

Service Quality of Solid Waste System at Urban Council Special Reference to Trincomalee Town and Gravest

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Abstract

A community given access to proper sanitation has improved living conditions, with increased health and well-being and economic productivity, therefore researcher is going to study of service quality of solid waste system at Trincomalee urban council. Objectives of the study are to identify the factor which determine the service quality, to identify the factor which influence on the customer satisfaction, to find out the relationship between service quality and customer satisfaction of Trincomalee Urban Council and to provide the suggestion to enhance the customer satisfaction through service quality of Trincomalee Urban Council. SERVQUAL method has been tested in this study. Two hundred and fifty questionnaires have been issued to eighteen Tamil families in G.N divisions based on the convenient sampling method. Finding of the study show that R2 contribute to 50.8% of customer satisfaction.

Keywords: Service Quality, Customer Satisfaction, Work Involvement

Introduction

Public service is a term usually used to mean services provided by government to its citizens, either directly (through the public sector) or by financing private provision of services. The term is associated with a social consensus that certain services should be available to all, regardless of income. Public service organizations should be aware about the level of service quality of their provided services. Service quality means the difference between customer expectations of service and perceived service. If expectations are greater than the performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs.

Measuring the service quality of a service provider is not as easy as measuring the quality of a product. Because of the attributes of the services, hence becomes a major challenge. Anyhow service organizations have to take steps to monitor and improve the quality of the service they provide. For the private organizations, it is very important to measure the service quality because by that they can able to explore how to distinguish themselves from their competitors and also how can obtain competitive advantage. Through that they can sustain in their market and gain the goodwill of the customers. However, the public service mostly non-profit oriented and the public service providers not need to face the competitors in the market. Even though cannot say that the assessment of the service quality is not important to the non-profit public service organizations. Because the Government of a country is elected by the public (rate payers) and it is expected to provide social services by utilizing their rates and taxes. Therefore, the Government obliges to provide quality service to the public. The quality of service provide by the Government should be assessed to ensure the accountability of the Government towards

general public. Further quality of services provided by the Government organizations should be evaluated to ascertain the achievement of their objectives of the regional, rural community development.

Literature Review

Providing excellent service quality is widely recognized as a critical business requirement (Voss et al, 2004; Vilares & Coehlo, 2003; Van der Weile et al, 2002). It is 'not just a corporate offering, but a competitive weapon' (Rosen et al, 2003) which is 'essential to corporate profitability and survival' (Newman & Cowling, 1996). However, service quality, particularly within the Services sector, remains a complex concept and there is little consensus as to the drivers for effective delivery (Voss et al, 2004; Johnston, 1995).

The importance of customer satisfaction cannot be overstated. Without customers the firm has no reason to exist every service business needs to productively define and measure customer satisfaction. Waiting for customers to complain in order to problems in the service delivery system of giving the firm's progress in customer satisfaction based on the number of complaints received is native.

The specific relationship between employee satisfaction, service quality and customer satisfaction has been the subject of a number of empirical studies. The relationship is often described as the 'satisfaction mirror' reinforcing the idea that business success results from employee satisfaction being 'reflected' in terms of customer satisfaction (Schlesinger & Heskett, 1991; Norman & Ramirez, 1993; Liedtka et al, 1997). Whilst Silvestro and Cross (2000) cast some doubts on the strength of the relationship, the balance of evidence suggests that employee satisfaction is a key driver of service quality. Voss et al (2004) for example, find that 'employee satisfaction directly affects both service quality and customer satisfaction', whilst Vilares and Coehlo (2003) are so convinced about the fit that they recommend changes to one of the existing customer satisfaction indexes (ECSI) to recognize the 'cause and effect relationship between employee behavior and customer satisfaction'.

Zeithaml and Bitner (2003) argue that customer satisfaction has become a major contributor for enhancing a service company such as long term profitability, customer loyalty, and customer retention. That means for example that it is important to encourage the staff to deliver the right service to the right people in reasonable time and showing good manner. Satisfied customers may also give positive word of mouth and for that reason attract new customers and create long term business profit.

According to Rust and Oliver (1994) while a strong positive correlation between service quality and satisfaction has been acknowledged, there is considerable debate regarding the direction of positive relationship.

In line with the findings of Sivadas & Baker-Prewitt (2000, p. 73-82), Su et al., (2002, p. 372) in their study of customer satisfaction and service quality, found out that; these two variables are related, confirming the definitions of both variables which have always been linked. They also dictated that service quality is more abstract because it may be affected by perceptions of value or by the experiences of others that may not be so good, than customer satisfaction which reflects the customer's feelings about many encounters and experiences with service firm. (Su et al., 2002, p. 372).

Satisfaction became a popular topic in marketing during the 1980s and is a debated topic during both business expansions and recessions. Most discussions on customer satisfaction involve customer expectation of the service delivery, actual delivery of the customer experience, and expectations that are either exceeded or unmet. Trincomalee urban council has engaged in providing many services to the public. Researcher is going to study of service quality of solid waste system at Trincomalee urban council.

Research Objectives

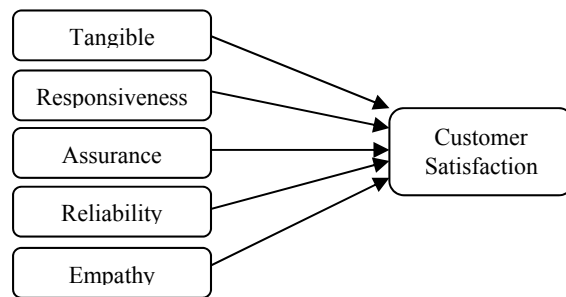
1. To identify the factor which determine the service quality?
2. To identify the factor which influence on the customer satisfaction?
3. To find out the relationship between service quality and customer satisfaction of Trincomalee Urban Council.
4. To provide the suggestion to enhance the customer satisfaction through service quality of Trincomalee Urban Council.

Conceptualization

General Conceptual frame work for service quality is the SERVQUAL model, which is presented by Parasuraman, Zeithaml and Berry (1985). It has five dimensions which are Reliability, Responsiveness, Assurance, Tangible and Empathy.

The conceptual frame work for this research study is illustrated as follow,

Conceptual Framework



Source: Literature Survey
Figure-1 Conceptual Framework

Sanitary Services

According to the by-law of the Municipal Council Sanitary services means the removal, disposal of pits and sanitary appliances. (Ordinance of Urban Council / 1987)

Tangibility: Physical facilities, equipment, and appearance of personnel

Reliability: Ability to perform the promised service dependably and accurately

Responsiveness: Willingness to help customers and provide prompt service

Assurance: Knowledge and courtesy of employees and their ability to inspire trust and Confidence

Empathy: Caring individualized attention the firm provides to its customers

Operationalization

Based on the conceptual framework the following operationalization has been formulated.

Table-1 Operationalization

Dimension	Indicators	Measurement
Tangible	Vehicles Safeguard materials Identification of employee	Questionnaire
Responsiveness	Promptness Helpfulness Waiting time	Questionnaire
Assurance	Respect Friendliness Knowledge	Questionnaire
Reliability	Maintenance Promised time Promised service	Questionnaire
Empathy	Caring Convenient hours Money	Questionnaire
Customer satisfaction	Work satisfaction Expectation Needs	Questionnaire

Source: (Develop for research purpose)

Methodology

It gives the idea about the way in which the research work carried out. The adequate and relevant data has been collected to the purpose of this research and to measure and analyze the customer satisfaction and service quality of the Trincomalee Urban Council.

Sampling

A subgroup of the elements of the population selected for participation in the study is called as sampling. For the purpose of data collection the convenient sampling has used in which residing in the urban council servicing area.

Sample size

The research considers 250 Tamil families as sample from the 18 G.N divisions in the Urban Council servicing area.

Table-2 Sample Selection

TUC servicing GN Divisions	Number of Families	Tamil Percentage %	Sample
Abayapura	204	2	05
Anpuvalipuram	1127	11	28
Arasadi	491	5	12
Arunagirinagar	456	5	12
Jinnanagar	52	1	03
Linganagar	724	7	18
Manayaveli	674	7	18
Mihindupura	159	2	04
Murugapuri	401	4	10
Orr's hill	1481	14	36
Pattanatheru	298	3	08
Peruntheru	351	3	08
Selvanayahapuram	572	6	14
Sivapuri	849	8	20
Sonagavadi	312	3	08
Thillainagar	545	5	12
Thirukadaloor	825	8	20
Villundy	651	6	14
Total	10172	100	250

(Source: Population by ethnic group in GN Division / 2014)

Method of Data collection

The reliability and credibility of the research is depending on data collection. This research mainly used primary data and secondary data. 250 questionnaires were issued to the beneficiaries of the Trincomalee Urban Council servicing areas.

Sources of data

There are two types of data used in this research.

- Primary data.
- Secondary data

Secondary information is information that has been collected by persons or agencies for purposes than the solution of the problem at hand. These data can be obtained indirectly. Those were obtained through already prepared materials.

The secondary data obtains from following sources.

- Ordinance of urban council
- Annual capital budget of TUC
- Website

Primary data are that have been already collected for purposes other than the problem at hand. Primary data collected by or on behalf of the person who are going to make use of data directly. These kinds of data are collected first and used particularly for the research concerned.

There are many ways to get primary data like,

- Questionnaire
- Interviews
- Observation etc.

Data Analysis Techniques

Likert Scale (Five points) is used to analyses the data's. Such are :

1-Strongly Disagree

2-Disagree

3-Neutral

4-Agree

5-Strongly Agree

Statistical Package for Social Survey (SPSS) used to analyze the questionnaires. Univariate analysis also will be used to analyses the mean and standard deviation.

Method of Data Evaluation

Based on the values indicated in the questionnaire a mean value for each question is calculated. The mean value is in the range of 1 to 5 and the value of each respondent for a variable is compared with the median value 3. Thus the decision can be formulated as follows:

Range	Decision Attribute
$1 < X_i \leq 2.5$	Low level of satisfaction
$2.5 < X_i \leq 3.5$	Moderate level of satisfaction
$3.5 < X_i \leq 5.0$	High level of satisfaction

(Source: Developed for the research purpose)

Correlation Analysis

Co-efficient taken through this equation expresses the following relation.

Correlation between variables	Value of correlation
Complete direct correlation	+1
Highest direct correlation	+0.75
No correlation	0
Highest negative correlation	-0.75
Complete negative correlation	-1
Average correlation	+0.5/ -0.5
Low correlation	< 0.5

Data Analysis

Descriptive analysis

Table-3 Descriptive analysis

Variable	Mean	Standard Deviation
Tangible	2.84	0.641
Responsiveness	2.75	0.564
Assurance	2.82	0.600
Reliability	3.18	0.415
Empathy	2.51	0.440

Source-Survey data

According to the descriptive analysis all the variables are moderately support to the system

Correlation analysis

Table-4 Correlation analysis

Variable	Customer satisfaction
Tangible	-.304**
Responsiveness	.380**
Assurance	.242*
Reliability	.547**
Empathy	.538**

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

* . Correlation is significant at the 0.05 level (2-tailed).

In order to the correlation analysis dependent and independent variable are having the moderate relationship among them.

Multiple regression analysis

Model Summary

Table-5 Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.713 ^a	.508	.498	.372

a. Predictors: (Constant), Empathy, Tangible, Assurance, Reliability, Responsiveness

Based on the multiple regression analysis 50.8% of variable support to the customer satisfaction.

Discussion

According to the tangible variable moderately support to the system. Respondents of 66% of the beneficiaries stated that TUC (Trincomalee Urban Council) uses modernized vehicles to render this service to the beneficiaries. For sanitary service they are using 3 galley bowzers among that one galley bowser is repair. Necord provide the one galley bowzers in 2004, and Oxfam provided two galley bowzers in 1994 and 2008, for clear the sewage properly. From the surveyed data the respondents nearly 43% expressed their disagreement and said that TUC employees had failed to use the safety materials such as gloves, boots, mask etc.; when they render the services. Protection of employees' health and prevention from diseases are very essential to maintain healthy workers. Negligence of employees is the most probable reason for this outcome. Lack of awareness about the safety mechanism and flexibility in restrictions in supervision may lead to this negligence of the employees. The identification of the employees can be made by their uniforms. Unique identity of the employees also contributes to the service quality. Uniforms to the employees are provided by the Organization to their identity. 81% of the respondents expressed their acceptance that TUC (Trincomalee Urban Council) employees can be easily identified by their blue color uniform with red collar. (Because of in the sanitary service mostly permanent employees are involved).

Based on the responsiveness the demand for this service is more during the rainy season. But sometimes employees are considering beneficiary's home/ business premises individually to render this service. In addition to that environmental disturbances become an obstacle (Marshy land) to deliver this service promptly as expected by the beneficiaries. Regarding to the helpfulness, 43% of the respondents are agree that the TUC employees are helping the beneficiaries. When they are cleaning the pits they are consider the surroundings neighbors health. But they are taking real risk (skin allergic). TUC have to serve for 10172 Tamil families according to the scheduled requests only they can perform their duties. The excessive demand, diesel block in engine, if the puncture in tires may be the reason for the delay. Even though, here administration failed to take necessary steps to manage this sort of inconveniences.

According to the collected data of assurance, 43% of the Beneficiaries disagree that the TUC employees who render the service of Sanitary didn't gave respect to the Beneficiaries (not all employees). Because of the reason may be lack of educational knowledge, social believes and personal attribute. From the findings that indicate TUC employees haven't enough knowledge about the services that they render. It shows that, lack of awareness of the public in relations to the particular service. Mostly, the awareness training or demonstration of proper disposal of

sanitary wastage was not done to the employees. During the service delivery supervisor should ensure the employees' physical ability, impacts on environment, and the way of delivering the service.

In order to the reliability, 86% of the respondents agreed that TUC properly disposes the sanitary wastage collected from the areas of the beneficiaries. Collected sanitary wastage is now disposed at kanniya- Damming ground land area. It is far from the residential area. Therefore, the public have the opinion that this is an environment-friendly arrangement. Before the removal of sanitary waste from the toilet pit two labourers have to involve in duty of clearing the toilet pit (pit is constructed 20 or 25 years ago). The next day the sanitary waste is removed by the vehicle. In this time there is chance for repairing and break down of vehicle (diesel block in engine, if the puncture in tires) are the main reason for this failure.

Empathy variable has moderately support to the system. The service carried over on the permission of president of the Urban Council, Secretary and the Health inspector. The removal of sanitary wastage was Rs.4000/= for people in the Urban council who paid the assessment tax. If the people from the Pradesha Saba have to pay Rs 4500/= for the removal. If there places were shops the charge Rs 5000/= outskirts of the town, within the town the rate is Rs.4500/=.

Conclusions

Sanitary service indicates the removal, disposal and cleaning sanitary appliances (pits). Quality level of the sanitary service provided by the TUC was determined by tangible, responsiveness, assurance, reliability and empathy. All the variables are moderately support to the system. Physical appearance of employees also resulted in a good quality. But the usage of safe guard materials by the TUC employees was absence due to negligence. Sanitary wastage properly disposed at Kanniya - damming ground. Most of the beneficiaries are agreed when TUC employees are doing the sanitary service they are considering the neighbors health protection.

Suggestions

The Health supervisors and the PH's confirm whether the labourers are wearing suitable safety materials (gloves mask) during working hours. Provide adequate awareness about the impacts and infections to both employees and the public. Action should be taken to ensure the vehicles are in good condition during the rainy season and increase the number of laborers in order to carry out the work without delay. Assure the employees' knowledge about the service delivery process. Provide instructions to the Public which have to be followed before, during and after the service delivery (Beneficiaries have to protect their food items and water source). Shift other laborers to this service to manage more requirements for this service.

References

- Anber, Shireen. (2011). Service Quality perspective and Customer Satisfaction in Commercial Banks Working in Jordan: Middle Eastern Finance and Economics Issue 14(2011), Euro Journal Publishing Ltd.
- Balachandran, S. (1999). Customer driven service management, First edition, A division of sage publication India PVT Ltd.
- Bearden, W., Ingram, T. and Laforge, R. (1998). Marketing, Second edition, Mc Graw Hill publishing.
- Bob E.Hayes. (1998). Measuring Customer Satisfaction: Survey Design, use and Statistical Analysis Method, 2nd edition, ASQ Quality press, Milwaukee, Wisconsin.
- Boyd, W.H., Walker, C.O and Larreche, C.J. (1998). Marketing Management, Third Edition, Irwin Mc Graw Hill Publication.
- Fifield, P. & Gilligan, C. (2000). Strategic Marketing Management, First edition: India: Viva Book Publishing.
- Hummayoun, Asma and Iqbal (2009) Service Quality and Its Impact on Customer Satisfaction: An Empirical Evidence from the Pakistani Banking Sector. International Business and Economics Research Journal Volume-8.
- Mcdonald, M., Roger, B. and Burn, W.d. (2001). Key Customers, First edition, Butterworth and Company publishinig
- Parasuraman, A., Zeithaml, V. A., and Berry, L.L. (1985) A conceptual model of service quality and its implications for future research, Journal of Marketing.
- Philip Kotler (2005), "Marketing Management, 5th edition, new Delhi North Western University.
- TUC programme budget / 2013.
- Urban Council Ordinance (Chapter 225) (Incorporating Amendments up to 16th April, 1987).
- Zeithaml, Parasuraman & Berry (1990), Delivering Quality Service; Balancing Customer Perceptions and Expectations.