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The Mediating Role of Knowledge Management Strategy in the Relationship Between Organisational Culture and Innovation Performance of Manufacturing Firms of Uganda

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Abstract

Purpose – To thrive, many businesses, especially those based in developing countries, rely heavily on their ability to innovate. However, improving on the innovation performance is challenging for many manufacturing firms. This study therefore aims to investigate the effect of organisational culture on innovation performance. It also assesses the mediation role of knowledge management strategy in this relationship.

Design/methodology/approach – A cross-sectional explanatory survey design was applied to examine the nature of reality. Data was collected from a sample of 263 selected manufacturing firms. Data was analyzed and hypotheses tested using hierarchical and multiple regression models using Hayes Process Macro model fifteen.

Findings – The findings shed light on several crucial aspects of organisation culture that influence innovation performance. Specifically, clan culture, culture–adhocracy, and market-culture were found to have a substantial impact on innovation performance. Additionally, the study uncovers a noteworthy insight that knowledge management strategy plays a mediating role in the relationship between organisational culture and innovation performance, particularly in the context of the manufacturing sector.

Research limitations/implications – The study only covered organisational culture among manufacturing firms, even though it is also popular in organisations especially the service sector organisations. Thus, the findings are not generalizable to all other firms. Further, the study employed a cross-sectional quantitative research design, yet innovation performance fluctuates over time and depend on the environment that one is facing at that particular time. Finally, the study was limited to only two predictors of innovation performance: organisational culture, and knowledge management strategy despite the existence of several other predictors.

Practical implications – Results suggest that effective cultures practiced at firm level is likely to improve on the level of innovativeness of manufacturing firms. Moreover, the research has recognized the significance of knowledge management strategy as a precursor to innovation. Partial mediation influence of knowledge management strategy on the relationship between organizational culture and innovation performance was also revealed. The findings of this study might help managers and policy makers of the manufacturing firms to develop effective strategies, and policies to enhance the innovation performance

by ensuring that positive cultures are practiced and that the staff have right knowledge through codification personalization.

Originality/value – This research stands out due to the fact that it provides new knowledge that knowledge management strategy acts as the mechanism through which organisational culture can enhance innovation performance.

Keywords – Organisational Culture, Knowledge Management strategy, and Innovation Performance.

1.0 Background

To thrive, many businesses, especially those based in developing countries, rely heavily on their ability to innovate (S. S. Zhou et al., 2019). Businesses in today's cutthroat marketplace often prioritize innovation as a way to stand out from the crowd, wow customers, and boost profits. Profit, market share, and market growth rate are some of the classic monetary metrics used to assess an innovation's performance (eg (Bican & Brem, 2020);.(Joshi & Sharma, 2004); (Tisnawati, 2019). Moreover, the value of an organization's innovation performance in allowing it to meet the needs of its consumers and the market has been the subject of much discussion (Damanpour, 2012).

In keeping with the theoretical foundation provided by the Resource-Based View (RBV) (J. Barney, 1991), it was argued that organizational culture is essential to successful innovation performance (Kazadi et al., 2016), especially where interconnected and interdependent networks are at play (Galati et al., 2017); (Al-Khatib et al., 2022). Further, the RBV of a firm considers Knowledge management strategy as firm-specific resource that can aid in the identification of innovative opportunities, the targeting of potential markets, and the acquisition of first-mover advantages, all of which in turn affect product innovation performance. According to recent studies (Leiva, J.C. 2018), the positive benefits of organizational learning capacity on business outcomes (such as product innovation performance) may vary between settings or across the resources that companies possess. We still don't have a good grasp on the conditions under which an organization's learning capabilities might boost the effectiveness of its product-innovation efforts.

Due to easy access to the global market, Africa's manufacturing industry has consistently been one of the continent's most cutting-edge economic sectors. Jahanbakht & Mostafa, (2022) said that this sector is widely acknowledged for the substantial benefits it provides to national economies via increased GDP, employment, and tax income. Because of how pervasively the manufacturing business links together many other industries, it is fair to say that the African economy is heavily dependent on it. A good case in point is Kenya, where the government's long-term development policy (Vision 2030) relies heavily on the expansion of manufacturing sector (King'ori et al., 2017). While the Ugandan government sees the manufacturing sector as crucial to the country's long-term economic prosperity, thus it is predicted that it would grow by 20% by 2040 (National Planning Authority, 2020). Uganda needs a renewed commitment to employ STI as catalysts of deep economic and social reforms if it is to solve the country's development difficulties and enable Vision 2040. To achieve its goals, Uganda needs its national science, technology, and innovation (STI) policies and programmes to have a significant impact on the country's social and economic progress. To better compete in the global market, Ugandan manufacturing firms must strengthen their national innovation performance. The Ugandan government established an innovation fund to help her get there. This fund is part of a larger initiative to foster a culture of innovation and creativity in Uganda via various forms of government financing. Uganda's manufacturing sector is one of the country's

most vibrant economic sectors. The market has grown fierce as other manufacturers vie for the country's millions of customers. Companies have had to become more innovative with their goods, branch out into other markets, and sharpen their overall business acumen just to keep up with the competition.

Despite all these endeavors, the manufacturing sector of Uganda has remained less innovative compared to those in the developing world. Such factors as knowledge possessed by workers, and leadership skills have been blamed for the lack of innovativeness of the manufacturing firms of Uganda. This has led to some 124 manufacturing firms closing down businesses, for a period between January 2022-June 2023 (Olwor, 2023). Moreover, little research has linked factors like organisational culture, and knowledge management strategy to innovation performance, and yet they have been found to influence innovation performance (Lafuente et al., 2017); (Akhtar et al., 2021); (Jiménez-jiménez & Sanz-valle, 2011); (Tian et al., 2020); (Czarnitzki, Dirk; Wastyn, 2009). There has been a great deal of interest, but contradictory results were arrived at, in studies examining the impact of organizational culture, and knowledge management strategy on innovation performance. Researchers have discovered a correlation between knowledge management strategy and innovative performance (Zia, 2020); (Zhao et al., 2020). Because of this, both anecdotal and scientific research on organizational innovation highlights culture as a key predictor of innovation performance (Srisathan et al., 2020); (Khattak et al., 2022). However, no research is found that looks at the role of knowledge management strategy as a mediator between organizational culture and innovation performance, according to the reviewed literature. Hence, the purpose of this research is to examine whether or not there is a mediating effect of knowledge management strategy on the relationship between organizational culture and innovation performance.

2.0 Literature Review

2.1 Conceptual Review

2.1.1: Innovation performance

In this study, the researcher used the term "innovation performance" to refer to the extent to which a new product or service has attained its targeted market share, sales, asset return, investment return, and profit. According to (K. Z. Zhou et al., 2017), innovation performance is a crucial factor in a company's long-term viability and success in the market, making it one of the most significant constructs in strategic management research. (Sun, 2015) stands out as one academic who developed a unique metric to assess innovation performance: the percentage of patent applications that were granted. Moreover, (Yu et al., 2018) employed patents as a proxy for innovation performance in their measurement of this variable. Yet, patents have been commonly used as a proxy for innovation performance despite their shortcomings (Laursen et al., 2010). This then made the researcher adopt the measure of innovation performance which was proposed by (Song et al., 2006).

2.1.2: Organisational culture

Hofstede, (2001) defines culture as the collective programming of the mind that distinguishes members of one group or category from another. The culture of an organization is described as the patterns of ideas, values, and learned techniques of coping with experiences that have formed throughout an organization's history and tend to manifest in the material arrangements and behavior of its members (Martinez et al., 2015). Failure to account for the impact of an organization's culture may have unforeseen results, such as the promotion of a less-than-ideal work environment or the retention of personnel who are reluctant to change (Alshumrani et al., 2018). Moreover, variations in organizational culture may influence how individuals perceive and respond to strategy shifts (MEYER, 2016). In operationalizing organisational

culture, the study relies on the four models of culture which were proposed by (Cameron & Sine, 1999). These include; Hierarchy, Market, Clan, and Adhocracy. Hierarchy culture emphasizes internal issues and intends to provide a stable environment to increase productivity, or to generate efficient and reliable products by setting up rules, policies, or specialization. Market culture focuses on the management of external affairs. Clan culture is about people and sharing between individuals and concentrates on teamwork, loyalty, commitment, and participation of employees. An adhocracy culture is dynamic and creative, and has a higher ability to assume risk and encourages employees' initiative and innovation.

2.1.3 Knowledge management strategy

There are two dimensions along which knowledge may be classified: tacit knowledge and explicit knowledge. Tacit knowledge is not easily transferable since it is ingrained in people, is action-based, lacks a clear form, and is not documented. In contrast, manuals, textbooks, and specifications are examples of the types of codified or codifiable formats in which explicit information may be kept (Nielsen & Cappelen, 2014). Hence, according to this generally acknowledged dichotomy, tacit and explicit knowledge are two different varieties, each with its unique characteristics in terms of where it is located, how it is communicated, stored, managed, etc. However other scholars argue that tacit and explicit knowledge are not poles apart but rather points on a continuum (Jasimuddin, 2005). (Walsh, J.N., and Lannon, 2020), following the dichotomous interpretation more closely, differentiate between a personalization approach for managing tacit knowledge and a codification strategy aiming instead at explicit knowledge. Therefore, this study operationalises knowledge management strategy in terms of codification strategy which facilitates the transfer of tacit information from one party to another, and personalization strategies which emphasizes a person-to-person approach, encouraging exchanges and direct encounters between people.

2.2: Theoretical background and hypotheses development

2.2.1: Organisational Culture and Innovation Performance

The literature on organizational innovation, both anecdotal and empirical, underscores the significance of culture as a primary factor influencing innovation performance (Širůček & Galečka, 2017). The literature identifies numerous techniques for managing personnel that provide a conducive organizational climate for innovation. Management must ensure a quality working life for employees that addresses their overall well-being, skills development, and career trajectories. Key cultural practices to foster innovative behaviors include empowerment and involvement. Empowerment should instill a sense of autonomy, reduce constraints imposed by technological or regulatory factors, and enhance self-efficacy in doing one's duties; together, these attributes foster innovation (Ergün, 2018a). The empirical results of (Abbas, 2022) substantiate the assertion that empowerment is favorably correlated with creative activities. This assertion is further corroborated by research indicating that the notion of empowerment is intricately linked to decentralization or organic structure ((Uddin, 2017), which is considered a critical predictor of creativity. Likewise, employee participation is seen as a precursor to organizational innovation (Basheer et al., 2019). Innovation fundamentally involves transforming ideas into commercial outcomes; hence, strong incentive to generate ideas is vital to harness workers' creative potential for translating concepts into inventions. Resource base view theory notes that culture, management, skills, and talent of employees are all examples of human resources, and when separated from other resources, these are useless. Hence, the ability of enterprises to gather, integrate, and manage these resources is valued by the resource-based theory (Sharma and Correa, 2003). The ability of firms to logically recognize and make use of scarce and unique resources is therefore very key in boosting the level of innovation at firm level (J. B. Barney et al., 2011).

As a result, manufacturing firms ought to introduce positive cultures so as to boost their level of innovation. Hence;

$H_0$1: *There is no significant influence of organisational culture on innovation performance.*

2.2.2: Knowledge management strategy and innovation performance

Knowledge is increasingly portrayed as the paramount asset of organizations and their primary source of competitive advantage (Bloodgood, 2019). According to the Resource-Based View (RBV) theory, a company's competitive advantage is based on the longevity, openness, transferability, and replaceable nature of its resources and skills. The idea posits that businesses have different levels of access to various resources and competencies. Tacit knowledge and goodwill are two examples of resources that are difficult to exchange (Teece, 2007). Hence, from an RBV point of view, businesses not only have access to a wide variety of resources but also to persistent collections of those resources. In economies driven by intangibles, the management of knowledge has grown essential and is now a daily priority for managers and company leaders. Moreover, research has recognized the significance of knowledge management strategy as a precursor to innovation (Rodrigues, 2010). Despite its extensive acknowledgment, there exists a scarcity of empirical data on the correlation between knowledge management strategy and the innovation performance of businesses (Mardani et al., 2018). Knowledge codification and knowledge personalization are two prevalent knowledge management methodologies (Mention, 2015) that facilitate the attainment of complementary objectives. Companies pursuing a product innovation strategy or offering highly tailored services for specific issues should emphasize a personalization strategy, whereas firms frequently addressing similar challenges should prioritize codification strategies to leverage the efficient reuse of accumulated information (Xu, 2023). Codification is shown to enhance NSD competency, whilst personalization is shown to favorably influence NSD innovativeness. The core of knowledge management (KM) related to innovation is that it offers a framework for management to cultivate and improve their organization's capacity for innovation (Ode & Ayavoo, 2020). Expanding on this notion, (Fiol & Fiol, 2016) assert that an organization's capacity to produce creative results is contingent upon its earlier accumulation of absorbed knowledge. Prior research used econometric analysis to assess the influence of personalization and codification tactics on two critical dimensions of innovation performance: innovation propensity and innovation output. This research focused on knowledge management strategy and the three pillars of innovation performance: product innovation, process innovation, and corporate social responsibility. Hence;

H02: *There is no significant effect of knowledge management strategy on innovation performance.*

2.2.3: Organisational Culture and Knowledge Management Strategy

Ahmady et al., (2016) assert that the fundamental concept of 21st-century businesses is not money, riches, or technology, but knowledge. Currently, an organization's performance is determined by the volume of intellectual property, its monopolistic position (which confers a competitive advantage), and the capacity to leverage that intellectual property and expertise. The facilitation of knowledge and information sharing is a primary process in contemporary organizational knowledge management. Despite the many benefits of knowledge management for individuals, companies, and collectives, its implementation has encountered some difficulties. Organizational culture plays a pivotal role among the aspects affecting knowledge management strategy activities. When Robert Bachman was inquired about three essential components of knowledge management strategy, he responded: "culture, culture, and culture" (Ebrahimi Mehrabani & Shajari, 2012). Moreover, organizational culture is considered a vital determinant for the successful implementation of knowledge management techniques (Hager et al., 2013); (Adeinat &

Abdulfatah, 2019). An enabling organizational culture promotes the dissemination of current information and the generation of new knowledge and capacities (Hager et al., 2013). Furthermore, culture influences the mechanisms via which new organizational knowledge, together with its inherent uncertainties, is generated, validated, and disseminated. Muthuveloo et al., (2017) reported significant results about the impact of corporate culture on tacit knowledge sharing. Zhang, (2018) stated in his research that a significant impediment to successful knowledge management strategy is organizational culture. Hence;
H03: *There is no significant effect of organisational culture on knowledge management strategy.*

2.2.4: The mediating effect of knowledge management strategy

Although literature on the indirect influence of knowledge management strategy on the relationship between organizational culture and innovation performance is scarce, there is a body of research demonstrating the impact of organizational culture on knowledge management strategies and the effect of knowledge management strategies on innovation performance. Researchers have repeatedly shown a positive correlation between organizational culture and knowledge management strategy. Organizational culture is considered a pivotal success element in the implementation of knowledge management techniques (Olan et al., 2019). An enabling organizational culture promotes the dissemination of current information and the generation of new knowledge and capacities (Memon et al., 2020). Moreover, the fundamental aspect of knowledge management (KM) related to innovation is that it offers a framework for management to cultivate and improve their organizational capacity for innovation (Mardani et al., 2018). It delineates an organization's capacity to identify the significance of novel external information and knowledge, integrate it, and implement it, which is essential in influencing inventive production. Knowledge management strategy was identified as a positive mediator in the interactions among several factors, such as the connection between collaborative culture and inexpensive innovation, as noted by Muhammad et al. (2022). Naqshbandi & Jasimuddin, (2018) suggested that knowledge management strategy mediates the association between knowledge-oriented leadership and open innovation. The researcher anticipates that the knowledge management approach will buffer the link between organizational culture and innovation performance. Hence;
H04: *There is no significant indirect influence of knowledge management strategy in the association of organisational culture and innovation performance.*

3.0 Research methodology

3.1 Design

A cross-sectional explanatory research approach was used to collect and evaluate quantitative data about the study variables. Since the main purpose is to test the mediation effect of knowledge management strategy in the relationship between organisational culture and innovation performance among manufacturing firms in Uganda, it is preferable to adopt a quantitative research design. The process through data collection until the final analysis is suitable to help examine and explain the relationships among the variables.

3.2 Sampling and data collection

This study drew a sample of 263 manufacturing firms across the four regions of Uganda. The survey questionnaire in was distributed among the operations and marketing managers in the different manufacturing firms. These respondents were appropriate for the present study because they had sufficient knowledge of organisational culture, knowledge management strategy and innovation performance to be able to provide adequate responses. In this study, quantitative method was preferred to test the research

model. The questionnaire based on a five (5) point Likert-type scale was used for data collection. Data was collected during the period from April 2024 to May 2025. At the end of the data collection process, responses from 263 firms were obtained.

3.3 Research variable measurement

In this study, organisational culture, knowledge management strategy and innovation performance of manufacturing firms were measured. To ensure the content validity of the measures, the items were adapted from past studies with only minimal adjustments.

Innovation Performance: The study adapted the measure of innovation performance which was proposed by Song et al., (2006). According to Song et al., (2006), innovation performance encompasses three specific areas of firm outcomes. These are the impact of innovation on products and markets, the impact of innovation on processes, and the impact of innovation on corporate social responsibility. A total of 13 items were used in the questionnaire to capture the scales for impact of innovation on products and markets, impact of innovation on processes and impact of innovation on corporate social responsibility. The impact of innovation on products and markets was measured using seven items, adopted from prior studies (Song et al., 2006) and was modified and used to evaluate innovation performance. The impact of innovation on processes was measured using four items adopted from previous studies (Song et al., 2006). While the impact of innovation on corporate social responsibility was measured using two items adopted from prior research by Song et al., (2006).

Organisational culture: Organizational culture was assessed using a set of questionnaires that evaluated the four elements of the construct: culture-clan, culture-adhocracy, culture-market, and culture-hierarchy. The questionnaire had 22 questions to assess the scales for culture-clan, culture-adhocracy, culture-market, and culture-hierarchy. These were derived from previous research with minimum modifications to assure the content validity of the measures. First, culture-clan was measured using six items, adopted from prior studies (Cameron & Quinn 2006). The second scale culture-adhocracy, was measured using six items adopted from a previous study (Cameron & Quinn 2006). Third, culture-market was measured using five items adopted from previous studies (Cameron & Quinn 2006). Lastly, culture-hierarchy was measured using five items adopted from prior research (Cameron & Quinn 2006).

Knowledge management strategy: The study adopted the full-range questionnaire that was developed by (Choi & Lee 2002) for measuring knowledge management strategy. The scale has two constructs; codification strategy and personalization knowledge strategy construct which all were measured using a 5-point Likert-type scale. Codification knowledge strategy was measured by the use of 7 items, while personalization knowledge strategy was measured using 4 items. A total of eleven (11) items that measure knowledge management strategy were identified from a previous study conducted by Choi and Lee (2002).

3.4 Data Analysis

Data analysis was conducted using Statistical Packages for Social Sciences (SPSS) version 24.3 to provide descriptive and inferential statistics aligned with the study aims and hypotheses. Descriptive statistics were employed to summarize and elucidate the sample characteristics through frequency tables, means, and standard deviations (Singh, 2007), while inferential statistics utilized computed statistics from the sample to derive statistical inferences regarding the population parameters based on the sample data extracted from the population (Singh & Masuku, 2014). The dependability of the research instrument was evaluated using the Cronbach alpha coefficient to determine the internal consistency of the instruments.

The Pearson correlation was used to assess the strength and direction of the linear correlations between the variables. A Hierarchical Regression Model was employed to assess the extent of variance elucidated

by the independent variables (organizational culture, and knowledge management strategy) on the dependent variable (innovation performance), as indicated by the progressive alteration in the R2 value. The research used Process Macro to calculate mediation effect of knowledge management strategy on the relationship between organisational culture and innovation performance.

4.0 Results

4.1 Firms' Description

Table 4.3 below presents that the vast majority of the firms (36.9 percent) had between 101 to 200 workers, followed by 61-100 with a percent of 36.5, 31-60 (14.1 percent), 201-500 (8.4 Percent), 500-1000 (2.4 percent), less than 30 employees (1.5 percent) finally more than 1000 had 0.4 percent. This means that most of the manufacturing firms were basically small and medium size enterprises with very few large scale enterprises.

Regarding firm age, 49.8% had been operational for the last 11-20 years, 27.8% had been operational up to between 6-10 years, 15.2% had been operational up to between 21-30 years, while 4.6% had been operational for less than five years, and yet only 2.7% had been operational for more than 30 years. The high number of firms that have operated in the country for the last 11-20 years could be a result of the stable security situations in the country which has encouraged a number of firms to open up businesses in Uganda of recent.

Table 4.1: Firms' demographic characteristics

		Frequency	Percent	Valid Percent
Valid	Less than 30 employees	4	1.5	1.5
	31-60	37	14.1	14.1
	61-100	96	36.5	36.5
	101-200	97	36.9	36.9
	201-500	22	8.4	8.4
	501-1000	6	2.3	2.3
	More than 1000 people	1	.4	.4
	Total	263	100.0	100.0
Valid	Less than 5 years	12	4.6	4.6
	6-10	73	27.8	27.8
	11-20	131	49.8	49.8
	21-30	40	15.2	15.2
	More than 30 years	7	2.7	2.7
	Total	263	100.0	100.0

Source: *Research Data (2025)*

4.2 Multivariate Outliers

This research used the Mahalanobis distance metric to detect and address multivariate outliers (Tabachnick & Fidell, 2001, 2013). A significant chi-square value was computed using two independent variables as the degrees of freedom to identify outlier situations. An alpha level of .001 was established as per the recommendations of Tabachnick and Fidell (2001, 2013). Consequently, instances with Mahalanobis D^2 values below 0.001 were identified as multivariate outliers and removed from the data set. In a study with

two predictor variables, the critical value is 16.27 (refer to Tabachnick & Fidell, 2001, Table C.4). Consequently, any case with Mahalanobis values exceeding 16.27 was classified as an outlier and subsequently removed from the dataset. In this study, the greatest Mahalanobis value was 14.85, while the least was 0.022.

4.3 Multicollinearity

Multicollinearity arises when two or more predictor variables in a multiple regression model exhibit a high correlation, defined as exceeding 0.8 (Williams et al., 2013). It typically inflates regression estimates, standard errors, and confidence intervals (Ernst & Albers, 2017). This assumption was evaluated using correlations, tolerance, and the variance inflation factor (VIF). Acceptable tolerance values should exceed 0.20, while VIF values should remain below 10 (Stevens, 2002). Consequently, multicollinearity was not a concern, as all variables demonstrated tolerances above 0.20 and VIFs below 5, as indicated in table 4.2, with correlations remaining below 0.8.

Table 4.2. Multi-collinearity of the Independent Variables

Collinearity Statistics		
Variable	**Tolerance**	**VIF**
Organisational Culture	.765	1.113
Knowledge management strategy	.874	1.751
Organisational Learning Capability	.672	1.766

Source: *Research Data (2025)*

4.4 Correlation Results

The Pearson Product Moment Correlation test was used to ascertain the relationship between the study variables. The correlation data shown in Table 4.3 suggest a positive and significant link between Organizational Culture and Innovation Performance ($r = .765$, $p < 0.01$). The Knowledge Management Strategy has a positive and substantial correlation with Innovation Performance ($r = .728$, $p < 0.01$). The results further indicated a substantial and positive correlation between Knowledge Management Strategy and organisational culture ($r = 0.808$, $p < 0.01$). The findings indicate that Organizational Culture, and Knowledge Management Strategy were anticipated to affect Innovation Performance, as seen in table 4.3 below;

Table 4.3. Correlation statistics for the study variables

Variable	**1**	**2**	**3**	**4**
Innovation Performance (1)	1			
Organisation Culture (2)	.765**	1		
Knowledge Management Strategy (3)	.728**	.808**	1	

**. Correlation is significant at the 0.01 level (2-tailed).

Source*: Survey data 2025*

4.5 Hypotheses Testing

Hierarchical regression analysis was used to examine the direct impacts of $H_0 1$, $H_0 2$, and $H_0 3$. This strategy elucidated the variation in the outcome variable (Innovation Performance) attributable to the supplementary variable in the model. The calculated test statistics for each model include the coefficient

of determination (R^2), the unstandardized beta coefficient (β), and the p-values. The choice to accept or reject a hypothesis was influenced by the significance level (p-value).

4.5.1 Testing the effect of Control variables

Before testing for the hypotheses, the covariates were regressed against the dependent variable (Innovation Performance) to determine the variance in the dependent variable that is explained by the covariates that are: firm size, and firm age. Findings in table 4.4 below indicate that both firm size and firm age are significant predictors of Innovation Performance β = -.351 , P < .05 and β = .327, P < .05 respectively with firm size negatively affecting innovation performance, while firm size affects innovation performance positively. The 'overall model explains .070 variance, F = 1.948, P<. 001. This implies that the covariates account for a 7.0 percent change in Innovation Performance.

Table 4.4: Testing the effect of Control variables

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.871	.069		56.291	.000		
	Firm Size	-.106	.025	-.351	-4.207	.000	.513	1.948
	Firm Age	.116	.030	.327	3.918	.000	.513	1.948

Model Summary statistics	
R	.265
R Square	.070
Adjusted R Square	.063
Std. Error of the Estimate	.28716
R Square Change	.070
F Change	9.792***
Durbin Watson	1.938

a. Dependent Variable: Innovation Performance

Source: *Research Data (2025)*

4.5.2 Testing for the direct effects

Organisational Culture and Innovation Performance

In table 4.5 model 2 below the covariates that were firm size and firm age were controlled to determine the impact of Organisational Culture on innovation performance *(H_{01})*. Results indicate that organisational culture significantly and positively predicts innovation performance β=.731, p<.001. This means that for every unit change in organisational culture, innovation performance vary by .731. Basing on these results, *H_{01}* which stated that there is no significant influence of organisational culture on innovation performance was rejected.

Knowledge Management Strategy and Innovation Performance.

In the third model, the null hypothesis *(H_{02})* which stated that there is no significant effect of knowledge management strategy on innovation performance was tested. In this model, the covariates and

organisational culture were controlled. Firm size and firm age remained significant at β=-.004, p<.01 and β=.007, p<.05 besides a positive and significant effect of organisational culture on innovation performance (β=.487, p<.001). Results further indicated that knowledge management strategy positively and significantly influences innovation performance β=.216, p<.001. This suggests that a unit improvement in knowledge management strategy would lead to a .216 increase in their innovation performance. Against this backdrop, the null hypothesis was rejected.

Table 4.5: The results for control variables and direct effects on innovation performance

Model 2 **Unstandardized Coefficients**			Model 3 **Unstandardized Coefficients**		Model 4 **Unstandardized Coefficients**	
Predictors	**B**	***t***	**B**	***t***	**β.**	***t***
(Constant)	.857	4.920	.949	5.646	.719	4.136
Firm Size	-.008	-.444	-.004	-.240	-.012	-.730
Firm Age	.009	.455	.007	.336	.008	.421
OC	.731	17.944	.487	7.662	.465	7.479
KMS	-		.216	4.845	.145	3.091
Model Summary statistics						
R Square	.585		.620		.642	
Adjusted R Square	.581		.614		.635	
Std. Error	.19210		.18427		.17928	
R Square Change	.515		.035		.022	
Sig. F Change	.000		.000		.000	
a. Dependent Variable: Innovation Performance						
Note: *p<.05, **p<.01, ***p<.001, OC = Organisational Culture, KMS Knowledge Management Strategy OLC = Organisational Learning Capability. ***Source:*** *Research Data (2025)*						

4.6 Testing or the indirect effect.

In the process of testing for the indirect impact of knowledge management strategy in the relationship between Organisational culture and innovation performance *(H04),* hypothesis 3 *(H_{03})* which states that; there is no significant effect of organisational culture on knowledge management strategy was also tested since it's a necessary condition while testing for indirect effects. To do so, Hayes' (2018) PROCESS macro vs. 4.2 (Model 4) was utilized. Thus, a series of regression model conditions were meant as follows; Model 1; the predictor variable (Organisational Culture) was used to predict the outcome variable (Knowledge management strategy). Results in model 1 show that organisational culture positively affects knowledge management strategy (β =.564, p<.OOI). All the control variables were insignificant in predicting knowledge management strategy and the overall model explains 65.35 percent variance. This implies that a unit increase in organisational culture results in .564 improvements in knowledge management strategy. Thus, null hypothesis 3 was rejected.

Lastly, bootstrapping was executed repeatedly while randomly sampling observations with replacements

to determine whether mediation has taken place or not (Preacher & Hayes, 2004). Findings from the bootstrap method indicate that the indirect impact of organisational culture on innovation performance via knowledge management strategy was statistically significant since the confidence interval (CI) was none zero (a^xb), β =.7638, SE =.0384, 95% CI = .6612 to .8125 (see table 4.6, modeI3). The indirect effect model indicates partial mediation between organisational culture and innovation performance via knowledge management strategy since the direct effect of organisational culture on innovation performance was also significant. Therefore, hypothesis 4 *(H_{04})* which stated that there is no significant indirect influence of knowledge management strategy in the association of organisational culture and innovation performance was rejected. Model 4 (Table 4.6) provides the total effect (a, * bi + CI ') of organisational culture on innovation performance is p =.489, p<.00l. Further, results reveal that firm size and firm age remained insignificant β =-.0041, p >.05 and β =.0067, p >.05 respectively.

Table 4.6: Testing for the indirect effect

	Model 1		**Model 2**		**Model 3**	**Model 4**	
	Outcome (KMS)		**(Outcome (IP)**	**Mediation ($a1^xb1$)**		**(Outcome IP)**	
Predictors	**B**	***t***	**β**	***t***		***B***	***t***
Constant	-.4288	-1.8395	.9495	5.6463		.8569	4.9202
Firm Size	-.0174	-.7379	-.0041	-.2403		-.0078	-.4438
Firm Age	.0127	.4590	.0067	.3360		.0094	.4550
OC	.5642	20.6883	.4873	7.6616	=.2432	.7305	17.9443
KMS			.2158	4.8453		-	-
R Square	.6534		.6200			.5854	
F	162.747		105.245		CI=.120, .359	121.9206	
Note: *p<.05, **p<.01, ***p<.001, ns = not significant, KMS=Knowledge Management Strategy, IP= Innovation Performance, OC = Organisational Culture ***Source:*** *Research Data (2025)*							

5. Discussion and conclusion

Innovation performance which is the extent to which a new product or service has attained its targeted market share, sales, asset return, investment return, and profit has gained paramount importance to firms. In particular, innovation has recently become one of the major organizational strategies and a key factor in determining a firm's as well as industrial sustainability. In Uganda, tremendous growth has been observed with regards to innovation, especially among manufacturing firms. The government has established an innovation fund which is part of a larger initiative to foster a culture of innovation and creativity in Uganda via various forms of government financing. Uganda's manufacturing sector is one of the country's most vibrant economic sectors. The market has grown fierce as other manufacturers vie for the country's millions of customers. Companies have had to become more innovative with their goods, branch out into other markets, and sharpen their overall business acumen just to keep up with the competition.

This paper is a landmark study in exploring how knowledge management strategy can serve as a mediating mechanism in the positive association between organisational culture and innovation performance. Unlike past studies that have focused exclusively on the direct relationships between organisational culture and innovation performance, in this study, we have gone further by employing the resource base view theory to explain the direct and indirect relationship between organisational culture and innovation performance. This study confirms the findings of previous studies in indicating a positive link between organisational culture and innovation performance. This finding is in line with the studies of Ergün, (2018b) who observed that a culture of employee empowerment fosters a sense of autonomy, reduces constraints imposed by technical or regulatory factors, and enhances self-efficacy in performing tasks; collectively, these attributes facilitate innovation.

The results further suggest a positive and significant connection between organisational culture and knowledge management strategy. This finding is in congruence with (Hager et al., 2013) who identified organizational culture as a key success element in the implementation of knowledge management techniques. An advantageous organizational culture promotes the dissemination of current information and the generation of new knowledge and capacities ((Hager et al., 2013).

Finally, the results show that the relationship between organisational culture and innovation performance is affected by knowledge management strategy. The study revealed that knowledge management strategy serves a complementary function in elucidating the innovation performance of manufacturing firms in Uganda, enhancing the influence of organizational culture in forecasting innovation performance. Finally, an interesting aspect of our study that was not addressed in previous studies, and therefore evidences the value of our research, is that the direct relationship between organisational culture and innovation performance is strengthened because of the bridging role of knowledge management strategy.

This study has imparted new knowledge to the existing literature on organisational culture, knowledge management strategy, and innovation performance. The results of this study provide evidence of the significance of organisational culture and knowledge management strategy to achieve a higher level of innovation performance among manufacturing firms. The findings suggest that manufacturing firms of Uganda should emphasize the establishment of positive cultures as a way of improving the innovativeness of manufacturing firms in Uganda. Further, manufacturing firms should have the ability to recognize the value of new external information and knowledge, assimilate it, and apply them, and this ability is critical in determining innovative output. Hence, knowledge management strategy is a conduit through which organisational culture influences innovation performance.

6. Limitations of the Study and Recommendations for Future Research

The study employed a cross-sectional quantitative research design, yet innovation performance fluctuate over time and depend on the environment that one is facing at that particular time. Therefore, the study did not reveal how innovation performance develop over time. The study did not establish the level of manufacturing firm's innovation performance before subjecting them to the organisational culture. Therefore, the magnitude of innovation performance specifically attributable to organisation culture was not established.

The study was limited to only two predictors of innovation performance: organisational culture, and knowledge management strategy, despite the existence of several other predictors. Factors like educational diversity, technological turbulence, and knowledge resources need to be explored.

Despite these limitations, the findings offer valuable implications for firms, regulators, and stakeholders,

emphasizing the importance of organisational culture and knowledge management strategy. However, applying these results beyond the Ugandan context requires caution. Further validation through comparative studies in different economic environments will be crucial to establish the broader applicability and robustness of these conclusions.

By addressing these limitations, future research can refine the theoretical and practical contributions of this study, ensuring a deeper and more accurate understanding of the intricate relationships between organisational culture, knowledge management strategy and innovation performance.

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