The Effects of the Shared Repertoire and Voluntary Action Characteristics of the Community of Practice on Knowledge Sharing at Kenya Revenue Authority

Evans Wafula Simiyu
Jomo Kenyatta University of Agriculture and Technology, Kenya
ivernsimiyu@gmail.com

Grace Wambui Kamau
Senior Lecturer, Department of Information and Knowledge Management
Technical University of Kenya
grace.kamau6@gmail.com

Abstract

Rationale of Study – Knowledge-sharing practices can be used to improve the current practices of the Authority. This study investigated the effects of the shared repertoire and voluntary action characteristics of a community of practice (CoP) on knowledge sharing in the Kenya Revenue Authority.

Methodology – A descriptive survey research design was adopted. Both qualitative and quantitative methods were employed to collect data. Data was obtained by administering semi-structured questionnaires. The target population was 1099 KRA employees, including middle-level managers and lower-level staff based at Times Tower in Nairobi. A stratified random sampling technique was employed to create a sample size of 92 respondents, ensuring equal representation of KRA employees.

Findings – The ANOVA results implied a significant relationship between shared repertoire and voluntary action with knowledge sharing at Kenya Revenue Authority. The coefficients of determination revealed that voluntary action had a more significant effect over shared repertoire on knowledge sharing in KRA.

Implications – This study can help KRA to implement working CoPs, improve knowledge sharing and enhance customer-focused tax administration. The study recommends that there should be specific artefacts only shared with department members and that KRA employees should belong to a professional body beyond the department's requirements.

Originality – This study fills a gap in recent research on the effects of the shared repertoire and voluntary action of a community of practice on knowledge sharing.

Keywords

Communities of practice, Knowledge sharing, Shared repertoire, Voluntary action, Kenya Revenue Authority, Kenya

1 Introduction

Knowledge has become a fundamental asset in firms and organizations around the globe. Companies are increasingly utilizing knowledge to remain relevant and wade off competition. In the present Knowledge-Based Economy, an organization's ability to tactically and strategically leverage knowledge is critical to boosting its competitive advantage (Liao, 2017). In addition, companies are dwelling on intangible assets that consist of intellectual capital, structural knowledge, crucial knowledge assets, and a rich experience to eliminate rivalry brought forth by knowledge. Moreover, ISO 9001: 2015 Clause 7.1.6 on Organization Knowledge requires organizations to manage critical knowledge required for their routine processes and avail it when needed (Wilson & Campbell, 2016).

According to Liebowitz (2019), knowledge sharing is the process of sharing both tacit and explicit knowledge via the processes of externalization and socialization, respectively. Tacit knowledge is the knowledge embedded in people's heads and very difficult to articulate, while explicit knowledge is the knowledge that has been expressed and documented. Therefore, it is easily available (Ferreira *et* al., 2018). Governments of South America have invested substantial resources leveraging existing knowledge to boost their economic development and create a knowledge-based economy (Al-Kurdi, El-Haddadeh & Eldabi, 2018). According to Charterina, Landeta, Basterretxea, and Landeta (2017), firms that share knowledge more often have more valuable innovation that supports their growth and competitiveness. However, in Kenya, government institutions do not maximize knowledge sharing due to extremely lengthy and bureaucratic approaches that hamper the implementation of crucial policies (Jones, 2014). The study further argues that creating a knowledge-sharing platform is essential for boosting KRA knowledge-sharing approaches. KRA was selected because it is the principal revenue agency and accounts for over 95% of government ordinal revenues. It also plays a crucial role in achieving the Kenya Vision 2030. The Authority has its main office in Times Tower in Nairobi and regional offices in all counties across the country. The study focused on both tacit and explicit knowledge captured in CoPs.

Communities enhance and facilitate connections among people; the connections are mostly used to develop corporate links and serve as expertise location services (Massingham, 2019). Wenger and Wenger-Trayner (2015) define a CoP as a team of employees sharing a common interest in a given subject or field and who share

information and knowledge through the structure and configuration of the organization to expound, develop new critical knowledge, lessons learned, and best practices. CoPs enhance community-based interactions and links; such links to experts can, as a result, be integrated into a pool of knowledge correspondents.

Kirchner, Jørgensen, Bolisani, and Scarso (2019) state that CoPs illustrate the process by which knowledge is created and eventually flows within a group of individuals to be engrained in their day-to-day duties. CoPs are the main tool through which knowledge sharing, knowledge creation, and lessons learned are shared among members. Wamitu (2016) recommends the creation of CoPs in Kenya's public sector organizations to strengthen unity amongst people with a common skill set, interest, and talent. Additionally, Guyo (2012) advocates for the formation of CoPs as a means of exchanging resources and ideas and sharing tacit knowledge harnessed during informal training in state corporations.

Moreover, to offer better services to taxpayers, KRA is subdivided into the following regions: Eastern Region, South Rift Valley, Southern Region, North Rift Valley, Northern Region, and Central Region. The Commissioner General leads the operations of the Authority, while the Commissioners head departments. The departments are subdivided into the following: Domestic Taxes Department, Customs and Border Control, Corporate Support Services, Investigation and Enforcement, Internal Audit and Strategy, and Innovation and Risk Management (KRA, 2015).

2 Statement of Research Problem

The communities of practice (CoPs) promote knowledge sharing in organizations. They enhance the exchange of valuable resources within teams and, as a result, boost a company's knowledge pool (Ferreira et al., 2018). Knowledge sharing is a fundamental tool by which employees collaborate, share ideas, innovate and improve an organization's competitive edge. Abdallah (2019) asserts that CoPs are the bond by which crucial tacit knowledge can be shared among groups and individuals in an organization.

However, the Kenya Revenue Authority knowledge sharing culture score was 23% in 2016 (KRA, 2016). According to Defond (2013), this score of 23% is attributed to a very low or poor knowledge-sharing culture as per the Most Admired Knowledge Enterprise Framework. The European Most Admired Knowledge Enterprise (MAKE) study was started in 1999 to recognize European organizations' ability to create and maximize existing enterprise knowledge and produce knowledge-based products (The KNOW

Network, 2017). Consequently, the Authority needed to meet its revenue targets. For example, in 2015/2016, it recorded 99.9%, representing USD 11,713.64 Million, the target being USD 11,725.37 Million. In 2016/2017, the collection dropped to 95.4% representing USD 13,325.27 Million, the target of USD 13,997.13 Million (EARA, 2018). According to Cheng and Lee (2014), knowledge sharing increases individual creativity and significantly contributes to organizational performance.

Jones (2014) asserts that poor knowledge-sharing culture was a key factor contributing to KRA's declining performance. This is echoed by the findings of Wamitu (2016), who notes that public sector organizations in Kenya do not employ a culture that supports knowledge sharing and facilitate tapping of tacit knowledge in CoPs. Additionally, Wanjiku and Karugu (2019) recommended that KRA develop initiatives on knowledge management that will bolster the transfer of critical knowledge among its employees.

Furthermore, the study was motivated by the existing knowledge gaps on how Communities of Practices influence knowledge sharing in Kenya. Therefore, the study will help counteract this problem by investigating the effects of COP characteristics on knowledge sharing at the Kenya Revenue Authority.

The purpose of the study was to investigate the effects of communities of practice characteristics on knowledge sharing in the Kenya Revenue Authority. The objectives of this study were to ascertain the effect of shared repertoire on knowledge sharing in KRA, and assess the outcome of voluntary action on knowledge sharing in KRA.

The study was undertaken in KRA's headquarters office in Times Tower Building, Nairobi. The study was limited to the KRA staff in Times Tower in Nairobi. The study was conducted within three months. Moreover, the study focuses on Etienne Wenger's characteristics of CoPs: Shared Repertoire of CoPs and Rene Kanter Voluntary action of CoPs.

3 Theoretical Framework

The study was informed by two theories of knowledge sharing, namely, organizational learning theory and social exchange theory. The two theories are interrelated in the following way: the Organizational Learning Theory focuses on the process of creating and transferring knowledge within the organization during which learning takes place; the Social Exchange Theory deals with interpersonal interactions, which result in the exchange of knowledge which leads to organizational learning. These theories would help

elaborate on how knowledge sharing can be empowered in a CoP. Furthermore, the theories would help elaborate the linkages between the variables in the study.

3.1 Organizational Learning Theory

This theory illustrates the process of creating and transferring knowledge within an institution. The theory aims to make employees better problem solvers, innovative and creative in the workplace. To achieve an upper edge over other firms, institutions are keen to tap critical tacit knowledge, allow colleagues to learn from others, and foster knowledge sharing (Ndegwa, 2015). According to Karanja and Mwaura (2017), Organization Learning Theory immensely contributes to an organization's success. Therefore, to maintain a competitive edge and the current technological change, organizations need to maintain and advance knowledge sharing and learning culture. This theory is relevant to the current study because it supports voluntary knowledge sharing and motivates and enables employees to learn in a community of practice. This knowledge-sharing leads to increased understanding and interactions in communities of practice. This theory significantly contributes to the voluntary action of a CoP, as discussed in the study.

3.2 Social Exchange Theory

This theory is used as a model in interpersonal interactions in psychology. The theory deals with interpersonal engagements, affections, products, and communication (Cook et al., 2013). This theory concentrates on the cost-benefit viewpoint same as an economic exchange rather than a social exchange. The social exchange involves intangible costs and benefits such as trust, caring, respect, honour, and friendship. The theory is not administered by direct rules or agreements, for example, economic exchange. According to the theory, economic and social exchange assume that members of a community of practice interact and share ideas only if they get a reward.

The only surety in social exchange is that they would earn a reward if they shared ideas (Cook et al., 2013). In the study, these interactions are beneficial as they lead to the creation of shared and stored knowledge. This knowledge forms the shared repertoire of the organization. Furthermore, in knowledge sharing, a social exchange, staff in an organization share knowledge among themselves when factors such as trust, respect, concern, and friendship exist. To achieve a shared repertoire, both the knowledge giver and knowledge receiver need to collaborate so that the knowledge sharing is effective.

This knowledge contributes to the knowledge pool and enhances the shared repertoire of the organization, as discussed in the study.

4 Literature Review

The study is based on two characteristics of a community of practice, namely voluntary action and shared repertoire. These characteristics play a critical role in establishing a community of practice. The literature review will highlight the two key components: shared repertoire and voluntary action of a community of practice.

4.1 Knowledge Sharing

Nonaka and Takeuchi 1995 (as cited by Guyo, 2012) define knowledge sharing as the process carried out through sharing tacit and explicit knowledge via externalization and socialization. Tacit knowledge is embedded in the head of the knower and is very difficult to articulate, while explicit knowledge is the knowledge that has been expressed and is documented; therefore, it is easily available. According to Jones (2014), knowledge sharing is critical within organizations and is rife with using interpersonal skills and social networks. Nonaka and Takeuchi 1995 (as cited by Guyo, 2012) state that tacit knowledge forms 80% of the knowledge available in an organization, while explicit knowledge forms 20% of the knowledge in an organization. Therefore, to effectively utilize available tacit knowledge, there is a need to develop initiatives that encourage staff to share knowledge in an organization.

4.2 Shared Repertoire of CoPs

This forms the pool of resources among members of a CoP and creates a reference that may enable the identification of members in a given CoP. According to Wenger and Wenger-Trayner (2015), using terminologies, stories, theories, best practices, recurrent problems, reviews, and many more pools of knowledge; forms the core resources of a CoP. Similarly, valuable knowledge asset critical to a given community's fundamental operations is collected, refined, classified, and stored in communities (Charterina et al., 2017). This stock of knowledge is stored and retrieved to solve a particular problem based on the circumstance and orientation of the problem.

Consequently, a knowledge repository is a shared tool among departments in an organization that stores regularly updated content related to the members' needs (Yusuf & Wanjau, 2014). The resources in the repository are prepared by community members and are in line with their day-to-day use. As a result, these resources help members of a CoP to forge meaning in different contexts. The shared understanding, common lingual,

and professional enrichment enable members of a CoP to share knowledge smoothly and cohesively. This also denotes a correct approach, as given by Ferreira et al. (2018), that that common culture among CoPs is a very powerful tool in the process of knowledge sharing.

Various researchers have discussed the effects that CoP characteristics have on knowledge sharing. Yuenyong (2019) identifies shared repertoire as a characteristic of a CoP that supports knowledge sharing. Shared repertoire supports knowledge sharing in organizations. According to Yuenyong (2019), if the shared repertoire is embraced, it can lead to the vital sharing of knowledge and resources in organizations.

The shared repertoire is a critical element of a CoP that incorporates resources used by a given community of practice to enhance discussion and negotiate on behalf of the members. These resources are key to enhancing the responsibility and strength of a community. The resources are also unique, and help community members easily identify themselves. Moreover, the resources collected in a community are collected, refined, and stored in community repositories (Charterina et al., 2017). The essential resources in a community may include more than jargon, theories, best practices, and lessons learned.

Yusuf and Wanjau (2014) studied factors affecting the implementation of knowledge management practices in state corporations in the National Treasury. Consequently, they found out that the organizational structure in state corporations was hierarchical, thereby hindering knowledge sharing. They recommended that organizational culture and structure support sociability, trust, and openness among staff. Therefore, the need to study and investigate how the shared repertoire of CoPs increases the flow of knowledge across state corporations.

4.3 Voluntary Action of CoPs

Kanter, as cited by (Kietzmann et al., 2013), defines voluntary action of a CoP as the quality of action taken by members of a community voluntarily. Voluntary action refers to the voluntary participation of members of a CoP in community-related activities. Voluntary action refers to cases where community members decide to carry out duties beyond the strict jurisdiction boundaries (Kitamura et al., 2018). Furthermore, members of a CoP can choose to interact and solve problems that are outside their range and certainly meet the needs of everyone in a community. Community members decide to do many more tasks than what they have been assigned because they really want to do it and are not coerced by their leaders or internal rules.

According to Ndegwa (2015), members of a CoP decide to set up communities and voluntarily share community roles. Moreover, this push is necessitated by the need to fulfil and seek solutions that will solve community problems and eradicate tough predicaments. Using diverse indigenous knowledge, key technologies, and professionally acquired knowledge can provide these critical voluntary solutions (Kitamura et al., 2018).

Wamitu (2016) investigated tacit knowledge sharing in the public sector. More so, her study focused on employees' need to share problems, tools, experiences, insights, and best practices. She also noted that tacit knowledge is the most competitive and non-imitable organizational knowledge stored in the individual's mind. For instance, she established that bureaucratic organizational structure and lack of a supportive organizational culture hindered knowledge sharing in organizations. Therefore, she recommended the creation of CoPs that would eliminate communication boundaries and provide a culture of trust and openness that would enhance knowledge sharing in public sector organizations. Voluntary action plays a key and vital role in creating knowledge and allowing the free flow of information in a CoP; therefore, the need to investigate the role of voluntary action on CoPs.

5 Conceptual Framework

A conceptual framework is an icon representation of an object or one of its characteristics (Frankfort, Nachmias & DeWaard, 2015). In addition, it shows the relationship of a phenomenon diagrammatically and helps a reader easily see the relationships between the independent and dependent variables (Bullock, Little & Millham, 2017). Also, the conceptual framework illustrates the relationship between the dependent variable (knowledge sharing) and the independent variable (shared repertoire and voluntary action of CoPs). The shared repertoire of a community of practice includes items shared and stored in a community of practice interactions. Clarke (2017) suggests that these resources may include artifacts, routines, forms, and language. The voluntary action of a CoP (Kitamura *et al.*, 2018) includes community jobs, community assignments, community membership, and certifications. These are key measures that will help deduce the voluntary action of CoPs. Figure 1 shows the conceptual framework.
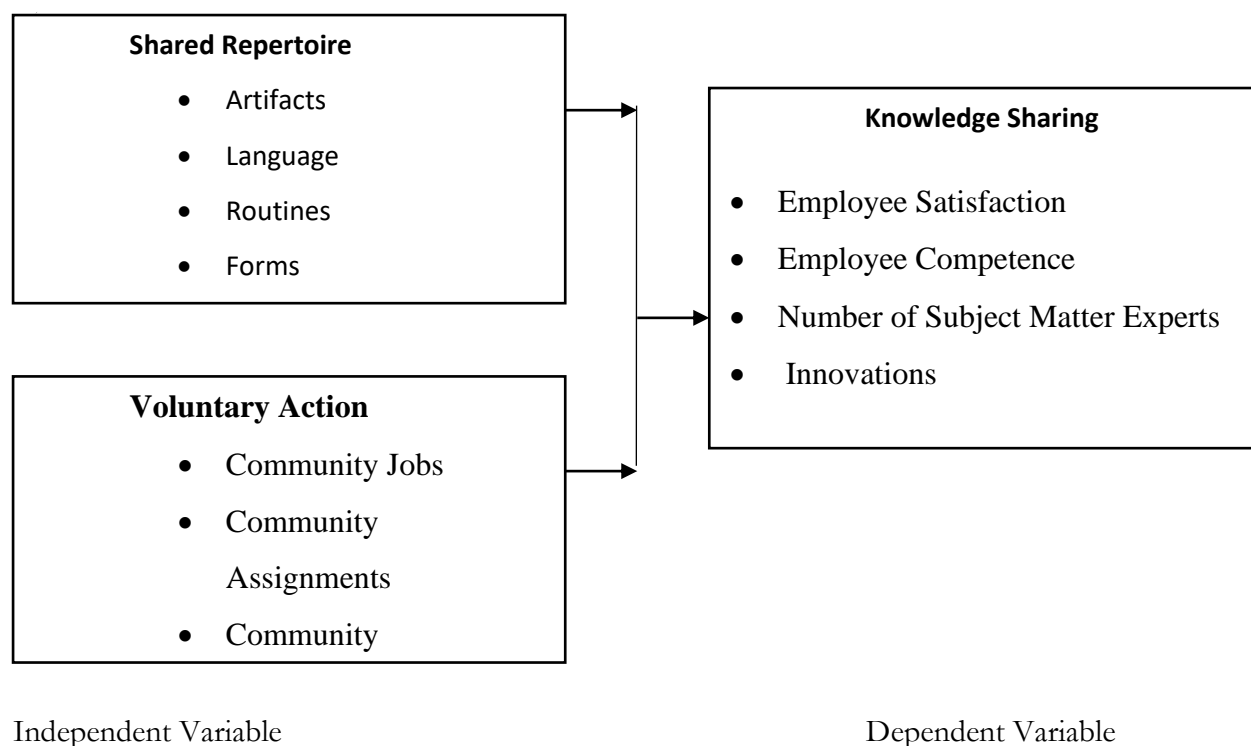
```
┌─────────────────────────┐
│   Shared Repertoire     │
│   • Artifacts           │
│   • Language            │
│   • Routines            │
│   • Forms               │
└─────────────────────────┘

┌─────────────────────────┐
│   Voluntary Action      │
│   • Community Jobs      │
│   • Community           │
│     Assignments         │
│   • Community           │
└─────────────────────────┘
```

┌─────────────────────────────────┐
│   Knowledge Sharing   │
│ • Employee Satisfaction   │
│ • Employee Competence   │
│ • Number of Subject Matter   │
│   Experts   │
│ • Innovations   │
└─────────────────────────────────┘

Independent Variable   Dependent Variable

Figure 1: Conceptual Framework.

6 Research Methodology

According to Creswell and Creswell (2017), a research design is an inquiry within the quantitative, qualitative, and varied approaches that shows the direction for steps in a research design. This study used a descriptive survey research design. Furthermore, the use of mixed research methods was adopted. These methods complement each other to improve the study (Quinlan, Babin, Carr & Griffin, 2019). The study focused on the KRA staff in the Head Quarters in Times Tower, Nairobi County. The target population was 1099 Staff. The sampling frame used in the study was KRA employees based in the headquarters in Times Tower, Nairobi County. A stratified sampling technique was first applied to create various strata representing the Domestic Taxes Department, Customs and Border Control, Corporate Support Services, Investigation and Enforcement, Internal Audit and Strategy, and Innovation and Risk Management departments. This was then followed by random sampling in each stratum. A sample size of 92 staff was obtained, as shown in Table 1.

Table 1: Sample Size

Departments	Target Population	Sample Size
Domestic Taxes Department	348	25
Customs and Border Control	307	22
Investigation and Enforcement Services	120	10
Corporate Support Services	78	7
Strategy Innovation and Risk Management	57	7
Marketing and Communication	53	7
Kenya School of Revenue Administration	41	4
Transformation Leadership Office	31	4
Internal Audit Department	30	2
Integrity and Strategic Operations	17	2
Legal Services and Board Coordination	17	2
Total	**1099**	**92**

The study used both open-ended and closed-ended questionnaires. This ensured that users' insights, ideas, and motives were captured. The data received was cleaned and coded. SPSS computer Software version 22 was then used to analyse quantitative data and the responses presented in statistical tables. Qualitative data obtained from the open-ended questionnaire was analysed thematically. Pearson Correlation showed the connection between variables. The use of multiple regression helped influence the two characteristics of a CoP on knowledge sharing.

7 Research Findings

The study set out to find the effects of communities of practice characteristics on knowledge sharing in the Kenya Revenue Authority. The two variables were conceptualized as mechanisms of knowledge sharing, namely, shared repertoire and voluntary action.

Out of a sample size of 92 respondents, 76 responded, translating to a response rate of 82.6 %. According to Mugenda and Mugenda (2012), a response rate of over 70% is satisfactory for analyzing and interpreting the survey results.

7.1 Gender of the respondents

One of the parameters to be determined was the gender of the respondents to ensure that both genders were represented in the study. From the findings, 48 of the

respondents representing 63.6%, were male and 28 of the respondents representing 36.4%, were female, as indicated in figure 2.
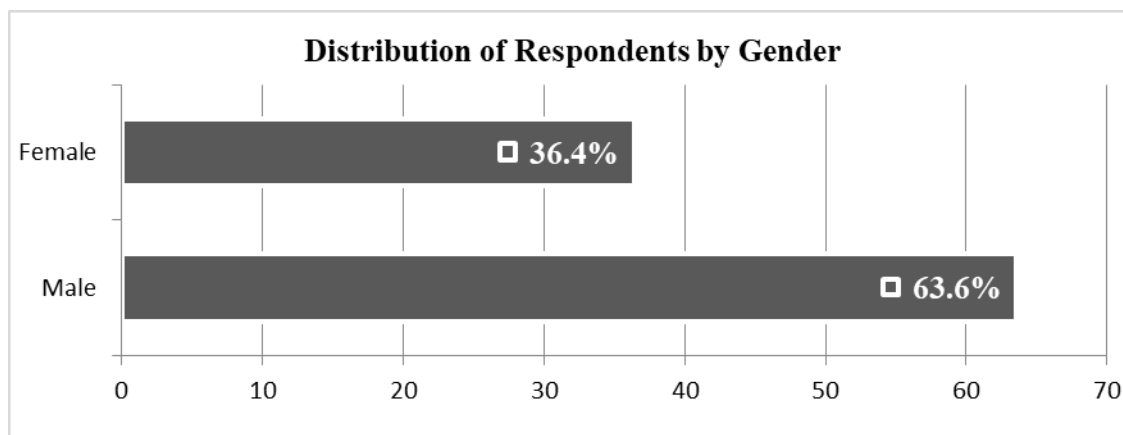
Distribution of Respondents by Gender

Female	□ 36.4%
Male	□ 63.6%

Figure 2: Distribution of respondents by Gender

7.2 Age of the Respondents

The study sought information on the age of respondents as they would help in effectively understanding respondents. The results are shown in figure 3. From Figure 3, 26 of the respondents representing 33.1%, were 31-35 years, 8 of the respondents representing 10.1%, were 21-25 years, 15 of the respondents representing 19.0%, were 26- 30 years, 12 of the respondents representing 16% were 36 -40 years, 10 of the respondents representing 14.3% were 41-45 years, and 5 of the respondents representing 7.5% were over 46 years.
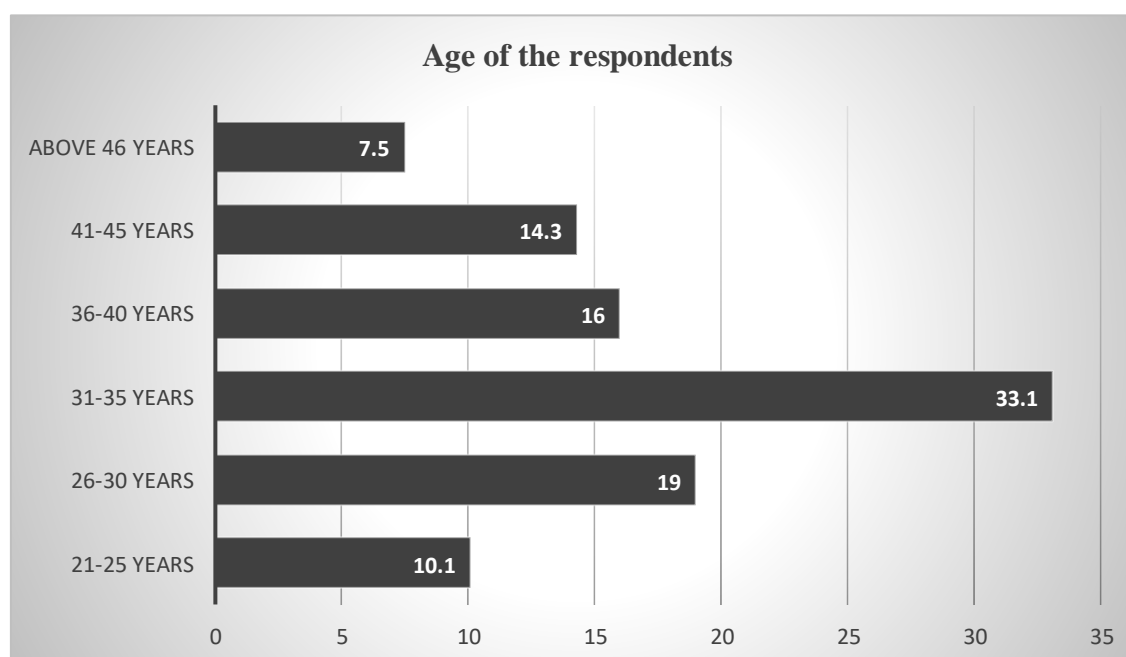
Age of the respondents

ABOVE 46 YEARS	7.5
41-45 YEARS	14.3
36-40 YEARS	16
31-35 YEARS	33.1
26-30 YEARS	19
21-25 YEARS	10.1

Figure 3: Distribution of respondents by age

7.3 Levels of Education

The respondents were asked to state their highest level of education, and the results were captured in Figure 4. The results revealed that most 35 (46.7%) respondents indicated their academic qualification was up to the bachelor's level. The result further revealed that 19 (25.3%) respondents indicated that their academic qualification was up to diploma level. The result also revealed that 6 (7.4%), 12(15.3%), and 4(5.3%) of the respondents indicated that their academic qualification was PhD level, masters level, and certificate level, respectively.
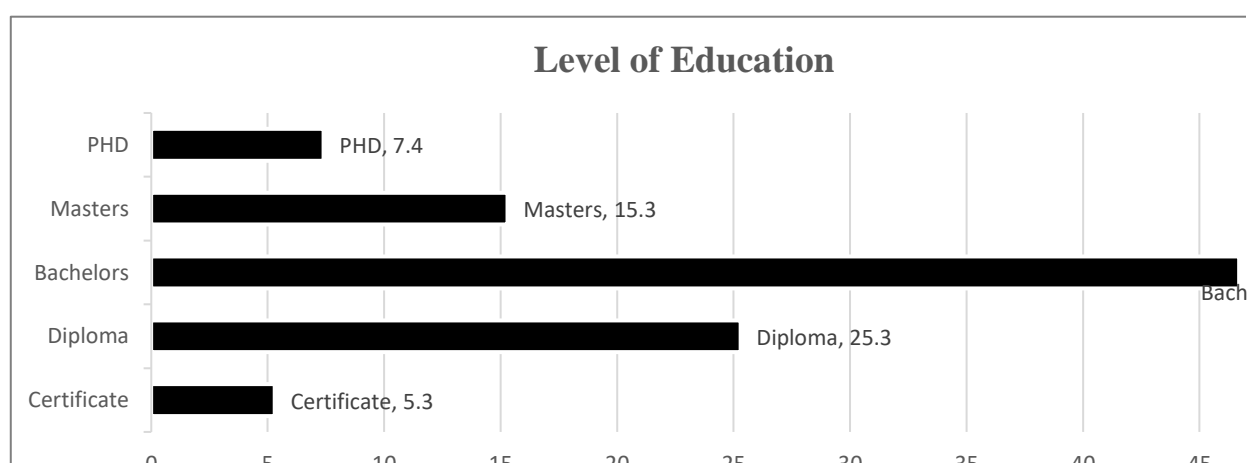

Figure 4: Levels of education

7.4 Department of the Respondents

The study also determined the departments of the respondents. The results are summarized in Table 2. The findings indicate that respondents of the Domestic Taxes Department, Customs and Border Control, Investigation and Enforcement, Corporate Support Services, Marketing and Communication, Strategy, Innovation and Risk Management, Transformation Leadership Office, Kenya School of Revenue Administration, Legal Services, and Board Coordination, Internal Audit, and Intelligence Services and Operations were 19 (25%), 16 (21.1%), 10 (13.2%), 7 (9.2%), 7 (9.2%), 5 (6.6%), 4 (5.3%),2 (2.6%), 2 (2.6%), 2 (2.6%), and 2 (2.6%) respectively.

Table 2: Departments of the Respondents

Department	Frequency	Percentage
Domestic Taxes Department	19	25%
Customs and Border Control	16	21.1%
Investigation and Enforcement	10	13.2%
Corporate Support Services	7	9.2%

Marketing and Communication	7	9.2%
Strategy, Innovation, and Risk Management	5	6.6%
Transformation Leadership Office	4	5.3%
Kenya School of Revenue Administration	2	2.6%
Legal Services and Board Coordination	2	2.6%
Internal Audit	2	2.6%
Intelligence Services and Operations	2	2.6%
Total	76	100%

7.5 Number of Years of Service in KRA

The number of years that respondents had worked in an organization plays an important role in determining the skills and knowledge gained by employees. In this regard, the study sought to determine how long respondents had worked in Kenya Revenue Authority. This finding shows that most of the respondents who participated in the study had worked for a significantly longer time frame and thus were knowledgeable. This is in line with (Trong Tuan, 2016), who indicated that the knowledge and capabilities that employees accumulate for working in the company are significantly important.
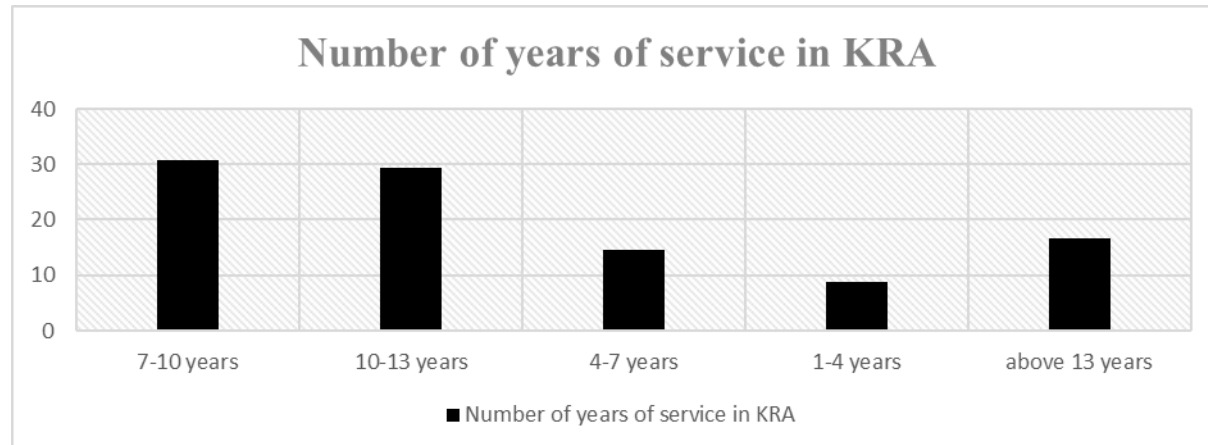

Figure 5: Number of Years of Service in KRA

7.6 Shared Repertoire and Knowledge Sharing

The results of the effect of shared repertoire on knowledge sharing are shown in Table 3.

Table 3: Effect of shared repertoire on Knowledge Sharing

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
We have common stories only shared in my department	2.9%	7.3%	10.5%	31%	48.3%	4.412	.32840
We have a language only understood by my department members	4.0%	8.3%	10.0%	35%	42.7%	4.1624	.73932
There are specific artefacts only shared with members of my department	2.2%	6.5%	13.2%	44.3%	33.8%	3.9843	.89375
We have forms that are used and stored correctly in my department	5.3%	8.8%	10.8%	40.4%	34.7%	3.9350	.98302
Average						4.1234	0.7361

According to the results in Table 3, most (79.3%) of the respondents agreed, 10.5% were neutral, and 10.2% disagreed that they have common stories only shared in my department. There was an agreement with the statement, indicated by a mean of 4.412. According to table 1 also, 77.7% of the respondents agreed, 10.0% were neutral, and 12.3% did not agree that we have a language only understood by my department members, showing neutral responses as shown by a mean of 4.1624. In the study (78.1%) of the respondents agreed, 13.2% were neutral, and 8.7% disagreed that we have specific artefacts only shared with members of my department. The general mean score was 3.9843, indicating that most respondents agreed with the statement. Therefore, this illustrated that shared repertoire, including specific artefacts and common stories, is shared in the departments, thereby boosting knowledge-sharing efforts.

Finally, from the study, 75.1% of the respondents agreed, while 10.8% showed neutrality, and 14.1% disagreed that we have forms that are used and properly stored in my department.

7.7 Voluntary Action and Knowledge Sharing

The study sought to establish the effects of voluntary action on knowledge sharing in KRA. The results are depicted in Table 4.

Table 4: Effect of voluntary action on Knowledge Sharing

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
I work on jobs that are beyond my departmental assigned duties	3.8%	7.4%	12.4%	40.1%	36.3%	3.9933	0.6738
I work on assignments that are beyond the department's mandate	2.1%	3.7%	4.9%	39.4%	49.9%	4.0938	0.5378
I belong to a professional body beyond the department's requirement	5.3%	3.7%	10.4%	24.3%	56.3%	4.1293	0.7929
I have a certification that's outside the scope of my department	3.8%	4.2%	12.3%	37.5%	42.2%	3.9893	0.9484
Average						**4.0514**	**0.7382**

Table 4 shows that 76.4% of the respondents agreed, 12.4% were neutral, and 11.2% disagreed that I work on jobs beyond my departmental assigned duties. This indicated a general agreement with the statement, as indicated by a mean score of 3.9933. From the study, 89.3% of the respondents agreed, 4.9% were neutral, and 5.8% disagreed that I work on assignments beyond the department's mandate. Accordingly, there was general agreement with the statement, as shown by a mean score of 4.0938. In addition, 80.6% of the respondents indicated an agreement, 10.4% were neutral, and 9% disagreed that I belong to a professional body beyond the department's requirements. The overall weight agreed with the statement, as shown by a mean score of 4. 1293. Finally, 79.7% of the respondents agreed, 12.3% indicated neutrality, and 8% disagreed that I have a certification outside my department's scope.

7.8 Knowledge Sharing

The participants were required to agree with various statements regarding the effects of knowledge sharing in KRA. The results are depicted in Table 5.

Table 5: Knowledge Sharing

Statements on knowledge sharing	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev
I can retrieve, use and reuse critical knowledge in my department timely.	3.1%	3.1%	6.8%	45.8%	41.2%	4.1033	0.9283
I can answer critical questions related to departmental roles and assignments due to knowledge sharing.	2.3%	3.1%	7.8%	43.8%	43%	3.9102	0.9922
In my department, most people can solve problems and address critical issues whenever needed.	4.3%	7.4%	13.5%	32.6%	42.2%	4.2033	0.6093
My department has new products, processes, and services due to knowledge sharing.	6.2%	7.1%	6.8%	41.4%	38.5%	4.1289	0.9383
Average						**4.0864**	**0.8670**

From the results shown in Table 5, most respondents (87%) agreed that I could retrieve, use and reuse critical knowledge in my department timely. From the findings, 6.8% of the respondents were neutral, and 6.2% disagreed with the statement. The majority of the respondents, which translated to 86.8%, agreed that I could answer key questions related to departmental roles and assignments due to knowledge sharing. Furthermore, 7.8% of the respondents showed neutrality, while 5.4% disagreed with the statement. Also, from the findings, 74.8% agreed that in my department, most people could solve problems and address critical issues whenever a need arises. As a result of knowledge sharing. 13.5% were neutral, and 11.7% disagreed with the same.

Concisely, 79.9% of the respondents agreed with the statement, 6.8% were neutral, and 13.3% disagreed that there are new products, processes, and services in their department due to knowledge sharing.

7.9 Inferential Statistics

This section highlights the inferential results from the study. According to Zarzoso, Calvo, Bernabé, and Bizy (2019), inferential analysis shows how general conditions that may not have been detected from the instant data can be reached. Therefore, this section will highlight the study's correlation and regression analysis of the study.

Correlation analysis determines the relationship between shared repertoire and knowledge sharing. Pearson correlation coefficient was computed and tested at a 5% significance level. The results indicate a positive relationship (r=0.663) between shared repertoire and knowledge sharing. In addition, the researcher found the relationship to be statistically significant at a 5% level (p=0.000, <0.05).

In the correlation analysis to determine the relationship between voluntary action and knowledge sharing, the Pearson correlation coefficient was computed and tested at a 5% significance level. The results indicate a positive relationship (r=0.652) between voluntary action and knowledge sharing. In addition, the researcher found the relationship to be statistically significant at a 5% level (p=0.000, <0.05).

Table 6: Summary of Pearson's Correlations

Variables		Shared repertoire	Voluntary action	Knowledge sharing
Shared repertoire	Pearson Correlation	1	.550**	.663**
	Sig. (2-tailed)		0	0
Voluntary action	Pearson Correlation	.550**	1	.652**
	Sig. (2-tailed)	0		0
Knowledge sharing	Pearson Correlation	.663**	.652**	1
	Sig. (2-tailed)	0	0	

Regression analysis was also conducted. This helped determine how the independent variables (shared repertoire and voluntary action) affected the dependent variable (knowledge sharing). At the end of the analysis, an ANOVA, model summary, and beta coefficients were produced. Table 6 shows the findings; the F calculated at a 5% significance level was 18.16. Since F calculated is greater than the F critical (at 18.16, F-critical is 2.50), the overall model was significant. The ANOVA results revealed a significant relationship between shared repertoire and voluntary action with knowledge sharing in KRA. These results corroborate with Ndegwa (2015), whose ANOVA test found a significant relationship between the mutual cohesiveness of members and knowledge sharing.

Table 7: ANOVA Test

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	16.928	4	4.232	18.16	.032
	Residual	16.517	71	0.233		
	Total	33.445	75			

Table 7 indicates that the two variables, shared repertoire and voluntary action, explain 82.5% of the knowledge sharing in KRA, as indicated by the R^2. Therefore, this demonstrates that the variables (shared repertoire and voluntary action) contribute to knowledge sharing at KRA, while other aspects not studied in this research contribute to 17.5% of knowledge sharing at KRA.

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.908[a]	.825	.789	0.752

a Predictors: (Constant), shared repertoire, voluntary action

From Table 8, the two variables studied (shared repertoire and voluntary action) explain 82.5% of the knowledge sharing in KRA, as demonstrated by the R^2. This, therefore, means that the two variables (shared repertoire and voluntary action) contribute 82.5% to knowledge sharing at KRA, while other aspects not studied in this research contribute 17.5% to knowledge sharing at KRA. The beta coefficients of the model show the level of the impact of the independent variables under study and the dependent variable.

Table 9: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.444	0.185		3.31566	0.000
Shared repertoire	0.426	0.198	0.236	2.15152	0.002
Voluntary action	0.471	0.224	0.172	2.10268	0.003

From the results shown in Table 9, a unit increase in the shared repertoire would lead to a 0.426 increase in the scores of knowledge sharing in KRA. This had a significant value of 0.002, which is less than 0.05 depicting the significance of the relationship between shared repertoire and knowledge sharing at KRA. Therefore, based on these findings, there is a positive and substantial relationship between shared repertoire and knowledge sharing in KRA. This shows that a unit increase in the shared repertoire would result in 0.426 times increase in knowledge sharing in

KRA. These results reflect Ndegwa *et al.* (2015), who echoes that organizational performance can be greatly enhanced if employees have a shared resource and meaning of information, experiences, views, and insights, among others.

The regression results show that voluntary action positively affects knowledge sharing at KRA. This is demonstrated by the regression coefficient of 0.471 and a significance value of 0.003, which is less than 0.05, the critical value at the 5% significance level. This, therefore, shows that taking all other independent variables at zero, a unit increase in voluntary action would lead to a 0.471 increase in knowledge sharing at KRA. Overall, voluntary action had the greatest effect on knowledge sharing in KRA. Concisely, all the variables were significant ($p < 0.05$).

8 Discussion of Findings

From the findings, the respondents agreed to the contribution of knowledge sharing as a key tool in enhancing interactions in a CoP, as indicated by a mean score of 4.0864. From the qualitative analysis, the respondents also indicated key knowledge-sharing initiatives in their departments that included creating knowledge-sharing forums, physical meetings, creating a knowledge base, and using knowledge-sharing platforms, awareness forums, and group discussions. These results concur with Jones (2014) that knowledge sharing is critical within organizations and is rife with using interpersonal skills and social networks.

From the findings, the overall result was in general agreement with the statement, as shown by a mean score of 3.9350. From the findings, the users indicated that the resources shared in their departments included procedure manuals, policies, guidelines, presentations, taxpayers' records, policies, and exports/importation documents. These results coincide with those of Charterina et al. (2017), who assert that the stock of knowledge is stored and retrieved to solve a particular problem based on the circumstance and orientation of the problem.

The findings show a general agreement that voluntary action is shown by a mean score of 3.9893. Moreover, the respondents indicated duties outside departmental requirements, including quality management training, community service activities, publication in the media, performance management training, and communication training. These results reflect the findings by Kietzmann et al. (2013), who state that the voluntary action of a CoP is manifested whenever there is a key challenge in a

community that requires unique solutions that are not covered within the scope of a Community of Practice.

9 Conclusion

The study findings indicated that shared repertoire and voluntary action contributed to Knowledge Sharing in the Authority. The study also concludes that shared repertoire significantly contributes to knowledge sharing at KRA. These findings suggest that increasing the level of shared repertoire by a unit would increase the levels of knowledge sharing in Kenya Revenue Authority by one. This shows that shared repertoire positively influences knowledge sharing at Kenya Revenue Authority.

Lastly, the regression coefficients of the study show that voluntary action significantly influences knowledge sharing in Kenya Revenue Authority. This indicates that increasing levels of voluntary action by a unit would increase knowledge sharing in the Authority. This indicates that voluntary action positively influences knowledge sharing in Kenya Revenue Authority.

10 Recommendations

Based on the findings, the study recommends that KRA must have common stories or tales about the key mandates of each department that can be easily shared. Also, the study recommends that KRA should have a language understood by all department members. In conclusion, the study recommends that there should be specific artefacts, for example, images and award plaques, that carry departmental mandate and can only be shared with members of the department should be provided and shared.

The study finally recommends that there is a need to encourage voluntary workings and involvement in the Authority beyond the departmental assigned duties. In this regard, KRA should allow staff to take assignments that contribute to staff development and encourage their self-build. For example, staff can belong to professional bodies and even achieve certification beyond the requirements of their department. Lastly, the study recommends that KRA employees should belong to a professional body beyond their departmental requirements.

11 Implications

This study's findings can help KRA to implement working Communities of Practice in departments. This will, in turn, improve knowledge sharing and enhance customer-focused tax administration.

12 Areas for Further Studies

The study has investigated the effects of communities of practice characteristics on knowledge sharing in the Kenya Revenue Authority and established that shared repertoire and voluntary action affect knowledge sharing at KRA. However, there are many other state corporations in Kenya whose management and areas of operations are either similar or different from those of the Kenya Revenue Authority due to differences in mandate and functionality. This warrants the need for another study that would ensure the generalization of the study findings for all the state corporations in Kenya and pave the way for new knowledge-sharing strategies and policies.

References

Abdallah, M. A. H. (2019). Rethinking Knowledge from an Imitative Perspective Towards Competitive Advantage. *Open Science Journal*, *4*(1).

Al-Kurdi, O., El-Haddadeh, R., & Eldabi, T. (2018). Knowledge sharing in higher education institutions: a systematic review. *Journal of Enterprise Information Management*.

Bolisani, E., & Scarso, E. (2014). The place of communities of practice in knowledge management studies: a critical review. *Journal of Knowledge Management*, *18*(2), 366–381. http://doi.org/10.1108/JKM-07-2013-0277

Bullock, R., Little, M., & Millham, S. (2017). The relationships between quantitative and qualitative approaches in social policy research. In *Mixing methods: qualitative and quantitative research* (pp. 81–99). Routledge.

Charterina, J., Landeta, J., & Basterretxea, I. (2018). Mediation effects of trust and contracts on knowledge-sharing and product innovation. *European Journal of Innovation Management*, 21(2), doi.10.1108/EJIM-03-2017-0030

Cheng, E.C.K & Lee, J. C.K. (2014) .Developing strategies for communities of practice. *International Journal of Educational Management*, Vol. 28 Issue: 6, pp.751-764, https://doi.org/10.1108/IJEM-07-2013-0105

Clarke, D., Partridge, L., & Petersen, L. (2017). Using technology to build engagement in a global Scholarship of Teaching and Learning (SoTL) community of practice. In *Implementing Communities of Practice in Higher Education* (pp. 81–106). Springer, Singapore.

Cook, K., Cheshire, C., & Rice, E. (2013). *Handbook of Social Psychology; Social Exchange Theory* [Ebook] (pp.61–88). Retrieved from http://10.1007/978-94-007-6772-0_3

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.

Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*, 19-43.

Defond, M. (2013). *Capital markets valuation and accounting performance of most admired knowledge enterprise (MAKE) award winners*. eScholarship, University of California

East African Revenue Authorities. (2018). *Comparative Revenue Analysis Publication 2016/17* [Ebook] (6th ed.). Kampala. Retrieved from https://www.ura.go.ug/Resources/webuploads/GNRART/EARA%20COMPERATIVE%20REVENUE%20ANALYSIS%202016-17.pdf

Ferreira, J., Mueller, J., & Papa, A. (2018). Strategic knowledge management: theory, practice and future challenges. *Journal of knowledge management*.

Frankfort-Nachmias, C., Nachmias, D., & DeWaard, J. (2015). *Research methods in the social sciences*. New York: Worth, Macmillan Education.

Guyo, W. (2012). *The role of hrm in intra-firms operationalization of tacit knowledge in Kenyan state corporations*: Retrieved from http://ir.jkuat.ac.ke:8080/bitstream/handle/123456789/1123/WARIO%20GUYO-PHD%20HRM-2012.pdf?sequence=1&isAllowed=y

Jones, K. (2014). *Adoption of Knowledge Management As a Strategic Approach By the Kenya Revenue Authority*. Retrieved from http://erepository.uonbi.ac.ke/bitstream/handle/11295/76073/Kaluhi_Adoption%20of%20knowledge%20management%20as%20a%20strategic%20approach%20by%20the%20Kenya%20revenue%20authority.pdf?sequence=4&isAllowed=y

Kenya Revenue Authority. (2015). Sixth Corporate Plan 2015/2016 – 2017/2018. Nairobi: Kenya Revenue Authority.

Kenya Revenue Authority. (2016). Knowledge Management Baseline Survey Report 2015.

Kietzmann, J., Plangger, K., Eaton, B., Heilgenberg, K., Pitt, L., & Berthon, P. (2013). Mobility at work. *The Journal of Strategic Information Systems*, *22*(4), 282-297. doi: 10.1016/j.jsis.2013.03.003

Kitamura, K., Nakagawa, C., & Sato, T. (2018). Formation of a community of practice in the watershed scale, with integrated local environmental knowledge. *Sustainability*, *10*(2), 404.

Liao, T. H. (2017). Developing an antecedent model of knowledge sharing intention in virtual communities. *Universal Access in the Information Society*, *16*(1), 215–224.

Massingham, P. (2019). *Knowledge management: theory in practice*. SAGE Publications Limited.

Mugenda, O. M. & Mugenda, A.G. (2012). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press.

Ndegwa, J.W. (2015). *Knowledge sharing, organizational learning, firm-level institutions and performance of top medium-sized companies in Kenya*. Retrieved From: http://erepository.uonbi.ac.ke/handle/11295/94686.

The KNOW Network, 2017. 2017 European Most Admired Knowledge Enterprises MAKE Report, Retrieved from, https://www.guillaume.nu/documents/2017-European-MAKE-Report.pdf

Trong Tuan, L. (2016). Knowledge Sharing in Public Organizations: The Roles of Servant Leadership and Organizational Citizenship Behavior. *International Journal of Public Administration*, 40(4), pp.361-373.

Wamitu, S. N. (2016). *Tacit knowledge sharing and public sector performance in Kenya*. Open Journal of Business and Management. 3(01), PP. 109-118.

Wenger-Trayner, E., & Wenger-Trayner, B. (2015). Communities of practice: A brief introduction.

Wilson, J. P., & Campbell, L. (2016). Developing a knowledge management policy for ISO 9001: 2015. *Journal of Knowledge Management*

Yusuf, M. M., & Wanjau, K. (2014). Knowledge Sharing. *International Journal of Management Technology*, *2*(2), 9–18.

Yuenyong, C. (2019, March). Lesson learned of building up a community of practice for STEM education in Thailand. In *AIP Conference Proceedings* (Vol. 2081, No. 1, p. 020002). AIP Publishing LLC.