



## Centralization and Knowledge Sharing. An analysis of Kenyan Universities

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### Abstract

*Centralization, the concentration of decision-making authority within higher echelons of an organization, influences knowledge sharing processes. This study explores the relationship between centralization and knowledge sharing in Kenyan universities. It examines how organizational structure affects interactions, communication patterns, and innovative practices. Centralization's impact on participation in decision-making processes, information flow, and power distribution is assessed. The research employs a mixed-methods approach, utilizing a descriptive research design and quantitative analysis. Findings highlight the substantial influence of centralization on knowledge sharing. Statistical tests confirm positive correlations between centralization and knowledge sharing. Surprisingly, heightened centralization seems to enhance knowledge sharing within this context. Recommendations include fostering transparent knowledge exchange, recognizing contributions, and judiciously managing centralization for effective knowledge dissemination.*

Keywords: Centralization, Knowledge Sharing, Organizational Structure, Universities

### Background

The relationship between organizational structure and knowledge sharing is a topic of growing significance in various sectors, including the realm of higher education. This study, titled "Centralization and Knowledge Sharing in Kenyan Universities," delves into the intricate interplay between centralization within organizational structures and the dynamics of knowledge sharing within Kenyan universities. Centralization, defined as the concentration of decision-making authority at higher levels of an organization, has far-reaching implications for how knowledge is disseminated, exchanged, and utilized among members of the organization.

The motivation for conducting this study arose from the realization that the organizational structure significantly influences the behaviors exhibited by individuals within an institution. The distinctive setting of Kenyan universities offers a particularly intriguing context for this investigation, primarily due to the lack of comprehensive data on this subject within this region.

Kenyan Universities, akin to counterparts worldwide, confront the complex task of efficiently disseminating knowledge and promoting innovation amidst the constantly evolving landscape of education. Consequently, comprehending the intricate connection between centralization and knowledge sharing becomes imperative for refining organizational strategies and attaining the envisioned goals of streamlined knowledge distribution and effective utilization.

The research aims to shed light on how centralization influences various aspects of knowledge sharing processes, including communication patterns, decision-making, and innovative practices within Kenyan universities. The study recognizes that while centralized structures may seem counterintuitive as facilitators of knowledge sharing, they may possess inherent advantages that contribute to effective communication, decision-making, and knowledge dissemination.

By employing a mixed-methods approach involving a descriptive research design and quantitative analysis, this study seeks to comprehensively explore the extent to which centralization affects knowledge sharing dynamics. Through an investigation of the perceptions and experiences of university stakeholders, particularly Heads of Human Resources, the study examines various facets of centralization and their impact on knowledge sharing practices. The utilization of a comprehensive sample of 74 accredited universities, both public and private, ensures the representation of diverse perspectives within the Kenyan higher education landscape.

The research also draws on established literature that highlights the intricate relationship between organizational structure and knowledge sharing. Prior studies have illuminated the effects of centralization on communication patterns, decision-making locations, power distribution, and the execution of innovative ideas. The findings of this study contribute to this body of knowledge by providing context-specific insights into how centralization shapes knowledge sharing dynamics within the unique setting of Kenyan universities.

The ultimate goal of this research is to provide valuable insights that can guide universities in enhancing their knowledge sharing practices. By understanding the complex interplay between

centralization and knowledge sharing, university administrators can make informed decisions about their organizational structure, fostering an environment that optimizes knowledge dissemination and utilization. The study's findings contribute to the broader discourse on organizational behavior, knowledge management, and effective practices within the higher education sector.

## **Literature Review**

Centralization, as a concept within organizational structure, refers to the concentration of decision-making authority at higher levels of an organization (Zeng et al., 2010). The degree of centralization influences knowledge sharing processes within an organization. A decentralized structure, on the other hand, is considered advantageous for fostering effective knowledge management and knowledge sharing (Zeng et al., 2010). Highly centralized organizational structures, in contrast, impede effective communication and collaboration among members, leading to limitations in individual growth and stifling of creativity. This complex interplay between centralization and knowledge sharing underscores the pivotal role of organizational structure in shaping knowledge-related dynamics.

Organizational structure's influence on knowledge sharing is evident through its impact on communication patterns, decision-making locations, and the execution of innovative ideas. The manner in which decisions are made and information flows within an organization directly affects the opportunities for knowledge exchange and sharing among members. The manifestation of centralization's effects can be observed through both horizontal and vertical communication channels. Horizontal sharing, which takes place among peers, and vertical sharing, involving communication between superiors and subordinates, are both crucial for effective knowledge sharing. Centralized structures often hinder such interactions, leading to inhibited individual growth and creativity. Highly centralized organizations tend to prescribe communication channels, which can impede timely decision-making, restrict internal knowledge exchange, and hinder the emergence of innovative solutions.

Another significant dimension of centralization pertains to power distribution, which is gauged through hierarchical observations. This dimension involves decisions related to tasks associated with different social positions. In decentralized structures, autonomy is granted to subgroups, fostering creativity and knowledge sharing, ultimately promoting knowledge creation.

Decentralized management empowers employees to autonomously complete critical tasks within the organization (Nonaka and Takeuchi, 1995). This autonomy contributes to a more inclusive and participatory environment where knowledge can be freely shared and applied.

Enhancing knowledge sharing within organizations, particularly in the context of universities, necessitates embracing a less centralized organizational structure. This shift involves fostering open workspaces, promoting communication across the organization, and encouraging informal interactions among members. The interplay between the organizational structure and knowledge processes becomes evident in communication patterns. Striking a balance between vertical and horizontal information flow is essential to optimize knowledge sharing.

Research by Lei and Slocum (1992), Kanter (1994), and others advocates for organizations with lower levels of centralization as catalysts for effective knowledge sharing. Effective knowledge sharing hinges on robust communication between employees and managers. Less centralized structures provide an environment conducive to greater knowledge sharing (Wang and Noe, 2010). Managers aiming to bolster knowledge sharing should consider creating open workspaces, enhancing communication flow, and encouraging informal interactions (Aljuwaiber et al., 2016; Huang et al., 2013).

In essence, the intricate relationship between centralization and knowledge sharing within organizational structures, particularly in the context of Kenyan universities, underscores the importance of understanding the interplay between these factors. While centralization might seem counterintuitive as a facilitator of knowledge sharing, it possesses inherent advantages that can foster effective communication, decision-making, and knowledge dissemination. Nevertheless, striking a balance between centralization and autonomy, coupled with structural adaptations that encourage transparent knowledge exchange, remains vital for optimizing knowledge-sharing processes within organizations. This study contributes valuable insights into how organizational structure can shape knowledge sharing dynamics and guide universities in enhancing their knowledge sharing practices.

### **Research Objective**

This research was guided by the general objective to examine the effect of organizational structures on knowledge sharing in Kenyan universities.

Specifically, the study aimed to examine the effect of centralization on knowledge sharing in Kenyan universities.

## **Methodology**

In this research endeavor, the chosen methodology was tailored to thoroughly investigate the relationship between centralization and knowledge sharing within Kenyan universities. Centralization, as a crucial aspect of organizational structure, was scrutinized for its influence on the intricate dynamics of knowledge dissemination and exchange.

A descriptive research design was carefully selected to unravel the complex influence of centralization on knowledge sharing within Kenyan universities. By utilizing a descriptive research design, the study sought to provide a detailed and nuanced understanding of the relationship between organizational structure and knowledge sharing practices.

Aligned with the quantitative nature of the study, the positivist research paradigm was adopted. This paradigm emphasizes empirical observation and measurement, offering a structured framework to analyze the chosen variables. The target population encompassed a total of 74 accredited universities in Kenya, spanning both public and private institutions. This comprehensive approach aimed to ensure a representative sample that could yield meaningful insights into the centralization-knowledge sharing nexus.

To effectively address the research objectives, a census was employed to gather data from the entire population of 74 accredited universities. The primary data collection instrument was a meticulously crafted semi-structured questionnaire. This questionnaire featured closed-ended questions presented on a Likert scale, enabling participants to express their perspectives on organizational structure elements and knowledge sharing practices.

The questionnaire underwent a rigorous validation process, including expert reviews and consultations, to ensure its content validity. Furthermore, the instrument's reliability was assessed using Cronbach's alpha coefficient to enhance the accuracy of the collected data.

Primary data collection occurred through a dual approach, involving electronic distribution via email and direct physical distribution of questionnaires. The questionnaires were specifically

directed towards Heads of Human Resources, key stakeholders within each university setting. Among the 74 universities targeted, 52 responded, contributing their valuable insights to the study.

In addition to primary data, secondary data played a pivotal role in enriching the study's context and depth. Existing literature related to organizational structure, centralization, and knowledge sharing practices was extensively reviewed, providing a foundation for comparative analysis and theoretical underpinning.

To analyze the amassed data comprehensively, the Statistical Package for Social Sciences (SPSS) was employed. The analysis began with descriptive statistics, which offered insights into demographic information and initial data trends. Subsequent analyses encompassed correlation analysis, exploratory factor analysis, and multiple regression. These analytical techniques delved deeper into relationships between variables and provided valuable insights aligned with the research objectives.

The selected methodology upheld the highest standards of research validity and reliability. Diagnostic tests were meticulously performed to ensure the accuracy and credibility of the data. These tests included assessments for normality, linearity, multicollinearity, autocorrelation, and heteroscedasticity, enhancing the robustness and dependability of the research findings.

## Findings and Discussions

### *Descriptive Statistics of Centralization*

The collected data, as illustrated in Table 1, presents a comprehensive snapshot of respondents' perceptions concerning centralization within organizational structure. These perceptions encompassed a range of statements, each shedding light on different aspects of centralization's influence on organizational processes.

*Table 1: Respondents Ratings on Organizational Structure (Centralization)*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
		m	m		

Employees frequently participate in the development and adoption of new policies	51	1.00	5.00	4.6863	.78715
Employees are frequently involved in the decision-making regarding the promotion of professional staff.	51	2.00	5.00	4.6078	.77662
Any staff who wants to make his own decisions is quickly discouraged.	51	2.00	5.00	4.3922	.77662
Employees have to get permission from their supervisors before they act on almost everything related to their position/job.	51	1.00	5.00	4.1961	.89487
Employees are involved in the decisions of the development and adoption of new programs.	51	1.00	5.00	3.9412	1.02785
Even simple matters have to be referred to someone higher in the hierarchy for final approval.	51	1.00	5.00	3.7647	.88517
There is very little action that can be taken by employees without approval from the top management/supervisor	51	1.00	5.00	3.7059	1.04488
The views of the employees are frequently sought in the decision of hiring new staff.	51	1.00	5.00	3.6078	1.23415
Valid N (listwise)	51				

The study observed that centralized structures tend to impede interactions among members of the organization, thereby restricting opportunities for advancement and hindering effective problem-solving. The organizational structure's significance in influencing knowledge sharing was evident

as it molded member interactions, dictated the locations of decision-making, and influenced the efficiency and efficacy of implementing innovative concepts.

In the specific context of the Kenyan universities under scrutiny, *Table 1* above highlights a noteworthy trend. The majority of respondents unequivocally agreed with statements that encapsulated the impact of centralization on knowledge sharing. These statements encompassed facets such as employees' participation in policy development, involvement in decisions related to professional staff promotions, constraints on independent decision-making, the requirement for supervisor approval for diverse tasks, participation in program development, referral of minor matters up the hierarchy, and the necessity for top management sanctioning of employee actions.

These findings align cohesively with prior research, affirming the notion that centralization indeed centralizes decision-making authority at higher managerial levels, thereby curtailing the involvement and autonomy of individuals occupying lower positions. Moreover, the outcomes resonate with Brennen's (2002) insights, highlighting the concentration of decision-making power at upper management tiers within centralized structures. This concentration, as illuminated by Gold et al. (2001), restricts interactions among organizational members, consequently inhibiting the exploration of creative solutions and the realization of problem-solving potential.

In essence, this study's findings echo the intricate interplay between centralization and knowledge sharing within organizational frameworks. The implications of centralization are far-reaching, touching upon decision-making dynamics, employee engagement, and the collaborative pursuit of innovative ideas. Such insights are invaluable for understanding the nuanced relationship between organizational structure and knowledge-sharing processes in of Kenyan universities.

### **Diagnostic Tests**

Before engaging in parametric tests, the study meticulously conducted a series of diagnostic tests to ascertain the suitability of the data for subsequent analysis. These diagnostic assessments were integral to ensuring the robustness and reliability of the findings. The tests encompassed evaluations for normality, autocorrelation, multicollinearity, and linearity, each shedding light on key aspects of the data's integrity.

### **Normality Test**



The normality test, a pivotal evaluation of the data's distribution, was conducted to determine the normality of the independent variables. Employing both the Kolmogorov-Smirnov test, and the Shapiro-Wilk test, the study examined the distribution of data. The results, in *Table 2*, demonstrated that the p-values associated with Centralization exceeded 0.05. This outcome signified that the data exhibited a normal distribution, laying a solid foundation for subsequent analyses.

*Table 2: Tests of Normality*

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
centralization	.100	51	.200*	.975	51	.348

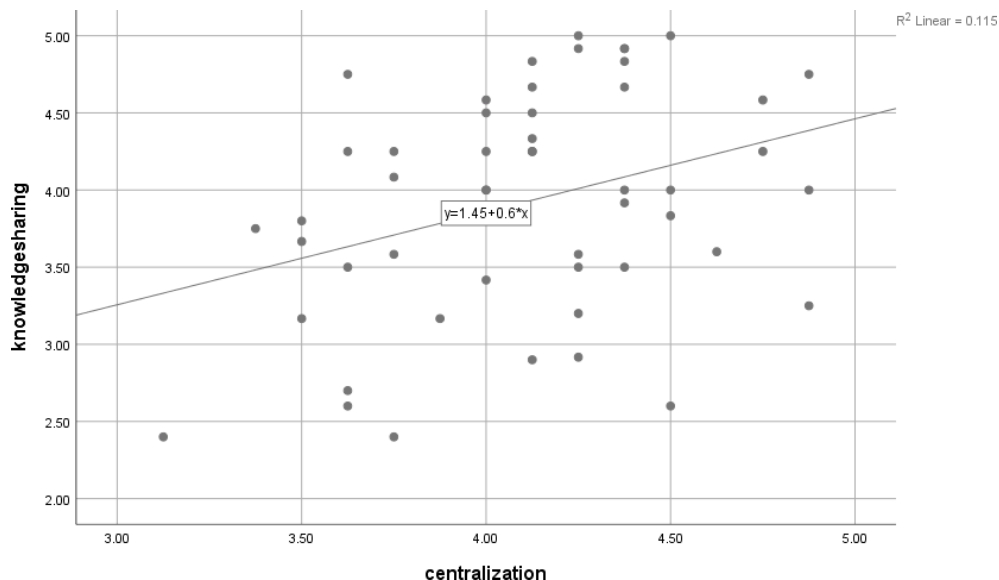
### **Autocorrelation Test**

The autocorrelation test delved into the potential relationships between the independent and dependent variables. Employing the Durbin-Watson statistic, the study uncovered a result of 1.894. This outcome served as a confirmation of the absence of autocorrelation, reinforcing the reliability of the data's independence.

### **Linearity Test**

The linearity test aimed to unravel the associations between the independent variable, Centralization, and the dependent variable, Knowledge Sharing. Through the utilization of scatterplots, the study visually captured these relationships. *Figure 1* portrays the scatter plot representing Centralization and Knowledge Sharing

*Figure 1: Centralization and Knowledge sharing (linear test)*



The depicted scatter plot effectively indicated a positive linear relationship between centralization and knowledge sharing. It emerged that centralization elucidated approximately 11.5% ( $R^2$ ) of the variance in knowledge sharing within Kenyan universities. These findings align with the assertions made by Susanty et al. (2012), positing that centralization detrimentally impacts the flow of knowledge among organizational members. Notably, high centralization correlated with reduced interaction and communication across various departments, leading to constrained idea exchange attributed to limited mandates stemming from higher levels in the structure.

### Correlation Analysis

To unravel the intricate interplay between the independent and dependent variables, the study enlisted Karl Pearson's correlation analysis, enabling a comprehensive exploration of the relationship dynamics existing within the data.

*Table 3: Correlation Analysis*

Correlations			
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		Knowledge sharing	Centralization
Knowledge sharing	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	51	
Centralization	Pearson Correlation	.339*	1
	Sig. (2-tailed)	0.015	
	N	51	51
** Correlation is significant at the 0.01 level (2-tailed).			

The calculated Pearson correlation coefficient between Centralization and Knowledge Sharing yielded a value of 0.339 as demonstrated on *Table 3*. This coefficient signifies a positive relationship between the two variables. It is noteworthy that this relationship attained statistical significance, substantiated by a p-value of 0.015. This outcome is consistent with the observations of Yang et al. (2015), who posited a positive correlation between centralization and innovation performance—an element intricately tied to knowledge sharing. Nevertheless, the potency of this positive effect is notably contingent upon factors such as the presence of high-level human capital, charismatic leadership, or entrepreneurial orientation.

Conversely, divergent findings emerged from the work of Khodaya et al. (2011), who detected a contrary relationship. Their research revealed a negative correlation between knowledge sharing and structural factors. This finding suggests that high centralization imparts a negative influence on knowledge sharing within organizational contexts. In such circumstances, it appears that the dominant influence of centralization hinders the seamless flow and interchange of knowledge among constituents within the organizational framework.

### Regression Analysis

Multiple regression analysis was applied to facilitate an in-depth exploration of the collective impact of the predictor variables on the phenomenon under study. The coefficient of determination, captured within the adjusted R-squared (0.547), indicated the extent of variability in Knowledge Sharing within Kenyan universities that could be expounded by all the independent variables under

study - Centralization, Formalization, Integration, and Complexity. This signifies that a notable 54.7% of the variance in the dependent variable can be illuminated through these independent factors, underscoring the potency of these elements in shaping the landscape of knowledge sharing. The statistically significant p-value (0.000) of the regression model confirmed its appropriateness for deriving meaningful inferences about population parameters.

For Centralization, the corresponding coefficient ( $\beta_1$ ) manifested a value of 0.490. Remarkably, the accompanying p-value (0.018) breached the significance threshold. This compelling finding underscores the substantive role of Centralization as a predictor of knowledge sharing within Kenyan universities. In essence, Centralization emerged as a salient factor that significantly contributes to the dynamics of knowledge sharing in universities.

*Table 4: Regression Analysis Coefficients*

Coefficients						
a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.230	.838		-.274	.785
	centralization	.490	.199	.275	2.464	.018
a. Dependent Variable: knowledge sharing						

These findings are consistent with the insights drawn from previous scholarly endeavors. Susanty et al. (2012) argued that centralization negatively influences knowledge flow within organizations, which aligns with the observed limitations on interactions and communication resulting from higher authorities' control.

Similarly, the positive relationship found between centralization and knowledge sharing echoes Yang et al. (2015)'s identification of a comparable linkage between centralization and innovation performance. Nonetheless, it's important to note that this effect might be moderated by factors such as high-level human capital, charismatic leadership, or entrepreneurial orientation, as suggested

by Yang et al. (2015). Conversely, Khodaya et al. (2011) noted a negative relationship between knowledge-sharing and structural factors, underscoring the complex interplay of organizational dynamics in shaping knowledge-sharing practices.

## **Conclusion**

In essence, this study emphasizes the intricate interplay between centralization and knowledge - sharing in the dynamic landscape of Kenyan universities, providing insights for optimizing knowledge-sharing practices within the organizational fabric.

The findings drawn from descriptive statistics underscore the distinct impact of centralization on knowledge-sharing dynamics. Respondents concurred that centralization wielded an apparent influence across various dimensions of decision-making and employee engagement within university settings. This encompassed areas such as policy formulation, staff promotion decisions, and program evolution. The statistical analyses served to bolster these findings, substantiating a robust and positive correlation between centralization and knowledge sharing.

The observed positive linkage between centralization and knowledge sharing, as manifested within the context of Kenyan universities, harmonizes with extant scholarship that accentuates centralization's propensity to restrict interactions, communication, and creative exchange among organizational members. The implications of this study's outcomes transcend mere correlation, contributing to a profound comprehension of how organizational structure intricately molds knowledge-sharing practices. Consequently, these insights empower universities to deliberate judiciously upon their structural frameworks, fostering a comprehensive understanding to guide the fortification of their knowledge-sharing endeavors.

Drawing from the research's findings, several conclusive observations can be advanced. Foremost, the investigation has unveiled an average, yet statistically significant, relationship between centralization and knowledge sharing in Kenyan universities. This revelation implies that heightened centralization catalyzes augmented knowledge sharing within these academic institutions. This outcome might seemingly defy conventional wisdom, as centralized structures typically concentrate decision-making authority among select leaders or echelons, ostensibly introducing potential impediments to the unhindered exchange of knowledge. One might anticipate a negative correlation between centralization and knowledge sharing. Nevertheless, centralization

harbors inherent advantages that inadvertently foster knowledge sharing. The hierarchical command structure guarantees lucidity in reporting lines, establishing avenues for junior staff to communicate queries and concerns about university operations. Moreover, higher executives can effectively delegate authority to domain experts, thereby streamlining information dissemination and expediting the execution of integrated decisions.

It is vital to acknowledge that adept management of centralization enables expedited decision-making by a select cohort of decision-makers, leading to efficient resolution and alignment. Conversely, involving all stakeholders could potentially engender prolonged discussions, potential conflicts, and logistical complexities, thereby impeding the swift execution of decisions—a counterproductive scenario for knowledge-sharing objectives.

In summary, for centralized structures to effectively underpin knowledge sharing, university management ought to cultivate an environment that fosters transparent knowledge exchange, akin to an "open-door policy," reminiscent of practices observed in many private Kenyan universities. Additionally, instituting mechanisms to acknowledge and reward knowledge-sharing endeavors, particularly those that substantially contribute, could serve as a catalyst for heightened engagement and the dissemination of knowledge.

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