KNOWLEDGE MANAGEMENT PRACTICES AND IMPLEMENTATION OF PROJECTS AT THE TEA RESEARCH FOUNDATION IN KENYA

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ABSTRACT

The tea industry has encountered challenge in implementation of major research done in Tea Research Institute leading to poor prices for tea produced in Kenya and poor quality of tea products. These are associated with limited ability of Tea Research Institute to improve tea productions. Therefore, the salient purpose of the research is to establish the influence of knowledge management practice on implementation of Tea Research Institute Projects in Kericho County, Kenya. Theory of project management guided the study. An explanatory and descriptive research design was used in the research. The study targeted 86 employees in Tea Research Institute. Census of all employees was used. Whereas 54 projects done by Tea Research Institute formed the unit of analysis. Questionnaires were adopted in collection of data. Data was prepared screening, coding and entering for analysis.

Descriptive statistics analysis utilized mean and standard deviation. Correlation analysis were utilized as inferential analysis. The findings indicated that Tea Research Institution was found to have knowledge capturing, sharing and storage that was important in organization learning and training of farmers. Knowledge management had positive relationship with implementation of projects (P<0.05). The research concluded that knowledge management practices had positive significant influence on implementation of Tea Research Institute projects in Kericho County. The study suggests more study to be done on knowledge management resource and implementation of projects.

Key words: Knowledge Management Practices, Implementation of Project, Tea Research Institute (TRI), Explanatory and Descriptive Research Design, Kericho County, Kenya.

INTRODUCTION

Implementation of project requires multifaceted approach which mainly involves different resources brought together for completion of the project. Over years' project implementation has improved through research (Andersen, 2015). Projects are becoming more expensive and require larger resource allocation with time. This is because of improvement in technology, cost of material, human resource complexity and monetization of project activities (Mongare, 2017). Due to dynamics in project implementation, there is need for extensive improvement in resource management.

In China, multi-project resource management techniques are implemented to ensure proper implementation process. Critical chain method technique was found to be appropriate for research-based projects since it assisted utilization of resources promoting utilization of limited resources (Li, Nie, Yang, & Wang, 2016). In Australia, the implementation of strategies in

infrastructure projects involves the utilization of competitive private-public partnership arrangement (Opsahl, Torp, Laedre, Andersend, & Olsson, 2015). Poland based research and development projects depend on knowledge management information communication technology-based systems, talents, knowledge and competence management (Kisielnicki, 2014).

In Rwanda, budgeting and money general plans had significant impact on performance of projects. Forecasting had low impact on the project performance. Financial resource planning practices were related to the performance of the projects. Material and time resources were well predicted by order placement, monitoring of order placed and planned procurement which had significant impact on project performance (Umulisa, Mbabazize, & Shukla, 2015). Implementation of tea project in Africa is only related with counties planting tea. However, Kenya is the largest tea producer in Africa and competes with China, Sri Lanka and India in international market.

In Kenya, tea projects done in Kenya are mainly associated with mechanization, automation and clone improvement. However, mechanization and automation has been focused mainly on the effect on performance as well as human resource (Kunyaga, 2017). Similarly, Maina and Kaluli (2013) focused on partial mechanization. However, institution research in Tea Research Institute has been associated with clone improvement (Kenya Tea, 2018). Based on few numerous research findings obtained by Tea Research Institute there is less development and improvement of production on both small- and large-scale farmers in Kenya.

Knowledge management is a new concept that has been view as resource in recent research (Ranf & Herman, 2018). It has been assocated with capture, storing and retriving of information to be utilised in the organization which can be adopted in research and development based institution. The current research would focus on financial, human, knowledge and physical resource management. In recent era, knowledge management has increasely become important resource in an organization. The capture, storage, access and utilization of knowledge in project has improved the input, process and output in an organization. Knowledge like other tangible resource needs to be managed in research based projects. According to Ranf and Herman, (2018) knowledge management cycle are applicable to project management which assist in generation of new knowledge. Hence through data capture, analysis and dissemination of new knowledge the organization are able to perform better.

Implementation of project is a sensitive step where all resources are brought on board to finish the project. These affect the time, quality, cost, and scope of the project done. Implementation of large project in China has undergone multi-project resource management methods that ensure effective utilization of resources (Li, Nie, Yang, & Wang, 2016). According to Umulisa, Mbabazize and Shukla (2015) the main area to determine the project performance is at implementation stage where quality, cost, time and scope are actualized from the planning phase. Client's satisfaction is also considered based on the objective of the project implemented.

Project implementation determines the scope, time, cost and quality of the projects. It is significant in ensuring the success of a project. There are numerous projects that require input on research and findings, but some finding might not be met if there is no proper implementation. Tea Research Institutes is one of the government agencies mandated to conduct research work through improving tea clones and yields of tea. Its aim is to improve competitiveness of Kenya tea within country and international markets. These has seen Tea Research Institutes coming with more than 914 clone where 51 clones have indicated high quality performance. However, implementation of Tea Research projects to be adopted by small scale farmers has become a challenge. This has resulted to negative publicity of tea produced in Kenya, poor international tea prices for tea resulting into low return for tea growers in Kenya (Maina, Mathenge, & Mathenge, 2018). Despite tea having many benefits where tea extracts have been shown to assist in cancer prevention, the tea extracts has also be found to prevent the growth of prostate cancer and breast cancer cells. Other components in tea which includes flavonoids, fluoride and plant estrogen's assist in building bones or prevent bone loss (Kenya Tea, 2018).

Tea Research Institute has a role in implementation and improvement of tea products, tea clones and agricultural technology. According to UNIDO (2017) report there are new clones that can resist frost. In another reports, there are advance in clone that are resistant to climatic changes as well as value for money but despite the research done on tea advance there is little that can be seen by tea farmers. Maina, Mathenge and Mathenge, (2018) revealed that there is problem associated with implementation of Tea research findings are results which is associated with resource management in projects. Since Kenya tea is facing major challenge in international market, there is a problem in implementation of research made in Tea Research Institutes, despite resources pumped by government of Kenya to aid tea research work. The main aim was to analyze the influence of knowledge management practices on implementation of Tea Research Institute Projects in Kericho County.

LITERATURE REVIEW

Theoretical Literature

The research is directed by theory of project management, RBV theory and capabilities theory. Theory of project management supports the need for phases of project management while the other two support the utilization to resource and capabilities in developing competitive advantage. Project management was developed in 1996 by Howell and Koskela, in an era where companies focus in developing projects Lock. The theory postulated that a project life is made of project cycle that is made of different stages. These stages are project formulation, project development, main program phase and phase-out. Therefore, the theory of project management does not have direct implication but indirect like with knowledge resource management. Knowledge management practices are required in two crucial stages that determine quality, time, scope and cost of the project that is planning as well as implementation phases of project management. Hence there is need to examine knowledge management practice in performance of tea research institute.

Knowledge Management Practices and Implementation of Projects

Access, disseminate and storage of information which represent knowledge management is important for development of organization. Knowledge management has grown to be part of important resource in the firm. Al-Zayyat, Al-Khaldi, Tadros and Al-Edwan (2010) alluded knowledge management had improved the performance of projects. There is need to investigate if it has also influence on project implementation. Terzieva (2014) added that human resource must be able to capture, share and store information in the organization. This reduced the cost of reacquisition as well as training employees. There are numerous empirical evidences of knowledge management by different scholar as discussed as follows;

Yeong (2010) assessed integrating knowledge management into project management on project success. Knowledge management is highly required in improving innovation and sustainable market. Based on empirical review 32% of the project surveyed were successful in terms of meeting functions and requirements, budget and time delivery. Knowledge management is increasingly important in improving the success of project from 32% as a new discipline. The study recommends the need to integrate knowledge management into projects management in order to realize a greater success rate and sustainability of the projects. The current study was done in using primary data collect from Tea Research Foundation.

Al-Zayyat, Al-Khaldi, Tadros and Al-Edwan (2010) examined knowledge management processes' influence on the project management. The study reviewed empirical literature from Jordanian IT industry. Majority of projects, especially information technology projects have high failure rate and challenges which is directly associated with knowledge management. Literature review indicated that there is no clear view of knowledge identification, uses of knowledge management and storage of knowledge for organizational learning. Knowledge management utilization significantly affected project performance. The current study used primary data collection method where question used in collecting data.

Terzieva (2014) investigated project knowledge management and projects experience based on organizational learning. Knowledge management enabled firms to practical learning through experience that is captured, share and stored. Based on the empirical review of the organization the study recommended that the success and failure of project can captured, stored and share to improve project success rate. The current study concentrated on resource management rather than project knowledge management.

Pereira and Goncalves (2017) researched on knowledge management in projects. Knowledge management is a new discipline that has attracted numerous researchers to investigate how knowledge can be maintained in organization project through organization learning. Portuguese organizations were surveyed to establish how knowledge management can be transferred into project life-cycle. The results indicated that majority of the organization are able to identify, capture and retention knowledge within the project cycle. However, there is no proper procedure of transferring knowledge from the project stakeholders to the organization as well as review of benefit of the knowledge. This is because majority of the

organization did not have a project department which made it difficult to institute a proper knowledge management. The current study was conducted in Kenya rather than Portugal.

Ranf & Herman, (2018) investigated the knowledge management contributions in project management. The study tries to create the association between the knowledgement and project management. The review identified that knowledge management was crucial on project management which affected the performance of project. Therefore, knowledge cycle are applicable in project management where knowledge to be passed, filter, improve and generation of new knowledges.

RESEARCH METHODOLOGY

Descriptive and explanatory research design were adopted in this research. Descriptive research design is considered to have an ability of establishing the relationship between variable which was appropriate in resource management practices and implementation of Tea Research foundation projects in Kericho County. The target population was 54 projects in Tea Research Institute where 86 employees of Tea Research Institute who are involved in the implementation process the respondents in the study. Census was used 86 respondents were used for the research based on the target of 54 projects in the Tea Research institute in Kericho County. Primary data was obtained utilizing questionnaires. The data was coded and entered in statistical package of social science. Descriptive analysis used standard deviation and mean to summarize the results for discussion. Correlation analysis was utilized as inferential statistics. Correlation analysis assisted in explaining the knowledge management practices and implementation of project in Tea Research Institute in Kenya.

RESULTS AND DISCUSSIONS

Knowledge management practices that were practiced in TRI were examined. The results were presented in terms of mean and standard deviation. The summary of the results was presented in table 1.

Table 1: Descriptive Statistics for Knowledge Management Practices

	N	Minimum	Maximum	Mean	Std. Deviation
The project had a clear feedback information from stakeholders	86	2.00	5.00	3.8256	.68928
There is continuous knowledge sharing and storing in the project	86	3.00	5.00	4.0698	.60955
The project was analysed and documented for maintaining organization learning.	86	4.00	5.00	4.4186	.49622
Knowledge was captured and stored for future use by farmers and organization.	86	2.00	5.00	4.2093	.72138
Knowledge based on previous project was used to improve the tea clones developed.	86	4.00	5.00	4.5233	.50239

Table 2 results indicated that the project somewhat had clear feedback information from stakeholders (mean of 3.8256). It was revealed that there was sufficient continuous knowledge sharing and storing in the project (mean of 4.0698). The projects were found to be sufficiently analyzed and documented for maintaining organization learning (mean of 4.4186). It was revealed that knowledge was satisfactorily captured and stored for future use by farmers and organization (mean of 4.2093). The knowledge was greatly improved from previous project to enhance existing clones (mean of 4.5233).

The results concurred with Al-Zayyat, Al-Khaldi, Tadros and Al-Edwan (2010) who found that knowledge management affected project performance. Similarly, Terzieva (2014) found that knowledge captured, stored and share improve success rate of the project. The project in TRI had satisfactorily captured, shared and store knowledge for training the farmers. Ranf & Herman, (2018) also found that knowledge management was crucial in project management resulting to higher performance of the project. Pereira and Goncalves (2017) pointed that most organization did not have project department making it difficult for knowledge management which is contrary with TRI. TRI has a function project department which assist in research and development where data are captured, shared and stored, however, response mechanism and networking with farmers remains to be a weak link affecting fully application of knowledge management in enhancing implementation of projects.

Implementation of projects in TRI were examined based on mean and standard deviation summary. The data was summarized in table 2 and discussed.

Table 2: Descriptive Statistics for Implementation of TRI Projects

Implementation of Projects	N	Minimum	Maximum	Mean	Std. Deviation
The organization has well developed funding for research project.	86	2.00	5.00	4.0465	.66699
Organization is able to distribute tea clones to farmer for improvement of their tea productions.	86	2.00	5.00	3.7674	.60730
The organization has been able to developing tea clones or varieties.	86	3.00	5.00	4.2907	.62996
The organization has ability to provide sufficient information to farmers.	86	3.00	5.00	4.3605	.57215
The Tea Research Institute has been able to implement major projects.	86	4.00	5.00	4.5465	.50075

Table 2 revealed that the organization implementation of projects was satisfactorily, since there was well-developed funding for research project, ability to developing tea clones or varieties, provide sufficient information to farmers and sufficiently able to implement major projects as indicated (mean over 4.0). Findings also revealed that the organization somewhat was able to distribute tea clones to farmer for improvement of their tea productions (mean of 3.7674). Therefore, TRI need to enhance distribution of clones to improve the farmers' tea quality,

quantity and resistance to climatic changes. Similar, challenges have been found in project implementation.

In case of Opsahl, Torp, Lædre, Andersend, & Olsson (2015) large-scale infrastructural large-scale project might have good stratefigies for implementation however it fails to deliver the main purpose to public. TRI has improve clones and enhance quality of tea however, there is delink between farmers and the institution in terms of dissermination of information as well as distribution of tea clones and inadequate of extention services.

Table 3: Correlation Analysis

Variables		Implementation of TRI Projects
	Pearson Correlation	.868[**]
Knowledge Management Practices	Sig. (2-tailed)	.000
	N	86

According to the results in table 3 revealed that knowledge management practices had very strong positive relationship with implementation of project in TRI (R=0.868, P<0.05). The results from Al-Zayyat, Al-Khaldi, Tadros & Al-Edwan (2010) concurred where knowledge management had significantly implication on project performance. However, the study was based performance of project rather than implementation.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

The results influence of knowledge management practices on implementation of Tea Research Institute Projects in Kericho County. The result revealed that project was had somewhat clear feedback information from the stakeholders. TRI has ensured continuous knowledge sharing and storing for the projects. This was done for future use by farmers and organization. There was sufficient project documentation for maintaining organization learning. The knowledge from previous project were found to be very useful in improving the tea clone's development.

Conclusions

The study concluded that there was significant influence of knowledge management practices on implementation of Tea Research Institute Projects in Kericho County. Knowledge management practices were leading resource management which was achieved by capturing knowledge, sharing knowledge and storing the knowledge with farmers. The projects were analysed and documentation for maintaining organization learning. The knowledge was stored to improve further tea clones developed. However, there was somehow clear feedback information from the stakeholders.

Recommendations

The study recommended further improvement in feedback mechanism to ensure all information from stakeholders are engaged in project. The TRI has well development knowledge sharing, knowledge storage and knowledge acquisition which should be used to assist farmers. The government through county government should develop funding's that will ensure farmers are able to acquire free or cheap seedling. This will farmers should be given free tours to the research institute for knowledge, training and acquisition of new cloned tea. The TRI have sufficient knowledge and information that should be channelled to the farmers.

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