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ORGANISATIONAL INNOVATION AND COMPETITIVE ADVANTAGE OF TELECOMMUNICATION COMPANIES IN KENYA

***[1]Ronny Cheruiyot Yegon, [2]Dr. Stephen Otiso & [3]Dr. Ocharo Momanyi**

[1,2,3]The East African University, Kenya

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ABSTRACT

Statement of the Problem: Kenya's telecommunications market is highly concentrated, and smaller operators struggle to turn innovation spending into market share. Studies in the sector have focused on product and technological innovation, while the way firms organise themselves to produce and act on new ideas has received little attention.

Purpose of the Study: This study examined the relationship between organisational innovation, covering organisational structure, employee empowerment and management systems, and the competitive advantage of telecommunication companies in Kenya.

Methodology: The study used an analytical cross-sectional survey within a convergent parallel mixed-methods design. From a target population of 162 employees in five telecommunication companies in Nairobi County, 115 were selected through proportionate stratified random sampling, and 97 usable questionnaires (84.3 percent) were obtained. Eight senior managers were also interviewed. Data were analysed using descriptive statistics, Pearson correlation, simple linear regression and thematic analysis.

Findings: Organisational innovation recorded a composite mean of 3.34 (SD = 1.22). Employees were encouraged to suggest ideas (mean = 3.70) but were not given enough authority to decide (mean = 2.97). Organisational innovation was positively and significantly related to competitive advantage ($r = 0.484$, $p < 0.01$). Regression analysis confirmed a significant positive effect ($B = 0.457$, $p < 0.001$) and showed that organisational innovation explained 23.4 percent of the variation in competitive advantage. Interviews attributed the authority gap to long-standing reporting lines and departmental protectiveness.

Conclusion: Organisational innovation is positively related to competitive advantage, but firms are better at inviting ideas than at giving staff authority to act on them.

Recommendation: The study recommends that telecommunication companies review their delegation frameworks and give staff clear decision authority within their areas of responsibility.

Keywords: *Organisational Innovation, Employee Empowerment, Organisational Structure, Competitive Advantage, Telecommunication Companies*

INTRODUCTION

Innovation has moved from the edge of corporate strategy to its centre. The Boston Consulting Group (2023) found that 79 percent of companies worldwide rank innovation among their top three priorities, and 66 percent plan to increase innovation spending. In Africa, 83 percent of executives named innovation a top-three priority, up from 62 percent the year before. In telecommunications, operators compete on network quality, digital services and customer experience, so how well a firm renews itself matters as much as what it sells. Most writing on innovation concentrates on products and technology. Organisational innovation, which covers changes in structure, employee empowerment and management systems, receives less attention (Azeem et al., 2021; Alshumrani et al., 2022). Yet the best product idea creates no advantage if the organisation cannot move it through its structure and into a decision. Barney et al. (2021) make the same point: a valuable resource produces advantage only when the firm is organised to capture its value.

Kenya's telecommunications industry is a useful setting for this question. The Communications Authority of Kenya (2024) reported 70.0 million active mobile subscriptions by September 2024, and mobile services revenue rose 13.2 percent to KES 384.3 billion in 2023. The market is nevertheless highly concentrated. Safaricom PLC held 65.7 percent of subscriptions, Airtel Networks Kenya 29.6 percent, Finserve (Equitel) 2.1 percent and Telkom Kenya 1.7 percent. When one operator controls about two thirds of the market, rivals cannot compete on scale alone and must compete on how well they use their people, ideas and systems. Kenyan studies have linked organisational innovation to competitive advantage in private hospitals (Ngeche & Okello, 2023), manufacturing firms (Okello, 2022) and real estate firms (Kamau & Naikuru, 2024). In telecommunications, studies have examined product innovation (Mugo & Macharia, 2021) and technological innovation (Wanaswa et al., 2021), but not organisational innovation as a distinct practice. This study therefore examined the relationship between organisational innovation and the competitive advantage of telecommunication companies in Kenya, and looked inside organisational innovation to see which parts are strong and which are weak.

STATEMENT OF THE PROBLEM

Kenya's telecommunications sector remains highly concentrated even as it grows. Mobile services revenue rose by 13.2 percent to KES 384.3 billion in 2023, yet Safaricom PLC controls 65.7 percent of subscriptions against Airtel Networks Kenya's 29.6 percent, Finserve's 2.1 percent and Telkom Kenya's 1.7 percent (Communications Authority of Kenya, 2024). Revenue growth has therefore not narrowed the competitive gap among operators, and smaller

firms continue to struggle to convert innovation investment into market share, customer retention and service standing.

Existing studies in the sector have examined single innovation types or single firms. Mugo and Macharia (2021) studied product innovation among telecommunication companies, and Wanaswa et al. (2021) studied technological innovation among large telecommunication firms. Studies of organisational innovation come from hospitals (Ngeche & Okello, 2023), manufacturing (Okello, 2022; Sulaimon et al., 2024) and real estate (Kamau & Naikuru, 2024), and often combine it with culture or knowledge sharing (Azeem et al., 2021; Zhang et al., 2024). No study has isolated organisational innovation among telecommunication companies, or compared the strength of structure, empowerment and management systems within it. This study addressed this gap.

OBJECTIVE OF THE STUDY

To examine the relationship between organisational innovation and the competitive advantage of telecommunication companies in Kenya.

RESEARCH HYPOTHESIS

$H0_1$: There is no statistically significant relationship between organisational innovation and the competitive advantage of telecommunication companies in Kenya.

LITERATURE REVIEW

THEORETICAL FRAMEWORK

This study is grounded in two theoretical perspectives: the Resource Based View and Dynamic Capabilities Theory.

Resource Based View

The Resource Based View, advanced by Barney (1991), holds that firms differ in the resources and capabilities they control, and that these differences, rather than industry conditions alone, explain why some firms consistently outperform others. For a resource to produce lasting advantage it must be valuable, rare and costly to imitate, and the firm must be organised so that its value can be captured (Barney et al., 2021). The theory has been criticised for circular reasoning, because a resource is called valuable when it produces advantage, which makes the central claim hard to test (Priem & Butler, 2001). Applied to this study, the "organised to capture value" condition is the link to organisational innovation. Skilled staff and good ideas

are resources, but they create advantage only when the firm's structures, decision rights and management systems allow them to be used.

Dynamic Capabilities Theory

Dynamic Capabilities Theory, developed by Teece, Pisano and Shuen (1997), explains how firms keep their advantage in fast-changing markets. It argues that firms must sense opportunities, seize them and reconfigure their assets and routines as conditions change. A recognised limitation is that its core concepts are difficult to measure directly, and it says little about how smaller firms with limited resources can build such capabilities. Applied to this study, organisational innovation is the reconfiguring part of the theory. How quickly a firm can change its structure, shift authority and update its management systems determines how well it can act on what it senses.

EMPIRICAL REVIEW

Azeem, Ahmed, Haider and Sajjad (2021) studied 294 industrial managers using partial least squares structural equation modelling and found that organisational innovation had a positive effect on competitive advantage. They also found that organisational culture and knowledge sharing supported innovation activity. The study combined organisational innovation with culture and knowledge sharing and was not set in telecommunications, a gap the current study addressed by examining organisational innovation on its own in telecommunication companies. Alshumrani, Baird and Munir (2022) linked new management approaches to competitive advantage while considering institutional pressures, and Zhang, Jehangir, Yang, Tahir and Tabasum (2024) reported that organisational culture, knowledge sharing and organisational innovation were mechanisms for building competitive advantage that then supports firm performance. Neither isolated organisational innovation in a telecommunications setting.

Elsharnouby and Elbanna (2022) studied 249 Egyptian manufacturing small and medium enterprises and found that organisational innovation fully mediated the relationship between environmental scanning and competitive advantage. This means that noticing changes outside the firm brought no benefit unless the firm turned that knowledge into organisational change. The study was set in manufacturing SMEs, whereas the current study examined large telecommunication companies. Sulaimon, Onyemaobi, Ebegbetale, Gbadamosi and Fajimolu (2024) found that administrative changes and a culture of innovation and experimentation were

important for sustainable competitive advantage among manufacturing firms in Lagos State, but did not examine telecommunications or compare the strength of different parts of organisational innovation.

In Kenya, Ngeche and Okello (2023) surveyed 253 managers from 46 private hospitals and found that organisational innovation capabilities had a significant positive effect on sustainable competitive advantage (β = 0.617). The study was set in healthcare, which differs from telecommunications in regulation and competition. Okello (2022) found that all 94 manufacturing firms in the Nairobi County sample used organisational innovation and that it had a positive effect on competitive advantage, but treated it as one element of strategic innovation. Kamau and Naikuru (2024) studied 317 real estate respondents in Kiambu County and found that innovation strategy had a significant effect on competitive advantage, recommending organisational innovation among other strategies, but did not isolate it as a variable. Within telecommunications, Mugo and Macharia (2021) found that product innovation significantly influenced competitive advantage among 26 telecommunication companies, and Wanaswa, Awino, Ogutu and Owino (2021) found that technological innovation had a significant and positive influence on competitive advantage among 83 large telecommunication firms. Neither examined organisational innovation, a gap the current study addressed by testing its relationship with competitive advantage across five telecommunication companies.

CONCEPTUAL FRAMEWORK

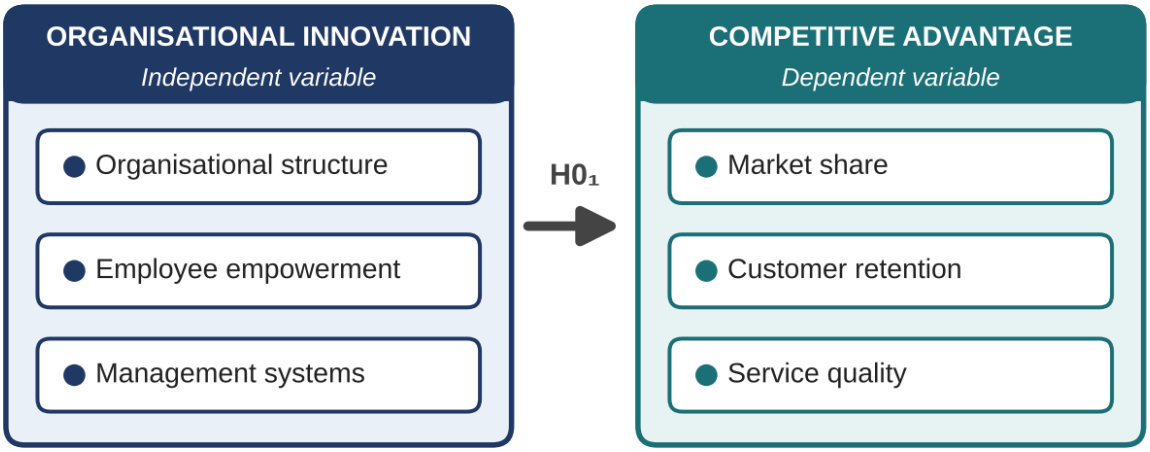

Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

The study adopted an analytical cross-sectional survey design and a convergent parallel mixed-methods approach, guided by a positivist philosophy (Creswell & Creswell, 2023; Saunders et al., 2023). Conducted in October 2026, the study targeted 162 employees from five telecommunications companies in Nairobi County. Using Yamane's formula, a sample of 115 employees was determined and selected through proportionate stratified random sampling. Additionally, ten senior managers were purposively selected for interviews. Data were collected using structured questionnaires and semi-structured interview guides. The instruments were piloted among 12 employees of Liquid Intelligent Technologies Kenya Limited, yielding Cronbach's alpha coefficients of 0.868 for organisational innovation and 0.884 for competitive advantage, confirming reliability.

Quantitative data were analysed using SPSS version 29 through descriptive statistics, Pearson correlation and simple linear regression, while qualitative data were analysed thematically (Braun & Clarke, 2021). Normality and linearity assumptions were assessed before regression analysis. The regression model examined the relationship between organisational innovation and competitive advantage, with competitive advantage as the dependent variable and organisational innovation as the independent variable. No control variables were included. Since competitive advantage was measured through employees' perceptions of market position, customer retention and service quality, the findings reflect perceived rather than objectively measured competitive advantage.

RESULTS AND DISCUSSION

This section presents the study findings based on questionnaire and interview data. Of the 115 questionnaires distributed, 101 were returned, and 97 were complete and usable, representing a response rate of 84.3%. This was considered adequate for social science research (Fincham, 2008). Eight of the ten senior managers targeted for interviews participated, representing an 80% response rate. Preliminary diagnostic tests indicated that the data met the normality and linearity assumptions required for regression analysis. The Shapiro–Wilk test was insignificant for organisational innovation ($W = 0.976$, $p = .092$) and competitive advantage ($W = 0.984$, $p = .276$). The linearity test also showed a significant linear relationship ($F = 32.741$, $p < .001$) and no significant deviation from linearity ($F = 1.924$, $p = .132$).

Organisational Innovation

Organisational innovation was assessed using nine statements covering organisational structure, employee empowerment and management systems. Respondents rated each statement on a five-point Likert scale, ranging from strongly disagree to strongly agree. Table 1 presents the descriptive statistics.

Table 1: Descriptive Statistics for Organisational Innovation (N = 97)

Statements	SD (%)	D (%)	N (%)	A (%)	SA (%)	M	SD
The organisation adjusts its structure to respond to changing business requirements.	10.3	17.5	20.6	34.0	17.5	3.31	1.24
The existing organisational structure facilitates the introduction of new ideas.	14.4	20.6	22.7	28.9	13.4	3.06	1.28
Organisational structures allow different functions to work effectively together.	12.4	18.6	21.6	32.0	15.5	3.20	1.26
Employees are encouraged to suggest ideas for improving organisational operations.	5.2	11.3	16.5	42.3	24.7	3.70	1.12
Staff members are given sufficient authority to make decisions within their areas of responsibility.	16.5	22.7	20.6	27.8	12.4	2.97	1.30
Management supports employees who take initiatives to improve organisational performance.	6.2	12.4	17.5	40.2	23.7	3.63	1.15
Management systems are reviewed and improved to respond to changing business needs.	9.3	15.5	19.6	36.1	19.6	3.41	1.22
The organisation's management systems facilitate effective coordination of activities.	11.3	17.5	21.6	33.0	16.5	3.26	1.25
Modern management systems are used to support organisational decision-making.	7.2	13.4	18.6	39.2	21.6	3.55	1.18
Composite score						3.34	1.22

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. M = Mean; SD = Standard Deviation.

As shown in Table 1, organisational innovation was moderately practised, with a composite mean of 3.34 (SD = 1.22). Employee empowerment recorded the strongest rating, particularly the encouragement of employees to suggest ideas (M = 3.70, SD = 1.12) and management support for employee initiatives (M = 3.63, SD = 1.15). However, the provision of decision-making authority recorded the lowest mean (M = 2.97, SD = 1.30), indicating limited employee autonomy. Organisational structure also received moderate ratings, with the facilitation of new

ideas recording a mean of 3.06 (SD = 1.28). Management systems performed relatively better, particularly in supporting organisational decision-making (M = 3.55, SD = 1.18). These findings suggest that although telecommunications companies encourage employee contributions and initiatives, structural flexibility and decentralised decision-making remain areas requiring improvement. This supports Azeem et al. (2021), who emphasised employee involvement in innovation, and Teece et al. (1997), who identified organisational reconfiguration as an important capability for sustaining competitive advantage.

The interview findings reinforced the quantitative results, revealing four themes: idea generation, idea screening, pilot testing and resistance to structural change. One manager (SM019) explained that ideas were collected through online portals, suggestion boxes and innovation laboratories. Another (SM020) indicated that innovation committees screened proposals before implementation, while SM022 noted that successful ideas were tested through pilot projects before wider adoption. However, SM021 highlighted resistance to structural change, explaining that established reporting lines and departmental interests made organisational restructuring difficult. These accounts suggest that although companies have mechanisms for generating and evaluating ideas, centralised decision-making and resistance to change may limit their implementation. Overall, the findings indicate that organisational innovation is practised moderately, with employee participation stronger than structural flexibility and decision-making autonomy.

Competitive Advantage

Competitive advantage was assessed using nine statements covering market position, customer retention and service quality. Respondents rated each statement on a five-point Likert scale. The descriptive findings are presented in Table 2.

Table 2: Descriptive Statistics for Competitive Advantage (N = 97)

Statements	SD (%)	D (%)	N (%)	A (%)	SA (%)	M	SD
The organisation maintains a strong position in the telecommunications market.	4.1	9.3	15.5	43.3	27.8	3.81	1.07
The organisation attracts customers from competing telecommunications companies.	8.2	14.4	19.6	39.2	18.6	3.46	1.19
The organisation has strengthened its market position over time.	5.2	10.3	16.5	45.4	22.7	3.70	1.09
A high proportion of the organisation's customers continue using its services.	3.1	7.2	12.4	45.4	32.0	3.96	0.99
The organisation is successful in retaining customers over time.	4.1	9.3	14.4	44.3	27.8	3.82	1.06
Strong relationships with customers contribute to continued use of the organisation's services.	2.1	6.2	11.3	43.3	37.1	4.07	0.94
The organisation provides reliable telecommunications services.	2.1	5.2	10.3	44.3	38.1	4.11	0.92
The quality of services provided meets the expectations of customers.	3.1	7.2	12.4	44.3	33.0	3.97	0.99
Customer service needs and complaints are handled effectively.	5.2	10.3	15.5	42.3	26.8	3.75	1.11
Composite score						3.85	1.04

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. M = Mean; SD = Standard Deviation.

Table 2 indicates that respondents rated their organisations' competitive advantage favourably, with a composite mean of 3.85 (SD = 1.04). Service quality received the strongest ratings, particularly service reliability (M = 4.11, SD = 0.92) and meeting customer expectations (M = 3.97, SD = 0.99). Customer retention was also rated positively, with strong customer relationships recording a mean of 4.07 (SD = 0.94). Regarding market position, maintaining a strong market presence recorded a mean of 3.81 (SD = 1.07), while attracting customers from competitors had the lowest mean of 3.46 (SD = 1.19). These findings suggest that telecommunications companies perform relatively well in service delivery and customer retention but face greater challenges in attracting customers from competing firms. The findings are consistent with Wanaswa et al. (2021), who observed that technological innovation contributes to improved service delivery and competitive positioning.

Correlation Analysis

Pearson correlation analysis was conducted to establish the direction, strength and statistical significance of the relationship between organisational innovation and competitive advantage. The results are presented in Table 3.

Table 3: Pearson Correlation

Variable	1	2
1. Organisational innovation	1.000	
2. Competitive advantage	.484**	1.000

Note. N = 97. **p < .01 (two-tailed).

The findings in Table 3 reveal a positive, moderate and statistically significant relationship between organisational innovation and competitive advantage (r = .484, p < .001). The 95% confidence interval ranged from .32 to .62, indicating a positive association between the variables. The squared correlation coefficient suggests that the two variables shared approximately 23.4% of their variance. This implies that organisations with higher levels of organisational innovation also tended to report higher perceived competitive advantage. However, the correlation does not establish causality. The finding is consistent with Azeem et al. (2021), Ngeche and Okello (2023), and Okello (2022), who reported positive relationships between organisational innovation and competitive advantage.

Regression Analysis

Simple linear regression was conducted to determine the extent to which organisational innovation explained variations in competitive advantage. The analysis examined the model fit, overall statistical significance and regression coefficients. The model summary is presented in Table 4.

Table 4: Regression Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.484	.234	.226	.587

Note. Predictor: Organisational innovation. Dependent variable: Competitive advantage.

As presented in Table 4, the regression model produced an R-value of .484 and an R^2 of .234, indicating that organisational innovation explained 23.4% of the variation in perceived competitive advantage. The adjusted R^2 was .226, while the standard error of the estimate was .587. The remaining 76.6% of the variation may be explained by other factors not included in the model, such as market structure, regulation, organisational resources and other innovation

practices. This suggests that organisational innovation is an important, although not exclusive, correlate of competitive advantage, consistent with Teece et al. (1997). The statistical significance of the regression model was assessed using analysis of variance (ANOVA). The results are presented in Table 5.

Table 5: Analysis of Variance for the Regression Model

Model	Source	Sum of Squares	df	Mean Square	F	p
1	Regression	9.998	1	9.998	29.06	< .001
	Residual	32.682	95	.344		
	Total	42.680	96			

Note. Dependent variable: Competitive advantage. Predictor: Organisational innovation.

Table 5 shows that the regression model was statistically significant, $F(1, 95) = 29.06$, $p < .001$. This indicates that organisational innovation significantly improved the prediction of perceived competitive advantage compared with a model without the predictor. The result provides statistical support for examining the contribution of organisational innovation to competitive advantage through the regression coefficients.

The regression coefficients were examined to establish the direction and magnitude of the relationship between organisational innovation and competitive advantage. The results are presented in Table 6.

Table 6: Regression Coefficients for Organisational Innovation and Competitive Advantage

Model	B	SE	β	t	p
Constant	2.322	.289		8.02	< .001
Organisational innovation	.457	.085	.484	5.39	< .001

Note. Dependent variable: Competitive advantage. B = Unstandardised coefficient; SE = Standard Error; β = Standardised coefficient.

As shown in Table 6, organisational innovation had a positive and statistically significant association with competitive advantage ($B = .457$, $SE = .085$, $\beta = .484$, $t = 5.39$, $p < .001$). The

95% confidence interval for the unstandardised coefficient ranged from .289 to .625, excluding zero. This indicates that a one-unit increase in organisational innovation was associated with a .457-unit increase in perceived competitive advantage. The findings suggest that improvements in organisational structures, employee empowerment and management systems are associated with stronger competitive positioning. The result supports the Resource-Based View, which emphasises the importance of organisational capabilities in creating value (Barney et al., 2021), and Dynamic Capabilities Theory, which highlights the importance of organisational adaptation and reconfiguration (Teece et al., 1997).

Hypothesis Testing

The study tested the null hypothesis that organisational innovation has no statistically significant relationship with competitive advantage among telecommunications companies in Kenya. The decision was based on the regression coefficient and its associated p-value, as presented in Table 7.

Table 7: Hypothesis Testing Results

Hypothesis	Test statistic	p	Decision
H_{01}: There is no statistically significant relationship between organisational innovation and competitive advantage.	t = 5.39	< .001	Rejected

As presented in Table 7, the regression coefficient was statistically significant ($t = 5.39$, $p < .001$), which is below the .05 significance level. Consequently, the null hypothesis was rejected, indicating a statistically significant positive relationship between organisational innovation and competitive advantage among telecommunications companies in Kenya. The finding suggests that improvements in organisational innovation are associated with stronger perceived competitive advantage.

CONCLUSIONS

The study concludes that organisational innovation has a positive and statistically significant relationship with the competitive advantage of telecommunication companies in Kenya, explaining about 23 percent of its variation. This is consistent with the Resource Based View, which holds that a firm's resources create advantage only when its organisation lets the firm capture their value, and with Dynamic Capabilities Theory, which treats reconfiguration as part

of sustaining advantage. The study further concludes that organisational innovation is practised at only a moderate level. Firms are strong at inviting ideas and weaker at giving staff the authority and structural flexibility to act on them, and this weakness comes from long-standing reporting lines and departmental interests and not from unwillingness to listen. Firms that move decision rights closer to the people who generate ideas are better placed to turn their organisation into a source of competitive strength than those that only collect ideas.

RECOMMENDATIONS

The study recommends that telecommunication companies review their delegation frameworks and give staff at all levels clear decision authority within their areas of responsibility, with defined limits. Boards and executive management should shorten the path from an idea's submission to a decision, give feedback to the people who propose ideas, and track what happens to submitted ideas. Joint teams across departments should be used for selected projects to reduce the departmental protectiveness that managers described. Smaller operators, which cannot match the market leader on scale, have the most to gain from these changes. Future studies could use company-level performance data, test the relationship longitudinally, include branch and regional staff, and examine other factors, such as market structure and regulation, that may influence how organisational innovation relates to competitive advantage.

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