International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2025: 7.089

# Organizational Structure and Firm Competitiveness in Kenya's Telecommunication Sector

**MBUGUA Mercy Muringe[1], Dr. Lawrence ODOLLO (PhD)[2], Dr. Abraham KIRUGA (PhD)[3]**

The Graduate School of Business and Economics, The Catholic University of Eastern Africa
Email: *mercymuringe[at]gmail.com*

**Abstract:** ***The research sought to analyze the effect of internal organizational factors on the competitiveness of telecommunication companies in Kenya, as there has been little empirical work exploring the relationship between telecommunication companies' internal organization and their competitiveness, particularly regarding nontraditional performance measures. Guided by the Contingency Theory, which states that organizational forms must fit with environmental factors to be "effective", it was decided to study the effect of organizational structure on firm competitiveness. A descriptive survey research design was used, and structured questionnaires were set up to collect data from 108 executive and senior managers of whom 97 provided responses. Cronbach's alpha was used to assess the reliability of the items measuring organizational structure, and it was deemed acceptable for analysis. Organizational structure was highly practiced, with an overall mean score of 4.412. Results indicated that organizational structure was positively correlated with competitiveness and was significant at the critical value of .01. In addition, regression analysis indicated that organizational structure had a significant positive effect on competitiveness (β = .414, p < .001). The study found that organizational structures were effective in boosting competitiveness. It suggested that telecom companies need to reinforce role clarity, coordination, hierarchy, and flexibility in their structure to maintain their competitive edge.***

**Keywords:** Organizational Structure; Firm Competitiveness; Telecommunication Sector; Contingency Theory; Organizational Performance; Kenya

## 1. Introduction

The competitiveness of telecommunication companies is based on their capability to make use of the internal resources, capabilities, and organizational systems to produce the best market performance. When evaluating a firm's ability to respond to technological changes and competitive pressures, key indicators include costs, profit margin, customer satisfaction, innovation capabilities, and market share growth. Hence, with a changing market, effective organizational structures, governance systems, decision-making processes, and performance management systems offer useful building blocks to sustainable competitive advantage (Hitt et al., 2020; Teece, 2020).

In fact, telecommunications companies are all faced with volatile and dynamic markets on a global scale in the face of technological disruption, customer expectations, regulatory pressures, and competition. Evidence shows that companies with flexible organizational structures, good governance systems, high participative decision-making, and integrated performance management systems have greater potential for innovation and adaptation to market changes. Within such internal mechanisms, it is possible to find strategic alignment, efficient use of resources, improvement in service delivery, building better relationships with customers, etc., which contribute to competitiveness (Vial, 2021; Appio et al., 2021). In Kenya, the telecommunications industry has enjoyed an unprecedented rate of technological developments, regulatory developments, and competition among the main service providers. In Kenya, companies like Safaricom and Airtel Kenya are dealing with an arena where day-to-day innovations, customer retention, and strategic responsiveness are essential. Thus, competitiveness is becoming more and more dependent on the adaptation of internal organizational mechanisms to market change. It is important, therefore, to understand how the policies of organizational structures, governance systems, decision-making processes, and performance management systems affect competitive outcomes as part of sustaining market positions and long-term growth (Communications Authority of Kenya, 2023; GSMA, 2024).

## 2. Statement of the Problem

Despite the importance of organizational structure to coordination, decision-making, flexibility and responsiveness, empirical evidence on how organizational structure affects firm competitiveness among licensed telecommunication firms in Kenya remains limited

Competitiveness in the telecom industry is highlighted by the market share of Safaricom compared to Airtel Kenya and Telkom Kenya, as well as the innovation capacity of the company despite operating within a similar competitive regulatory landscape (Barney & Hesterly, 2019; Communications Authority of Kenya, 2023). A gap in the literature is that previous studies have tended to address either leadership or strategy, or financial performance individually, and have been centered on industries that have not been explored in the telecom study, thereby establishing a gap in context and methodology (Mutiso, 2023; Karanja, 2024). This study thus examined the effect of organizational structure on the competitiveness of the licensed telecom firms in Kenya.

## 3. Literature Review

According to Contingency Theory, especially the structural contingency approach by Donaldson, there is no universal organization that is hoped to be effective. Instead, the efficacy of an organization is linked to the extent to which its structure is suited to the environmental conditions, such as

environmental uncertainty, organizational size, strategy, and technology (Donaldson, 2015). This view is particularly important in telecommunications, as the companies are in a fast-changing technological and competitive environment.

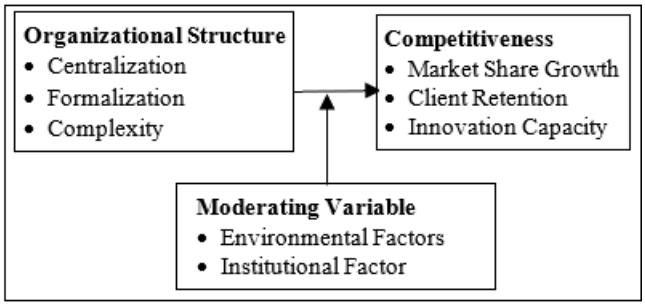
The theory contributes to the objective of organizational structure, providing the reasoning for how the correct structures can add value to competitiveness. Appropriate organizational structures with clear lines of responsibility, coordination, and flexibility may allow firms to rapidly adapt to shifts in the market and better effectiveness of the firm. Mobile Telephone operators in Kenya revealed that organizational structure had a positive impact on the performance of the organization, hence responding to the structural fit of relevance in the telecommunications industry (Donaldson, 2015; Nene & Pillay, 2019).

Organizational structure is a formal system that establishes relationships and roles among organizational members and assigns the authority and accountability needed to perform these roles. It identifies how tasks are split, decisions are made, and where resources in an organization are coordinated across areas (Robbins & Judge, 2019). In today's competitive environment and with technological advancements, effective structures improve flexibility, responsiveness, innovativeness, and operational efficiencies. So, understanding organizational structure is significant when studying how firms coordinate their internal activities and how they build competencies to help sustain competitiveness and a secure market position (Daft, 2018).

Nene and Pillay (2019) noted that efficient employee structures had a moderate positive relationship to employee performance, and Mutunga et al. (2024) identified clear authority relationships and flexible decision-making as influential aspects of improving firm performance. However, Watiri et al. (2022) showed that there is a strong association between organizational structure and operational performance, indicating the importance of having clear details of roles and reporting processes. Goga (2023) further highlighted that organizational structure was a key factor in enhancing productivity and coordination in Kenyan state corporations. Overall, it can be said that the successful creation of structures contributes positively to the effectiveness of the organization, coordination of activities, work performance, and attainment of objectives of the institution.

Although the evidence for organizational structure is consistent, there are key methodological and contextual issues to tease out. The focus of Nene and Pillay (2019), Watiri et al. (2022), and Goga (2023) was on the performance of the organization or operation and not on competitiveness measures like market share, customer loyalty, and innovation willingness. Mutunga et al. (2024) also focused on pharmaceutical manufacturing companies, and multiple regression analysis can only be generalized to companies with a high level of technology, in this case, telecommunications firms. Organizational complexity was shown to have a significant impact on performance; centralization and formalization were found to be insignificant in the context of SMEs in Nigeria by Shaibu et al (2025). These differences illustrate that geographical, sectoral, and methodological gaps exist, which may hinder the application of available evidence to Kenya's telecoms.

The literature indicates that organizational structure relates to the results of the organization – generally, where structures are clear in terms of responsibilities, effective coordination, authority, and flexibility, there is a link to better results. The problem with these studies so far, however, is that they have mainly focused on performance, which, by itself, does not provide a sense of competitiveness in terms of market share growth, customer retention, and innovation capacity. Moreover, many studies have been done in the aircraft industry, the manufacturing industry, pharmaceuticals industry, and all the public companies, etc., in South Africa and Nigeria. For this reason, the empirical evidence on the licensed telecommunication companies in Kenya is rather limited. The current study fills this gap by analyzing the competitiveness of the telecommunication sector in Kenya as affected by organizational structure, which adds to existing knowledge in analyzing competitiveness in a dynamic technology-driven environment.




The conceptual design used indicated that organizational structure, is the internal organizational mechanism affecting firm competitiveness in the telecommunications sector of Kenya. Organizational structure was measured on centralization, formalization, and complexity, and competitiveness was measured on the basis of market share growth, customer retention, and innovation capacity (Daft, 2021; Barney & Hesterly, 2020). The framework also included the role of environmental and institutional factors as a moderating aspect, including technological changes, market competition, customers' preferences, government regulations, and industry policies. These types of situations were supposed to either reinforce or diminish the performance of internal organizational mechanisms, in line with the contingency and strategic management approaches (Hitt et al., 2020; Teece, 2020).

## 4. Research Methodology

A pragmatic research philosophy was used because the research problem needed methods that would yield substantive as well as useful evidence of a relationship between the internal organizational mechanisms and competitiveness of telecommunication firms in Kenya. Pragmatism acknowledges that there is not one particular research technique that can always be used, and that researchers can mix quantitative and qualitative research, depending on the research question (Saunders et al., 2019). Through this philosophy, the researcher in this study was able to get measurable evidence on organizational structure,

governance system, decision-making system, performance management system, competitiveness, and also managerial experiences and organizational realities were considered. The approach thus was suitable as it highlighted practical solutions and evidence applicable to management and policy decision-making (Creswell & Creswell, 2022).

## 5. Research Design

A correlational study design was chosen because the study wanted to address the relationships between the internal organizational mechanisms and firm competitiveness, and neither manipulated the variables in the study nor required any control over the variables. The design allowed the researcher to investigate the relationship between variations in organizational structure, governance systems, decision-making systems, and performance management systems and variations in the competitiveness of telecommunication firms. This also enabled an analysis of the environmental and institutional conditions and competitiveness interrelationships. Correlational research was appropriate since the variables were not amenable to experimentation and occurred naturally within the organizations. The design thus yielded quantitative data to help in assessing the magnitude and direction of the relationships between the variables in the study (Kothari, 2022; Saunders et al., 2019).

**Target Population and Sampling**

The target population included 27 telecommunications firms in Kenya, which were used as units for analysis. From each firm, four managers were targeted (one executive and three senior managers), resulting in a total of 108 respondents. Executive managers were targeted since they led the decision-making and direction of the organization, and senior managers were targeted since they made decisions, performed, and worked on operations in the organization. The positions they occupied gave them insights into the organizational structures and competitive strategies (Oso & Onen, 2021).

The relatively small number of managers reached by the accessible population led the study to adopt a census approach targeting all 108 eligible executive and senior managers across the 27 licensed telecommunications firms. Within each firm, managers were purposively identified based on their involvement in strategic decision making and organizational management. This allowed the elimination of sampling error in the defined population and also enabled the study to obtain the strategic and operational perspectives from the participating firms. Purposive criteria for determining the respondents were used, as managers were the only ones who had the information related to the objectives of the study, being the ones who are directly involved in strategic decision-making, governance, organizational structure, and performance management (Etikan et al., 2016). The population covered the entire population that was accessible, while the selection was deliberate based on the relevance of the respondents to the problem being researched.

**Data Collection Instrument**

The data were found to be primary in nature as the structured questionnaire was used to gather information from the executive and senior managers. The questionnaire comprised areas such as competition, environmental and institutional conditions, performance management systems, decision-making processes, organizational structure and governance system, and demographic characteristics. Responses to the closed-ended items were measured using a five-point Likert scale, where 1 indicates strongly disagree, and 5 indicates strongly agree. The standardized format ensured consistency of responses and helped to statistically analyze them. The instrument used was suitable because it enabled the researcher to obtain comparable quantitative data from the respondents who were from different telecommunication companies (Creswell & Creswell, 2022).

**Data Collection Procedure**

The researcher was given an introduction letter from the Catholic University of Eastern Africa (CUEA) by the Graduate School of Business and the necessary research authorization by the National Commission for Science, Technology and Innovation (NACOSTI). The support of the management of the involved telecommunication companies has been requested as well. The questionnaires were administered electronically using Google Forms. The participants were provided with information on the purpose of this study, the nature of their voluntary participation, the arrangements for confidentiality, and the possibility to withdraw without penalty before answering the questions. The online method provided better access, was administrative and cost-effective, and allowed for effective response collection and monitoring.

**Pilot Study, Validity and Reliability**

An approximation of 10% of the target sample (11 managers from a similar telecom company) was used in conducting a pilot study. A pilot test was carried out to clarify, make it relevant, and make it uniform, and to make it usable, the questionnaire itself was first tested (Creswell & Creswell, 2022).

Content validity was achieved by checking the relevant literature and having the questionnaire evaluated by academic supervisors, as it would measure the constructs in the study. Face validity was evaluated based on the clarity, understanding, and relevance of the questions for the respondents. Exploratory Factor Analysis (EFA) was employed as a method to measure construct validity, with results greater than 0.40 accepted (Hair et al., 2019).

Cronbach's alpha coefficient was calculated based on the pilot data to check each component of reliability. When assessing the internal consistency of instrument items, Sekaran & Bougie 2016) deemed a coefficient of 0.70 or greater as acceptable. To test the reliability, it was confirmed that the questionnaire was measuring in a consistent manner, which is suitable for further statistical analysis.

**Data Analysis**

Collected questionnaires were coded, cleaned, and analyzed using SPSS version 30. Descriptive and inferential statistics were used in order to address the objectives of the research. Means and standard deviations were used to describe and summarize the respondents' perceptions related to organizational structure, governance systems, decision-making process, performance management systems, the

environment and institutional conditions, and competitiveness.

The strength and direction of relationships between the independent variables, moderator, and competitiveness were determined using Pearson correlation analysis. Correlations range from -1 to +1, where positive means it is a direct relationship and negative means it has an inverse relationship (Pallant 2020). The significance of the relationships was tested at the 5% level.

Based on this, multiple regression analysis was then conducted to see if there is a predictive relationship between organizational structure, governance systems, decision-making processes and systems, and performance management systems and competitiveness. The analysis enabled the determination of the unique contribution of each predictor, after controlling for the other predictors. The coefficient of determination was calculated to specify the percent variance accounted for by the predictors, and regression coefficients and significance tests were performed for each of the predictors to indicate the direction and statistical significance of the individual components (Hair et al., 2019).
Moderated regression analysis was used to determine the moderating effect of the environmental and institutional conditions. Model 1 was conducted with main effects of the internal organizational mechanisms and the moderating variable, while Model 2 was conducted with the main effects of the internal organizational mechanisms, the moderating variable, and interactions between the moderating variable and each internal organizational mechanism. There was a statistically significant interaction term; that is, environmental and institutional conditions affected the relationship between the respective internal mechanism and competitiveness.

Diagnostic testing was also carried out before the interpretation of the results of the regression. Normality was tested by Shapiro-Wilk and Kolmogorov-Smirnov tests. We tested for autocorrelation using the Durbin-Watson statistic, which showed a value of 2, which did not indicate any serious autocorrelation (Gujarati & Porter, 2021). Multicollinearity was examined using the tolerance value and Variance Inflation Factor (VIF); very low tolerance and high VIF values were generated, which suggests that there are potential multicollinearity problems. Using appropriate statistical tests and a plot of the residuals examined if the variance of the errors were equal. Diagnostic procedures were used to determine if the regression assumptions were reasonably satisfied.

**Ethical Considerations**
Ethical principles were adhered to during the study. Participants received the reasons for the research, the voluntary nature of participation, confidentiality, anonymity, and the ability to drop out of the research without any repercussions. Before administering the questionnaires, informed consent was sought, and the information was used solely for academic purposes. In the reporting of findings, personal identifiers were not made available. Additionally, the study adhered to the institutional and national research requirements in terms of permits and authorization. These measures allowed for the protection of the participants and increased the credibility, integrity, and trustworthiness of the research process (Saunders et al., 2019; Creswell & Creswell, 2022).

## 6. Research Findings

**Organizational Structure**
The study was interested in respondents' perceptions of organizational structure in the on competitiveness in the telecommunication sector. This was measured by a series of descriptive statistics (mean and standard deviation). The items were measured using a 5-point Likert scale, 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. The summary in Table 1 is presented.

**Table 1:** Descriptive Analysis for Organizational Structure

| Statement | Mean | Std Dev |
|---|---|---|
| The company uses centralized or decentralized structures effectively to improve performance. | 4.237 | 0.814 |
| Formalization of roles and procedures enhances operational efficiency. | 3.928 | 1.083 |
| Structural complexity facilitates innovation and adaptability to market changes. | 4.608 | 0.730 |
| Roles and responsibilities are clearly defined, reducing confusion and overlaps. | 4.701 | 0.632 |
| Span of control and hierarchy levels are suitable for effective coordination. | 4.773 | 0.743 |
| The organizational structure supports timely decision-making and responsiveness to market changes. | 4.227 | 0.823 |
| **Average** | 4.412 | 0.804 |

Results indicated that there was a high degree of agreement between the results that organizational structure increased the competitiveness of the telecommunication firms in Kenya. There was support for the different designs of centralized or decentralized organizations and for the formalization of roles and procedures in the sense that both worked to improve performance (M = 4.237, SD = 0.814) as well as improve efficiency (M = 3.928, SD = 1.083). They strongly agreed that structural complexity was supportive of innovation and adaptability (M = 4.608, SD = 0.730), clear roles reduced overlaps (M = 4.701, SD = 0.632), appropriate hierarchy makes coordination easier (M = 4.773, SD = 0.743), and that structure facilitated timely decisions (M = 4.227, SD = 0.823). The mean was 4.412, and SD was 0.804, reflecting good agreement overall.

The results were corroborated by prior empirical studies, which showed that good organizational structures have an impact. Mutunga et al. (2024) concluded that the existence of well-defined authority structures and flexibility in decision-making fostered organizational effectiveness, while Watiri et al. (2022) determined that well-defined reporting relations and clear roles resulted in more efficient coordination and operations. Hence, Goga (2023) concluded that organizational structure positively enhanced employee productivity and organizational coordination. The results so far confirmed the previous conclusions and indicated that organizational structure also helped broader competitiveness in terms of innovation, adaptability, responsiveness, and good coordination. Such qualities are essential in the Kenyan telecom sector, which is characterized by rapidly changing

technology and keen competition, and necessitates flexible and responsive organizational structures.

**Diagnostic Test for Organizational Structure**

**Table 2:** Diagnostic Test Results

| Diagnostic Test | Organizational Structure Result | Interpretation | Conclusion |
|---|---|---|---|
| Kolmogorov–Smirnov | 0.237, p < .001 | Significant deviation from normality | Regression retained because of robustness |
| Shapiro–Wilk | 0.717, p < .001 | Significant deviation from normality | Non-normality acknowledged but not prohibitive |
| Durbin–Watson | 1.473 | Residual independence acceptable | No serious autocorrelation |
| Tolerance | 0.295 | Above 0.10 | No serious multicollinearity |
| VIF | 3.394 | Below 10 | No serious multicollinearity |
| Heteroscedasticity | No substantial pattern observed | Variance of residuals reasonably constant | Assumption considered satisfied |

The results of the diagnostic tests for the organizational structure objective showed that the regression equation is appropriate to use to measure the impact of organizational structure objective on firm competitiveness. Significant deviation from normality was found in the normality tests, but this was not problematic for regression analysis as the sample size was adequate and the regression is relatively insensitive to moderate non-normality (deviation in organizational structure resulted in a Kolmogorov–Smirnov statistic of 0.237, a Shapiro–Wilk statistic of 0.717, and p < .001). The Durbin–Watson statistic from the autocorrelation test was 1.473, which was close enough to 2 to consider the residuals to be sufficiently independent. Multicollinearity related to organizational structure was also acceptable, with a tolerance value of 0.295 and 3.394 VIF value (a tolerance below 0.1 is considered problematic, and a VIF over 5 is problematic) for the revised model. There was also no significant heteroscedasticity in the residual analysis, showing that the model is appropriate.

**Correction Analysis**

**Table 3:** Correlation Analysis

| Variables | Organizational Structure | Competitiveness |
|---|---|---|
| Organizational Structure | 1.000 | |
| Sig. (2-tailed) | — | |
| Competitiveness | .471** | 1.000 |
| Sig. (2-tailed) | .000 | — |
| N | 97 | 97 |

Results show that there is a positive and statistically significant relationship between organizational structure and competitiveness, with the correlation coefficient of 0.471 (p < .05). Thus, companies that have transparent job responsibilities, adequate hierarchical structure, adequate coordination, and reporting relationships seem to be more likely to produce superior competitive performance. The results support the notion of Anderson (2020) that good internal decision-making mechanisms promote greater organizational effectiveness and performance. In the same manner, Kariuki and Odhiambo (2023) determined that effective performance management systems have an impact on employee productivity and organizational outcomes. These studies were each concerned with the inner workings of the organization, but the conclusions support the current argument that internal organizational systems can be very effective when well designed to boost organizational performance and competitiveness.

**Regression Coefficients**

The multiple regression model showed the individual effects of organizational structure on competitiveness while controlling for other variables. A multiple regression with the dependent and independent variables was performed. The results of the p-values are illustrated in Table 5

**Table 5:** Regression Coefficient

| Model | Predictor | B | Std. Error | Beta (β) | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | Constant | -.320 | .090 | — | -3.574 | .001 |
| | Organizational Structure | **.470** | .085 | **.414** | **5.548** | **.000** |
| 2 | Constant | .043 | .259 | — | .166 | .868 |
| | Organizational Structure | .056 | .348 | .050 | .162 | .872 |
| | Moderating Variable | -.052 | .103 | -.046 | -.499 | .619 |
| | Organizational Structure × Moderating Variable (OM1) | .092 | .068 | .588 | 1.352 | .180 |

**Model 1: CA = -0.320 + 0.470OS + ε**
**Model 2: CA = 0.043 + 0.056OS - 0.052M + 0.092(OS × M) + ε**

Results indicate that, in Model 1, organizational structure is positive and statistically significant in increasing firm competitiveness, with β = .414, t = 5.548, p < .001. This means that the more organized a telecom is, the more competitive the firm would be in Kenya. The results indicate that defining roles, creating structures, establishing hierarchy, and coordinating effectively increases the possibility of facing the demands of the market and maintaining a competitive position in the firm. The result is consistent with Mutunga et al. (2024), who concluded that the level of clear authority relationship and flexibility of organizational structure positively affects the firm's performance, and Watiri et al. (2022), who recently revealed that clear reporting relationship and roles positively influence organizational coordination and the performance of operations.

After the inclusion of environmental and institutional conditions in the model and the interaction between organizational structure and the moderating variable, the direct path from organizational structure to the dependent variable was no longer significant (β = .050, t = .162, p = .872) in Model 2. The moderating variable itself was also insignificant (β = -.046, t = -.499, p = .619). More

importantly, there was no significant interaction between organizational structure and the moderating variable (β = .588, t = 1.352, p = .180). This indicates that neither the environment nor institutions significantly moderated the organizational structure-competitiveness relationship. Thus, the impact of organizational structure on competitiveness may be considered relatively independent of the surrounding environment and institutional conditions.

## 7. Conclusion

The study revealed that organizational structure is significant in improving the competitiveness of telecommunication companies in Kenya. Based on the descriptive findings, the respondents believe that structural factors like clarity of roles, appropriate hierarchy, coordination mechanisms, and flexibility are important factors that influence the effectiveness of an organization. The results revealed that well-designed structures lead to efficient operations, prompt responses to changes in the market, and enhance their innovation ability. The correlation analysis results showed that organizational structure was positively correlated with competitiveness, indicating that the organization system that is effective will influence to achieve a good competitive results in the company. The regression results also indicated that organizational structure is very significant for competitiveness, which shows that a company is able to use resources effectively, coordinate well, and respond strategically to the dynamics of the industry when the company's structure is aligned. Hence, the importance in further enhancing the organizational structure in order to maintain a competitive advantage in the telecommunication field.

The study found that organizational structures have a significant impact on the competitiveness of telecom companies in Kenya. Clearly defined roles, an appropriate hierarchy, effective coordination, and flexibility in organizational structure are shown to improve organizational responsiveness and performance. The results showed that companies that have a good structure have a higher chance of coping with market changes and enhancing their strategic results. Thus, the study has concluded that the development of a working and effective organizational structure will contribute to competitiveness by increasing the efficiency of the firm, minimizing role conflicts, and enabling the firm to react to industry needs.

The study revealed the importance of organizational structure in improving the competitiveness of telecommunication companies. Clear, appropriate reporting lines, clear division of tasks, and flexibility were seen as improving coordination and responsiveness in effective structures. The results showed that a firm's structural arrangements positively affected its ability to deal with operational pressures and market fluctuations. Hence, the study can be summed up as: Organizational structures are fundamental bases for competitiveness. The study suggests that telecoms have a need to continually analyze their organizational designs, streamline their reporting chain, make the roles more transparent, and introduce flexible organizational structures, enabling them to be more innovative, quicker to decide, and better adapt to industry trends.

## References

[1] Appio, F. P., Lima, M., & Paroutis, S. (2021). Understanding smart cities: Innovation ecosystems, technological advancements, and societal challenges. *Technological Forecasting and Social Change, 167*, 120707.
[2] Barney, J. B., & Hesterly, W. S. (2019). *Strategic management and competitive advantage: Concepts and cases* (6th ed.). Pearson.
[3] Barney, J. B., & Hesterly, W. S. (2020). *Strategic management and competitive advantage: Concepts and cases* (7th ed.). Pearson.
[4] Communications Authority of Kenya. (2023). *Sector statistics report for the financial year 2022/2023*. Communications Authority of Kenya.
[5] Creswell, J. W., & Creswell, J. D. (2022). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.
[6] Daft, R. L. (2018). *Organization theory and design* (12th ed.). Cengage Learning.
[7] Daft, R. L. (2021). *Organization theory and design* (13th ed.). Cengage Learning.
[8] Donaldson, L. (2015). *Structural contingency theory*. International Encyclopedia of the Social & Behavioral Sciences.
[9] Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1–4.
[10] Goga, [initials]. (2023). *[Title of study on organizational structure, productivity, and coordination in Kenyan state corporations]*. [Publisher/Journal].
[11] Gujarati, D. N., & Porter, D. C. (2021). *Basic econometrics* (6th ed.). McGraw-Hill Education.
[12] Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage.
[13] Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2020). *Strategic management: Competitiveness and globalization: Concepts and cases* (13th ed.). Cengage Learning.
[14] Kariuki, R., & Odhiambo, L. (2023). Performance management systems and manufacturing performance. *Journal of Business and Technology Management*, 10(4), 55–70.
[15] Kothari, C. R. (2022). *Research methodology: Methods and techniques*. New Age International Publishers.
[16] Mutunga, J., Munga, P., & Mbebe, C. (2024). Organizational structure and performance. *Kenya Business Review*, 14(2), 70–85.
[17] Nene, T., & Pillay, S. (2019). Organizational structure and performance. *Journal of Business and Organizational Studies*, 8(2), 30–45.
[18] Oso, W. Y., & Onen, D. (2021). *A general guide to writing research proposals and reports*. Jomo Kenyatta Foundation.
[19] Pallant, J. (2020). *SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS* (7th ed.). Routledge.
[20] Robbins, S. P., & Judge, T. A. (2019). *Organizational behavior* (18th ed.). Pearson.

[21] Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.
[22] Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). John Wiley & Sons.
[23] Shaibu, A., Musa, H., & Bello, R. (2025). Organizational structure dimensions and SME performance. *Journal of Small Business Management*, 17(1), 25–40.
[24] Teece, D. J. (2020). Hand in glove: Open innovation and the dynamic capabilities framework. *Strategic Management Journal, 41*(5), 847–855.
[25] Vial, G. (2021). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems, 30*(2), 101727.
[26] Watiri, J., Senaji, M., & Ogolla, P. (2022). Organizational structure and airline performance. *East African Journal of Aviation Management*, 6(3), 55–70.
[27] GSMA. (2024). *The mobile economy Sub-Saharan Africa 2024*. GSMA.