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Effect of Strategic Interventions on Reducing Transformer Vandalism: A Case of Kenya
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Effect of Strategic Interventions on Reducing Transformer Vandalism: A Case of Kenya Power Limited

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ABSTRACT

Purpose: Electricity plays a significant role in the industrialization of a nation. However, frequent power outages caused by transformer vandalism result in high company losses and economic losses. The overall aim of this study was to determine the effectiveness of strategic interventions that have been adopted by Kenya Power on reducing transformer vandalism. The study specifically aimed at effectiveness of strategic policies, human resource management and technical research development adopted by Kenya Power on reducing transformer vandalism. The study was supported by Defensible space theory, Manageable space theory and Physical design and kinetic management theory.

Methodology: A descriptive research design was employed in the study where the target population comprised of 128 managerial staffs in Kenya Power working at the firm's headquarters in Nairobi comprising of senior managers, middle level managers and front line managers. A sample of 97 respondents was selected through Krejcie and Morgan sample table. The study utilized a five point Likert scale questionnaire in collecting data. The collected data was analyzed quantitatively through descriptive and inferential statistics and qualitatively through thematic analysis. The results were outlined in form of tables and figures.

Findings: The results established that the strategic interventions employed by KPLC such as strategic policies, human resource management and technical research development positively and significantly contributes to the reductions in the number of transformer vandalism cases. The results bears the implications that enhancing the strategic interventions leads to a reduction in the number of transformer vandalism in KPLC.

Unique contribution to theory, practice and policy: The study recommends to the management of Kenya Power and Lighting Company to enhance the levels of strategic policies, strategic human resource management practices and technical research and development since the practices leads to a reduction in the number of cases of transfer vandalism.

Key Words: *Strategic Policies, Human Resource Management, Technical Research Development and Transformer Vandalism*

Background of the Study

Electricity plays a critical and crucial role in the economy of all nations both developed and developing countries. For economies to grow and develop; there must be transactions that involve the buying and selling of goods and services. According to Jorgenson and Stiroh (2000), these transactions have significantly been improved by technology. Technology has for instance made production and manufacturing of products more efficient and cost effective (Jorgenson & Stiroh, 2000). Furthermore, technology has significantly enhanced the exchange of information between individuals and has thus made communication between buyers and sellers more effective (Guerrieri & Meliciani, 2005). This implies and signifies that technology is indeed critical for economic development and growth. However, technology cannot operate without electricity. This implies that technology relies on electricity to operate. An institution can therefore have the latest and most advanced technology in production but due to the lack of electricity or frequent electricity interruption: the firm's production processes can be adversely affected.

In China, Yuan *et al.* (2007) conducted a research study that sought to relate electricity consumption with the performance of a country's growth domestic product. The study findings revealed that electricity is critical for economic growth and development. Furthermore, Yuan *et al.* (2007) argue that there is a positively correlation between electricity consumption and the growth domestic product of a country. In the same vein, Shiu and Lam (2004) recommend that China's government should effectively increase electricity production and enhance distribution in order to effectively promote an atmosphere for economic growth within a country. In South Africa, Bah and Azam (2017) carried out a study which sought to determine the relationship between electricity production and economic growth. The findings revealed increased investments in electricity production positively influences economic growth and development.

In Kenya for instance, the government has through various initiatives clearly illustrated the importance of electricity by emphasizing the need and importance of electricity generation. This is through the country's Vision 2030 which seeks to increase the amount of electricity that is generated within the country. According to Otieno (2018), Kenya imports electricity from both Uganda and Ethiopia to meet its national demand. This implies and illustrates that there is a high demand for electricity within Kenya. Still the country is affected by frequent power interruptions that adversely affect production and manufacturing processes within institutions and organizations

(Kinyua, 2010). Consequently, these frequent power interruptions negatively impact on Kenya's economy. Frequent power interruptions result in Kenya's economy not attracting foreign direct investments from foreign investors (Odaba, 2014). This is attributed to the view that frequent power interruptions can have adverse cost implications.

There are various reasons that result in frequent electricity interruptions. According to Kithinji, Huang and Ayambire (2017), one of the causes of frequent power interruptions in Kenya is transformer vandalism. According to Kenya's single electricity distribution company-Kenya Power Limited-some of the power or electricity interruptions are a result of transformer vandalism. According to Kenya Power Limited (2012), transformer vandalism has resulted in the company losing millions of shillings in terms of repair and replacement costs of vandalized transformers. In addition, vandalism of Kenya Power Limited transformers' result in frequent electricity interruptions that adversely affect thousands of Kenya Powers' clients and customers. This implies and signifies that transformer vandalism not only results in Kenya Power incurring avoidable expenses but further adversely affects the Kenya's economy.

According to the official website of Kenya Power (2012), the inception of the Kenya Power company can be traced back to 1922. Since 1922 up to date, the firm and institution has undergone through various rebranding exercises. The most recent rebranding exercise was initiated in 2009 and climaxed in 2011 when the Kenya Power company was rebranded from the previous Kenya Power and Lighting Company. According to the Kenya Power's official website (2012), the vision of Kenya Power is 'to provide world class power that delights our customers'. The company seeks to do so through the distribution, transmitting, and retailing electricity to clientele throughout Kenya.

Statement of the Problem

Kempe (2010) conducted a study which sought to determine the factors that hinder development in Kenya. Findings from his study identified frequent power interruptions as one of the constraints that hampers infrastructure growth and development in Kenya. In the same vein, Walubengo (2012) explored the causes of the electricity interruption in Kenya. The findings revealed that 40% of electricity interruptions in Kenya are as a result of transformer vandalism. Muktar (2011) argues Kenya Power incurs huge monthly costs due to the vandalized of its transformers. According to Kenya Power (2012), 196 transformers were vandalized in the month of April 2012. Similarly, Ngirachu (2011) postulates that Kenya Power had made losses accruing to over Shs.14 million in Nandi district alone within 10 months to the vandalism of its transformers. Oriedo (2012) argues that the Kenya Power transformers are vandalized due to their components-transformer oil, copper and aluminum windings, and steel bracings-which fetch high prices in the black market. Kenya Power & Lighting Co. (2010) postulates the company makes losses amounting to Kshs. 600 million annually as a result of transformer vandalism. In addition, transformer vandalism is

approximated to cost the Kenyan economy an average of Kshs. 2 billion annually. Njoroge (2009) identifies the following as the strategic measures which Kenya Power has implemented to manage transformer vandalism: (1) enhanced transformer protection features; (2) government and community policing; (3) organizational restructuring. Similarly, Kirunguru, Huang and Ayambire (2017) conducted a study which sought to identify techniques used by Kenya Power to manage transformer vandalism. The implementation of a transformer vandalism monitoring information system was identified as one of the measures which Kenya Power can use (Kirunguru et al., 2017). Empirical literature focuses on the measures which can be adopted to manage transformer vandalism. However, empirical literature is limited with reference to the effectiveness of the strategic measures adopted to manage transformer vandalism. This study sought to fill this gap in empirical literature.

Objectives of the Study

General Objective

The overall objective of this study was to determine the effect of strategic interventions that have been employed by Kenya Power on reducing transformer vandalism.

Specific Objectives

- i. To determine the effectiveness of strategic policies adopted by Kenya Power on reducing transformer vandalism.
- ii. To investigate the human resource management measures that have been instituted by Kenya Power on reducing transformer vandalism.
- iii. To evaluate the effectiveness on technical research and development adopted by Kenya Power on reducing transformer vandalism.

Research Questions

- i. To what extent does the strategic policies adopted by Kenya Power affect reduction in transformer vandalism?
- ii. How does human resource management measures adopted by Kenya Power affect reduction transformer vandalism?
- iii. To what extent does technical research and development procedures adopted by Kenya Power affect reduction in transformer vandalism?

LITERATURE REVIEW

Theoretical Review

Defensible Space Theory

According to Kim and Bruchman (2005), the defensible space theory (DST) was developed by Oscar Newman in the 1970s. DST was developed with the aim of effectively reducing the rates of crime within neighborhoods (Kim and Bruchman, 2005). According to DST, there were higher rates of theft and vandalism within high rise buildings as compared to low rise buildings. This was attributed to the fact that high rise buildings were usually secluded from people and members of the society. DST postulates that the solution to vandalism and theft within high rise buildings is to increase surveillance and thus effectively reduce seclusion of high rise buildings from public scrutiny (Kim and Bruchman, 2005). DST postulates that the interaction and connection between the environment and members of the society can be effectively utilized to enhance the reduction of cases of theft and vandalism.

Manageable Space Theory

According to Kim and Bruchman (2005), the manageable space theory was developed by Donald Perlgrut in the early 1980s. The theory postulates that there are two effective ways of managing institutional vandalism and theft: (1) developing institutional policies and practices that prevent vandalism and theft; (2) development of institutional and organizational structures that significantly reduces and hamper institutional vandalism and theft (Geason and Wilson, 1989). In addition, the manageable space theory postulates that institutions and organizations can effectively reduce the vandalism and theft of institutional property through the exploration of opportunities in institutional surveillance, and the avoidance of seclusion of institution and organizational property (Geason and Wilson, 1989).

Physical Design and Kinetic Management Theory

According to Geason and Wilson (1989), the physical design and kinetic management theory was designed and developed in the 1980s. According to the theory, vandals target areas which are easily accessible, have easy escape routes and that takes least time to vandalize and steal (Geason and Wilson, 1989). The physical design and kinetic management theory postulates that institutions and organizations need to manipulate their institutional environment in order to reduce the proneness of institutional vandalism and theft (Kim and Bruchman, 2005). By so doing, vandals will not have easy institution targets to conduct their vandalism and theft activities.

Conceptual Framework

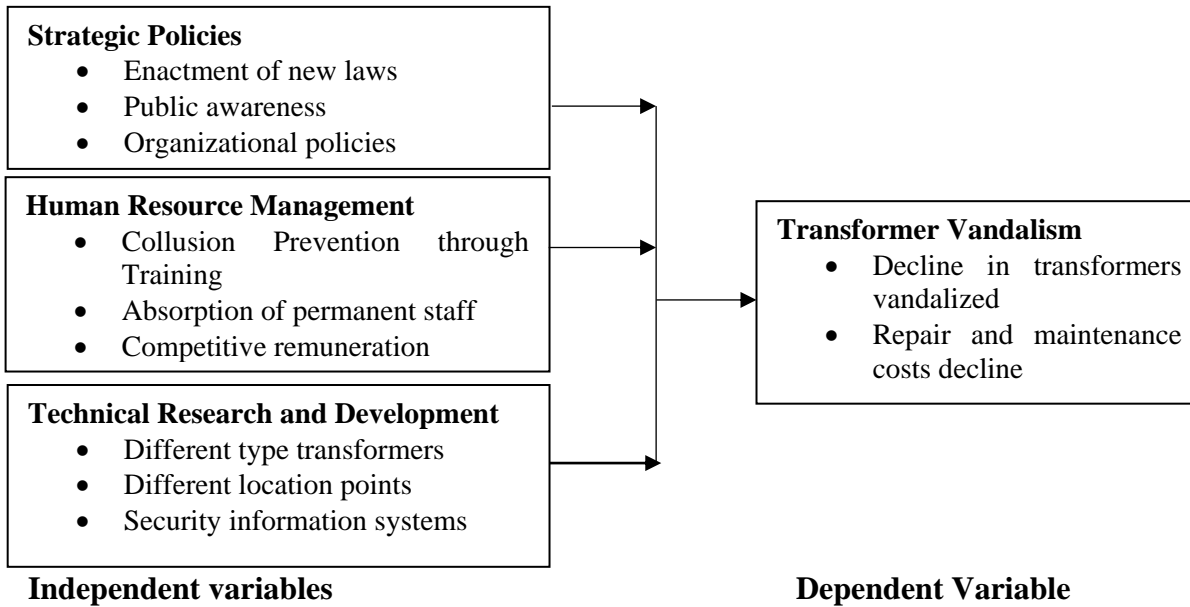


Figure 1: Conceptual Framework

Strategic Policies

Strategic policies are documented details of an institution's decisions within its operating environment (Sekhar, 2009). Strategic policies are a blueprint of institutional activities which are in nature a routine. According to Sekhar (2009), strategic policies enable an institution to have guidelines in which its management and staff operate. Dhar (2008) argues that strategic policy objectives enable frontline managers to deal with institutional challenges without referring to senior management every time. Institutional strategic policies should have the following features: clear, specific, simple, reliable, comprehensive, and stable (Stead, Stead & Starik, 2004). In this case, this study seeks to determine the extent to which strategic policies adopted by Kenya Power Limited have reduced vandalism of its transformers.

Human Resource Management

Human resource management (HRM) is the institutional or organizational process of effectively managing employees (Dhar, 2008). Effective human resource management results in an organization gaining competitive advantage. In addition, HRM involves the institutional processes of: employee rewarding, employee appraisals, employee training and development, employee relations and recruitments. Mitchell, Obeidat and Bray (2013) carried out a study which sought to determine the relationship between HRM and institutional performance. The study sourced its data from 118 manufacturing and financial companies in Jordan. The findings revealed a positive relationship between HRM and organizational performance. On the other hand, Havarneanu

(2017) argues that human factors can be an effective technique of managing vandalism. Havarneanu (2017) identifies the following as some of the techniques institutions can use to manage vandalism: staff training and staff remuneration. In this particular case, the study seeks to determine the effectiveness of human resource management in managing transformer vandalism.

Technical Research and Development

Research and development refers to improvements and innovations of existing organizational products, services, and procedures (Stead, Stead & Starik, 2004). It involves a series of activities of investigations on existing institutional processes and products. Havarneanu (2017) argues that security innovations developed through research and development can be effectively utilized in the management of organizational vandalism. Similarly, Kirunguru, Huang and Ayambire (2017) argue that power transmission firms need to design innovative designs and technological systems to detect and monitor incidences of transformer vandalism. In this case, the study seeks to determine the effectiveness of technical research development implemented by Kenya Power to effectively manage transformer vandalism.

Vandalism

According to Brenner (2010), vandalism can be defined and described as an act of deliberately destroying or damaging private or public property. In legal terms, vandalism is the deliberate damage or destruction of property which belongs to another party, individual or institution. Vandalism in this particular case can therefore be defined as the deliberate destruction or damage of transformers which belong to Kenya Power. Vandalism is regarded as a societal vice that affects both the developed countries and the developing countries. Vandalism is one of the contributing factors that led states and nations to formulate and develop security agencies and judicial systems (Jamerson, 2007). According to Jamerson (2007), one of the reasons as to why security agencies and judicial systems are developed is so as to aid in the aversion of theft and vandalism of both privately and state owned property. Vandalism is not peculiar to institutions, corporations and organizations. Empirical evidence suggests that institutions, corporations and organizations accrue losses and costs running into billions of dollars as a result of institutional vandalism and theft. It further suggests that organizational vandalism arises from both the internal and external members of an organization. A study that illustrates the prevalence of vandalism was conducted by Aroh, Ubong, Eze, Harry, Otong and Gobo in 2010. Aroh et al (2010) conducted a research study that sought to investigate the causes of various oil spills that had occurred in Nigeria between 1970 and 2005. According to Aroh et al (2010), one of the factors that were attributed as the cause of oil spills in Nigeria was as a result of vandalism on the country's pipelines. Individuals vandalize the country's pipeline to siphon fuel which they then sell to make a living for themselves.

Empirical Review

Effect of Strategic Policies on Management of Vandalism.

A number of studies have been conducted with reference to the use of strategic policy in the management of organizational vandalism. For instance, a research study conducted by Donkor in 2008 illustrates the prevalence of vandalism within the construction industry in the United States of America. Donkor (2008) argues that construction companies in the United States of America loose an approximate figure of \$1 billion every year as a result of theft and vandalism of construction equipment. According to Donkor (2008), construction companies have to formulate and adopt mechanisms that ensures that their institutional equipment is not vandalized. Donkor (2008) argues that vandalism results in huge costs and expenses for construction companies in the United States of America. These losses are incurred as construction companies seek to replace stolen and vandalized equipment. The findings of Donkor’s study reveal that one of the effective strategies construction companies can adopt is have strategic policies which deal with jobsite security.

Similarly, Tsokota, Chipfumbu, Mativenga and Mawango (2013) conducted a study in Zimbabwe which sought to determine the causes of ICT infrastructure vandalism. The study collected data from respondents using snow balling sampling technique. The findings identified political, economic, and social factors as the cause of vandalism. However, Tsokota et al (2013) argue that stakeholder participation and involvement is a viable technique of managing vandalism during ICT infrastructure development. In addition, findings revealed that strategic policies are a viable strategy of managing vandalism. Similarly, Koinange (2017) argues that company policies are viable basis of managing organizational vandalism.

Okoye and Gbegi (2013) conducted a study which sought to determine the influence of fraud on the Nigerian economy. Data for the study was collected from secondary sources and inferential statistics was utilized to draw inference from the data collected. The findings of the study reveal that fraud had a negative on economic performance. Okoye and Gbegi (2013) further argue that strategic internal control policies are a viable technique that can be utilized in the management of fraud. Strategic policies on fraud hinder and block the opportunities of committing fraud.

Institutions in most cases are the victims of vandalism. In some instances irreparable damage is done to their property and even their communities whose value or values remained irrevocably dented (Gravenor, 2002). Vandalism can also give the perception that the organization has failed to uphold the values it professes. In this sense therefore, the image of the victim organization becomes damaged when its operations stall due to the activities of vandals.

Effect of Human Resource Management Measures on Management of Vandalism.

Numerous studies have been conducted with reference to using HRM to manage employee vandalism. For instance, Omar, Nawawi and Salin (2016) conducted a study which sought to determine the causes and effects of employee fraud in the automotive industry. The study sampled one automotive company and both qualitative and quantitative data analysis techniques were utilized to analyze data collected. The findings revealed the following as the causes of employee fraud: opportunities of committing fraud, employee compensation, and lack of understanding about company policy on fraud. Omar et al (2016) identifies the following as effective strategies of minimizing employee fraud: creating a conducive working environment, offering trainings on fraud awareness, developing improved security controls, and offering competitive remuneration rates.

Similarly, Dzansi, Rambe and Mathe (2014) conducted a study in South Africa which sought to determine the role of employees in electricity cable theft. The study was theoretical in nature and explored the factors that cause employees to vandalize organizational property. Findings revealed organizational – working environment – and personal trait – attitude and perceptions – factors are the triggers of employee vandalism. Dzansi et al (2014) identified the following as some of the strategies human resource managers can use to manage organizational vandalism and embezzlement: (1) offering competitive remuneration; (2) nurturing good employer-employee relations; (3) establishing efficient employee controls. In the same vein, Njenga (2011) conducted a study which sought to determine the strategies adopted to reduce non-technical electricity losses by Kenya Power. Both primary and secondary data was sourced to answer the research questions for the study. For primary data, interviews were utilized while company reports were utilized as the source for secondary data. The findings identified one of the major causes of non-technical losses is as a result of employee. The study recommended the use of effective human resource strategies, use of technology to manage company losses that are caused by employees.

A strategic approach to human resource management entails that the management processes link the human resource policies and activities with the set strategic goals of a business organization (Armstrong, 2008). According to Armstrong (2008), to achieve a successful strategic approach to human resource management; an institution must first determine its operational factors that affect the establishment of a strategic approach to human resource management in order to understand how a successful human resource strategy is formulated. Secondly, a business organization must establish the human resource practices of different human resource strategy models. It's also important for an organization to examine the levels of organizational performance of other firms employing a strategic approach to human resource in the management of vandalism. According to Jerald (1990), human resource management is also viewed as a strategic organization partner that can actively participate in the formulation and implementation of strategies to achieve the desired results (control vandalism). In this vein, human resource management procedures must continually

strive to achieve great results from their practices and their laid down strategies as well as establishing people strategies in line with the objectives of the business organization. Human resource planning and development, job analysis and recruitment selection, employee appraisal and motivation, career planning and development, employee compensation and benefits as well as employee health and safety are the major areas of consideration in any organization (Jerald, 1990). To achieve organization end such as sustainability, there exists a dire need for the human resource department to establish the means of working hand in hand with other major departments within the organization such as; administration, accounts and finance, production, sales and marketing, supplies as well as the information technology department to control vandalism.

The administration department is responsible for the supervision of the entire business organization. It comprises of administrative managers and other senior personnel who make decisions to facilitate the smooth and successful running of the entire business organization. Effective strategic human resource management links human resource management policies with the strategic aims and objectives of a business organization (Armstrong, 2008). The administration, on the other hand, organizes the staff and other resources towards the achievement of the organization's aims and objectives. The two departments cooperate in various areas to enhance the success of strategic human resource management within an institution. Henri (n.d), in his five elements of administration, identifies a set of administrative duties and functions undertaken by the administrative department to achieve the strategic goals of an organization: (1) planning; (2) organizing; (3) staffing; (4) directing; (5) controlling. According to Jeffs (2008), planning encompasses the making of decisions in advance concerning the activities to be undertaken, the means of doing the activities, time frame for completing these activities and the employees intended to perform these activities. In line with the strategic human resource management, planning (both long term and short term) involves the formulation of strategic goals and objectives and the identification of the required human resource to accomplish these goals.

Effect of Strategic Technical Research and Development on Vandalism Management.

Kajalo (2010) conducted a study which sought to determine the perception of managers with reference to the effectiveness of formal and informal surveillance on vandalism in Finland's shopping centers. Data for the study was collected through an internet survey which consisted of 58 shopping centers. The findings of the study revealed that surveillance using surveillance cameras, security officer patrols is an effective technique of managing vandalism and theft. In addition, surveillance is an effective technique of monitoring employee activities that relate to employee behaviour. In another study, Koinange (2017) sought to determine the influence of vandalism on service delivery. The study collected data from 60 managerial employees working in Safaricom, Nairobi Water and Sewerage Company, and Kenya Power. The findings revealed that the major cause of vandalism was the lack of stakeholder involvement and ownership in the laying down of infrastructure. According to Koinange (2017), vandalism significantly affects

service delivery. One of the solutions proposed by the study to manage vandalism is through the use of technical research and development.

Similarly, Ewing (1994) explored and investigated on the effects of theft and vandalism within libraries in the United Kingdom. According to Ewing (1994), libraries in the United Kingdom incur huge losses as a result of theft and vandalism of their products. These costs are with reference to replacement and repair expenses that libraries incur as they resolve cases of theft and vandalism. In addition, libraries in the United Kingdom have to invest a substantial proportion of their income to set up security systems that ensures and lead to the reduction of theft and vandalism within libraries. Ewing (1994) postulates that if there were no cases of vandalism and theft; institutions and organizations would invest the resources they spend in acquiring and setting up security systems for expansion of their services. Consequently, this would lead to higher institutional profit. This, therefore, brings about opportunity cost to an institution.

On the other hand, an organization may choose to invest in product or equipment differentiation to manage the menace of vandalism since competitors may bank of equipment similarity to boycott the activities of another organization (Fleetwood and Hesketh, 2007). For instance the information technical support can help the organization create relevant information systems within the firm that can enhance the organization's surveillance and monitoring. These systems could include better training systems or simulations, better employee participation systems and greater security systems among many others. According to Siegel and Senna (2008), institutions and organizations should adopt and employ the latest technology in an effort to manage institutional theft or vandalism. Development and advancement in technology are as a result of research and development. Research and development encompasses institutions and organizations investing their resources in activities that aids them innovate new and better ways of performing their institutional duties. In this particular case, this would involve institutions and organizations investing in research and development activities in order to effectively reduce the cases of theft and vandalism of their institutional equipment.

Implications of Vandalism on Organizational Performance

Empirical evidence from the prior section highlights and outlines the prevalence of vandalism within institutions and the society. This section examines empirical literature with reference to the outcomes of theft and vandalism. Other scholars that contribute to this debate are Kajalo and Lindblom. Kajalo and Lindblom (2011) argue that institutional theft and vandalism results in institutions incurring costs that are secondary. In this particular case, Kajalo and Lindblom describe secondary costs as costs that are not directly linked to the sale of an institution's product or service. Consequently, institutions and organizations do not invest their resources in primary activities that raises the revenue of their enterprise. This in turn implies that institutions get lower profit margins due to increased costs. In addition, the vandalized and stolen products also

constitute forgone income and thus adversely affect the balance sheet, and the trading profit and loss account of an enterprise.

Another research study that highlights implications of theft and vandalism was conducted by Warren in 2001. Warren (2001) sought to evaluate and investigate the risk concerns that a healthcare facility faces as a result of adopting a computer information system. According to Warren (2001), there various risks that a healthcare institution can be prone to because of adopting a computer information system one being vandalism and theft. Warren (2001) argues that healthcare institutions risk losing crucial healthcare records or even breaching doctor-patient confidentiality as a result of vandalism or theft of computers of the healthcare institution. Another research study highlights the effects of vandalism in cyber space was conducted by Satapathy in 2000. Satapathy (2000) argues that cybercrime may result in an institution and organization loosing crucial information as a result of vandalism by hackers. The research study gave various illustrations that made institutions not operate efficiently as a result of vandalism by hackers.

Research Methodology

The study employed a descriptive research design. Where the target population of the study were all the managerial employees working at the Kenya Power headquarters in Nairobi. There are 128 managerial employees attached at the Kenya Power headquarters who would constitute the study target population. Stratified random sampling technique was utilized to select the 97 managerial employees who would constitute the study's respondents. The target population was divided into the following categories: senior managers, middle level managers, and frontline managers. In order to adequately capture the perceptions of the respondents, a five point Likert scale semi-structured questionnaire was the main instrument of the study. Data collected from the respondents was coded and entered into the computer for analysis using the Statistical Package for Social Science (SPSS). Data collected was analyzed both qualitatively and quantitatively. Qualitative data was analyzed by arranging responses according to the research questions and objectives. On the other hand, quantitative analysis was accomplished through descriptive and inferential statistics. For descriptive analysis, the study employed both mean, and standard deviation. For inferential statistics, the study employed correlation and regression. A regression model was utilized to better understand the relationship between the study's independent and dependent variables. The regression model for the study was as follows:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon_i$$

β_1 , β_2 , and β_3 represent the specific beta coefficients. X_1 represents strategic policies, X_2 represents strategic human resource management measures, and X_3 represents strategic technical research and development. ϵ_i represents the error term in the model. β_0 represents the constant while Y_i represents transformer vandalism cases at Kenya Power Ltd.

Results

The study issued 97 questionnaires to the respondents of the study comprising of Senior Managers, Middle Level Managers and Front Line Managers. 75 questionnaires were fully responded and returned. This accounted for 77.3% response rate. Mugenda and Mugenda (2013) argue that a response rate of 50% and above is adequate for descriptive research. Consequently, a response rate of 77.3% was adequate to proceed with data analysis.

Descriptive Findings and Analysis

The study employed the descriptive statistics with the aim of describing the respondents' level of agreement with the statements on each of the variable under study. The study utilized both the means and standard deviation where the mean was used as a measure of central tendency while standard deviation was used as a measure of dispersion to inform how the responses were dispersed from the mean. The procedure followed in coming up with the means and standard deviations was as follows: First, respondents were presented with statements on each variable and were supposed to indicate their level of agreement with the statements using a scale of 1-5 where Agree (A)-4, Neutral (N)-3, Disagree (D)-2 and Strongly Disagree (SD)-5. The mean and standard deviation of each statement was computed to generate the general conclusion of the statements. Average mean and average standard deviation of each of all the statements from each variable was then computed to derive the general rate of response for the variables which was then utilized in making conclusions.

Effectiveness of Strategic Policies on reducing Transformer Vandalism

The responses on the effectiveness of strategic policies on reducing transformer vandalism outlined in table 1 shows that respondents agreed with the statement that Kenya Power had adopted strategies policies to manage transformer vandalism as shown by a response mean of 4.61 and standard deviation of 0.101. Respondents further agreed with the statements that the policies adopted are effective in reducing the vandalism of transformers as shown by a mean of 4.31 and standard deviation of 0.111 and that the legislations and policies formulated by Kenya Power in conjunction with Kenyan government have effectively reduced theft and vandalism of transformers (mean=4.06 and standard deviation=0.461). Similarly, the respondents were in agreement with the statements that through public awareness of Kenya Power's policies on transformer vandalism the cases of vandalism have effectively reduced (mean=3.99 and standard deviation=0.602) and that Kenya Power policies on transformer vandalism have significantly reduced cases of transformer vandalism (mean=3.67 and standard deviation =0.917). The results shows that all respondents were in agreement with the statements on effectiveness of strategic policies on reducing transformer vandalism as shown by average response mean of 4.128 and average standard deviation of 0.438. This is in line with Sekhar (2009) who asserts that strategic policies enable an institution to have guidelines in which its management and staff operate.

Additionally, Dhar (2008) argues that strategic policy objectives enable frontline managers to deal with institutional challenges without referring to senior management every time.

Table 1: Descriptive Statistics on Strategic Policies

Statements	Mean	Std.Dev
Kenya Power have adopted strategies policies to manage transformer vandalism	4.61	0.101
The policies are effective in reducing the vandalism of transformers	4.31	0.111
The legislations and policies formulated by Kenya Power in conjunction with Kenyan government have effectively reduced theft and vandalism of transformers	4.06	0.461
Through public awareness of Kenya Power's policies on transformer vandalism the cases of vandalism have effectively reduced	3.99	0.602
Kenya Power policies on transformer vandalism have significantly reduced cases of transformer vandalism	3.67	0.917
Average	4.128	0.438

On whether there was any other strategic policies which Kenya Power can adopt to effectively manage vandalism of its transformer, majority of the respondents indicated there exists more strategic policies such as community policing, using informers to track vandals, and inspection raids on scrap yards.

Effectiveness of Strategic Human Resource Management on Transformer Vandalism

The responses on the effectiveness of strategic human resource management on transformer vandalism outlined in table 2 shows that respondents were in agreement with the statements that Kenya Power has adopted human resource management strategies to manage transformer vandalism as shown by average response mean of 4.55 and average standard deviation of 0.233 and that the human resource management strategies adopted are effective in reducing the vandalism of transformers (mean=4.62 and standard deviation of 0.311). Respondents similarly agreed with the statements that employee trainings on transformer vandalism have significantly resulted in a decline in the number of transformer vandalism cases as shown by mean response of 3.97 and average standard deviation of 0.726. Additionally, respondents were in agreement with

the statements that conversion of employee contracts from temporary to permanent have resulted in a significant decline in the vandalism of transformers(mean=4.06, std.dev=0.329) and that offering employees good remuneration packages has resulted in a significant decline in transformer vandalism(mean=4.77, std.dev=0.206). The results shows that all respondents were in agreement with the statements on strategic human resource management as shown by average response mean of 4.394 and average standard deviation of 0.361. The results tallies with Havarneanu (2017) who argues that human factors can be an effective technique of managing vandalism through techniques such as staff training and staff remuneration.

Table 2 Descriptive Statistics on Strategic Human Resource Management

Statements	Mean	Std.Dev
Kenya Power has adopted human resource management strategies to manage transformer vandalism	4.55	0.233
The human resource management strategies adopted by Kenya Power are effective in reducing the vandalism of transformers	4.62	0.311
Employee trainings on transformer vandalism have significantly resulted in a decline in the number of transformer vandalism cases.	3.97	0.726
Conversion of employee contracts from temporary to permanent have resulted in a significant decline in the vandalism of transformers.	4.06	0.329
Offering employees good remuneration packages has resulted in a significant decline in transformer vandalism.	4.77	0.206
Average	4.394	0.361

Effectiveness of Technical Research and Development on Transformer Vandalism

The responses on the effectiveness of technical research and development on transformer vandalism presented in table 3 shows that respondents were in agreement with the statements that Kenya power has adopted technical research and development strategies to manage transformer vandalism (mean=4.32, std.dev=0.413) and that the technical research and development strategies are effective in reducing the vandalism of transformers(mean=4.25, std.dev=0.392). Respondents were further in agreement with the statements that the adoption of dry transformers by Kenya Power has effectively reduced the cases of transformer theft and vandalism as shown by a response mean of 4.45 and std.dev of 0.361 and that moving and shifting of transformers by Kenya Power has effectively reduced transformer vandalism(mean=4.02, std.dev=0.323). Respondents were

finally on agreement that Kenya Power has dedicated a significant proportion of its resources to the research and development of transformers that reduces the cases of theft and vandalism (mean=3.94, std.dev=0.712). All the respondents on average were in agreement with the statements on effectiveness of technical research and development on transformer vandalism as shown by an average response mean of 4.196 and average standard deviation of 0.44. The results concurs with Kirunguru, Huang and Ayambire (2017) who argues that power transmission firms need to design innovative designs and technological systems to detect and monitor incidences of transformer vandalism.

Table 3 Descriptive Statistics on Technical Research and Development

Statements	Mean	Std.Dev
Kenya power has adopted technical research and development strategies to manage transformer vandalism	4.32	0.413
The technical research and development strategies adopted by Kenya Power are effective in reducing the vandalism of transformers	4.25	0.392
The adoption of dry transformers by Kenya Power has effectively reduced the cases of transformer theft and vandalism	4.45	0.361
The moving and shifting of transformers by Kenya Power has effectively reduced transformer vandalism	4.02	0.323
Kenya Power has dedicated a significant proportion of its resources to the research and development of transformers that reduces the cases of theft and vandalism.	3.94	0.712
Average	4.196	0.44

On whether there was any other technical research and development strategies KPC can adopt in order to manage transformer vandalism, majority of the respondents indicated there exists more strategic policies such as having a live wire around the transformer, installation of alarms, and putting security lights.

Effectiveness of KPC Strategic Interventions on Transformer Vandalism

The results presented in figure 2 on the effectiveness of KPC strategic interventions on transformer vandalism shows that 10% and 20% of the respondents were of the opinion that the cases of transformer vandalism had reduced by 0 to 49 and 50-99 cases respectively on a semi-annual basis since the adoption of strategic intervention by KPC. In addition, 32% of the respondents were of

the view that cases of transformer vandalism had reduced by 100 to 149 cases semi-annually since the adoption of KPC strategic intervention. The findings further revealed that 38% of the respondents were of the view that transformer vandalism cases had reduced by over 150 cases on a semi-annual basis. According to Muthoni (2016), the strategies adopted by KPC were effective in managing transformer vandalism cases. For instance, the losses accumulated as a consequence of transformer vandalism cases was Ksh. 86 million in 2015 as compared to Ksh. 100 million in 2014.

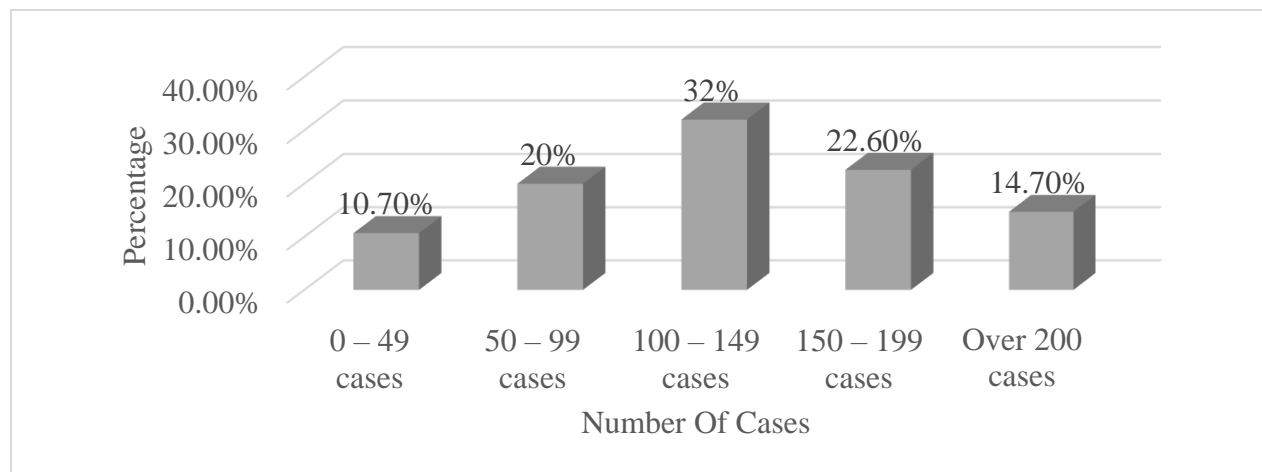


Figure 2 Reduction in Cases of Transformer Vandalism

Inferential Statistics

Correlation Analysis

The study conducted a correlation analysis with an aim of establishing existence of correlations between the variables of the study. The correlation results outlined in table 4 shows that strategic policies and transformer vandalism correlates to a positive and significant level as shown by a correlation value of 0.539 and significance value of 0.000. The results implies that enhancing strategic policies leads to a reduction in the transformer vandalism incidents in Kenya Power. The results concurs with Sekhar (2009) who asserts that strategic policies enable an institution to have guidelines in which its management and staff operate. Additionally, Dhar (2008) argues that strategic policy objectives enable frontline managers to deal with institutional challenges without referring to senior management every time.

The correlation results further shows that strategic human resource management and transformer vandalism correlates to a positive and significant level as shown by a correlation value of 0.464 and significance value of 0.000. The results bear the implications that enhancing strategic human resource management leads to a reduction in the transformer vandalism incidents in Kenya Power. The results tallies with Omar *et al* (2016) who identified creating a conducive working

environment, offering trainings on fraud awareness, developing improved security controls, and offering competitive remuneration rates as effective strategies of minimizing employee frauds.

The correlation results also revealed that technical research and development and transformer vandalism correlates to a positive and significant level as shown by a correlation value of 0.351 and significance value of 0.002. The results bear the implications that enhancing technical research and development culminates to a reduction in the transformer vandalism incidents in Kenya Power. The results tallies Kirunguru, Huang and Ayambire (2017) who argues that power transmission firms need to design innovative designs and technological systems to detect and monitor incidences of transformer vandalism.

Table 4 Correlation Analysis Results

		Strategic Policies	Strategic Human Resource Management	Technical Research and Development	Transformer Vandalism
Strategic Policies	Pearson Correlation	1			
	Sig. (2-tailed)				
Strategic Human Resource Management	Pearson Correlation	.021**	1		
	Sig. (2-tailed)	0.088			
Technical Research and Development	Pearson Correlation	-.117**	.134**	1	
	Sig. (2-tailed)	0.091	0.129		
Transformer Vandalism	Pearson Correlation	.539**	.464**	.351**	1
	Sig. (2-tailed)	0.000	0.000	0.002	
	N	75	75	75	75

Multiple Regression

The purpose of conducting a multiple regression analysis was to establish existence of a relationship between the independent variables and the dependent variable. The model summary results outlined in table 5 shows that there exists a high relationship between strategic interventions (Strategic Policies, Strategic Human Resource Management and Technical Research and Development) and transformer vandalism as shown by R value of 0.844. The value of R-square shows that strategic interventions (Strategic Policies, Strategic Human Resource Management and Technical Research and Development) accounts for 78.1% in the reduction of transformer vandalism in Kenya Power.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.844 ^a	.781	.724	.2401

a. Predictors: (Constant), Strategic Policies, Strategic Human Resource Management and Technical Research and Development

The study included analysis of variance (ANOVA) to assess whether the model connecting strategic interventions and transformer vandalism was statistically significant. The results presented in table 6 shows that the significance value of 0.013876 was less than 0.05 implying that the model was statistically significant and could be used in assessing the relationship between the independent and dependent variables of the study.

Table 6: ANOVA (Model of Significance)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	235.681	3	78.5603	28.1786	0.013876
	Residual	197.944	71	2.7879		
	Total	433.625	74			

a. Dependent Variable: Transformer Vandalism

b. Predictors: (Constant), Strategic Policies, Strategic Human Resource Management and Technical Research and Development

The model coefficient results presented in table 7 shows the levels of effectiveness of strategic policies positively and significantly relates with the levels of transformer vandalism as shown by a beta coefficient value of 0.878 and significance value of 0.000. The results bear implications that a unit increase in the levels of strategic policies results to 0.878 units in the reduction of transformer vandalism in Kenya Power. The results are in line with Sekhar (2009) who asserts that strategic policies enable an institution to have guidelines in which its management and staff operate. Additionally, Dhar (2008) argues that strategic policy objectives enable frontline managers to deal with institutional challenges without referring to senior management every time.

The coefficient results further shows that the levels of effectiveness of strategic human resource management positively and significantly relates with the levels of transformer vandalism as shown by a beta coefficient value of 0.634 and significance value of 0.000. The results bear implications that a unit increase in the levels of strategic human resource management practices results to 0.634 units in the reduction of transformer vandalism in Kenya Power. The results tallies with Havarneanu (2017) who argues that human factors can be an effective technique of managing vandalism through techniques such as staff training and staff remuneration.

The coefficient results finally shows that the levels of effectiveness of technical research and development positively and significantly relates with the levels of transformer vandalism as shown by a beta coefficient value of 0.467 and significance value of 0.001. The results bear implications that a unit increase in the levels of technical research and development practices results to 0.467 units in the reduction of transformer vandalism in Kenya Power. The results concurs with Kirunguru, Huang and Ayambire (2017) who argues that power transmission firms need to design innovative designs and technological systems to detect and monitor incidences of transformer vandalism.

Table 7: Model Coefficients

Predictors	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	0.167	0.115		1.4522	0.029
Strategic Policies	0.878	0.136	0.748	6.4559	0
Strategic Human Resource Management	0.634	0.151	0.594	4.1987	0
Technical Research and Development	0.467	0.182	0.347	2.5659	0.001

According to the results, strategic policies bears the highest effect on reduction of vandalism cases in Kenya Power followed by strategic human resource management and lastly technical research and development. All the strategic interventions however has a positive and significant effect on reduction of vandalism cases in Kenya Power.

Conclusion of the Study

The findings of the study culminated into conclusions that strategic policies positively and significantly affects reduction of transformer vandalism cases in Kenya Power. Activities surrounding strategic policies such as adopting effective strategies policies to manage transformer vandalism, having legislations and policies formulated by Kenya Power in conjunction with Kenyan government that effectively reduces theft and vandalism of transformers, and creating public awareness on Kenya Power's policies on transformer vandalism significantly contributes into a reduction on the number of transformer vandalism in Kenya Power.

The findings of the study further led into conclusions that strategic human resource management positively and significantly affects reduction of transformer vandalism cases in Kenya Power. Activities surrounding strategic human resource management such as adopting effective human resource management strategies to manage transformer vandalism, conducting employee trainings on transformer vandalism, conversion of employee contracts from temporary to permanent, and offering employees good remuneration packages significantly contributes into a reduction on the number of transformer vandalism in Kenya Power.

The findings of the study finally culminated into conclusions that technical research and development and significantly affects reduction of transformer vandalism cases in Kenya Power.

Activities surrounding technical research and development such as adopting effective technical research and development strategies to manage transformer vandalism, adopting dry transformers, moving and shifting of transformers, and dedicating a significant proportion of resources to the research and development of transformers significantly contributes into a reduction on the number of transformer vandalism in Kenya Power.

Recommendations of the Study

The study recommends to the management of Kenya Power and Lighting Company to enhance the levels of strategic policies on transformer vandalism since the practices leads to a reduction in the number of cases of transfer vandalism. KPLC can achieve this through adopting effective strategies policies to manage transformer vandalism, having legislations and policies formulated by Kenya Power in conjunction with Kenyan government that effectively reduces theft and vandalism of transformers, and creating public awareness on Kenya Power's policies on transformer vandalism.

The study also recommends to the management of Kenya Power and Lighting Company to enhance the levels of strategic human resource management practices since the practices leads to a reduction in the number of cases of transfer vandalism. KPLC can achieve this through adopting effective human resource management strategies to manage transformer vandalism, conducting employee trainings on transformer vandalism, conversion of employee contracts from temporary to permanent, and offering employees good remuneration packages.

The study finally recommends to the management of Kenya Power and Lighting Company to enhance the levels of technical research and development since the practices leads to a reduction in the number of cases of transfer vandalism. KPLC can achieve this through adopting effective technical research and development strategies to manage transformer vandalism, adopting dry transformers, moving and shifting of transformers, and dedicating a significant proportion of resources to the research and development of transformers.

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