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THE INFLUENCE OF END USER ATTITUDES ON ADOPTION OF NEW TECHNOLOGIES AT KENYA POWER AND LIGHTING COMPANY, KENYA

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Abstract

The Kenya Power and Lighting Company (KPLC) plays a critical role in the economic development of the country through supply of electricity for both domestic and corporate customers. In order to execute its mandate efficiently, the company has embraced new technologies such as a modern robust and integrated Distribution Management System (DMS) as well as different types of sensors on feeders, transformers and distribution substations. Other measures include smart metering of transformers and feeders to enable energy balancing amongst a host of diverse new technologies in its operations. Adoption of technology expected to reduce power losses, operational cost savings, lowered peak demand, new or increased revenue streams, improved long-term growth prospects and improved customer satisfaction. Despite, the potential benefits of new technologies usage within KPLC, there is evidence showing low adoption levels of diverse introduced technologies at KPLC. Examples in this context include poor adoption levels of live line handling technology, as well as cable joining and termination technology amongst others. This study therefore seeks to examine influence of end user attitudes on adoption of new technologies at Kenya Power and Lighting Company in Nakuru. The descriptive research design was used for the study as the phenomena characteristics wereexamined on the ground without any manipulation of variables. The target population is the 274 Kenya Power and Lighting Company staff in Nakuru. The sample size of 73 for the study was calculated using the Nassiuma's formula. The stratified random sampling was used as the sampling procedure. A structured questionnaire was used in this study. The study found that on average, the respondents tended to agree that most new technologies are useful in generic work functions at KPLC e.g. leave application, training etc (mean score=4.26), and that most new technologies are useful in specific line of work at KPLC (mean score=4.06). The respondents on average tended to agree that they find most new technologies easy to use (mean score=3.57), and that most new technologies preserve historically held data in their line of work (mean score=3.81). Additionally, the respondents also tended to agree that, they consider new technologies necessary for work functions at KPLC (mean score=4.03), and that they are receptive to changes in technology advances (mean score=4.39). All the metrics on end user attitudes had standard deviations that were moderately distributed around the mean with the exception of ease of use of new technologies which was widely distributed. Most new technologies are useful in generic work functions at KPLC had a standard deviation of 0.76, most new technologies being useful in specific line of work at KPLC had a standard deviation of 0.97, while ease of use of new technologies had a standard deviation of 1.02. The standard deviation for most new technologies preserve historically held data in my line of work was 0.99, and standard deviation of reception to in technology advances was 0.97. On the otherhand, the standard deviation of new technologies being necessary for work functions at KPLC was 0.83.The ease of use of new technologies was widely distributed due to means of above 1.0. This implies that with the exception of the ease of use of new technologies which had no consensus (due to $\sigma_X \geq 1$), there was moderate consensus (due to $0.5<\sigma_X<1$) on the influence of individual metrics on adoption of new technologies at KPLC.

Keywords: Adoption of New technologies, Attitudes, End User, Utility Firm

I. INTRODUCTION

Across the globe, there are diverse factors leading to the need for new technologies amongst utility firms such as water and sewerage firms, as well as energy firms. These factors include an increasing population, urbanization effects, an increasing middle class, industrialization

effects, and increase in development across diverse countries (Apulu, Latham, & Moreton, 2011). Within the energy sector, there are different technologies that have been adopted across the world based on their specific needs.

In the United States of America, the New York Power Authority., (2014) noted that there is need to embrace technologies in energy sector with a view of achieving diverse objectives. In this context, the New York Power Authority 2014-2019 strategic vision cites the objectives for new technologies adoption as clean generation of electricity, meet the needs of energy driven economy, creation of a stronger and resilient electricity grids, and strengthening environmental protection.

On the other hand, the New York Independent System Operator which is concerned with operations of New York's bulk electricity grid, noted the need for technology in order to counter emerging threats as well better contain the old ones (Jones, 2015). Amongst the needs for new technology adoption include the need to evolve and strengthen the physical and cyber security mechanism to protect the grid from ever-changing threats. Saibu (2016) undertook a study on Macro determinants of renewable electricity technology adoption in Nigeria. The study identified the need that led to a need to adopt renewable energy technologies as increase in energy consumption levels, and fossil related fuel carbon dioxide emission. In the context of the carbon dioxide emissions, the fossil related fuel carbon dioxide emission stood at 86.40 million metric tons in 2012 making it amongst the highest carbon dioxide emitting countries in Africa (Saibu, 2016). On the other hand, in terms of electricity energy consumption, the electricity consumptions levels had increased to 23.11 billion kilowatt-hours by 2011 and continue to rise due to industrialization levels of the country. Similar to Nigeria, South Africa is facing the challenge of high carbon dioxide emission leading to adoption of new technologies in cleaner energy generation.

There are several factors that influence the adoption of new technologies in utility firms. According to Kukafka, Johnson, Linfante, & Allegrante, (2003), there are three groups of factors that affect the adoption of new technologies in utility firms; organizational level factors, group level factors and individual level factors. The organizational level factors include aspects relating to the organization that affect the individual users of new technologies within the organization (Buabeng-Andoh, 2012). These factors may include organizational structure, organizational culture, policies and procedures of workflow amongst other factors. The group level factors include aspects such as professional values and culture. On the other hand, the individual level factors include aspects that touch on the individual user attributes that impact on their use of new technologies such as attitudes, user satisfaction, and user involvement amongst other factors (Graziano, 2014).

In Kenya, the Kenya Power and Lighting Company (KPLC) is involved in transmission, distribution and retail of electricity connection. The Kenya Power and Lighting Company was formed in 1922 as the East African Power and Lighting Company (EAP&L) (Oginda, 2013). EAP&L rebranded to KPLC in 1983 involved in both the generation and supply of electricity. Changes in the energy sector in 1997 and 2008 led to the formation of Kenya Electricity Generating Company (Ken Gen) and Kenya Electricity Transmission Company (KETRACO) respectively (Aketch, 2015). The company is divided into twelve major divisions; network management, Information and Communication Technology, Supply Chain Management, Customer Service, Business Strategy, Infrastructural Development, and Internal Audit. Others are Street Lighting, Connectivity, Finance, Human Resource and Management, and Company Secretary, Legal & Corporate Affairs.

The Kenya Power and Lighting Company (KPLC) plays a critical role in the economic development of the country through supply of electricity for both domestic and corporate customers (Kenya Power and Lighting Company., 2017). In this context, the energy sector is listed as one of the ten pillars of the country's Vision 2030 pillars in which more electricity connection, and efficiency in electricity consumption amongst other aspects need be achieved (Vision 2030 Secretariat, 2017). The country is also facing an increasing electricity demand at the moment from a peak demand of 899 MW in 2004/2015 to 1,585 MW in 2015/2016 year with an increase of customer base from 735, 144 to 4, 890, 373 in the same period. In its operations, KPLC faces challenges such as challenges in reliability of power supply to diverse customer base and other network changes. The company therefore targets in its 2016/17-2020/21 network strategic plan to adapt diverse new technology in its supply of electricity (Kenya Power and Lighting Company., 2015b). These measures include Installation of a modern robust and integrated Distribution Management System (DMS) as well as different types of sensors on feeders, transformers and distribution substations. Other measures include smart metering of transformers and feeders to enable energy balancing amongst a host of diverse new technologies in its operations (Kenya Power and Lighting Company., 2015b).

II. LITERATURE REVIEW

The attitudes of end users affect the adoption of new technologies amongst different sectors. The perceived usefulness and perceived ease of use are some of the major factors affecting the attitudes of the end users and ultimately impacting on their ability to use the new technologies. The perceived usefulness has been defined as the user's perception of the degree to which a new technology is critical in the improvement of the user's performance on a given task (Phan & Daim, 2011). On the other hand, the PEOU has been defined as user's perception of amount of effort needed to adopt the new technology

There has been mixed results and academic debate on which factor between perceived ease of use and perceived usefulness is a primary determinant of behavioral intention to use a new technology. Azmi & Bee (2011) in an examination on the acceptance of the e filling system by Malaysian taxpayers found that both PEOU and PU had significant positive effects on behavioral intention. The study also that PU was a more powerful predictor of behavioral intention compared to PEOU due to a regression coefficient of 0.40 compared to that of 0.38 of the latter. Therefore, a unit increase of PU led to a 0.40 increase in behavioral intention to use new technology while a unit increase of PEOU led to a 0.38 increase in behavioral intention.

Olouch, Abaja, Mwangi, & Githeko (2015) study on adoption of mobile banking technology examined the role of PU and PEOU on adoption of mobile banking. The study found that PU had a significant influence on the adoption of mobile banking technology. The study found a correlation coefficient of 0.715 between PU and adoption of mobile banking implying that PU has positive and significant effect on adoption of mobile banking. The study however found that there was no statistically significant relationship between PEOU and adoption of mobile banking technology. Finally, the study found that there was significant statistical relationship between perceived security risk and the adoption of mobile banking technology. Al-smadi (2012) in a study on the factors affecting adoption of electronic banking examined the interrelationship between PU and PEOU in regards to electronic banking. The study found that there was a positive and significant relationship

between PEOU and PU suggesting that the easier the electronic banking service the more useful it becomes.

The aspect of perceived security is intertwined with the perception of risk that may be prevalent in the use of new technology. According to Kamarulzaman & Azmi (2010), perceived risks refers to the financial, new technology performance, social, psychological, physical or time risks that may be prevalent in the usage of the new technology. The financial risk or security aspects relates to whether the user of the new technology will suffer any financial loss (Qatawneh, 2015). The new technology performance risks relate to the issue on whether the new technology will perform as expected. Social risk is considered to be the perceptions of significant others towards the products or services (Bultum, 2014). Convenience risk stands for the additive problematic inconveniences that the consumer will encounter when they purchase the products or services.

The perception towards change influences the adoption of new technology in the context that change brings disruptions in established policies, and ways of doing things. In the context of technology, change essentially having to learn new skills, adopting to a new process map in the execution of tasks, and develop new coping mechanisms with the demands of the new technologies (Bitengo, 2015). A positive towards change enables to the end user to be more receptive to learning the skills of new technology hence reducing perceived ease of use. Finally, the perception towards new technology, whether positive or negative, has a great influence on the adoption of new technologies (Watiri, 2013). The end users with positive perception towards the use of new technology adopt the new technology faster.

III. OBJECTIVE OF THE STUDY

To establish the influence of End User Attitudes on adoption of new technologies at Kenya Power and Lighting Company, Kenya

IV. RESEARCH HYPOTHESIS

H_0: The end user attitudes has no significant influence on adoption of new technologies at Kenya Power and Lighting Company, Kenya

H_A: The end user attitudes have significant influence on adoption of new technologies at Kenya Power and Lighting Company, Kenya

V. METHODOLOGY

The descriptive survey research design was used for the study. The descriptive survey research describes the characteristics of the research phenomenon as it is on the ground without any manipulation of the variables. The descriptive survey research design was most suitable for this study in the context that the research is interested in the examination of the factors affecting the end user adoption of new technologies at KPLC. The study described the factors as they are on the ground without any manipulation of variables. The target population for this study was 274 employees of Kenya Power and Lighting Company staff in Nakuru across various departments, that is, regional management, design and construction, finance, supply chain, transport, technical services, security, information and communications technology, customer service, and human resources and administration. A sample size of 73 respondents was utilized for the study which was calculated using Nassiuma's (2009) formula, therefore 73 questionnaires were issued to the potential respondents with

distribution per department shown in Table 1. Out of the questionnaires distributed, 70 questionnaires were returned with 3 questionnaires not being returned. One respondent who whose questionnaire was not returned opted not to participate in the study despite assurance that the responses will be kept strictly confidential and that the purpose of the study was academic only. The other 2 questionnaires that were not returned was because they had not been filled due to lack of time on the part of the respondents despite the questionnaires having been left with the respondents to be collected at a pre agreed time. During data cleaning 1 questionnaire was rejected because it was incomplete which left 69 questionnaires whose data was entered into SPSS and analyzed. The study results and findings were therefore based on 69 questionnaires. The return rate was 94.5% which was deemed sufficient for the studies as it was above the 80% that is recommended by Mugenda &Mugenda (1999).

Table 1: Return Rate by Department

Departments	Questionnaires Issued	Questionnaire Analysed	Response Rate
Regional Management	1	1	100%
Design and Construction	10	9	90%
Finance	11	10	91%
Supply Chain	6	5	83%
Transport	3	2	67%
Technical Services	9	9	100%
Security	1	1	100%
ICT	4	4	100%
Customer Service	24	24	100%
Human Resources and Administration	4	4	100%
Total	**73**	**69**	**94.5%**

VI. FINDINGS AND DISCUSSIONS

The study sought to know whether end user attitude has been instrumental in adoption of new technologies. When asked whether most new technologies are useful in generic work functions at KPLC like leave application, training etc., most of the respondents (91.3%) were of the opinion that they were, with 40.6% and 50.7% choosing strongly agree and agree prompts respectively. An equal number of respondents, that is, 1.4% chose disagree and strongly disagree prompts while 5.8% were unsure. The generic work functions refer to the common functions that are applicable to the employees irrespective of their departments. The ability of the new technologies to address these needs is critical in building the perceived usefulness of these new technologies and thus impacting on their adoption levels.

In the context of whether most new technologies are useful in specific line of work at KPLC, 40.6% and 37.7% of the respondents were of the opinion that they were as they chose the agree and strongly agree prompts respectively. Majority of the respondents chose the agree prompt (53.6%), further supported by 13.0% of the respondents who chose strongly agree to affirm that most of the respondents find most new technologies easy to use. The ability of the new technologies being useful to the specific line of work leads to the technologies impacting on the productivity of the employee. These new technologies are likely to have a very high perceived value and hence influencing the employee attitude towards the technology thus its adoption levels.

In the context of whether most new technologies preserve historically held data in their line of work, most of the respondents said they did with 58.0% and 20.3% responding with agree

and strongly agree respectively. The ability of new technologies to preserve historically held data is key to the continuity aspects of work functions deliverables. This is due to the fact that the previously held information is still preserved in the system. When asked whether they are receptive to changes in technology advances, 34.8% and 43.5% responded with strongly agreed and agree respectively, which affirmed that they are receptive to changes in technology advances. Being receptive to changes in technology advances is key in determining the efforts that is expended in learning of the new technologies.

Table 4.1: Frequency Distribution of End User Attitude

	SA Freq.(%)	A Freq.(%)	U Freq.(%)	D Freq.(%)	SD Freq.(%)
Most new technologies are useful in generic work functions at KPLC e.g. leave application, training etc.	28 40.6%	35 50.7%	4 5.8%	1 1.4%	1 1.4%
Most new technologies are useful in specific line of work at KPLC	26 37.7%	28 40.6%	9 13.0%	5 7.2%	1 1.4%
I find most new technologies easy to use	9 13.0%	37 53.6%	9 13.0%	12 17.4%	2 2.9%
Most new technologies preserve historically held data in my line of work	14 20.3%	40 58.0%	5 7.2%	8 11.6%	2 2.9%
I am receptive to changes in technology advances	24 34.8%	30 43.5%	10 14.5%	3 4.3%	2 2.9%
I consider new technologies necessary for work functions at KPLC	37 53.6%	26 37.7%	3 4.3%	2 2.9%	1 1.4%

When asked whether they find most new technologies easy to use, most new technologies preserve historically held data in their line of work, and whether they are receptive to changes in technology advances, (2.9%) of the respondents chose the strongly disagreed prompt in respect to each indicator. A few of the respondents (4.3%) were unsure about whether they consider new technologies necessary for work functions at KPLC, while a cumulative minority of 4.3% (disagree=2.9%, strongly disagree=1.4%) do not consider new technologies necessary for work functions at KPLC. However, most of the respondents highly consider new technologies necessary for work functions at KPLC (53.6%=strongly agree) further supported by 37.7% of respondents who responded with agree. The necessity of the new technologies for the work functions is key for the employees to expend energy in learning the new technologies.

Means of End User Attitudes

The study sought to know on average whether end user attitudes had been instrumental in adoption of new technologies. The mean scores of individual metrics within the end user attitudes' matrix were generated. These metrics were most new technologies are useful in generic work functions at KPLC, ease of use of new technologies, most new technologies preserve historically holding data, reception to changes in technology advances, and necessity of new technologies for work functions at KPLC. On average, the respondents tended to agree that most new technologies are useful in generic work functions at KPLC e.g. leave application, training etc (mean score=4.26), and that most new technologies are useful in specific line of work at KPLC (mean score=4.06). The respondents on average tended to agree that they find most new technologies easy to use (mean score=3.57), and that most new technologies preserve historically held data in their line of work (mean score=3.81).

Additionally, the respondents also tended to agree that, they consider new technologies necessary for work functions at KPLC (mean score=4.03), and that they are receptive to changes in technology advances (mean score=4.39).

The results of the end user attitudes being influential to the adoption of new technologies was supported by the reviewed literature. The findings that that the respondents tended to agree that most new technologies are useful in generic work functions at KPLC (mean score=4.26), and that most new technologies are useful in specific line of work at KPLC (mean score=4.06) is tandem with findings of Phan & Daim (2011). Phan & Daim, (2011) noted that the perception of which the user perceives the new technology is critical in the improvement of the user's performance of given task is key in informing its adoption levels.

Similarly, the results that reception towards change in technology advances (mean score of 4.39) being influential to the adoption of new technology is supported by Bitengo (2015) and Watiri (2013) studies. In this context, Bitengo (2015) notes that a positive towards change enables the end user to be more receptive to learning the skills of new technology hence reducing perceived ease of use. Finally, the perception towards new technology, whether positive or negative, has a great influence on the adoption of new technologies (Watiri, 2013). The end users with positive perception towards the use of new technology adopt the new technology faster.

The means of the metrics on end user attitudes were ranked on a scale of 1 to 6 from the highest scored mean(1) to the lowest scored mean (6). On average, the respondents consider new technologies necessary for work functions at KPLC as most instrumental in adoption of new technologies among the metrics on end user attitude as it was ranked first. The second, third, fourth, fifth and sixth ranking mean scores corresponded to the metrics most new technologies are useful in generic work functions at KPLC e.g. leave application, training etc.,most new technologies are useful in specific line of work at KPLC, the respondents were receptive to changes intechnology advances, most new technologies preserve historically held data in my line of work, and I find most new technologies easy to use, respectively.

In the context of end user attitudes, the respondents on average tended to agree that end user attitudes have been instrumental in adoption of new technologies at KPLC Nakuru, Kenya with an aggregate mean score of 4.02 ($3.5< \mu < 4.5$). The aggregate mean score was generated by doing an average of the individual mean scores of the metrics of the end user attitude matrix. This aggregate mean which show that the respondents tended to agree that end user attitudes tended to influence the adoption of new technologies is consistent with the Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB). According to Kukafka et al (2003), the TRA indicates that an individual user's intention to adopt and use new technologies is affected by personal interests. The personal interests of the individual user of new technologies refer to the attitude towards the new technology after a personal evaluation of ease of adoption of the new technologies (Azmi & Bee, 2011).

Table 4.2: Means of End User Attitude

	N	**Min.**	**Max.**	**Mean**	**Respondents on average tended to;**	**Rank**
Most new technologies are useful in generic work functions at KPLC e.g. leave application, training etc.	69	1	5	4.26	Agree	2
Most new technologies are useful in specific line of work at KPLC	69	1	5	4.06	Agree	3
I find most new technologieseasy to use	69	1	5	3.57	Agree	6

Most new technologies preserve historically held data in my lineof work	69	1	5	3.81	Agree	5
I am receptive to changes in technology advances	69	1	5	4.03	Agree	4
I consider new technologies necessary for work functions at KPLC	69	1	5	4.39	Agree	1
Aggregate mean				**4.02**		

Standard Deviations of End User Attitudes

The standard deviations of the metrics on end user attitudes were generated to show how the responses were distributed around the mean and know whether there was high, moderate or no consensus. Most new technologies are useful in generic work functions at KPLC had a standard deviation of 0.76, most new technologies being useful in specific line of work at KPLC had a standard deviation of 0.97, while ease of use ofnew technologies had a standard deviation of 1.02. The standard deviation for most new technologies preserve historically held data in my line of work was 0.99, and standard deviation of reception to in technology advances was 0.97. On the other hand, the standard deviation of new technologies being necessary for work functions at KPLC was 0.83.

All the metrics on end user attitudes had standard deviations that were moderately distributed around the mean with the exception of ease of use of new technologies which was widely distributed. The ease of use of new technologies was widely distributed due to means of above 1.0. This implies that with the exception of the ease of use of new technologies which had no consensus (due to $\sigma_X \geq 1$), there was moderate consensus (due to $0.5<\sigma_X <1$) on the influence of individual metrics on adoption of new technologies at KPLC.

The standard deviations were ranked on a scale of 1 to 6 from the highest standard deviation of 1.02 ranked as number 1 to the lowest standard deviation of 0.76 ranked as number 6. Most new technologies are useful in generic work functions at KPLC scored the lowest standard deviation of 0.76 implying compared to other user attitudes there was higher levels of consensus in respect to its influence on the adoption of new technologies. The aggregate standard deviation on end user attitudes was 0.92, which was a result of averaging the standard deviations of the individual metrics. This implied that there was moderate consensus ($0.5<\sigma_X <1$) that end user attitude has been instrumental in adoption of new technologies at KPLC Nakuru, Kenya.

Table 4.3: Standard Deviations of End User Attitudes

	N	**Std. Deviation**	**Responses distribution around the mean;**	**Rank**
Most new technologies are useful in generic work functions at KPLC e.g. leave application, training etc.	69	0.76	Moderately	6
Most new technologies are useful in specific line of work at KPLC	69	0.97	Moderately	4
I find most new technologies easy to use	69	1.02	Widely	1
Most new technologies preserve historically held data in my line of work	69	0.99	Moderately	2
I am receptive to changes in technology advances	69	0.97	Moderately	3
I consider new technologies necessary for work functions at KPLC	69	0.83	Moderately	5
Aggregate		**0.92**		

Hypothesis Testing

For the purposes of hypothesis testing, this study used the hypothesis testing steps that were enumerated by Kothari in the book *Research Methodology; Methods and Techniques*. According to Kothari (2004), a research hypothesis is a predictive statement that relates an independent variable to a dependent variable. The research hypothesis was also defined as a proposition or a set of proposition set forth as an explanation for the occurrence of some specified group of phenomena either asserted merely as a provisional conjecture to guide some investigation or accepted as highly probable in the light of established facts. According to Kothari (2004), there are six steps that should be used in hypothesis testing; (i) making a formal statement,
(ii) Selecting a significance level, (iii) Deciding on the distribution to use, (iv) selecting a random sample and computing an appropriate value, (v) Calculation of the variable, and (vi) comparing the probability.
In respect to the first step of making a formal statement, this step relates to formally stating the null hypothesis (*H*0) and also of the alternative hypothesis (*Ha*).The second step of hypothesis testing involves the selection of the significance levels. The significance level (usually stated as a percentage) refers to the percentage of risk that the researcher is willing to take of rejecting the null hypothesis when the null hypothesis is in fact true (Kothari, 2004). The significance level is therefore the maximum value of rejecting null hypothesis when it is true. This is also referred as the probability of making Type I error that is the probability of rejecting H_0 when H_0 is true. The level of significance of this study was set at 5% (Kothari, 2004).
The third and fourth and step that is selection of a random sample and computation of its appropriate value was undertaken through the use of SPSS software. In this context, the individual metrics of the independent variables were regressed against a composite variable of the independent variable for the purposes of getting the p-value. The p-value statistic was then examined for the viability of each regression model. The indicators for the variables were five indicators for End User Skills Matrix, end user demographic characteristics, and end user attitudes while the indicators for end user attitudes were six in number. The last step of the hypothesis testing involved the comparison of the calculated p value with the set significance level.
In order to test the hypothesis in respect to end user attitudes influence on adoption of new technologiesat Kenya Power and Lighting Company, Kenya, the following null (**H_0)** and alternate hypothesis (**H_a)** were used;
H_0: The attitudes of end users has no significant influence on adoption of new technologies at Kenya Power andLighting Company, Kenya
H_a: The attitudes of end users have significant influence on adoption of new technologies at Kenya Power and Lighting Company, Kenya
The p value for one way ANOVA for end user attitude was 0.005 which led to rejection of the null hypothesis. Therefore, the null hypothesis (H_0) that attitudes of end users has no significant influence on adoption of new technologies at Kenya Power and Lighting Company, Kenya was rejected since $p=0.005<0.05$. Thus, the alternate hypothesis that the attitudes of end users have significant influence on adoption of new technologies at Kenya Power and Lighting Company, Kenya was accepted.

VII. CONCLUSION OF THE STUDY

The study found that on average, the respondents tended to agree that most new technologies are useful in generic work functions at KPLC e.g. leave application, training etc (mean score=4.26), and that most new technologies are useful in specific line of work at KPLC (mean score=4.06). The respondents on average tended to agree that they find most new technologies easy to use (mean score=3.57), and that most new technologies preserve historically held data in their line of work (mean score=3.81). Additionally, the respondents also tended to agree that, they consider new technologies necessary for work functions at KPLC (mean score=4.03), and that they are receptive to changes in technology advances (mean score=4.39). All the metrics on end user attitudes had standard deviations that were moderately distributed around the mean with the exception of ease of use of new technologies which was widely distributed. Most new technologies are useful in generic work functions at KPLC had a standard deviation of 0.76, most new technologies being useful in specific line of work at KPLC had a standard deviation of 0.97, while ease of use of new technologies had a standard deviation of 1.02. The standard deviation for most new technologies preserve historically held data in my line of work was 0.99, and standard deviation of reception to in technology advances was 0.97. On the other hand, the standard deviation of new technologies being necessary for work functions at KPLC was 0.83.The ease of use of new technologies was widely distributed due to means of above 1.0. This implies that with the exception of the ease of use of new technologies which had no consensus (due to $\sigma_X \geq 1$), there was moderate consensus (due to $0.5<\sigma_X<1$) on the influence of individual metrics on adoption of new technologies at KPLC.

VIII. RECOMMENDATIONS

Due to their high means and moderately low standard deviations, the study recommended that the Kenya Power management should consider the attitudes of the employees in regards to necessity of new technologies for work functions at KPLC, usefulness of new technologies for generic work functions, and usefulness of new technologies, and most new technologies are useful in specific line of work at KPLC

IX. SUGGESTIONS FOR FURTHER STUDIES

The suggestion or further studies was based on the item with a standard deviation of greater than one which implied that the responses were widely distributed around the mean hence leading to a conculsion of lack of consensus in respect to the metric amongst the respondents. In this context, the study suggests that researchers examine the role of ease of use of new technologies on the adoption of new technologies amongst utility firms' employees in detail in future studies.

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