

# Customer's Perceptions and the Dimensions of Quality

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## Abstract:

Quality is a broadly pervasive philosophy, which has been described as being multi-dimensional. Parasuraman, Zeithaml and Berry (1985) articulate the dimensions of service quality and their determinants. Later, Garvin (1987) in discussing the dimensions associate with product quality was one of the first to actually define what attributes characterize quality. Nelson (1974), and later amended by Darby and Karni (1973), discuss how consumers create their perceptions about products through a combination of search, experience and credence properties. This paper proposes a framework better understand of the dimensions of product and service quality and how they influence the customer's perception of that quality.

**Keywords:** Customer Perceptions; Dimensions of Quality; Product Quality; Service Quality;

## 1. Introduction:

Quality is a broad and pervasive philosophy that can significantly affect a firm's competitiveness (Sousa & Voss, 2002). Many organizations have adopted improvement philosophies, such as total quality management (TQM), six-sigma, just-in-time (JIT), and others, with the goal of reducing costs and/or increasing revenues. In a survey conducted by Arthur D. Little, only one-third of respondents believed that their TQM efforts improved their competitive profile.

In the quality literature there has been an extensive discussion of the various quality management systems/philosophies (Crosby, 1979; Deming, 1986; Juran, 1988), and the factors and practices driving those quality management systems (Saraph, Benson, Schroeder, 1989; Dean & Bowen, 1994; Flynn, Schroeder, Sakakibara, 1994; Ahire, Golhar, Waller, 1996). Garvin (1987) asserted that the only way for the firm to achieve competitive advantage through quality is to match the importance that the markets assign to the individual quality dimensions to the organization's performance along those dimensions. Fynes and De Burca (2005) further noted that given the consensus that exists on the quality management paradigm, it is time to explore the nature of the causal relationships between the various dimensions of quality and performance.

With the exception of some of the marketing literature, very little has been written on how consumer's actually evaluated product and service quality. There has also been very little work on the relationship between customer perceptions of quality and the dimensions of quality. The focus of this paper is on the linkage between dimensions of product and service quality and how the customer perceptions quality in the products and services they purchase.

## 2. The Properties of Customers Perceptions

From the customer's point of view, the perception of quality is related to their experiences with a product's performance, or services benefits, as compared to their expectations about a hypothetical ideal. Following the dimensions first proposed by Nelson (1974) and later

amended by Darby and Karni (1973), products can have a combination of search, experience and credence properties. Search properties are attributes that can be evaluated by a consumer prior to purchase. Experience properties are attributes that can be evaluated after purchase and the actual consumption or use of the product. Credence properties are characteristics that cannot be discerned even after the product is purchased. These are typical of items such as insurance, surgical procedures, automobile maintenance work, etc.

People frequently receive and process information that they receive from their environment. The sources of this indirect reception can include; word-of-mouth testimonies for family members or friends, general conversations with associates or strangers, advertisements, and numerous other sources. From these bits and pieces of information a perception about a given product or service, or the company or brand that produces the product or service, is created. This perception, called a credence property, is often vague and relative subconscious.

Before a person acts on this credence property, by deciding to purchase a product or service, there must be the recognition of a need for that product or service. This need could arise from either an actual requirement, or a simple whim of self-gratification. This need will typically drive the individual into searching for a product or service that will satisfy the specifics of their need. The search process can range in duration from the instantaneous impulse buy, to a length and arduous qualification of both the vendor and the product or service. This search process is called the search property.

Once the search process is completed and the specific product and or service, and a given vendor has been made; a purchase is made. The act of either using the product, or consuming the service, creates information translates into an experience property. The perceptions that the person has stored in this experience property will, over time, modify their perceptions stored in their credence properties. This whole process is repeated over and over an innumerable number of times by all of us over the course of our lives.

Quality dimensions can be defined as those attributes, or characteristics, that when viewed together formed the basis upon which opinions and perceptions of the item are established, and expectations for similar items are shaped. Furthermore, there is a degree of interdependence between these dimensions; such that any opinions, perceptions, or expectations that are formed without considering all the applicable dimensions of an item will be deficient. It should also be noted that in creating an item that the consumer will consider "Fit for Use", dimension beyond those used by the consumer must frequently be addressed; such as with those associated with the organization and its transformation processes.

## **2.1 The Dimensions of Product Quality**

Garvin (1987) stated that quality was first and foremost a strategic question, in that it governs the development of product design and the choice of features or options, as well as setting the criteria for the selection of suppliers and materials. Adam (1992) asserted that many firms are putting forth strategic objectives of improving product, process, and service quality as a method for achieving world-class performance. It is general accepted that product quality is a major factor in the development of sustainable competitive advantage. Garvin also noted that customer impressions about a firm's products are formed from past experiences with the firm and its products. Garvin also stated that he believed that management needed a conceptual bridge to the consumer's vantage point in order to achieve true quality: in other words, "high quality means pleasing consumers, not just protecting them from annoyances" (pg. 104).

In order to help management better understand how to achieve quality, Garvin defined eight dimensions for the development of products; performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality. Garvin ascribed that that with respect to quality management and the design of products or services, that management needed to think strategically about the quality, and focus on those dimensions of quality that support their strategic objectives. He believed that these dimensions are interrelated such that improves in one dimension might be at the expense of another.

From the customer's perspective, the choice of purchasing a product starts with the desire to satisfy a given need. Thus, the product must possess specific performance characteristics, or capabilities. Coupled with the product's performance are the features by which this performance is achieved. Usually, more features are perceived as equating to greater performance; but not are exceptions to this such as with fighter aircrafts that are designed to performance multiple missions (e.g. dog fighting, bombing, and close air support of ground troops), thus rendering them less than superior at any of those missions. Next, customers are interested in the reliability of the product to performance at a given level each time they use the product, as well as its durability over time. The final choice to buy the product often involves its aesthetics. If the product is unwieldy, ugly, or otherwise hard to handle or use, the customer may well forgo the purchase altogether.

The customer will usually form a set of expectations about the dimensions previously noted from information received directly and indirectly; thus, the degree of conformance between the products actual performance, reliability, and durability to these expectations, or standards, is important to their perception of the product's quality. If over time the maintenance and serviceability of the product will moderate the customer's perceptions of the quality of the product. Those products that are difficult or expensive to maintain or service, the perception of quality will frequently be downgraded, while those that aren't will be upgraded.

Several studies have found empirical support for Garvin's dimension. Stone-Romero et al (1997) found empirical evidence supporting the multi-dimensional nature of product quality. Paulson-Gjerde and Slotnick (1997) studies manufacturing quality along a multidimensional approach. Ahire and Dreyfus (2000) found that product design management is equally important as process management on quality results such as scrap, rework, defects, performance, customer complains, warranty, litigation, and market share. Sousa and Voss (2002) pointed out that future research should focus upon the fundamental nature of an organization's products and use measures that capture the relevant dimensions for those products. They also stated that as knowledge about the dimensions of product quality is acquired, that it may be necessary to aggregate or disaggregate some of Garvin's basic dimensions.

## **2.2 The Dimensions of Service Quality**

Parasuraman et al., (1985) identify three aspects of services that distinguish it from physical goods; intangibility, heterogeneity, and inseparability. Because of intangibility, services can't be touched or measured in any way before their purchase by the consumer. In addition to intangibility, services are difficult to judge because of the inconsistency of behavior of service personnel (heterogeneity) and the consumer's active role in the consumption of the service (inseparability). The latter implies that the production and consumption of services cannot be separated from each other, as with the case of physical goods.

From the customers perspective there are several generic attributes to the service delivery experience. The first attribute is connivance, or accessibility. Services are easily duplicated, thus

giving rise to a host of providers, limited only by the profitability of the market for that service; thus, when faced with multiple choices of providers, and all other factors being equal, the consumer will consume the service that is the easiest to access. In order to remain competitive, the service provider must engender both competency and reliability. In other words, does he/she possess the request skills and knowledge necessary to perform the service requested, and can the reliability provide the same level of satisfaction each time they perform the service. If not, the consumer will not utilize them. Arguably, if the service provider is both competent and reliable, then they are most likely credible and secure. Where credibility and security would be the most apparent as a determinant of quality is in the creation and maintenance of the customer's perceptions and expectations about the service and the service provider.

Because there is a tremendous difference between individual customers and even with the same customer from contact to contact, it is important that the service providers are responsive to the needs of each customer. These needs include, but are not restricted to, understanding of their specific requirements, courtesy, and respect. Furthermore, a savvy service provider will in recognition of the differences in customer expectations, and that these expectations can be moderated by their moods, will provide the customer with timely and informative communications. The final determinant of service quality is associated with the tangibles that are part of the service delivery. Even though they are a product and not a service, the quality of the tangibles provided during delivery can greatly influence the customer's overall perception of the actual service. The dimensions that determine quality of these tangibles are discussed in section 3 above.

Based upon a series of extensive interviews, Berry, Zeithaml, and Parasuraman (1985), identified ten determinants. Parasuraman et al. (1985) believed that only tangibility and credibility could be known in advance of the purchase; while only competence and security could be classified as credence properties. Using factor analysis, they then refined these ten determinants into five dimensions: tangibles, reliability, responsiveness, assurance and empathy.

Parasuraman et al. (1985) in their discussion of service quality, identified six of those determinants that are related to the experience properties of perception; access, courtesy, reliability, responsiveness, understanding the customer, and communication. They also identified two determinants that could be categorized as credence properties; competence and security. Ford, Smith, and Sway (1990) argued that reports on consumer satisfaction could transform credence and experience properties into search properties.

### **3. Linking Customers Perceptions and the Dimensions of Quality**

The product or service's ability to robustly render the expected benefits sought by the customer contributes significantly towards the customer's perceptions of quality. The firm's ability to consistently deliver these types of products and services is critical to their ability to create and maintain a competitive advantage. Given this cause and effect relationship, it is incumbent upon the firm to better understand the linkage between how customers perceive quality and the product and service dimensions that define quality. They then need to focus on designing the features captured by these dimensions such that they can stimulate higher degrees of perception. A strong argument for this understanding was made by Sachdev and Verma (2004) where they state that the customer's perception of quality depends upon the differences between what was expected and what was actually received, and the best way to maximize quality is to maximize the difference between what is expected and what is perceived as having been received.

Information received by the customer about the performance of products/service also contributes to the formation of both perceptions and expectations. As such, environmental conditions not only influence the way customers perceive the benefits received from their purchases, but also, can influence their expectations for the benefits possible from future purchases. By monitoring the customer's reactions to various products and services, coupled with and understanding of how these reactions relate to the design of a product or services characteristics, the firm should be able to better manage the customer's perception of quality.

In the quality management literature there are strong endorsements for companies to seek out the customer's requirements for a product or service as the starting point for their product/service design, but there is little said out the customer's perceptions and expectations for the product or service, and even less said about how these perceptions and expectations link up with the characteristics that define the product or service. Figure 1 shows a proposed linkage between the customer's perceptions model and the dimensions of both service and product quality.

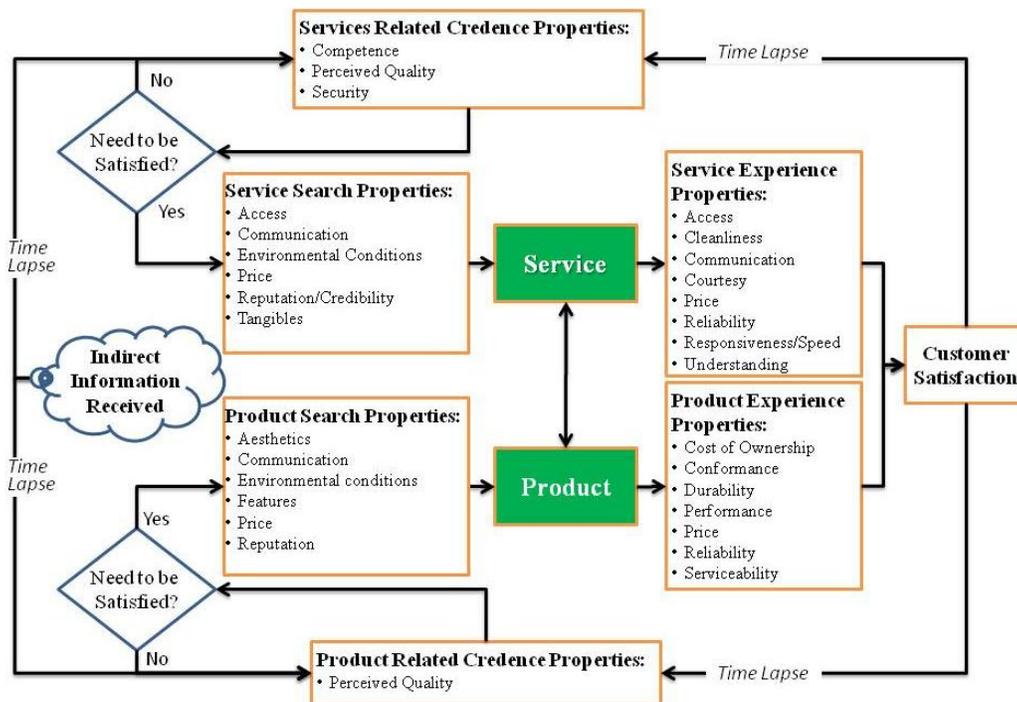


Figure 1: Proposed Relationship between the Perceptions and the Dimensions of Quality

#### 4. Conclusions:

The present paper presents an integrative model that presents a theoretical model how consumers gauge the quality of items that have both tangible and intangible dimensions. Although separately, both Garvin (1987) and Parasuraman et al., (1985) have evaluated the salient dimensions of service and product quality by which we postulate that consumers judge both simultaneously. The paper uses the work of Nelson (1974) and Darby and Karni (1973) to build a model that consumers are likely to use in judging the quality of products and services they are likely to purchase and use.

Future research on both the properties of perception and the dimensions of quality should strive to validate the mechanisms consumers use to incorporate the information they obtain under

the search, experience and credence dimensions. Also, researchers might want to find a unitary metric that can be used to judge the quality of products and associated service.

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