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FACTORS INFLUENCING KNOWLEDGE SHARING IN THE ENERGY SECTOR IN KENYA

Sylvia Njeri Kimingi,[1] & Thomas Anyanje Senaji [2]

[1] Master of Science Candidate, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya
[2] Professor, The East African University [EAU], Kenya

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ABSTRACT

The world has now evolved into the era of knowledge-based economy (KBE), where knowledge is the main capital as well as a fundamental factor for growth and development of industries. From the knowledge-based view, an organization is considered as an entity where knowledge is created and used to improve performance. Therefore effective knowledge management process is crucial for success in any organization and knowledge sharing is the most important aspect in knowledge management processes which enables organizations to come up with new solutions to problems. However, there is scarcity of empirical studies on the factors influencing knowledge sharing particularly in the energy sector in Kenya. The purpose of this study was to assess the factors influencing knowledge sharing in the energy sector in Kenya. A descriptive survey of 98 respondents was conducted to determine the influence of rewards and top management support on knowledge sharing in the energy sector in Kenya. Data was collected using structured questionnaire and analyzed using both descriptive and inferential statistics using Statistical Package of Social Sciences (SPSS) version 22; a response rate of 90.81% was achieved. It was found that rewards ($t = 2.711$, $p = .006 < .05$) and top management support ($t = 3.080$, $p = .003 < .05$), positively influenced knowledge sharing in the energy sector in Kenya. The combination of rewards and top management support explained 68.8% ($R^2 = .688$) of the variation in knowledge sharing. Based on these findings, it recommended that the energy sector provide rewards targeted at knowledge sharing and provide support to knowledge management activities. Further, studies are recommended to determine other factors that may be affecting knowledge sharing in other organisations.

Keywords: *Knowledge sharing, Rewards, Top Management support*

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INTRODUCTION

The world has now evolved into the era of knowledge-based economy (KBE), where knowledge is seen as its main capital as well as a fundamental factor for growth and development of industries. In this knowledge era, the expression "knowledge is powerful" has changed to "Knowledge sharing is power" (Vahidi, 2017). Razmerita, Kirchner and Nielsen (2016) concur that in the contemporary knowledge-intensive economy, knowledge is recognized as a critical strategic resource for the organizations and the source of organization's competitive advantage because it signifies intangible assets that are unique, inimitable and non-substitutable. However, the studies note that an organization's capability is not only improved by relying on the existence of knowledge but also its ability in effectively using the existing organizational knowledge as well as sharing so as to be able to come up with new knowledge and apply.

The knowledge-based view of the organization considers the organization as a knowledge creating entity hence effective knowledge management is a crucial factor for success of every organization in the knowledge era (Ramayah, Yeap, & Ignatius, 2014). For this reason, organizations have greatly embraced knowledge management activities, which have phases such as knowledge identification, creation, organization, storage, sharing, use, and maintenance. Among these phases, knowledge sharing has been identified as a key process in knowledge management.

Knowledge Management is the process of promoting an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's knowledge assets (Janus, 2016).This can be translated as to making the right knowledge available to the right people at the right time for the right decision to be made. According to Nawab, Nazir, Zahid, and Fawad (2015) KM has become an important theme at many large business organizations as managers realize that much of their organization's value depends on its ability of creating and managing its own knowledge. An organization that encourages its employees to share knowledge stands a great chance of coming up with new ideas that help in solving problems arising in the organization.

Knowledge management has four key processes namely knowledge discovery, knowledge capture, knowledge sharing and knowledge application. Out of the four key processes, knowledge sharing is perceived as the most important aspect because most of KM initiatives are dependent on it (Ologbo, Nor & Okyere-Kwakye, 2015). It is important to acknowledge that knowledge sharing in any organization is very important as this is the basis upon which ideas and processes are being implemented and that helps management in decision making.

Many researchers define knowledge sharing in different ways. For instance, Kaewchur and Phusavat (2016), define it as flow of knowledge from one individual to the other so as to collaborate with others in solving problems, developing of new ideas and implementation of policies and procedures. Also, Aliakbar, Yusoff, and Mahmood (2012) defines knowledge sharing as various ways of executing tasks as well as the know-how to work with each other in coming up with solutions to problems, implementing policies as well as in developing new ideas. The researchers point out that knowledge sharing may never have a standard definition because it consists of different elements. The three major elements of knowledge sharing are: the kind of knowledge shared, ways of sharing the knowledge; face to face, conference, use of knowledge networks, and organizational learning, and lastly the level of sharing: individuals, teams, or organizations.

Knowledge shared can either be in form of tacit knowledge, explicit knowledge or embedded knowledge. Nonaka and Toyama (2015) defined tacit knowledge as highly personal and engrained in action and in an individual's commitment to a specific task. He continues that, tacit knowledge is difficult to formalize and also difficult to

communicate to others whereas, Explicit knowledge refers to knowledge that can be expressed, captured, and documented in forms of publication such as trade secrets, patents and online databases (Mlanga, 2013). Explicit knowledge is often connected to human communications through signs, images, and codes. The transmission of explicit knowledge is based on the interactions between people who own their information and data which can be easily accessed and seen by others while embedded knowledge refers to the knowledge that is locked in processes, products, culture, routines, artifacts, or structures and can be shared when the knowledge from one product or Process is incorporated into another (Gojak-Salimović, 2018 et al.).Knowledge sharing which is the important process of knowledge management is therefore crucial to enhance organization's innovation capability.

Statement of the Problem

Knowledge sharing unlike knowledge discovery, knowledge capture and knowledge application is perceived as the most important aspect in Knowledge Management initiatives (Ologbo et al., 2015). It is therefore important to acknowledge that knowledge sharing in any organization is very important as this enables individuals and or organizations to meet their needs while coming up with new solutions to problems that face them or their organizations.

The Energy sector is one of the crucial sectors in Kenya and needs to be given much emphasis because it is crucial for the sustainability of modern societies. To achieve vision 2030, energy has been identified as one of the key elements for sustaining Kenya's economic growth and to also spur the annual GDP by 10% (RoK, 2013). However, the sector has a challenge of sustaining the supply of power to meet the ever growing demands (RoK, 2013). In fact, Kenya has been experiencing problems in the area of electricity generation, transmission and distribution for the last two decades (Maina, 2013).

Edwards (2008) as quoted by (Kalei, 2015) suggests that such challenges in the energy sector can be addressed from a knowledge management perspective through institutionalization of knowledge management in organizations. Since knowledge sharing is a crucial aspect of knowledge management, there is need to understand factors that lead to effective knowledge sharing in an organization. This notwithstanding, there is scarce empirical evidence on factors that influence knowledge sharing in general and in Kenya's energy sector in particular. As such the study aimed at bridging this knowledge gap by assessing the influence of rewards and top management support on knowledge sharing. Consistent with this aim, an attempt was made to answer two questions: First, what is the relationship between rewards and knowledge sharing; and second, what is the influence of top management support on knowledge sharing in the energy sector in Kenya?

LITERATURE REVIEW

This study was anchored by Self-determination Theory and Resource Based View theory (RBV)

Self-determination Theory

Gagné and Deci (2005), and Porter and Lawler (1968) suggested a model of work-motivation based on the motivation theory that highlight two types of motivation: intrinsic and extrinsic motivation. The theory notes that intrinsic motivation is about staff executing their duties because they enjoy and derive satisfaction from what they are doing. Extrinsic motivation is where staff execute their duties because of the verbal or tangible reward appended to the tasks. The satisfaction is not derived from the task they are carrying out but rather from the extrinsic effects provided by the task. This theory is linked to the first objective of this study which is to assess the influence of Rewards on knowledge sharing in the energy sector in Kenya.

Knowledge sharing can be viewed as a task. According to self-determination theory, staff who are intrinsically motivated share their knowledge because they enjoy sharing their knowledge so that

their colleagues can learn and execute their duties efficiently while the extrinsically motivated staff need to be motivated through rewards such as money, trip to destination of their choice, acknowledgement letter, promotions so as to share their knowledge.

Resource Based Theory

Resource Based Theory (RBV) came into existence in the year 1980 and was first published by Wernerfelt (1984). With RBV, the organization is in a position to understand the importance of their resources. Resources tend to be difficult to imitate, rare and valuable. According to Hitt, Xu and Carnes (2016), knowledge is one of the organizational resources. According to the RBV, an organization benefits more with valuable information that it receives from individuals who form part of its staffs. This theory is linked to the second objective of the study and it states "To determine the influence of top management support on knowledge sharing in the energy sector in Kenya."

Santos and Morris (2017) asserts that, Resource Based Theory facilitates Top Management Support (TSS), which involves continuous support to employees with guidelines and frameworks that will motivate and enable them share the knowledge that they have since knowledge sharing is voluntary. These guidelines and frameworks within which employees operate are resources that are provided by top management. Muinde, Lewa, and Kamau (2016) concur that RBV of the firm enables organizations to use resources such as top management support together with KM process capabilities of creation, retention, transfer and application to transform organizational knowledge into a valuable, rare, inimitable and nonsubstitutable resource for competitive advantage.

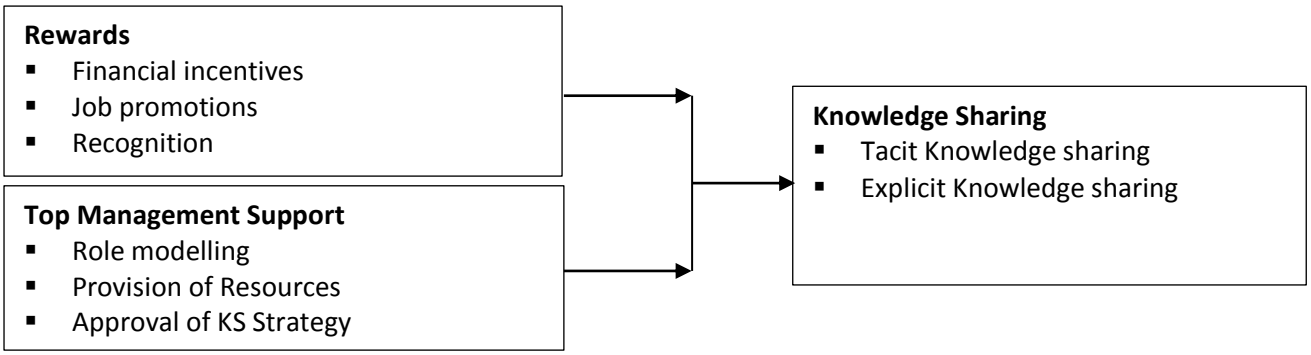

Figure 1*:* Conceptual Framework

Rewards

Rewards are categorized into intrinsic and extrinsic rewards. Extrinsic rewards refer to tangible things, which organizations give their employees such as salaries, bonuses, promotion, commissions, and an educational opportunity while intrinsic rewards can be defined as the pleasure or satisfaction derived from executing a task (Šajeva, 2014). An organization needs to understand and appreciate employees' motivation in the knowledge sharing their knowledge. According to Razmerita, Kirchner, and Nielsen (2016), Intrinsic motivation is the interest gained by enjoyment in executing a task or deriving satisfaction in helping other colleagues. This kind of motivation is within an individual. He asserts that intrinsically motivated employees are more likely to carry out their duties and also in the long run end up improving and sharpening their skills which leads to better capabilities for themselves as well as that of the organization.

Further, extrinsic motivation can be defined as the tangible rewards given to employees to motivate certain Behaviors (Mc Manus, 2016). This kind of motivation is based on the perception of the effort and reward associated with sharing knowledge. This means that when employees realize the benefits exceed or is equal to the cost, knowledge sharing

will happen among themselves. As a result, most organizations have embraced the culture of motivating employees through rewards system to encourage them in sharing their knowledge. A case example is Buckman Laboratories that rewards its top 100 employees who share their knowledge during their annual conference. Also, Lotus Development, a division of IBM, allocates 25 per cent of the total performance evaluation of its customer support workers on the extent of their knowledge sharing activities (Alhawary, Abu-Rumman, & Alshamaileh, 2017). From this study, it can be deduced that when employees know they will receive organizational rewards by offering their knowledge, they will develop greater positive willingness to both give and receive knowledge.

Top Management Support

Top Management, just like other employees, work within a social like group and, as a social behavior, an individual's knowledge sharing is inevitably susceptible to social influences arising from other people (Mc Manus, 2016). Hence, it can be argued that top management support determines the culture of an organization by spelling out the shared values and goals of the organization (Evans, 2012). Since the sharing of knowledge is done on a volunteer basis, which can be difficult to happen, it is seen as a prerequisite that top management should provide continuous support, guidelines and framework for knowledge sharing to effectively happen in the organization.

Alhawary et al., (2017) asserts that top management support is considered one of the important potential influences on organizational knowledge sharing .This is because it creates a supportive climate and providing sufficient resources for executing initiatives in line with knowledge sharing. Mc Manus (2016) study corresponds that to successfully drive KM initiatives like knowledge sharing, top management involvement is of great essence. Top management commitment and involvement includes conducting of efforts in order to convey to employees the importance of KM, in support of creating a culture that promotes the creation and sharing of knowledge (Bello, 2015).

This translates that, support from management only is termed not enough, top management needs to also lead the way by demonstrating a commitment and an active role in sharing their knowledge too. They need to lead by demonstrating the willingness to freely give knowledge to their juniors in the organization as well as continuously learning and seeking new knowledge and ideas. When they act as role models in the organization, they naturally influence other employees in participating in KM initiatives like knowledge sharing.

Knowledge Sharing

Tacit knowledge was first defined by Michael Polanyi as knowledge that is not easily articulated or verbalized, he puts it as 'We know more than we can tell' (Mohajan, 2016). Keglovits (2013) agrees that tacit knowledge is difficult to transmit and not easy to communicate with language. It is actually knowledge that is deeper than it could be just expressed with words.

Tacit knowledge sharing is becoming essential as organizations strive to meet the ever increasing and changing demands in the market. Product, service and process innovation in organizations are highly contributed by the tacit knowledge in organization. Therefore, sharing tacit knowledge among colleagues is more crucial with today's mobile work force where employees' turnover leads to loss of organizational memory (Mayfield, 2010).In addition, trust and mutual understating are key components for a successful tacit knowledge sharing.

Explicit knowledge is knowledge which is easily articulated in a formal and systematic manner and can be shared in the form of data (Mládková, 2012). It can be processed, transmitted and stored easily with the help of technology. Sharing of explicit knowledge entails formally and systematically articulated, disseminated and stored knowledge that is beneficial to an organization. Organizations have acknowledged the importance of knowledge and knowledge repositories for managing explicit

knowledge. The knowledge repositories aid in documenting knowledge hence making it widely available and easily accessible in the organization(Obrenovic, Obrenovic & Hudaykulov, 2015).

Rewards and Knowledge Sharing

Findings from the study by Boateng and Agyemang (2016) on a qualitative insight into key determinants of knowledge sharing in a public sector institution in Ghana showed that public sector workers would hoard their knowledge when they are undermined and disregarded. Public sector workers want to be valued and be shown recognition before they will share their knowledge. Employees' opinions and suggestions should be welcomed and evaluated on their merits. In this case, undermining employees' capabilities and ideas would be a recipe for knowledge hoarding. These findings are echoed by Ong, Yeap, Tan, and Chong (2011) on Factors influencing knowledge sharing among undergraduate students: A Malaysian perspective. The study revealed that rewards and tangible benefits such as money, recognition, gaining acceptance and creation of an 'elite' image were some of the motivating factors for knowledge sharing among the students.

However, study by Titi (2013) showed that there was no relationship between knowledge sharing and rewards. This can be explained on the basis that rewards might cause a strained relationship between those rewarded and those not.

Top Management Support and Knowledge Sharing

According to Evans (2012) top Management employees influence the culture of an organization by clearly spelling out the shared values and goals of the organization. Top management support is considered as a prerequisite for effective knowledge sharing since it is considered to be done on volunteer basis. This can be very difficult to articulate, therefore, they need to provide appropriate support and guidelines (Manus, 2016).

A study by Witherspoon, Bergner, Cockrell, and Stone (2013) showed that employees are more willing to share their knowledge if they believe top management values knowledge sharing. Conversely, a study by Nemati-Anaraki and Nooshinfard (2014) confirmed that there is no denying that management leadership and support play a key role in the facilitating of employees' willingness to sharing their knowledge.

METHODOLOGY

The research design adopted by the study was descriptive research design. The target population was obtained from staff in Kenya Power and Lighting Company Limited, Kenya Electricity Generating Company Limited, Energy and Petroleum Regulatory Authority, Rural Electrification and Renewable Energy Corporation, Geothermal Development Company and Kenya Electricity Transmitting Company at the Head Quarters offices who total to 5800. In order to come up with a representative sample for this study, the Nassiuma (2000) formula was used to calculate the sample which was 98.

Structured questionnaire with questions/ statements anchored on a five point Likert scale was used to collect data. The scoring on the scale was 1 = strongly disagree, 2 = disagree, 3 = somewhat agree, 4 = agree and 5 = strongly agree. The research instrument was pre-tested before administering to the sample size. According to Bryman (2017), pre-testing allows errors to be identified and corrected before collecting data for actual analysis. 10% of the population was drawn as a representative to conduct the pilot study. Cronbach's Alpha was used to calculate and measure the internal consistency and a co-efficient of 0.7 and above was accepted. To guarantee validity, the study adopted content validity that is a personal judgment on the respondents' capability in understanding the concepts intended to be addressed in the research. The researcher and research supervisor cross checked the instruments and compared with the research objectives to ensure it captures all the information to answer the set questions and address the objectives set.

Quantitative data was fed into the SPSS software for analysis and the findings was presented in statistical tables. In addition, Pearson correlation to assess relationship between variables and multiple regression analysis to determine the influence of a variable on the other variable. The mean responses were coded as follows: 'strongly disagree' and 'disagree' were taken to represent a statement not agreed upon, equivalent to mean score of 1 to 2.5. The score of 'neutral/somewhat agree' was taken to represent a statement neither agreed nor disagreed upon, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' were taken to represent statement agreed upon equivalent to a mean score of 3.5 to 5.

RESULTS AND DISCUSSIONS

A total of 89 questionnaires were properly filled and returned. This represented a 90.81% response rate which was satisfactory.

Descriptive results for Rewards and Top Management Support

The following is the description of the status of rewards and top management support in the energy sector in Kenya.

Rewards. The first objective of the study sought to assess the influence of rewards on knowledge sharing in the Energy sector in Kenya. Means and percentages of responses on rewards were computed. The results were presented in Table 1.

TABLE 1

Rewards

Statements	Mean	SD
There is an approved rewards and recognition framework in our organization	3.98	0.83
Employees who excel in knowledge sharing are always acknowledged	3.90	0.82
Employees who excel in knowledge sharing are always promoted	4.05	0.85
Knowledge sharing is highly encouraged in our organization	4.46	0.50
Average	**4.09**	**0.75**

The rewards for knowledge sharing were found to be satisfactory in the energy sector in Kenya. Specifically, there was an approved rewards and recognition framework in the organization (M = 3.98, SD = 0.83). Further, "employees who excel in knowledge sharing are always acknowledged" (M = 3.90, SD = 0.82). The findings are in line with the findings of Boateng and Agyemang (2016) that most parastatals in energy sector have approved rewards and recognition frameworks.

Furthermore, the respondents agreed that "employees who excel in knowledge sharing are always promoted" (M = 4.05, SD = 0.85). In addition, the results established that majority of the respondents (88%) agreed that knowledge sharing was highly encouraged in the organization (M = 4.46, SD = 0.50). These findings are consistent with those by Ong *et al*. (2011) that staff who are actively engaged in knowledge sharing are often promoted.

Using the Likert scale, the aggregate/composite responses was 4.09 which means that majority of the respondents were agreeing with most of the statements on rewards; additionally, the responses did not vary widely (SD = 0.75).

Top Management Support. The second objective of the study sought to determine the influence of top management support on knowledge sharing in the Energy sector in Kenya. Descriptive analysis was used on the data collected for the study variable top management support. The results were presented in Table 2.

TABLE 2

Top Management Support

Statements	Mean	Std. Deviation
There is an approved knowledge sharing framework that supports the KM activities	3.98	0.802
Our management also participates in the knowledge sharing activities	3.82	1.029
Knowledge sharing activities are funded in our organization	4.00	0.816
There is an effective structure to handle knowledge management activities	2.86	1.476
Average	**3.66**	**1.03**

The findings in Table 2 showed that majority of the respondents who were 66.9% agreed that there was an approved knowledge-sharing framework that supports the KM activities. The findings were in agreement with the findings of Witherspoon *et al*. (2013) that parastatals in energy sector approve knowledge- sharing framework that support KM activities. The statement response had a mean score of 3.98 and a standard deviation of 0.80. Further, the results indicated that majority of the respondents (63.2%) agreed to the statement that their management also participates in the knowledge sharing activities. The findings are in agreement with the findings of Nemati-Anaraki and Nooshinfard (2014) that top management support plays a key role in the facilitating of employees' willingness to sharing their knowledge.

The statement response had a mean score of 3.82 and a standard deviation of 1.02. Furthermore, the results revealed that majority of the respondents who were 76.9% agreed that the Knowledge sharing activities were funded in their organization. The responses on this statement had a mean of 4.00 and a standard deviation of 0.816. In addition, the results established that majority of the respondents (48.1%) agreed that there is an effective structure to handle knowledge management activities. The responses on this statement attracted a mean score of 2.86 and a standard deviation of 1.47. The results are in line with the findings of Manus (2016) that most of the top management in parastatals in energy sector support knowledge sharing through provision of appropriate support and guidelines. The mean of the responses on this statement was 3.66 and the standard deviation was 1.03. This indicated that although majority of the respondents were agreeing to the statement, the responses were varied but with a low variation. The results herein imply that top management influences the knowledge sharing in parastatals in the energy sector. The findings are in agreement with the findings of Evans (2012) that top management support has significant influence on knowledge sharing among parastatals in energy sector.

Knowledge Sharing. The study also sought to determine the level of agreement of respondents on various statements relating with knowledge sharing, both tacit and explicit. The results for tacit knowledge sharing were as presented in Table 3.

TABLE 3

Tacit Knowledge Sharing

Statement	Mean	SD
Knowledge sharing is high among colleagues	3.982	1.370
Regular interactions to share knowledge and experiences among colleagues is encouraged in our organization	3.777	1.275
In our organization, we proactively share knowledge resources (ideas, insights, etc.)	3.889	1.381
Our organization has effective mentorship programs	3.738	1.320

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From the findings presented in table 3, majority (80.8%) of the respondents were in agreement that in their organization, they proactively share knowledge resources (ideas, insights, etc.). The mean was 3.982 and the standard deviation was 1.370, which is an indication that on average respondents were in agreement with the statement. The findings also showed that majority (80.1%) of the respondents were in agreement that knowledge sharing is high among colleagues. The mean value for this statement was 3.889 and standard deviation was 1.381, which is an indication that on average respondents were in agreement. In addition, majority (75.6%) of respondents agreed that regular interactions to share knowledge and experiences among colleagues is encouraged in their organization; the mean value was 3.777 and standard deviation 1.275 an indication that on average respondents were in agreement. Furthermore, majority (77.5%) of respondents agreed that their organization has effective mentorship programs and indicated by a mean of 3.738 and standard deviation of 1.320.

These study findings concurs with Keglovits (2013) who explained that tacit knowledge sharing is becoming essential as organizations strive to meet the ever increasing and changing demands in the market; the researcher therefore explained that sharing tacit knowledge among colleagues is more crucial with today's mobile work force where employees' turnover leads to loss of organizational memory.

TABLE 4

Explicit Knowledge sharing

Statement	Mean	SD
I am satisfied with access to information and knowledge needed in decision-making/ executing my roles in my organization	3.698	1.331
Our organizational documents are centrally located hence all staff can easily access the formation/knowledge	3.948	1.263
There are formal mechanisms on how best practices are shared in the organization regarding sharing of knowledge	3.863	1.326
I am satisfied with the quality of knowledge resources shared within my organization	3.836	1.220

From the findings presented in table 4, majority (78.2%) of the respondents agreed that there are formal mechanisms on how best practices are shared in the organization regarding sharing of knowledge. The mean value was 3.863 and standard deviation was 1.326 and indication that on average the respondents agreed with the statement. The findings also showed that majority (77.5%) of the respondents were in agreement that they are satisfied with access to information and knowledge needed in decision-making/ executing their roles in their organization as indicated by a mean of 3.698 and standard deviation of 1.331. The study also established that majority (74.9%) agreed that their organizational documents are centrally located; hence, all staff can easily access the information/knowledge as supported by a mean of 3.948 and standard deviation of 1.263. Furthermore, the study findings showed that majority (72.9%) of the respondents agreed that they are satisfied with the quality of knowledge resources shared within their organization as indicated by a mean of 3.836 and a standard deviation of 1.220.

These study findings agreed with Obrenovic, Obrenovic, and Hudaykulov (2015) that Sharing of explicit knowledge entails formally and systematically articulated, disseminated and stored knowledge that is beneficial to an organization. Organizations have acknowledged the importance of knowledge and knowledge repositories for managing explicit knowledge.

Relationship between Rewards, Top Management Support and Knowledge Sharing

TABLE 5

Correlation Matrix for the Study Variables

	Knowledge sharing	rewards	Top management
Knowledge sharing	1.000		
Rewards	.614**	1.000	
	.000		
Top management	.529**	0.791	1.000
	.004	0.072	

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

Correlation analysis results in Table 5 showed that there is a positive and significant correlation between rewards and knowledge sharing (r = 0.614, p = .001 < .05). Thus, the findings indicated that rewards increased the knowledge sharing in the parastatals in energy sector. Results also suggested that there was a positive and significant relationship between top management support and knowledge sharing in the parastatals energy sector (r = 0.529, p = .004 < .05). Thus an increase in top management support results to increase in the knowledge sharing in the parastatals in the energy sector. The correlation analysis exhibited positive results; hence, the variables were selected for further regression analysis to test their individual contributions.

Influence of Rewards, Management Support on Knowledge Sharing

TABLE 6

Regression Model Summary

Indicator	Coefficient
R	0.829
R Square	0.688
Adjusted R Squared	0.671
Std. Error of the Estimate	0.295

a. Predictors : (Constant), rewards, top management support

Rewards and Top Management support have a moderately good fit in predicting changes in knowledge sharing in the parastatals in the energy sector. This was supported by coefficient of determination also known as the R square of 68.8%. This means that rewards, top management support, organizational culture and technology explain 68.8% of the variations in the dependent variable, which knowledge was sharing in the parastatals in the energy sector. This results further meant that the model applied to link the relationship of the variables was satisfactory.

In statistics significance, testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. Table 6 provides the results on the analysis of the variance (ANOVA).

TABLE 7

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	23.49	4	5.873	9.871	.001
Residual	49.997	84	0.595		
Total	73.488	88			

ANOVA statistics of the processed data at 5% level of significance shows that the value of calculated F is 9.87 and the value of F critical at 5% level is 2.48 since F calculated is greater than the F critical (9.871 >2.48), this shows that the overall model was significant in explaining the variation in the dependent variable.

TABLE 8

Regression Coefficients

Model	B	Std. Error	T	Sig.
(Constant)	0.156	0.585	0.267	0.79
Rewards	0.345	0.127	2.711	0.006
Top management Support	0.294	0.096	3.08	0.003

Table 8 showed that rewards and knowledge sharing in the energy sector are positively and significantly related (t= 2.711, p=0.006). The table further indicated that top management support and knowledge sharing in the parastatals in the energy sector are positively and significantly related (t= 3.08, p=0.003).

Thus, the optimal model for the study was;

$$\mathbf{Y = 0.156 + 0.345X_1 + 0.294X_2}$$

In conclusion, the regression findings found out that top management support had the highest significance to the knowledge sharing in the parastatals in the energy sector, followed by rewards. These findings agreed with that of Ong, Yeap, Tan, and Chong, (2011) on Factors influencing knowledge sharing among undergraduate students: A Malaysian perspective. The study revealed that rewards and tangible benefits such as money, recognition, gaining acceptance and creation of an 'elite' image were some of the motivating factors for knowledge sharing among the students. However, the findings disagreed with those of Titi, (2013) who showed that there was no relationship between knowledge sharing and rewards. This can be explained on the basis that rewards might cause a strained relationship between those rewarded and those not.

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that rewards and knowledge sharing in the energy sector had a positive and significant relationship. The study found that financial incentives, job promotions and recognition have significant influence on knowledge sharing among parastatals in energy sector.

The study also concluded that that top management support and knowledge sharing in the parastatals in the energy sector had a positive and significant relationship. The study also found that role modeling, provision of resources and approvals of KS strategy have significant influence on knowledge sharing among parastatals in energy sector.

In line with the first objective, the study recommended the need to develop and adopt an effective rewards system. Different ways of rewarding such as promotion, acknowledgement or financial rewards can be embraced. This will play a critical role in motivating staff to share their knowledge.

The study also recommended the top management involvement when it comes to knowledge sharing activities. They need to take a forefront in sharing knowledge. There is easier buy-in from other employees when top management act as role models in knowledge sharing. Also, financial resources that support the knowledge sharing activities should be provided to support the execution of the activities.

Area of Further Study

The study was a milestone for further research in the field of knowledge sharing in Africa and particularly in Kenya, parastatals in the energy sector. The findings demonstrated the important factors of knowledge sharing that include; rewards and top management support. The current study obtained an R^2 of 68.8% and should therefore be expanded further in future in order to include other factors of knowledge sharing that may as well have a positive significance as factors influencing knowledge sharing in the energy sector in Kenya to cater for the remaining 31.2%. Existing literature indicates that as a future avenue of research, there is need to undertake similar research in other sectors in Kenya and other countries in order to establish whether the explored factors of knowledge sharing can be generalized as the only factors of knowledge sharing.

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