THE INFLUENCE OF ORGANIZATIONAL CULTURE ON KNOWLEDGE TRANSFER IN THE ENERGY SECTOR IN KENYA

BY

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DECLARATION

I declare that this dissertation is my original work and has not been previously submitted or published elsewhere for award of any degree. I also declare that this contains no material by other people except where due reference is made and author duly acknowledged.

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ABSTRACT

Knowledge transfer involves sharing of knowledge from the source to the recipient and the utilization of the knowledge by the recipient to improve on their performance. The purpose of this study was to investigate the influence of organizational culture on knowledge transfer in the energy sector in Kenya. The specific objectives that guided the study were to establish the influence of organizational structure on knowledge transfer in the energy sector in Kenya; to investigate the influence of information systems on knowledge transfer in the energy sector in Kenya; to find out the influence of rewards system on knowledge transfer in the energy sector in Kenya; to determine the influence of interpersonal trust on knowledge transfer in the energy sector in Kenya. The study was anchored on four theories; Organization theory, adaptive structuration theory, Incentive theory and interpersonal trust-building theory. The study adopted a descriptive survey research design to obtain critical information of the subject under investigation from 98 respondents who work for the seven state corporations under the department of energy in Kenya with a response rate of 92.9%. The seven state corporations in the department of energy in Kenya are; the Kenya Electricity Generating Company (KenGen), Kenya Power, Geothermal Development Company (GDC), Energy and Petroleum Regulatory Authority (EPRA), Rural Electrification & Renewable Energy Corporation (REREC), Kenya Electricity Transmitting Company (Ketraco) and Nuclear Power and Energy Agency (N*u*PEA). The obtained data was entered into STATA 15 and Ms excel for analysis and computation.The findings show that coefficient of adjusted determination R2 was 0.589 which translates to 58.9%, of changes in knowledge transfer can largely be explained by the four independent variables; organization structure, information system, reward system and interpersonal trust. The study concludes that the rewards system has a significant influence on knowledge transfer in the energy sector in Kenya. This is due to the both financial and no-financial rewards ability to motivate individuals to adopt behaviours that promote knowledge transfer. Interpersonal trust has a significant influence on knowledge transfer in the energy sector in Kenya, this is due to the existence of trust among employees as well as policies that protect those transferring their knowledge from harm. The study recommends that the state corporations in the energy sector ought to refine their rewards systems to attract more of it employees partake in knowledge transfer practices. Further, they ought to promote and enhance interpersonal trust among it ranks.

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DEDICATION

I dedicate this project to my friends and family.

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ACRONOMY AND ABBREVIATIONS

ICT- Information Communication Technology

OT- Organizational Theory

KNLS- Kenya National Library Services

KM – Knowledge Management

KS- Knowledge Sharing

KT-Knowledge Transfer

SPPS- Statistical Package for the Social Sciences

KenGen- The Kenya Electricity Generating Company

KPLC- Kenya Power

GDC - Geothermal Development Company

EPRA - Energy and Petroleum Regulatory Authority

REREC - Rural Electrification & Renewable Energy Corporation

Ketraco - Kenya Electricity Transmitting Company

N*u*PEA - Nuclear Power and Energy Agency

TERMS AND DEFINITIONS

Knowledge Management – According to Ferreira, Mueller and Papa (2018) Knowledge Management (KM) is defined as the process that involve the creation, sharing use, and management of information and knowledge in an organization.

Knowledge Transfer – Knowledge Transfer (KT) is defined as the sharing of knowledge with an aim of solving the problems that exist in the organization (Noroozi *et al.,* 2018). The transfer of knowledge from one organization to the other is also referred to as Knowledge Transfer as illustrated in Organizational Theory.

Organizational Culture – It is defining ad the shared beliefs that exists in an organization and are different from the other organization. They are values that are withheld by an organization staff and are put in place to ensure that knowledge transfer has been done effectively to the benefit of the organization (Schein & Schein, 2017).

Organization structure – Organization structure is the framework that defines the nature of work and relations, systems used, the communications channels, the process of operation and people making efforts to achieve the set goals (Ahmady et al., 2016).

Rewards system – Rewards systems is a scheme that encompasses elements of compensation for performance and incentive for motivation within an organization (Benati and Coccia, 2018).

Information systems – A computer based artefact that aid in collection, processing, transmitting, storing and display of information and knowledge. These may include telephones and databases.

Interpersonal Trust – Interpersonal trust is psychological state involving the acceptance of vulnerability. It is based on the expectation that others will do the right thing (F. E. Six, 2007).

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The growth of the public service in the recent past has demonstrated the value of knowledge transfer (KT) since knowledge is recognized as a significant source of sustainable competitive advantage owing to the vast day-to-day activities of state corporations (Benassi & Landoni, 2019). Traditionally, knowledge as a critical resource has not been afforded the attention afforded to financial, human or material resources in state corporations. However, that is changing now as more and more organizations are realizing knowledge resource matters more than the conventional resource such as financial and materials. Whereas, in the past debate on knowledge management revolved on communication and information systems such as repositories and search tools, currently attention is increasingly being directed to the role of organizational culture in advancing or hindering knowledge transfer (Bresnen *et al.*, 2003).

Davenport & Prusak, (1998) stressed on the critical role played by organizational culture on knowledge management. They contend that individual beliefs and values inevitably influence organizational knowledge management practices such as knowledge transfer. These individual beliefs and values can impact on ones' tendency to transfer, seek or accept knowledge from others. Ismail Al- Alawi et al., (2007) who studied organizational culture factors such as organizational structure, information system, rewards and interpersonal trust and their influence on knowledge sharing also affirms the critical role of organizational culture in knowledge management. Knowledge management scholars and researchers (Syed & Rowland, 2004; Zohoori *et al.*, 2013; Chen and Huang 2007; Rahman & Shoid, 2017; Karlsen & Gottschalk, 2004; Ismail Al- Alawi *et al.*, 2007; Abubakar *et. al.*, 2019; Liang *et al.* 2016; (Wei et al., 2011) have turned their attention to organizational

culture and how it can influence knowledge management practice such as knowledge transfer.

The study will look into organizational culture factors such as organizational structure, information systems, rewards and interpersonal trust. The study was undertaken in the state department of energy in Kenya. Public sector has a culture unique to it compared to the private sector.

1.1.1 Organization Culture

Organizational Culture has often been cited as a critical factor which influences knowledge management practices such as knowledge transfer. The reasons for failure of implementation of knowledge transfer practices in state corporations in Kenya is the failure to adopt and promote favourable organizational culture. Knowledge transfer is an important knowledge management practice. Wamitu (2016) study on public sector established that the reason for ineffective knowledge management practice in public sector organization is due to existing organizational culture. They posit that corporate cultures have an effect on knowledge management implementation in State Corporations.

As defined by Misigo and Moronge (2017), organizational culture is a blend of attitude, beliefs, behaviours, and traditions of an organization**.** It encompasses the collective aspiration of the organization, describes its environment and dictates the behaviour of individual employee and their relationship with other employees and the public. According to Armstrong and Taylor (2020) organizational culture exist inform of values, norms, artefacts and management style. Organizational culture is what defines the character of an organization, guide how members of the organization go about their business, demarcate organizational boundary and guide how communication flows through the different layers of organizational boundaries (Ribière & Sitar, 2003).

According to Ferraris, Santoro and Scuotto (2018), each organization has its unique culture, a culture which develops over time and is cemented in the organization structure. This culture manifests in two dimensions; visible culture and invisible culture. The visible dimension of culture is reflected in the organizations core values, structure and its vision and mission statement while the invisible dimension can be realized from the tacit values that guide the opinion and actions of its employees.

Chidambaranathan and Regha (2016) developed an organizational culture assessment tool which categorizes organizational culture in four categories. They posit that organizations can have any one or combination of four culture types. These are clan culture, adhocracy culture, market culture and hierarchy culture. The clan culture type is characterized by friendly and open working environment where team work, collaboration, employees' involvement and commitment by both employees to the organization and the organization to its employees is visible. In adhocracy culture the work environment is characterized by an entrepreneurial, creative and dynamic work environment. The leadership tend to be visionary that encourages the employees to be innovative and take risks. The market culture type is dominated by competition and need for high performance. Demanding goals, gaining competitive advantage and success are prioritized. In hierarchical culture type is dominated by formalized and compound hierarchical structures and silo working environment. Actions of the organization members are governed by standardized procedures and rules are enforced. Employees are expected to be guided by exiting rules and procedures and follow best practices. The major concern of the organization is to be predictable and stable in the long term.

In their study on Scania AB *et al.* (2017) sought to investigate how organizational culture affects and supports knowledge transfer process between the headquarters and foreign subsidiaries. Their study found that organizational culture has significant effect on knowledge

transfer among employees. They pointed out the importance of creating a shared value and integrating the same in the organizational daily routine. Further, Rathi and Given (2017) study finds a positive relationship between culture as an organizational element and knowledge transfer performance in non-profit organization.

Locally, Wamitu (2016) explored how tacit knowledge is shared in the Kenyan public sector. She finds hierarchical bureaucracy and a highly structured scalar chain in the divisions of public sector. This has an impact on inflexible standards, rules and laws, which are difficult to change and must be complied with. The authors' findings also revealed that functional boundary as a major organizational culture has a negative effect on knowledge sharing in public sector in Kenya.

According to (Ismail Al- Alawi *et al.*, 2007) organizational culture encompasses six major categories; organization structure, processes, people, leadership, reward system and information systems. To expound on these categories, they stress on important factors under these broad categories of organizational culture. However, they have given more prominence in their literature in four of the six organizational culture categories. These are organizational structure, reward system, information systems and trust. The researcher intends to concentrate on these four categories and study their influence on knowledge transfer in state corporations in Kenya.

1.1.2 Knowledge Transfer

Knowledge transfer is as important as knowledge creation, storage and documentation. Many organizations are increasingly placing more effort on how existing knowledge within the organization can be transferred across the organization. Knowledge transfer includes the exchange of knowledge from a knowledgeable individual to a beneficiary and the development and use by the receiver of knowledge (Wang & Noe, 2010).

Martin (2019) defines knowledge transfer as involving transmission of knowledge from a person or ownership to a different person or ownership. The author further adds that knowledge transfer is the process through which teams, units, or organization exchange and receive knowledge.

Patalas-Maliszewska and Krebs (2016), defined five types of knowledge transfer utilizing the knowledge transfer model. These are; (i) serial transfer: which includes the transfer of knowledge acquired by a team from executing a role in a field to the next occasion that the same activity is carried out by that team and in a different environment; (ii), near transfer: applies to explicit knowledge that a team is passed to other teams doing quite similar work from executing a repeated and recurring mission; (iii) Fair transfer: includes tacit knowledge that other teams in other areas of a company have acquired from non-routine practice, (iv) strategic transfer: needs a common knowledge of the organization to carry out a policy mission that happens unusually but which is crucial for the whole company, and (v), Expert Transfer: requires a team which tackles a technical problem outside the reach of its own expertise.

The transfer of knowledge takes place at various levels, at interpersonal, departmental and interdepartmental level (Munyai, Nyakala & Mbohwa, 2017). Effective knowledge transfer involves commitment at all levels of the organization, therefore, adopting a culture which creates a learning environment that encourages experts to transfer and inspires others to seek knowledge is important (Zheng, 2005). By affecting employee's behaviour, organizational culture plays an important role in effective knowledge transfer process. This is why organizational leadership should put importance into understanding their organizational culture and how it influences knowledge transfer efforts.

1.1.3 The Energy Sector in Kenya.

The state department of energy is domiciled under the ministry of energy. The mandate of the department includes; National energy and policy management, Hydro-power development, geothermal exploration and development, rural electrification programme, promotion of renewable energy, energy regulation, security, and conservation (Executive Order Number 1 of 2018).

The State Department of Energy has seven state corporations under it. These state corporations are; the Energy and Petroleum Regulatory Authority, Kenya Power, Kenya Electricity Transmission Company, Rural Electrification and Renewable Energy Corporation, Kenya Energy Generating Company, Geothermal Development Company and Nuclear Power and Energy Agency (Executive Order Number 1 of 2018).

State corporations are knowledge intensive bodies (Dewah & Mutula, 2016) and generate a lot of knowledge and information through normal operations, research, and reports. A considerable amount of their knowledge is also tacitly stored with their experienced and skilled employees. Hence, the need for these state corporations to implement knowledge transfer initiatives to retain their knowledge and increase employee competencies.

1.2 Statement of the Problem

There is a general consensus among scholars that supportive organizational culture must be present in an organization for a successful implementation of knowledge transfer. Organizational culture can enable or hinder knowledge transfer (Ahmady, Nikooravesh & Mehrpour, 2016). According to Nagesh (2016) two-thirds of organizations knowledge transfer effort should focus on organizational culture. Pietersen (2017) characterized information systems, interpersonal trust, organizational structure and reward system as essential factors of organizational culture.

According to Henttonen, Kianto and Ritala (2016) as quoted by (Syed & Rowland, 2004), employees in government agencies are hesitant to share their knowledge due to

hieratical and bureaucratic organizational structure that make knowledge transfer difficult. They note that employees in government agencies held to the *knowledge is power* mantra and treat their knowledge as a source of competitive advantage over others hence hindering knowledge transfer.

Locally, (Wamitu, 2016) observes that employees in public sector in Kenya are reluctant to share their knowledge. Wamitu, (2015) estimates that public sector, losses its core competencies when employees exit the service or are transferred. Similarly, according to (Ondari-Okemwa & Smith, 2014), Kenya, just like most of its sub-Saharan peers is behind in integrating knowledge management practices such as knowledge transfer in its government agencies.

Despite its immense benefit, state departments face a major problem in implementing knowledge transfer (Ondari-Okemwa & Minishi-Majanja, 2013) . Given the various challenges that impede in implementing knowledge transfer, scholars have consistently identified organizational structure, information system, reward system and interpersonal trust as the main hindrance (Ondari-Okemwa & Smith, 2014); (Rahman & Shoid, 2017). This informs the choice of the researcher to investigate the influence of organizational culture on knowledge transfer in the energy sector in Kenya. Similarly, despite the existence of numerous studies on knowledge transfer, there is a dearth in literature on knowledge transfer in public sector (Syed & Rowland, 2004) as most studies concentrate on knowledge creation and documentation. This study therefore seeks to enrich the literature on knowledge transfer practices in public sector.

1.3 The Purpose of the Study

The purpose of the study was to determine the influence of organizational culture on knowledge transfer in the energy sector in Kenya using a descriptive research design with the view of enriching the literature on knowledge transfer in the public sector. Organizational

culture in the study was characterised by organization structure, information systems, rewards system and interpersonal trust. In view of this, the study was to determine the influence of organizational structure, information systems, rewards systems and interpersonal trust on both tacit and explicit knowledge transfer in the public sector. The study was undertaken in the seven state corporations domiciled under the state department of Energy and the sample drawn from the technical staff working in these state corporations.

The study employed a semi-structured questionnaire to collect primary data and use regression analysis to test the relationship between the independent and dependent variables and the result presented in form of tables, charts and graphs and interpreted in narratives.

1.4 Objective of the Study

The following were the general and specific objective of the study.

1.4.1 General objective

The main objective of the study was to assess the influence of organizational culture on knowledge transfer in the energy sector in Kenya.

1.4.2 Specific objectives of the study

The main objective was broken down into the following specific objectives:

i. To establish the influence of organizational structure on knowledge transfer in the energy sector in Kenya.
ii. To investigate the influence of information systems on knowledge transfer in the energy sector in Kenya.
iii. To find out the influence of rewards system on knowledge transfer in the energy sector in Kenya.
iv. To determine the influence of interpersonal trust on knowledge transfer in the energy sector in Kenya.

1.5 Research Questions

The study was to answer the following questions;

i. What is the influence of organizational structure on knowledge transfer in the energy sector in Kenya?
ii. What is the effect of information systems on knowledge transfer in the energy sector in Kenya?
iii. What is the influence of rewards system on knowledge transfer in the energy sector in Kenya?
iv. What is the influence of interpersonal trust on knowledge transfer in the energy sector in Kenya?

1.6 Significance of the Study

The research aim was to examine the impact on of organizational culture on knowledge transfer in the energy sector in Kenya. It was envisioned that the findings and recommendations of the report will help different stakeholders. The analysis and recommendations was expected to provide State corporations and government policy-makers with insights to consider how their organizational culture affects their attempts in implementing knowledge transfer initiatives and. Scholars, academics and researchers were expected to find this study useful contribution to the existing literature on knowledge transfer particularly in state corporations in Kneya. The study was also expected to identify other areas of possible future studies.

1.6.1 State Corporations

The State Corporations will find the study findings and recommendations relevant in understanding how different factors on the organizational culture influences knowledge transfer efforts in these corporations. The recommendations in the study will enable them adopt a culture that translates to successful knowledge transfer implementation.

1.6.2 Policy Makers

The study findings and recommendations will be important in the formulation of policies governing implementation of knowledge management practices such as knowledge transfer in state corporations. The State Corporations policy makers will be able to gain insight on how organizational culture variables influence knowledge transfer and enable them put in place appropriate policy measure to enhance knowledge transfer in State Corporations.

1.6.3 Academicians and Scholars

The study will add to the literature on organizational culture and knowledge transfer process in public sector, making it useful to academicians, scholars and researchers.

1.7 Scope of the Study

The study was focus on assessing the influence of organizational culture on knowledge transfer in the energy sector in Kenya. It was carried out in the State Department of Energy and it covered the seven state corporations under the State Department of Energy. The study concentrated on the four main organizational culture categories; organization structure, information systems, rewards system and interpersonal trust as identified by (Gupta & Govindarajan, 2000). These four organizational culture factors were selected as they had the strongest emphasis in influencing knowledge transfer in an organization. In addition, due to time and resources limitation, the study could not cover all the factors under the organizational culture. Further, the study was only limited in the state corporations in the department of energy and did not look into the private players in the energy sector in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on the influence of organizational culture on knowledge transfer. It contains a theoretical review, empirical review and the summary of the research gap.

2.2 Theoretical Review

This study finds several theories valuable to understand the association between organizational culture and knowledge transfer. The research would discuss theories and literature that are useful to the study. The theories include organizational theory (OT), adaptive structuration theory, incentive theory and interpersonal trust-building theory. The theories and the reviewed literature will be important in forming a basis under which the study will be established.

2.2.1 Organizational Theory

According to Haveman and Wetts (2019), Organizational Theory (OT) is used to understand the right way to operate an organization or to recognize organization structure that can thrive. The theory explores organizations to determine the behaviors and processes to address challenges, optimize performance and competitiveness, and satisfy stakeholder expectations (Birken *et al.*, 2017).

Organization theory is rooted in the early 1900s research work on organizational performance and structure of Henri Fayol, Max Weber, and Frederick Taylor. Henri Fayol work was centered on administrative principles, Max Weber on bureaucratic principles and Taylor's work was based on scientific management. Although the scholars front three different school of thoughts on organizational structure and management, they share the

perception that formalized organizational structure prescribe a common behavior for its employees.

Henri fayol developed a management hierarchical pyramid as a system of administrative principles. This system functions in a top-down approach. This approach places greater concern on the principles of coordination and specialization in an organization. Coordination in the sense that members of the organization are linked in a clear pyramid like top-down chain of command where all employees are accountable to one superior only. Similarly, all superiors have a limited span of control in that they can only have a number of subordinate whom they can manage. This sort of organization structure also emphasized on specialization of task through departmentalization where homogenous tasks are grouped into one entity.

Max Weber whom many regard as the father of sociology, fronted a legal and rule oriented bureaucratic model as the most efficient model to set up and manage an organization. His approach to organization structure is broader and includes both social and historical perspective (Serpa & Ferreira, 2019). This model is reflected in Weber's view of a public employee. According to him, a public employee must always act consistent with his superior's interest and thus stay in his bureaucratically assigned role. Weber established some criteria for an organization to be said to be bureaucratic. These are: (i) That an organization should have an administrative hierarchy; (ii) that there should be distribution of work; (iii) formal set of rule which guide performance of work; (iv) impersonality in the application of rules and recruitment based on technical qualification. Although this type of organizational structure is still widely applied, it has been criticized for its emphasis on inflexible and rigid rules and regulations.

Frederick Taylor's scientific management model also palaces emphasis on efficiency much like Weber's bureaucratic approach. However, unlike weber's hierarchy and rules oriented approach, Taylor fronts a scientific based idea of systemization where attempts are

made to find a process of achieving maximum output with minimum input of energy and resources. Taylor's approach is a bottom-up organizational structure that places emphasis on the welfare of individual employees to increase their productivity. Fredrick Taylor's scientific management model is based upon on four principles; (i) constantly experimenting on new efficient processes instead of sticking to old practices of doing work; (ii) creating harmony in the place of work between management and subordinates through hierarchy and authority; (iii) a clear division of tasks and responsibilities; (iv) as well as hiring the right people for the job and constantly training and improving their capacity and skills. This scientific management model has over time been criticised as too mechanical and exploiting employees and it is not prevalently practised. Organization structure that is free from bureaucracy, where employees are encouraged to collaborate across departments and management appreciates learning on the job is likely to support knowledge transfer.

Organization Theory is essential to this study because of its application to organization structure. The theory helps shed light on how different architectures of organizational structure can influence knowledge transfer in organization. Adopting the right organizational structure may positively influence success of knowledge transfer processes.

2.2.2 Adaptive Structuration Theory

Adaptive Structuration Theory (AST) is one of the major theories of group communication. According to Rains and Bonito (2017), Adaptive Structuration Theory (AST) was influenced by the idea of Structuration by Anthony Gidden who pioneered Structuration Theory in the year 1984. AST came as an improvement of Gidden's Structuration Theory, as it narrows down its focus to structures which have relationship with information technology. Therefore, AST came as a link among Information technology, human activities and the social structures that exist in an organization.

Adaptive structuration theory aids in the study of advanced information systems in organizations. The theory seeks to explain the structures of advanced technologies and the associations that actually emerge in human action as a result of interacting with these technologies. Central to the AST is the notion of structuration. The systems that are provided by information technology as well as the structures that arise when people use these technologies. These systems and structures exist in a corresponding manner and they produce and reproduce each other in a continuous cycle.

The theory posits that before adopting any information system, the intended users' *attitude*, that's their feelings and emotions towards the system; their *faithfulness*, that's intentions of the system as perceived by the intended users and *consensus*, that's the extent of agreement among the intended users on how the system should be used has to be considered to achieve a positive adoption.

The study has adopted AST because it models how information systems are adopted in an organization and how organizational structures adopt to these information systems. Since the theory models and explains these interactions between information systems and people it can help explain how information system can impact on and influence knowledge transfer in an organization. This is so because knowledge transfer is impacted by both technological systems employed by organizations and the social structures that exist among people in organization. With the use of collaborative technology, knowledge transfer becomes an easier task to undertake by most organizations since today's systems are web based and they can be interconnected to achieve knowledge transfer even among individuals and teams far apart.

2.2.3 Incentives Theory

Killeen, (1982) defines incentives as events that generate a heightened state of arousal which in turn increases the vigor of an ongoing behavior. Incentive Theory came into the limelight

in the 1940s. The theory was improved by (Laffont & Martimort, 2006) in their original work published in 2001. The central tenet of the incentive theory is that people are motivated by a drive for incentives and reinforcement. That people behave in a way they believe will result for them a rewards and avoid them sanctions. The Incentive theory covers both the reward system and the motivation aspect that can influence people's behavior. The theory suggest that people tend to be motivated into performing activities that leads them to receive reward after that. Incentives can be both intrinsic and extrinsic (Deci and Ryan, 2002). Both types of incentives attract and motivate different individuals and have distinct effects over employee behaviour.

Employees in an organization might behave differently in similar situations depending on the rewards available to them at any given time. Depending on time and situation, the importance of the same reward is likely shift. Psychological and social influences may help decide which rewards influence individuals' behavior. Incentives function only as incentive mechanism if people respect the incentives they earn for their actions and behavior.

Killeen, (1982) alludes to a situation in which as incentives induced behavior increases in rate and vigor, it also approaches limitation. A phenomenon he describes as a decay in arousal. Therefore, for an incentive to be functional it has to be reinforced over time. This means that a long delay between the deliveries of incentive will accelerate the decay in arousal of the perceived incentive, hence the need for a timely reinforcement of the incentives delivery.

Rewards systems which are central to the incentive theory, have the ability to attract, motivate and maintain individuals in an organization. They provide a strategic way of influencing individuals' attitudes, behaviour and performance (Gomez-Mejia et al., 2010). Rewards can be in the form of monetary, or non-monetary rewards such as job security, promotion, recognition and professional development. Rewards such as recognition,

promotion or monetary reward motivates individual to perform with an aim of achieving perceived incentives (Killeen, 1981). Incentive Theory is relevant to this study because it explains how the reward system works and how it can influence employees' behavior and attitude. Incentive theory has therefore been adopted to explain the independent variable reward system.

2.2.4 Interpersonal Trust-Building Theory

Interpersonal trust theory has been advanced by the work of (F. E. Six, 2007). He defines interpersonal trust as a physiological state involving the intent to accept vulnerability while dealing with another party based on the belief that others will implement tasks important to you. The theory is built on two basic assumptions: (i) Human behaviour is goal directed and rationality is strongly informed by the fact that different competing interest are not given same attention. (ii) Human behaviour is context dependent. The theory posits that for interpersonal trust to be built in an organization, four conditions need to be achieved by the individuals building interpersonal trust;

i. Removing any legitimate distrust.
ii. Individuals must regularly act in a way that convey positive relational signals
iii. Individuals must have a positive way of solving troubles
iv. Organizational policies should promote and enhance trust

In a trust building process, the individuals involved actions must reciprocally reinforce each other. Individuals predisposing believes also influence their initial attitude and how they interpret information and events observed

Interpersonal trust-building theory holds that interpersonal trust guides how employees relate with each other and this influences their knowledge transfer practices. If an

employee does not believe for instance that their co-worker is trustworthy, or is not considerate of their feelings, are not friendly or reliable, then there is a high likely hood that they will not transfer their knowledge to such co-worker. The reverse is also true. While adopting the theory to explain the interpersonal trust variable and how it can impact on knowledge transfer, the researcher is not ignorant of the limitation of the theory. The theory is limited to interpersonal trust-building and does not extend to other forms such teams or inter-organizational trust building.

2.3 Empirical Review

2.3.1 Organizational Structure and Knowledge transfer

Organizational structure informs the formal relations and reporting in an organization, determines the place of an individual in their working units within the organization and includes ways by which all the units in the organization are coordinated (Ahmady *et al.*, (2016). Organizations create structure that suite them so as to guide their activities and processes as well as direct the action of its members in a desired manner. It is a tool for coordination and it influences the entire of organization.

Organizational structure in public sector is characterized by bureaucracy and strict hierarchical chain of command (Wamitu, 2015). Organization structure involve factors such as decision making, document confidentiality, cross-functions collaboration as well as the relationship between the superior and subordinated (Alawamleh & Kloub, 2013). Organizational structure which support a broad-based consensus in decision making, and cross functions collaborations is believed to enhance knowledge transfer. If certain knowledge and documents are restricted to certain level in the organization hierarchy, then knowledge transfer is inhibited in the organization (Syed & Rowland, 2004). Additionally, (Acharya & Mishra, 2017) believed that organizational structure has an interesting correlation with the transfer of knowledge in an organization. The most remarkable point about this

finding of the authors was that the design of an organizational structure had a refined, more guided impact on knowledge transfer in the organisation.

A study by (Zohoori *et al.*, 2013) on the relationship between organizational structure and knowledge sharing culture pointed out on the importance of cross-functional collaboration and participatory decision making have a positive influence on knowledge transfer and learning. Cross-functional collaboration fosters team work and shared values. Similarly involving employees in decision making gives them a certain level of empowerment. The stronger the team work bond and shared values and the broader the level of employees' participation in decision making, the higher their level of knowledge transfer and learning.

In another study conducted by Chen and Huang (2007), the authors found out that organizational structure is positively related to knowledge management whereby the theoretical implications are extended to capture the effects organizational structure have on knowledge transfer. The study further indicates that the centralization contributes to the enhancement of the level of knowledge management. There is a dearth of literature on organizational structure and its influence on knowledge transfer in public sector in Kenya.

2.3.2 Information System and knowledge transfer

There is no agreement among scholars on what exactly is information system. The lack of consensus is not as a result of what is sufficient to define information system is but rather the designation of the same term by various scholars to mean different things (Falkenberg et al., 2000). This study will adopt information system to mean a computer-based artefact that support communication among members of organization as well as its publics through aiding the generation, sharing and storage of information.

Information systems are one of the main enablers of formal and informal knowledge transfer process (Rahman & Shoid, 2017). Information systems such as telephones, email,

social media tools and other video conferencing tools enable virtual interaction and transfer of knowledge among employees, while database and intranet helps in collection, storage and transfer of critical organization knowledge for future use. However, information systems require skills on the part of the users and technical support hence the need to train users on how to use these systems. Similarly, there is the issue of the ease of use of the information system.

Margilaj (2015) emphasizes that important factors to be considered while developing knowledge management systems is the simplicity and ease of use of the technology, and adaptability to the needs of the user. Karlsen and Gottschalk, (2004) who studied factors affecting knowledge transfer in IT projects in Norway find a significant and a positive influence of organizational culture and knowledge transfer. However, they find no significant correlation between information systems and effective knowledge transfer. They observed that even though Norwegian organizations have significantly invested in information systems for purpose of knowledge transfer, in most cases these technologies are not used as intended and consequently their impact on knowledge transfer is insignificant.

Roberts, (2000) underscore the importance of information systems in knowledge transfer. However, he notes that information systems are more beneficial when it comes to transfer of explicit knowledge. That when knowledge is codified, it can be transferred through information systems far and wide at insignificant cost. He notes that tacit knowledge transfer is not as easy as explicit knowledge transfer. This he notes, is because of the need for a common social and cultural context between the transferor and the receiver of the knowledge. However, (Roberts, 2000) recognises the ability of information systems creating a co-presence for a distant individuals hence facilitating tacit knowledge sharing that would have otherwise only be possible in a face-to-face.

López *et al*, (2009) find that information system plays an important role knowledge transfer. They contend that the introduction of information systems has the ability to bypass structures that exist in an organization and promotes greater dissemination of knowledge to all individuals. They also argue that information systems can aid in profiling of experts in a database and as a result facilitate access of these experts' others hence enhance knowledge transfer. Zawawi *et al.,* (2011) who studied barrier factors to knowledge sharing in public universities find that information systems play a major role in making sure that knowledge transfer works and that the absence of good systems could hinder knowledge transfer.

Locally, (Owino *et al.*, 2012) find that information system can increase knowledge transfer by expanding individuals' reach. They consent that barriers such as lack of training and familiarity on use of information system can hinder knowledge transfer. Despite the existence of literature on the nexus between information systems and knowledge transfer, there is still limited literature on the influence of information systems on knowledge transfer in public institutions. Hence, the need for study to contribute to the literature on this area.

2.3.3 Reward System and knowledge transfer

Reward system involves incentives that influence employees to share their knowledge. The existence and quality of reward system can influence their participation in knowledge transfer. The incentive can be a positive or negative. The positive incentive can be in the form of money, promotion, training, award or even recognition. A negative incentive can be fear of demotion, missing out on training and promotion among others punishments. It's impractical to assume employees are always willing to transfer their knowledge without gauging what they are likely to gain or loss from such an action (Ismail Al- Alawi *et al.*, 2007). According to Abubakar *et. al.*, (2019), without proper reward system, the motivation to seek and transfer knowledge among employees is weakened.

According to Nguyen and Prentice (2020) there may be a significant element in the fostering of knowledge transfer practices through organizational rewards. The authors argue that an organization can effectively foster a culture of knowledge sharing not just by integrating knowledge explicitly into its policy but also by modifying employee perceptions and practices in order to promote the eager and effective exchange of knowledge. Nguyen and Prentice (2020) mentioned in their study that several organizations, such as Buckman Laboratory and IBM, have adopted reward systems to facilitate knowledge transfer among employees.Goh (2002) study on managing effective knowledge transfer identifies a number of key "hard" and "soft" factors that can facilitate effective knowledge transfer in an organization. These factors include a broad based reward system that does not only rely on financial performance.

Yih- Tong Sun & Scott, (2005) investigated the barriers to knowledge transfer at different levels of knowledge transfer; individual, team, organization and inter-organization. They find that individuals undertake cost benefit analysis before they transfer their knowledge to other individuals or team. They note that economic-wellbeing as well as social status of individuals can act as a hindrance to knowledge transfer. If individuals are likely to economically benefits and get recognition then they are more likely to transfer their knowledge to others.

Martin-Perez & Martin-Cruz, (2015) find that reward systems do not influence knowledge transfer directly. However, they find that reward systems, creates employee loyalty and reduces their chances of exit from the organization. In the process employees improve their willingness to transfer their knowledge. Their study is in concurrence with (Jeung et al., 2017) study on perceived organizational support and knowledge sharing intentions. They find that when individuals perceive that the organization support and care about them, they develop a commitment to wellbeing of the organization. They also related commitment to organization to enhance knowledge sharing intention to better organizational

effectiveness. The study additionally suggested that the best way to ensure that employees perceive organization support and care is through rewarding the employees in their sharing circumstances. There is need for further study on the influence that reward systems can have on knowledge transfer especially in public sectors institution in Kenya.

2.3.4 Interpersonal Trust and knowledge transfer

Trust is defined as "the mutual confidence that no party to an exchange will exploit another's vulnerabilities" (Sabel, 1993). Trust mitigates the perceived risk associated with knowledge transfer (Sankowska, 2013). Interpersonal trust can be defined as a psychological state involving the acceptance of vulnerability, based upon the anticipation that the other will perform a particular important action properly or as envisioned (F. E. Six, 2007).

Interpersonal trust is an important ingredient for a successful cooperation in an organization setting. However, despite the importance of interpersonal among employees in an organization, many organizations still struggle to build and maintain a healthy interpersonal trust among their ranks. Interpersonal trust building is an interactive process. It is based on positive feedback, reinforcing one's past behaviour (F. E. Six, 2007). It is important to also note that organizational policies and settings have immense influence on the generation and maintenance of interpersonal trust.

Interpersonal trust leads to acceptance and openness in expressions whereas lack of it evokes rejection and defensive conduct. In knowledge transfer, both the knowledge giver and receiver take risk. The knowledge giver faces the risk of diminishing their competitive edge by sharing prized knowledge while on the other hand the knowledge receiver runs the risk of absorbing false and misleading knowledge given in bad faith. However, interpersonal trust helps mitigate these risk. According to Lee *et al.* (2019), Trust is very important in the implementation of knowledge management in an organization. Dabić *et al.* (2019) suggests

that an atmosphere of trust and transparency in an ecosystem where continuous learning and innovation are valued.

A recent research by Rutten, Blass-Franken and Martin (2016) identified major variations in the degree of information exchange where trust differs. The study found that lack of trust contributes to less exchange of information. Fleig-Palmer & Schoorman, (2011) studied trust as a moderating factor between mentoring and knowledge transfer, in their study they find that the amount of trust a protégé has on mentor has a significant influence of the amount of knowledge transferred. Their finding is similar to that of (Jensen & Szulanski, (2004); Levin et al., (2002) who also find trust as a direct antecedent to knowledge transfer.

A different study by (Holland, Cooper & Sheehan, 2017) showed that the trustee's reputation plays a medium function in enabling employee to transfer their knowledge. There exists a relationship between trust and knowledge transfer in organizations. (Yasir et al., 2017) who studied trust and knowledge sharing found out that an organization needs to support the various types of trust including interpersonal trust to help in efficient and smooth transfer of knowledge. The study further indicate that organizational trust is significant for knowledge management in general. This is because the organization trust may aid in motivating the employees. The study also highlights the various types of interpersonal trust for the several knowledge management processes including knowledge transfer to constitute organizational trust. (McAllister, 1995) developed two different types of trust: effect-based trust, which is based on mutual reciprocation of care among co-workers; and cognition-based trust which is informed by ones confidence in co-workers competence and reliability.

Locally, (Kipkosgei et al., 2020) find a significant and positive relationship between co-worker trust and knowledge sharing. Their finding is similar to that of (Sankowska, 2013) who found a positive relationship between trust and knowledge transfer in firms. These

results imply that organizations need to invest in building trustful bond among its workforce to enhance knowledge transfer.

2.3.5 Knowledge Gap

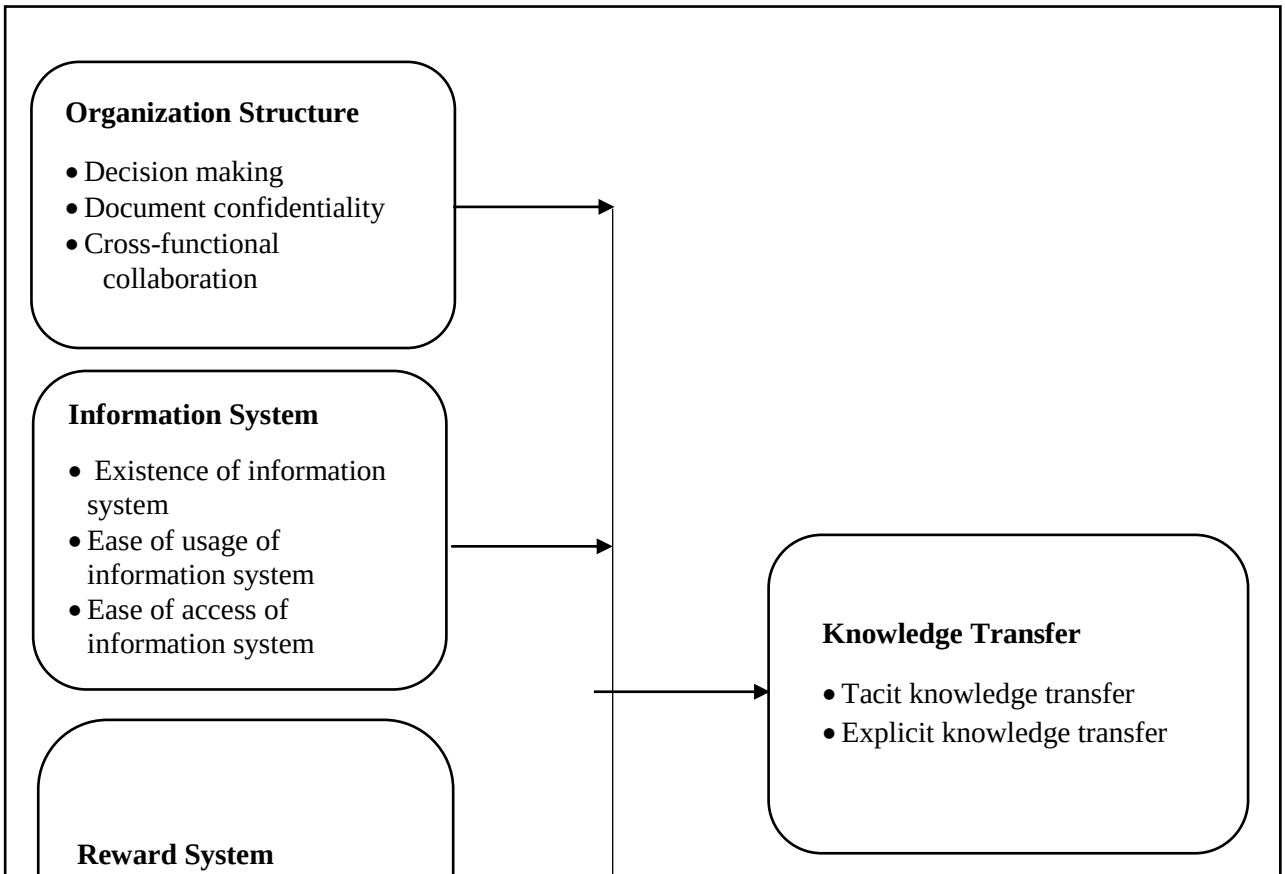
There exist empirical evidence on the nexus between organizational culture and knowledge transfer (Syed & Rowland, 2004; Zohoori *et al.*, 2013; Chen and Huang 2007; Rahman & Shoid, 2017; Karlsen & Gottschalk, 2004; Ismail Al- Alawi *et al.*, 2007; Abubakar *et. al.*, 2019; Liang *et al.* 2016; (Wei et al., 2011). However, literature on knowledge management I public sector is still scanty (Syed & Rowland, 2004).

The public sector in Kenya still lags behind on matters knowledge transfer (Wamitu, 2016). This could be as a result of the fact that in Kenya, most of the public sector institutions have not understood well knowledge transfer. Similarly, the public sector in Kenya does not prioritize knowledge transfer (Mosoti & Masheka, 2010). Consistent with this observation is that of (Ondari-Okemwa & Minishi-Majanja, 2013) who note that state corporations in Kenya hardly train their employees on Knowledge management and are slow in adopting knowledge transfer practices. On the other hand most studies on knowledge transfer conducted in Kenya target the private sector organizations (Nielsen et al., (2010); Ollows & Moro, (2015); Kinyua et al., (2015); Spurk et al., (2014)) leaving a gap in the literature of knowledge transfer in the public sector. This lag and lack of proper understanding of knowledge management practices in the public sector in Kenya justify a study on the influence that organization culture could have on knowledge transfer in the energy sector in Kenya.

2.4 Conceptual Framework

Figure 2.1

Conceptual Framework



2.5 Operationalization of Variables

The operationalization of variables in this study ensured that the variables used in the study have facilitated their measurement quantitatively to allow them in the testing of the hypothesis. The variables were broken down to develop an operational framework. The variables of the study included the organization structure, information systems, rewards system and people forming the independent variable. On the other hand, knowledge transfer formed part of the dependent variable as shown in table 2.2 below.

Table 2.1

Operational Framework

Variable	Orientation	Objectives	Indicator	Scale of Measurement	Tool of Analysis	Location in the Questionnaire
Knowledge Transfer	Dependent variable	To assess the influence of organizational culture on knowledge transfer	• Tacit knowledge transfer • Explicit knowledge transfer	5 point Likert Scale	Descriptive Regression Analysis	Section F; page 53
Organization Structure	Independent variable	To establish the influence of organizational structure on knowledge transfer in the energy sector in Kenya.	• Decision making • Document confidentiality • Cross-functional collaboration	5 point Likert Scale	Descriptive Regression Analysis	Section B page 55
Information System	Independent variable	To investigate the influence of information systems on knowledge transfer in the energy sector in Kenya.	• Existence of information system • Ease of usage of information system • Ease of access of information system	5 point Likert Scale	Descriptive Regression Analysis	Section C; page 55 and 56
Reward System	Independent variable	To find out the influence of rewards system on knowledge transfer in the energy sector in Kenya.	• Financial rewards • Non-financial rewards • Team-based rewards	5 point Likert Scale	Descriptive Regression Analysis	Section D; page 56
Interpersonal trust	Independent variable	To establish the influence of interpersonal trust on knowledge transfer in the energy sector in Kenya.	• Trust in Knowledge giver • Trust in knowledge receiver • Trust in management	5 point Likert Scale	Descriptive Regression Analysis	Section E; page 56 and 57

2.6 Study Hypothesis

Emerging from the conceptual model in figure 1, the following null hypothesis of the relationship in the study was formulated.

Hypothesis 1

$H_{o1;}$ Organizational structure has no significant influence on knowledge transfer in the Energy Sector in Kenya.

Hypothesis 2

$H_{o2;}$ Information System has no significant influence on knowledge transfer in the Energy Sector in Kenya.

Hypothesis 3

$H_{o3;}$ Rewards System has no significant influence on knowledge transfer in the Energy Sector in Kenya.

Hypothesis 4

$H_{o4;}$ Interpersonal trust has no significant influence on knowledge transfer in the Energy Sector in Kenya.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter will address the methodology used to examine the influence of organizational culture on knowledge transfer in the energy sector in Kenya, being a case of the state department of energy. It explains the research design with specifics that include the research population, the sampling procedures, data collection methods, and the analysis of data.

3.2 Research Design

Research design guides the strategy of how the research is to be conducted by laying the blue print of how data is collected, analyzed and interpreted (Kothari, 2017). This study has adopted a descriptive research design. The descriptive research design includes surveys and fact inquiry of various types that describe the state of affairs in existence (Kothari, 2017).

Descriptive research design is useful since it is free from subjectivity and helps describes the variables of interest by analysing their relationships and it offers valuable and correct answers to the research questions (Kombo & Tromp, 2006). Descriptive research makes use of six Ws (who, what, when , where, why, how) of research (Gupta & Rangi, 2014). A descriptive study was deemed as the most suitable as the study sought to gather information intended to establish the influencing of organization culture on knowledge transfer in the energy sector in Kenya.

3.3 Study Population

Study population is the large group of study elements such as individual or events from which a sample is derived from, which results in generalized results (Lawrence, 2018). The study collected data from technical staff working under state corporations in the department of Energy. These corporations are the Kenya Electricity Generating Company (KenGen),

Kenya Power, Geothermal Development Company (GDC), Energy and Petroleum Regulatory Authority (EPRA), Rural Electrification & Renewable Energy Corporation (REREC) Kenya, Electricity Transmitting Company (Ketraco) and Nuclear Power and Energy Agency (N*u*PEA). The combined staff population of these corporations was 5, 879 as shown in table 3.1 below.

Table 3.1

Study population

Organization	**Population**
Kenya Electricity Transmitting Company	857
Kenya Power	3152
Kenya Electricity Generating Company Limited	1256
Energy and Petroleum Regulatory Authority	176
Rural Electrification and Renewable Energy Corporation.	152
Geothermal Development Company	207
Nuclear Power and Energy Agency	79
Total	**5,879**

Source: (Kimingi, S. N., & Senaji, T. S. 2020; NuPEA strategic plan).

3.4 Sampling Technique and Sample size

3.4.1 Sampling Techniques

For the study to be credible, a sampling technique should be identified. Sampling is the process of selecting a fraction of a population to represent the population of interest in a study (Kothari, 2017). The sample units selected for the study were selected in such a way that they represent the entire population, Fraenkel *et al*. (2012). Given its characteristics, the study has adopted a stratified simple random sampling and simple random sampling technique.

The stratified simple random sampling technique clusters the study population into subgroups and selects samples randomly from each subgroup ensuring each subgroup is proportionately represented. A stratified sampling technique was used to select appropriate number of respondent from all the different departments to get a fair representation in every state corporation covered in the study. The participants were sent a link with the questionnaire to comply with the government Covid -19 control measures. Similarly, staff and members of the state corporations are believed to be busy most of their time and the link gives them time to attempt the questionnaire at their opportune time.

The study also employed a simple random sampling technique to select respondents from all the departments in each of the seven state corporations covered in the study. The technique eliminates selection biases and allows every technical staff of each of the seven state corporations to have an equal chance of being selected as a respondent of the study.

3.4.2 Sample size

Sample size is the number of unit selected from a study population for collection of data for purpose making generalized conclusion about the study population (Kothari, 2017).

This study focused on the staff of the seven state corporations which is 5,879. In order to come up with a representative sample for this study, the Nassiuma (2000) formulae was used. Nassiuma (2000) formulae is as follows:

$$n = \frac{N * C^2}{C^2 + (N-1)e^2}$$

Where:

n= sample size

N= Population size

e= tolerable error (5%)

C= coefficient of variation (0.5)

A sample size of 98 was obtained by substituting in the above formula. The sample population for each organization is calculated proportionally with the total sample size as shown table 3.2 below.

Table 3.2

Sample size distribution

Organization	Sample Size	Percentage
Kenya Electricity Transmitting Company.	14	14%
Kenya Power.	53	53%
Kenya Electricity Generating Company Limited.	21	21%
Energy and Petroleum Regulatory Authority.	3	3%
Rural Electrification and Renewable Energy Corporation.	3	3%
Geothermal Development Company.	3	3%
Nuclear Power and Energy Agency.	1	1%
Total	**98**	**100%**

3.5 Data Collection Instrument

This study adopted a semi- structured questionnaire as the data collection tool. This is because questionnaires are the most appropriate tools for collection of data in instances where the respondents are many (Kothari & Gaurav, 2014). The questions in the questionnaire were designed according to the study objectives. The questionnaire made use of both open ended and closed ended questions to ensure exhaustive response to the study. The questionnaire adopted a 5 point Likert scale (1-5) for closed ended questions while open ended questions

were arranged in themes for ease of analysis. The open-ended questions allowed the study to obtain in-depth insights, motives, opinions and interests towards the study objective under investigation while the Likert scale responses were used to measure the respondents' opinions, perception and attitudes (Mugenda & Mugenda, 2012).

3.6 Validity and Reliability of Research Instruments

The validity and reliability are ways of demonstrating the thoroughness of the research instrument and therefore the credibility of the findings arrived at. The researcher tested the validity and reliability of the instrument before embarking on data collection.

3.6.1 Validity test

Validity is the degree to which an analysis correctly represents the basic ideas that the researcher is trying to quantify or evaluate. A study conducted by Shaked *et al.* (2020) suggests that "Validity is one of the necessary foundations of research. If the research lacks validity, it does not add value to the knowledge of society." According to (Lakshmi & Mohideen, 2013) an instrument is valid if the inference made from its score is "appropriate, meaningful and useful."

To guarantee validity, the study employed content validity test to ensure the suitability of the research instrument of the study. The research supervisor also crosschecked the instruments and how suitable they are in address the objectives set in the study.

3.6.2 Reliability test

Reliability is the consistency and stability of a score over time. It denotes the degree to which the instrument is free from errors and would yield a consistent result. An instrument will be termed reliable if it delivers the similar outcome in several experiments or many approaches to try to do something (Shaked *et al.*, 2020). Reliability is commonly assessed in three forms: test-retest, alternate-from and internal consistency.

The study employed the internal consistency reliability test. The most common and widely used method of testing internal consistency is the Cronbach's Alpha(α). The Cronbach's Alpha(α) is a reliability coefficient that measures inter item reliability. The absolute value of Cronbach's Alpha(α) varies from 0 to 1. In social science the value of Cronbach's Alpha(α) below 0.7 is regarded as one of unsatisfactory internal consistency reliability. An estimate of 0.7 and higher is acceptable to indicate satisfactory internal consistency reliability.

3.6.3 A Pilot study of research instruments

The research instrument was subjected to a pilot study before they are administered. This enabled the researcher to improve on the questionnaire. According to Mugenda and Mugenda (2012) pre-testing helps in improvement of the research instruments before deploying for data collection. The questionnaire was administered to 10% of the study's desired sample population as a pilot study. Based on the study sample population, the 10 respondents participating in the pilot study did not take part in the actual study data collection exercise.

3.7 Diagnostic Test

The researcher carried out a diagnostic tests to ascertain the suitability of data set for a regression analysis. The three diagnostic tests that were conducted included; Normality test, Multicollinearity test, Homoscedasticity and Autocorrelation test.

3.7.1 Normality test

A normality test was conducted to assess the normal distribution of the data. The Shapiro-wilk test was used to establish the normal distribution of data collected. A summary of statistics that summarized the measure of central disposition such as the mean and standard deviation was used. If the significant value of the Shapiro-wilk test is greater than 0.05, the data is normal, if it is below 0.05, then the data is significantly deviate from a normal distribution.

3.7.2 Multicollinearity Test

A multicollinearity test was performed to determine the possible correlation and the degree of correlation of two or more of the independent variables in the study for accurate interpretation of data in the regression model. The study used the variance inflation factor (VIF) test to measure the correlation between the variables and the strength of that correlation. If the IVF value is higher than 10, it indicates a very high correlations and is a cause for a concern. Therefore, the variable will be released from the model. If 5<VIF<10, at that point multicollinearity is reasonable, if 5<VIF, then Multicollinearity is insignificant.

3.7.3 Homoscedasticity Test

Homoscedasticity refers to a situation in which the variance of the error term in regression model is constant across all the values of an independent variable. Heteroscedasticity, which is the inverse of homoscedasticity makes it problematic to measure the true forecast errors' standard deviation, and too narrow or too wide are usually the result. For consistence, the variance of the data should point roughly the same for all data points. Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity was used to check for homoscedasticity in the data.

3.8 Data Collection Procedures

This study relied on primary data from the target population. However, the researcher had first sought the permission from the appropriate authorities in all of the seven state corporations the study intended to collect data. At the point of administering the questionnaire, The researcher shared with the respondents the introductory letter from KCA University, management authorisation from the concerned state corporation authorizing data collection. In some instances, the HR divisions in these state corporation provided a contact person to help in the data collection.

The questionnaires had both open ended and close ended questions which were developed in line with the study objectives and research questions. The researcher administered the questionnaires by use of google form link. Telephone follow-up was used to increase the rate of response to the questionnaire.

3.9 Data Processing and Analysis

The collected data was carefully reviewed and cleaned for accuracy, completeness and consistency. The researcher then classified and coded the data based on the research objective and a descriptive analysis carried out using STATA 15 and Ms Excel was used to analyze the data and produce descriptive statistics such as mean, frequency, percentage and standard deviation. Descriptive analysis was then carried out for each variable to describe that variable and how it influences knowledge transfer in state corporations in the energy sector in Kenya. The result was then presented in form of tables and charts and interpreted in narratives.

Secondly, inferential statistics was produced using regression analysis to test the relationship between the independent variables (Organizational structure, information system, reward system and interpersonal trust) and dependent variable (knowledge transfer) based on the model below;

$$Y= B_0+B_1X_1+B_2X_2+B_3X_3+B_4X_4+E$$

Where: Y= Knowledge Transfer

X1=Organizational Structure;

X2=Information System;

X3=Rewards System;

X4=Interpersonal Trust;

E=Error term

B_0 = Constant (Y-intercept), and

Bi (i=0 to i=4) =Regression coefficients.

3.10 Ethical Consideration

Ethics are the principles of actions that differentiate between wrong and right. In research, ethical issues are important. The researcher gave the respondents an accurate background of the study and allowed them to fill the questionnaires anonymously. They were also reassured that the data gathered from them is handled with confidentiality and only used for the research purpose.

CHAPTER FOUR
DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents the findings of the collected data. The data was collected by use of structured questionnaires and coded into excel and STATA 15 for analysis and presentation. The findings of the study are presented below.

4.1.1 Response Rate

The researcher distributed the research link to 98 respondents in the seven state corporations in the department of energy, 91 respondents filled the questionnaire. This translates to a response rate of 92.9% an indication of a sufficient response rate for the study. This conforms to Babbie (2010) who stated that a response rate of 70% and above is deemed as a very good response.

Table 4.1
Response rate

Variable	Frequency	Percentage
Response	91	92.9
Non-Response	7	7.1
Total	**98**	**100**

4.1.2 Reliability Test

The study employed a pilot test to establish the reliability of the research instruments. A Cronbach alpha was computed as shown in Table 4.2 below.

Table 4.2
Reliability test

Cronbach Alpha	
Average inter item covariance:	0.308
Number of items in the scale:	5
Scale reliability coefficient:	0.857

Before further analysis was carried out, a reliability test was conducted using a Cronbach's alpha. A reliability coefficient of 0.7 or higher is normally considered appropriate for analysis. The alpha coefficient for the 5 items analysed was 0.857, this suggests that the items used have relatively high internal consistency and reliability and therefore desirable for the analysis.

4.2 Demographics

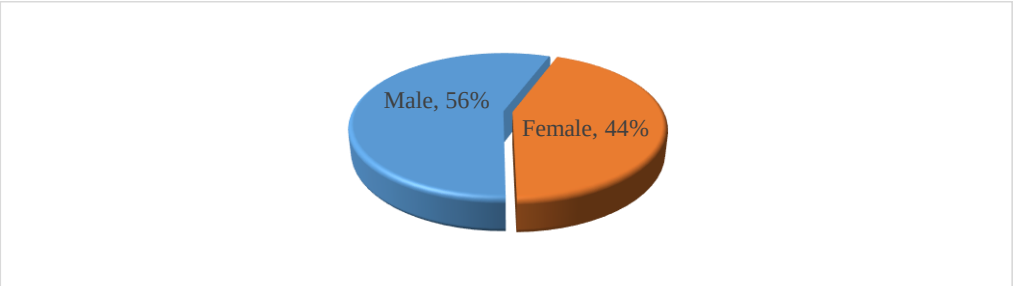
The researcher asked the respondents to indicate their demographic information regarding: their gender, age, highest level of education, name of their organization, position and years worked in their organization, to establish their appropriateness in the study. This aimed at establishing the suitability of respondents to provide information for the completion of the current study. The findings are as shown in subsequent sections.

4.2.1 Response by Gender

The researcher sought to establish the respondents under the state corporations in the department of energy by gender. The findings are indicated in figure 4.1 below.

Figure 4.1

Response by gender



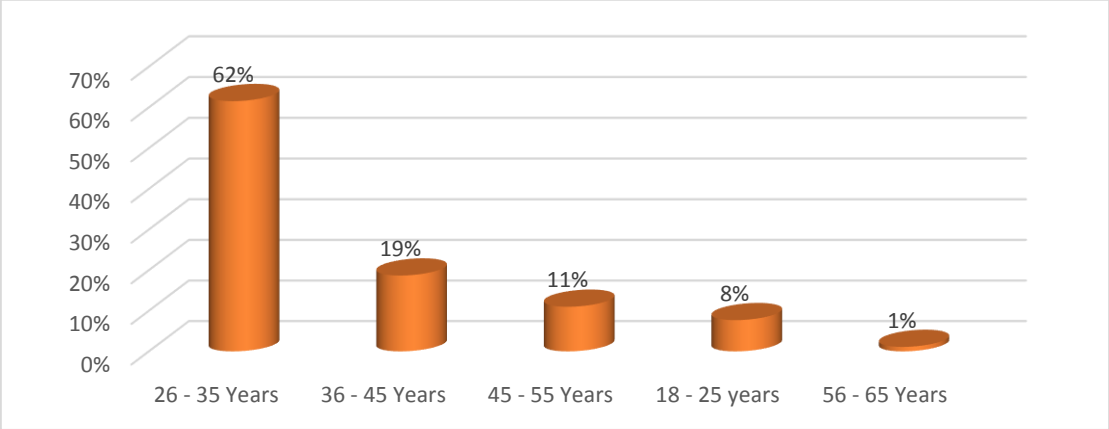
The findings show that the majority of the respondents 56% were male while 44% of the respondents were female.

4.2.2 Response by Age Group

The study sought to establish the respondents' age groups. As shown in the figure 4.2 below, majority of the respondents at 62% were mid-level career officers between the ages of 26 -35 years.

Figure 4.2

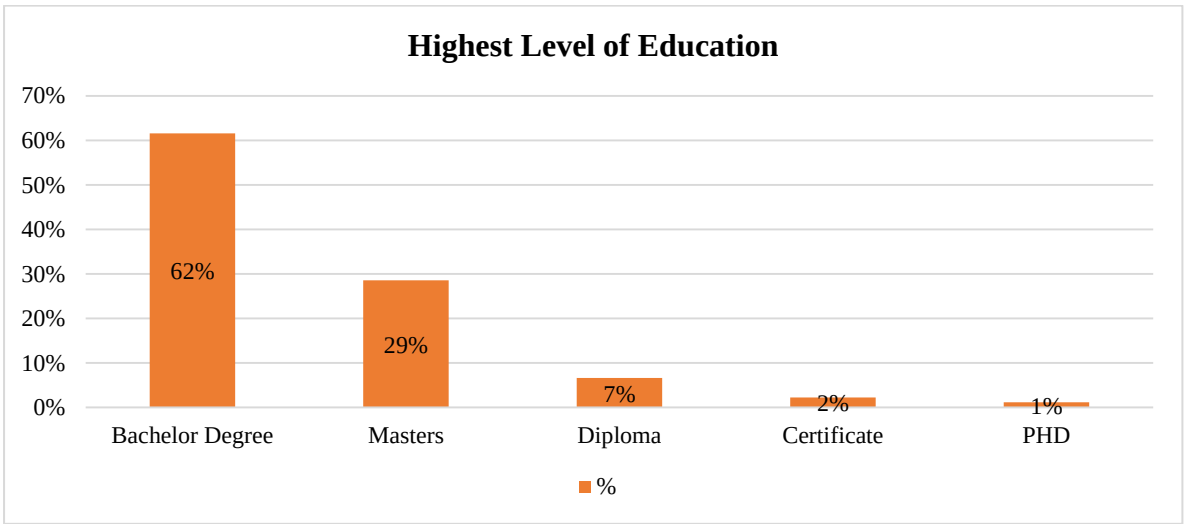
Response by Age Group



4.2.3 Response by Education Level

The study sought to establish the respondents' highest level of education attained. Given the study revolves around organizational culture and knowledge transfer, the level of education of the respondent has an impact on their participation of knowledge transfer. The result of the respondents' level of education is shown in Figure 4.3. below.

Figure 4.3
Highest Level of Education



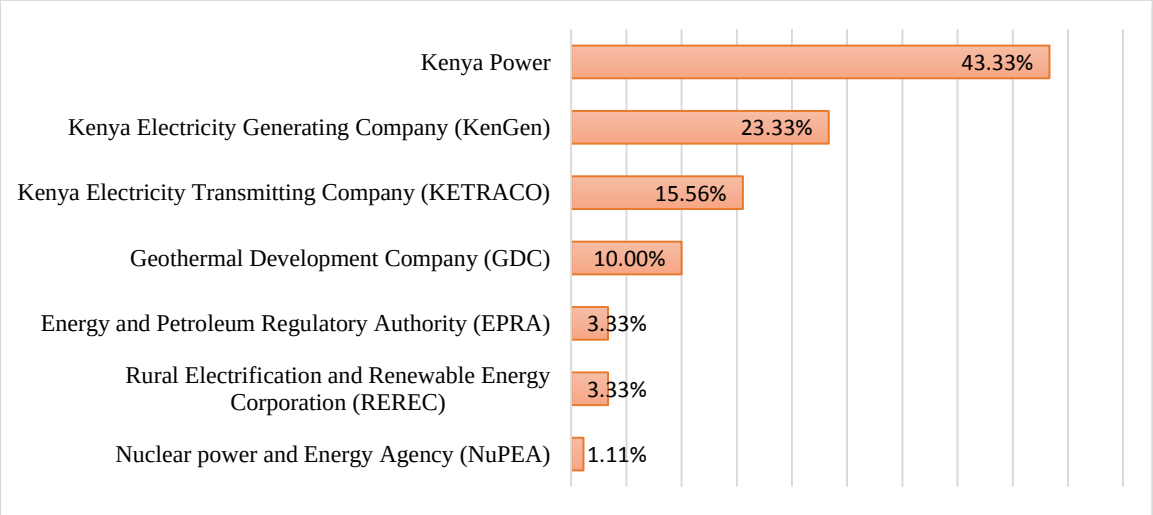
The findings in Figure 4.3 show that 62% of the respondent's highest level of education was first degree, 7% had diploma, 29% had masters, 2 % had certificate and 1% had PhD. The findings shows that the majority of the respondents were educated and professionals in their fields.

4.2.4 Response by Organisation

The study targeted the seven state corporations under the department of energy in Kenya. These are; Kenya Power, Kenya Electricity Generating Company, Kenya Electricity Transmitting Company, Geothermal Development Company, Energy and Petroleum Regulatory Authority, Rural Electrification and Renewable Energy Corporation as well as the Nuclear Power and Energy Agency.

As indicated in the figure 4.4 below, 43.33% of the respondents were from Kenya Power while 23.33% of the respondents were from Kenya Electricity Generating Company. Similarly, 15.56% of the respondents were from Kenya Electricity Transmitting Company; and 10.0% of the respondents were from Geothermal Development Company; 3.33% of the respondents were from Energy and Petroleum Regulatory Authority; 3.33% of the respondents were from Rural Electrification and Renewable Energy Corporation; whereas 1.11% of the respondents were from the Nuclear Power and Energy Agency.

Figure 4.4
Response by Organization

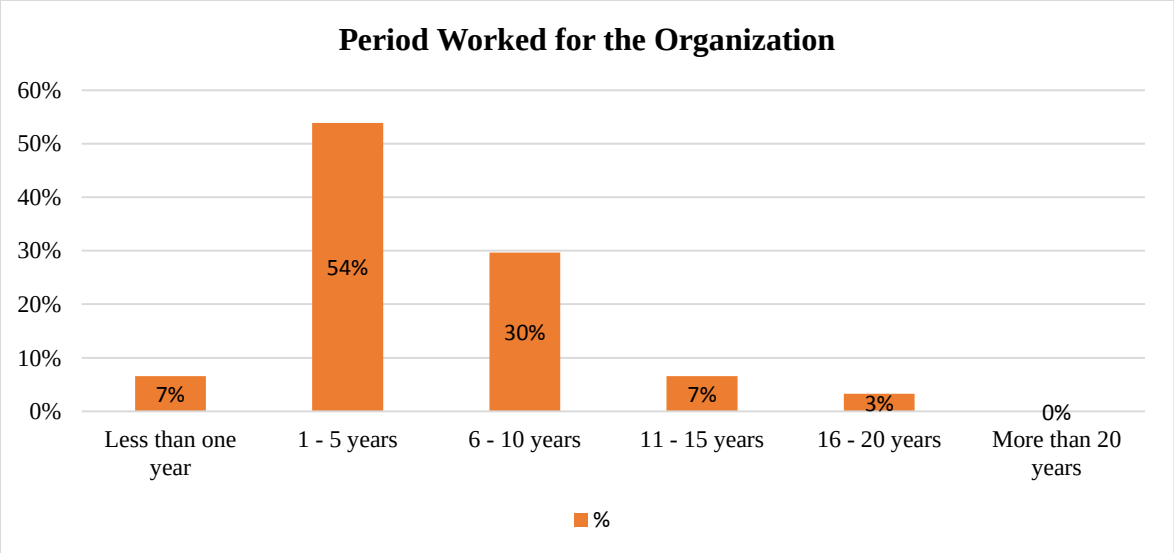


4.2.5 Response by Period Worked for the Organization

The study sought to establish the period of time respondents worked for their organizations. The result of the respondents' period worked for their organization is shown in Figure 4.5. below.

Figure 4.5

Period worked for the organization

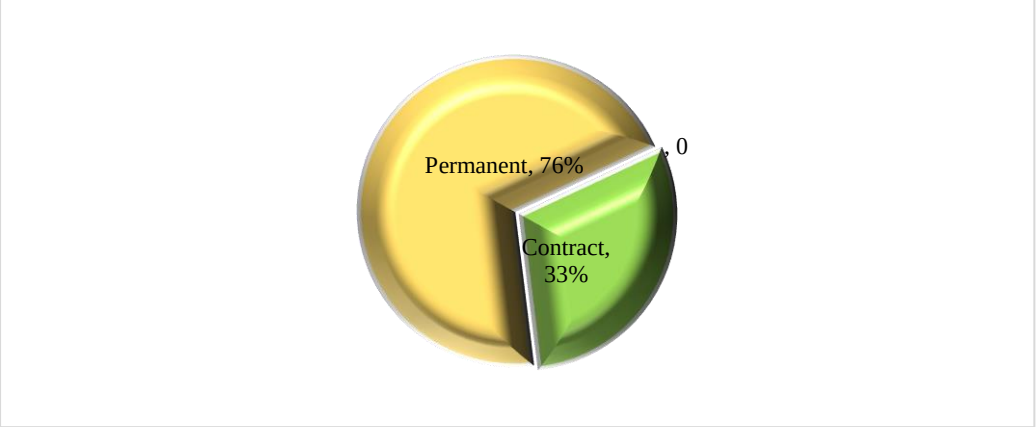


4.2.6 Response by Terms of Employment

The study finds that majority of the respondents 76% were on permanent employment terms while 33% of the respondents were on contract as shown on figure 4.6 below.

Figure 4.6

Terms of employment



4.3 Descriptive Statistics

The researcher conducted descriptive statistics to establish the extent of the agreement of respondents to statements selected by the researcher on effect of organizational culture on knowledge transfer in the energy sector in Kenya. The findings are indicated below.

4.3.1 Influence of Organizational Structure on Knowledge Transfer in the Energy Sector.

The study sought to find the influence of organizational structure on knowledge transfer in the energy sector in Kenya. The respondents were asked to indicate their level of agreement on selected statements by the researcher. A Likert scale of 1-5 where; 1 - strongly disagree; 2 -disagree; 3 – Not Sure; 4 - Agree; 5 - Strongly Agree was used. The findings are shown in Table 4.1 below

Table 4.3
Organizational Structure and Knowledge Transfer

	Mean	Std. Dev.
Employees in my organization actively participate in the process of decision making	3.54	.992
I access all documents I need in my line of work and Information flows easily throughout the organization regardless of employee roles or other boundaries	3.90	1.001
Co-workers from different departments often collaborate and exchange their knowledge	4.00	.879
Some tasks are accomplished through team work and collaboration between employees	4.23	.822
Some tasks require the formation of teams with members from different departments in order to be accomplished	4.29	.779

The findings show that majority of the respondents agreed that employees in the state corporations in the energy sector in Kenya actively participate in the process of decision-making in their organizations as indicated by a mean of 3.54 with standard deviation of 0.992. Majority of employees in the state corporations in the energy sector in Kenya have access to all documents they need in their line of work. Similarly, they note that information flows easily throughout their organization regardless of employees' role or boundary as indicated by a mean of 3.90 with a standard deviation of 1.001. Employees in the state corporations in the energy sector in Kenya often collaborate and exchange knowledge as indicated by a mean of 4.00 with a standard deviation of 0.879.

Majority of the respondents agreed that employees in the state corporations in the energy sector collaborate and accomplish task through teamwork as indicated by 4.23 with standard deviation of 0.822. Respondents indicated that in the state corporations under the energy sector where they work, some task require formations teams with membership from different departments to accomplish results as indicated by a mean of 4.29 with a standard deviation of 0.779. This agrees with (Acharya & Mishra, 2017) finding that organization

structure has influence on organizational knowledge transfer. They note that the design of an organizational structure has a refined, more guided impact on knowledge transfer.

4.3.2 Influence of Information Systems on Knowledge Transfer in the Energy Sector

The study sought to find the influence of information systems on knowledge transfer in the energy sector in Kenya. The respondents were asked to indicate their level of agreement on selected statements by the researcher. A Likert scale of 1-5 where; 1 - strongly disagree; 2 - disagree; 3 – Not Sure; 4 - Agree; 5 - Strongly Agree was used. The findings are shown in Table 4.2 below.

Table 4.4

Information System and Knowledge Transfer

	Mean	Std. Dev
The organization provides various technological tools to facilitate knowledge transfer (e.g. Knowledge repositories, e-mail, intranet)	4.34	.734
The knowledge transfer technologies in my organization are easy to use.	3.99	.888
The knowledge transfer technologies are easily accessible	4.02	.869
The technological tools available at the organization for knowledge transfer are effective	3.89	.827

The findings indicate that the majority of agreed that state corporations under the department of energy provide various technological tools such as knowledge repositories to facilitate knowledge transfer as indicated by a mean of 4.34 with a standard deviation of 0.734. Similarly, most of the respondents agreed that knowledge transfer technologies such as knowledge repositories in their organizations are easy to use as indicated by a mean of 3.99 with a standard deviation of 0.888. In addition, most of the respondents agreed that knowledge transfer technologies in their organizations are easily accessible as indicated by a mean of 4.02 with a standard deviation of 0.869. Regarding the effectiveness of the knowledge transfer technologies available, most of the respondents agreed that technological

tools available at their organizations for knowledge transfer are effective as indicated by a mean of 3.89 with standard deviation of 0.827.

The study findings agrees with (López *et al.*, 2009) who find that information system plays important role knowledge transfer. They found that the introduction of information systems has the ability to bypass structures that exist in an organization and promotes greater dissemination of knowledge to all individuals. They also argue that information systems can aid in profiling of experts in a database and as a result facilitate access of these experts' by others hence enhance knowledge transfer. Similarly, Owino *et al.*, (2012) find that information system can increase knowledge transfer by expanding individuals' reach.

4.3.3 Influence of Rewards System on Knowledge Transfer in the Energy Sector

The study also endeavoured to find the influence of rewards systems on knowledge transfer in the energy sector in Kenya. The respondents were asked to indicate their level of agreement on selected statements by the researcher. A Likert scale of 1-5 where; 1 - strongly disagree; 2 -disagree; 3 – Not Sure; 4 - Agree; 5 - Strongly Agree was used. The findings are shown in Table 4.3 below.

Table 4.5

Rewards System and Knowledge Transfer

	Mean	Std. Dev
Financial rewards (promotion, allowances, etc.) enhance behaviours toward knowledge transfer with others	3.77	1.175
Non-financial rewards (thank you letter, recognition, appreciation, educational opportunities, etc.) enhance behaviours toward knowledge transfer with others	3.84	.923
Non-financial rewards (such as appreciation, recognition) is effective in encouraging knowledge transfer than monetary rewards	3.59	1.022
Employees are more likely rewarded on teamwork and collaboration rather than merely on individual performance	3.48	1.089

Majority of the respondents in the state corporations in the energy sector in Kenya agreed that financial rewards such as promotions and allowances enhances behaviours towards knowledge transfer with others as indicated by the calculated mean of 3.77 with the standard deviation of 1.175. Most of the respondents also agreed that non-financial rewards such as thank you letters, recognitions and educational opportunities enhance behaviours towards knowledge transfer as indicated by the mean of 3.84 with a standard deviation of 0.923. In addition, majority of the respondents in the state corporations under the department of energy agreed that non-financial rewards such as appreciation and recognition is effective in encouraging knowledge transfer than monetary rewards as indicated by a mean of 3.59 with a standard deviation of 1.022. On the other hand, a slight majority of the respondents agreed that in their organizations employees are more likely to be rewarded on teamwork and collaboration rather than merely on individual performance as indicated by a mean of 3.48 with a standard deviation of 1.089.

The findings concur with those of Yih- Tong Sun & Scott, (2005) who investigated the barriers at different levels of knowledge transfer. They note that economic-wellbeing as well as social status of individuals can act as a hindrance to knowledge transfer. If individuals are likely to economically benefits and get recognition for their knowledge transfer efforts, then they are more likely to transfer their knowledge to others. Similarly, Abubakar *et. al.,* (2019), contend that without proper reward system, the motivation to seek and transfer knowledge among employees is weakened.

4.3.4 Influence of Interpersonal Trust on Knowledge Transfer in the Energy Sector

The study endeavoured to find the influence of interpersonal trust on knowledge transfer in the energy sector in Kenya. The respondents were asked to indicate their level of agreement on selected statements by the researcher. A Likert scale of 1-5 where; 1 - strongly disagree; 2

-disagree; 3 – Not Sure; 4 - Agree; 5 - Strongly Agree was used. The findings are shown in Table 4.4 below.

Table 4.6

Interpersonal Trust and Knowledge Transfer

	Mean	Std. Dev
Overall, the people in my team are very trustworthy	3.95	.821
I have great confidence in knowledge shared by my colleagues	3.96	.911
I have not been previously harmed as a result of transferring my knowledge to my colleagues	4.14	.943
Certain Policies and procedures exist to protect the person transferring his/her knowledge against harmful intentions of others	3.56	1.077

The researcher noted that majority of the respondents at the state corporations in the department of energy in Kenya believe that people in their teams are very trustworthy as indicated by a mean of 3.95 with a standard deviation of 0.821. Similarly, majority of the respondents agreed that they have a great confidence in knowledge shared by their colleagues as indicated by the mean of 3.96 with standard deviation of 0.911. In addition, most of the respondents agreed that they have not been previously harmed because of transferring their knowledge to their colleagues as indicated by a mean of 4.14 with a standard deviation of 0.93. Further, most of the respondents agreed that certain policies and procedures exist to protect the person transferring his/her knowledge against harmful intentions of others as indicated by a mean of 3.56 with a standard deviation of 1.077.

Their findings are similar to that of (Sankowska, 2013) whose study on organizational trust, knowledge transfer and knowledge creation, and firm's innovativeness finds a positive relationship between trust and knowledge transfer in firms. Similarly, (Kipkosgei et al., 2020) study on co-worker trust and knowledge sharing among public sector employees in Kenya find a significant and positive relationship between co-worker trust and knowledge sharing.

4.3.5 Knowledge Transfer

The study sought to find the knowledge transfer practices in the energy sector in Kenya. The respondents were asked to indicate their level of agreement on selected statements by the researcher. A Likert scale of 1-5 where; 1 - strongly disagree; 2 -disagree; 3 – Not Sure; 4 - Agree; 5 - Strongly Agree was used. The findings are shown in Table 4.5 below.

Table 4.7

Knowledge Transfer

	Mean	Std. Dev.
In my organization there is mentorship, coaching and work shadowing for purpose of knowledge sharing	3.66	1.024
In my organization knowledge is documented and shared in a central repository for access by all staff	3.78	1.041
When projects are completed we normally undertake an after action review and lessons learnt documented	3.58	1.044
My organization normally provides staff with training to equip them with new skills	4.26	.856
In my organization, there are designated experts whom staff can consult for advice	3.81	1.043
In my organization there are knowledge sharing groups in which employees often share knowledge and learn from each other's experience	3.46	1.068

The findings show that majority of the respondents agreed that in their organizations they practice mentorship, coaching and work shadowing for purpose of knowledge sharing as indicated by a mean of 3.66 with a standard deviation of 1.024. Further, majority of the respondents agreed that in their organizations knowledge is documented and shared in a central repository for staff to access as indicated by a mean of 3.78 and a standard deviation of 1.041. Similarly, most of the respondents agreed that in their organizations, when projects are completed they normally undertake an after action review and lessons learnt documented

as indicated by a mean of 3.58 with a standard deviation of 1.044. Majority of respondents agreed that their organizations provide staff with training to equip them with new skills as indicated by a mean of 4.26 and a standard deviation of 0.856. Majority of the respondents agreed that in their organizations, there are designated experts whom staff can consult when in need as indicated by a mean of 3.81 with a standard deviation of 1.043. In addition, majority of the respondents agreed that in their organizations there are knowledge sharing groups in which employees often share knowledge and learn from each other's experience as indicated by a mean of 3.46 with a standard deviation of 1.068.

The findings in table 4.5 above imply that state corporations under the department of energy do have knowledge transfer practices. The findings are in line with (Ireri 2013) who find that Kenya power had incorporated knowledge transfer in its management process and that knowledge transfer is a source of competitive advantage for Kenya Power.

4.4 Diagnostic Test

The researcher conducted diagnostic test to establish the reliability of the dataset used in carrying out analysis. The following tests were carried out; multicollinearity test, normality test and homoscedasticity test. The findings are indicated in subsequent sections below.

4.4.1 Multicollinearity Test

A multicollinearity test was performed to determine the possible correlation and the degree of correlation of two or more of the independent variables in the study for accurate interpretation of data in the regression model. The study used the variance inflation factor (VIF) test to measure the correlation between the variables and the strength of that correlation. If the IVF value is higher than 10, it indicates a very high correlations and is a cause for a concern. Therefore, the variable will be released from the model. If 5<VIF<10, at

that point multicollinearity is reasonable, if 5<VIF, then Multicollinearity is insignificant. The findings are indicated in table 4.8 below.

Table 4.8
Variance inflation factor

	VIF	1/VIF
Organization Structure	3	.333
Information System	2.487	.402
Reward System	2.224	.45
Interpersonal Trust	1.416	.706
Mean VIF	2.282	.

The findings in table 4.8 indicate that organizational culture had a VIF of 3, information system had a VIF of 2.487, rewards system had a VIF of 2.224 and interpersonal trust had a VIF of 2.282. The mean VIF was 2.282. The findings show that all the variables had a VIF of less than 10 an indication that the variables had no multicollinearity.

4.4.2 Normality Test

A normality test was conducted to assess the normal distribution of the data. The Shapiro-wilk test was used to establish the normal distribution of data collected. A summary of statistics that summarized the measure of central disposition such as the mean and standard deviation was used. If the significant value of the Shapiro-wilk test is greater than 0.05, the data is normal, if it is below 0.05, then the data is significantly deviate from a normal distribution. The findings are indicated in table 4.9 below.

Table 4.9
Shapiro-Wilk W test for normal data

Variable	Obs	W	V	Z	Prob>z
Knowledge transfer	91	0.945	4.166	3.149	0.001

Organizational structure	91	0.958	3.226	2.585	0.005
Information system	91	0.959	3.159	2.538	0.006
Rewards system	91	0.982	1.412	0.761	0.223
Interpersonal trust	91	0.943	4.330	3.234	0.001

The figure 4.9 above shows that the significance level of most of the data variables were less than 0.05. This was an indication that the data set was generally not normally distributed. The normality of individual variables has no effect on regression results so long as the error term in the regression model is normally distributed. The error term is normally distributed if the variance and the mean are constant. A constant variance implies homoscedasticity. A subsequent test on heteroscedasticity confirms that the variance is constant.

4.4.3 Homoscedasticity Test

The researcher conducted a heteroskedasticity test to establish the presence of heteroscedasticity. The findings are shown;

Table 4.10
Heteroskedasticity Test

Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity	
Ho:	Constant variance
Variables:	Fitted values of Knowledge transfer
$Chi^2(1)$	2.62
Prob > chi^2	0.1055

The null hypothesis is that of homoskedasticity, that is it assumes a constant variance. From the findings based on the Breusch-Pagan test, the p-value (0.1055) is greater than the critical value of 0.05, therefore we fail to reject the null hypothesis and conclude that heteroskedasticity is not a problem.

4.4.4 Correlation Matrix

The Findings of the correlation analysis are shown in table 4.10 below

Table 4.11
Correlation Analysis

	Knowledge Transfer	Organization Structure	Information System	Reward System	Interpersonal Trust
Knowledge Transfer	1				
Organization Structure	0.6532	1			
Information System	0.5408	0.7247	1		
Reward System	0.4898	0.4053	0.2151	1	
Interpersonal Trust	0.7334	0.7229	0.5892	0.5158	1

According to Ratner (2009) for interpretation of a linear relationship when the value ranges from ± 0.10 to± 0.3 indicates a weak correlation; when the value ranges between ±0.30 and ±0.7 it indicates a moderate correlation; while in a strong correlation, the value ranges from ±0.7 and ± 1.0. The findings in table 4.10 above point that organization structure has a positive correlation to knowledge transfer of 0.6523 an indication of a moderate correlation, information system has a positive correlation of a 0.5408 an indication of a moderate correlation, rewards system has a positive correlation of a 0.4898 an indication of a moderate correlation and interpersonal trust has a positive correlation of a 0.7334 an indication of a strong correlation.

4.5 Regression Analysis

The researcher conducted regression analysis to establish the effect of organizational culture on knowledge transfer in the energy sector in Kenya. The findings of Model Summary, ANOVA and Regression Coefficients are presented as follows:

4.5.1 Model Summary

The findings of coefficient of correlation R and coefficient of adjusted determination R2 is as shown in Table 4.11.

Table 4.12
Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.767[a]	0.589	0.570	0.5036

a. Predictors: (Constant), Organizational culture, information system, rewards system, interpersonal trust

b. Dependent Variable: knowledge transfer

The R-squared of the model shows the variability in the dependent variables that is brought about by the different sets of independent variables. In this case, the R-Squared is 0.589, implying that 58.9% of the variation in Knowledge transfer is brought about by organization structure, information system, reward system and interpersonal trust.

4.5.2 ANOVA

An ANOVA was carried out at 95% level of significance to compare F Calculated and F Critical to test for the overall strength of the regression model. The findings are shown in the table below;

TABLE 4.13
ANOVA

Model	Sum Square	df	Mean Square	F	Sig.
Regression	31.266	4	7.817	86.370	0.00[b]
Residual	21.813	86	0.254		
Total	53.079	90			

a. Predictors: (Constant), Organizational culture, information system, rewards system, interpersonal trust

b. Dependent Variable: knowledge transfer

The finding in Table 4.13 show that F Calculated was 86.370 and F Critical was 2.4778. This show that F Calculated > F Critical (86.370 >2.478) this denotes that the overall regression model was sufficient for the study. The probability value p=0.00 which is less than 0.05 an indication that at least one of the independent variable significantly influenced knowledge transfer.

Table 4.14

Regression Analysis

Knowledge transfer	**Coef.**	**St.Err.**	**t-value**	**p-value**	**[95% Conf**	**Interval]**	**Sig**
Organization Structure	.209	.138	1.52	.133	-.065	.482	
Information System	.114	.112	1.02	.313	-.109	.336	
Reward System	.141	.074	1.90	.06	-.006	.289	*
Interpersonal Trust	.471	.112	4.22	0.00	.249	.693	***
Constant	.105	.362	0.29	.772	-.614	.824	

Mean dependent var	3.757	SD dependent var	0.768
R-squared	0.589	Number of obs	91
F-test	30.818	Prob > F	0.000
Akaike crit. (AIC)	138.265	Bayesian crit. (BIC)	150.819

****** p<.01, ** p<.05, * p<.1***

The regression analysis formula indicates how the independent variables affected the dependent variable.

$Y= B_0+B_1X_1+B_2X_2+B_3X_3+B_4X_4+E$

Where: Y= Knowledge Transfer

X1=Organizational Structure;

X2=Information System;

X3=Rewards System;

X4=Interpersonal Trust;

E=Error term

B_0 = Constant (Y-intercept), and

Bi (i=0 to i=4) =Regression coefficients.

$Y= 0.105 +0.141X_3+0.471X_4$

The general model was found to be significant in explaining the effects of the independent variables on Knowledge transfer. Based on the regression output in table 4.11, reward system and interpersonal trust were found to be significant in explaining knowledge transfer. However, organizational structure and information system were not significant in determining knowledge transfer.

The study established that the P-Value for the rewards system is 0.06 which is slightly more than 0.05 indicting that there is a positive and significant relationship between reward system and knowledge transfer. This relationship has a 90 per cent significance level. A unit increase in the reward system increases the knowledge transfer by 14.1 per cent. According to Abubakar *et. al.,* (2019), without proper reward system, the motivation to seek and transfer knowledge among employees is weakened. This findings agree with Martín-Cruz, Martín-Pérez, & Trevilla-Cantero, (2009) who find that rewards system positively influences knowledge transfer. Further, Habibur Rahman *et. al.,*(*2018*) find that employees in the public organizations in Dubai are influenced by reward in their effort to transfer knowledge to other employees.

The study further establishes that the P-value for interpersonal trust is 0.00<0.05 denoting that there is a positive and significant relationship between interpersonal trust and knowledge transfer. This relationship has a 99 per cent significance level. As shown in table 4.11, a unit increase in interpersonal trust, increases knowledge transfer by 47.1 percent. The findings are in concurrence with that of (Rutten, Blaas-Franken, & Martin, 2016) who found significant differences in the level of knowledge sharing in organizations where trust varies.

The study showed that low level of trust results in less knowledge sharing. In addition, Habibur Rahman *et. al.*,(*2018*) find that trust is an important catalysts in knowledge transfer within the government employees of Dubai.

4.6 Hypothesis Testing

The study has adopted a null hypothesis where;

Hypothesis 1

$H_{o1;}$ Organizational structure has no significant influence on knowledge transfer in the Energy Sector in Kenya.

Hypothesis 2

$H_{o2;}$ Information System has no significant influence on knowledge transfer in the Energy Sector in Kenya.

Hypothesis 3

$H_{o3;}$ Rewards System has no significant influence on knowledge transfer in the Energy Sector in Kenya.

Hypothesis 4

$H_{o4;}$ Interpersonal trust has no significant influence on knowledge transfer in the Energy Sector in Kenya.

The study established that organizational structure had no significant effect on knowledge transfer. Therefore, we fail to reject the null hypothesis and reject the alternative hypothesis that organizational structure has a significant effect on knowledge transfer in the Energy sector in Kenya.

Similarly, the study establishes that information systems had no significant effect on knowledge transfer. Therefore, we fail to reject the null hypothesis and reject the alternative hypothesis that information systems has a significant effect on knowledge transfer in the Energy sector in Kenya.

The study find that Rewards systems had a significant effect on knowledge transfer. Therefore, we reject the null hypothesis and accept the alternative hypothesis that rewards system has a significant influence on knowledge transfer in the energy sector in Kenya.

The study further find that interpersonal trust had a significant effect on knowledge transfer. Therefore, we reject the null hypothesis and accept the alternative hypothesis that interpersonal trust has a significant influence on knowledge transfer in the energy sector in Kenya.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents the summary of the findings of this study. Conclusion and recommendations are drawn from the findings in chapter four. The chapter also presents suggestions of further areas of studies.

5.2 Summary of the Findings

The main purpose of the study was to assess the influence of organizational culture on knowledge transfer in the energy sector in Kenya. The study was guided by the following research questions; What is the influence of organizational structure on knowledge transfer in the energy sector in Kenya? What is the effect of information systems on knowledge transfer in the energy sector in Kenya? What is the influence of rewards system on knowledge transfer in the energy sector in Kenya? What is the influence of interpersonal trust on knowledge transfer in the energy sector in Kenya?

The study adopted a descriptive research design to assess the influence of organizational culture on knowledge transfer in the energy sector in Kenya. The target population of the study was the seven state corporations under the department of energy in Kenya. The sample size of the study was 98 and the response rate was 91 givig a response rate of 92.9%. The study relied on primary data collected by use of questionnaire and coded into STATA 15. The findings show that the coefficient of adjusted determination R2 was 0.589, which translates to 59%, this shows changes in knowledge transfer can be explained by the independent variables.

5.2.1 Organizational structure and knowledge transfer

The study pointed out that the state corporations under the department of energy in Kenya actively consult their employees in decision-making and enable them access all documents they need in their line of work. Similarly, information flows easily to all employees in these state corporations regardless of employees' roles and other existing boundaries. The study also found that co-workers from different departments in these state corporations often collaborate and exchange their knowledge. In addition, certain duties are accomplished through co-operation and collaboration between employees. The study also found that some tasks in these corporations require the creation of cross-departmental teams in order to accomplish results.

The study findings agrees with (Zohoori *et al.,* 2013) who find that cross-functional collaboration and participatory decision making have a positive influence on knowledge transfer and learning.

5.2.2 Information system and knowledge transfer

The study found that state corporations under the department of energy provided various technological tools such as intranet to facilitate knowledge transfer. Knowledge transfer technologies in these corporations are effective, are easily accessible and easy to use. Information system plays a key role in coordinating and promoting communication in the organizations and in turn facilitate knowledge transfer.

The study findings concur with Zawawi *et al.,* (2011) who find that information systems play a major role in ensuring that knowledge transfer works and that the absence of good systems could hinder knowledge transfer. In addition, Roberts, (2000) finds information systems as important to knowledge transfer. However, he notes that information systems are more beneficial when it comes to transfer of explicit knowledge.

5.2.3 Rewards system and knowledge transfer

The study points out that financial reward enhances behaviours towards knowledge transfer. This finding concurs with (Ahuja Anita 2020) who finds that monetary rewards is positively related to knowledge sharing in the education sector in India. In addition, the study shows non-financial rewards enhance behaviours toward knowledge transfer with others. Further, the study finds that non-financial rewards are effective in encouraging knowledge transfer than monetary rewards. The study also found that workers stand a better chance of being rewarded on co-operation and collaboration rather than on individual performance.

Existing literature testing the relationship between rewards system and knowledge transfer has reported mixed results Wolfe & Loraas, (2008). For instance, Bock et al. (2005) find that extrinsic reward such as monetary rewards has a negative influence on knowledge sharing, while Wolfe & Loraas, (2008) found that extrinsic monetary rewards increase knowledge sharing behaviours.

5.2.4 Interpersonal trust and knowledge transfer

The findings point out that generally people in the state corporations under the department of energy are trustworthy. In addition, employees in these state corporations have a great confidence in knowledge shared by their colleagues. The findings are similar to that of Fleig-Palmer & Schoorman, (2011) who find that the amount of trust a protégé has on mentor has a significant influence of the amount of knowledge transferred. Similarly, Jensen & Szulanski, (2004) also find trust as a direct antecedent to knowledge transfer. No one has been previously harmed because of transferring their knowledge to their colleagues in these state corporation. Further, policies and procedures exist to protect the person transferring his/her knowledge against harmful intentions of others. The findings are similar to (Kipkosgei et al.,

2020) who find a significant and positive relationship between co-worker trust and knowledge sharing among public sector employees in Kenya.

5.3 Conclusion

The study concludes that rewards system and interpersonal trust significantly influence knowledge transfer. This was attributed to the following; respondents indicated that financial rewards such as promotion and allowances enhance behaviours toward knowledge, that non-financial rewards enhance behaviours toward knowledge transfer. Further, respondents indicated that non-financial rewards such as appreciation, recognition are effective in encouraging knowledge transfer than monetary rewards. Employees are more likely rewarded on corporation and collaboration rather than simply on individual successes, respondents indicated that the people they work with are trustworthy, that they have a great confidence in knowledge shared by their colleagues, that they have not been previously harmed as a result of transferring their knowledge with colleagues and that certain Policies and procedures exist to protect the person transferring his/her knowledge against harmful intentions of others.

5.4 Recommendation

Following this study on the influence of organizational culture on knowledge transfer in the energy sector in Kenya, the following recommendations have been specified as avenues that the state corporations in the energy sector in Kenya can improve on their knowledge transfer.

5.4.1 Rewards system and Knowledge transfer

The study recommends that the state corporations under the department of energy should adopt a rewards system to improve on their knowledge transfer practice. This include both financial and non-financial rewards. However, non-financial rewards should be given more consideration as they influence knowledge transfer more significantly.

5.4.2 Rewards system and Knowledge transfer

The study recommends that state corporations under the department of energy ought to improve on the interpersonal trust of their employees. Employees ought to have confidence and trust by the knowledge shared by their colleagues. Further, there ought to be policies and procedures to protect the person transferring his/her knowledge against harmful intentions of others.

5.5 Suggestion for further studies

The current study sought to determine the influence of organizational culture on knowledge transfer in the energy sector in Kenya. The study was carried out in the seven state corporations under the department of energy. Similar studies should be carried out in private players in the energy sector in Kenya. The current study relied on primary data, future studies should make use of available secondary or empirical data for a more detailed results. Current study established coefficient of determination of 59%, the remaining 41% presents other factors not carried out in the current study that future studies may focus on.

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APPENDICES

Appendix I: Letter to Respondent

Mubarak Abdi

KCA University

School of Business and Public Management

Town Campus,

NAIROBI.

Dear Respondent,

RE: ACCEPTANCE LETTER

I am a student at KCA University undertaking a Master of Science Degree in Knowledge Management and Innovation. I am currently undertaking a study on "*The influence of organizational culture on knowledge transfer in the energy sector in Kenya*." This study is towards partial fulfillment for the requirements for the award of the Degree of Masters of Knowledge Management and Innovation at KCA University.

Your organization has been chosen as one of the state corporations to participate in this study. I therefore, kindly request your voluntary participation in the study by respond sincerely to the issues in the attached questionnaire. The information obtained will only be used for academic purpose only.

Thanking you in advance for your response.

Yours truly,

Mubarak Abdi

Reg No: 18/00649

KCA University

Appendix II: Questionnaire

This questionnaire is meant to collect information on, **"The influence of organizational culture on knowledge transfer in the Energy Sector in Kenya".** The information you provide here will only be used for academic purposes and discretion observed by having the respondent's identity anonymous. Kindly respond to all questions.

Instructions

Please put a ***tick*** *in the appropriate box in the questions where choices are provided. Where choices are not provided, kindly answer using your own words in the most suitable way.*

SECTION A: DEMOGRAPHIC DATA

1. **Gender:** Male [ ] Female [ ]
2. **Your age**: 18 - 25 years [ ] 26 – 35 years [ ] 36–45 years [ ]
   45 – 55 years [ ] 56 – 65 years [ ] Above 65 years [ ]
3. **Education level:**
   Primary [ ] Secondary [ ] Certificate [ ] Diploma [ ]
   Bachelors [ ] Masters [ ] PhD [ ] Professional [ ]
   Others: Please specify ……
4. **Organization Name:** ……
5. **Position:** …….
6. **Period worked for your organization:**
   Less than one year [ ] 1 – 5 years [ ] 6–10 years [ ]
   11 – 15 year [ ] 16 – 20 years [ ] Above 20 years [ ]
7. **Nature of employment:**
   Casual [ ] Contract [ ] Permanent [ ]

SECTION B: To establish the influence of organizational structure on knowledge transfer in the energy sector in Kenya.

8. In your opinion, pick the level of agreement or disagreement with each of the following statements. Please tick **(√)** the appropriate box for each statement below to indicate: (Please Tick 5 for "Strongly Agree", 4 for "Agree", 3 for "Not Sure", 2 for "Disagree" 1 for "Strongly Disagree").

	The level of agreement with each of the following statements	**5**	**4**	**3**	**2**	**1**
(a)	Employees actively participate in the process of decision making					
(b)	I access all documents I need in my line of work and Information flows easily throughout the organization regardless of employee roles or other boundaries					
(c)	Co-workers from different departments often collaborate and exchange their knowledge					
(d)	Some tasks are accomplished through team work and collaboration between employees					
(e)	Some tasks require the formation of teams with members from different departments in order to be accomplished					

SECTION C: To investigate the influence of information systems on knowledge transfer in the energy sector in Kenya.

9. In your opinion, pick the level of agreement or disagreement with each of the following statements. Please tick **(√)** the appropriate box for each statement below to indicate: (Please Tick 5 for "Strongly Agree", 4 for "Agree", 3 for "Not Sure", 2 for "Disagree" 1 for "Strongly Disagree").

	The level of agreement with each of the following statements	**5**	**4**	**3**	**2**	**1**
(a)	The organization provides various technological tools to facilitate knowledge transfer (e.g. Knowledge repositories, e-mail, intranet)					
(b)	The knowledge transfer technologies in my organization are easy to use.					
(c)	The knowledge transfer technologies are easily accessible					

(d)	The technological tools available at the organization for knowledge transfer are effective					

SECTION D: To find out the influence of rewards system on knowledge transfer in the energy sector in Kenya.

10. In your opinion, pick the level of agreement or disagreement with each of the following statements. Please tick **(√)** the appropriate box for each statement below to indicate: (Please Tick 5 for "Strongly Agree", 4 for "Agree", 3 for "Not Sure", 2 for "Disagree" 1 for "Strongly Disagree").

	The level of agreement with each of the following statements	**5**	**4**	**3**	**2**	**1**
(a)	Financial rewards (promotion, allowances, etc.) enhance behaviours toward knowledge transfer with others					
(b)	Non-financial rewards (thank you letter, recognition, appreciation, educational opportunities, etc.) enhance behaviours toward knowledge transfer with others					
(c)	Non-financial rewards (such as appreciation, recognition) is effective in encouraging knowledge transfer than monetary rewards					
(d)	Employees are more likely rewarded on teamwork and collaboration rather than merely on individual performance					

SECTION E: To establish the influence of interpersonal trust on knowledge transfer in the energy sector in Kenya.

11. In your opinion, pick the level of agreement or disagreement with each of the following statements. Please tick **(√)** the appropriate box for each statement below to indicate: (Please Tick 5 for "Strongly Agree", 4 for "Agree", 3 for "Not Sure", 2 for "Disagree" 1 for "Strongly Disagree").

	The level of agreement with each of the following statements	**5**	**4**	**3**	**2**	**1**
(a)	Overall, the people in my team are very trustworthy					
(b)	I have great confidence in knowledge shared by my colleagues					
(c)	I have not been previously harmed as a result of transferring my knowledge to my colleagues					

(d)	Certain Policies and procedures exist to protect the person transferring his/her knowledge against harmful intentions of others					

SECTION F: Knowledge transfer

12. In your opinion, pick the level of agreement or disagreement with each of the following statements. Please tick **(√)** the appropriate box for each statement below to indicate: (Please Tick 5 for "Strongly Agree", 4 for "Agree", 3 for "Not Sure", 2 for "Disagree" 1 for "Strongly Disagree").

	The level of agreement with each of the following statements	**5**	**4**	**3**	**2**	**1**
(a)	In my organization there is mentorship, coaching and work shadowing for purpose of knowledge sharing					
(b)	In my organization knowledge is documented and shared in a central repository for access by all staff					
(c)	When projects are completed we normally undertake an after action review and lessons learnt documented					
(d)	My organization normally provides staff with training to equip them with new skills					
(e)	In my organization, there are designated experts whom staff can consult for advice					
(f)	In my organization there are knowledge sharing groups in which employees often share knowledge and learn from each other's experience					

13. In what other way does your organizational structure affect knowledge transfer?

    ……

    ……

    ……

14. In what others ways does the information system in your organization affect knowledge transfer?

    ……

    ……

    ……

15. In what other ways does rewards system influence knowledge transferrin your organization?

    ……

    ……

    ……

16. In what other ways does interpersonal trust influence knowledge transfer in your organization?

    ……

    ……

    ……

THANKS FOR COMPLETING THE QUESTIONNAIRE