# Unboxing SERVQUAL: SQuID Inside!

*by* Sihar Tigor Benjamin Tambunan

# Unboxing SERVQUAL: SQuID Inside!

**Tigor Tambunan**

*Department of Accounting, Widya Mandala Surabaya Catholic University, Indonesia*

*Corresponding author: tigor_tambunan@ukwms.ac.id

## Abstract

Maps based on bibliographic data of 50 of 264 keywords in 111 papers show that service quality, SERVQUAL, and customer satisfaction are the most popular topics in service management research. The discussion about costs are relatively minimal and is not directly related to SERVQUAL but to service quality and customer satisfaction. This empirical evidence is interesting, given that cost is an intrinsic element of service quality that is much more measurable and controllable in practice. The logical relationship between price, cost, activity, and service quality was studied to find the possibility of placing the cost aspect into the original model of SERVQUAL. A mixed methods study combining preliminary theoretical evaluation and empirical research findings is used to develop the model of ServQual. This study succeeded in presenting gaps 6 and 7 inside a framework called the Service Quality Improvement Driver (SQuID). SQuID clarifies the significant relationship between service quality, cost, and price on SERVQUAL. This framework can help companies analyze and develop traceable service quality comprehensively and improve service quality effectively, even on an ongoing basis. Further research in the geographical context shows that the SQuID framework can be a practical solution for Asian businesses that are already quite familiar with SERVQUAL. Cultural-based service quality in the dimensions of tangible and empathy need special consideration when implementing the SQuID framework in several business sectors in Asia.

**Keywords:** Service Management, Service Dimension, Service Quality, SERVQUAL, Service Price, Service Cost

## Introduction

Services can act as products like goods or as complementary aspects that accompany the delivery of a product to its users (Parasuraman *et al.*, 1985; Zeithaml *et al.*, 2017). Several researchers and managers argue that service quality results from comparing consumer expectations with their perceived service performance (Berry *et al.*, 1988; Jo Bitner *et al.*, 1997; Zeithaml *et al.*, 2017). Service quality also significantly affects the company's or product's positioning strategy (Berry *et al.*, 1988; Ladhari, 2009; Zeithaml *et al.*, 2017). The issue is that consumers find it difficult to articulate the service quality and the activities that influence it (Parasuraman *et al.*, 1988; Park *et al.*, 2021). SERVQUAL comes as a method and a logical flow of measurements carried out by service providers and users on the advantages or disadvantages of a service entity (Moon, 2013; Parasuraman *et al.*, 1985).

**Figure 1 Current Research Map on ServQual**
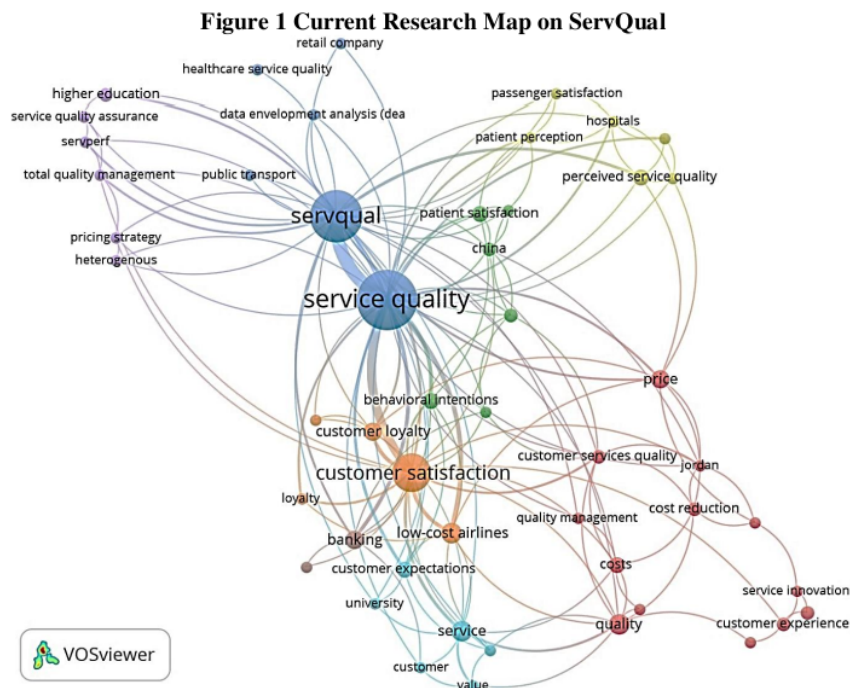


VOSviewer has been used to map the relationship among 50 of 264 keywords in 111 SERVQUAL-related papers, with two minimum occurrences (Figure 1). This bibliographic map shows that service quality, SERVQUAL, and customer satisfaction are the three most popular research variables in the service area. This map reveals that research on SERVQUAL is mainly linked to service quality in the performance assessment context (Chatzipetrou and Moschidis, 2018; Ladhari, 2009). They also show how these evaluations influence customer satisfaction and behavior in various sectors (Akamavi *et al.*, 2015; Fida *et al.*, 2020; Koay *et al.*, 2020; Liu and Lee, 2016; Mey *et al.*, 2006; Mm and Jasim, 2021; Russell *et al.*, 2015).

Research directly links price with service quality and SERVQUAL is relatively frequent (Akamavi *et al.*, 2015; Kim and Wook Kim, 2010). It is not surprising because the price is an extrinsic signal of quality. For example, hotels are frequently classified according to star ratings. A four- or five-star hotel's facilities will be more lavish and pricier than a lower-star hotel in the same region. The price significantly affects the perceived service quality of high-star luxury hotels rather than lower ones (Giannakos *et al.*, 2014). Research suggests that services that do not add value to the customers should be eliminated. This action will simplify pricing for the hotel and reduce customer disappointment (Aladwan and Alsinglawi, 2018; Ye *et al.*, 2014).

Research on health services shows that outpatient departments need instruments to monitor their available services. Patients' opinions of medical staff's service quality significantly affect overall service quality perceptions (Giovanis *et al.*, 2018). Patients can leave providers unable to meet their needs quickly (Kennedy *et al.*, 2015). Patients pay attention to specific dimensions and values of quality in choosing health services. This value is reflected in the patient's perception of the price fairness they pay (Lai *et al.*, 2020; Russell *et al.*, 2015). Again, service quality triggers the gap in the service price and vice versa.

A low-cost airline survey shows that employees' effective service affects service quality and passengers' perceptions of price worthiness. Employees' self-efficacy reduces terrible service experiences and increases passenger satisfaction (Akamavi *et al.*, 2015). Self-service technology-based facilities have become an option for the airline industry to achieve work efficiency and positively influence customer loyalty (Yusra, 2018).

In the banking industry, the development of digital technology has proven to be an excellent instrument for lowering service costs while developing various non-core bank businesses (Mbama *et al.*, 2018). The Internet can even personalize bank services at meager operating costs while addressing the high heterogeneity of service requests (Broderick and Vachirapornpuk, 2002). Financial services have been compelled to adapt to changing customer requirements by providing high-quality banking services (Hamzah *et al.*, 2017; Mbama *et al.*, 2018).

Previous studies show that effective activity-cost management can control the service quality-price relationship. Interestingly, although the cost is; an intrinsic element of service quality (Sharabi and Davidow, 2010), the element of the price that is absorbed by service activities (Blocher *et al.*, 2019; Cooper and Kaplan, 1992; Guerreiro *et al.*, 2008; Piercy and Rich, 2009); and determine the customer satisfaction (Morikawa, 2021; Parasuraman *et al.*, 1985), none linked to SERVQUAL. Contrary to price, cost's role in several service quality dimensions appears to be overlooked.

Customer satisfaction will rise as service quality improves, but the company's limited resources should not be neglected (Akamavi *et al.*, 2015; Piercy and Rich, 2009; Shen and Yahya, 2021; Zeithaml *et al.*, 2017). For consumers, price contributes to the perception of pre-purchasing and post-purchasing satisfaction (Agus *et al.*, 2007; Lai *et al.*, 2020; Ye *et al.*, 2014; Zeithaml *et al.*, 2017). From another viewpoint, service providers must recover service costs and profit by setting the prices (Abu-Salim *et al.*, 2017; Law *et al.*, 2022; Liping and Carsten Ørts, 2016; Rust *et al.*, 2002).

**Table 1 Previous Research on the Role of Cost or Price on Service**

| No | Author | Location | Industry | Findings |
|---|---|---|---|---|
| 1 | (Ye *et al.*, 2014) | China | Tourism and Hospitality | Price affects pre-purchasing perception and post-purchasing satisfaction |
| 2 | (Aladwan and Alsinglawi, 2018) | Jordan | Tourism and Hospitality | Target costing is effective for reducing costs due to non-value-added products or services. |
| 3 | (Ramdeen *et al.*, 2007) | United States | Hotel and Restaurant | Investment in prevention activities led to a reduction in failure costs according to inadequate services. |
| 4 | (Akamavi *et al.*, 2015) | England | Air Transport | Low-cost airlines have a minimum target of service quality |
| 5 | (Liu and Lee, 2016) | Taiwan | Air Transport | Airplane passengers generally make trade-offs between the service quality and the price paid or will be paid. |
| 6 | (Law *et al.*, 2022) | Laos | Air Transport | Service quality affects customer satisfaction. The dimensions of service quality that are very important are the dimensions of tangible, reliability, and dependability. |
| 7 | (Luke and Heyns, 2020) | South Africa | Public Transports | Safety, policing, maintenance, and the accompanying poor levels of reliability are common areas that are overlooked. |
| 8 | (Hamzah *et al.*, 2017) | Malaysia | Banking Industry | The use of Internet technology in banking services can reduce operational costs. |
| 9 | (Kennedy *et al.*, 2015) | United States | Medical | Improving medical care is the right thing for patients, and in a value-based payment model, it helps keep a business afloat. |
| 10 | (Lai *et al.*, 2020) | Malaysia | Medical | Any price changes should reflect an increase in service quality |

These studies show that the relationship between service quality, price, and service costs occurs in various times, industries, and regions, including Asia (Table 1). Moreover, the service sector is rapidly developing into a critical business engine for the economic growth of every country in Asia (Park and Shin, 2012). The increasing competition between businesses and new pricing methods has prompted companies to evaluate prices and their pricing methods (Morikawa, 2021). To reduce customer dissatisfaction and waste of resources, identifying the suitable service-related activities and quality that customers need must be accomplished (Aladwan and Alsinglawi, 2018). Data Envelopment Analysis (DEA) was used to determine the relative efficiency of firm resources in reaching a combination of perception and expectancy on each

dimension. However, it only succeeded in defining service quality improvement objectives. How to make it happen and the cost consequences have not been disclosed (Fida *et al.*, 2020; Lee and Kim, 2012; Sharabi and Davidow, 2010). The use of DEA to assess the efficiency of Asian cultural tourism has resulted in the disclosure of business financing strategies, which is the goal of this study. Unfortunately, the study does not explain how the DEA results reflect service quality (Wu and Lin, 2022).

Determining competitive prices must begin with calculating the correct service costs while reflecting effective and efficient activities (Liu and Lee, 2016). SERVQUAL has proven to help describe customer perception but has not provided sufficient complete information as an accountable direction for service quality improvement (Ghotbabadi *et al.*, 2015; Ladhari, 2009). The original SERVQUAL model appears to be a descriptive diagnostic. Combining SERVQUAL with other methods, such as Quality Function Deployment, may provide an improved solution but with repetitive or redundant activities (Camgöz-Akdağ *et al.*, 2013). Therefore, research exploring hidden prescriptive aspects in SERVQUAL must be followed up. The relationship between the dimensions, activities, cost, and service price on SERVQUAL must be studied to overcome this deficiency effectively.

## Literature Review

### Dimensions of Service Quality

Services are heterogeneous. They might differ in time, location, and customer types (Khan, 2003; Parasuraman *et al.*, 1985). The heterogeneity of services is increasing because customers are co-producers of service delivery. This role reduces the service provider's ability to control the consistency of the service quality (Khan, 2003; Ladhari, 2009; Wirtz and Zeithaml, 2018). Service quality can be described in five dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Jo Bitner *et al.*, 1997; Parasuraman *et al.*, 1985; Zeithaml *et al.*, 2017).

Physical service delivery features, such as physical buildings, staff appearance, instruments, or equipment, are all part of the tangible dimension. Perceptual judgments can be damaging if what is seen, heard, and felt is the opposite. Tangible dimensions in the digital era can be seen in web design aesthetics, ease of use, virtual tours, and visualization (Moon, 2013). Tangible attributes may play a significant role as pull factors to a location in the tourism sector (Adruce *et al.*, 2021). Adding environmentally friendly attributes to the tangible dimension can increase the value of customer perception (Abisuga *et al.*, 2020; Khan, 2003).

Reliability is related to the consistency in providing promised services through customer communication channels. Identifying and calculating service quality costs on reliability is relatively more complex than tangible (Parasuraman *et al.*, 1985). Standardization of operational procedures is an essential factor affecting this dimension. Reliability-related activities provide services according to a predetermined time duration, keeping transaction records properly and billing accuracy. Likewise, some physical facilities, such as computers, database management programs, and employee skills training, are not visible directly to the customer (Law *et al.*, 2022; Wirtz and Zeithaml, 2018; Zeithaml *et al.*, 2017).

The responsiveness dimension concerns the availability and readiness of employees to provide services when needed. This dimension relates to how employees respond to general and specific customer requests, the speed of payment services, and handling complaints. The responsiveness is also influenced by Standard Operating Procedures and various tangible facilities (Abisuga *et al.*, 2020). The distinction is that customers might have diverse experiences with this standardized responsiveness (Zeithaml *et al.*, 2017). Service customization, which leads to the imposition of additional fees, is one of the activities in this dimension (Ma *et al.*, 2019).

The assurance dimension relates to employees' knowledge, courtesy, and ability to assure customers that their needs will be met as expected (Ramanathan *et al.*, 2018). The ability of service providers to minimize customer intervention is a basic form of assurance with some cost consequences (Kim and Wook Kim, 2010). Service providers must design service delivery systems (Ma *et al.*, 2019). Such as reporting system will encourage customers to employ cheaper information exchange behavior (Youngdahl and Kellogg, 1997).

Meanwhile, empathy is a quality dimension of the company's care and attention to its customers without being asked. Empathy has a significant role in certain products (Izogo, 2015). The right reward system can mobilize empathy from workers (Lin *et al.*, 2021; Sharabi and Davidow, 2010). Empathy manifests itself by making customers feel safe in transactions, providing necessary information, answering questions, and being courteous (Khan, 2003). Western countries rely on contracts regarding trust, whereas some Asian countries, such as China, rely on reputation and history (Xiong *et al.*, 2021). In addition, responsiveness, assurance, and empathy are three of five dimensions of service quality directly affected by human performance (Berry *et al.*, 1988; Ramanathan *et al.*, 2018).
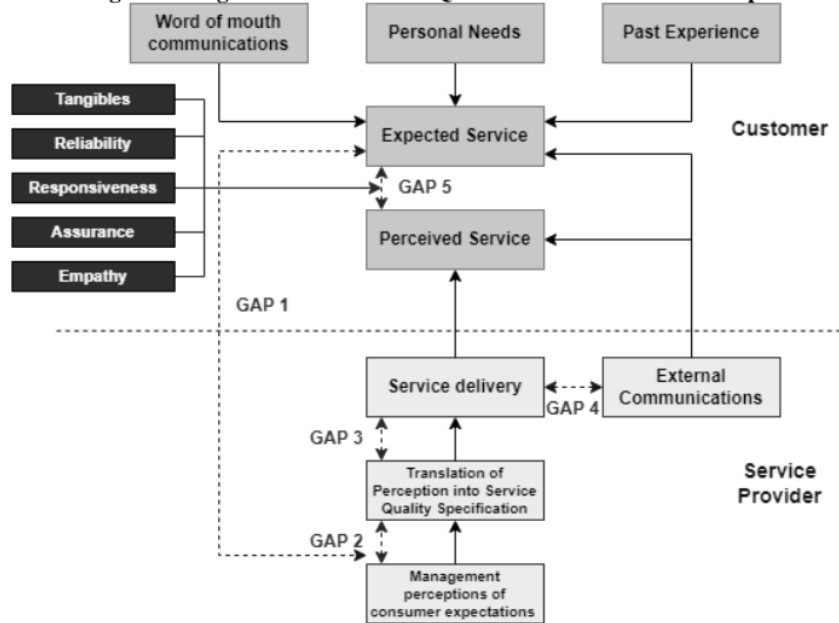
**Servqual**

SERVQUAL is a very effective analytical method to identify and manage five gaps in the production and consumption of services.

These are the knowledge, policy, delivery, communication, and customer gaps (Figure 2) (Parasuraman *et al.*, 1985; Zeithaml *et al.*, 2017).

The knowledge gap (gap 1) is the difference between what customers expect and what management believes or knows. Ideally, companies must provide services that exceed customer expectations (Abu-Salim *et al.*, 2017; Agus *et al.*, 2007). Therefore a company's management must have an accurate and up-to-date understanding of customer expectations (Berry *et al.*, 1988). The policy gap (gap 2) is the difference between management's perceptions of customer demands and how those perceptions are translated into policies and service delivery standards. Even if management understands consumer expectations, the translation into formal procedures may not be strong enough to guide their subordinates' conduct. The delivery gap (gap 3) causes customer dissatisfaction regarding the failure to deliver efficient service quality. This gap is the difference between service delivery policies and the realization. An incompetent workforce and inefficient working conditions are often the cause (Berry *et al.*, 1988). The communication gap (gap 4) is the difference between what is advertised and delivered to customers, including price (Liu and Lee, 2016). This gap might arise

for several reasons, including the company's promise of better service than the actual situation (Parasuraman *et al.*, 1985). The customer gap (5th gap) is the difference between what the customer perceives and expects from the service. The gap between what consumers anticipate from service and what they believe they have received is one of the most prominent reasons for customer dissatisfaction. Gap 5 is the sum of the cost of gaps 1,2,3, and 4 on the related dimensions (Ladhari, 2009; Parasuraman *et al.*, 1985).

**Figure 2 Original Model of SERVQUAL with Dimensions on Gap 5**



SERVQUAL has faced several criticisms regarding model reliability, scores, validity as a predictive instrument, and contextual applicability in its development (Ladhari, 2009). Developments on the original SERVQUAL model and newer models such as ServPref and HedPerf continue to answer these criticisms (Cronin and Taylor, 1992; Rodrigues *et al.*, 2011).

**Target Costing**

Target costing is a process for planning, managing, and reducing costs. Target costing prevents companies from offering products or services that fail to generate the desired revenue (Blocher *et al.*, 2019). Several parties recommend this method as an efficient managerial tool to manage existing or new products and services (Aladwan and Alsinglawi, 2018; Blocher *et al.*, 2019). This system helps companies eliminate non-value-added costs from the early design stages to product or service development. Target costing recognizes the need for actions to balance trade-offs across the organization, including developing a team to deal with these problems as soon as possible in the product/ service development cycle; of course, the ultimate goal is to make money, grow and increase value (Liping and Carsten Ørts, 2016).

The target costing method was initially defined and applied in manufacturing companies (Aladwan and Alsinglawi, 2018). In the service business, the target costing

method can increase management's ability to manage its business processes more profitably and focus on customer demand at a reasonable service price (Aladwan and Alsinglawi, 2018). In certain studies, consumer-perceived pricing is frequently connected with other categories, including benefit, cost, utility, value, and quality. Some consumer behavior experts believe that customers' perceptions of price appropriateness are comparable to their perceptions of value, usefulness, and quality. Perceived price results from evaluative judgments, whereas perceived value, usefulness, and quality are socially accepted norms that serve as the foundation for such evaluations. (Lai *et al*., 2020).

Consumer sensitivity to prices forces companies to find effective operating methods to reduce prices while adding benefits such as attracting buying interest, loyalty, and increasing market share (Lai *et al*., 2020). Consequently, Cost to Serve (CTS) is vital in realizing sales (Guerreiro *et al*., 2008). CTS is like a double-edged sword. CTS that is too low will affect customer relationships, but too high will be detrimental to the company (Li, 2018). Companies should always ask, how much profit can companies make for every dollar spent on CTS? Thus, linking price and profit with CTS forms a rational basis for evaluating service quality (Li, 2018).

## Methodology

Exploring earlier SERVQUAL articles, both conceptual and practical, is the first step in this conceptual research. The diversity of business sectors and regions is considered when choosing previous empirical or case studies to ensure theoretical background convergence. The next stage is to use VOSviewer to perform a bibliography study (Dolhey, 2019; Zhao *et al*., 2021) to determine where service costs stand in various service quality studies, particularly those that use the SERVQUAL, both the original (Parasuraman *et al*., 1988) and modified models (Cronin and Taylor, 1992; Ladhari, 2009; Luke and Heyns, 2020; Rodrigues *et al*., 2011).

Some basic theoretical studies related to service dimensions, SERVQUAL, and target costing, combined with empirical studies, especially in Asia, are prepared as a basis for developing a new conceptual framework using mixed methods (Greene *et al*., 1989). Discussion materials on monetary aspects in various service dimensions are a special consideration in preparing theoretical constructs.

A new SERVQUAL conceptual framework was developed to incorporate cost aspects into the original SERVQUAL model. The discussion section presents a SERVQUAL improvement scenario in several service dimensions to simulate implementing the SQuID framework. Specifically, a study on the implications of SQuID for Asian businesses was added.

## Discussion

The original SERVQUAL model only identifies service quality problems through gaps 1 to 5. No research openly shows how improvements should be made and the cost consequences. Some only focus on describing the gaps. Several companies set a priority or importance scale for service quality improvement based on the size of the gap 5 of

each dimension. The wider the gap of an element in a dimension, the higher the priority. Some carry out dimension weighting to emphasize the priority scale (Brysland and Curry, 2001). Due to particular contexts, others modify the SERVQUAL instrument (Ladhari, 2009; Luke and Heyns, 2020). Several companies in certain industries, such as tourism, prioritize specific dimensions for improvement (Berry *et al.*, 1988; Izogo, 2015; Zeithaml *et al.*, 2017). Do these priorities applicable or not? No one has explained explicitly. It depends on everyone's perception in setting priorities, logic, and analysis flow. The use of modified SERVQUAL is prone to be influenced by the subjectivity/ interests of researchers or companies that want to measure the quality of their services in its dimensions. That is all.

Let us adopt some Asian business case studies to look deeply into the missing link between service quality problems and their potential activities improvement:
1. The main reason Laotian passengers use airlines in Laos is to save time. If the service quality is improved, these passengers will consider increasing their flight frequency. Visual brand features such as corporate logos and frontline personnel uniform designs are suggested to attract consumers' attention to local culture (tangible dimension) and raise passenger confidence in the airline business (assurance dimension). Providing onboard technology, such as in-flight Wi-Fi, in-seat power, and in-flight entertainment, may also be an effective way to improve service quality (Law *et al.*, 2022).
2. The patient's perception of health care quality in Syria shows that all service dimensions are undesirable except for the tangible dimension. Based on patient expectations, empathy got the greatest score. The most significant unfavorable gap was connected to the hospital staff's listening abilities and time spent with patients. The positive gap in the tangible dimension occurs because the patient's expectations are relatively low. Interestingly, this study shows that improvements in the tangible dimension play an important role in neutralizing negative gaps in other dimensions of service quality. Furthermore, medical and paramedical staff communication skills should be strengthened to improve patient impressions of healthcare services (AlOmari, 2021).
3. Low consumer perceptions and negative gaps in all dimensions also occur in vocational and technical colleges in Iran. The biggest gap occurs in the tangibles dimension. Facility maintenance actions and quality improvement are recommended to reduce this gap (Akhlaghi *et al.*, 2012). Service quality costs in the tangible dimension are more quantifiable than others since their existence is reasonably apparent to human senses. Giving different weights (modified SERVQUAL) makes responsiveness and assurance dimensions the two dimensions with the highest ratings.
4. The absence of studies on the management of service quality in Malaysian banking and the rapid expansion of international banks are two factors that make the issue of service quality critical in Malaysian banks. Foreign banks forced local banks to find ways to maintain their respective competitiveness. Banking products are intangible. As a result, the customer-service provider relationship is typically used to evaluate a bank's level of service. Satisfying service tends to make customers trust the bank, which in turn will improve the bank's reputation. Interestingly, although research also reveals the critical role of the tangibility dimension as a supporter of bank service reputation (e.g., parking lots, ATMs, modern equipment displays, attractive brochures), there are no recommendations for economically feasible improvements on the dimensions discussed (Hamzah *et al.*, 2017).

These studies confirmed that determining the service quality-activities relation and the gap's size as the basis for the priority of service quality improvement is quite doubtful in implementation (Khare, 2013).

**Figure 3 Multidimensional Gap 5**
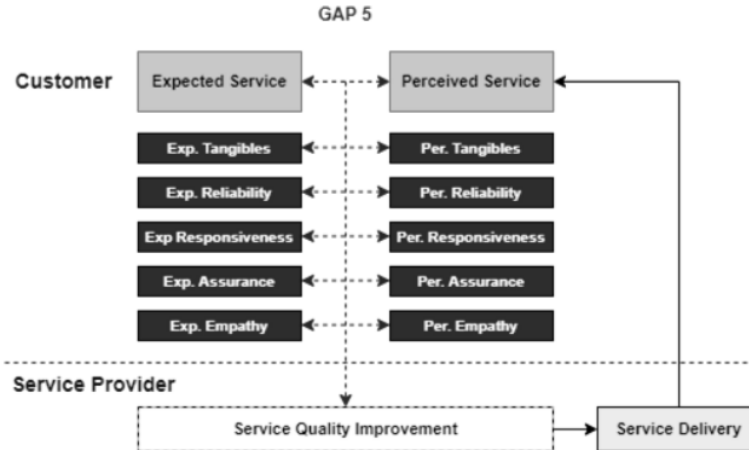


Conceptually, service quality improvement is triggered by a negative value in gap 5. Therefore, modification of the SERVQUAL model starts from gap 5 (Figure 3). However, some case shows that the perceived value higher than expectancy also needs to be considered. This SERVQUAL model modification began by showing five service quality dimensions' position on the original model. The priority of service quality improvement varies because the rationality used also varies. Each rationality will generate activities and cost consequences. Due to the service quality-cost unique relationship, the cost must be treated carefully (Piercy and Rich, 2009; Tomic *et al.*, 2018; Wirtz and Zeithaml, 2018).

In practice, companies can conduct customer research, increase the intensity and quality of interactions between management and customers or between management and service staff, and improve services based on customer suggestions after they have been validated to close gap 1 (Berry *et al.*, 1988; Jo Bitner *et al.*, 1997; Lin *et al.*, 2021; Zeithaml *et al.*, 2017). Companies must create appropriate service quality standards to close the gap 2. Ensuring a good proportion of remuneration between job levels and the service quality provided, setting relevant and measurable service quality goals, training managers to become service quality leaders or references, updating policies related to service quality regularly, and rewarding employees for meeting quality goals are examples (Berry *et al.*, 1988; Tomic *et al.*, 2018; Zeithaml *et al.*, 2017).

To reduce gap 3, companies must ensure that performance meets standards (Ramdeen *et al.*, 2007). Training employees, providing them with the right technology, tools, and equipment, emphasizing internal marketing, and taking steps to keep top performers are all important (Izogo, 2015; Koay *et al.*, 2020; Mm and Jasim, 2021; Ramdeen *et al.*, 2007; Wirtz and Zeithaml, 2018). To close gap 4, companies must ensure that the delivered product or service is as communicated (Kim and Wook Kim, 2010; Zeithaml *et al.*, 2017). Some things that can be done to cover this include considering employee

input regarding creatives, using reality advertising where actual customer/actual employee figures and reviews are presented, and managing customer expectations realistically (Tomic *et al.*, 2018).

**Figure 4 Service Quality Improvement Driver (SQuID) Framework**
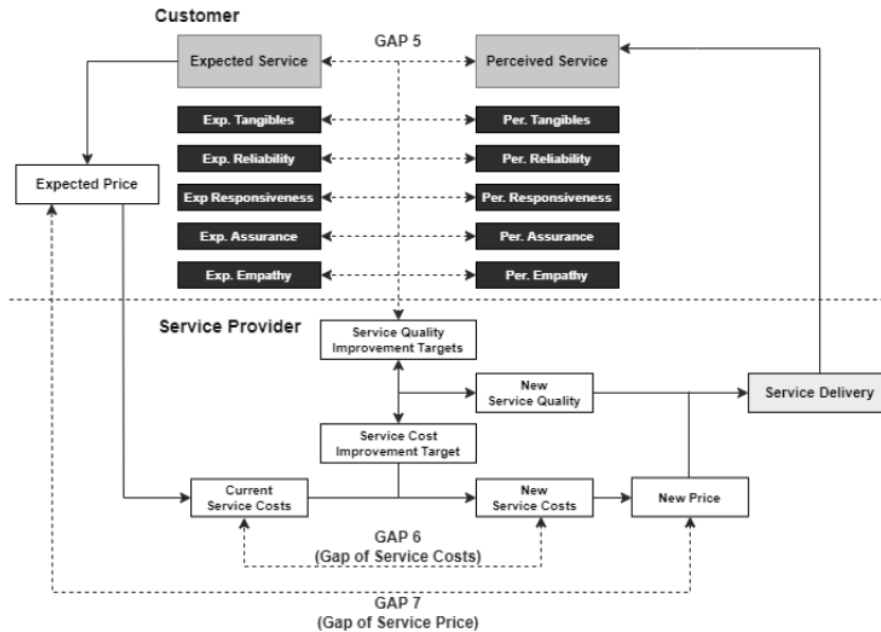


In practice, it turns out that these five gaps are not enough to become the only basis for improving the service quality. Price is critical for customer perception (Lai *et al.*, 2020; Liu and Lee, 2016; Shen and Yahya, 2021). Customers will state whether the price paid is appropriate, including mentioning the price they think they deserve to pay when it is too high or too low (Beltagui and Candi, 2018; Liu and Lee, 2016; Ma *et al.*, 2019). Gap 5 indicates the failure of service providers to meet customer needs on the related dimensions.

Restoration of gap 5 is tantamount to the cost of preventing future re-emergence of gap 5. If the company adds the same activity to reduce the gap in a dimension, there will be a proportional increase in costs. If the activities carried out are different, the cost/unit of activity will also differ (Blocher *et al.*, 2019; Cooper and Kaplan, 1992). As a result, the relationship between service quality-cost is unavoidable. Therefore this conceptual research recommends the gap in service costs (gap 6) as an essential consideration for improving the service quality. Gap 6 is the difference between new and current service costs (Figure 4).

Meanwhile, the gap in the service price (gap 7) is the difference between the new price and the customer-expected price, the so-called expected price. Gap 7 is influenced by gap 6 directly or indirectly. Gap 7 will be zero if the company can realize the customer-expected price from the beginning. The new price due to pricing evaluation is unavoidable in business management related to competition and customer satisfaction. Of course, the new price is not a mere price reduction policy (Sharabi and Davidow, 2010; Wirtz and Zeithaml, 2018). The new lower price must be logically preceded by

a decrease in service costs (new service costs < current service cost). Service cost reduction is a rational reason to make the new price equal to, even lower than expected (Berry *et al.*, 1988; Kim and Wook Kim, 2010; Ladhari, 2009; Piercy and Rich, 2009). In brief, this modification model shows that SERVQUAL has cost consequences that must be carefully analyzed before being executed (Ye *et al.*, 2014). This study has unboxed the original SERVQUAL model and found Service Quality Improvement Driver (SQuID) inside (Figure 4). The braid of the result of research on service quality-price, the natural relation of price-cost, service quality-activities, and service quality-cost has revealed the "tentacles" of SquID; they are expected price, service quality improvement targets, service cost improvement targets, current service costs, new service costs, and new prices. Current service costs are the financial manifestation of management's perception on consumer expectations.

Thus, a negative value in gap 5 indicates management's inaccuracy in understanding consumer expectations and service quality costs. In more detail, gap 5 indicates the need for more effective service quality cost management. The target costing can be applied when determining the new price and new service costs, where the difference between the new price and new service costs is the target profit (Liping and Carsten Ørts, 2016). So, if the company has set the profit target while the new price is the same as the expected price (gap 7 is zero), the new service cost becomes the new target cost.

Following are the recommended steps in implementing the SQuID framework:
1. Identify current gap 5 in each service quality dimension ($D1\_G5_c$, $D2\_G5_c$, $D3\_G5_c$, $D4\_G5_c$, and $D5\_G5_c$) followed by gaps 1-4
2. Calculate each dimension's service quality improvement target or new gap 5 target according to the priority scale for each improvement alternative ($D1\_G5_{nx}$, $D2\_G5_{nx}$, $D3\_G5_{nx}$, $D4\_G5_{nx}$, and $D5\_G5_{nx}$). Service quality heterogeneity reduction can be a general target.
3. Identify expected prices.
4. Define target costs on each dimension ($SC_{nx}$, $AC_{nx}$, $CR_{nx}$).
5. Calculate the gap in service costs by comparing the new service cost ($SC_{nx}$) to accommodate the expected price and compare it with the current service costs ($SC_c$).
6. Make a trade-off of service cost improvement targets for each service quality improvement target.
7. Delivery of the new service quality and price.

On the one hand, gap 6 can serve as a cost reference for service providers; on the other hand, the presence of gap 7 completes gap 5 as a component of customer feedback that the firm requires to improve service quality (Jo Bitner *et al.*, 1997; Lai *et al.*, 2020). Theoretically, gaps 6 and 7 strengthen the role of communication as a determinant of service quality, where one of the primary roles of communication is to explain the trade-off between service and cost (Hui *et al.*, 2013; Kim and Wook Kim, 2010; Liu and Lee, 2016; Parasuraman *et al.*, 1985).

**Table 2 Evaluation of the Effect of SERVQUAL Improvement on Several Dimensions (simulation)**

| Dimension | Gap 5 | SERVQUAL Improvement-Affected Dimension | | |
|---|---|---|---|---|
| | Current | $SQuID_1$ | $SQuID_2$ | $SQuID_x$ |

| | | SQ$_1$ | Gap 5$_{n1}$ | SQ$_2$ | Gap 5$_{n2}$ | SQ$_x$ | Gap 5$_{nx}$ |
|---|---|---|---|---|---|---|---|
| Tangible (D1) | D1_G5$_c$ | Ö | D1_G5$_{n1}$ | Ö | D1_G5$_{n2}$ | Ö | D1_G5$_{nx}$ |
| Reliability (D2) | D2_G5$_c$ | Ö | D2_G5$_{n1}$ | Ö | D2_G5$_{n2}$ | Ö | D2_G5$_{nx}$ |
| Responsiveness (D3) | D3_G5$_c$ | | D3_G5$_{n1}$ | Ö | D3_G5$_{n2}$ | Ö | D3_G5$_{nx}$ |
| Assurance (D4) | D4_G5$_c$ | | D4_G5$_{n1}$ | | D4_G5$_{n2}$ | Ö | D4_G5$_{nx}$ |
| Empathy (D5) | D5_G5$_c$ | | D5_G5$_{n1}$ | | D5_G5$_{n2}$ | Ö | D5_G5$_{nx}$ |
| **Current Service Cost** | SC$_c$ | | | | | | |
| **New Service Cost (SC$_{nx}$)** | | | SC$_{n1}$ | | SC$_{n2}$ | | SC$_{nx}$ |
| Additional Cost (AC$_{nx}$) | | | AC$_{n1}$ | | AC$_{n2}$ | | AC$_{nx}$ |
| Cost Reduction (CR$_{nx}$) | | | CR$_{n1}$ | | CR$_{n2}$ | | CR$_{nx}$ |

Companies must calculate and compare the Service Costs of the new service alternative (SC$_{n1}$, SC$_{n2}$, SC$_{nx}$), the Additional Costs of each new service alternative (AC$_{n1}$, AC$_{n2}$, AC$_{nx}$), and the Cost Reduction of the new service alternative (CR$_{n1}$, CR$_{n2}$, CR$_{nx}$) that arise in Service Quality Improvement Driver alternatives (SQuID$_1$, SQuID$_2$, and SQuID$_x$) from one dimension to another as simulated in Table 2, which expected conditions for the gaps are:

1. SQuID$_1$: D1_G5$_{n1}$<D1_G5$_c$, D2_G5$_{n1}$<D2_G5$_c$, or;
2. SQuID$_2$: D1_G5$_{n2}$<D1_G5$_c$, D2_G5$_{n2}$<D2_G5$_c$, D3_G5$_{n2}$<D3_G5$_c$, or;
3. SQuID$_x$: D1_G5$_{nx}$<D1_G5$_c$, D2_G5$_{nx}$<D2_G5$_c$, D3_G5$_{nx}$<D3_G5$_c$, D4_G5$_{nx}$<D4_G5$_c$, D5_G5$_{nx}$<D5_G5$_c$.

Thus, the new service cost (SC$_{n1}$ or SC$_{n2}$ or SC$_{nx}$) is not always higher than the current service cost (SC$_c$). The total cost reduction may be greater than the additional cost due to new activities, at least in the long run (Sharabi and Davidow, 2010). Although service quality improvement actions are often focused on one or two dimensions in practice, companies need to calculate the effect of these alternatives on gap 5 in each dimension. If the improvement is carried out on responsiveness, assurance, or empathy dimensions, which are often interrelated (Berry *et al.*, 1988; Hamzah *et al.*, 2017; Ramdeen *et al.*, 2007), when setting the service cost improvement targets, companies must consider the voice of the customer, the intensity of competition, and the internal strategic plan (Jo Bitner *et al.*, 1997; Morikawa, 2021; Zeithaml *et al.*, 2017). These targeted costs will guide the business throughout the development cycle to achieve optimal solutions that meet customer expectations and maximize service performance at the desired margins (Aladwan and Alsinglawi, 2018; Rust *et al.*, 2002).

There are times when some customer perceptions exceed their expectations. Mathematically, transferring resources to optimize a positive gap of 5 on specific dimensions is possible. However, this needs to proceed cautiously because the service quality on this dimension may be strongly correlated with other dimensions with a zero or negative gap. At least the positive gap may have become the new expectancy of customer service quality. Reducing the quality considered positive should not be pursued.

**Figure 5 Modified SERVQUAL**
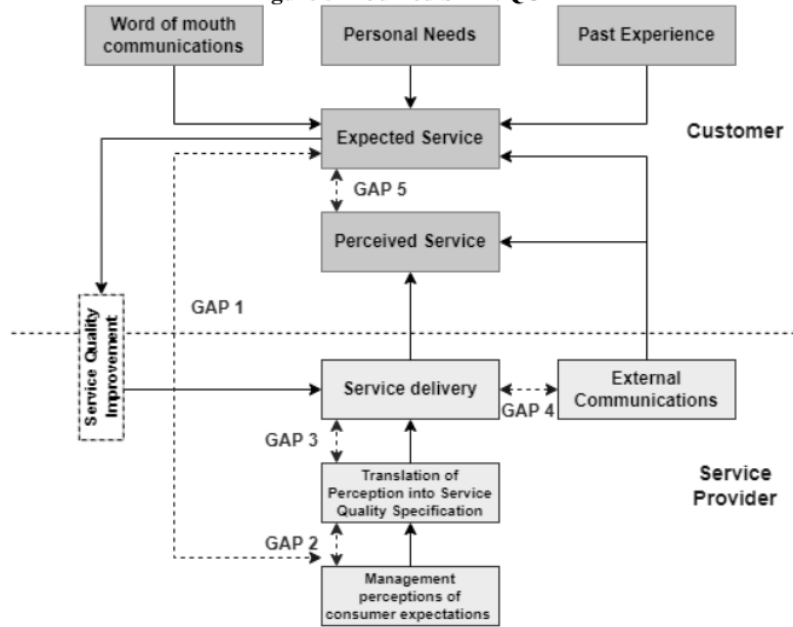


The SQuID position in SERVQUAL represents the consumers' and providers' involvement (Figure 5). The portion is much more extensive for service providers. No less fascinating than this conceptual study is; the SQuID, which contains the two new gaps, has led to continuous improvement in the SERVQUAL model. Elements of SQuID simultaneously confirm the theoretical view, which states that retaining existing customers is substantially cheaper than finding new customers (Zeithaml *et al*., 2017).

## Implications

### Practical Implications

The original SERVQUAL model does not recommend the directions to reduce service quality gaps and their cost consequences. The presence of gaps 6 and 7 in the SERVQUAL model will significantly assist businesses in improving service quality, even on an ongoing basis. Both gaps are improvement indicators inside the Service Quality Improvement Driver (SQuID) framework, consisting of; expected price, service quality improvement target, service cost improvement targets, current service costs, new service costs, and new prices. Running SQuID will be much more efficient because managers and researchers can also evaluate current service cost and price apart from diagnosing service quality issues as the original SERVQUAL model did.
In this modified SERVQUAL, service quality improvement also plays a sustainability actor in the SERVQUAL model.

### Future Research

This conceptual research, of course, has several limitations. The operational concept of service costs in the SERVQUAL model is not explicitly defined, so the role of cost in its various categories on various service quality dimensions could be potential research in the future. This model is also general; contexts like the public sector may result in service quality improvement elements with specific characteristics such as an upper or lower price limit. Therefore, various case studies involving the existence of gaps 6 and 7 will undoubtedly complete the insight into the concept in question, mainly if these case studies are studied more deeply in specific contexts.

## Practical Implications for Asian Business

Companies and public services in Asia in various sectors, such as air transportation, tourism & hospitality, banks, medical services, and universities/ colleges, often use SERVQUAL. At least, we can see it from previous studies that became the references for this research (Aladwan and Alsinglawi, 2018; Hamzah *et al.*, 2017; Law *et al.*, 2022; Liu and Lee, 2016; Ye *et al.*, 2014). These studies generally only reveal how companies in Asia use SERVQUAL to measure their service performance, as many companies outside Asia do. There is no further explanation of how these companies respond to the negative gap that has arisen. This phenomenon also shows that many businesses in Asia face difficulty evaluating the feasibility of their service quality improvement plans regarding service cost because that is the problem faced by SERVQUAL users in general.

Based on the previous discussion, the SQuID framework can be a practical solution that is easy to implement by Asia businesses in general. First, businesses in Asia can more easily plan and evaluate the effectiveness of investments and costing in various dimensions of SERVQUAL, especially the tangible dimension as the pull factors (Adruce *et al.*, 2021). The emphasis on the tangible dimension, whether directly visible to the customer or not (such as the number, completeness, and technology of the facilities and equipment, the uniform of the employees, communication materials, and company logos), based on the many research facts tend to be part of the emergence of a negative gap in SERVQUAL at almost all other dimensions (Agus *et al.*, 2007; Bose and Gupta, 2013, 2013; Law *et al.*, 2022; Yu *et al.*, 2008). Besides, in practice, the tangible dimension is the most manageable. Second, the interrelationships between the several business sectors described earlier demonstrate the potential use of SQuID in the scope of the external supply chain, not just for individual companies.

Understanding cultural differences is crucial for comprehending consumer preferences (Mey *et al.*, 2006; Poon and Lock-Teng Low, 2005). Asian people have a unique cultural phenomenon. A few aspects demand extra consideration when deploying SQuID in specific Asian businesses. In order to determine new service prices in transportation firms in Asia, it is crucial to consider culturally based tangible characteristics such as unique colors, logos, and traditional fashion-based employee uniforms, as in the case of Laotian Airlines (Law *et al.*, 2022). The application of SQuID to health services can refer to a case study in Syria (AlOmari, 2021). Applying the new service cost can be focused on the cost of improving the communication skills of medical and paramedical staff. Health technology sophistication is, of course, a dimension that patients need, but a positive gap that is too high on this dimension can

also be wasteful/ ineffective for patient recovery. It is a good idea to pay attention to other dimensions, especially empathy. Stories about people's perceptions of low-quality education may be easy for us to find in many countries in Asia. Apart from the application of the weighting method on the dimensions in the case of implementing SERVQUAL causes responsiveness and assurance to be the two most problematic dimensions, a case example of the importance of the role of the tangible dimension for students at vocational colleges in Iran (Akhlaghi *et al.*, 2012) can be the basis for selecting priority dimensions for the implementation of SQuID in universities in general in Asia. Besides, from the statistical analysis perspective, incorporating a Likert scale (disagree-agree) in dimensional analysis can be problematic when combined with an ordinal level of importance.

In particular, SQuID will be of great use in developing the service quality of Asian private-owned enterprises (POEs) that are heavily influenced by clan culture (Xiong *et al.*, 2021). Theoretically, trust plays a significant role in kinship-based societies, according to informal institutions. It questions social trust and who should be trusted: institutions or individuals. SQuID is highly recommended in Asia businesses to improve clan culture-based service quality.

## References

Abisuga, A.O., Wang, C.C. and Sunindijo, R.Y. (2020), "Facility Managers' Responses to User Post-Occupancy Feedback: A Conceptual Framework", *Facilities*, Vol. 38 No. 7/8, pp. 481–499, doi: 10.1108/F-10-2018-0119.

Abu-Salim, T., Onyia, O.P., Harrison, T. and Lindsay, V. (2017), "Effects of Perceived Cost, Service Quality, and Customer Satisfaction on Health Insurance Service Continuance", *Journal of Financial Services Marketing*, Vol. 22 No. 4, pp. 173–186, doi: 10.1057/s41264-017-0035-4.

Adruce, S.A.Z., Ting, H., Puah, C.H., Lim, T.-Y. and Kichin, S. (2021), "Visit, Revisit, or Stay Longer? A Case of Emerging Tourism Destination", *Asian Journal of Business Research*, Vol. 11 No. 2, doi: 10.14707/ajbr.210110.

Agus, A., Barker, S. and Kandampully, J. (2007), "An Exploratory Study of Service Quality in The Malaysian Public Service Sector", *International Journal of Quality & Reliability Management*, Vol. 24 No. 2, pp. 177–190, doi: 10.1108/02656710710722284.

Akamavi, R.K., Mohamed, E., Pellmann, K. and Xu, Y. (2015), "Key Determinants of Passenger Loyalty in The Low-Cost Airline Business", *Tourism Management*, Vol. 46, pp. 528–545, doi: 10.1016/j.tourman.2014.07.010.

Akhlaghi, E., Amini, S. and Akhlaghi, H. (2012), "Evaluating Educational Service Quality in Technical and Vocational Colleges using SERVQUAL Model", *Procedia - Social and Behavioral Sciences*, Vol. 46, pp. 5285–5289, doi: 10.1016/j.sbspro.2012.06.424.

Aladwan, M. and Alsinglawi, O. (2018), "The Applicability of Target Costing in Jordanian Hotels Industry", Vol. 22 No. 3, p. 14.

AlOmari, F. (2021), "Measuring Gaps in Healthcare Quality Using SERVQUAL Model: Challenges and Opportunities in Developing Countries", *Measuring Business Excellence*, Vol. 25 No. 4, pp. 407–420, doi: 10.1108/MBE-11-2019-0104.

Beltagui, A. and Candi, M. (2018), "Revisiting Service Quality Through The Lens of Experience-Centric Services", *International Journal of Operations & Production Management*, Vol. 38 No. 3, pp. 915–932, doi: 10.1108/IJOPM-06-2015-0339.

Berry, L.L., Parasuraman, A. and Zeithaml, V.A. (1988), "The Service-Quality Puzzle", *Business Horizons*, Vol. 31 No. 5, pp. 35–43, doi: 10.1016/0007-6813(88)90053-5.

Blocher, E., Stout, D.E., Juras, P.E. and Smith, S. (2019), *Cost Management: A Strategic*

*Emphasis*, Eighth Edition., McGraw-Hill Education, New York, NY.

Bose, S. and Gupta, N. (2013), "Customer Perception of Services Based on the SERVQUAL Dimensions: A Study of Indian Commercial Banks", *Services Marketing Quarterly*, Vol. 34 No. 1, pp. 49–66, doi: 10.1080/15332969.2013.739941.

Broderick, A.J. and Vachirapornpuk, S. (2002), "Service Quality in Internet Banking: The Importance of Customer Role", *Marketing Intelligence & Planning*, Vol. 20 No. 6, pp. 327–335, doi: 10.1108/02634500210445383.

Brysland, A. and Curry, A. (2001), "Service Improvements in Public Services Using SERVQUAL", *Managing Service Quality: An International Journal*, Vol. 11 No. 6, pp. 389–401, doi: 10.1108/09604520110410601.

Camgöz-Akdağ, H., Tarım, M., Lonial, S. and Yatkın, A. (2013), "QFD application using SERVQUAL for private hospitals: a case study", edited by Sinha, M.*Leadership in Health Services*, Vol. 26 No. 3, pp. 175–183, doi: 10.1108/LHS-02-2013-0007.

Chatzipetrou, E. and Moschidis, O. (2018), "A Multidimensional Longitudinal Meta-Analysis of Quality Costing Research", *International Journal of Quality & Reliability Management*, Vol. 35 No. 2, pp. 405–429, doi: 10.1108/IJQRM-08-2016-0117.

Cooper, R. and Kaplan, R.S. (1992), "Activity-Based Systems: Measuring the Costs of Resource Usage", *Accounting Horizons*, p. 12.

Cronin, J.J. and Taylor, S.A. (1992), "Measuring Service Quality: A Reexamination and Extension", *Journal of Marketing*, Vol. 56, p. 14.

Dolhey, S. (2019), "A bibliometric analysis of research on entrepreneurial intentions from 2000 to 2018", *Journal of Research in Marketing and Entrepreneurship*, Vol. 21 No. 2, pp. 180–199, doi: 10.1108/JRME-02-2019-0015.

Fida, B.A., Ahmed, U., Al-Balushi, Y. and Singh, D. (2020), "Impact of Service Quality on Customer Loyalty and Customer Satisfaction in Islamic Banks in the Sultanate of Oman", *SAGE Open*, Vol. 10 No. 2, p. 215824402091951, doi: 10.1177/2158244020919517.

Ghotbabadi, A.R., Feiz, S. and Baharun, R. (2015), "Service Quality Measurements: A Review", *International Journal of Academic Research in Business and Social Sciences*, Vol. 5 No. 2, p. Pages 267-286, doi: 10.6007/IJARBSS/v5-i2/1484.

Giannakos, M.N., Pappas, I.O. and Mikalef, P. (2014), "Absolute Price as a Determinant of Perceived Service Quality in Hotels: A Qualitative Analysis of Online Customer Reviews", *International Journal of Hospitality and Event Management*, Vol. 1 No. 1, p. 62, doi: 10.1504/IJHEM.2014.062873.

Giovanis, A., Pierrakos, G., Rizomyliotis, I. and Binioris, S. (2018), "Assessing Service Quality and Customer Behavioral Responses in Hospital Outpatient Services: A Formative Measurement Approach", *International Journal of Quality and Service Sciences*, Vol. 10 No. 2, pp. 98–116, doi: 10.1108/IJQSS-03-2017-0023.

Greene, J.C., Caracelli, V.J. and Graham, W.F. (1989), "Toward a Conceptual Framework for Mixed-Method Evaluation Designs", *Educational Evaluation and Policy Analysis*, Vol. 11 No. 3, pp. 255–274, doi: 10.3102/01623737011003255.

Guerreiro, R., Rodrigues Bio, S. and Vazquez Villamor Merschmann, E. (2008), "Cost-to-Serve Measurement and Customer Profitability Analysis", *The International Journal of Logistics Management*, Vol. 19 No. 3, pp. 389–407, doi: 10.1108/09574090810919215.

Hamzah, Z.L., Lee, S.P. and Moghavvemi, S. (2017), "Elucidating Perceived Overall Service Quality in Retail Banking", *International Journal of Bank Marketing*, Vol. 35 No. 5, pp. 781–804, doi: 10.1108/IJBM-12-2015-0204.

Hui, E.C.M., Zhang, P. and Zheng, X. (2013), "Facilities Management Service and Customer Satisfaction in Shopping Mall Sector", *Facilities*, Vol. 31 No. 5/6, pp. 194–207, doi: 10.1108/02632771311307070.

Izogo, E.E. (2015), "Customers' Service Quality Perception in Automotive Repair", *African Journal of Economic and Management Studies*, Vol. 6 No. 3, pp. 272–288, doi: 10.1108/AJEMS-02-2013-0024.

Jo Bitner, M., Faranda, W.T., Hubbert, A.R. and Zeithaml, V.A. (1997), "Customer

Contributions and Roles in Service Delivery", *International Journal of Service Industry Management*, Vol. 8 No. 3, pp. 193–205, doi: 10.1108/09564239710185398.

Kennedy, D.M., Nordrum, J.T., Edwards, F.D., Caselli, R.J. and Berry, L.L. (2015), "Improving Service Quality in Primary Care", *American Journal of Medical Quality*, Vol. 30 No. 1, pp. 45–51, doi: 10.1177/1062860613518093.

Khan, M. (2003), "ECOSERV", *Annals of Tourism Research*, Vol. 30 No. 1, pp. 109–124, doi: 10.1016/S0160-7383(02)00032-4.

Khare, A. (2013), "Retail Service Quality in Small Retail Sector: The Indian Experience", *Facilities*, Vol. 31 No. 5/6, pp. 208–222, doi: 10.1108/02632771311307089.

Kim, S. and Wook Kim, S. (2010), "The Trade-off of Service Quality and Cost: A System Dynamics Approach", *Asian Journal on Quality*, Vol. 11 No. 1, pp. 69–78, doi: 10.1108/15982681011051831.

Koay, K.Y., Khoo, K.L., Department of Marketing, Sunway University, Malaysia, Soh, P.C.-H., and Department of Management, Multimedia University, Malaysia. (2020), "The Impact of Servicescape and Employee Service Quality in the KTV Industry", *Asian Journal of Business Research*, Vol. 9 No. 3, doi: 10.14707/ajbr.190067.

Ladhari, R. (2009), "A Review of Twenty Years of SERVQUAL Research", *International Journal of Quality and Service Sciences*, Vol. 1 No. 2, pp. 172–198, doi: 10.1108/17566690910971445.

Lai, K.P., Yee Yen, Y. and Siong Choy, C. (2020), "The Effects of Service Quality and Perceived Price on Revisit Intention of Patients: The Malaysian Context", *International Journal of Quality and Service Sciences*, Vol. 12 No. 4, pp. 541–558, doi: 10.1108/IJQSS-02-2019-0013.

Law, C.C.H., Zhang, Y. and Gow, J. (2022), "Airline Service Quality, Customer Satisfaction, and Repurchase Intention: Laotian Air Passengers' Perspective", *Case Studies on Transport Policy*, p. S2213624X22000293, doi: 10.1016/j.cstp.2022.02.002.

Lee, H. and Kim, C. (2012), "A DEA-SERVQUAL Approach to Measurement and Benchmarking of Service Quality", *Procedia - Social and Behavioral Sciences*, Vol. 40, pp. 756–762, doi: 10.1016/j.sbspro.2012.03.262.

Li, W.S. (2018), *Strategic Management Accounting: A Practical Guidebook with Case Studies*, Springer Singapore, Singapore, doi: 10.1007/978-981-10-5729-8.

Lin, M., Ling, Q., Liu, Y. and Hu, R. (2021), "The Effects of Service Climate and Internal Service Quality on Frontline Hotel Employees' Service-Oriented Behaviors", *International Journal of Hospitality Management*, Vol. 97, p. 102995, doi: 10.1016/j.ijhm.2021.102995.

Liping, J. and Carsten Ørts, H. (2016), *Target Costing as a Strategic Tool to Commercialize the Product and Service Innovation*, CBS Maritime.

Liu, C.-H.S. and Lee, T. (2016), "Service Quality and Price Perception of Service: Influence on Word-of-Mouth and Revisit Intention", *Journal of Air Transport Management*, Vol. 52, pp. 42–54, doi: 10.1016/j.jairtraman.2015.12.007.

Luke, R. and Heyns, G.J. (2020), "An Analysis of The Quality of Public Transport in Johannesburg, South Africa using An Adapted SERVQUAL Model", *Transportation Research Procedia*, Vol. 48, pp. 3562–3576, doi: 10.1016/j.trpro.2020.08.095.

Ma, B., Liu, S., Liu, J. and Wang, Y. (2019), "Service Strategies and Pricing based on Heterogeneity of Service Values and Waiting Costs in Queuing System", *Kybernetes*, Vol. 48 No. 10, pp. 2325–2352, doi: 10.1108/K-08-2018-0422.

Mbama, C.I., Ezepue, P., Alboul, L. and Beer, M. (2018), "Digital banking, Customer Experience, and Financial Performance", p. 21.

Mey, L.P., Akbar, A.K. and Fie, D.Y.G. (2006), "Measuring Service Quality and Customer Satisfaction of the Hotels in Malaysia: Malaysian, Asian and Non-Asian Hotel Guests", *Journal of Hospitality and Tourism Management*, Vol. 13 No. 2, pp. 144–160, doi: 10.1375/jhtm.13.2.144.

Mm, S. and Jasim, K.M. (2021), "Ascertaining service quality and medical practitioners' sensitivity towards surgical instruments using SERVQUAL", *Benchmarking: An International Journal*, Vol. 28 No. 1, pp. 370–405, doi: 10.1108/BIJ-04-2020-0165.

Moon, Y.J. (2013), "The Tangibility and Intangibility of e-Service Quality", *International Journal of Smart Home*, Vol. 7 No. 5, pp. 91–102, doi: 10.14257/ijsh.2013.7.5.10.

Morikawa, M. (2021), "Price Competition vs Quality Competition: Evidence from Firm Surveys", *Journal of Economics and Business*, Vol. 116, p. 106007, doi: 10.1016/j.jeconbus.2021.106007.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985), "A Conceptual Model of Service Quality and Its Implications for Future Research", *Journal of Marketing*, Vol. 49 No. 4, p. 41, doi: 10.2307/1251430.

Parasuraman, A., Zeithaml, V.A. and Leonard L., B. (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality.", *Journal of Retailing*, Vol. 64, p. 30.

Park, D. and Shin, K. (2012), "The Service Sector in Asia: Is It an Engine of Growth?", *SSRN Electronic Journal*, doi: 10.2139/ssrn.2198154.

Park, S.-J., Yi, Y. and Lee, Y.-R. (2021), "Heterogeneous Dimensions of SERVQUAL", *Total Quality Management & Business Excellence*, Vol. 32 No. 1–2, pp. 92–118, doi: 10.1080/14783363.2018.1531700.

Piercy, N. and Rich, N. (2009), "High Quality and Low Cost: The Lean Service Centre", *European Journal of Marketing*, Vol. 43 No. 11/12, pp. 1477–1497, doi: 10.1108/03090560910989993.

Poon, W. and Lock-Teng Low, K. (2005), "Are travellers satisfied with Malaysian hotels?", *International Journal of Contemporary Hospitality Management*, Vol. 17 No. 3, pp. 217–227, doi: 10.1108/09596110510591909.

Ramanathan, U., Win, S. and Wien, A. (2018), "A SERVQUAL Approach to Identifying The Influences of Service Quality on Leasing Market Segment in The German Financial Sector", *Benchmarking: An International Journal*, Vol. 25 No. 6, pp. 1935–1955, doi: 10.1108/BIJ-12-2016-0194.

Ramdeen, C., Santos, J. and Kyung Chatfield, H. (2007), "Measuring The Cost of Quality in A Hotel Restaurant Operation", *International Journal of Contemporary Hospitality Management*, Vol. 19 No. 4, pp. 286–295, doi: 10.1108/09596110710747625.

Rodrigues, L.L.R., Barkur, G., Varambally, K.V.M. and Golrooy Motlagh, F. (2011), "Comparison of SERVQUAL and SERVPERF Metrics: An Empirical Study", *The TQM Journal*, Vol. 23 No. 6, pp. 629–643, doi: 10.1108/17542731111175248.

Russell, R.S., Johnson, D.M. and White, S.W. (2015), "Patient Perceptions of Quality: Analyzing Patient Satisfaction Surveys", *International Journal of Operations & Production Management*, Vol. 35 No. 8, pp. 1158–1181, doi: 10.1108/IJOPM-02-2014-0074.

Rust, R.T., Moorman, C. and Dickson, P.R. (2002), "Getting Return on Quality: Revenue Expansion, Cost Reduction, or Both?", *Journal of Marketing*, Vol. 66 No. 4, pp. 7–24, doi: 10.1509/jmkg.66.4.7.18515.

Sharabi, M. and Davidow, M. (2010), "Service Quality Implementation: Problems and Solutions", *International Journal of Quality and Service Sciences*, Vol. 2 No. 2, pp. 189–205, doi: 10.1108/17566691011057357.

Shen, C. and Yahya, Y. (2021), "The Impact of Service Quality and Price on Passengers' Loyalty Towards Low-Cost Airlines: The Southeast Asia Perspective", *Journal of Air Transport Management*, Vol. 91, p. 101966, doi: 10.1016/j.jairtraman.2020.101966.

Tomic, I., Tesic, Z., Kuzmanovic, B. and Tomic, M. (2018), "An Empirical Study of Employee Loyalty, Service Quality, Cost Reduction and Company Performance", *Economic Research-Ekonomska Istraživanja*, Vol. 31 No. 1, pp. 827–846, doi: 10.1080/1331677X.2018.1456346.

Wirtz, J. and Zeithaml, V. (2018), "Cost-Effective Service Excellence", *Journal of the Academy of Marketing Science*, Vol. 46 No. 1, pp. 59–80, doi: 10.1007/s11747-017-0560-7.

Wu, Y.-C. and Lin, S.-W. (2022), "Efficiency evaluation of Asia's cultural tourism using a dynamic DEA approach", *Socio-Economic Planning Sciences*, p. 101426, doi: 10.1016/j.seps.2022.101426.

Xiong, M.N., Wang, C.L., Cui, N. and Wang, T. (2021), "The influence of clan culture on

business performance in Asian private-owned enterprises: The case of China", *Industrial Marketing Management*, Vol. 99, pp. 97–110, doi: 10.1016/j.indmarman.2021.09.009.

Ye, Q., Li, H., Wang, Z. and Law, R. (2014), "The Influence of Hotel Price on Perceived Service Quality and Value in E-Tourism: An Empirical Investigation Based on Online Traveler Reviews", *Journal of Hospitality & Tourism Research*, Vol. 38 No. 1, pp. 23–39, doi: 10.1177/1096348012442540.

Youngdahl, W.E. and Kellogg, D.L. (1997), "The Relationship Between Service Customers' Quality Assurance Behaviors, Satisfaction, and Effort: A Cost of Quality Perspective", *Journal of Operations Management*, Vol. 15 No. 1, pp. 19–32, doi: 10.1016/S0272-6963(96)00097-6.

Yu, L., Hong, Q., Gu, S. and Wang, Y. (2008), "An epistemological critique of gap theory based library assessment: the case of SERVQUAL", *Journal of Documentation*, Vol. 64 No. 4, pp. 511–551, doi: 10.1108/00220410810884066.

Yusra, Y. (2018), "The influence of Perceived Service Quality towards Customer Satisfaction and Loyalty in Airasia Self Check-in System", *The Journal of Social Sciences Research*, No. SPI 2, pp. 766–775, doi: 10.32861/jssr.spi2.766.775.

Zeithaml, V.A., Jo Bitner, M. and Gremler, D.D. (2017), *Services Marketing: Integrating Customer Focus Across the Firm*, Seventh Edition., McGraw-Hill Education, New York, NY.

Zhao, Y., Wang, L. and Zhang, Y. (2021), "Research thematic and emerging trends of contextual cues: a bibliometrics and visualization approach", *Library Hi Tech*, Vol. 39 No. 2, pp. 462–487, doi: 10.1108/LHT-11-2019-0237.

# Unboxing SERVQUAL: SQuID Inside!

**4**% SIMILARITY INDEX     **4**% INTERNET SOURCES     **2**% PUBLICATIONS     **2**% STUDENT PAPERS

| | | |
|---|---|---|
| **1** | **Submitted to Victoria University**<br>Student Paper | **2**% |
| **2** | shodhganga.inflibnet.ac.in<br>Internet Source | **1**% |
| **3** | researchrepository.napier.ac.uk<br>Internet Source | **1**% |
| **4** | researcharchive.lincoln.ac.nz<br>Internet Source | **1**% |

| | | | |
|---|---|---|---|
| Exclude quotes | On | Exclude matches | < 1% |
| Exclude bibliography | On | | |