

operating at the individual and firm level. The theory sees innovations as being communicated through certain channels over time and within a particular social system [25] Individuals are seen as possessing different degrees of willingness to adopt innovations, and thus it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time. [26] Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system.

The more compatible the technology will be to users the less a change of behavior is required, therefore, allowing for faster adoption. Trial ability is the extent that the innovation can be tested and experimented before its inclusion. The complexity (its ease of use) of technology will also impact on adoption. If the use of technology requires considerable learning it is less likely that users will persevere with it and observer ability, is whereby the innovation use and effects must be visible by others.

6.1.2 Change Management Theory

Change is endemic in managing large Corporations that provide service to the public. The pressures for change come from all sides: globalization, government initiatives, doing more with less, improving the quality of service and the learning experience, and the pace of change is ever increasing. Living with change and managing change is an essential skill for all. In many cases, first effects of change on employees, leaders, and on performance levels are negative. These effects include fears, stress, frustration and denial of change. Most employees tend to react with resistance to change rather than seeing change as a chance to initiate improvements. They are afraid of losing something, because they have incomplete information on how the change processes will affect their personal situation in terms of tasks, workload, or responsibilities [31]

Managers need to keep in mind those negative side effects of change initiatives in order to achieve the expected positive results. The success of change projects depends on the organization's ability to make all their employees participate in the change process in one way or the other. Change Management is the process, tools and techniques to manage the people-side of change processes, to achieve the required outcomes, and to realize the change effectively within the individual change agent, the inner team, and the wider system [5]

In other words, change is the result from an organizational learning process that centers around the questions: In order to sustain and grow as an organization and as individuals within; what are the procedures, what is the know-how we need to maintain and where do we need to change? And, how can we manage a change that is in harmony with the values we hold as individuals and as organizations? [31] Although there are many competing approaches to effecting individual and organizational change, there are general agreements that the two dominating tactics are the planned and emergent approaches [5]. Today, change is not the exception but a steady ongoing process. On contrast 'business as usual' will become the exception from phases of turbulence.

6.1.3 Service Quality Theories

[14] Gave the satisfaction model after considering three basic factors, which influence customer satisfaction namely; Basic factors, these are the minimum requirements which will cause dissatisfaction if they are not fulfilled but do not cause customer satisfaction if they are fulfilled/ exceeded. Excitement factors these are factors that increase customer satisfaction if delivered but do not cause dissatisfaction if they are not delivered. They surprise the customer and generate 'delight'. Using these factors, a company can really distinguish itself from its competitors in a positive way. Performance factors are factors that cause satisfaction if the performance is high and they cause dissatisfaction if the performance is low. Such attributes are like customer care, and handling of bills. If the customers get the updated information from time to time then this increases the performance and so is the satisfaction level.

[24] Postulated a service quality (SERVQUAL) theory. They first framed service quality as a discrepancy construct. They then suggested that customers make service quality judgments on the basis of five factors, assurance, empathy, reliability, tangibility and responsiveness. Furthermore, they assumed that customers use the expectancy-disconfirmation to compare their expectations on the five quality dimensions with their perception of service delivery. They stated that service quality is an overall evaluation of an entity's excellence or superiority, and that this judgment or evaluation is similar to attitude and related to, but not equivalent to, satisfaction. This definition frames service quality as a long term attitude whereas satisfaction is viewed as a transitory judgment that is made on the basis of a specific service encounter.

The approach has been applied in service and retailing organizations [24]. Service quality is a function of pre-purchase customers' expectation, perceived process quality, and perceived output quality. Service quality is defined as the gap between customers' expectation of service and their perception of the service experience. Based on the conceptualization of service quality approach, they developed five quality dimensions; tangibility, reliability, responsiveness, assurance and empathy to measure service quality.

6.2 Empirical Literature Review

In this section, empirical studies touching on pre-pay billing system customer service delivery of power distributing companies will be delved into from a global to regional perspective, then narrowing down to the Kenya Power Company (Kenya's) context.

6.2.1 Pre-Pay Billing Systems vis-à-vis customer service delivery

In a recent study, [20] identified the effects of power-sector reforms on the sectoral performance indicators (for instance, installed capacity, transmission and distribution losses) and finds that reform variables such as the entry of Independent Power Producers (IPPs), unbundling of generation and transmission, establishment of regulatory agencies, and the introduction of a wholesale spot market leads to the increased generation capacity as well as reduced

transmission and distribution loss in the respective regions. Pre-paid electricity billing was first used in South Africa in mid 1980s. The primary objective was to supply electric power to low income neighbourhoods at affordable rates (Stoner, 2009). The concerns for universal service in utilities have motivated firms and regulators to identify technological and regulatory options aimed at encouraging access, and making it easier for consumers to pay for their services [6] Prepayment mechanism requires consumers to hold credit and then use the service until the credit is exhausted. In the case of electricity consumers use energy only when they have credit in the electricity account, a supply is discontinued when such credit is exhausted. Taking a cue from the South Africa's success, countries such as United Kingdom, Turkey, India and Argentina adopted prepaid electric meters to extend electricity connections not only to poor urban neighbourhoods but also to far flung rural residences [29]. More recently, faced with huge customer debt profile and revenue collection challenges, Power Holding Company of Nigeria and National Power Authority of Sierra Leone introduced the pre-paid electric meters in 2006 and 2007 respectively. These decisions were motivated by the need to boost revenue collections and limit debts to power distribution companies [23]

However, the research revealed that while the introduction of the prepaid meter increases the revenue collection, it reduces revenue generation because it is reliability based. This means that the consumers were now careful with the way they used (consumed) electricity. As part its recommendation, the research noted that there was need for consumers to embraces the prepaid meters. It ensures that the consumer pays only for energy consumed and not the estimated bill in post-paid [22] Since its incorporation in the 1920s as the East African Power & Lighting Company (EAPL) and later in the 1980s as the Kenya Power and Lighting Company Ltd., the KP has been operating on post-paid electricity meters for both domestic and industrial energy users. Recently, the company launched on a pilot basis post-paid electricity meters for domestic users within Nairobi area and Kisumu town with an initial connections to 24,000 households. But even with countries where the introduction of prepaid electric billing had clear objectives, it has never been established whether such objectives have ever been achieved, and if not why. The continued use of post-paid electric meters in countries like South Africa two and a half decades after the introduction of post-paid meters may point to possible challenges in the adoption of prepaid meters. There is virtually no study in Kenya (known to the researcher) that has attempted to investigate the extent to which prepaid electric meters have boosted revenue collection, and how employees and clients of power distribution companies have responded to organization's transition from post-paid to prepaid electric meters. The prepayment technology in electricity bill payment was initially developed in South Africa in the late 1980s. The objective here was to supply energy to a large number of low-income and geographically dispersed users. The idea came into being the realization that low-income neighbourhood were unable to meet electricity costs accrued through post-paid payment system. The prepayment system was later adopted in India, Great Britain and Argentina [8]. This mechanism, essentially, requires that users pay for the

delivery of goods or services before their consumption. In this way, consumers hold credit and then use the service until the credit is exhausted [6]

While arguing from economic perspectives, [29] posited that prepaid system results in mixed financial fortunes to energy provider and consumers. For instance, prepayment systems may result in a decrease in metering, billing and disconnection and reconnection costs to energy provider. This is brought on by the fact that payment is made prior to consumption, which implies a significant improvement in revenue collection and a reduction in working capital. From the consumer's perspective, prepayment systems may result in a better understanding of how much energy is being consumed, inducing more control of energy use and budget management. These analyses, however, ignore how consumers and employees of energy provider evaluate the prepayment system. Therefore, the views of consumers and employees of energy providers must also be critically examined since the success of billing transition from post-paid to prepaid system depend on among other factors; their positive contribution.[27]

7. Research Methodology

The study adopted descriptive survey research design. The study population for this research included all domestic and small commercial electricity consumers served by the KPC Nakuru branch. Data contained in their integrated customer service (ICS) system for the year 2014 indicated that, there were a total of 95,438 electricity consumers served by the KPC Nakuru branch, who were categorized into two groups: 77,604 domestic consumers, 17,834 small commercial consumers. A sample of 400 respondents was drawn from the target population. To get the exact number of respondents, the Nassiuma's formula was employed while the simple random sampling method was used to identify the 400 respondents from the target population (95,438 consumers). A structured questionnaire containing a 5-point Likert scale was used to collect data. A pilot test comprising of 40 respondents drawn from the target population was conducted before the ultimate study with the sole purpose of assessing both the reliability and validity of the research instrument (questionnaire). Reliability of the research instrument was tested using the Cronbach's alpha (α). Furthermore, the instrument's content validity was determined by seeking expert opinion of the study's supervisor.

7.1 Data Processing and Analysis

Collected data was processed, coded and analyzed using Statistical Package for Social Sciences (SPSS) version 21.0. The collected data was then analyzed by use of both descriptive and inferential statistics. Given that the data collected was on a Likert scale, descriptive statistics in form of mean and standard deviation were calculated. On the other hand, inferential statistics in form of Pearson's correlation were calculated. The latter was further employed to test the research hypothesis. The findings were presented in form of tables that essentially illustrated both descriptive and inferential statistical results.

7.2 Research Findings

The researcher had administered structured questionnaires to 400 respondents. 212 filled the questionnaires which were later collected by the researcher. This represented 53% response rate. All responses were on a 5-point Likert scale where integers 1, 2, 3, 4, and 5 represented strongly disagree, disagree, neutral, agree, and strongly agree in that order.

7.2.1 Descriptive Statistics for Pre-pay Billing System

The objective in this case was to outline the views of the respondents on issues touching on Pre-pay Billing System. Table 1 shows the findings. According to the findings respondents averagely agreed (mean inclined to 4.00) that the pre-pay billing system has helped eliminate customer congestion during payment of bills hence improving customer service; pre-pay billing system has enabled supply of electric power to low income neighborhoods at affordable rates, pre-pay billings system has resulted in a decrease in metering, billing and disconnection inconveniences hence improving customer service; the pre-pay billing system is more beneficial to the consumer since they only consume what they pay for, pre-pay billing system has enabled a significant improvement in service delivery through convenient sale points for tokens; prepaid systems provide more flexible payment options to users with minimal or unreliable income.

Table 1: Descriptive Statistics for Pre-pay Billing System

| | n | Min | Max | Mean | Std. Dev. |
|--|-----|-----|-----|------|-----------|
| The pre-pay billing system has helped eliminate customer congestion during payment of bills hence improving customer service. | 212 | 2 | 5 | 4.26 | 1.328 |
| Pre-pay billing system has enabled supply of electric power to low income neighborhoods at affordable rates. | 212 | 1 | 5 | 2.88 | .0654 |
| Pre-pay billings system has resulted in a decrease in metering, billing and disconnection inconveniences hence improving customer service. | 212 | 1 | 5 | 3.87 | 1.153 |
| Pre-pay billing system has enabled a significant improvement in service delivery through convenient sale points for tokens. | 212 | 2 | 5 | 3.36 | .941 |
| Prepaid systems provide more flexible payment options to users with minimal or unreliable income | 212 | 1 | 5 | 4.16 | .609 |
| Pre-pay billing system has contributed to improved customer service delivery in Kenya Power and Lighting Company | 212 | 1 | 5 | 2.26 | .738 |

7.2.2 Descriptive Statistics for Customer Service delivery

Lastly, the researcher wanted to find out how customer service delivery was perceived by the respondents. The findings of the descriptive analysis are as shown in Table 2. The findings indicated that respondents on average agreed that customers are satisfied with the services provided to them (3.86), there is reduced customer complaints as a

result of the innovation strategies put in place (3.76), there is good customer feedback on the services provided (4.02), customers are extremely excited about the quality of services provided to them (3.44). On whether the implementation of the innovation strategies adopted by Kenya Power has improved customer relations with the company (4.16). This means that the respondents strongly agreed that the innovations have improved customer relations at Kenya Power Company. The small standard deviation across most of the statements indicated that the responses were highly skewed. The findings led to the assertion that the innovation strategies improve the customer service delivery.

Table 2: Descriptive Statistics for customer service delivery

| | n | Min | Max | Mean | Std. Dev. |
|--|-----|-----|-----|------|-----------|
| Customers are satisfied with the services provided to them | 212 | 1 | 5 | 3.86 | 1.145 |
| There is reduced customer complaints as a results of the innovation strategies put in place | 212 | 1 | 5 | 3.76 | 1.321 |
| There is good customer feedback on the services provided | 212 | 1 | 5 | 4.02 | .932 |
| Customers are extremely excited about the quality of services provided to them | 212 | 2 | 5 | 3.44 | .900 |
| The implementation of the innovation strategies adopted by Kenya Power has improved customer relations with the company. | 212 | 2 | 5 | 4.16 | .921 |

7.2.3 Relationship between Pre-pay billing System and Customer Service Delivery

The study sought to establish the influence of pre-pay billing System on customer service delivery in Kenya power Company. The results of the correlation analysis are indicated in Table 3.

Table 3: Relationship between Regulatory Pressure and Environmental Management Practices

| | | Environmental Management Practices |
|------------------------|---------------------|------------------------------------|
| Pre-Pay Billing System | Pearson Correlation | .174** |
| | Sig. (2-tailed) | .000 |
| | n | 212 |

** Correlation is significant at the 0.01 level (2-tailed).

It was established that there is a weak but positive correlation between pre-pay billing system and customer service delivery (r = 0.174; p < 0.01). This means that pre-pay billing system has a weak but positive effect on customer service delivery. When the quality of the pre-pay billing system is improved, the quality of customer service delivery will be enhanced. Therefore, the research hypothesis (H₀: Pre-pay billing system has no significant effect on the customer service delivery in Kenya Power Company) was rejected.

8. Summary, Conclusion and Recommendations

8.1 Summary

It was averagely agreed that The pre-pay billing system has helped eliminate customer congestion during payment of bills hence improving customer service (4.26), pre-pay billing system has enabled supply of electric power to low income neighborhoods at affordable rates (2.88), pre-pay billings system has resulted in a decrease in metering, billing and disconnection inconveniences hence improving customer service (3.87), the pre-pay billing system is more beneficial to the consumer since they only consume what they pay for (4.12). On whether pre-pay billing system has contributed to improved customer service delivery in Kenya Power and Lighting Company the mean was 2.26. It was established that there is a weak but positive correlation between pre-pay billing system and customer service delivery ($r = 0.174$; $p < 0.01$). This means that pre-pay billing system has a weak but positive effect on customer service delivery. Therefore, the research hypothesis (H_0 : Pre-pay billing system has no significant effect on the customer service delivery in Kenya Power Company) was rejected.

8.2 Conclusions

The study also concluded that there is a significant relationship between the pre-pay billing system and customer service delivery. Results from the descriptive analysis also showed that the pre-pay billing system has helped eliminate customer congestion during payment of bills hence improving customer service, pre-pay billings system has resulted in a decrease in metering, billing and disconnection inconveniences hence improving customer service, the pre-pay billing system is more beneficial to the consumer since they only consume what they pay for

8.3 Recommendations

It is recommended that Kenya Power increases the outlets serving prepaid customers seeking to purchase the top up tokens as was recommended by the customers who participated in the study. It also recommends that Kenya Power makes the top up tokens service be available via M-pesa and other mobile service networks to make it easy for the customers to obtain the same.

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