CHAPTER 2—LITERATURE REVIEW

Researcher’s Overview

This chapter is a systematic literature review of service quality concept, and service gaps models. The aim of the literature review is;— to know the origin and reach of the service quality concept;—to appreciate use of service gaps in operationalizing service quality;—to explore work of services marketing scholars and;—to identify research gaps in the topic. The review also analyzes service quality relationships with—customer satisfaction, relationship management, experience quality, technology, human resource, emotions, customer loyalty, demography, service failure, recovery, and other concepts.

The literature review uses bibliographic analysis of research articles based on citations count; and then studies service gaps approach to measurement of service quality. Citations count, journal publications, and contribution of researchers, is used to identify important work of literature.

The review explores literature related to; need of the service quality; various conceptual frameworks, changing trends; hypothesized constructs; and measurement scales. The review also covers; work of criticism, and alternative viewpoints, different model variants and industry applications.

Services Marketing Literature

Services marketing literature has progressed from nonexistence in 1960’s;—to proposing its own distinct philosophies in 1980’s;—to exploring service quality concepts in relation to satisfaction & loyalty in 1990’s;—to the present day of discussing service quality in relation with technology and automation.

SCOPUS bibliographic database- an illustrious database of research articles, journals, and researchers is used as a reference for analyzing “service quality” literature (“Scopus,” 2015). Articles limited to business, management & accounting are considered for review. Total 3466 articles are found; year wise distribution of articles is displayed in Figure 7 (Appendix A—Literature Frequencies).

Up to 1985, service quality did not get much attention in literature; but beyond 1985 up to 1999, the topic of “service quality” received overwhelming attention from research scholars. Beyond 1999 up to 2004, the attention is reduced; but beyond 2004, as newer concepts emerged the topic received renewed interest.
SERVICE GAPS IN TV RETAILING

Figure 7. "Service quality" Literature Frequency Distribution; “Scopus,” 2015

Analysis of citations. Out of the total 3466 articles, top 20 most cited articles are listed in Table 5. ‘The behavioral consequences of service quality’, by Zeithaml et al., is the most cited article with 2430 citations. ‘Zero defections: quality comes to services’, is the second most cited article with 1554 citations. ‘Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments’ by Cronin, Brady, & Hult is third most cited article with 1305 citations.

Table 5. Top 20 Cited Articles on "service quality"

<table>
<thead>
<tr>
<th>No</th>
<th>Article</th>
<th>Authors</th>
<th>Year</th>
<th>Source</th>
<th>Citations</th>
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<td>No</td>
<td>Article</td>
<td>Authors</td>
<td>Year</td>
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<tr>
<td>12</td>
<td>Service quality, profitability, and the economic worth of customers: What we know and what we need to learn.</td>
<td>Zeithaml, V.A.</td>
<td>2000</td>
<td>Journal of the Academy of Marketing Science</td>
<td>486</td>
</tr>
<tr>
<td>No</td>
<td>Article</td>
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<td>Year</td>
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Note. ("Scopus," 2015)

**Contributions of journals.** These 3466 articles are published in 549 research journals; top 20 journals are listed in Table 6. ‘Total Quality Management and Business Excellence’ is the top journal, with 131 articles published. ‘Managing Service Quality’ is the second with 128 articles published; and ‘Service Industries Journal’ is at third position with 125 articles.

Table 6. Top 20 Research Journals on "service quality"

<table>
<thead>
<tr>
<th>No</th>
<th>Source</th>
<th>Count of articles</th>
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<tbody>
<tr>
<td>1</td>
<td>Total Quality Management and Business Excellence</td>
<td>131</td>
</tr>
<tr>
<td>2</td>
<td>Managing Service Quality</td>
<td>128</td>
</tr>
<tr>
<td>3</td>
<td>Service Industries Journal</td>
<td>125</td>
</tr>
<tr>
<td>4</td>
<td>International Journal of Hospitality Management</td>
<td>94</td>
</tr>
<tr>
<td>5</td>
<td>Journal of Services Marketing</td>
<td>83</td>
</tr>
<tr>
<td>6</td>
<td>International Journal of Quality and Reliability Management</td>
<td>78</td>
</tr>
<tr>
<td>7</td>
<td>Journal of Business Research</td>
<td>73</td>
</tr>
<tr>
<td>8</td>
<td>International Journal of Service Industry Management</td>
<td>57</td>
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<tr>
<td>9</td>
<td>Tourism Management</td>
<td>55</td>
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</tbody>
</table>
No | Source                                                                 | Count of articles |
---|-----------------------------------------------------------------------|-------------------|
10 | Journal of Retailing and Consumer Services                            | 49                |
11 | Services Marketing Quarterly                                          | 42                |
12 | International Journal of Bank Marketing                               | 40                |
13 | International Journal of Contemporary Hospitality Management         | 40                |
14 | Journal of Air Transport Management                                  | 39                |
15 | Journal of Service Research                                          | 39                |
16 | Total Quality Management                                             | 39                |
17 | International Journal of Services and Operations Management           | 36                |
18 | TQM Journal                                                          | 32                |
19 | Journal of Quality Assurance in Hospitality and Tourism               | 31                |
20 | Health marketing quarterly                                           | 30                |
20 | Quality - Access to Success                                          | 30                |

Note. (“Scopus,” 2015)

**Contribution of researchers.** Top 20 author’s contribution to “service quality” literature is listed in Table 7. Prybutok, V.R. has contributed maximum i.e. 17 articles, and has significant contribution to IT service quality & related instrument. De Ruyter, K. has second most contribution i.e. 16 articles with contribution mainly in e-services, service switching costs, service recovery etc., while Wetzels, M. has 14 articles related to various aspect of service quality (“Scopus,” 2015).

**Table 7.** Top 20 Authors on "service quality"

<table>
<thead>
<tr>
<th>No</th>
<th>Author,</th>
<th>Count of articles</th>
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<tr>
<td>1</td>
<td>Prybutok, V.R.</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>De Ruyter, K.</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>Wetzels, M.</td>
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<td>4</td>
<td>Ladhari, R.</td>
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<td>5</td>
<td>Cronin, J.J.</td>
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<tr>
<td>6</td>
<td>Brady, M.K.</td>
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<td>7</td>
<td>Prentice, C.</td>
<td>9</td>
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<td>8</td>
<td>Kandampully, J.</td>
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<td>9</td>
<td>Fongsuwan, W.</td>
<td>9</td>
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<tr>
<td>10</td>
<td>Yeung, A.C.L.</td>
<td>9</td>
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Up to 1985 – Emergence of Service Marketing Concepts

Up to early 1985; research scholars developed new concepts of services marketing, previously unexplored in goods marketing philosophies (Shostack, 1977). Services needed a new conceptual approach distinct from goods (Black, 1951; Regan, 1960), as the old tested goods-management philosophies were not fitting the needs of the services. In this period the concept of 7P’s (Booms & Bitner, 1982) is developed.

Other concepts attended by literature in this period are; self-servicing (Regan, 1960), goods-service continuum (Rathmell, 1966) services perception (Gillette & Evans, 1975), services intermediaries (Donnelly, 1976), service capacity (Deshmukh & Jain, 1977), service employee role (Schneider, Parkington, & Buxton, 1980), service mass marketing (Upah, 1980), service advertising (George & Berry, 1981), process approach to services (Blois, 1983), service design (Shostack, 1984), service capacity constraints (Lovelock, 1984), and technology services (Piercy, 1984). This phase of literature culminated with well-known classification of services by Christopher Lovelock (Lovelock, 1983).

Cornerstone research articles identified during literature review is listed in Table 8. The literature is arranged chronologically, and identified based on important contribution to the service quality concept development. The first article is by Oliver (Oliver, 1977) about disconfirmation theory; this is considered as the base of service quality literature.
<table>
<thead>
<tr>
<th>Year</th>
<th>Authors</th>
<th>Document title</th>
<th>Journal title</th>
<th>Concepts</th>
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<tbody>
<tr>
<td>2000</td>
<td>Frost &amp; Kumar</td>
<td>INTSERQUAL – an internal adaptation of the GAP model in a large service organization.</td>
<td><em>Journal of Services Marketing</em></td>
<td>INTSERQUAL scale of internal service quality</td>
</tr>
<tr>
<td>2005</td>
<td>Chatterjee &amp; Chatterjee</td>
<td>Prioritization of service quality parameters based on ordinal responses.</td>
<td><em>Total Quality Management</em></td>
<td>Criticism of SERVQUAL, Nomenclature of gaps</td>
</tr>
<tr>
<td>2012</td>
<td>Grönroos</td>
<td>Conceptualising value co-creation: A journey to the 1970s and back to the future.</td>
<td><em>Journal of Marketing Management</em></td>
<td>Value co-creation</td>
</tr>
</tbody>
</table>
Beyond 1985 – Service Quality Concept

Beyond 1985, till present day; service gaps model (Parasuraman et al., 1985); an approach to service quality, is the most researched concept in services marketing literature.

Disconfirmation theory. The service gaps model is developed based on an universal approach suggested by Grönroos; who adopted it from disconfirmation theory (Figure 8) propounded by Oliver (1977). Though the theory is developed for conceptual representation of ‘satisfaction’; Grönroos adopted it to define ‘service quality’ as’ the comparison of ‘Customer’s expected service’ with ‘Customer’s perceived service’, and suggested that ideally the expected service should match the perceived service (Grönroos, 1984).

While goods quality can be operationalized using advanced measurement devices, jigs & fixtures, automated CNC machines, and improved quality control techniques; service quality measurement has limitations— on account of its distinct characteristics of intangibility, heterogeneity, inseparability, and perishability (V. A. Zeithaml et al., 1985).

In 1980’s; total quality management (TQM) had become the industry buzzword. Various goods quality management philosophies received best attention from practitioners during industrialization. Concept of TQM using advanced technology was widely practiced in manufacturing of goods. With the advancement of technology, quality of goods was comparatively easier to define and operationalize.

Researchers sought to define service quality concept in line with goods-quality concept. This search went on for years till SERVQUAL (PZB’88) was accepted as a
better tool as it was handy, universal, easy to implement, and easy to adopt. This led to a major push in the adoption of SERVQUAL (PZB-88) as a service quality measurement tool. Service quality being an attitude SERVQUAL instrument has a cognitive and affective components based on behavior intentions (Chiu & Wu, 2002; Chiu, 2002). Even though the development of concept of services quality and concept of TQM took different routes to development, a connect can be found in Deming’s TQM to service quality management (Douglas & Fredendall, 2004).

Nine critical success factors for successful implementation of TQM in service organizations are defined as; top management commitment, customer focus, training & education, continuous improvement & innovation, supplier management, employee involvement, quality information & performance measurement, benchmarking, employee encouragement (Talib & Rahman, 2010). All these factors are in accordance with service quality management philosophies.

**Service gaps model (PZB 85).** The landmark service gaps model (PZB 85) was proposed as a model of service quality, conceptualized on disconfirmation theory. Exploratory factor analysis initially suggested 10 dimensions of service quality as; reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowledge, and tangibles (Parasuraman et al., 1985).

As displayed in Figure 3 the model is based on the premise that ‘external service gap’, effects provider’s ‘internal service gaps’. Research community has well received the service quality gaps model. The basic theme of the model is that, the issues related internally to the organization are the primary reasons of external service quality (ESQ). The internal issues are identified as knowledge gap, design gap, delivery gap, and communication gap. All internal gaps have interrelated effect on each other and finally on the external (customer) service gap. Thus the effort to improve internal service quality is proposed to improve external service quality.

**SERVQUAL (PZB 88) – service quality scale.** Initial model is followed by development of a service quality measurement scale by same researchers. The empirically developed scale is named SERVQUAL (Parasuraman et al., 1988) the acronym of service quality; is universal in nature and has five dimensions instead of ten as explored earlier (PZB 85).
The service quality scale is conceptualized based on; perceived quality against objective quality, quality as an attitude, quality theorized similar as satisfaction, expectation to perception difference, and ten dimensions as proposed in SERVQUAL (PZB 85). The final five dimensions based on exploratory factor analysis are; tangibility, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1988).

SERVQUAL (PZB 88) is considered to be handy, universal, easy to implement, and easy to adopt. This led to a major push in the adoption of SERVQUAL (PZB 88) for measurement of service quality. Service quality being an attitude, the instrument has a ‘cognitive’ and ‘affective’ components based on behavior intentions (Chiu & Wu, 2002; Chiu, 2002).

**Expectation question**

Q.3 Their employees *should be* well dressed and appear neat.

|----------------------|------------|----------------------|-----------------------------|------------------|---------|------------------|

**Perception question**

Q.3 XYZ’s employees are well dressed and appear neat

|----------------------|------------|----------------------|-----------------------------|------------------|---------|------------------|

Figure 9. SERVQUAL-PZB 88 Measurement Technique; Parasuraman et al., 1988

\[ Service \text{Quality}_{gap} = (\text{Expectations score} - \text{Perceptions score}) \] (1)

As presented in Figure 9, SERVQUAL (PZB 88) has two Likert scale questionnaires; while one measures *‘expectations’* of the customer from the service provider, the other measures customer *‘perceptions’* or *‘performance’* of the service. Since expectation score of the scale is designed on *normative* expectations (Teas, 1993); the words like *‘should be’* are often used. While expectations are considered to
be developed before actual service encounter; perceptions develop after service encounter.

Initially the scale had 97-items (questions), but subsequently the scale is condensed to two sets of 22 items each; making the total of 44 items. Out of total 22 items, nine items are reversed coded. As shown in equation (1), service gap is measured as difference between customer expectation score and customer perception score; and the difference is conceptualized to be the measure of service gap; the smaller the gap – the better is the service quality.

**Drawbacks of SERVQUAL (PZB 88).** SERVQUAL (PZB 88) faced barrage of criticism, since its inception (Chatterjee & Chatterjee, 2005; Coulthard, 2004). The reasons for the criticism are; its failure of replication efforts, non-generic dimensions of the construct, challenge in treatment of expectations (Carman, 1990), and doubts raised over five factors (Finn & Lamd Jr., 1991; Llosa, Chandon, & Orsingher, 1998). The model could not provide consistent results in different industries, the factors proposed were not in line with factors found, and different number of factors emerged in different settings. Teas, 1993; doubted SERVQUAL questionnaire validity, for its conceptual and definitional problems; and theoretical explanation of construct (Teas, 1993).

A strong criticism has come from Brown et al; that SERVQUAL’s (PZB 88) difference of score method of service gaps (expectations - performance) suffers from instrument reliability, discriminant validity, and variance restriction (Brown, Churchill, & Peter, 1993; S. K. Jain & Gupta, 2004) problems. It also suffers from boredom factor because of lengthy questionnaire, lower response rate, and data proliferation (Brandon-Jones & Silvestro, 2010). In an interesting research article Johns & Tyas, expressed that fundamental assumption of service perceptions may be working like mythology meaning—individual’s expression of generalized or exaggerated versions of reality (Johns & Tyas, 1997). The model developed in 1988, is being analyzed and criticized even in recent times; in an article in 2011, SERVQUAL and related instruments are criticized for being static & generic; having conceptual, measurement, dimensionality, & operational drawbacks; not applicable to all ethnicities & countries; and measurement inconsistencies (Al-allak & Bekhet, 2011). Though the basic premise of service gaps model is disconfirmation theory, adopted by Christian Grönroos, the Scandinavian researcher has always been strong
criticizer of service gaps model. Christian Grönroos philosophy of service quality is discussed later in the chapter.

**SERVQUAL (PBZ 91) – revised service quality scale.** In response to above criticism Parasuraman et al. revised and refined original instrument SERVQUAL (PZB 88) and suggested new scale SERVQUAL (PBZ 91) (Parasuraman, Berry, & Zeithaml, 1991). While SERVQUAL (PZB 88) has nine reverse coded items, the revised instrument SERVQUAL (PBZ 91) has none. In the new refined instrument the wording of ‘expectations’ scale is changed from ‘should’ to ‘excellent’. Thus the expectation scale is changed from ‘normative’ expectations to ‘ideal’ expectations (Teas, 1993). The instrument is tested empirically for validity and reliability related concerns (Parasuraman et al., 1991). Even though the new scale SERVQUAL (PBZ 91) also received criticism, the scale is the base for service quality measurement even today. The instrument is used under various settings in different service industries across the globe. The measurement technique of SERVQUAL (PBZ 91) is as presented in Figure 10.

---

**Expectation question**

Q.3 Employees of excellent company will be neat-appearing.

|-------|----------------------|-------------|----------------------|-----------------------------|-----------------|----------|------------------|

**Perception question**

Q.3 XYZ’s employees are neat-appearing.

|-------|----------------------|-------------|----------------------|-----------------------------|-----------------|----------|------------------|

*Figure 10. SERVQUAL-PBZ 91 Measurement Technique Parasuraman et al., 1991*

\[
Service\ Quality_{gap} = (\text{Expectations score} - \text{Perceptions score})
\] (2)
The measurement technique of PBZ 91 – equation (2) is similar to PZB 88 – equation (1); the difference lies only in the wording of expectations questions, and absence of reverse coding. In the new instrument the reverse coded questions were removed, since those were problematic for reasons of higher standard deviation, compared to positively coded questions, and were confusing the respondents. The investigation also revealed that the reverse coded questions were awkward and not meaningful. The reverse coded questions also reported lower internal reliability (Cronbach alpha).

One of the challenges of differential score calculations is situations when respondents rate perception scores higher than expectation score. Under such situations Hussey, 1999 has suggested a corrective methodology (Hussey, 1999).

**SERVPERF – new approach to service quality scale.** Few of the limitations of SERVQUAL (PZB 88), stated above are also applicable to revised SERVQUAL (PBZ 91). Considering the limitations of SERVQUAL (PZB 85 & PBZ 88), Cronin & Taylor analyzed different approach to service quality measurement. Researchers studied various service quality measurement techniques proposed in the literature and suggested a new approach to the scale called SERVPERF. The new scale has many benefits over older scales (Cronin & Taylor, 1992).

**Perception question**

Q.3 XYZ’s employees are well dressed and appear neat

|----------------------|-------------|----------------------|-----------------------------|-----------------|---------|------------------|

*Figure 11. SERVPERF Measurement Technique; Cronin & Taylor, 1992*

\[
Service \ Quality = (Perceptions) \quad (3)
\]

\[
Service \ Quality_{gap} = (Highest \ score - Perceptions)
\]

\[
Service \ Quality_{gap} = (7 - Perceptions) \quad (4)
\]
As shown in Figure 11 SERVPERF is a ‘performance only scale’, and does not use disconfirmation paradigm (expectations – perceptions). The scale instead uses only perception score as a measure of service quality. This approach could reduce number of items (questions) in the instrument from 44 of SERVQUAL to 22.

This 50% reduction eases respondent fatigue and errors in answering the questionnaire; because SERVPERF scale does not need expectation score otherwise measured in SERVQUAL (PBZ 91).

While SERVQUAL is ‘expectation – performance’ differential scale, SERVPERF’s ‘non-differential attitude measurement’ scale makes it statistically stronger.

There are many benefits of SERVPERF scale; it is conceptually easier to operationalize; it scores better on instrument reliability, validity, variance restriction, predictive power, response rate and efficiency; it explains more variation in service quality. While SERVQUAL repeatedly failed to produce five factors; exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) proved theoretical superiority of SERVPERF.

Importantly, SERVPERF is able to demonstrate antecedent relationship to consumer satisfaction and purchase intentions.

While above equation (3) is service quality measurement, equation (4) is service gap measurement scale. The point to be noted here is that the use of either equation (3) or equation (4) does not affect covariance/correlation structure relationships between variables and factors.

Parasuraman et.al hits back. To the criticism of Cronin & Taylor, 1992; and Teas, 1993; to SERVQUAL instrument; the original researchers hit back arguing in favor of SERVQUAL. They corrected their position on relationship between service quality & customer satisfaction (Parasuraman, Zeithaml, & Berry, 1994b).

Cronin & Taylor explains. Cronin & Taylor, again challenged superiority of SERVQUAL by supporting empirical findings of structural equation modeling (Cronin & Taylor, 1994), reconfirming their doubts over validity and reliability of SERVQUAL.
**RSQS – retail service quality scale.** Founded on SERVPERF’s ‘perception only’ approach, a retail service quality scale (RSQS) is developed by Dabholkar et al. for retail setting. The specialized scale for retail business, is well received by research community, and is being used globally for retail service quality measurement.

RSQS is conceptualized based on triangulation of three qualitative techniques of phenomenology, in-depth interviews, and tracking. The model tested using confirmatory factor analysis (CFA), is a second order factorial construct consisting of; physical aspects (appearance, convenience), reliability (promises, doing it right), personal interaction (inspiring confidence, courteous/helpful), problem solving, and policy (Dabholkar, Thorpe, & Rentz, 1996). The scale is also tested for construct reliability and validity measures. The factorial structure of specialized retail service quality scale (RSQS) scale is displayed in Figure 17.

**INTSERVQUAL – internal service quality model & scale.** In one of the first attempt to operationalize internal service quality; Frost & Kumar proposed INTSERVQUAL an internal service quality model and measurement scale. This model & the scale is conceptually similar to SERVQUAL but applied internally on frontline staff and support staff, where frontline staff are treated as internal customer, and support staff as internal service provider (Frost & Kumar, 2000).

The model is conceptualized on internal marketing philosophy. The model proposes that perceptions and expectations of internal customers and internal suppliers determine internal service quality in the organization. The model is tested in gasoline companies in Greek (Pantouvakis, 2011).

Internal service quality research is an important aspect of business because; first, employees themselves are recipients of internal service, while internal service quality effects external service quality; second, employees are likely to have insights into service problems at delivery as they handle the work on daily basis; third, the employee research may work as the early warning to major crisis later. The model is presented in Figure 12. The model has identified three service gaps between front-line staff and support staff.

- Internal gap 1 is defined as the difference between ‘front line staff’s expected service’ and ‘support staff’s perception of front-line expectations’.
- Internal gap 3 is difference between ‘support-staff’s perception of front-line expectations’ to ‘translation of perceptions into service actually delivered’.

- Internal gap 5 is difference between ‘front-line staff’s expected service’ to ‘front-line staff’s perceived service’. Internal gap 5 is measured using a scale similar to SERVQUAL.

Front line staffs are employees facing the customers directly, and support staffs are back office staff helping front line staff in delivering services to organizations external customers.

![Diagram](#)

*Figure 12. INTSERVQUAL; Frost & Kumar, 2000*

**Approaches to Service Quality**

The quest for service quality measurement goes much further with researchers suggesting many changes and alternatives. Researcher has grouped these models in
four broad categories as; gaps versus perceptions only approach, multiple gap approach, hierarchical model approach, conceptually different approach.

1. Gaps versus Perceptions Only Approach

In general, service quality is conceptualized on two different approaches; the gaps approach and the perception only approach. Both the versions of SERVQUAL and INTSERVQUAL are designed on gaps approach. Customer expectations and perceptions scores are measured and the gap between the two is treated as a measure of service quality. RSQS and SERVPERF are designed as perception only approach to service quality. In this approach measure of customer perception is used for analysis.

2. Multiple Gaps Approach

Various researchers have suggested different or additional service gaps. Few of these multi-gap models are listed below.

*Figure 13. Seven Gaps Model; Luk & Layton, 2002*
Seven gaps model. A seven gaps service quality model is proposed by Luk & Layton, in 2002. In addition to five SERVQUAL gaps, the model has two new service gaps; — (1) difference in understanding of customer expectations between manager and front-line service providers, and — (2) difference in customer expectations and understanding of these expectations by front line employee. The model is developed to capture inconsistencies in customer understanding between management and employees of the organization (Luk & Layton, 2002). The seven gaps model is shown in Figure 13.

The inconsistencies in knowledge about the customer between service employees and management may create deviation in service delivery. The model aims to analyze perceptive difference of customer knowledge between the management and the service employee; and further extends the concept to SERVQUAL model of Parasuraman et al.

Fourteen gaps model, Candido & Morries. A 14 gaps model is designed to integrate various service quality gaps suggested by various researchers, into a single model. The model is based on strategic management perspective as displayed in Figure 14 (Candido & Morris, 2000).

The 14 gaps are related to following issues.

- Gap 1. Management perception
- Gap 2. Service quality strategy
- Gap 3. Design and quality specifications from customer expectations view
- Gap 4. Service quality supporting financial function
- Gap 5. Internal communications
- Gap 6. Integration and coordination
- Gap 7. Coordination of others in value system
- Gap 8. Selection, training, autonomy, power and rewards to employees
- Gap 9. Service delivery
- Gap 10. External communication
- Gap 11. Contact employee’s perception of customers’ expectations
- Gap 12. Contact employee’s perception of customers’ experiences
- Gap 13. Customer perceptions
• Gap 14. Service quality evaluation

![Fourteen Service Gap Model](image)

**Figure 14.** Fourteen Service Gap Model; Candido & Morris, 2000

**Fourteen gaps model, Shahin & Samea.** Another 14 gaps model from strategic perspective is presented in Figure 15 (Shahin & Samea, 2010). Researchers have defined 14 gaps as follows.

• Gap 1. Management perception of customer expectations – Customer expected service
• Gap 2. Management perception of customer expectations - Service quality strategy & policy
Figure 15. Fourteen Gaps Model; Shahin & Samea, 2010

- Gap 3. Service quality strategy & policy - Translation of strategy & policy into service quality specs
- Gap 4. Translation of strategy & policy into service quality specifications - Ideal standards
- Gap 5. Translation of strategy & policy into service quality specifications - External communication to customers
- Gap 6. Translation of strategy & policy into service quality specifications - Service Delivery (Pre & post)
- Gap 7. Service Delivery (Pre & post) - External communication to customers
- Gap 8. Customer expected service - Perceived service
• Gap 9. Customer expected service - Employee perception of customer expectation
• Gap 10. Employee perception of customer expectation - Management perception of customer expectations
• Gap 11. Perceived service - Management perception of customer perceptions
• Gap 12. Management perception of customer perceptions - Service quality strategy & policy
• Gap 13. Employee perception of customer perceptions - Perceived service
• Gap 14. Employee perception of customer perceptions - Management perception of customer perceptions

*Fifteen gaps model.* Fifteen gaps model is suggested by Nwabueze, in 2001, exploring 15 service gaps (U Nwabueze & Mileski, 2008; Uche Nwabueze, 2001).

Incorporating too many service gaps in the model may lead to scale development related difficulties. Too many items in the instrument can cause fatigue in the respondents. Validity, reliability related issues may crop up, and analyzing the data could also be challenging.

3. **Hierarchical Model Approach**

Service quality models in general can be divided based on hierarchical level of factorial structure. Some service quality models are suggested to be non-hierarchical single factor structures while some are designed to be second-order factorial structures.

*First order factor structure.* Factorial structure of service gaps model proposed by Parasuraman et al. is shown in Figure 16. The measurement of SERVQUAL (PZB 88 & PBZ 91) and SERVPERF are designed as single order factorial structures. Single factor structures are easy to operationalize and measure.
Second order factor structure. Few service quality models can be described as structure of two levels. Retail service quality scale (RSQS) and Brady & Cronin models are two level structures of service quality.

Retail service quality scale (RSQS). Discussed earlier retail service quality scale (RSQS) proposed by Dabholkar et al. is a second order hierarchical factor structure, consisting of two levels of service quality construct and 28 items.

The two levels are physical aspects (appearance, convenience), reliability (promises, doing it right), personal interaction (inspiring confidence, courteous/helpful), problem solving, and policy (Dabholkar et al., 1996). The factorial structure is as displayed in Figure 17.
Second order factor structure - Brady & Cronin. Brady & Cronin suggested service quality as three primary, and nine secondary dimensions as; interaction quality (attitude, behavior, expertise), physical environmental quality (ambient conditions, design, social factors), and outcome quality (waiting time, tangibles, valence) (Brady & Cronin, 2001). The model attempts to combine Nordic school approach and American school approach and provides empirical evidence that service quality is a multidimensional, hierarchical construct. This model is criticized for its multidimensional construct, suggested factors, and instrument and measurement complications (Martínez García & Martínez Caro, 2010).

Figure 18. Second Order Factor Structure; Brady & Cronin, 2001

4. Conceptually Different Approach

There is series of service quality models, proposing altogether different dimensions of service quality. Some of these like RSQS and Brady & Cronin are already discussed above, others are listed below.

European view – Nordic school approach. May it be service gaps model or SERVQUAL variants; American scholars always dominated service quality research, and European scholars followed a conceptually different approach to service quality. Christian Grönroos, consistently proposed service quality as a two dimensional construct of technical quality, and functional quality (Figure 19).

Technical quality, is a technical solution, the ‘what’ part; and functional quality, the functionality solution, the ‘how’ part; and firm/brand image works as a
filter. Technical quality influences satisfaction of utilitarian services, while functional quality is more important for hedonic services (Lien & Kao, 2008).

![Diagram of Total Quality](image1)

*Figure 19. Total Quality; Grönroos, 2007*

**American school approach.** This approach is based on service gaps model, and focuses on functional quality of service. It is considered that overwhelming focus by researcher community on SERVQUAL based models has sidelined technical quality dimensions of service quality. Christian Grönroos has always criticized American view of service quality as;—too simplified solution to complex relationship (Woodall, 2001).

![Diagram of Customer Perceived Service Quality](image2)

*Figure 20. Customer Perceived Service Quality; Sureshchandar et al., 2001*
**Customer perceived service quality, Sureshchandar et al.** Another variation in service quality model suggests three additional dimensions of; core service, non-human element, and social responsibility—along with basic SERVQUAL dimensions of; human element (service delivery), and servicescape (tangibles) (Sureshchandar, Rajendran, & Kamalanabhan, 2001). The model is presented in Figure 20.

**SQ-NEED model of theory of needs, Chiu & Lin.** Another research defines service quality as founded on need driven multiple-item scale based on Maslow’s hierarchy of needs. The model analyzes SQ-NEED dimensions as physiology, safety, belongingness, esteem, self-actualization, knowledge, and aesthetics (Chiu & Lin, 2004).

**Service template process.** This is an alternative service quality measurement approach based on service template process. It suggests a service template of quality determinants (characteristics), importance weightage, reasonable expected score, and perceived characteristics score. The overlap of expectations and perception can also be indicated on the template. Two extremes ends defines ideal and worst situations for the characteristics. Representative service template is displayed in Figure 21.

<table>
<thead>
<tr>
<th>Quality determinants (characteristics)</th>
<th>Ideal situation for each characteristics identified</th>
<th>Worst situation for each characteristics identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support from others</td>
<td>Speedy &amp; accessible</td>
<td>Non-existent</td>
</tr>
<tr>
<td>Availability</td>
<td>Permanently there</td>
<td>Sporadic</td>
</tr>
<tr>
<td>Speed of service</td>
<td>Prompt</td>
<td>Inefficient</td>
</tr>
</tbody>
</table>

**Figure 21.** Service Template Approach; Williams & Saunders, 2006

The template process can capture dyadic interchange between customer and the service deliverer. Template may not statistically validate its effectiveness, but is
particularly advantageous to service users and deliverers. The tool is specifically important to service operations management in improvement process (Williams & Saunders, 2006).

Industry Specific Service Quality Model Variants

Inspired by widespread use of SERVQUAL, over years scholars have developed industry specific variants having different industry application. Some of these are listed below.

*RSQS – retail service quality scale.* This is one of the early service quality models, developed for retail service quality using structural equation modeling. This is one of the extensively discussed, and well accepted scale for retail setting (Dabholkar et al., 1996). The scale is discussed in earlier sections. See Figure 17 for explanation.

*PDSQ – physical distribution service quality scale.* PDSQ is a special scale for measuring quality of physical distribution services (Bienstock, Mentzer, & Bird, 1996).

*INTSERVQUAL.* This is a variant of service gaps model developed specifically for internal service quality. Conceptually similar to SERVQUAL the scale is designed for internal service quality (Frost & Kumar, 2000). The model is discussed in detail in earlier section. The model is presented in Figure 12.

*e-SERVQUAL.* Specifically developed for measuring service quality of websites, this model is conceptually similar to gaps model (V. A. Zeithaml, Parasuraman, & Malhotra Arvind, 2002).

*e-SQ.* This is also a special service quality scale for internet retail stores (Gounaris, Dimitriadis, & Stathakopoulos Vlasis, 2005).

*E-S-QUAL.* Proposed by Parasuraman, this is a multi-item scale developed for measuring website service quality (Parasuraman, 2005).
FAIRSERV. This is a measurement scale developed for measuring organizational fairness to its customers (Carr, 2007).

**Purchase department service quality.** This is an interesting instrument similar to service gaps model’s SERVQUAL developed for measurement of purchase department-internal service gaps. The instrument is designed for industrial environment consisting of the internal customer to the purchase department, and the purchase department as the supplier.

The performance gap of purchaser is defined as the difference between expectations and perceptions of the purchaser. Performance gap of internal customer is the difference between expectations and perceptions of the internal customer (Large & König, 2009). The model has aptly defined the performance of the purchase department as the ‘perception gap’ between the purchaser and the internal customer; while ‘expectation gap’ is the difference between expectations of the purchaser and the internal customer. Purchase department service quality model is displayed in Figure 22.

---

**Figure 22.** Purchase Department Service Quality; Large & König, 2009
SALESPERF. This scale is designed for measuring service performance of salesperson (Amyx & Bhuian, 2009).

DINESERV. This is a service quality scale designed for dining service restaurants (Vanniarajan, 2009).

BANKZOT. Developed on zone of tolerance (ZOT) this scale incorporates a desired and adequate levels of expectations for measurement of bank service quality (Nadiri, Kandampully, & Hussain, 2009).

SERVDIV. This measurement tool uses Vedic approach to measurement of service quality (Kelkar, 2010).

Customer contact center quality scale. This scale is designed to measure service quality at customer contact center (Dun, Bloemer, & Henseler, 2011).

Hotel industry service quality. This is a specialized service quality scale for hotel industry (H.-C. Wu & Ko, 2013).

Webqual. The scale is meant for service quality measurement of Websites offering e-services (Shahin, Pool, & Poormostafa, 2014).

Above is a list of few of many industry specific scales developed conceptually similar to SERVQUAL.

Industry Applications of Service Quality Models

Applications of service quality scale variants are being reported globally from various industries. Few of these industries are; healthcare (McAlexander, Kaldenberg, & Koenig, 1994; O’Connor, Shewchuk Richard M., & Carney Lynn W., 1994), healthcare in Turkey (Lonial, Menezes, Tarim, Tatoglu, & Zaim, 2010), automobile repair (Andaleeb & Basu, 1995), foodservice outlets (J. Bell, Gilbert, & Lockwood, 1997; Johns & Tyas, 1996), fast food at Malaysia (How & Sorooshian, 2013), hotel industry Croatia (Gržinić, 2007; Markovic & Raspor, 2010), hotels at Poland (Grobelna & Marciszewska, 2013), higher education (D. Bell, 1997), education in
India (Singh & Khanduja, 2010), education (Norizan Mohd Kassim & Zain, 2010), public sector (Orwig, Pearson, & Cochran, 1997), banking (Bick, Abratt, & Möller, 2012; Pass, 2006; Rai, 2009), banking in Bangladesh (Rahaman, Abdullah, & Rahman, 2011), banks at Ethiopia (Mersha & Sriram, 2012), telecom (Rahman, 2006), travel agents at China (Ruiqi & Adrian, 2009), travel agencies at Taiwan (Pao, Wu, & Pan, 2010), travel agencies at Serbia (Marinković, Senić, Kocic, & Sapic, 2013). An variant of SERVQUAL has been applied for analyzing competitive matrix of companies with service aspects (S. Lee, Kim, Hemmington, & Yun, 2004).

There are numerous other industries using service quality scale variant for measurement of service quality.

**Comparison of Service Quality Scales**

Cronin & Taylor has studied various alternative service quality measurement scales proposed by various researchers. (Cronin & Taylor, 1992). The researcher has compiled the list and presented below.

Equation (5) is SERVQUAL (PZB 88 & PBZ 91) scale. This is an original scale as suggested by Parasuraman et al. As discussed earlier service quality is measured as differential of performance & expectations. The difference between the two termed as service gap, and smaller is the difference the better is the service quality. The conceptualization is based on disconfirmation theory discussed earlier.

Equation (6) is SERVQUAL (PZB 88 & PBZ 91) scale weighted (multiplied) by customers’ factor importance rating. The importance rating prioritizes the factor to arrive at the service quality measure. This scale is also based on disconfirmation theory. In data analysis using structural equation modeling; since covariance/correlation values are applied; analysis does not need importance weightage to be measured separately.

Equation (7) is a SERVPERF discussed earlier, the scale recommended by Cronin & Taylor, 1992. The scale hypothesized service quality as just a measure of service quality perception; and does not use disconfirmation approach. The scale is easy to implement, it is analyze and scores better on validity & reliability measures. The scale as discussed earlier is simpler version of SERVQUAL.
Equation (8) is weighted SERVPERF which is performance rating weighted by importance rating. The scale is similar to SERVPERF but weighed using importance. This is also not a disconfirmation scale. This scale has major limitation of non-linear relationship between variables (Deng, Kuo, & Chen, 2008); but at the same time the scale provides greatest diagnostic information (Andronikidis & Bellou, 2010).

Equation (9) is a ratio scale; another method of measuring service quality as a ratio of perception score to expectation score as suggested by Lee et al, 2004. The measure is less frequently used by the researchers.

**SERVQUAL**

\[
Service \Quality_{gap} = (Expectations - Perceptions) \tag{5}
\]

**Weighted SERVQUAL**

\[
Service \Quality_{gap} = Importance(Expectations - Perceptions) \tag{6}
\]

**SERVPERF**

\[
Service \Quality = (Perceptions) \tag{7}
\]

**Weighted SERVPERF**

\[
Service \Quality = Importance \times (Perceptions) \tag{8}
\]

**Ratio SERVQUAL** (S. Lee et al., 2004)

\[
Service \Quality = \frac{Perceptions}{Expectations} \tag{9}
\]
Antecedents to Service Quality

This section discusses antecedents to service quality as reviewed in literature. Service quality has two distinct concepts; internal service quality (ISQ), and external service quality (ESQ). Figure 23 is an extended model of service quality (V. A. Zeithaml, Berry, & Parasuraman, 1988) indicating the simplified relationship. The model proposes external service quality as the differential in; customers’ expected, and customers’ perceived service quality. The model further defines internal service quality as net effect of series of internal discrepancies as knowledge gap, design gap, delivery gap and communication gap.

Figure 23. Extended Service Gaps Model; Zeithaml et al., 1988

Antecedents to Internal Service Quality

The hypothesized model suggests; to minimize external service gap, the other four internal service gaps should be minimized. If these four gaps are minimized, effective external service quality as perceived by customer improves. Service gaps model has suggested four internal gaps as knowledge gap, design gap, delivery gap, and communication gap. These gaps occur inside the organization, and should be controlled for improving internal service quality (ISQ) inside the organization.
**Knowledge gap.** Knowledge gap is the outcome of difference in customer expected service and organizations perception of customers’ expectations. This is the first amongst the five gaps, and arises for reasons like; insufficient, inadequate, or unfocussed marketing research orientation. Knowledge gap also arise from lack of upward communication which could be; insufficient interaction with customers, and between layers of employees & management. Another reason of knowledge gap is lack of relationship focus on account of; improper market segmentation, too much of transaction focus, or priority to new customers over relationships.

Knowledge gap may arises from poor service recovery mechanism like; no motivation to listen to customers, absence of proper recovery mechanism, and non-response to service failures (V. A. Zeithaml, Gremler, Bitner, & Pandit, 2008).

<table>
<thead>
<tr>
<th>Customer Expected Service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inadequate marketing research orientation</strong></td>
</tr>
<tr>
<td>Insufficient marketing research</td>
</tr>
<tr>
<td>Research not focused on service quality</td>
</tr>
<tr>
<td>Inadequate use of market research</td>
</tr>
<tr>
<td><strong>Lack of upward communication</strong></td>
</tr>
<tr>
<td>Lack of interaction between management and customers</td>
</tr>
<tr>
<td>Insufficient communication between contact employees and managers</td>
</tr>
<tr>
<td>Too many layers between contact personnel and top management</td>
</tr>
<tr>
<td><strong>Insufficient relationship focus</strong></td>
</tr>
<tr>
<td>Lack of market segmentation</td>
</tr>
<tr>
<td>Focus on transactions rather than relationships</td>
</tr>
<tr>
<td>Focus on new customers rather than relationship customers</td>
</tr>
<tr>
<td><strong>Inadequate service recovery</strong></td>
</tr>
<tr>
<td>Lack of encouragement to listen to customer complaints</td>
</tr>
<tr>
<td>Failure to make amends when things go wrong</td>
</tr>
<tr>
<td>No appropriate recovery mechanisms in place for service failures</td>
</tr>
</tbody>
</table>

*Figure 24. Knowledge Gap; V. A. Zeithaml et al., 2008*
**Design gap.** Accurate knowledge of the customer is necessary but not sufficient for better service quality. The organization should be able to convert the service knowledge into good service designs and performance standards. Employees should be able to understand and execute the service design & performance standards. Instead of prioritizing companies concerns of productivity, efficiency, and profitability etc.; operational standards should correspond to customers’ priorities and expectations.

Design gap arises from flawed service design; improper, unclear service design, or new service design lost on positioning. Design gap also arises, out of absence of customer-driven standards, absence of process management, or lack of formal service setting process. Absence of effective physical evidence and servicescape like; failure to develop tangibles, servicescape not meeting customer & employee requirements, and poor servicescape maintenance & makeover, also adds to design gap (V. A. Zeithaml et al., 2008).

**Figure 25.** Design Gap; V. A. Zeithaml et al., 2008
**Delivery gap.** Even though organization develops good service designs and performance standards, actual delivery may fail to deliver as planned. Delivery gap occurs because of; inappropriate human resources policies like; faults in recruitment, role ambiguity, role conflicts, poor job fit; absence of performance evaluation & compensation and; missing empowerment, control and teamwork issues. Delivery gap also develops when customers do not fulfill their roles appropriately, and when customers negatively affect each other during service process. The problems related to service intermediaries like; channel conflicts, quality control & consistency at intermediaries, and channel empowerment & control also adds to delivery gap. Inappropriate management of service demand-supply; heavy fluctuations in demand & supply, incorrect customer mix, and over reliance on price also affect service delivery (V. A. Zeithaml et al., 2008).

**Deficiencies in human resource policies**
- Ineffective recruitment
- Role ambiguity and role conflict
- Poor employee-technology job fit
- Inappropriate evaluation and compensation systems
- Lack of empowerment, perceived control, and teamwork

**Customers who do not fulfill roles**
- Customers who lack knowledge of their roles and responsibilities
- Customers who negatively impact each other

**Problems with service intermediaries**
- Channel conflict over objectives and performance
- Difficulty controlling quality and consistency
- Tension between empowerment and control

**Failure to match supply and demand**
- Failure to smooth peaks and valleys of demand
- Inappropriate customer mix
- Overreliance on price to smooth demand

*Figure 26. Delivery Gap; V. A. Zeithaml et al., 2008*
Communication gap. Disconnect between service design & performance standards; and incorrect communication to customers from various direct and indirect channels, are causes of communication gap. Integrated communication internally and externally is expected to contain the communication gap. The communication gap occurs because of; absence of integrated, interactive communication devoid of internal marketing. Communication gap also occurs because of poor management of customer expectations, customer education and; overpromising through direct & indirect means of communications such as advertising, personal selling, and physical evidence. Insufficient horizontal communication between departments, branches, and units are also reasons of communication gap (V. A. Zeithaml et al., 2008). Well managed communication during service encounter positively impacts customer perception of the organization (N. Jain, Sethi, & Mukherji, 2009).

<table>
<thead>
<tr>
<th>Service Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lack of integrated services marketing communications</strong></td>
</tr>
<tr>
<td>Tendency to view each external communication as independent</td>
</tr>
<tr>
<td>Not including interactive marketing in communications plan</td>
</tr>
<tr>
<td>Absence of strong internal marketing program</td>
</tr>
<tr>
<td><strong>Ineffective management of customer expectations</strong></td>
</tr>
<tr>
<td>Absence of customer expectation management through all forms of communication</td>
</tr>
<tr>
<td>Lack of adequate education for customers</td>
</tr>
<tr>
<td><strong>Overpromising</strong></td>
</tr>
<tr>
<td>Overpromising in advertising</td>
</tr>
<tr>
<td>Overpromising in personal selling</td>
</tr>
<tr>
<td>Overpromising through physical evidence cues</td>
</tr>
<tr>
<td><strong>Inadequate horizontal communications</strong></td>
</tr>
<tr>
<td>Insufficient communication between sales and operations</td>
</tr>
<tr>
<td>Insufficient communication between advertising and operations</td>
</tr>
<tr>
<td>Differences in policies and procedures across branches or units</td>
</tr>
</tbody>
</table>

*Figure 27. Communication Gap; V. A. Zeithaml et al., 2008*
Antecedents to External Service Quality

External service quality is hypothesized to be the difference between customer expectations and customer perceptions. While customer expectations are formed before service encounter; perception are the evaluation of actual experiences of the customer.

Customer expectations. Since the time the service quality model is proposed by Parasuraman et al; service expectation has become a highly debated topic. Based on disconfirmation paradigm, the antecedents to customer expectations are; actual delivery, external communication to the customers, word of mouth communications, personal needs, and past experiences of the customers (Parasuraman et al., 1985).

Zone of tolerance. Depending upon factors like type of service and type of customer; the levels of customer expectations vary from desired expectations, to lowest threshold level called adequate expectation. The difference between these two levels is termed as zone of tolerance. The zone of tolerance plays a key role in customer’s assessment of service quality. Zone of tolerance (ZOT), in customer expectations may change from services to services, while few services display narrow zones; others may show wider zones. (Durvasula & Lobo, 2005). Zone of tolerance may also vary for five dimensions of the service quality.

Figure 28. Zone of Tolerance – Customer Expectations; Zeithaml et al., 1993
Implicit promise & cues, specifically service employee’s dress, presentation, and demeanor works as cues building service expectations (Bebko, Sciulli, & Garg, 2006). Perceptions are formed based on functional, mechanic, and humanic cues (Berry, Wall, & Carbone, 2006). Considerable literature goes in understanding meaning of expectations from customers’ point of view. Expectations could be ‘ideal expectation’, ‘desired expectation’, or ‘normative expectation’ (Parasuraman, Zeithaml, & Berry, 1994a; Teas, 1993). While SERVQUAL (PZB 88) is operationalized on normative expectations, SERVQUAL (PBZ 91) is operationalized on ideal expectation. The service expectations can also be differentiated as ‘desired service’, ‘adequate service’, and ‘predicted service’ (V. Zeithaml, Berry, & Parasuraman, 1993). Customer expectation is a subject of curiosity for researchers for years. Finer study of customer expectations shows that expectations can differ based on various parameters like the gender of the customers (Yelkur & Chakrabarty, 2006), and national culture of the customers (Laroche, Ueltschy, Abe, Cleveland, & Yannopoulos. Peter P., 2004).

<table>
<thead>
<tr>
<th>Customer Expected Service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reliability</strong></td>
</tr>
<tr>
<td>Ability to perform the promised service dependably and accurately</td>
</tr>
<tr>
<td><strong>Responsiveness</strong></td>
</tr>
<tr>
<td>Willingness to help customers and provide prompt service</td>
</tr>
<tr>
<td><strong>Assurance</strong></td>
</tr>
<tr>
<td>Employees’ knowledge and courtesy and their ability to inspire trust and confidence</td>
</tr>
<tr>
<td><strong>Empathy</strong></td>
</tr>
<tr>
<td>Caring, individualized attention given to customers</td>
</tr>
<tr>
<td><strong>Tangibility</strong></td>
</tr>
<tr>
<td>Appearance of physical facilities, equipment, personnel, and written materials</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Perceived Service</th>
</tr>
</thead>
</table>

Figure 29. Dimensions of Customer Perception; V. A. Zeithaml et al., 2008
Customer perceptions. Customers perceive service based on their judgment of service quality and satisfaction received from the service. Improvements in service quality and customer satisfaction are the key ingredients of the perception.

Parasuraman et al. has explored five dimensions of customer perception as reliability, responsiveness, assurance, empathy, and tangibles. The five dimensions of service quality in general apply to all kinds of services. Reliability is delivering the promises, responsiveness is willingness to help, assurance is inspiring trust and confidence, empathy is having customer point of view, and tangibles are physical representation of the service. The five dimensions of service quality represent how customers’ process information related to service quality. Sometimes all five dimensions are used for service quality evaluation, at other times only few dimensions may be used, the variation may differ according to service, customer culture, gender, and other demographic factors (V. A. Zeithaml et al., 2008).

Figure 30. Customer Perception – Satisfaction – Loyalty; Zeithaml et al., 2008

The connection between product quality, service quality, price; with customer satisfaction and ultimate customer loyalty is explained in Figure 30. Service quality in general develops perceived value, and perceived value further leads to customer service satisfaction (Huber & Henneberg, 2007). Perceived risk plays an important
role in quality-value relationship, while perceived value-for-money plays an
mediating role between quality, price, risk; with willingness to purchase (Sweeney,
Soutar, & Johnson, 1999). Seller provides the products & services; and customer
value is generated when customer uses these products and services. Even better
customer relationship management (CRM) can create duel value; for customer, as
well as for organizations (Boulding, Staelin, Ehret Michael, & Johnston Wesley J.,
2005). Employee attitude and their behavior also influences customer perception of
service quality (Ackfeldt & Wong, 2006).

Communication at the time of service encounters impacts customer’s
perception about the organization as well (N. Jain et al., 2009). In services like
restaurants, service quality perception even can be enhanced based on the physical
attractiveness of the service employee (Luoh & Tsaur, 2009). Customer’s self-
efficacy, and emotional intelligence, also has important role in service quality
perception (Snell & White, 2011). Research in prospect theory in service encounter
recommends; management of service failure & delight distribution pattern, for
effective service quality perceptions (Sivakumar, Li, & Dong, 2014).

One of the limitations of all these service quality models is; while all could
operationalize measurement of service quality, none could explain relationship
between service quality, customer satisfaction, and purchase intention. Establishing
such relationship is important for the service providers and researchers.

**Service Quality and Important Concepts**

This section explores literature connecting service quality; with other
important concepts such as; customer satisfaction, relationship management,
experience quality, technology, and many other concepts. The section also discusses
service quality literature associated with service failures and recovery.

**Service quality and customer satisfaction.** Customer satisfaction is influenced
by factors like; features offered by product and services; emotions generated in the
service process; customers attributions to service successes and service failures;
customers perceptions of equity & fairness; and other factors related to consumers,
their family members & coworkers.
Quest to search connection between service quality and customer satisfaction, is extensive in the literature. Research in the field of defining and operationalizing customer satisfaction started way back in 1940’s (Bader & Wernette, 1938). Later, research in customer satisfaction and service quality went parallel, but independent of each other.

Historically, research considered service quality and customer satisfaction as two distinct constructs, both considered to be based on disconfirmation paradigm (Oliver, 1980). Early research calls customer satisfaction as a surprise element bundled inside the product (Oliver, 1981).

Literature as early as 1990 investigated the connect, of service quality, with customer satisfaction and behavioral intent (Bitner, Booms, & Tetreault, 1990; Bitner, 1990; Bolton & Drew, 1991; Cronin & Taylor, 1992; Headley & Miller, 1993; Iacobucci, Ostrom, & Grayson, 1995; Taylor & Baker, 1994; V. A. Zeithaml, Berry, & Parasuraman, 1996). In 1994, Taylor & Baker suggested that in a retail setting, customer satisfaction could be moderating, the relationship between service quality and behavioral intent of the customer (Taylor & Baker, 1994). Service quality is found to effect; customer satisfaction, attitudinal loyalty, and purchase intention (Carrillat, Jaramillo, & Mulki, 2009).

Investigation of this relationship widened the scope of research up to corporate image. Delivering high quality service and creating high customer value may cause high customer satisfaction, and then affecting corporate image, leading to consumer retention (H.-H. (Sunny) Hu, Kandampully, & Juwaheer, 2009).

Concept of customer loyalty is around for quite a while, (Ganesh, Arnold, & Reynolds, 2000; K. P. Marshall & Smith, 2000). Literature discusses relationship of quality and switching behavior (Shah & Schaefer Allen D., 2005). Relationship between service quality and financial performance is also empirically established (Duncan & Elliott, 2002).

**Kano’s attractive quality – new approach.** In 1984; Kano et al., proposed a two dimensional model to clarify subjective and objective aspects of the product quality. Though the model is validated for goods, it is considered to be valid for services too. Kano’s two dimensional model theorizes a non-linear relationship between product quality attributes (basic, performance, excitement, indifference, and reverse) and customer satisfaction. While performance factor, and reverse factor are
linearly related to satisfaction; basic factor and excitement factor have non-linear relationship with satisfaction. Indifference factor does not have any relationship with satisfaction (Kano, Seraku, Takahashi, & Tsuji, 1984). Figure 31 is traditional model of service quality, while Figure 32 is Kano’s two dimensional model.

**Figure 31.** Traditional SQ – CS Relationship; Parasuraman et al., 1985

For better understanding of service performance, traditional gaps approach may not be a valid consideration. Kano’s two dimensional model could be a better approach to understanding customer satisfaction using product quality (M.-C. Tsai, Chen, Chan, & Lin, 2011).

Lately, the model is extensively used by researchers for defining; creativity (L.-S. Chen, Liu, Hsu, & Lin, 2010), new service development (Y.-C. Lee & Chen,
Contradiction between service quality & customer satisfaction relationship. Considering service quality and customer satisfaction are two distinct concepts, literature attempts to find relation between them. Researchers took contradictory stand on the relationship, while some claimed service quality as the antecedent to customer satisfaction; others claimed customer satisfaction is an antecedent to service quality. In 1990, Bitner suggested; service quality is an antecedent to customer satisfaction, and in 1991, Bolton & Drew, hypothesized a model with customer satisfaction as an antecedent to service quality. At times even the relationship of customer satisfaction to service quality is used for analysis and discussion by researchers (Dabholkar, 1995). The difference of views is later settled after lot of deliberations, and acceptance that service quality is an antecedent to customer satisfaction (Parasuraman et al., 1994b).

Service quality and relationship management. While some customers are interested in active relationship with the firm, some are passive to relationship building; and some are not at all interested in relationship building with firm (Grönroos, 1997). Service quality is recognized as an important construct affecting relationship commitment through shared value and trust (Jih, Lee, & Tsai, 2007). Relationship management and service quality go hand-in-hand (Grönroos, 1996; Palmer & Bejou, 1994) There is significant literature connecting marketing in general, and services marketing in particular; with relationship marketing (Bendapudi & Berry, 1997; Berry, 1995; Bitner, 1995; Gwinner, Gremler, & Bitner, 1998; Holmlund & Kock, 1996). Good service helps build the relationship, and good selling enhances the relationship. Strategies like core-service marketing, relationship customization, service augmentation, relationship pricing, and internal marketing can enhance the customer relationship (Berry, 2002). Relationship researchers has attempted to establish the connect between service quality factors (customer-employee interaction, service environment, service outcome), and relationship quality factors (trust & satisfaction) (Y.-C. Hsieh & Hiang, 2004).
Lately, relationship management has entered a new age with use of information technology and data management tools. Concepts of relationship management implemented through IT solutions for the benefit of customers are termed as customer relationship management (CRM) by researchers. Various approaches to CRM are suggested over a continuum from narrowly defined tactics using a particular technology; to a strategically defined CRM tool (Payne & Frow, 2005). CRM Framework based on operational, collaborative, and analytical CRM;—integrate business, technology, and customer perspective to deliver a high service quality (Teo, Devadoss, & Pan, 2006).

![Customer Experience Quality Diagram](https://example.com/customer_experience.png)

*Figure 33. Customer Experience Quality; Lemke et al., 2011*

**Service quality and experience quality.** The recent shift in the literature is from service quality measurement to service experience measurement. Customer experience is customer’s emotional judgment of the entire experience under detailed service setting, and is proposed to be measured as experience quality. Whereas service quality in general is cognitive in nature;—satisfaction is quasi-cognitive & predominantly affective in nature and;—experience quality is emotional or affective in nature of its assessment (Chang & Horng, 2010).
Research has suggested significant relationship between, experiential marketing and customer satisfaction; as well as service quality and customer satisfaction;—signaling the conceptual difference of service quality and experiential marketing (M.-S. Lee, Hsiao, & Yang, 2010).

Newer approach is overwhelming in favor of using customer experience measurement over service quality approach. Customer experience quality factors are suggested as; peace of mind, outcome focus, moments of truth, and product experience (Maklan & Klaus, 2011).

Presented in Figure 33 is customer experience quality as proposed by Lemke et al., is as the effect of; communication encounter, service encounter (product quality, service quality, and network quality), and usage encounter—on value-in-use mediated by experience context; and later value-in-use leading to relationship outcomes (Lemke, Clark, & Wilson, 2011).

Lately, researchers are taking interest in service experience; customer experience management is considered as customer’s interpretation of total interaction with the brand, hence it is imperative to extend experience management to encompass service quality (Frow & Payne, 2007). Payment as a sub-element of the encounter process, also contributes to the customer experience (K. V. Hansen, Jensen Oystein, & Gustafsson Inga-Britt, 2004). Customers who perceive action & proxy control on service exchange process; experience better service satisfaction (Namasivayam, 2004). Relative importance of service and experience to customer perceived value may change based on income levels and the consumption frequency of the customer (Yu & Fang, 2009).

**Service quality and customer waiting, time, duration, & speed.** The time of service delivery, the duration of service and customer waiting time for their tern of service, and speed of service delivery are discussed as crucial factors in service quality literature.

**Service waiting.** The service organization is required to analyze customer perception towards their waiting time for the service delivery (Antonides, Verhoef, & van Aalst, 2002). Services customer tends to have expected & perceived time of
waiting. Customer feels happy when the time spent during service encounter is less than expected time; while customer is annoyed when encounter time is longer than expected.

The perceived value of time is positive for gains while negative for losses; while valence of perceived time loss is greater than perceived time gain (Y.-T. Lin & Bei, 2008). Service setups with below threshold wait time, have strong association between service quality drivers and service quality perception (Chandukala, Long-Tolbert, & Allenby, 2011).

*Service time.* For the reason of service providers cost, organizations avoid consideration of customers preferred time for service delivery, while such efforts may actually reduce combined total cost to the organization (Apte, Apte, & Venugopal, 2007). These researchers recommend time promise window for customers preferred time for service delivery.

*Service duration.* In some services customer may actually judge the service based on duration of the service (duration heuristic) along with other factors of judgment (W.-B. Chiou, 2008).

*Service speed.* It is observed that for customer intensive services, the service quality or service value increases with time spent by the service provider with customer. The longer service time in turn results in longer waiting for customers, thus the service speed may be designed optimally by considering service quality, delay costs, demand, queue congestion, price, and revenue; termed as ‘quality-speed trade-off’ (Anand, Pac, & Veeraraghavan, 2011).

*Service quality and technology.* One more significant development in services marketing practice is, increasing use of technology to improve service quality. Service industry is one of the first sectors to willingly adopt technology in all its activities. Advancements in information technology, data collection, data management, and data analysis is helping organizations to enhance service quality by improving reliability, competence, credibility, communication, and better understanding of customers (A. D. Smith, 2006).
New millennium e-commerce businesses face millions of online service encounters. These millions of service encounters are forcing firms to infuse technologies at internally as well as at customer interface (Bitner, Brown, & Meuter, 2000). Internal service gaps as well as external service gaps can be effectively managed by application of wide range of technologies (Kazi & Prabhu, 2015). Technologies are also helping in bringing new customers (Prabhu & Satpathy, 2015), and even in managing customers.

Self-service technologies (SSTs) are increasingly playing important role in service encounter management (Meuter, Ostrom, Roundtree Robert I., & Bitner, 2000). Even though technologies are instrumental in delivering improved service quality to customer (Parasuraman & Grewal, 2000), implementing SST is a huge challenge (Bitner, Ostrom, & Meuter, 2002).

While online consumers go through process of disconfirmation, service quality, regret & satisfaction, and reuse intentions (Liao, Liu, Liu, To, & Lin Hong-Nan, 2011); many researchers felt need to have different method of service quality measurement for e-services. For e-service adoption 3Q model consisting of; service quality, system quality, and information quality is suggested (Xu, Benbasat, & Cenfetelli, 2013). A recent research in online service claims that, supporting service functionality also contribute to service quality (Cenfetelli, Benbasat, & Al-Natour, 2008). Trust and usefulness as the factors of technologies like e-commerce acceptance, moderates relationship of e-service quality, service value, and satisfaction (Luo & Lee, 2011).

**Service quality and human resource.** Employee plays a vital role in services quality, there is extensive research investigating the role of front line employees in services (Hui, Lam, & Schaubroeck, 2001; Lewis & Gabrielsen, 1998). A significant relationship between firms commitment towards employees and service delivery is found (Pitt, Foreman, & Bromfield, 1995). The organizational climate is found to have a positive effect on customer perception of service quality (Schneider, White, & Paul, 1998), the effect is observed in Indian context as well (Shainesh & Sharma, 2003).

When unacquainted with the service; customer view employee job standardization as positively related to service quality (Y.-M. Hsieh & Hsieh, 2001). The research suggest that human resource management practices, positively affects
service quality as well as customer satisfaction (Chand, 2010), transformational leadership, workplace spirituality, service climate, job satisfaction, and service quality (Lenka, Suar, & Mohapatra, 2010).

*Service triangle.* Service triangle concept proposed by Kotler and later refined by (Parasuraman & Grewal, 2000; Parasuraman, 1996) to include technology; the service triangle model is a seamless connection between the company, service employee, and customer. The model is further proposes connection of technology individually with all three stakeholders (Barrutia, Charterina, & Gilsanz, 2009).

![Service Triangle](diagram.png)

*Figure 34. Service Triangle; Parasuraman & Grewal, 2000*

Service triangle suggests all three stakeholders namely the organization, employees, and customers are connected with each other in form of relationship. While organization connects with employees through internal marketing; employees and customer are connected through interactive marketing; while organization connects customer through external marketing. Organization should manage all three connections for better management of service.

Higher level of organizational citizenship behavior (OCB) is associated with higher level of service quality perceptions (Bienstock & Demoranvillez, 2006). Managers should understand and show organizational citizenship behaviors, to motivate employees, by exhibiting citizenship behavior (M.-L. Wang, 2009). Effective service teams are likely to develop positive customer perceptions and improve service revenues (Jong, Ruyter, & Wetzels, 2006).
Employee behavior either positive or negative, is highly correlated to customer perception of service quality and overall customer satisfaction, thus human contact is a critical determinant of customer satisfaction (Kattara, Weheba, & El-Said, 2008). Happy customers need happy employees, and happy employees needs policies, procedures, and systems aligned with organization’s mission (Crotts & Ford, 2008). It has been discussed that employee satisfaction is a driver to customer satisfaction; and a significant relationship of time lag of half year is found between employee satisfaction and customer satisfaction (Eklöf & Selivanova, 2008).

*Service quality and employee training.* Service quality concept has also been extended as a diagnostic tool for management of salesforce (G. Marshall & Shepherd, 1999), training employees is important to build a service culture (Sturdy, 2000), even part-time marketers like technical staff is important to build service quality (Laing & McKee, 2001). Employee training and marketing process improvement are important factors for customer satisfaction (Sharma & Gadenne, 2008). Informal training of front line employees like coaching is found to be more effective than, formal training in building front line service employees commitment towards customer service quality (Elmadağ, Ellinger, & Franke, 2008). Formal employee training, coaching & reward system is found to affect commitment of frontline employees to service quality (Sun, Hsu, & Wang, 2012).

Work burnout is work related stress faced by the employees. In a typical service setting; customer and management burnout can have an adverse effect on customer contact employees, influencing their propensity to leave (Harris & Lee, 2004). Organization facing employee burnout may lead to difficulty in running the business. One of the method of improving service quality is to improve employee job satisfaction and implementation of job standardization, for positive effect on the service quality (Karatepe, Avcı, & Araslı, 2004). On the darker side of customer relationship is service sweethearing, the situation when frontline server employee give an unauthorized free or discounted access to customer conspirators (Brady, Voorhees, & Brusco, 2012).

*Service quality and emotions.* Emotional labor is a display of emotions by the employee in-line with the requirement of the organization. Frontline employees are
required to display positive emotions, and such display positively affects customers’ evaluation of service quality (Pugh, 2001).

It is known that server employees attitudes and behavior influences customer perception of service quality (Ackfeldt & Wong, 2006). Emotions displayed by service personnel, hierarchically influence consumer’s emotions, their satisfaction with service employee, attitude towards brand, and patronage intention (E. S.-T. Wang, 2009). Sometimes even customers use emotional blackmailing techniques with service employee (S.-Y. Chen, 2009) to get favorable service. Employee emotion, group mood, and service environment is found to positively affects service delivery from employee, which in turn affects customer emotion and service outcomes (J.-S. C. Lin & Lin, 2011). Employee’s emotion management ability (emotional appraisal); of self and others is important for their in-role cooperative and extra-role service behavior (C.-W. Tsai, 2009).

Service co-creation. In order to captures how firms and customers co-produce quality, a three stages integrative quality framework demarking; quality production process, quality evaluation process, quality experience process, is suggested (Golder, Mitra, & Moorman, 2012). The framework suggests that, the quality production occurs when design is used to create attributes.

![Integrated Quality Framework](image)

*Figure 35. Integrated Quality Framework; Golder et al., 2012*
Quality experience is when organization delivers and customers perceives attributes. Quality evaluation is when customer forms judgment of the quality.

Grönroos, 2012 has suggested Service-Dominant (SD) approach based on servuction. The model postulates that the customers creates value through value-in-use and, co-creation of value happens in joint collaborative during interactions with each other (Grönroos, 2012). In Figure 36, ‘service concept’ is what the service provider wants to achieve; and ‘service process’ is where the service emerges for the customer. ‘Service concept’ is the starting point, while ‘experienced service’ is the end point; and in between ‘service concept’ and ‘experienced service’ is ‘value-creation platform’ for co-creation.

Figure 36. Value Co-creation; Grönroos, 2012

Service quality and customer loyalty. Literature repeated mentions significant contribution of service quality to customer satisfaction (Amin, Yahya, Ismayatim, Nasharuddin, & Kassim, 2013); while research in loyalty programs indicate strong relationship of customer loyalty behavior with service quality (Agudo, Crespo, & Bosque, 2012). Research suggests service quality is a good predictor of customer loyalty; while negatively affecting customer switching (Shukla, 2010). In 2010, Chin has studied the predictive relationship between service quality, customer expectations, disconfirmation, overall customer satisfaction, and loyalty; while perceived quality and customer expectations develops disconfirmation, the disconfirmation further affects overall satisfaction. Overall satisfaction is further suggested to affect customer loyalty.
While perceived quality and customer expectations are ‘appraisal’ of the customer; overall customer satisfaction is his ‘emotional response’; and customer loyalty is a ‘customer behavior’ (Chin, 2010). It is said that customer orientation and interpersonal relationships moderates the linkage between service quality and customer loyalty (Chao, Fu, & Lu, 2007). Loyalty is considered as the outcome of cognitive process rather than an affective process. The important antecedents to customer loyalty are proposed to be perceived value, service quality, service attributes, satisfaction, image and trust. All these factors are interlinked to form a loyalty antecedents (Lewis & Soureli, 2006).

In high involvement, high service, luxury products, the essential ingredients to customer loyalty and asset investment decisions are service quality, satisfaction, and trust. Trust and customer satisfaction directly or indirectly persuade customers to invest in specific assets (J.-S. Chiou & Droge, 2006). Another study proposes an integrative model; with perceived value exerting the larger effect on post-purchase behavior than that of the customer satisfaction (Tam, 2004). In 2009; Blery et al., empirically emphasized relationship between service quality and repurchase intention (Blery, Batistatos, Papastratou, & Perifanos, 2009).

*Service value.* Service quality in general leads to perceived value, and perceived value further leads to customer service satisfaction (Huber & Henneberg, 2007). Perceived risk plays an important role in quality-value relationship, and perceived value-for-money also plays an mediating role between quality, price, risk, and willingness to purchase (Sweeney et al., 1999).

Value is produced when customers use of the product and services provided by the seller. Relationship management is getting close to the customers, understanding their agendas, facilitating their agendas, then collaborating with them to accomplish their goals (Crosby, Grönroos, & Johnson, 2002). Customer relationship management (CRM) is a concept of dual creation of value, for the organization as well as for the customer (Boulding et al., 2005). Even with all best practices in CRM the organization may not be consider as the perfect by the customers (Kallof, Jitesh, & Sadananad, 2009). Over the period of time salespeople develop relationship akin to friendship with their customers (Bäckström, Pitt, Campbell, & Nel, 2009).
Service value is an important predictor of customer satisfaction further leading to behavioral intentions; through cognitive evaluations leading to emotional responses (Lu, Tu, & Jen, 2011). Lately the focus of research is shifting from company’s service process dominant view, to customer’s multi-contextual value formation, involving company (Heinonen, Strandvik, & Voima, 2013).

**Service quality and personality & gender.** Customer expectations have been a subject of curiosity for researchers for years. Finer study of customer expectations shows that expectations can differ based on the gender of the customers (Yelkur & Chakrabarty, 2006). Personality traits like ‘need to evaluate’ service also can moderate effects of service quality, benevolence, and image (H. Hansen & Sand, 2008). Interestingly, stereotypes based on server gender may also affect perceived service quality dimensions (Luoh & Tsaur, 2007). Significant relationship between personalities of the sales person and customer suggest importance of employee-customer fit in service relationships (Teng, Huang, & Tsai, 2007). Service experience also gets affected by social presence of other customers during service encounters (He, Chen, & Alden, 2008).

In case of restaurants, service quality perception are found to be enhanced based on the physical attractiveness of the service employee, specifically responsiveness, and assurance dimension is affected (Luoh & Tsaur, 2009). Customer expectations towards services changes based on factor like age-maturity, and level of affluence (Moschis & Nguyen, 2008), even age related variability is observed in service quality, trust, and commitment (Cho & Hu, 2009). During service failure younger customers are more likely to be affected by negative emotions, thus age is a factor affecting the services failures (Varela-Neira & Vazquez-Casielles, 2010). Customer’s self-efficacy, and emotional intelligence, also has important role in service quality perception (Snell & White, 2011).

Research in prospect theory with service encounter indicate, management of service failure & delight distribution pattern, for effective service quality perceptions (Sivakumar et al., 2014). Customer discrimination is found between gender of the server employee; female server employees are found to be assessed critically on service quality compared to male employees (Parrett, 2011).
Service quality and culture. Globally, service quality dimensions may not be consistent, but the gaps model may be used as a guide to replicate similar studies (Witkowski & Wolfinbarger, 2001). SERVQUAL instrument does not found to be applicable universally, sometime suggesting new dimensions (Greenland, Coshall, & Combe, 2006), except for cultural difference found to be applicable in Philippines (Munoz, Raven, & Welsh, 2006). Service quality perceptions significantly varies across national cultures of the customers (Laroche et al., 2004). Global culture plays significant role as a reaction to the bad service encounter, while anger is a common reaction, African customer’s displayed anger and sadness as a reaction to the bad service encounter (A. M. Smith, 2006). Culture plays an important role in complaining behavior of customers too. Customers from individualist Asian society are less likely to complain compared to individualistic western customer (Chelminski & Coulter, 2006). Cultural dimension and individual contextual factors play differential effect on customer’s risk evaluation of services (Keh & Sun, 2008). Customers from emerging economies are more tolerant of ineffective service as they lack in years of experience, the inverse relationship is found between customer satisfaction and years of customer experience with product use (Gothan & Erasmus, 2008). Research conducted at Israel again reconfirms relationship of culture, with service quality perception (Etgar & Fuchs, 2011).

Service quality and miscellaneous concepts. Lately service quality literature has explored connect of service quality with customer satisfaction, relationship management, experience quality, service waiting-time duration & speed, technology, human resource, co-creation, customer loyalty, personality & gender, and culture as discussed above. This section discusses conceptual relations of service quality with other concepts as follows.


In 1996, 1994; Grönroos and other researchers insisted that improved service quality, and customer satisfaction can drive firm’s profitability (Ravald & Grönroos, 1996; Storbacka, Strandvik, & Grönroos, 1994).
In 2000; Parasuraman & Grewal, suggested that; service quality dimensions, product quality, and price creates—perceived value (acquisition value, transaction value, in-use value and redemption value);—which further results in customer loyalty (Parasuraman & Grewal, 2000).

In 2001; Hui et al., established vital role of employee in; services quality delivery (Hui et al., 2001).

In 2004; Doucet, claimed that hostile behavior displayed by service employee towards customer can lower service quality of the product (Doucet, 2004).

In 2007; Klaus Y Maklan, conceptualized that experience quality, created through service quality;—affects behavior (retention); moderated by intent (customer satisfaction) (Klaus & Maklan, 2007).

In 2007; Iyengar et al., theorized that in case of billed-on usage services; the customer is likely to experience uncertainty of service quality and consumption pattern (Iyengar, Ansari, & Gupta, 2007).

In 2007; Bourdeau et al., claimed that, depending upon service quality of the service partner, service delivered can have spillover positive or negative effect on service quality, (Bourdeau, Cronin, & Voorhees, 2007).

In 2009; Chen et al., confirmed that just offering service guarantee does not improve service quality perceptions (X. (Jack) Chen, John, Hays, Hill, & Geurs, 2009).

In 2009; Bogomolova et al., observed that service quality scores decline over a time period as experience with the service increases, the phenomena is called as temporal decay (Bogomolova, Romaniuk, & Sharp, 2009).

In 2009; Davis-Sramek, tried to understand link between service quality perceptions and satisfaction of retailers (Davis-Sramek, Droge, Mentzer, & Myers, 2009).
In 2009; Ekinci, said part of service quality could be in defining interaction quality as an effect of three personality traits (extroversion, conscientiousness, and agreeableness) (Ekinci & Dawes, 2009).

In 2009; Reimer & Folkes, showed how category based inductive inferences are made by consumer. Consumer generalizes service quality of a category based on another category and customer’s belief of managerial control (Reimer & Folkes, 2009).

In 2010; Wang, suggested service quality, in association with customer-perceived value, and corporate image has positive effect on customer intentions, moderated by switching barriers (C.-Y. Wang, 2009, 2010).

In 2011; Wu & Chan, maintained that supply channel used for service delivery also has significant effect on service quality perception, self-concept, purchase intention, satisfaction, and loyalty (S.-I. Wu & Chan, 2011).

In 2011; Hellén & Sääksjärvi, demonstrated how happiness can be considered as a predictor of customer's service quality evaluation (Hellén & Sääksjärvi, 2011).

In 2011; Anand et al., indicated, how in customer intensive services; the service quality or service value can be optimally designed, with time spent using ‘quality-speed trade-off’ (Anand et al., 2011).

In 2011; Ardagna et al.; proved, ‘solely loyal customers’ tend to give better quality evaluation compared to ‘multi-provider customers’ (Ardagna, Baresi, & Comai, 2011).

In 2011; Gómez: indicated how service quality at intermediaries like franchisees be controlled, through methods of audits, mystery shopping, and purchase of inputs (Gómez, González, & Suárez, 2011).

In 2011; Yang; explained how customer variability (arrival variability, request variability, capability variability, effort variability, variability in subjective
preference, and communication variability) can be looked at from service gaps model; and actions of classic accommodation, classic reduction, low-cost accommodation, and uncompromised reduction (Yang, 2011).

In 2012; Gallan et al., said higher level of customer positivity and participation improves service quality perceptions; and satisfaction with co-produced service experience (Gallan, Jarvis, Brown, & Bitner, 2012).

In 2012; Webber et al. said customer agreeableness, and service provider’s service orientation lead to affective and cognitive trust; further affecting service quality (Webber, Payne, & Taylor, 2012).

In 2012; to explain how firms and customers produce quality, a three stages framework demarking; quality production process, quality evaluation process, quality experience process, is suggested (Golder et al., 2012).

In 2012; Y.-J. Hu found that brand equity moderates, the relationship between service quality and customer loyalty (Y.-J. Hu, 2012).

In 2013; Amin et al., emphasized, how service quality makes a significant contribution to customer satisfaction (Amin et al., 2013).

In 2014; Chamchuntra & Fongsuwan, suggested; service quality, service user trust, & service performance—through customer satisfaction, further leads to repeat purchase intentions (Chamchuntra & Fongsuwan, 2014).

In 2014; Susanti indicated strong relation between; service quality, product quality,—mediated through customer satisfaction; effecting customer loyalty (Susanti, 2014).

In 2014; Koufteros et al., suggested relationship between historic satisfactions, encounter satisfaction, and order fulfillment service quality; but with a paradox (Koufteros, Droge, Heim, Massad, & Vickery, 2014).
In 2014; Huang et al., specified that corporate social responsibility also significantly influence service quality, through corporate image; then on purchase intentions (C.-C. Huang, Yen, Liu, & Huang, 2014).

In 2015; Satsanguan et al., indicated relationship between service quality and customer satisfaction (Satsanguan, Fongsuwan, & Trimetsoontorn, 2015).

There are other theories proposing relationships between service quality with other constructs like; balance theory (Carson, Carson, Knouse Stephen B., & Roe C. William, 1997),

**Service Quality and Failure, Recovery**

Even though service failures are common in service industry, not having corrective service recovery mechanism can be harmful to customer perception of service quality. Employee service recovery performance is found to be highly related to management’s commitment to service quality (Babakus & Yavas, 2003). Better service quality perceptions of past experience, can influence responses of customer to future service failures, and works as a buffer against negative impact on consumer satisfaction (Vázquez-Casielles, Rio-Lanza, & Diaz-Martin, 2007). Further, expected service quality has direct relation with the tendency of customers to complain;— higher the expected service quality, higher the tendency to complaint (Forbes, 2008).

Image and satisfaction plays significant direct role in customer retention; service quality affects retention indirectly through satisfaction (N Mohd Kassim & Souiden, 2007). For organizations with weak customer relationship and problematic service quality; customer is more likely to get disappointed, emotional, and less satisfied (Johnson, Olsen, & Andreassen, 2009).

A simplified method to service quality understanding is, by classifying service errors as; worker controllable, or management controllable (Mergen & Stevenson, 2009).

**Service Quality in Indian Context**

Significant research in service quality is reported from India; some of the examples are; retail store (Parikh, 2006), fast-food (S. K. Jain & Gupta, 2004), shopping mall loyalty (Majumdar, 2005), and telecom (Rahman, 2006).
Generalized scales SERVQUAL and SERVPERF are compared for their validity in Indian market (S. K. Jain & Gupta, 2004). SERVPERF scale tested using structural equation modeling failed in Indian rural banking, thus raising doubts over universal appeal of the scale (Adil, 2013). Similarly, SERVQUAL and RSQS could not found support on reliability and validity in Indian context (Gaur & Agrawal, 2006).

There are attempts to develop a new service quality scale for Indian automobile services (Saravanan & Rao, 2007). Research in banking industry in India suggests four service quality dimensions as; customer-orientedness, competence, tangibles and convenience (Pal & Choudhury, 2009).

**Retail Service Quality Literature**

Research in retail service quality literature is grouped in two sections, the first section is literature investigating ‘can retail be considered as a service’; and the second section is literature related to retail service quality.

**Retail as a service.** In the early phase of services literature, doubts were raised over considering retail as a services or goods marketing activity. The doubts were resolved after long drawn literature debate, by accepting retail as a service and not goods marketing activity. (Bateson, 1985). All retail businesses are services; while some use services for selling goods, some use services for selling goods as well as services (Berry, 1986).

Retailers are brands too; unlike product brands, retailer brands are multi-sensory in nature. Store-image access, in-store atmosphere, price & promotion, cross-category assortment, and within-category assortment are inputs to retailer brand (Ailawadi & Keller, 2004). Congruency of atmospherics in the retail store has a significant positive relationship with customer experience in the store (Mattila & Wirtz, 2001).

Store environmental clues (social, design, ambience) influences store choice of customer, merchandise value perception,—which further influences store patronage intentions (Baker, Parasuraman, Grewal, & Voss, 2002). Recent research advances in the area of retail services marketing has extensively discussed,—retail store environment like ambience & social elements, provide cues that are used by customers for quality inferences (Baker, Grewal, & Parasuraman, 1994). Clues can be
functional clues, mechanic clues, or humanic clues. While, functional clues are technical quality of the product offer; mechanic clues are related to the actual objects or environments like sight, smell, sound, taste, and texture; and humanic clues come from service provider behavior, appearance, words used, tone of speaking, enthusiasm, body language, neatness, and dressing sense (Berry et al., 2006).

Customers prefer retailers where they can save time & energy. By creating convenience retailers can build lasting customer relationships (Seiders, Berry, & Gresham, 2000).

**Retail service quality.** Research indicate that service quality delivered at retailer has positive effect on perceived quality of store brand (M.-H. Huang, 2009). Service quality can work as a differentiator and retailers can charge better markups (Rabinovich, Maltz, & Sinha, 2008). Service quality and merchandise quality at the retailer influences store performance, mediated by customer satisfaction (Babakus, Bienstock, & Scotter, 2004).

Through extraordinary customer service, retail store can leverage differentiated service and provide superior customer experience (Tripathi, 2009). Even cross-buying at retailers depends upon factors like, convenience, service quality (functional, technical), and characteristics of the firm;—through satisfaction and trust;—mediated by category similarity; (Liu & Wu, 2009). Factors like waiting time, product quality and atmosphere also affect customer loyalty in retail (Molina, Martín, Santos, & Aranda, 2009). Various theories and articles on store loyalty are available in literature. Store loyalty intention, can be explained as a complex relationship of; shopping mall loyalty (mall accessibility, ambience, amenities), value perception, overall impression of the store (store amenities, assortment, merchandise quality, personnel service, supporting services), and sales promotion (Majumdar, 2005).

Another research suggests direct relationship of store’s service quality with customer loyalty, except that store pricing, store formats, and shopping enjoyment may change ongoing choice (von Freymann & Cuffe, 2010).

Empirical research using structural equation modeling shows a significant relationship between retailer attributes of; service, value/price, assortment, advertising, and store design; with retail brand equity (Haelsig & Swoboda, 2007). Good service quality and satisfaction also reduces customer propensity to switch, even when the competitor is conveniently located (Leisen, 2006). Retailers self-
perceived store image also indicate that service quality is the most positively distinguishable characteristics of the retailer (Oppewal & Timmermans, 1997). The study conducted at Hong Kong, suggested the service quality perceptions, not just depends upon industry or culture, but also on type of retailer (Meng, Summey, Herndon, & Kwong, 2009).

Aspect of retail customer’s visible characteristics like gender, race, and dressing on service experience has significant effect on retail service delivery (Ainscough & Motley, 2000). Retail customers from collectivist cultures like India, are likely to respond positively to relationships efforts, collectivist are also likely to focus less on service quality; and will be more attracted to social bonding mechanisms of service provider (Ozdemir & Hewett, 2010).

Store employees play an important role in retail service. Employee attitude through customer service establishes sales performance (Simon, Gomez, McLaughlin, & Wittink, 2009). Even customer is an important contributor to service quality at retail. Complaining customers have differential moderating effect on relationship between organizational and supervisory support; and frontline sales staff’s outcome (S. J. Bell, Mengüç, & Stefani, 2004). Customer’s own appearance orientation, and body image also has effect on service quality perception (Yip, Chan, Kwan, & Law, 2011). As discussed in earlier section the retail service quality is one of the high curiosity topics in the literature. A generalized retail service quality scale is proposed by Dabholkar et al.; is an extensively discussed and often utilized scale for measurement of service quality in retail. Retail Service Quality Scale, short formed as RSQS is a hierarchical scale specialized for measurement of service at retailers. Like SERVQUAL the new scale RSQS is not based on disconfirmation approach, but uses only perception score for the analysis (Dabholkar et al., 1996; Kandampully, 1997).

Like SERVQUAL, even RSQS could not support replicate dimensionality (Kim & Jin, 2001). While RSQS has five dimensions of; physical aspect, reliability, personal interactions, problem solving, and policy; a similar scale developed for grocery retail has dimensions of; personal interactions, trustworthiness, physical appearance, policy, and reliability (Siu & Chow, 2003). In retail situation, RSQS instrument reported partly different factors based on the type of retail format (Eysteinsson & Bjornsdottir, 2012).

Even in retail context, in India; it is reported that service quality has an influence over customer loyalty (Sainy, 2010). Exploratory Factor Analysis, at Indian
retail stores has yielded three factors of store attributes; convenience & merchandise mix, store atmosphere, and services (Ghosh, Tripathi, & Kumar, 2010). Research using RSQS found, female customers at emerging economy, also have high expectations from retailer (Erasmus & Grabowski, 2013).

Retail industry of late, is adapting to technology in its operations. Use of self-service technologies (SSTs) like retailing through vending machines is accepted by customers; and lack of personal service is not perceived as an issue. Age seems to have impact on technology adaptation, as some customers resist use of technology in retailing (Mäki & Kokko, 2012). Technology like self-checkout is found to have positive influence on loyalty mediated by customer satisfaction (Demirci & Kara, 2014).

**Research Gap**

Extensive review of 60 years of literature covers many concepts, models and relationships. Two distinctive research gaps are found in the literature; first, in using ‘customer perspective of internal service quality (ISQ) gap’, and; second, analyzing ‘predictive nature of service gaps’.

1. **Customer Perspective of ISQ gap**

   It is hypothesized that while firm has ‘internal service quality’ generated during internal transactions; — it is the predictor of customer’s received ‘external service quality’. If the firm initiates’ improvement in its internal service quality, it is likely to improve firm’s external (customer) service quality. Internal market – external market framework of the firm could be grouped as; expertise capacity, resource capacity, time capacity, economic reward, psychic reward, trust, and control. The framework addresses the ‘why’ part of SERVQUAL (W. & Band, 1995).

In order to conceptualize service quality, researchers have suggested two views; ‘customer perspective’ and ‘producer perspective’. Service quality can be viewed; either externally from customers’ satisfaction point of view; or internally from product attribute point of view (Csipak, Chebat, & Venkatesan, 1995). Based on this dichotomous view for internal and external service quality; literature is grouped in four sections.
### Table 9. Research Gap Identified in Literature

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a. **External service quality using customer perspective.** External service quality using customer perspective has popularly been operationalized using SERVQUAL variants. Extensive literature on the topic is already discussed in earlier sections. This group of literature has studied external service quality by collecting data from customers; under the assumption that customer views are direct reflection of service quality. The limitation of this research is the focus is solely external, and does not investigate issues purely internal to the firm. Customer being the only set of respondent the data collection and analysis is simpler. Most of the research in this group uses SERVQUAL instrument exploring service quality through customer feedback like; hospitality services (Saleh & Ryan, 1991) retail (Finn & Lamd Jr., 1991); but there also are instances of different instruments used other than SERVQUAL.

b. **Internal service quality using employee perspective.** In contrast to external approach, internal service quality approach focuses service quality issues purely internal to the firm. ‘Internal service quality’ interchangeably takes form of ‘internal marketing’ and analyzes internal quality. The data is collected internally from employees to understand interdepartmental quality issues. There are three sub-groups of literature under this section.

1. **Internal marketing/Internal service quality.** This uses situation based instruments for measuring internal marketing/internal service quality. Research using exploratory factor analysis indicated six factors construct of internal service quality as; customer intimacy, team-based continuous improvement, communication, reliability/competence, requisition process and tangibles (Jun & Cai, 2010). Employee job satisfaction and organizations internal service quality have positive relationship with employee’s organizational commitment (Bai et al., 2006). The research suggests, internal customer orientation, promotes internal service quality, which in turn leads to external customer orientation of the organization, thus indicating importance of employee management for better customer service (Anosike & Eid, 2011).
2. Extended SERVQUAL. This is suggested by Parasuraman is an application of SERVQUAL for measuring internal service quality (Parasuraman, 1991). Instead of pure form SERVQUAL; modified versions of this framework like INTSERVQUAL can also be used.

3. INTSERVQUAL. This internal service quality model is already discussed in earlier section is an instrument developed for measuring internal service gaps using front line employees and organizations support staff.

Limitation of employee view to service quality is that the research delves mainly in organizational behavior of the firm, and fails to connect to the customer view of the service quality, unless a strong operationalization method is used.

c. External service quality using employee perspective. There is some literature where front-line employees are used to judge external service quality experienced by customers. This approach assumes that; since front line employees interacts with customers, are also better judge to external service quality. This approach is used in explaining significant relationship of organizational commitment to external service quality (Malhotra & Mukherjee, 2003). Similar approach also claims, employee service training programs, and clear service vision of the organization are more effective than method of performance incentives (Y. Tsai & Tang, 2008). Employee perspective of external service quality is used to establish its relationship with internal service constructs (Vella et al., 2009). This approach is also used in retail store setting (Weitzel et al., 1989); as well as to establish contribution of; customer contact employee job satisfaction & affective commitment to; service quality delivered to the customers (Wong & Cheung, 2014).

The limitation of this approach is employees may fail to correctly perceive external service quality expectation, there is supporting evidence to this claim (Yavas, 2006).
d. *Internal service quality using customer perspective*. Extensive literature review could not find any literature using customer perspective to understand internal service quality, and its relationship with external service quality. Since customer may not be aware of internal happenings at the service organizations, he/she may not be a right judge to internal service quality. However during purchase of product like television; customer’s presence in the store gives him the opportunity to listen and see the internal interactions among employees up to the ‘line of visibility’; added to this is his own interactions at ‘line of interaction’, thus qualifying him to be the good evaluator of internal service quality. See Figure 40, explaining interactions of a typical customer at television retail showroom.

Based on the above discussion this study aims to explore predictive relationship between internal and external service quality, using customer view. This study is the first to use customer’s view to internal service quality. The research gap identified during literature is explained in tabular form as in Table 9.

At this stage it is worth noting the extensive research methodology used by Opoku et al., 2009 and Urban, 2011 to establish relationship between external service quality and internal service quality by collecting data from customer’s as well as employees (Opoku et al., 2009; Urban, 2011).

This effort to collect data from customers and employees is a daunting exercise. Firstly, because it requires larger sample sizes as more groups are involved. Secondly; the difficulty of operationalizing the concept across interface of customers, contact employees, and managers require complex research design (Parasuraman, 1991). Thirdly, covering all internal service gaps is operationally difficult, as same respondent has to repeatedly answer similar questionnaire one after another (Saleh & Ryan, 1991). Fourthly, operationalizing such study using covariance research in structural equation modeling (SEM) is furthermore difficult because of requirements of large sample size and higher data sensitivity.
2. Predictive Interrelationships of Service Gaps

Very little literature could be attributed to investigating predictive nature of service gaps. SERVQUAL model proposed by Parasuraman in 1985 hypothesizes simultaneous predictive nature of various service gaps presented below.

- Knowledge gap → Design gap
- Design gap → Delivery gap
- Design gap → Communication gap
- Delivery gap → External gap
- Communication gap → External gap

None of the existing literature has impressively investigated the whole and simultaneous predictive relationships of service gaps as proposed in the model. Listed below is research work which investigates the relationship to some extent.

- In 2013, Choi et al. postulated, how interactions between customers exert influence on service quality perceptions, and repeat purchase intentions typically at retail stores, based on customers attribute of blaming the retail store (Li, Choi, Rabinovich, & Crawford, 2013).

- Luk & Layton has conducted a comprehensive research and established effect of knowledge of frontline employees on external service quality. The research is one of the few covering customers, front-line employees, and managers (Luk & Layton, 2002).

Considering no mentionable literature exploring predictive nature of service gaps; the present study takes the objective of exploring this relationship using structural equation modeling. In 1988, Zeithaml et al, has mentioned the need of investing this as a future scope of research (V. A. Zeithaml et al., 1988).

Conceptual Framework

Based on the literature review and the research gaps found; the conceptual framework is hypothesized as displayed in Figure 37. The model indicates predictive,
direct, and simultaneous relationships between constructs of knowledge gap, design
gap, delivery gap, communication gap and external gap.

Figure 37. Hypothesized Research Model

The path diagram of the hypothesized model has arrows indicating predictive
relationship among internal and external service gaps constructs. These predictive
paths are to be tested, simultaneously for their significance. The arrows indicate;

\[ H_01: \text{Knowledge gap has significant predictive relationship with design gap.} \]
\[ H_02: \text{Design gap has significant predictive relationship with delivery gap.} \]
\[ H_03: \text{Design gap has significant predictive relationship with communication gap.} \]
\[ H_04: \text{Delivery gap has significant predictive relationship with external gap.} \]
\[ H_05: \text{Communication gap has significant predictive relationship with external gap.} \]

The next chapter discusses development of constructs, scales and; extensive
testing of validity & reliability for the hypothesized model.

Chapter Summery

This literature review is taken up considering importance of service quality to
service industry. The review covered most of the relevant work in the topic.
Conceptual base of service gaps is disconfirmation theory, service gaps model, and
SERVQUAL scale. The review analyzes SERVQUAL and its subsequent variants
like SERVPERF, RSQS, INTSERVQUAL, many other industry specific models and
applications of the models.
Literature review also explores relationship of service quality with important concepts of customer satisfaction, relationship management, experience quality, technology and others. The review discusses service quality relationship with service failure & recovery. In specific context the chapter explores literature in Indian and retail management; identifies research gaps as; the methodological approach of customer as respondents and;—in unexplored predictive nature of service gaps. Next chapter elaborates research methodology used to conduct the primary research in establishing relationship in the model.