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# Difference in Customer Expectations and Perceptions towards Electric Utility

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**Abstract**
This study revolves around the analysis of service quality of electricity distribution utility in Sonepat district of Haryana, India. For this study, SERVQUAL model has been adopted which encompasses ten dimensions (tangibility, empathy, responsiveness, reliability, communication, security, credibility, competence, assurance and accessibility) to judge the quality of services which utility offers to its customers. The sample population survey has been conducted using the well-designed questionnaire to collect comprehensive view of the expectations and perceptions of customers towards company. The results showed that every dimension of SERVQUAL model is having large difference between customers' expectations and perceptions. Mean score of expectations an perceptions infer that customers are satisfied to some extent with the communication behaviour of the utility and least satisfied with tangibility dimension of the utility's service quality

**Keywords:** expectations, perceptions, servqual, electric utility

## 1. Introduction

The Service sector contributes largely in the economic development of the nation (Daniel and Harrington, 2007) [1]. Service sector prosper only due to good service quality irrespective of whether it is public sector or private sector (Singh *et al*, 2016) [2]. Today, every customer wants maximum in lieu of the amount spent (Satapathy, 2014; Saini, S. 2017) [3]. Same thing applies for electricity distribution sector which comprises a major part of country's GDP. Beside the quantity, customers are also willing for the best quality of electricity supplied to them (Saini & Kapoor, 2012; Kapoor & Saini, 2007; [6] Saini *et al*, 2011; Saini & Kapoor, 2010; [8] Saini & Beniwal, 2018) [9]. Mostly all the electric utilities are covered under public sector, consequently, least attention is devoted to the service quality. But, service quality has become a significant player in every nook & corner of service industry. Good service quality brings in the customer satisfaction which further results into customer loyalty. Customers' good belief in the company will surely return the financial benefits in either direct or indirect way (Saini, 2018[a], 2018[c], 2018[d], 2018[f], 2018[g], 2018[h], 2018[i], 2018[j], 2018[k]) [10, 15-16, 20, 23-29]. Due to poor service quality, financial losses also occur in the system (Saini, 2018[b], 2018[e]) [14, 31-32]. Therefore, service quality is the domain which can't be ignored by any utility offering its services to the people. Consequently, a lot of research work has been focused on the improvement in quality of electricity supply (Beniwal, 2018[a], 2018[b]; Kumar, 2018[a], 2018[b]; Sumit, 2018; Saini, 2018[l]) [28-31, 33] .

Service quality has been defined by many researchers. Service quality is defined by Reeves and Bednar (1994) [11] as excellence, value, conformance to specifications and meeting or exceeding customers' expectations. Service quality is also defined in terms of difference between customers' expectations and the perceived service. More the perceived service deviates from the expected service, poorer is the service quality leading to more customer dissatisfaction. Customer expectations arise from the predictions about what they like to get during the transaction with company. To study the service quality, Parasuraman, Zeithaml and Berry developed SERVQUAL model in 1985 [12] which identifies gap between the expectations and perceptions (Parasuraman, Zeithaml, and Berry, 1985) [12]. This model is also known as 'GAP' model (Seth *et al*, 2004). SERVQUAL model has become the favourite choice of researchers and academicians in different fields (Carman, 1990), and it has also become a standard for measuring service quality (DeMoranville & Bienstock, 2003) [13].

In literature, there is huge number of studies concentrating on the analysis of service quality in different service sectors like banking, health, travel, electricity etc. But, only few significant studies are available related to service quality of electricity distribution utility (Satapathy, 2014; Gunatilake *et al*, 2012; Chodzaza *et al*, 2003; Achchuthan *et al*, 2014) [3,18,21-22]. Therefore, this study addresses SERVQUAL based service quality analysis of electricity distribution utility, UHBVNL which is serving the districts covered under south Haryana, India.

## 2. Objectives of the Study

This study aims at the analysis of different dimensions of service quality in electricity distribution utilities. For examining the customers' response towards different dimensions of service quality, following objectives have been framed:

1. To study the customer expectations towards different dimensions of service quality.
2. To study the customer perceptions towards different dimensions of service quality.

## 3. Research Hypotheses

The customers' expectations and perceptions are to be studied and compared in respect of all ten dimensions of service quality. The hypotheses for this research work are as follows:

**$H_1$:** Customers' expectations and perceptions towards tangibility dimension of service quality are equal.
**$H_2$:** Customers' expectations and perceptions towards empathy dimension of service quality are equal.
**$H_3$:** Customers' expectations and perceptions towards responsiveness dimension of service quality are equal.
**$H_4$:** Customers' expectations and perceptions towards reliability dimension of service quality are equal.
**$H_5$:** Customers' expectations and perceptions towards communication dimension of service quality are equal.
**$H_6$:** Customers' expectations and perceptions towards security dimension of service quality are equal.
**$H_7$:** Customers' expectations and perceptions towards courtesy dimension of service quality are equal.
**$H_8$:** Customers' expectations and perceptions towards credibility dimension of service quality are equal.
**$H_9$:** Customers' expectations and perceptions towards competence dimension of service quality are equal.
**$H_{10}$:** Customers' expectations and perceptions towards accessibility dimension of service quality are equal.

## 4. Research Design

This research study has been undertaken using descriptive research design. For this study, a well-designed questionnaire has been built as the measurement instrument using the SERVQUAl model. Two different sections have been designed for the analysis of customers' expectations and perceptions towards service quality dimensions of the electricity distribution utility. Before these two sections, demographic information of the respondents is also captured. The questionnaire was distributed amongst 170 respondents in Sonepat district of Haryana. 150 respondents filled the questionnaire with the response rate of 88%. The respondents were electricity customers of the area chosen for the sample survey

## 5. Data Sources

Two types of data sources have been used in this analytical study: primary data sources and secondary data sources. Primary data in form of customers' personal information, their expectations and perceptions, have been collected from the sample population through well-structured questionnaire. Secondary data have been collected from different research journal papers, different libraries, different websites and the electricity distribution utility offices.

## 6. Data Analysis

After primary data collection, collected data has been analysed using Statistical Package for Social Sciences (SPPS Version 20). Descriptive analysis of customers' expectations and perceptions towards different dimensions of service quality of electricity distribution utility has been carried out. The results are represented in Bar Graph form in Figures 1-10 for different dimensions of service quality according to SERVQUAL model.

Figure 1 shows the customers' expectations and perceptions towards different attributes of tangibility dimension of service quality of UHBVN. Five attributes of tangibility dimension are modern tools and technology, well-managed company offices, simply written forms (understandable by electricity customers), proper maintenance of electricity records (bills, connection details etc.) and well organized electricity distribution wires. Corresponding to all these five attributes, customers' expectations are very high. But due to lack in service quality, customers' perceptions are not very good towards all the attributes as shown in Figure 1. Out of all five attributes, customers think that company does not provide electricity distribution wires which are well laid on distribution poles. Their perception is minimum (2.1) for this attribute and maximum (2.5) for attribute: maintenance of records.

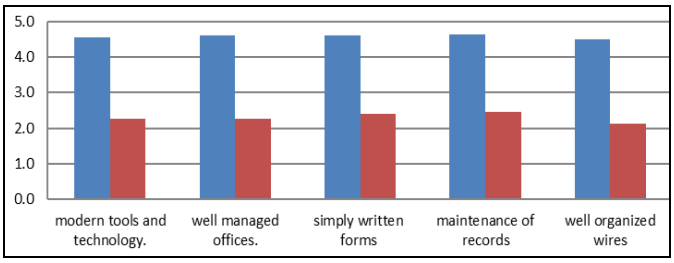


**Fig 1:** Mean score of customers' expectations (in blue) and perceptions (in red) towards tangibility dimension of service quality

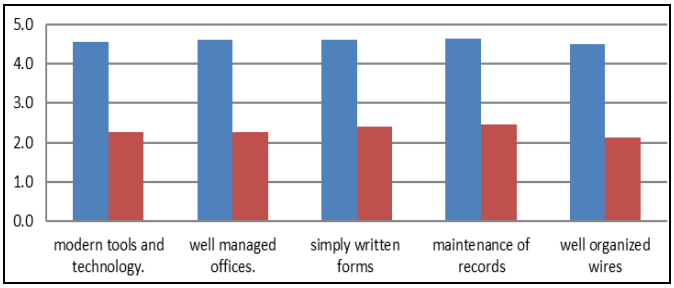


**Fig 2:** Mean score of customers' expectations (*in blue*) and perceptions (*in red*) towards empathy dimension of service quality

Figure 2 describes the scenario of empathy dimension of service quality. Empathy dimension covers following attributes: company employees personally attend the customers, the operating hours are suitable to customer needs, company give subsidies to rural customers, company motivates the customers to use energy saving bulbs, fans and products and bill collection centres are near to customers' residences. Customers are not personally attended by the company employees. Comparatively, customer perceptions are better towards attribute: company motivates customers to use energy friendly equipment. Mean score of customers' perception is highest in case of company motivation and lowest in case of personal attention to the customers.

The customers' expectations and perceptions towards responsiveness dimension of service quality are shown in Figure 3. There are different attributes of responsiveness dimension of electricity distribution utility like no long queues at bill collection centres, quick response to customers' complaints, helpdesk at each utility office, advance information for power cuts and satisfactory service to the

customers in the first visit only. Customers' expectations are approximately equal with respect to all five attributes of responsiveness dimension. But, company's services are poorest in case of quick response to customers' complaints. Electricity customers get satisfactory service in their first visit to the company office, therefore, customers' perception towards this attribute is however good.

In Figure 4, customers' expectations towards different attributes of reliability dimension and the respective perceptions are pictorially given. Customers think that they do not get 24 hours electricity supply at all, therefore, their perception towards this attribute (i.e., 2.51) is the poorest. Among different attributes of reliability dimension, correct meter reading gets the best customers' perception.

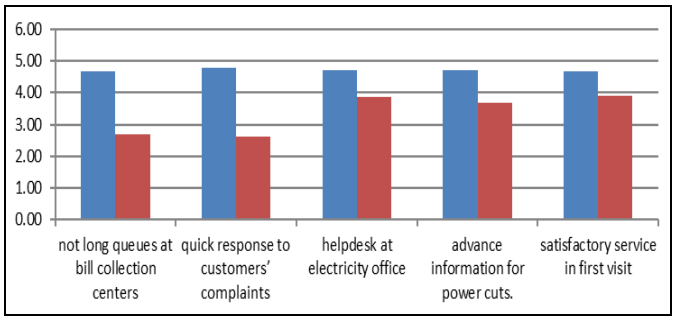


**Fig 3:** Mean score of customers' expectations (*in blue*) and perceptions (*in red*) towards responsiveness dimension of service quality

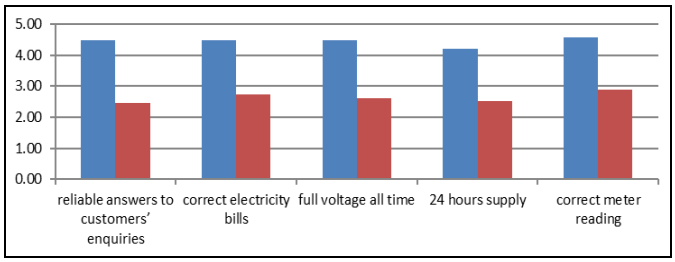


**Fig 4:** Mean score of customers' expectations (*in blue*) and perceptions (*in red*) towards reliability dimension of service quality

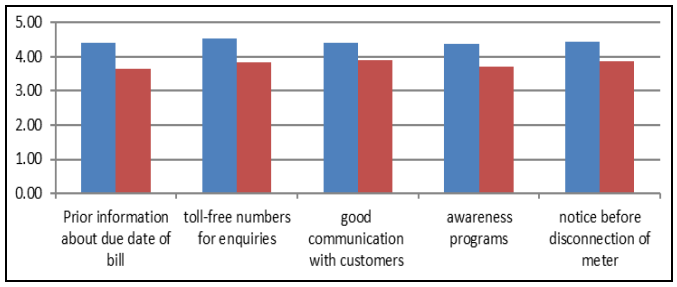


**Fig 5:** Mean score of customers' expectations (*in blue*) and perceptions (*in red*) towards communication dimension of service quality

Figure 5 describes the customers' expectations and perceptions towards communication dimension of service quality. Company employees communicate with customers in good manner. The customers' perceptions are least towards attribute: prior information to customers about due date of electricity bill. There are other communication attributes of company's service quality like toll-free numbers for enquiries, notice before disconnection of meter and awareness programmes, on which customers have average perceptions.

Figure 6 gives the comparison of expectations and perceptions towards security dimension of service quality of the electricity utility. Dimension of security encompasses security in all financial transactions, ID proof with employees while visiting the customers' premises, timely maintenance of major equipments, supply lines at high distance and sealed electricity meters. Customers have overall poor perception towards all

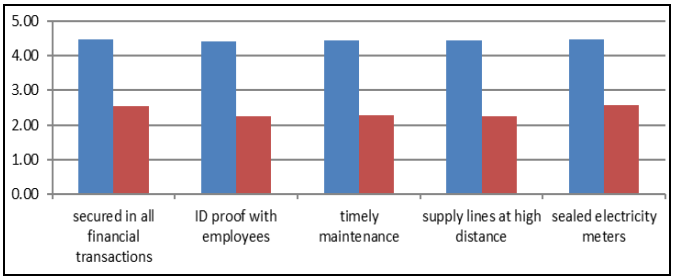


**Fig 6:** Mean score of customers' expectations (*in blue*) and perceptions (*in red*) towards security dimension of service quality

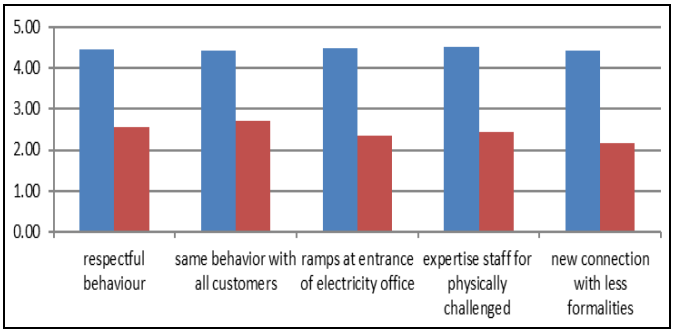


**Fig 7:** Mean score of customers' expectations (*in blue*) and perceptions (*in red*) towards courtesy dimension of service quality

The attributes of security dimension of company's services. Comparatively, company's performance is better with regard to sealed electricity meters.

Five attributes of courtesy dimension of service quality have been focussed in Figure 7 which shows customers' perceptions compared with their expectations towards different attributes of courtesy dimension. Courtesy dimension reflects the manner in which company employees behave with the customers. Figure 7 shows unsatisfactory customers' perceptions towards courtesy dimension of utility's services. As inferred from Figure 7, customers believe that company does not provide them new connections with fewer formalities. Though, there is one positive point about customer perceptions that is second attribute (company's behaviour is same with all the customers irrespective of their financial status).

Figure 8 indicates the difference in customers' expectations and perceptions towards credibility dimension of company's services. Five attributes of credibility dimension in the field of electricity utilities cover free repairing of equipments, restoration of supply within minimum time, electricity bills at time of meter reading only, toll-free number/ online facility to report and electricity meter running at normal speed. All five

attributes of credibility dimension have good customers' perceptions although not as good as much customers' expectations.

Figure 9 represents the customers' expectations and perceptions towards competence dimension of utility's service quality. The mean score of customer perceptions on all five attributes is comparative with customer expectations. Out of all five attribute, attribute (equipments replacement without delay) has minimum mean score of perceptions.

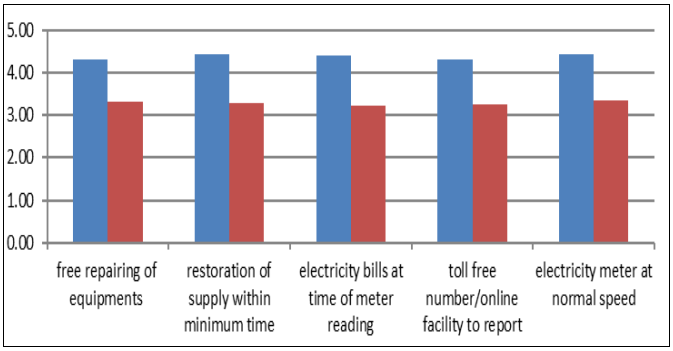


**Fig 8:** Mean score of customers' expectations (*in blue*) and perceptions (*in red*) towards credibility dimension of service quality

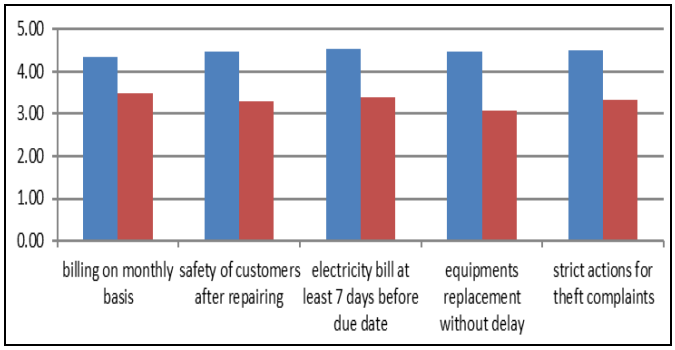


**Fig 9:** Mean score of customers' expectations (*in blue*) and perceptions (*in red*) towards competence dimension of service quality

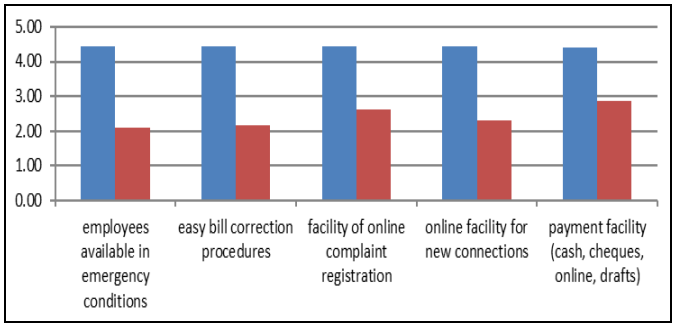


**Fig 10:** Mean score of customers' expectations (*in blue*) and perceptions (*in red*) towards accessibility dimension of service quality

Figure 10 presents the comparison of customers' expectations and perceptions towards accessibility dimension of service quality. Towards accessibility dimension, customers have very poor perceptions on all attributes of accessibility. Customers believe that company employees are not available in emergency conditions. Bill correction procedures are also very difficult. There is also no online facility of applying for new electricity connections. Among all five attributes, company's performance is better in case of attribute (bill payment facility through different modes like cash, cheques, online drafts etc.)

## 7. Overall Results

Overall mean scores of customers' expectations and perceptions towards ten dimensions of service quality are compared on the same scale in Figure 11. Customers' expectations are more or less similar on every dimension of service quality but customers' perceptions are significantly different. Moreover, the customers' perceptions also lag their expectations towards different attributes of each SERVQUAL dimension. Amongst ten dimensions of SERVQUAL model, the company's services have the best performance with respect to communication dimension. Consequently, customers have the best perceptions towards communication dimension. In other words, we can say that there is very small difference in customers' expectations and perceptions. After communication dimension, dimensions of competence, responsibility and credibility have comparatively lower gaps between expectations and perceptions. Company's service quality is considered satisfactory towards dimension of responsibility, empathy, reliability and competence. There is lesser gap in these dimensions. Poorest customers' perceptions lie towards tangibility, accessibility, and security. Observing the large gap between

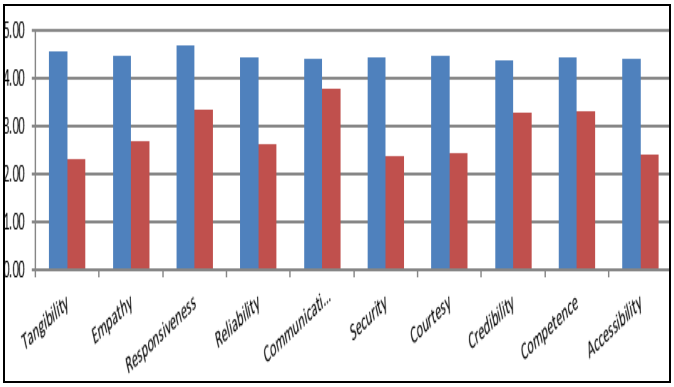


**Fig 11:** Overall mean score of customers' expectations (*in blue*) and perceptions (*in red*) towards dimensions of service quality

customers' expectations and perceptions towards all dimensions of service quality of electricity distribution utility, all ten research hypotheses are rejected.

If all the dimensions are compared using the mean score of customers' expectations and perceptions, as given in Table 1, the dimensions of service quality can be arranged in order of increasing performance as follows: tangibility < security < accessibility < courtesy < reliability < empathy < credibility < competence < responsiveness < communication. Thus, the company's best performance is towards the communication dimension, so the best customer perceptions towards communication dimension of company's services. Likewise, the lowest performance is towards tangibility dimension of service quality.

**Table 1:** Comparative analysis of customers' expectations and perceptions towards service quality dimensions specifications

| Dimensions | Mean Score of Expectations | Mean Score of Perceptions |
|---|---|---|
| Tangibility | 4.59 | 2.31 |
| Empathy | 4.47 | 2.70 |
| Responsiveness | 4.72 | 3.35 |
| Reliability | 4.44 | 2.64 |
| Communication | 4.42 | 3.78 |
| Security | 4.45 | 2.38 |
| Courtesy | 4.47 | 2.44 |
| Credibility | 4.39 | 3.29 |
| Competence | 4.45 | 3.31 |
| Accessibility | 4.43 | 2.41 |

## 8. Conclusion

It is concluded from this study that customers' expectations are very high from the service quality of electricity distribution utilities. Electricity customers served by electric utility in Sonepat district of Haryana expect much more than the utility offers in respect of all ten dimensions of service quality as per SERVQUAL model. Due to lagging utility's performance, customers' perceptions about its service quality are also below average almost on all dimensions except communication dimension. The mean scores of expectations and perceptions reflect the disagreement between what the customers expect from the company and what they get from the company. There is large gap between customers' expectations and perceptions which drive the need for electricity distribution utility to upgrade its service quality to maintain the customer satisfaction and thereby the customer loyalty.

## 9. Practical Implication

From these observations, electricity distribution utility may analyse that on which dimension they should first focus their efforts towards improvement of service quality. Company can judge that at what dimension, it is lagging the most resulting into disagreement between customers' expectations and perceptions. In this way, it can improve the satisfaction level of its customers.

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