

ASSESSING SERVICE QUALITY FOR CUSTOMER SATISFACTION AND ORGANIZATIONAL SUSTAINABILITY MODEL WITH REFERENCE TO CONSUMER DURABLES – A STRUCTURAL EQUATION MODEL APPROACH

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Abstract: Customer satisfaction is been a subject of much interest to academicians, research scholars and business managers. The main objective of any organization is to maximize the profits and to minimize its cost. Profit maximization is best achieved by increasing the sales and reducing the cost in best suitable manner. Business executives and academicians have realized that maximizing the sales can be best achieved by satisfying the needs of the customers. Customer satisfaction leads to customer loyalty which will again lead to repeat purchases and influence new buyers. This paper aims to analyze the effectiveness of service quality in enhancing the customer satisfaction and organizational sustainability in the consumer durable industry. The authors have used Structural Equation Model (SEM) for analyzing the effectiveness.

Keywords: Consumer durable, Service Quality, SEM, Customer satisfaction, After sales Service

I. INTRODUCTION

Customer satisfaction is been a subject of much interest to academicians, research scholars and business managers. The main objective of any organization is to maximize the profits and to minimize its cost. Profit maximization is best achieved by increasing the sales and reducing the cost in best suitable manner. Business executives and academicians have realized that maximizing the sales can be best achieved by satisfying the needs of the customers. Customer satisfaction leads to customer loyalty which will again lead to repeat purchases and influence new buyers. Since the beginning of the consumption era in marketing, customers are considered as the central key in business sustainability. (Negi, 2009). Without loyal customers no business can sustain in the long run. However, what are the services which the customers prefer? Are customers are satisfied with the level of services offered by the organization? After sales service will influence customer satisfaction? Loyal customers are key to business sustainability?. Are some of the questions which need to be answered?. Businesses realize that customer is the key to business growth and sustainability. Customer satisfaction is considered as the most important aspect in enhancing the business and to generate above average profits even during the tough economic situations. Moreover, the importance of customer satisfaction and service quality has been proven relevant to help improve the overall performance of organizations.

II. SERVICE QUALITY

In order for a company's offer to reach the customers there is a need for services. The type of services and the varieties offered is usually based on the company's product and service offering and it varies based on the company. Service is defined as "any intangible act or performance that one party offers to another that does not result in the ownership of anything" (Kotler & Keller, 2009). In all, service can also be defined as an intangible offer by one party to another in exchange of money for pleasure. Quality is one of the essential aspect which modern customers look in the company's product offering. Quality can also be defined as the totality of features and characteristics of a product or services that bear on its ability to satisfy stated or implied needs (Kotler et al., 2009, p. 831). It is evident that quality is also related to the value of an offer, which could evoke satisfaction or dissatisfaction on the part of the user.

Service quality is stated as the extent to which the customer's perceptions towards the services are met or exceeded by the organization. Parasuraman defines service quality as "the differences between customer expectations and perceptions of service" (Parasuraman, 1988). They argued that measuring service quality as the difference between perceived and expected service was a valid way and could make management to identify gaps to what they offer as services.

In his original study Parasuraman et al., (1988) has presented nearly 10 different dimensions on the concept of service quality, they are:

- **Tangibles:** are states as the appearances on the physical artifacts and the members who are concerned with the service offering.
- **Reliability:** the ability of the firm to present the promised service to the customers.
- **Responsiveness:** the eagerness of employees to assist customers in an effective way.
- **Competence:** the ability of the employees in performing the stated service to the customers.
- **Courtesy:** the esteem, attention to detail, and courtesy exhibited by employees towards the customer.
- **Credibility:** the honesty and integrity of the service provider.
- **Security:** nonexistence of any disbelief, covering the economic risk, and physical danger.
- **Access:** the convenience enabled by the organization to the customers.
- **Communication:** adopting a comprehensible way to communicate the thoughts and ideas to the users.
- **Understanding the customer:** efforts by the service provider to know and understand the customer.

However, the above stated ten dimensions were more or less correlated, after a refinement; the above stated ten points were reduced to five dimensions.

Tangibility: includes all the physical facilities, tools and equipment used by the firm, and overall outlook of the service personnel

Reliability: the ability of the service personnel to perform stated services more accurately

Responsiveness: readiness to assist the customers and offer punctual service all the time.

Assurance: information and courtesy of the service personnel and their aptitude to motivate faith and self-assurance

Empathy: caring individualized attention the firm provides to its customers

III. REVIEW OF LITERATURE

3.1 Customer satisfaction and service quality

Customer satisfaction is entirely based on the level of experience, which a customer encounters on a product or service offering. Service quality comes from the services which are offered by the service providers to the targeted customers. Saravanan (2007) stated that "definitions of consumer satisfaction relate to a specific transaction (the difference between predicted service and perceived service) in contrast with 'attitudes', which are more enduring and less situational-oriented". Customer satisfaction can be greatly achieved through enhancing the after sales service in the consumer durable industry. Customers who purchase the goods are more concerned about the life time of the product. Therefore, Consumer Durables Company always tends to offer after sales service to their customers. This makes the customers to strongly believe in the product and in the company. The effectiveness of after sales service will lead to greater customer satisfaction and business sustainability.

A happy customer will always refer more customers and will be influential in enhancing the sustainability of the business. With reference to customer satisfaction, service quality and business sustainability researchers have taken keen interest in measuring the satisfaction level of the customers towards service quality during after sales service. Parasuraman et al propounded a theory called SERVQUAL model to assess the effectiveness of service quality. Parasuraman et al stated that "service quality is a focused evaluation that reflects the customer's perception of reliability, assurance, responsiveness, empathy, and tangibles". (Eshghi, 2008).

This paper aims in analyzing the effectiveness of service quality in enhancing the customer satisfaction and organizational sustainability.

IV. RESEARCH METHODOLOGY

This is an empirical analysis, the survey was conducted from 510 respondents. The researchers have used reliability test, chi square analysis and SEM model in analyzing the effectiveness of service quality in enhancing the customer satisfaction and organizational sustainability.

The framework of the analysis is given as follows

| | |
|-----|--|
| B1 | Consistency of service quality |
| B2 | Choice and range of service |
| B3 | Provision of service tools/equipments |
| B4 | Reasonable warranty policy |
| B5 | Provision of needed spare parts |
| B6 | Accessibility of service centre |
| B7 | Complaint registration facilities |
| B8 | Responsiveness to customer complaints |
| B9 | Time taken for resolving the complaint |
| B10 | Provision of service as promised |

| | |
|-----|---|
| B11 | Reasonable servicing cost |
| B12 | Accessibility of service people |
| B13 | Easiness to contact service people |
| B14 | Understanding the needs of customers |
| B15 | Handling of customers |
| B16 | Professionalism of service people |
| B17 | Technical competence of service people |
| B18 | Interpersonal behavior of service people |
| B19 | Quality and availability of technical manuals / service documents |
| B20 | Availability of information and advice at service centre |
| C1 | Customer Satisfaction |
| C2 | Business Sustainability |

| |
|---|
| SERVQUAL DIMENSIONS |
| Reliability (Rel) B1, B2, B5, B10 |
| Responsiveness (Res) B4,B8,B9,B11 |
| Assurance B15,B16, B17, B18 |
| Empathy B12, B 13, B14 |
| Tangibles B3, B6, B 7, B 19 & B 20 |

V. HYPOTHESIS

- Hypothesis 1:** There is a significant relationship between Time taken for resolving the complaint and Customer satisfaction
Hypothesis 2: There is a significant relationship between Interpersonal behavior of service people and Customer satisfaction
Hypothesis 3: There is a positive correlation between reliability and customer satisfaction towards consumer durables
Hypothesis 4: There is a positive correlation between responsiveness and customer satisfaction towards consumer durables
Hypothesis 5: There is a positive correlation between assurance and customer satisfaction towards consumer durables
Hypothesis 6: There is a positive correlation between empathy and customer satisfaction towards consumer durables
Hypothesis 7: There is a positive correlation between tangibles and customer satisfaction towards consumer durables
Hypothesis 8: There is a positive correlation between customer satisfaction towards consumer durables and business sustainability

VI. DATA ANALYSIS

Cronbach's Alpha

| S. No | Particulars | Cronbach Alpha |
|-------|----------------|----------------|
| 1 | Reliability | 0.914 |
| 2 | Responsiveness | 0.912 |
| 3 | Assurance | 0.936 |
| 4 | Empathy | 0.938 |
| 5 | Tangibles | 0.942 |
| | Overall | 0.982 |

Chi Square test between Time taken for resolving the complaint and Customer satisfaction

Case Processing Summary

| | Cases | | | | | |
|---------|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| C1 * B9 | 510 | 100.0% | 0 | 0.0% | 510 | 100.0% |

| C1 * B9 Crosstabulation | | | B9 | | | | | | Total |
|-------------------------|-------------|-------------|--------|--------|--------|--------|--------|--------|--------|
| | | | 0 | 1 | 2 | 3 | 4 | 5 | |
| C1 | 1 | Count | 0 | 14 | 2 | 1 | 0 | 0 | 17 |
| | | % within C1 | 0.0% | 82.4% | 11.8% | 5.9% | 0.0% | 0.0% | 100.0% |
| | | % within B9 | 0.0% | 31.1% | 1.8% | 0.5% | 0.0% | 0.0% | 3.3% |
| | | % of Total | 0.0% | 2.7% | 0.4% | 0.2% | 0.0% | 0.0% | 3.3% |
| | 2 | Count | 0 | 7 | 16 | 5 | 2 | 0 | 30 |
| | | % within C1 | 0.0% | 23.3% | 53.3% | 16.7% | 6.7% | 0.0% | 100.0% |
| | | % within B9 | 0.0% | 15.6% | 14.2% | 2.7% | 2.3% | 0.0% | 5.9% |
| | | % of Total | 0.0% | 1.4% | 3.1% | 1.0% | 0.4% | 0.0% | 5.9% |
| | 3 | Count | 0 | 13 | 26 | 13 | 6 | 5 | 63 |
| | | % within C1 | 0.0% | 20.6% | 41.3% | 20.6% | 9.5% | 7.9% | 100.0% |
| | | % within B9 | 0.0% | 28.9% | 23.0% | 7.0% | 7.0% | 6.2% | 12.4% |
| | | % of Total | 0.0% | 2.5% | 5.1% | 2.5% | 1.2% | 1.0% | 12.4% |
| | 4 | Count | 1 | 8 | 64 | 137 | 54 | 22 | 286 |
| | | % within C1 | 0.3% | 2.8% | 22.4% | 47.9% | 18.9% | 7.7% | 100.0% |
| | | % within B9 | 100.0% | 17.8% | 56.6% | 74.1% | 62.8% | 27.5% | 56.1% |
| | | % of Total | 0.2% | 1.6% | 12.5% | 26.9% | 10.6% | 4.3% | 56.1% |
| 5 | Count | 0 | 3 | 5 | 29 | 24 | 53 | 114 | |
| | % within C1 | 0.0% | 2.6% | 4.4% | 25.4% | 21.1% | 46.5% | 100.0% | |
| | % within B9 | 0.0% | 6.7% | 4.4% | 15.7% | 27.9% | 66.2% | 22.4% | |
| | % of Total | 0.0% | 0.6% | 1.0% | 5.7% | 4.7% | 10.4% | 22.4% | |
| Total | Count | 1 | 45 | 113 | 185 | 86 | 80 | 510 | |
| | % within C1 | 0.2% | 8.8% | 22.2% | 36.3% | 16.9% | 15.7% | 100.0% | |
| | % within B9 | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | |
| | % of Total | 0.2% | 8.8% | 22.2% | 36.3% | 16.9% | 15.7% | 100.0% | |

| Chi-Square Tests | | | |
|---|----------------------|----|-----------------------|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 304.538 ^a | 20 | .000 |
| Likelihood Ratio | 235.568 | 20 | .000 |
| Linear-by-Linear Association | 152.361 | 1 | .000 |
| N of Valid Cases | 510 | | |
| a. 11 cells (36.7%) have expected count less than 5. The minimum expected count is .03. | | | |

Interpretation

From the above it is noted that there is a significant relationship between Time taken for resolving the complaint and Customer satisfaction

Chi Square test between Interpersonal behavior of service people and Customer satisfaction

Case Processing Summary

| | Cases | | | | | |
|----------|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| C1 * B18 | 510 | 100.0% | 0 | 0.0% | 510 | 100.0% |

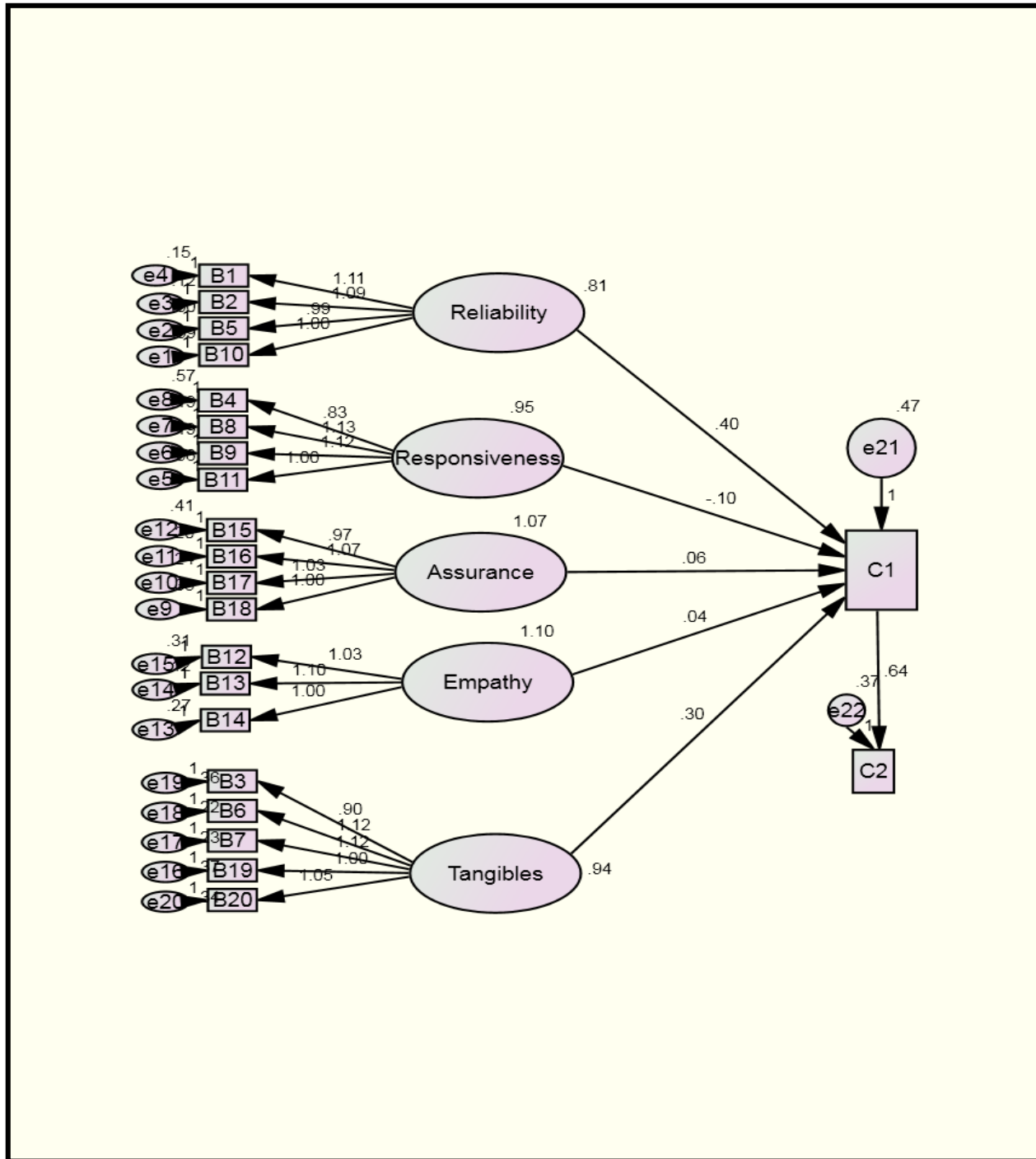
| C1 * B18 Crosstabulation | | | | | | | | | |
|---------------------------------|--------------|--------------|--------|--------|--------|--------|--------|--------|--------|
| | | B18 | | | | | | Total | |
| | | 0 | 1 | 2 | 3 | 4 | 5 | | |
| C1 | 1 | Count | 0 | 12 | 3 | 1 | 0 | 1 | 17 |
| | | % within C1 | 0.0% | 70.6% | 17.6% | 5.9% | 0.0% | 5.9% | 100.0% |
| | | % within B18 | 0.0% | 48.0% | 3.0% | 0.6% | 0.0% | 0.9% | 3.3% |
| | | % of Total | 0.0% | 2.4% | 0.6% | 0.2% | 0.0% | 0.2% | 3.3% |
| | 2 | Count | 0 | 5 | 14 | 8 | 2 | 1 | 30 |
| | | % within C1 | 0.0% | 16.7% | 46.7% | 26.7% | 6.7% | 3.3% | 100.0% |
| | | % within B18 | 0.0% | 20.0% | 14.0% | 4.7% | 2.0% | 0.9% | 5.9% |
| | | % of Total | 0.0% | 1.0% | 2.7% | 1.6% | 0.4% | 0.2% | 5.9% |
| | 3 | Count | 1 | 6 | 29 | 9 | 11 | 7 | 63 |
| | | % within C1 | 1.6% | 9.5% | 46.0% | 14.3% | 17.5% | 11.1% | 100.0% |
| | | % within B18 | 25.0% | 24.0% | 29.0% | 5.3% | 10.8% | 6.5% | 12.4% |
| | | % of Total | 0.2% | 1.2% | 5.7% | 1.8% | 2.2% | 1.4% | 12.4% |
| | 4 | Count | 1 | 2 | 53 | 139 | 65 | 26 | 286 |
| | | % within C1 | 0.3% | 0.7% | 18.5% | 48.6% | 22.7% | 9.1% | 100.0% |
| | | % within B18 | 25.0% | 8.0% | 53.0% | 81.3% | 63.7% | 24.1% | 56.1% |
| | | % of Total | 0.2% | 0.4% | 10.4% | 27.3% | 12.7% | 5.1% | 56.1% |
| | 5 | Count | 2 | 0 | 1 | 14 | 24 | 73 | 114 |
| | | % within C1 | 1.8% | 0.0% | 0.9% | 12.3% | 21.1% | 64.0% | 100.0% |
| | | % within B18 | 50.0% | 0.0% | 1.0% | 8.2% | 23.5% | 67.6% | 22.4% |
| | | % of Total | 0.4% | 0.0% | 0.2% | 2.7% | 4.7% | 14.3% | 22.4% |
| Total | Count | 4 | 25 | 100 | 171 | 102 | 108 | 510 | |
| | % within C1 | 0.8% | 4.9% | 19.6% | 33.5% | 20.0% | 21.2% | 100.0% | |
| | % within B18 | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | |
| | % of Total | 0.8% | 4.9% | 19.6% | 33.5% | 20.0% | 21.2% | 100.0% | |

| Chi-Square Tests | | | |
|---|----------------------|----|-----------------------|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 415.314 ^a | 20 | .000 |
| Likelihood Ratio | 306.961 | 20 | .000 |
| Linear-by-Linear Association | 158.219 | 1 | .000 |
| N of Valid Cases | 510 | | |
| a. 11 cells (36.7%) have expected count less than 5. The minimum expected count is .13. | | | |

Interpretation

From the above it is noted that there is a significant relationship between Interpersonal behaviour of service people.

VII. SEM MODEL FOR SERVICE QUALITY



Chi-square = 5166.11, Degrees of freedom = 205, Probability level = .000

Interpretation

Standardized Regression Weights: (Group number 1 - Default model)

| | Estimate |
|-------------|----------|
| C1 <--- Rel | .431 |
| C1 <--- Res | -.116 |

| | Estimate |
|--------------------|----------|
| C1 <--- Assurance | .074 |
| C1 <--- Empathy | .056 |
| C1 <--- Tangibles | .348 |
| B10 <--- Rel | .762 |
| B5 <--- Rel | .753 |
| B2 <--- Rel | .943 |
| B1 <--- Rel | .933 |
| B11 <--- Res | .792 |
| B9 <--- Res | .929 |
| B8 <--- Res | .931 |
| B4 <--- Res | .730 |
| B18 <--- Assurance | .868 |
| B17 <--- Assurance | .910 |
| B16 <--- Assurance | .927 |
| B15 <--- Assurance | .844 |
| B14 <--- Empathy | .895 |
| B13 <--- Empathy | .959 |
| B12 <--- Empathy | .888 |
| B19 <--- Tangibles | .848 |
| B7 <--- Tangibles | .913 |
| B6 <--- Tangibles | .918 |
| B3 <--- Tangibles | .822 |
| B20 <--- Tangibles | .868 |
| C2 <--- C1 | .662 |

Correlations (Group number 1 - Default model)

| | | | Estimate |
|-----|------|-----------|----------|
| Rel | <--> | Res | .981 |
| Rel | <--> | Assurance | .898 |
| Rel | <--> | Empathy | .889 |
| Rel | <--> | Tangibles | .984 |
| Res | <--> | Assurance | .894 |
| Res | <--> | Empathy | .900 |
| Res | <--> | Tangibles | .989 |

| | | | Estimate |
|-----------|------|-----------|----------|
| Res | <--> | Tangibles | .989 |
| Assurance | <--> | Empathy | .928 |
| Assurance | <--> | Tangibles | .934 |
| Empathy | <--> | Tangibles | .911 |

| Hypotheses | | Hypothetical Relationship | Result |
|---|------------------|---------------------------|--------------|
| Hypothesis 3: There is a positive correlation between reliability and customer satisfaction towards consumer durables | Rel | Positive | 0.40 |
| Hypothesis 4: There is a positive correlation between responsiveness and customer satisfaction towards consumer durables | Res | Negative | -0.10 |
| Hypothesis 5: There is a positive correlation between assurance and customer satisfaction towards consumer durables | Assurance | Positive | 0.06 |
| Hypothesis 6: There is a positive correlation between empathy and customer satisfaction towards consumer durables | Empathy | Positive | 0.04 |
| Hypothesis 7: There is a positive correlation between tangibles and customer satisfaction towards consumer durables | Tangibles | Positive | 0.30 |
| Hypothesis 8: There is a positive correlation between customer satisfaction towards consumer durables and business sustainability | C2 | Positive | 0.64 |

Interpretation

From the above it is noted that reliability possesses a higher factor in influencing the customer satisfaction among the other variables. The customer satisfaction possess a strong association in business sustainability

VIII. CONCLUSION

The aim of the study was to establish the critical determinants of service quality by including those attributes of each and every after sales services activity with delivery channel that were currently assessed by existing service quality instruments and those attributes that were currently overlooked in the service quality literature. Subsequently, this paper proposed a conceptual model of automated services quality, as perceived by customers, with specific emphasis on the after sales services in consumer durable sector. The proposed comprehensive model was empirically validated by perceptual data collected from customers of consumer durables in Chennai District Tamil Nadu India.

All of the proposed five factors of customer perceptions of after sales service quality have exhibited strong unidimensionality, reliability, convergent, discriminate, and criterion related validity. Moreover, the SEM and the other criteria indices for the overall model have also been found to exceed the obligatory requirements. Consequently, it can be accepted that the service quality and after sales services in Consumer Durables can be conceptualized as a five- factor structure consisting of: Tangibility, Reliability, Responsiveness, Assurance and Empathy . However service quality, core service quality and price quality are determining the customer satisfaction, If organization provide good after sales services which will lead the customer delight in Consumer Durable Industry.

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