

**REGRESSION ANALYSIS OF SERVICE QUALITY AND CONSUMER SATISFACTION OF SHOPPING MALL**

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**Abstract-** *Customer is the lifeblood of every other business. In spite of the growing culture of mall shopping and importance of planned, centrally available, managed and enclosed shopping centers in the retailing sector, the understanding about the customer satisfaction with this kind of purchasing from shopping malls is limited. The level of satisfaction of customer during shopping with a company has profound effects. Thus, though customer satisfaction does not guarantee and gives any assurance to the repurchase from a company but it does play a very vital and important role in achieving customer loyalty. Customer satisfaction is largely a reflection of the expectations and experiences that the customer has with a product or service and this satisfaction varies from customers to customers. If customer satisfaction is not measured, it can't be identified happy customers and satisfied with services and goods offered to them who are finding success with the product or service. Customer satisfaction is important because it helps us in not only measuring levels of satisfaction and attachment of consumers but to solve problems, prevent churn, and identify happy customers that can become our advocates in promoting us in the market and evangelists.*

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**1 INTRODUCTION**

A customer is now not a simple customer but the most important person in any business organization. Customer is not dependent upon shopkeepers but they are dependent upon him for their business and growth in business in this cut throat competition. Now the scenario of market is changed into looks like overfeeding to the customer.

When customers evaluate the quality of the service provided to them, they receive from a storing institution they use different criteria and standards which are likely to differ in their importance, usually some being more important than others while some are less important. While several criteria which are highlighted are important only a few are most important. These determinant attributes and set of these attributes are the ones that will define service quality from the consumer's perspective. The use of technology and modern tools and techniques in the delivery of storing services is becoming increasingly and continuously prevalent as it is being employed to reduce costs of the transactions and eliminate uncertainties.

Satisfaction is a broad evaluation of a service and factors associated to its importance that is influenced by perceptions of service quality, product quality, and price of the service or product offered. Oliver (1980) defined satisfaction in terms of singular events leading up to a consumption outcome as far as customer is concerned and as a collective impression of these events. The events Oliver spoke of are the

expectations that customers make reference during transaction to when determining whether they were satisfied or dissatisfied.

Service quality is the dimension of effective value associated with judgment of the services offered and the way these are offered during the shopping experience, as well as after the purchase is made and effect of these purchase (Lee & Overby, 2004; Mathwick, Malhotra, & Rigdon 2001; Srinivasan, Anderson & Ponnnavolu, 2002). Service quality is a focused evaluation about a transaction held that reflects the customer's perception of elements of service. On the other hand, and in a broad sense satisfaction is influenced by many factors which affect minorly or majorly such as perceptions of service quality, product quality, price, situational factors and personal factors.

In simple terms Service quality is the consumer's overall impression and thinking of the relative inferiority or superiority of the organization and its services (Bitner, Booms and Mohr; (1994). In that way customer satisfaction is an individual's feeling which arise during dealing with company and relates to outcome driven of pleasure or disappointment resulting from comparing a product's perceived performance after the use (or outcome) in relation to his or her expectations and pre-determined thinking (Oliver, 1981; Brady and Robertson, 2001; Lovelock, Patterson and Walker, 2001).

Generally, there are two general conceptualizations of satisfaction which are important from customer point of view, namely, transaction-specific satisfaction and cumulative satisfaction (Boulding et al., 1993; Jones and Suh, 2000; Yi and La, 2004). In simple words Transaction-specific satisfaction is a customer's evaluation of his/her experience and reactions arise due to a particular service encounter (Cronin and Taylor, 1992; Boshoff and Gray, 2004), and cumulative satisfaction refers and focuses on to the customer's overall evaluation and analysis of the consumption experience to date (Johnson, Anderson and Fornell, 1995).

## 2 LITERATURE REVIEW

Some researchers, such as Bitner (1990) and Bolton and Drew (1991), in their study suggested that customer satisfaction is an antecedent of service quality and this is true up to certain extent. Parasuraman et al. (1985, 1988) specifically suggest that service quality is an antecedent of customer satisfaction and is proved in several studies. Kettinger and Lee (1994) discuss the possibility that neither customer satisfaction nor service quality derive from one another and sometimes both are separated from each other.

A more recent research and publication on service quality and satisfaction by Lee, Graefe, and Burns (2004) gave support to a growing belief about the service quality that service quality is an antecedent of customer satisfaction.

Thus, research community in their research and in reference of their past experiences and studies accepts that in general agreement on service quality and customer satisfaction being important factors to the success of an organization.

Early concepts of satisfaction research have typically defined satisfaction as a post choice evaluative judgment concerning a specific purchase decision (Churchill and Sauprenant 1992; Oliver 1980). Most researchers agree that satisfaction is an attitude or evaluation that is formed by the customer comparing their pre-purchase expectations of what they would receive from the product to their subjective perceptions of the performance they actually did receive (Oliver, 1980).

Consumer satisfaction is a central concept in retail marketing (e.g., Anselmsson 2006; Gomez, McLaughlin, and Wittink 2004; Mägi and Julander 1996). Even though studies indicate that other factors are also important for store loyalty (Miranda, Konya, and Havrila 2005; Seiders et al. 2005), the explanatory role of satisfaction has been strongly emphasized.

Gomez, McLaughlin, and Wittink (2004); Mägi and Julander (1996) even their studies indicate that other factors are also important for store loyalty (Miranda, Konya, and Havrila 2005; Seiders et al. 2005), the explanatory role of satisfaction has been strongly emphasized (Anselmsson 2006). Because of its positive effects on repurchase intention and loyalty (Bloemer and De Ruyter 1998; Bloemer and Odekerken-Schröder 2002; Sivadas and Baker-Prewitt 2000), store satisfaction is also a main driver of profitability (Anderson and Mittal 2000; Helgesen 2006; Keiningham et al. 2007; Mägi 2003).

Service quality appears to be only one of the service factors contributing to customers' satisfaction judgments (Cronin and Taylor, 1992; Ruyter et al., 1997; Spreng and Mackoy, 1996). A number of academics such as Parasuraman et al. (1985, 1988); Grönroos (1984); Johnston (1995) and others have tried to identify key determinants by which a customer assesses service quality and consequently results in satisfaction or not. Jayawardhena & Foley (2000) suggested that service quality feature in Internet storeing web sites is critical to enhance customer satisfaction.

"Because of the intangibility, multifaceted nature of many services, it may be harder to evaluate the quality of a service than a good" (Lovelock, 2001). Parasuraman, Zeithaml, and Berry's (1985, 1988, and 1993) has identified five dimensions of service quality. These dimensions are: reliability, responsiveness, assurance, tangibles, and empathy.

Based on these dimensions, researchers measured perceptions of service quality in service and retailing organizations. Both customer satisfaction and service quality are critical for managers to understand how customers may react to being satisfied or dissatisfied (Saravanan & Rao; 2007).

## Objectives

The main objective of the study is to find out the effect of service quality on consumer satisfaction while shopping from shopping malls. The following supporting objectives included in the study are as follows:

1. To develop, design and standardize a measure for evaluating consumer satisfaction and service quality of shopping malls
2. To evaluate the extent by which service quality influences consumer satisfaction in shopping malls
3. To open new vista for further research

## 3 RESEARCH METHODOLOGY

Nature of current study was causal for which survey being used to collect the data and to complete the study. All consumers of shopping malls were a sample of this study. The population for the study were all consumers of various shopping malls. The sample frame was all consumers of different incomes groups in Madhya Pradesh. Non-probability, purposive and convenient sampling techniques were used for data collection.

The study tried to make similar representation on the demographic variables to ensure that the demographic variables did not affect the results of the study and also ensured that results of this study are at least suitable for drawing generalizations for the state. The total sample size for the study was 1800 consumers. Individual consumers were sampling elements for this study.

- **Tools for data Collection:** We have used Self designed questionnaires to collect the responses of consumers of shopping malls. The data were collected on a scale of 1 to 5, where maximum is indicated by 1 and minimum is indicated by 5. Software SPSS 23.0 is used for computing Cronbach Alpha Reliability of both the measures.
- **Tools Used for Data Analysis:** Internal consistency of both measures were established through item to total correlation. Cronbach Alpha ( $\alpha$ ) reliability coefficients were computed to check the reliabilities of both measures. Factors analysis
- Were executed to check the validity of collected data and to reduced factors to further analysis. Regression analysis were conducted to establish relationship between dependent and independent variables.
- **Hypothesis:** Ho (Null hypothesis): There is no
- Relationship between service quality and consumer satisfaction in case of shopping at shopping malls.

## **4 RESULTS & ANALYSIS**

### **Reliability Measures**

Reliability tests for both the variables were carried out using SPSS software and the reliability tests measured are given below

#### **Reliability Statistics Customer Satisfaction**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|----------------------------------------------|------------|
| .888             | .888                                         | 16         |

#### **Reliability Statistics Service Quality**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|----------------------------------------------|------------|
| .837             | .839                                         | 22         |

Since all the values of reliability measures are greater than .7 which is the standard value for reliability, it means all questionnaires are highly reliable.

### **Normality Test of Data**

Before applying regression analysis on the data, the data was tested for its Normality by non-parametric One-Sample Kolmogorov-Smirnov Test with the help of SPSS software. The results were tabulated in table below.

**Table: - 1 Showing normality test results**

| Sample                | K-S test | Test results           |
|-----------------------|----------|------------------------|
| Customer Satisfaction | .200     | Distribution is Normal |
| Service Quality       | .313     | Distribution is Normal |

### **Correlations**

After conforming that the data had normal distributed, the data was tested for the relationship between the dependent variable and corresponding independent variable by using SPSS software.

### **Curve Estimation for Customer Satisfaction and Service Quality**

The curve estimation is calculated by taking the total of Customer Satisfaction and Service Quality by using SPSS software. In this test Customer Satisfaction is dependent variable and Service Quality is independent variable, therefore curve estimation is calculated by taking dependent and independent variable.

**Table:- 2 Showing results for Curve Estimation (Customer Satisfaction and Service Quality)**

| <b>Relationship Type</b> | <b>R Square</b> | <b>F</b> |
|--------------------------|-----------------|----------|
| Linear                   | .697            | 1.100E3  |
| Logarithmic              | .658            | 918.593  |
| Inverse                  | .556            | 599.298  |
| Quadratic                | .698            | 551.978  |
| Cubic                    | .700            | 369.407  |
| Compound                 | .691            | 1.068E3  |
| Power                    | .683            | 1.030E3  |
| S                        | .609            | 744.881  |
| Growth                   | .691            | 1.068E3  |
| Exponential              | .691            | 1.068E3  |
| Logistic                 | .691            | 1.068E3  |

For checking the best fit R square and F value is evaluated. Since R square value is highest and also highest value of F lies in Linear, therefore we were applied linear regression.

Relationship between Customer Satisfaction with Service Quality is of linear in nature; therefore, Linear Regression was applied. Since both have independent linear relationship, in order to evaluate combined relationship in between Customer Satisfaction and Service Quality, we are applying multiple regressions.

### **Linear Regression between Service Quality and Customer Satisfaction**

The regression is calculated by taking the total of service quality and customer satisfaction by using SPSS 23.0 software. In this the service quality is independent variable and customer satisfaction is the dependent variable. Therefore, regression is calculated by taking dependent and independent variable.

**H<sub>0</sub>:** It stated that there is no significant impact of service quality on customer satisfaction.

**Table:- 3 Showing results of R, R Square, Adjusted R Square (SQ & C S) Model Summary<sup>b</sup>**

| Model | R                 | R Square | Adjusted Square | Std. Error of the Estimate | Change Statistics |          |     |      |             | Durbin-Watson |
|-------|-------------------|----------|-----------------|----------------------------|-------------------|----------|-----|------|-------------|---------------|
|       |                   |          |                 |                            | R Square Change   | F Change | df1 | df2  | Sig. Change |               |
| 1     | .580 <sup>a</sup> | .337     | .336            | 9.43246                    | .337              | 912.097  | 1   | 1798 | .000        | 1.128         |

a. Predictors: (Constant), Service Quality

b. Dependent Variable: Consumer Satisfaction

**Table:- 4 showing results of Sum of Squares, df, Mean Square& F (SQ & C S) ANOVA<sup>a</sup>**

| Model        | Sum of Squares | df   | Mean Square | F       | Sig.              |
|--------------|----------------|------|-------------|---------|-------------------|
| 1 Regression | 81150.572      | 1    | 81150.572   | 912.097 | .000 <sup>b</sup> |
| Residual     | 159970.548     | 1798 | 88.971      |         |                   |
| Total        | 241121.120     | 1799 |             |         |                   |

a. Dependent Variable: Consumer Satisfaction

b. Predictors: (Constant), Service Quality

**Table:- 5 showing results of Coefficients<sup>a</sup> (SQ & C S)**

**Coefficients<sup>a</sup>**

| Model           | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. | 95.0% Confidence Interval for B |             | Collinearity Statistics | Tolerance | VIF   |
|-----------------|-----------------------------|------------|---------------------------|--------|------|---------------------------------|-------------|-------------------------|-----------|-------|
|                 | B                           | Std. Error | Beta                      |        |      | Lower Bound                     | Upper Bound |                         |           |       |
| 1 (Constant)    | 12.746                      | 1.366      |                           | 9.328  | .000 | 10.066                          | 15.425      |                         |           |       |
| Service Quality | .550                        | .018       | .580                      | 30.201 | .000 | .515                            | .586        |                         | 1.000     | 1.000 |

a. Dependent Variable: Consumer Satisfaction

$$Y = a + bx$$

$$Y = 12.746 + 0.550x$$

Where,

X = Service Quality (Independent variable)

Y = Customer satisfaction (Dependent variable)

The model having service quality as independent variable and customer satisfaction as dependent variable has good fit as indicated by F-test value which is 912.097 and significant at 0.000 level of significance. The result of regression from the coefficient table indicates that service quality has strong relationship with customer satisfaction having beta value of 0.580 tested through t-test having t value of 30.201 which is significant at 0.0% level of significance. The model summary table indicating that service quality has only 33.7% effect on customer satisfaction since the  $r^2$  value of table is .337 which means service quality has a very significant impact on customer satisfaction.

## 5 CONCLUSION

Analysis of the survey data obtained in this project shows that service quality has 33.7 % influence on customer satisfaction though there are some more influencer such as trust and customer relationship management but the percentage of service quality is quite above average. It means now customer more focuses on quality of services given by shopping mall rather than other attributes.

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