



# **Influence of Sustaining Effective Organizational Culture on Organizational Performance of Pharmaceutical Companies in Kenya**

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## **Abstract**

Organizational performance has been a challenge in the pharmaceutical industry in Kenya, with firms recording low returns over the past recent years. The study sought to establish to what extent organizational culture influenced the organizational performance of pharmaceutical companies in Kenya. Organizational culture was operationalized through 3 variables; Innovation, Risk-taking and proactiveness; while organization performance was operationalized through 3 variables; profitability, customer perspective and growth & learning. The study adopted a positivist philosophy approach and a descriptive correlational research design. Structured questionnaires were used to collect data from senior managers in Kenya's pharmaceutical companies. Of 390 shared across the pharmaceutical companies in Kenya, 320 completed questionnaires were returned. The study hypothesis was tested using inferential tests: ordinal logistic regression and parameter estimates. The study findings established that organizational culture explained 6.3% variations in organizational performance (Nagerlkerke, Pseudo  $R^2 = .063$ ), while parameter estimates indicated that organizational culture significantly predicted organizational performance,  $\beta = .211$ ,  $p \leq .05$ ), and consequently rejecting the null hypothesis that organizational culture does not significantly influence organizational performance. The study, therefore, recommends that a regular culture audit be undertaken to identify the measures that should be taken to ensure a culture of innovation, risk-taking and autonomy is sustained. Additionally, the study recommends that leadership embrace supportive team norms, organisational values and behaviours that support the growth of organizational performance.

## **Introduction**

Organizational culture evolves around the survival of a specific and gradual mix of leadership, strategy and daily activities that focus on circumstances for an organisation's drive. As such, organization culture is simply the self-sustaining pattern of behaviour that



determines how things are done (Rahman *et al.*, 2019). Specifically, culture transformation requires value, behaviour and a shared vision that focuses people on goals for achieving and sustaining the organization's performance. In a business environment setting, achieving goals arising from day-to-day operations is fundamental. The proven path towards achieving goals is through a strategic plan and its implementation. This implies that leaders set strategies to be implemented to achieve performance goals. Severgnini *et al.* (2018) observed that organizational performance takes the form of outcomes and results measured with goals and objectives compared. Such outcomes include finance-based, specifically profits and various returns; product market performance, such as sales and market share; shareholder return, such as total shareholder return; and economic value added. Organizational performance depends on an organization's deliberate association of productive assets, including human, physical, and capital resources, for achieving a shared purpose (Houck, 2019). Organizational culture is a complex set of ideologies, symbols, and core values shared throughout the firm and influence how business is managed (Marcus & Fremeth, 2017). Organizations can develop core competencies in terms of the capabilities it owns and how they are leveraged when executing strategies to generate expected outcomes. Organizational culture influences the organizational ability to run its operations.

Additionally, culture aids in regulating and controlling employees' behaviour and consequently being a source of competitive advantage whilst being a critical factor in promoting innovation (Rahman *et al.*, 2019). Due to this criticality, organizational culture can be leveraged as a source of competitive advantage. Entrepreneurial orientation is a critical culture to enable organizations to ensure the exploration of growth opportunities. The role of strategic leaders is to promote innovation by pursuing entrepreneurial opportunities. This can be achieved by encouraging risk-taking, autonomy, innovativeness, proactiveness and competitive aggressiveness (Kozubíková *et al.*, 2017). On a continuous basis, strategic leaders should pulse the organisation's culture and effectively institute change management if the culture is not a source of strategic advantage.

Strategic leadership in pharmaceutical organizations is considered to comprise the top management team (TMT) and is headed by the Chief Executive Officer. The CEO is assisted by a management committee comprising the heads of department, which take different names, either Management Committee (ManCom) or Executive Committee (ExCo) and in most cases are based at the head office for the pharmaceutical organizations, primarily located in Nairobi (Mailu *et al.*, 2018). The size of the TMT in-pharmaceutical organizations varies with the size of the organizations such that larger companies have larger sizes of TMTs while the small pharmaceutical organizations at the other end have relatively smaller sizes of top management teams (Gakuya & Mbugua, 2018).

Pharmaceutical companies in Kenya are stratified into local manufacturing pharmaceutical companies, research and development pharmaceutical companies and generic pharmaceutical companies. The Pharmacy and Poisons Board is the pharmaceutical regulatory authority in Kenya established by law under the Pharmacy and Poisons Act, Cap 244. The Board regulates pharmacy practice and the manufacture and trade of drugs and poisons. The key objective of the Board is to improve the quality of life of Kenyans by ensuring the quality, safety, and efficacy of pharmaceutical products and services (Pharmacy and Poisons Board, 2018).



According to Horner (2019), the pharmaceutical industry is characterized by tensions between the multinational companies' objectives that lead to little development in terms of public health issues. These conflicts include trade-related aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (WTO) to these multinationals' influence regarding access to their intellectual property rights. Others are the manufacturing incapacity of developing countries' pharmaceutical industries, such as Kenya, to innovate (Vugigi et al., 2017) to the regulatory complexity of the industry that affects product availability in the market (Martin et al., 2018). Further, one of the industry's most crucial challenges is strategic leadership practices, of which sustaining an effective organizational culture is critical.; leaders must navigate this complex and changing landscape (Parker et al., 2019). According to Jaleha and Machuki (2018), effective organizational culture is considered a significant ingredient for the successful performance of any organization operating in the ever-dynamic and complex environment of the 21st century. In the context of information uncertainty and resource scarcity, effective organizational culture must inculcate the reality of environmental turbulence and the continuous need for sustainability to achieve performance goals.

The pharmaceutical industry is very effective, thus requiring the sustenance of effective culture in which the attraction-selection-attrition approach strongly applies. This attraction-selection-attrition phenomenon dictates that an industry is first attractive from the outside. Many get into the industry through stiff selection of the industry requirements, but later on, only some remain strong, surviving the industry's competitive environment (Rahman et al., 2019). In effect, it means that apart from the organization making profits, there is a need to have a positive and long-term impact on the community served.

The study thus sought to answer the research question, "To what extent does sustaining an effective organizational culture influence the organizational performance among senior managers of pharmaceutical companies in Kenya?"

The target population for this study included the 1746 senior managers from the 583 Pharmaceutical companies authorized to do business in Kenya by the Pharmacy and the Poisons Board. A sample of 390 senior managers was selected using a stratified random sampling technique. The study was anchored on the strategic leadership theory developed by Hitt et al. (2016) and conducted in the 2021-2022 period.

### **Literature Review**

According to Barney (2018), organizational culture is a complex set of values, beliefs, assumptions, and symbols that define how a firm conducts its business. Similarly, Felipe et al. (2017) defined organizational culture as the complex set of ideologies, symbols and core values shared throughout the firm and influence how the firm conducts business. Additionally, culture has been defined by six properties; shared basic assumptions that are; invented, discovered, or developed by a given group as it; learns to cope with its problem of external adaptation and internal integration in ways that have worked well enough to be considered valid, and, therefore, can be taught to new members of the group as the; correct way to perceive, think, and feel about those problems.

Effective organizational culture refers to cultures that encourage innovativeness and make employees deliberate beyond existing knowledge, parameters, and technologies, thereby finding creative alternatives of value addition. Wang et al. (2019) indicated that firms with an entrepreneurial orientation are often typified by risk-taking behaviour, the second



dimension, in the interest of securing high returns by seizing opportunities in the marketplace. At the firm's level, risks are taken; the individual firm member would not take that, and a risk-taking culture in the organization increases the appetite for risky projects to achieve firm objectives.

Furthermore, proactiveness refers to processes aimed at predicting and acting on future needs by seeking new opportunities which may not necessarily be related to the current line of operations, introducing new products ahead of the competition, and strategically eliminating operations in the mature or declining stages of life cycles (Marcus & Fremeth, 2017). Additionally, Proactiveness describes a firm's ability to be a market leader rather than a follower because it has the will and foresight to seize new market opportunities, even if it is not always the first to do so. Proactive organizational cultures constantly use processes to anticipate future market needs and to satisfy them ahead of the competition. Proactiveness is aimed at anticipating and acting on future needs by seeking new opportunities which may not necessarily be related to the current line of operations, introducing new products ahead of the competition, and strategically eliminating operations in the mature or declining stages of life cycles (Lin & Wittmer, 2017).

Besides the top leaders, managers have significantly more impact on effecting change and hence firm performance than individual innovators by integrating and coordinating the innovative work of others, energizing the culture, and fostering alignment with the organization's vision and mission (Nazarian et al., 2017). Organizational leaders use mentoring, coaching, job rotation and creating a conducive learning environment to develop strategic leadership skills. Learning is an essential element of strategic leadership development that should be part of the organization's culture. Such a culture would foster creativity and innovation, with employees learning through practice, without fearing punishment for mistakes (Kawiana et al., 2018).

Barney (2018) suggested that for a culture to provide sustained competitive advantage and hence a source of sustained superior financial performance, the three conditions that must be met; that the resources of which organizational culture is included amongst other resources, must be valuable (lead to high sales, low costs, high margins or generally lead to positive economic consequences), rare (must have attributes that are not common to the cultures of a large number of other firms) and imperfectly imitable (other firms cannot engage in activities to change their cultures to copy and if they do, they will be at a disadvantage compared to firms they are trying to imitate). Bradach (2019) indicated that most research on organizational culture focuses on the direct relationship between culture and performance; a few theories related to how culture impacts performance would conceptualize it as a moderated/mediated variable.

Organizational culture can encourage or discourage strategic leaders and their colleagues from pursuing opportunities vital to growth and innovation. Strategic leaders, therefore, encourage and promote innovations by pursuing entrepreneurial opportunities (Arz, 2017). Innovation can be encouraged by investing in opportunities as real options where uncertainty can increase the value of real options or managerial flexibility. Real options can influence strategic entrepreneurship opportunities and advantage-seeking behaviours positively or negatively. Lakshman et al. (2017) demonstrated that a venture capital investor could benefit from uncertain industry conditions if it holds open the option to withdraw from a project in that industry, in which case it has an opportunity to seize the growth potential



of the project if industry conditions turn favourable in the future but limit its downside losses if industry conditions turn adverse.

Cultures that encourage innovativeness make employees think beyond existing knowledge, parameters, and technologies, thereby finding creative alternatives of value addition. Bakker (2017) affirmed that firms with an entrepreneurial orientation are often typified by risk-taking behaviour, the third dimension, in the interest of securing high returns by seizing opportunities in the marketplace. At the firm's level, risks are taken; the individual firm member would not take that, and a risk-taking culture in the organization increases the appetite for risky projects to achieve firm objectives.

Sustainability is effective when firms remain proactive in their operations and carefully remain innovative in their industry, keeping an advantage that cannot be easily imitated by the competition. To sustain effective organization culture, firms face difficulty maintaining a firm hold of the attraction-selection-attrition axis (Kozubíková et al., 2017). Firm leadership thus must actively pursue innovativeness to avoid falling into attrition for survival or the continued existence of their firm with reasonable organizational performance (Parker et al., 2019). Organizations that maintain innovativeness on a proactive nature will thus remain in the selection phase as customers in their market go for their products and services all the time, thus never falling into the attrition phase.

### **Methodology**

The study had a target population of all 1746 senior managers in pharmaceutical companies, with a sample target of 390 managers randomly selected using a stratified random sampling technique. The study used a descriptive research design to collect 320 questionnaires from managers at pharmaceutical companies, with a response rate of 82%.

This study adopted Yamane (1967) simplified formula to calculate the sample size, which provided the number of target responses that was obtained using the following equation;

$$n = \frac{N}{1 + N(e)^2}$$

Where:

**n** = Sample Size

**N** = Population Size

**e** = Sampling error (0.05)

1 = Constant

$$n = 1746 / \{1 + 1746(0.05)^2\}$$

$$= 325.44$$

$$n \sim 325 + 20\% \text{ non-response rate}$$

$$n = 390$$

The distribution of the samples was proportioned, as shown in Table I.



*Table 1: Sample Size Proportion*

<b>Pharmaceutical Company Category</b>	<b>Number in Category</b>	<b>Proportion of Population</b>	<b>Target Sample</b>
Local Manufacturing Pharmaceutical Companies	35	0.06	23
Global R &D Pharmaceutical Companies	46	0.08	31
Generic Pharmaceutical Companies	501	0.86	336
<b>Totals</b>	<b>582</b>	<b>1</b>	<b>390</b>

**Reliability of Study Instrument**

A pilot study was undertaken to test the research instrument's reliability and validity. This involved randomly selecting 39 senior managers to participate in the pilot study. The reliability considered the value of Cronbach's alpha ( $\alpha$ ) for reliability, as shown in Table II.

*Table 2: Reliability Test of Instrument*

<b>Study Variables</b>	<b>Variable Constructs</b>	<b>Cronbach Alpha Coefficient (<math>\alpha</math>)</b>	<b>Number of Items</b>
Organization Culture	<ul style="list-style-type: none"> <li>•Innovativeness</li> <li>•Risk Taking</li> <li>•Pro-activeness</li> </ul>	0.833	3

**Validity of Study Instrument**

Results, as presented in Table III, show the variables' validity tested using the composite value. The threshold for composite value is 0.7 (Cooper & Schindler, 2019). The value of the composite test for the study was  $>.7$ , indicating that all the variables in the study attained construct validity. The study also tested content validity using the Average Variance Extracted (AVE) approach. The AVE test aimed to attain an average value measurement of  $\geq .5$ . From the study results, all the items attained the threshold ( $AVE \geq .5$ ). Furthermore, the AVE values were ideally averaging over 0.7. This implied that the measurement scales revealed a satisfactory measurement of content validity.

*Table 3: Validity of the Instrument*

<b>Variables</b>	<b>Composite value</b>	<b>Average Variance Extracted (AVE)</b>
Organizational Culture	0.785	0.764



## Results

Study results are presented in this section following the different tests performed, including factor analysis, descriptive statistics and inferential statistics used in the proving of the study hypothesis.

### Factor Analysis

The study carried out factor analysis to obtain the values for KMO and Bartlett's test of sphericity for effective organizational culture. The Bartlett's test was significant ( $p < .05$ ). Results in Table IV indicate that the Kaiser-Meyer-Olkin of sampling adequacy was 0.690. At the same time, the Bartlett's test of Sphericity was significant at  $X^2(32, N=320) = 311.430, p < .05$ . From the study results; it indicates that the output for the independent variable factors were adequate for the use of factor analysis since Kaiser-Meyer-Olkin Measure was greater than 0.6.

*Table 4: Testing the KMO/Bartlett's on Organization Culture*

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>		<b>.690</b>
Bartlett's Test of Sphericity	Approx. Chi-Square	311.430
	Df	32
	Sig.	.000

### Descriptive Results of the Study Constructs

Organizational culture had four sets of constructs: effectively sustaining organizational culture, the influence of sustaining an effective organizational culture on profitability, the influence of sustaining an effective organizational culture on customer perspective and finally the influence of organizational culture on learning and growth. The descriptive statistical tests include mean (M) and standard deviation (SD). Specifically, the respondents voluntarily indicated the extent to which they agreed or disagreed with various statements of variable constructs on a 5-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

From the results in Table V, there was a clear indication that culture was sustained through innovations (M=3.72, SD=.70), risk-taking (M=3.84, SD=.95) and proactiveness (M=3.84, SD=.70). Additionally, culture was found to affect organizational profitability through innovations (M=3.76, SD=.86), risk-taking (M=3.74, SD=.88) and pro-activeness (M=3.62, SD=.82). Furthermore, culture was found to affect customer perspective through innovation (M=3.82, SD=.89), risk-taking (M=3.87, SD=.80) and pro-activeness (M=3.86, SD=.85). Finally, organizational culture was also found to affect learning and growth through innovations (M=3.70, SD=.93), risk-taking (M=3.67, SD=.93) and pro-activeness (M=3.79, SD=.91).



*Table 5: Mean and Standard Deviation Organization Culture*

<b>Sustaining an Effective Organizational Culture</b>	<b>N</b>	<b>M</b>	
<b>My leader effectively sustains a culture of innovation</b>	<b>320</b>	<b>3.72</b>	<b>0.70</b>
My leader effectively sustains a culture of risk taking	320	3.91	0.95
My leader effectively sustains a culture of pro-activeness	320	3.84	0.70
<b>Influence of Organizational Culture on Profitability</b>	<b>N</b>	<b>M</b>	<b>SD</b>
To what extent is the profitability of my organization influenced by my leader effectively sustaining a culture of innovation	320	3.79	0.86
To what extent is the profitability of my organization influenced by my leader effectively sustaining a culture of risk-taking	320	3.74	0.88
To what extent is the profitability of my organization is influenced by my leader effectively sustaining a culture of pro-activeness	320	3.62	0.82
<b>Influence of Organizational Culture on Organizational Customers' Perspective</b>	<b>N</b>	<b>M</b>	<b>SD</b>
To what extent is the customer perspective of my organization is influenced by my leader effectively sustaining a culture of innovation	320	3.82	0.89
To what extent is the customer perspective of my organization is influenced by my leader effectively sustaining a culture of risk taking	320	3.87	0.80
To what extent is the customer perspective of my organization is influenced by my leader effectively sustaining a culture of pro-activeness	320	3.86	0.85
<b>Influence of Organizational Culture on Organizational Learning and Growth Perspective</b>	<b>N</b>	<b>M</b>	<b>SD</b>
To what extent is my organizational learning perspective and growth is influenced by effectively sustaining a culture of innovation	320	3.70	0.93
To what extent is my organizational learning perspective and growth is influenced by my leader effectively sustaining a culture of risk taking	320	3.67	0.93
To what extent is my organizational learning perspective and growth is influenced by my leader effectively sustaining a culture of pro-activeness	320	3.79	0.91



**Inferential Statistics**

This study undertook five inferential tests, namely correlation analysis, chi-square test, one-way ANOVA, ordinal logistic regression and parameter estimates for hypothesis testing.

**Correlation Analysis for Effective Organizational Culture and Performance**

Pearson’s correlation analysis test was conducted to determine the relationship between effective organizational culture and organizational performance. Table VI shows that results indicate a significant relationship between organizational culture and performance  $r(320) = .226, p < .05$ . This indicated a strong relationship between the independent and dependent variables.

*Table 6: Correlation Analysis of Organization Culture and Performance*

		<b>Organizational Culture</b>	<b>Organizational Performance</b>
Organizational Culture	Pearson Correlation	1	
	Sig. (2-tailed)	.002	
	N	320	
Organizational Performance	Pearson Correlation	.226*	1
	Sig. (2-tailed)	.012	.000
	N	320	320

\*. Correlation is significant at the 0.05 level (2-tailed).

**Chi-Square Test on Organizational Culture and Performance**

A chi-square test ( $\chi^2$ ) was conducted to determine whether there was an association between effective organizational culture and organizational performance. The results in Table VII indicate that there was a statistically significant association between organizational culture and organizational performance  $\chi^2(298, N = 320) = 319.024, p < .05$ .

*Table 7: Chi-square Test on Organizational Culture and Performance*

<b>Chi-square Test</b>	<b>Value</b>	<b>Df</b>	<b>Asymp. Sig. (2-sided)</b>
Pearson Chi-Square	319.024 <sup>a</sup>	298	.001 <sup>b</sup>
Likelihood Ratio	345.474	298	.738
Linear-by-Linear Association	42.332	1	.000
N of Valid Cases	320		

a. 390 cells (100.0%) have expected count less than 5. The minimum expected count is .01.

b. \*Chi-square is significant at  $p < .05$  level

**One-Way ANOVA Test between Effective Organizational Culture and Demographics**



A one-way ANOVA test was carried out to determine whether there were any significant differences between the means for effective organizational culture and demographic variables of gender, age bracket, position in the organization, work experience in the pharmaceutical company, and the highest level of education. Results displayed in Table VIII indicate that significant differences between the means of organizational culture and demographic variables occurred for the position in the organization,  $F(4, 316) = 2.842$ ,  $p \leq .05$  and Work experience in the pharmaceutical company,  $F(4, 316) = 1.902$ ,  $p \leq .05$ .

*Table 8: One-Way ANOVA for Organizational Culture and Demographics*

		<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Gender	Between Groups	5.342	4	1.336	1.713	0.14
	Within Groups	79.832	316	0.253		
	Total	85.174	320			
Age Bracket	Between Groups	17.824	4	4.456	2.389	0.21
	Within Groups	334.212	316	1.058		
	Total	352.036	320			
Position in Organization	Between Groups	312.812	4	78.203	2.842	0.02
	Within Groups	1182.124	316	3.741		
	Total	1494.936	320			
Work Experience	Between Groups	56.321	4	14.080	1.902	0.00
	Within Groups	381.668	316	1.208		
	Total	437.989	320			
Highest Academics	Between Groups	61.891	4	15.473	0.789	0.07
	Within Groups	876.423	316	2.773		
	Total	938.314	320			

**Ordinal Logistic Regression (not valid for biased measurement)**

Pseudo R-square provided the coefficient of determination based on the log-likelihood for the regression model, and this was compared to the log-likelihood of the baseline model. As presented in Table IX, results indicate the Pseudo R-square results for organizational culture using the Nagelkerke R-Square,  $R^2 = .063$ , implying that organizational culture explained a variation of 6.3% in organizational performance.



Table 9: Pseudo R-Square for Organizational Culture on Performance

Link Function	Logit
Cox and Snell	.057
Nagelkerke*	.063
McFadden	.071

\*Link function: Logit

**Parameter Estimates for Organizational Culture**

The model for the influence of effective organizational culture, X, on organizational performance, Y, is given as:

$$\text{Logit } [P(Y \leq j)] = \alpha_j - \beta X,$$

Results in Table X indicate a Log Likelihood<sup>b</sup> of 3.283, showing that the model is fit and predicts the influence of the independent variable (organizational culture) on the dependent variable (organizational performance). Bayesian Information Criterion (BIC) means that other factors held constant, effective organizational culture constructs as an independent variable is responsible for 6.2 positive change in organizational performance of the various pharmaceutical companies in Kenya, conclusively, based on the chi-square scores of above critical chi-square value at four (4) degree of freedom 3.841 (7.219 for organizational culture).

Table 10: Parameter Estimates of Hypothesis for Organizational Culture

<b>(a) Goodness of Fit<sup>a</sup></b>								
	Value							
Log Likelihood <sup>b</sup>	3.283							
Akaike's Information Criterion (AIC)	11.455							
Finite Sample Corrected AIC (AICC)	11.507							
Bayesian Information Criterion (BIC)	6.216							
Consistent AIC (CAIC)	20.348							
<b>(b) Hypothesis Testing (Wald Chi-square)</b>								
	Wald Chi-Square	df	Sig.	B	Std. Error	95 Percent Wald Confidence Interval		Wald Chi-Square
						Lower	Upper	
(Intercept)	14.381	4	.000	2.89	.7982	3.457	5.328	14.38



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Organizational Culture	7.219	4	.005	.211	.6671	.834	1.322	7.219
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### **Discussion of Results**

Correlation results showed that effective organizational culture had a positive and significant relationship with organizational performance,  $r(320) = .226, p \leq .05$ . The findings are in line with results from a previous study by Agyei-Mensah (2017) studying commercial banks in Ghana. Correlation analysis results showed a positive correlation with a positive influence when firms enabled their staff to be autonomous in their operations. This was positively correlated to organizational performance,  $r(172) = .321, p \leq .05$ . This was found to be specifically true when innovation was cultivated in an atmosphere of openness and rewarding culture. Elsewhere in Romania, a study by Ilieş and Gavrea (2019) seeking to demonstrate the relationship between telecommunications firms' performance and the adopted organization culture surveyed 39 firms. Correlation analysis results indicated a positive and significant influence of organizational culture on organizational performance,  $r(39) = .608, p \leq .05$ .

Contrary to the above results, other scholars have argued that organizational culture could be, in fact, the biggest hindrance to organizational performance. As seen in the study by Zhang et al. (2018), correlation results  $r(214) = -.246, p > .05$  indicated a negative influence on performance by encouraging a culture of risk-taking. Zhang et al. (2018) showed that a social or market risk occurs when a market crash slows or wipes out the performance of an investment, even when the quality of the investment is high.

The chi-square test showed the existence of a statistically significant association between effective organizational culture and organizational performance,  $\chi^2(298, N = 320) = 319.024, p < .05$ . The chi-square test results are similar to previous findings in Vietnam by Thiel et al., (2017). In surveying 41 industrial firms' the Chi-square test result demonstrated that there was a positive influence of process, marketing, and organizational innovations on firm performance  $\chi^2(89, N = 41) = 174.011, p \leq .05$ . Elsewhere, Inklaar and Papakonstantinou (2020) compared the organizational performance of European and USA firms by comparing the organizational culture. From the chi-square test, it was established that there was a significant influence of organizational performance through risk-taking and market innovation  $\chi^2(94, N = 205) = 309.321, p \leq .05$ . More specifically, Inklaar and Papakonstantinou (2020) demonstrated that innovation if rewarded, led to high customer retention that was key to improved organizational performance.

On the contrary, Don and Nguyen (2020) observed Chi-square test results of  $\chi^2(111, N = 67) = 192.011, p > .05$ . They opined that a culture of pro-activeness would fail when entrepreneurial orientation was not adequately articulated in the strategic plans of a firm. Pro-activeness also failed the test of anticipating and acting on future wants and needs in the marketplace or space when the proactiveness did not keep up with changes in the environment of a particular profession. According to Don and Nguyen (2020), this was due to the experience that, with any group, there is a trade-off resulting from business group affiliation, which creates a form of agency problem.



The one-way ANOVA results revealed that there were significant differences between the means of organizational culture and demographic variables occurring for the position in the organization,  $F(4, 316) = 2.842$ ,  $p \leq .05$  and work experience in the pharmaceutical companies,  $F(4, 316) = 1.902$ ,  $p \leq .05$ . These study results are convergent to findings by Hashi and Stojčić (2019) who earlier carried out a study to compare the performance of community innovations in Austria with that of similar communities in neighboring Germany. The one-way ANOVA results in the comparative study indicated significant differences between the means of community innovations and demographics of the other variables  $F(3, 72) = 2.512$ ,  $p \leq .05$ . The study results therefore demonstrated that higher positions inspired one to keep inspiring others to be innovative aimed at increasing the firm's competitiveness. This also demonstrated that the higher the level of process, organization and marketing innovativeness and risk-taking, the better the firm's performance. On the contrary, One-way ANOVA results from the study by Cooper et al. (2018) indicated that there was negligible significance in the means of groups for independent variable constructs and the demographic component of the study,  $F(2, 84) = 1.062$ ,  $p \geq .05$  and  $F(2, 84) = 0.212$ ,  $p \geq .05$ . This was clear proof that indeed organizational culture failed to significantly influence the organizational performance in the Irish small-scale pharmaceutical firms.

Ordinal logistic regression model (Negerlkeke Pseudo R-Square) results indicated that organizational culture explained 6.3% variations in organizational performance ( $R^2 = .063$ ),  $p \leq .05$ . Additionally, ordinal logistic regression parameter estimates showed a good prediction of organizational performance by organizational culture ( $\beta_3 = 1.322$ ,  $p \leq .05$ ). The findings were similar to those by Arzubiaga et al. (2018) who researched SMEs in Spain, ordinal logistic regression (Negerlke Pseudo R-Square) results determined that 11.1% of the variations in organizational performance was explained by organizational culture ( $R^2 = .111$ ,  $p \leq .05$ ). Arzubiaga et al. (2018) concluded that risk-taking culture had a positive influence on organizational performance. They concluded that when leadership cultivates a culture of risk-taking, there is a higher chance of performance sustainability that results in improved and superior organizational performance.

On the contrary, Haque and Oino (2019) determined that the Ordinal logistic regression model (Negerlkeke Pseudo R-Square) results indicated that organizational culture explained a non-significant 0.4% variation in organizational performance ( $R^2 = .004$ ),  $p \geq .05$ . This according to Haque and Oino (2019) could be true in the pharmaceutical industry as the players are torn between keeping group agreements and making their pharmaceutical firms survive in the very competitive pharmaceutical market. Haque and Oino (2019) concluded that organizational culture was less effective in influencing the organizational performance of the pharmaceutical industry.

### **Conclusion**

Ordinal logistic regression model (Negerlkerke, Pseudo R-Square) results indicated that organizational culture explained 6.3% variations in organizational performance ( $R^2 = .063$ ). Additionally, parameter estimates indicated that organizational culture significantly predicted organizational performance,  $\beta_3 = .211$ ,  $p \leq .05$ . Hence, effective organizational culture significantly influences the organizational performance of pharmaceutical companies in Kenya.

Therefore, the study recommends that leaders ensure regular culture audits to identify the predominant culture that promotes innovation, risk-taking and autonomy. Additionally, the



study recommends that leadership embrace supportive team norms, organization values and behaviors that support the growth of organizational performance.

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