JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue

JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

AN ASSESSMENT OF THE IMPACT OF SERVICE QUALITY ON CUSTOMER SATISFACTION ON PSTN FIXED LINE VOICE SERVICE OF ENTERPRISE CUSTOMERS (IN THE CASE OF ETHIOTELECOM ADDIS ABABA)

[1]Tesfay Teklay Gebrewbet

[1]Campus Dean

[1]MBA

[1]Atlas Business and Technology College, Addis Ababa, Ethiopia

Abstract: *The main objective of this study was to assess the overall impact of service quality and customer satisfaction* ***in the case of ethio telecom Addis Ababa*** *city, and to investigate the impact of service quality dimensions on customer satisfaction under the study area. The study was to assess the quality of fixed line voice service and customers satisfaction in Addis Ababa by using Service Quality Scale (SERVQUAL) model. A descriptive research approach was used to execute the study. Data was gathered using the questionnaire from respondents who were selected using the convincing sampling technique. The data gathered from the respondents were analyzed using statistical tools such as mean, correlation, and regression analysis. The finding of this study indicates that customers were not satisfied with the tangibility dimensions of service delivery followed by assurance. Accordingly, from the regression result it is observed that some of service delivery dimensions have positive and significant effect on customer satisfaction and some of service delivery dimension have negative and significant, and one of the dimension has positive and not significant..*

Key words: *Service quality, customer satisfaction, SERVQUAL, PSTN Fixed line voice service*

1. INTRODUCTION

In Ethiopia, telecommunications investment is limited to the government or a domestic or international joint venture with the government (Proclamation No. 280/2002). Ethiopia is still the last African country to allow a national monopoly on all telecommunications services, including fixed, mobile, Internet, and data communications [1]. Ethio Telecom is the country's sole provider of telecommunications services. The company's total subscribers for all telecom services were at 18.28 million as of June 2012 [2]. Because

perceived quality has a large impact on customer happiness, a customer's sense of quality is crucial to a telecoms service provider's long-term success. Residential and Enterprises are the two types of consumers of Ethio Telecom. The current research focuses on determining the impact of service delivery quality on enterprise customer satisfaction as well as identifying service quality elements that influence enterprise customer satisfaction.

2. Statement of the Problem

The situation at Ethio Telecom indicates that the company is always lucrative and has good financial performance, but the majority of its services are unsatisfactory to customers. This is because Ethio Telecom is Ethiopia's single telecommunications service provider, with a 100 percent market share in the rapidly rising telecom service demand. As a result, whether customers are satisfied or not with the company's service quality, they have no alternative but to stay unsatisfied.

According to a 2010 survey conducted by Horus Telecom & Utilities S.A. among business customers in Addis Ababa, 75% were dissatisfied with the poor quality of fixed line service, 90% were dissatisfied with the mobile service network problem, and 65% were dissatisfied with the poor quality of internet and data services they receive from the service provider [7].

Poor telecom service quality has a substantial influence on Ethio Telecom's revenue as well as the competitiveness of businesses, institutions, and individuals at all levels. Furthermore, this issue poses a challenge to the Ethiopian government, which has spent a significant amount of money on telecoms infrastructure expansion and management contracts in order to create a world-class telecom service provider. As a result, the primary goal of this research is to determine the perceived degree of service quality and customer satisfaction with an Ethiopian telecom service.

3. Objectives of the Study

The Objective of this study is to assess the level of service quality and to identify the most important service quality dimensions that influence overall customer satisfaction**.**

4. REASEARCH METHODOLOGIES

This part of the study focuses on research design, research approach, sampling methods, sampling size data Collection techniques and Data Analysis.

4.1 Research Design

The researcher was underlying descriptive research design to get pertinent and precise information concerning to the past and therefore the current condition. Within the research, both qualitative and quantitative method was going to be applied with the view of assessing fixed line voice service delivery.

4.2 Research Approach

At this study researcher used induction approach because there was no hypothesis testing and data was qualitative in nature.

4.3 Sampling method

The researcher had chosen convenience sampling technique where samples are selected from the population only because they are conveniently available to researcher. Ideally, in research, it is good to check sample that represents the population. But, during this research, the population is just too large to check and consider the whole population and can have not list of target customer and address. But also, key sub-groups of the population, especially small minority groups. A standard method to rearrange or classify the target group is geographical location and similar ways. Splitting subjects into mutually exclusive groups then using convincing sampling to settle on samples from groups. The researcher also used judgmental sampling technique to interview representatives of employee; because of the samples are selected based purely on researcher's knowledge and credibility. In other words, researchers choose only those that he feels are a right fit (with reference to attributes and representation of a population) to participate in research study. So, in this study 12 interviewee were participated.

According to mathematical formula, 399 respondents were going to be taken from Addis Ababa Ethio telecom enterprise customers of fixed line voice service. Supported the structure of Ethio telecom, the target population is categorized in to 6 strata. These are: central Addis Ababa zone (CAAZ), East Addis Ababa Zone (EAAZ), West Addis Ababa Zone (WAAZ), North Addis Ababa Zone (NAAZ), South Addis Ababa Zone (SAAZ) and South West Addis Ababa Zone (SWAAZ). In each category there are **56270, 90168, 18159, 33825, 38222, and 31461** customers used fixed line voice service in Addis Ababa, respectively.

4.4 Population and Sample Size

The identification of the population of the research helps in narrowing down to the specific objective that is the subject matter of the research. Sampling is related with the selection of a subset of individuals from within a population to estimate the characteristics of whole population. Sample size determination is the technique of electing the number of observations to include in a sample.

In this study, the researcher was assumed that there's a difference within the characteristics of population units in reference to assess and evaluate service delivery among enterprise customers and further classifications are going to be made to the purchasers. Thus, method is employed to divide the population into subgroups (strata) supported the situation of consumers then proportionate method is employed to pick representatives from each subgroup within the population that represent the sample. The sample frame list was taken from the enterprise division, key account, and Small Office and Home Office customer / Small and Medium Enterprises recent customer database in March 2020. The sample size of 399 fixed line enterprise customers were selected from the entire population 268105 subscribers supported [3] mathematical formula for determining sample size.

$$n = \frac{N}{N(e)^2}$$

Where n= sample size,

N= Total population,

e= sampling error (Usually .10, .05 and .01 acceptable errors, the researcher Uses 0.05 sampling error and 95% confidence level)

n= 268105/ [1+268105(0.05)2]

n= 268105/ [1+670.2]

n= 268105/671.2

n = 399.4=400

Therefore, the sample size of this research was 400 respondents.

From the above sample size; the researcher was distributed in each stratum by using simple mathematical formula. If N = 268105 399; respondent

56,270 = ?

Then, by using the cross Math multiplication we get,

CAAZ =84 respondents

EAAZ = 135

WAAZ = 27

NAAZ = 51

SAAZ = 55

SWAAZ = 47

4.5 Source of data and collection instrument

The researcher has used both primary and secondary data sources. The primary data was collected from Enterprise Customers through questionnaires. The secondary data was collected from books and journal articles conducted on customer satisfaction and other related titles, unpublished materials of Ethio telecom and web addresses or internet.

4.6 Methods of data analysis

In this study the researcher has used both qualitative and quantitative data. The descriptive statistics is applied to assess the extent of customer service delivery while the connection and thus, the influence of the broadband internet services dimensions are getting to be analyzed by using multiple regression.

5. DATA ANALYSIS AND PRESENTATIONS

This part presents and discusses findings of data from the field on assessing customer satisfaction and service quality using SERVQUAL model in Ethio telecom.

5.1. Reliability and validity measurement

Table 5.1: Reliability Scale

Alpha Value	Reliability Scale
≥ 90	Excellent
0.7 ≤ α < 0.89	Good
0.6 ≤ α < 0.69	Acceptable
0.5 ≤ α < 0.59	Poor
α < 0.5	Unacceptable

Table 5.2: overall reliability test

Number of valid cases	Cronbach's alpha	Number of items
310	0.73	26

5.2. Descriptive analysis of Service Satisfaction Dimension measurement

In this study, the researcher wants to assess service quality satisfaction level of fixed line voice customers in Ethio telecom. Mainly, enterprise customers were directly measure the services delivery satisfaction from all respondents of that used them distributed questionnaires supported five SERVQUAL dimension measurements like tangibility, assurance, reliability, responsibility, and empathy. Thus, supported the collected data from the survey, the satisfaction level of fixed line voice subscribers with reference to five dimensions is as follows.

5.3. Reliability

To measure consistency of the size, the Cronbach alpha coefficient was used as a measure of reliability. A high value of the Cronbach alpha coefficient suggests that the things that structure the size, hang together" and measure an equivalent underlying construct. Cronbach's alpha may be a tool for assessing reliability scale which normally ranges between 0 and 1

Table 5.3: Mean score of reliability

	Reliability 1	Reliability 2	Reliability 3	Reliability 4	Reliability 5	Reliability 6	Reliability 7	Reliability average
N valid	310	310	310	310	310	310	310	310
Missing	0	0	0	0	0	0	0	0
mean	4.20	4.09	3.22	3.96	3.38	3.22	3.51	3.6

Source: SPSS result, June (2021)

5.4. Responsiveness

Table 5.4: Mean score of responsiveness

	Responsiveness 1	Responsiveness 2	Reliability 3	Responsiveness 4	Responsiveness 5
N valid	310	310	310	310	310
Missing	0	0	0	0	0
mean	4.13	4.14	3.14	3.13	3.13

Sources: SPSS result, June (2021)

Responsibility is willingness to assist customers and supply prompt service. During this dimension emphasis attentiveness and promptness in handling customers" requests, questions, complaints and problems.

5.5. Tangibility

Table 5.5: Mean score of tangibility

	Tangibility 1	Tangibility 2	Tangibility 3	Tangibility 4	Tangibility 5
N valid	310	310	310	310	310
Missing	0	0	0	0	0
mean	3.52	3.5	3.88	3.92	3.76

Source: survey result, June (2021)

Tangibility since services are tangible customers derives their perception of service quality by comparing the tangible related to these services provided.

5.6. Assurance

Table 5.6: Mean score of assurance

	Assurance 1	Assurance 2	Assurance 3	Assurance 4	Assurance 5
N valid	310	310	310	310	310
Missing	0	0	0	0	0
mean	4	3.9	3.88	3.8	3.79

Source: SPSS result, July (2021)

Assurance is knowledge and courtesy of employees and their ability to convey trust and confidence.

According to mean of assurance from all respondents were score 3.79. This suggests the workers of Ethio telecom in fixed line voice service were an honest knowledge, politeness and confidence to transfer a service for patron.

5.7. Empathy

Table 5.7: Means score of empathy

	Empathy 1	Empathy 2	Empathy 3	Empathy 4	Empathy 5
N valid	310	310	310	310	310
Missing	0	0	0	0	0
mean	4.21	4.2	4.18	4.15	4.04

Source: SPSS result, June (2021)

Empathy it means to caring individualized attention the firm provides its customers. Consistent with mean of empathy result 4.04 means the workers of the corporate care the customer and provides attentions to every individual Ethio telecom customer.

5.8. The overall mean value of SERVQUAL dimensions

Table 5.8: Overall mean of service delivery dimensions

	Reliability 1	Reliability 2	Reliability 3	Reliability 4	Reliability 5
N valid	310	310	310	310	310
Missing	0	0	0	0	0
mean	3.6	4.13	3.76	3.79	4.04

Source: SPSS result, June, (2021)

As the researcher shown from table 5.8, the general mean results of, reliability, responsiveness, tangibility, and assurance, empathy (3.6, 4.13, 3.76, 3.79 and 4.04, respectively. Employees of Ethio telecom caring individualize for the customer and provides attention for those and more satisfactory. Responsiveness and empathy of the corporate are good for the customer when compare from other.

5.9. Regression analysis result

In this study, the researcher can see the relationship between dependent variables with independent variables. More specifically, regression analysis helps one understand how the typical value or the independent variable "criterion variable" changes when any one of the independent variables, is varied, while the other independent variables are held fixed. Regression analysis is also used to understand which among the independent variables are related to the dependent variable, and to explore the forms of these relationships

Table 5.9 the model summary provides R, R-square, adjusted R square and durbin-watson values

Model	R	R square	Adjusted r square	Std. errors of estimate	Durban-watson
1	.846a	.716	.712	.771	2.006

Source: SPSS Result (2020)

a. Predictors: (Constant), empathy, assurance, tangibility, responsiveness, reliability

b. Dependent Variable: In the above table 5.9 the model summary provides R, R-square, adjusted R square and durbin-watson values. The R value represents simple correlation which is .846 that indicates high degree of correlation. From the R values, adjusted R square is vital during this analysis. The adjusted R square (0.712) indicates how of the entire variation within the variable "customer satisfaction "can be explained by the independent variables like "reliability, responsiveness, tangibility, assurance and empathy". Determinations for multiple correlation. The definition of R-squared is fairly straight-forward; it's the share of the response variable variation that's explained by a linear model. R-squared = explained variation/total variation, R-squared is usually between 0 and 100%:

0% indicates that the model explains none of the variability of the response data around its mean. 100% indicates that the model explains all the variability of the response data around its mean. Generally, the upper R-squared, the higher the model fits our data.

As the researcher can see the result from table 5.9 R2 is 71.6% l for all independent variables which suggests customer satisfaction are often explained by our independent variables such as: Assurance,

Empathy, Reliability, Responsibility and Tangibility can explain customer satisfaction. Therefore, the model is nicely fit and that i am happy about model.

In other way the researcher check whether the model has serial correlation or not? To check the residual has serial correlation or not, this is often checked from Durbin Waston statistics. Durbin-Waston must be between 0 and 4. If the DW= value is on the brink of zero (0) meaning that there's strong positive serial correlation. If the DW = value is on the brink of 4, there's strong indirect correlation. So both positive and indirect correlation isn't desirable.

5.10. Multicollinearity test

Multicollinearity of sufficient magnitude to possess the potential to adversely affect regression estimates. During this study matrix for five of the independent variables is shown below in Table 5.10. The results of the estimated matrix show that the very best correlation of 0.653 which is between tangibility and responsibility. Since there's no correlation above 0.75 and 0.9 consistent with [5] and [6] respectively, it is often concluded that there's no multicollinearity problem in the least.

Table 5.10: Correlation matrix between independent variables

		satisfaction	reliability	responsiveness	tangibility	assurance
satisfaction	Pearson Correlation	1	-.445**	-.552**	.403**	-.043
	Sig. (2-tailed)		.000	.000	.000	.450
reliability	Pearson Correlation	-.445**	1	-.270**	-.475**	.046
	Sig. (2-tailed)	.000		.000	.000	.421
responsiveness	Pearson Correlation	-.552**	-.270**	1	.026	.099
	Sig. (2-tailed)	.000	.000		.653	.081
tangibility	Pearson Correlation	.403**	-.475**	.026	1	.081
	Sig. (2-tailed)	.000	.000	.653		.153
assurance	Pearson Correlation	-.043	.046	.099	.081	1
	Sig. (2-tailed)	.450	.421	.081	.153	

5.11. Hypothesis Testing

Hypothesis testing is predicated on p-value and standardized coefficients beta value. This hypothesis testing will not to know whether the independent variables have positive and significance effect on variable. The hypothesis is rejected means independent variables haven't positive and significance effect on the variable and therefore the hypothesis is accepted, these show independent variables have positive and significance effect on the dependent variables.

This study tried to point out the areas needed improvement in Ethio telecom regarding service delivery environment. The target of this study was to assess Ethio telecom service delivery satisfaction in Ethio telecom enterprise service center. Five hypotheses were proposed to review the subject. To check the hypotheses and determine the connection between independent variables (service delivery dimensions) and

variable (customer satisfaction), the multivariate analysis was employed. The independent variables are reliability, responsiveness, tangibility, assurance and empathy.

The regression of y on x wont to predict the impact of experimental variable on variable is;

Y= a + β1X1+ β2X2+ β3X3+ β4X4+ β5X5+e

Where Y= customer satisfaction

a = y-intercept

β1= Beta weight or parametric statistic of reliability

β2= Beta weight or parametric statistic of responsiveness

β3= Beta weight or parametric statistic of tangibility

β4= Beta weight or parametric statistic of empathy

X1= Reliability

X2= Responsiveness

X3= Tangibility

X4= Assurance

X5= Empathy

e= Residual value/error term

Therefore, the researcher reveal hypothesis tested supported multilinear regression analysis as follows;

Hypothesis 1

H1. *Reliability have significant positive influence on fixed line service delivery satisfaction in Addis Ababa.*

H0. *Reliability have significant negative influence on fixed line voice service delivery satisfaction in Addis Ababa.*

From the multivariate analysis result table 20, reliability had significant and negative contribution for customer satisfaction, since the p-value 0.000 which is a smaller amount than the many level 0.05 and therefore the coefficient of reliability -1.349 was negative and 134.9% of customer satisfaction is explained by reliability. Therefore, when perception of consumers towards company reliability isn't good, customer satisfaction also will be low and the other way around. Reliability had negative significant contribution to customer satisfactions. This means that reliability increases with significant decrease of customer satisfactions. As a result, we will conclude that the null hypothesis (H0) is accepted and therefore the alternative hypothesis (H1) is rejected (not accepted).

Hypothesis 2

H1. *Responsiveness have significant positive influence on fixed line service delivery satisfaction in Addis Ababa*

H0. *Responsiveness have significant negatively influence on line voice service delivery satisfaction in Addis Ababa.* According to table 4.19, Y = a + (-1.267) X2. A change in responsiveness changes customer satisfaction at the speed of -1.267. A negative coefficient on X2(β2=-1.267) which suggests that responsiveness has negative effect on customer satisfaction. Since the p-value 0.000 which is a smaller amount than the many level 0.05 and therefore the coefficient of responsiveness -1.267 was negative and 126.7% of customer satisfaction is explained by responsiveness. This study showed that responsiveness

affects negatively on customer satisfaction of Ethio telecom enterprise customers. As a result, we will conclude that the null hypothesis (H0) is accepted and therefore the alternative hypothesis is rejected.

Hypothesis 3

H1. *Tangibility have significant positive influence on fixed line voice service delivery Satisfaction in Addis Ababa.*

H0. *Tangibility have significant negative influence on fixed line voice service delivery Satisfaction in Addis Ababa*.

From the multivariate analysis result table 4.19, tangibility had highly significant and positive contribution for customer satisfaction. Since the p-value 0.000 which is a smaller amount than the many level 0.05 indicated that there's a statistical significance between tangibility and customer satisfaction. The coefficient of tangibility 0.340 which indicates that 34% of customer satisfaction is explained by tangibility. It had positive significant contribution to customer satisfactions. This means that a change in tangibility related to the change in customer satisfactions. As a result, we will conclude that the null hypothesis is often rejected or alternative hypothesis are often accepted.

Hypothesis 4

H1 Assurance have significant positive effect on fixed line voice service delivery Satisfaction in Addis Ababa.

H0 Assurance have not significant positive effect on fixed line voice service delivery Satisfaction in Addis Ababa.

According to table 4.19, Y= a+ (0.071) X4. The result showed that there's direct correlation between assurance and customer satisfaction. P-value (0.286) indicated there's not statistical significance between assurance and customer satisfaction... the reassurance positively influences

To customer satisfaction. This suggests Increase in assurance end in increase in customer satisfaction in Ethio telecom enterprise FBBI service. Studies support my findings that customer crowd positively affect customer satisfaction.

Hypothesis 5

H1. Empathy have significant positive effect on fixed line voice service delivery

Satisfaction in Addis Ababa.

H0. Empathy have significant negative effect on fixed line voice service quality

Satisfaction in Addis Ababa.

The linear regression result revealed that p value <0.05 and Unstandardized beta value 0.316 at 95% confidence interval. It indicates the null hypothesis is rejected and alternative hypothesis is accepted that, empathy has positive and significance effect on customer satisfaction.

5.12 Summary of hypothesis testing

- ✓ Reliability have significant positive influence on fixed line voice service quality satisfaction in Addis Ababa. (reject)
- ✓ Responsiveness have significant positive influence on fixed line voice service quality satisfaction in Addis Ababa(reject)

- ✓ Tangibility have significant positive influence on fixed line voice service quality satisfaction in Addis Ababa. (Accept)
- ✓ Assurance have significant positive effect on fixed line voice service quality satisfaction in Addis Ababa. (reject)
- ✓ Empathy have significant positive effect on fixed line voice service quality satisfaction in Addis Ababa. (accept)

5.13 Summary of Findings

The gap score analysis carried out, found that, the overall service quality is low as perceived by Ethio telecom customers and hence unsatisfactory customer satisfaction. The findings on the factors hindering satisfaction for Ethio telecom, it has been found that most of customers were not happy with Ethio telecom customer care service, voucher availability, phones type and prices, airtime charges and flexibility. Evidence from the study shows that, Ethio telecom have to improve performance on all dimensions of service quality in order to increase customer satisfaction as customers expect more than what is being offered by Ethio telecom.

5.14 Conclusion

The main purpose of this study was to assess service quality and customer satisfaction using SERVQUAL model from Ethio telecom current business set ups. It also reveals how customers of Ethio telecom perceive service quality, see how applicable the SERVQUAL model in the context of Ethio telecom using its dimensions to measure service quality , factors hindering satisfaction in Ethio telecom and what to be done to improve customer satisfaction in Ethio telecom. The research was conducted to assess the fixed line voice service delivery on Ethio telecom enterprise customer satisfaction. A complete of 310 samples were selected for the study and therefore the study used SERVQUAL model questionnaire for collecting data from customers of FBBI subscribers. Accordingly, a five dimensional instrument comprising of reliability, responsiveness, tangibility, assurance, and empathy has been used for the study. The info obtained from the respondent was analyzed using various SPSS statistical tools. The main objective of the study was to assess fixed line PSTN voice service delivery satisfaction in Ethio telecom enterprise customer by using the SERVQUAL instrument. Consistent with the study 56.77% of enterprise customers are dissatisfied with the fixed line voice services delivery of Ethio telecom. Whereas 43.23% customers are satisfied during which the service delivery of Ethio telecom fixed line voice service.

REFERENCES

[1] Ethio Telecom (2017). Company Profile. Addis Ababa: Paradise.

[2] http://www.ethiotelecom.et.

[3] Meron, H. (2007). The Role of Microfinance in Empowering Women in Addis Ababa, Unpublished Master‘s Thesis, Addis Ababa University, Ethiopia.

[4] Mussie, D. (2010). Assessment of Service Quality and Customer satisfaction towards the Mobile Services of Ethiopian Telecommunications Corporation; the case of Addis Ababa, Unpublished.

[5] Wang, Y. & Lo, H. (2002). Service quality, customer satisfaction and behavior intentions: Evidence from china's telecommunication industry. 4(6), 50-60.

[6] Wisniewski, M. (2001).Using SERVQUAL to assess customer satisfaction with public sector services.Managing service quality, 11(6), 380-388.

[7] Zhao, X., Bai, C. & Hui, Y.V. (2002).An empirical assessment and application of SERVQUAL in a Mainland Chinese department store. Total Quality Management, 13 (2), 241-54