and results-oriented cultures are expected to derive greater service delivery benefits from knowledge management practices than organizations operating under less supportive cultural environments (Ibid, 2006). The study therefore examines culture as a moderator rather than assuming that its role is limited to a direct effect on service delivery.

Against this background, the study examines the moderating effect of organizational culture on the relationship between KMPs and service delivery in selected Regional WSSAs in Tanzania. It contributes by shifting attention from the direct knowledge management practices outcome relationship to a conditional relationship, extending evidence to an under-researched public water utility context, and providing implications for aligning knowledge management initiatives with organizational conditions.

LITERATURE REVIEW

Knowledge Management Practices

Knowledge management refers broadly to organizational processes and practices through which knowledge is created, acquired, captured, shared, stored, and applied to support organizational learning and performance (Balasubramanian, Al-Ahbabi, & Sreejith, 2020; Edwards & Lönnqvist, 2023; Ha & Lo, 2018; Inkinen et al., 2015). Although scholars conceptualize knowledge management practices differently, the literature generally recognizes it as a systematic organizational capability for mobilizing and utilizing knowledge resources to achieve organizational objectives (Chen, 2022; Nair & Munusami, 2019; Armstrong, 2012; Gold, Malhotra, & Segars, 2001; Ho, 2008; Hsiao, Chen, & Chang, 2011; Inkinen, 2016; Andreeva & Kianto, 2012). This study adopts Heisig's classification of knowledge management practices, focusing on human-oriented, technology-oriented, and organization-oriented practices (Inkinen, 2016). Human-oriented practices concern human resource management and leadership; technology-oriented practices concern ICT systems that facilitate knowledge processes; and organization-oriented practices concern structures and arrangements supporting knowledge sharing, coordination, and decision-making (Donate & Guadamillas, 2011; Inkinen, 2016; Inkinen et al., 2015; Andreeva & Kianto, 2012; Ansari et al., 2012). Collectively, these dimensions form the study's composite KMP construct. Previous literature links KMPs with organizational performance and service outcomes (Balasubramanian et al., 2020; Edwards & Lönnqvist, 2023; Ha & Lo, 2018; Inkinen et al., 2015), while also suggesting that their effectiveness depends partly on organizational context. This provides the basis for examining organizational culture as a moderator of the relationship between knowledge management practices and service delivery.

Organizational Culture

Organizational culture comprises shared values, beliefs, norms, and behavioural expectations that guide how employees interact and perform (Robbins & Judge, 2013; Prasad, 2008). It can shape communication, collaboration, innovation, and decision-making and therefore influence how knowledge is translated into organizational outcomes (Amayreh, 2023; Ugwu & Ejikeme, 2023; Muslim et al., 2021). Several frameworks explain organizational culture, including Schein's model, Hofstede's dimensions, the CVF, and the dimensions proposed by Robbins and Judge. These frameworks differ in emphasis and are not conceptually identical. In this study, the CVF provides the theoretical lens for explaining why culture may condition organizational relationships, while Robbins and Judge's (2013) dimensions provide the operational measure used in the empirical analysis. Specifically, outcome orientation captures emphasis on results, innovation and risk-taking captures openness to creativity and change, and people orientation captures concern for employee participation and development. This distinction is important since the study does not claim that these three measured dimensions are the four CVF culture types. Rather, CVF provides the theoretical rationale for the moderating function, while the selected Robbins and Judge dimensions provide observable cultural characteristics relevant to the study context. Organizational culture is therefore specified as a moderator of the KMPs –service delivery relationship.

Theoretical Foundation

The theoretical foundation of this study is the Competing Values Framework (CVF), developed by Cameron and Quinn (2006) from the organizational effectiveness model initially proposed by Quinn and Rohrbaugh (1983). The framework classifies organizational culture into four orientations: clan, adhocracy, market, and hierarchy, based on the competing dimensions of flexibility versus stability and internal versus external organizational focus. The framework provides a basis for understanding why similar organizational practices may produce different outcomes across organizations operating under different cultural conditions. Clan cultures emphasize collaboration and knowledge sharing; adhocracy cultures encourage innovation and experimentation; market cultures emphasize performance and goal achievement; while hierarchy cultures emphasize formal rules, coordination, and control (Cameron & Quinn, 2006).

The CVF is particularly relevant to knowledge management because different cultural orientations can influence how employees create, share, and apply knowledge. For example, collaborative and innovative cultural environments may facilitate knowledge sharing and experimentation, while highly formalized environments may place greater emphasis on rules and control. Thus, organizational culture can influence the conditions under which knowledge management practices are implemented and translated into organizational outcomes. Accordingly, CVF provides the theoretical basis for testing whether organizational culture changes the strength of the knowledge management practices and service delivery relationship. The empirical measure used in this study is drawn from Robbins and Judge (2013), as explained above; the two frameworks are therefore used for distinct purposes rather than treated as interchangeable measurement systems.

Empirical Review: Organizational Culture as a Moderator

Empirical evidence suggests that organizational culture can influence the extent to which knowledge management practices translate into organizational outcomes. For example, Amayreh (2023) found that organizational culture significantly enhanced the influence of knowledge management on employee performance across manufacturing, healthcare, and service organizations in Jordan. Similarly, Rashid and Yeop (2020) reported that organizational culture positively moderated the relationship between knowledge management and managerial performance in Dubai's public sector. Ugwu and Ejikeme (2023) also found that knowledge management and organizational culture jointly contributed to improved employee performance among university librarians in Nigeria.

However, empirical findings are not consistent. Muslim et al. (2021) found that although knowledge management significantly improved employee performance in Indonesian organizations, organizational culture did not significantly moderate this relationship. The authors suggested that the strong direct influence of organizational culture on employee performance may have limited its moderating effect. These mixed findings indicate that the moderating effect of organizational culture may vary according to organizational context, institutional characteristics, and how knowledge management is conceptualized and operationalized.

Several gaps therefore remain in the literature. First, existing studies have largely focused on manufacturing, healthcare, higher education, and general public administration contexts outside Sub-Saharan Africa. Limited empirical evidence exists on the moderating effect of organizational culture on the relationship between knowledge management practices and service delivery in public water utilities in Tanzania. Second, previous studies have predominantly conceptualized knowledge management as knowledge processes, whereas this study adopts Heisig's framework, focusing on human, technology, and organization-oriented practices. Third, previous studies have mainly examined employee or managerial performance, while this study focuses on service delivery, which directly reflects the performance mandate of Regional WSSAs. These gaps support testing the moderating effect of organizational culture in Tanzanian public water utilities.

Hypothesis Development

The literature indicates that knowledge management practices effectiveness may depend on organizational context. Culture can shape willingness to share knowledge, collaborate, innovate, and apply knowledge, but evidence on whether it significantly changes the knowledge management–outcome relationship remains mixed (Amayreh, 2023; Rashid & Yeop, 2020; Muslim et al., 2021). Given the limited evidence from Tanzanian public water utilities and the service-delivery focus of this study, the following null hypothesis was tested:

H_{01}: Organizational culture has no significant moderating effect on the relationship between knowledge management practices and service delivery in selected Regional Water Supply and Sanitation Authorities in Tanzania.

METHODOLOGY

Research Philosophy and Design

The study adopted a positivist philosophy and a cross-sectional design incorporating descriptive and explanatory approaches. Positivism was appropriate for quantitative measurement, hypothesis testing, and statistical examination of the proposed effect of organizational culture. Data were collected at one point in time. The descriptive approach assessed respondents' perceptions of knowledge management practices, organizational culture, and service delivery, while the explanatory approach examined the moderating relationship among the study variables.

Study Area, Population and Sampling Procedure

The study was conducted in selected Regional Water Supply and Sanitation Authorities (WSSAs) in Tanzania. The target population comprised 1,359 employees from four departments involved in knowledge management and service delivery: Human Resources and Administration, ICT, Customer Service, and Water Supply and Sanitation Management. Ten of the 26 Regional WSSAs were selected through multistage sampling: five purposively selected based on persistent service-delivery challenges identified in the Controller and Auditor General Report (2024), and five selected through stratified random sampling for geographical representation. Employees were then selected using simple random sampling. A total of 286 completed questionnaires were analyzed.

Measurement of Variables and Data Collection

Primary data were collected using a structured questionnaire comprising closed ended questions. The items were measured on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), while open-ended questions provided additional explanations to complement the quantitative findings. Knowledge management practices were measured using three dimensions adapted from Heisig's framework as adopted by Inkinen et al. (2015): human-oriented, technology-oriented, and organization-oriented practices. Human-oriented practices covered recruitment and selection, training and development, performance appraisal, compensation, and leadership support; technology-oriented practices covered ICT availability and utilization; and organization-oriented practices covered delegation of authority, participatory decision-making and cross-functional teamwork.

Organizational culture was measured using selected dimensions adapted from Robbins and Judge (2013), namely outcome orientation, innovation and risk-taking, and people orientation. Service delivery was measured using the SERVQUAL dimensions of reliability, responsiveness, assurance, empathy, and tangibles (Parasuraman, Zeithaml, & Berry, 1988). Measurement items were adapted from established studies, including Donate and Guadamillas (2011), Inkinen et al. (2015), Kokkaew, Peansupap, & Jokkaw (2022), Njuguna, Muli, & Wainaina (2021), and Robbins and Judge (2013), with contextual modifications for Regional WSSAs.

Validity and Reliability Assessment

Content validity was established through literature review and expert evaluation, while construct validity was assessed using exploratory factor analysis. The KMO values exceeded 0.60 for all constructs and Bartlett's Test of Sphericity was statistically significant ($p < 0.001$), confirming the suitability of the data for factor analysis. Reliability was assessed using Cronbach's alpha, with all constructs recording values above 0.70, indicating satisfactory internal consistency.

Data Analysis

Quantitative data were analyzed using SPSS Version 27. Descriptive statistics, including means and standard deviations, summarized respondents' perceptions, while Pearson correlation analysis examined relationships among the study variables. The moderating effect was tested using hierarchical multiple regression with three models: Model 1 entered the composite KMP construct; Model 2 added organizational culture; and Model 3

added the KMP × organizational culture interaction. Predictor and moderator scores were mean-centered before the interaction term was created to reduce multicollinearity. Statistical significance was assessed at 5%.

RESULTS

Descriptive Statistics of Organizational Culture

Organizational culture was assessed using nine statements covering innovation and risk-taking, outcome orientation, and people orientation. Respondents rated the statements on a five-point Likert scale. As shown in Table 1 below, the aggregate mean was 3.85 (SD = 0.590), indicating generally positive perceptions of organizational culture across the selected Regional WSSAs. The highest rated item concerned the emphasis on results and efficient service delivery (M = 4.05, SD = 0.731), followed by encouraging the generation of new ideas (M = 3.95, SD = 0.871) and recognizing employees as central to organizational success (M = 3.94, SD = 0.835). The relatively lower ratings concerned management provision of resources for implementing new ideas and reward systems for high-performing employees, both with a mean of 3.68. Overall, respondents reported a generally supportive culture, although some innovation-support mechanisms were perceived less strongly.

Table 1: Descriptive Statistics of Organizational Culture

Organizational culture	N	Mean	S.D.
My organization encourages the generation of new ideas that support continuous improvement in service delivery	286	3.95	0.871
Innovative employees are recognized and rewarded, which motivates knowledge sharing and service enhancement	286	3.74	0.873
Management provides resources for implementing new ideas that promote effective knowledge use	286	3.68	0.879
The organization emphasizes results, encouraging employees to find efficient ways to deliver services	286	4.05	0.731
All employees are held accountable, creating a culture that supports quality performance and learning	286	3.93	0.687
A reward system exists to recognize high achievers, promoting a culture that values contribution and service outcomes	286	3.68	0.952
Employees are recognized as central to the organization's success, supporting teamwork and knowledge flow	286	3.94	0.835
Employee grievances are addressed through effective systems, helping maintain a collaborative learning environment	286	3.84	0.727
The organization provides welfare support that boosts morale and commitment to service excellence	286	3.83	0.823
Aggregate mean score and standard deviation	**286**	**3.85**	**0.590**

Source: Survey data (2026)

Correlation Analysis

Table 2 presents the Pearson correlation coefficients among knowledge management practices, organizational culture, and service delivery. All three dimensions of knowledge management practices were positively and significantly correlated with organizational culture and service delivery ($p < 0.01$). Organization-oriented practices had the strongest correlation with organizational culture ($r = 0.616$, $p < 0.001$) and service delivery ($r = 0.638$, $p < 0.001$), followed by human-oriented practices ($r = 0.386$ and $r = 0.406$, respectively) and technology-oriented practices ($r = 0.239$ and $r = 0.228$, respectively). Organizational culture was also positively and significantly correlated with service delivery ($r = 0.638$, $p < 0.001$). Although the correlations demonstrate significant associations, they do not establish a moderating effect. Hierarchical multiple regression was therefore used to test whether organizational culture significantly changes the relationship between knowledge management practices and service delivery.

Table 2: Correlation between Knowledge Management Practices, Organizational Culture, and Service Delivery

Variables	Organizational Culture	Service Delivery
Human-oriented practices	0.386**	0.406**
Technology-oriented practices	0.239**	0.228**
Organization-oriented practices	0.616**	0.638**
Organizational culture	1.000	0.638**

Note: Correlation is significant at the 0.01 level (2-tailed). N = 286.

Hierarchical Multiple Regression Analysis

Hierarchical multiple regression was used to examine the moderating effect of organizational culture on the relationship between knowledge management practices and service delivery. Three models were estimated. Model 1 examined the direct effect of knowledge management practices on service delivery. Model 2 introduced organizational culture to assess its additional explanatory power. Model 3 incorporated the interaction term between knowledge management practices and organizational culture to determine whether organizational culture significantly moderates the relationship between knowledge management practices and service delivery. Prior to creating the interaction term, the predictor and moderator variables were mean-centered to reduce the likelihood of multicollinearity.

Table 3: Empirical Model Summary for moderator effect models 1_2_3

Model Summary[d]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.555[a]	.308	.306	.40703
2	.685[b]	.470	.466	.35702
3	.703[c]	.495	.489	.34905

a. Predictors: (Constant), Knowledge Management Practices
b. Predictors: (Constant), Knowledge Management Practices, Organizational Culture
c. Predictors: (Constant), Knowledge Management Practices, Organizational Culture, Org_Cult_X_Know_Mngt_Interaction
d. Dependent Variable: Service Delivery

Source: Author, (2026)

Table 3 presents the results of the hierarchical regression models used to examine the moderating effect of organizational culture on the relationship between knowledge management practices and service delivery. Model 1 indicates that knowledge management practices significantly explain service delivery, accounting for 30.8% of its variance ($R^2 = 0.308$). When organizational culture was entered in Model 2, the explanatory power of the model increased substantially to 47.0% ($R^2 = 0.470$), indicating that organizational culture contributes additional explanatory value beyond knowledge management practices alone. The inclusion of the interaction term in Model 3 further improved the model, increasing the coefficient of determination to 49.5% ($R^2 = 0.495$). This represents an additional 2.5% of the variance explained, suggesting that the interaction between knowledge management practices and organizational culture contributes significantly to explaining variations in service delivery. Furthermore, the progressive reduction in the standard error of the estimate across the three models demonstrates improved predictive accuracy following the inclusion of organizational culture and the interaction effect.

Table 4: ANOVA for the moderator effects models 1_2_3

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.953	1	20.953	126.474	.000[b]
	Residual	47.051	284	.166		
	Total	68.004	285			
2	Regression	31.933	2	15.966	125.264	.000[c]
	Residual	36.071	283	.127		
	Total	68.004	285			
3	Regression	33.647	3	11.216	92.056	.000[c]
	Residual	34.357	282	.122		
	Total	68.004	285			

a. Dependent Variable: Service Delivery
b. Predictors: (Constant), Knowledge Management Practices
c. Predictors: (Constant), Knowledge Management Practices, Organizational Culture
d. Predictors: (Constant), Knowledge Management Practices, Organizational Culture, Org_Cult_X_Know_Mngt_Interaction

Source: Author, (2026)

The ANOVA results confirm that all three hierarchical regression models are statistically significant ($p < 0.001$). Model 1 demonstrates that knowledge management practices significantly predict service delivery. Model 2 remains statistically significant after organizational culture is incorporated into the model, while Model 3 also achieves statistical significance following the inclusion of the interaction term. These findings indicate that the hierarchical models adequately explain variations in service delivery and provide initial evidence supporting the moderating role of organizational culture.

Table 5: Regression coefficients for the moderator effects models 1_2_3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	.823	.282		2.916	.004	.268	1.379
	Knowledge Management Practices	.776	.069	.555	11.246	.000	.640	.912
2	(Constant)	.776	.248		3.133	.002	.289	1.264
	Knowledge Management Practices	.414	.072	.296	5.751	.000	.272	.556
	Organizational Culture	.396	.043	.478	9.281	.000	.312	.480
3	(Constant)	-3.314	1.117		-2.967	.003	-5.512	-1.115
	Knowledge Management Practices	1.428	.279	1.021	5.113	.000	.878	1.978
	Organizational Culture	.393	.042	.474	9.421	.000	.311	.475
	Org_CultXKnow_Mngt_Interaction	-.288	.077	-.741	-3.751	.000	-.439	-.137

a. Dependent Variable: Service Delivery

Source: Author, (2026)

The regression coefficients further clarify the nature of the moderating relationship. In Model 1, knowledge management practices exerted a positive and statistically significant effect on service delivery ($\beta = 0.555$, $p < 0.001$). Following the inclusion of organizational culture in Model 2, the direct effect of knowledge

management practices remained significant, although its standardized coefficient declined ($\beta = 0.296$, $p < 0.001$), while organizational culture exhibited a strong positive effect on service delivery ($\beta = 0.478$, $p < 0.001$). This finding suggests that organizational culture independently contributes to improved service delivery beyond the direct influence of knowledge management practices. Most importantly, Model 3 shows that the interaction term between knowledge management practices and organizational culture is statistically significant ($\beta = -0.741$, $p < 0.001$). This finding confirms that organizational culture significantly moderates the relationship between knowledge management practices and service delivery, leading to the rejection of the null hypothesis that organizational culture has no moderating effect.

The negative interaction indicates that the positive association between knowledge management practices and service delivery becomes weaker at higher levels of the measured organizational-culture construct. This implies that the marginal effect of additional knowledge management practices becomes weaker as organizational culture reaches higher levels. This suggests diminishing incremental returns, implying that organizations characterized by very strong cultural systems may experience less additional benefit from further investments in knowledge management practices. Nevertheless, both knowledge management practices and organizational culture remain significant predictors of service delivery after accounting for the interaction effect, demonstrating that each contributes independently while organizational culture also shapes the strength of their relationship.

DISCUSSION

The findings demonstrate that organizational culture plays a significant moderating effect in the relationship between knowledge management practices and service delivery in selected Regional Water Supply and Sanitation Authorities (WSSAs). The descriptive findings suggest that respondents generally perceived organizational culture within the selected WSSAs as supportive of knowledge management and service delivery, particularly through results orientation, accountability, innovation, and recognition of employees. However, comparatively lower perceptions regarding reward systems and the provision of resources for implementing new ideas suggest that some aspects of a knowledge supportive culture may not yet be consistently institutionalized across the authorities.

More importantly, the hierarchical regression results demonstrate that organizational culture changes the strength of the relationship between knowledge management practices and service delivery. The significant interaction effect indicates that the contribution of knowledge management practices to service delivery is conditional on the prevailing organizational culture. Thus, knowledge management practices do not operate independently of their organizational context; rather, their effectiveness is partly determined by the cultural environment in which they are implemented. This finding is particularly relevant to Regional WSSAs because knowledge management involves not only the availability of systems, structures, and human capabilities but also the willingness of employees and managers to use, share, and apply knowledge in their daily service activities.

The negative and statistically significant interaction coefficient provides an important insight into this relationship. Although organizational culture has a positive direct association with service delivery, the negative interaction suggests that the marginal contribution of knowledge management practices becomes smaller as organizational culture increases. This finding should not necessarily be interpreted to mean that a stronger organizational culture is harmful to service delivery. Rather, it may indicate a diminishing marginal effect, whereby established cultural practices already provide a supportive environment for service delivery and therefore additional strengthening of culture produces a relatively smaller incremental benefit from knowledge management practices. It may also suggest that strongly established cultural norms can, under certain circumstances, reduce flexibility and adaptability when new knowledge management practices require changes in established ways of working.

This interpretation is consistent with the Competing Values Framework, which emphasizes the existence of competing organizational values and the importance of balancing stability and control with flexibility and adaptability. The framework recognizes that organizational cultures differ in their emphasis on hierarchy, market orientation, clan relationships, and adhocracy. In the context of Regional WSSAs, a culture emphasizing results, accountability, collaboration, and innovation can create favourable conditions for knowledge sharing and knowledge utilization. However, when established procedures, norms, or performance expectations become overly dominant, they may limit experimentation and reduce employees' flexibility in applying newly acquired knowledge. Therefore, the effectiveness of knowledge management practices may depend not simply on the strength of organizational culture, but on whether the prevailing cultural characteristics are compatible with knowledge creation, sharing, application, and continuous improvement.

The findings are consistent with Amayreh (2023), who established that organizational culture strengthens the relationship between knowledge management and employee performance. The study emphasized that a supportive cultural environment enables employees to utilize knowledge more effectively, thereby improving performance outcomes. The present study extends this argument by demonstrating that the moderating role of organizational culture also applies to service delivery within public water utilities. This extension is important because service delivery in Regional WSSAs involves organizational processes, employee capabilities, technological systems, and interactions with customers and other stakeholders, making the organizational context particularly important in determining whether knowledge is effectively translated into service improvements.

The findings also support Rashid and Yeop (2020), who found that organizational culture significantly influenced the relationship between knowledge management and managerial performance in government departments in Dubai. Their findings suggest that a supportive cultural environment can enhance the effectiveness of knowledge management in achieving organizational outcomes. The present study similarly demonstrates the importance of culture in a public sector setting, but differs in its focus on service delivery rather than managerial performance. By examining employees across different organizational levels within Regional WSSAs, the study provides evidence that the cultural context can shape how knowledge management practices contribute to broader public service outcomes.

However, the findings differ from those of Muslim et al. (2021), who reported that organizational culture did not significantly moderate the relationship between knowledge management and employee performance. This difference may reflect variations in institutional and sectoral contexts. Muslim et al. (2021) examined organizations operating in services, trade, and manufacturing in Indonesia, whereas the present study focuses on public water utilities in Tanzania. Regional WSSAs operate within public-sector mandates and regulatory requirements and are responsible for providing essential services to communities. These contextual characteristics may make organizational culture particularly important in determining how employees respond to knowledge management practices and how such practices are translated into service delivery outcomes.

The findings therefore contribute to the existing literature by demonstrating that organizational culture should not be treated solely as a background organizational characteristic. Instead, it functions as an important contextual condition that shapes the effectiveness of knowledge management practices. The results suggest that the presence of knowledge management practices alone may not guarantee improvements in service delivery. Their contribution depends partly on whether the prevailing organizational culture enables employees to share knowledge, experiment with new ideas, collaborate across functions, respond to changing service demands, and apply knowledge to operational problems.

Overall, the study provides evidence that organizational culture significantly moderates knowledge management practices and service delivery relationship in selected Regional WSSAs. Its principal contribution is not that culture is universally beneficial or harmful, but that the association between KMPs and service delivery is conditional on the organizational cultural context. This extends knowledge management

research in a Tanzanian public water utility setting and provides a context for further research using more differentiated culture measures and interaction probing.

CONCLUSION

This study examined whether organizational culture moderates the relationship between knowledge management practices and service delivery in selected Regional WSSAs in Tanzania. Knowledge management practices were positively associated with service delivery, organizational culture had a positive direct association with service delivery, and the KMPs × organizational culture interaction was negative and statistically significant. The findings therefore support the conclusion that organizational culture conditions the knowledge management -service delivery relationship. The positive association between knowledge management practices and service delivery becomes weaker at higher levels of the measured culture construct. The study does not establish that culture is harmful or that rigidity is the mechanism underlying this pattern. The findings highlight the importance of an organizational culture that supports results orientation, accountability, employee involvement, innovation, and appropriate flexibility. For Regional WSSAs, knowledge management initiatives should therefore be considered alongside the cultural environment in which knowledge is shared and applied. The study contributes empirical evidence on the contextual role of organizational culture in knowledge management and service delivery within Tanzania's public water sector. It also demonstrates the value of distinguishing a theoretical explanation of culture from the particular operational dimensions used to measure it.

REFERENCES

African Development Bank . (2021). *The African Development Bank Group Water Strategy 2021 –2025 Towards a Water Secure Africa.* Abidjan, Ivory Coast: African Development Bank Group.

Amayreh, K. T. (2023). The Role of Organizational Culture on the Relationship between Knowledge Management and Employee Performance in Jordan. *International Journal of Academic Research in Accounting, Finance & Management Sciences, 13* (3).

Andrea, P. T., & Wanyoike, R. (2024). Knowledge Management and Organization Performance; A Critical Review of Literature. *Journal of Business and Strategic Management , 6* (2), 73- 85.

Andreeva, T., & Kianto, A. (2012). Does knowledge management really matter?Likinking knowledge management practices, competitiveness and economic performance. *Journal of Knowledge Management , 16* (4), 617-636.

Ansari, M., Youshanlouei, H. R., & Mood, M. M. (2012). A Conceptual Model for Success in Implementing Knowledge Management: A Case Study in Tehran Municipality. *Journal of Service Science and Management , 5*, 212-222.

Armstrong, M. (2009). *Armstrong's Handbook of Human Resource Management* (11th ed.). London and Philadephia: Kogan Page.

Armstrong, M. (2012). *Armstrong's Handbook of Human Resource Management Practice* (Twelfth ed.). UK: Ashford Colour Press.

Balasubramanian, S., Al-Ahbabi, S., & Sreejith, S. (2020). Knowledge management processes and performance; The impact of ownership of public sector organizations. *International Journal of Public Sector Management;Emerald Publishing Limited , Vol. 33* (1), pp. 1-21.

Cameron, K. S., & Quinn, R. E. (2006). *Diagnosing and Changing Organizational Culture: Based on Competing Values Framework* (Revised Edition ed.). San Francisco: Jossey-Bass, A Wiley Imprint.

Chen, A. (2022). The Implementation of Knowledge Management Practices: A Theoretical Perspective Including both Cooperation-based Analysis and Conflict-based Analysis. *Creative Business and Sustainability Journal , Vol.44* (No.1), pp.41-60.

Controller and Auditor General. (2024). *Annual General Report on the audit of Public of Authorities and Other Bodies for the financial year 2022/23.* Dodoma, Tanzania: National Audit Office, United Republic of Tanzania.

Donate, M. J., & de Pablo, J. D. (2015). The role of knowledge-oriented leadership in knowledge management practices and innovation. *Journal of Business Research, 68* (2), 360-370.

Donate, M. J., & Guadamillas, F. (2011). Organizational factors to support knowledge management and innovation. *Journal of Knowledge Management, 15* (6), pp. 890-914.

Edwards, J., & Lönnqvist, A. (2023). The future of knowledge management: an agenda for research and practice. *Knowledge Management Research, 21* (5), 909-916.

EWURA. (2024). *Water Utilities Performance Review Report of FY 2022/23; Regional and National Project Water Utiliies.* Dodoma, Tanzania: Energy and Water Utilities Regulatory Authority.

Gold, A., Malhotra, A., & Segars, A. (2001). Knowledge management: an organizational capabilities perspective. *Journal of Management Information Systems , 18* (1), 185-214.

Ha, S., & Lo, M. (2018). An empirical examination of knowledge management and organizational performance among Malaysian manufacturing SMEs. *International Journal Business Innovation and Research , 17* (1), 23-37.

Heisig, P., Suraj, O. A., Kianto, A., Kemboi, C., Arrau, G. P., & Easa, N. F. (2016). Knowledge management and business performance: global experts' views on future research needs. *Journal of Knowledge Management, 20* (6), 1169-1198.

Ho, L. A. (2008). What affects organizational performance? The linking of learning and knowledge management. *Industrial Management and Data Systems , 108* (9), 1234- 1254.

Hsiao, C. Y., Chen, J. C., & Chang, C. S. (2011). Knowledge management capacity and organizational performance: the social interaction view. *International Journal of Manpower, 32* (5/6), 645-660.

Ineye-Briggs, A. C. (2024). Role of Human Resource Management (HRM) Practices in Enhancing Service Delivery within Public Secondary Schools in Rivers State, Nigeria. *African Journal of Humanities & Contemporary Education Research, 17* (1), 293-305.

Inkinen, H. (2016). Review of empirical research on knowledge management practices and firm performance. *Journal of Knowledge Management , 20* (2), 230-257.

Inkinen, H. T., Kianto, A., & Vanhala, M. (2015). Knowledge management practices and innovation performance in Finland. *Baltic Journal of Management, 10* (4), 432-455.

Ishola, A. A., Maramura, T. C., & Gumbo, T. (2025). Analysing Metropolitan Municipal Water Services Delivery Performance in South Africa: A Comparative Assessment of Household Access, Water Quality, and Households' Satisfaction. *Journal of Digital Food, Energy & Water Systems, 6* (1), 75-95.

Kianto, A., Sa'enz, J., & Aramburu, N. (2017). Knowledge-based human resource management practices. *Journal of Business Research , 81*, 1-11.

Kokkaew, N., Peansupap, V., & Jokkaw, N. (2022). An Empirical Examination of Knowledge Management and Organizational Learning as Mediating Variables between HRM and Sustainable Organizational Performance. *Sustainability, 14*, 1-25.

Muslim, A., Indra, L., Lystiardi, H. I., & Anggiani, S. (2021). The effect of knowledge management, employee engagement, and intrinsic motivation on employee performance with organizational culture as a moderating variable. *Budapest International Research and Critics Institue-Journal (BIRCI-Journal), 4* (4), 13895-13904.

Nair, B. V., & Munusami, C. (2019). Knowledge management practices; An exploratory study at the Malaysian highereducation institutions. *Journal of Research in Innovative Teaching & Learning* , 2397-7604.

Nama, K., Daweti, B., Lourens, M., & Chikukwa, T. (2022). The impact of training and development on employee performance and service delivery at a local municipality in South Africa. *Problems and Perspectives in Management, 20* (4), 42-51.

Njuguna, E. N., Muli, J. V., & Wainaina, L. (2021). The Role of Participatory Management Practices on Employees' Performance in Water Service Providers in Kenya. *International Journal of Academic Research in Business and Social Sciences, 19* (9), 351-367.

Nyathikala, S. A., Jamasb, T., Llorca, M., & Kulshrestha, M. (2023). Utility governance, incentives, and performance: Evidence from India's urban water sector. *Utilities Policy* .

OECD. (2020). *Financing Water Supply, Sanitation and Flood Protection: Challenges in EU Member States and Policy Options, OECD Studies on Water*. Paris: OECD Publishing.

Ojo, V. O., & Sohail, M. (2024). Assessing the performance of state water utilities in Nigeria: Towards achieving the sustainable development goal on drinking water. *Sustainability, 16* (59), 1-23.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64* (1), 12-40.

Prasad, L. M. (2008). *Organizational Behaviour* (4 ed.). New Delhi: Sultan Chand & Sons.

Rashid, M. S., & Yeop, N. K. (2020). The effect of organizational culture on knowledge management and managerial performance of government department in Dubai. *European Journal of Multidisciplinary Studies , 5* (1).

Robbins, S. P., & Judge, T. A. (2013). *Organizational Behaviour* (15 ed.). Boston: Pearson Education, Inc.

Ugwu, C. I., & Ejikeme, A. (2023). Knowledge management, organizational culture and job performance in Nigerian University Libraries. *International Federation of Library Associations and Institutions Journal , 6* (3), 96-116.

World Bank. (2023). *Performance of Water Utilities in Africa*. Retrieved March 20, 2023, from The World Bank: https://www.worldbank.org/en/topic/water/publication/performance-of-water-utilities-in-africa