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Asymmetric relationship between attribute performance and customer satisfaction: A new perspective

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ABSTRACT

The objectives of this study were two-fold. First, this inquiry attempted to provide additional support to the studies conceptualizing the relationship between attribute-level performance and overall satisfaction as non-linear or asymmetric. Second, the study aimed to provide an explanation to the observed asymmetry, thus addressing the gap in the previous research in the area. Asymmetric response of customer satisfaction to different types of attribute performance was tested and interactions between attributes were examined as an explanation for the observed asymmetry. Results of the study confirmed the non-linear nature of the customer satisfaction function. Moderating effects of attribute type explained the asymmetrical relationships between attribute performance and customer satisfaction, thereby providing theoretical rationalization to the observed, but often ignored, phenomenon.

1. Introduction

Customer satisfaction (CS) is a central issue in the hospitality field due to its imperative role in organizational performance and, ultimately, in the survival of hospitality companies. Research on CS has been proportionate to its growing managerial importance (Fournier and Mick, 1999; Oh and Parks, 1997). Much of the existing CS literature focuses on understanding the process of performance evaluation and identifying sources of CS (Knutson et al., 2003). While some definitional and technical issues are to be further resolved, most researchers agree that CS is best evaluated on a multi-attribute scale. That is, CS depends on a number of determinants at an attribute level and measuring CS through attribute-level performance captures the multifaceted nature of consumption experience.

The multi-attribute approach prevailing in the area of CS evaluation provides several advantages (Oliver, 1997; Yi, 1990). It allows a higher level of specificity and diagnostic usefulness than merely measuring overall satisfaction. An attribute level of satisfaction measurement captures CS with a specific aspect or dimension and can be aggregated into an overall satisfaction score, thereby providing specific constructive feedback to management for action strategies (Szymanski and Henard, 2001).

Most multi-attribute CS studies have conceptualized the relationship between attribute-level performance and satisfaction as linear or symmetric (Oliver, 1997). In these studies, an implicit assumption was that adequate performance at an attribute level would lead to a certain level of satisfaction, which was counter-proportionate to the level of dissatisfaction if the attribute performance was equally inadequate. In other words, under the linear relationship assumption, unreliable performance of a hotel service staff leads to dissatisfaction, whereas reliable performance leads to satisfaction with the same magnitude of positive or negative impact.

Yet, this symmetric view has been criticized and shown as not always holding true (Cadotte and Turgeon, 1988; Hui et al., 2004; Johnston, 1995; Maddox, 1981; Mittal et al., 1998; Swan and Combs, 1976). Several studies indicate that an asymmetrical relationship exists between attribute-level performances and CS (Ammar et al., 2008; Backhous and Bauer, 2000; Hui et al., 2004; Oliva et al., 1992; Matzler and Sauerwein, 2002). For example, stained linens in a hotel room can cause serious dissatisfaction, but will not cause the same degree of satisfaction when presented clean. A complimentary chocolate can produce high satisfaction but, when not offered, will not entail any negative effect on CS.

It is commonly agreed that accurate understanding of CS is imperative but has yet to be accomplished (Babin and Darden, 1996; Oliver, 1997). Despite the abundance of research on CS, complexities beyond the linear relationship between CS and attribute performance remain largely unexplained. More importantly, in spite of growing number of studies supporting

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asymmetric responses of CS to attribute-level factors, no explanation to the observed asymmetry has been provided. This study aim to provide such explanation and thus enrich the existing theoretical knowledge on CS.

Substantial empirical evidence indicates that the relationship between attribute performance and CS is inconsistent and varies in its strength and direction (Anderson and Mittal, 2000; Johnston et al., 1990; Johnston, 1995; Mersha and Adhlaka, 1992). When there is such an unexpected, inconsistent relationship between a theoretical predictor (attribute performance) and criterion (satisfaction), some unspecified moderator effects are likely to exist, especially in cases where a relationship holds in one setting but not in another (Baron and Kenny, 1986).

Little is known about potential moderating effects of the attributes as determinants of satisfaction. However, examination of moderator effects is important because it would allow a more accurate understanding of the satisfaction process by distinguishing between the effects that attributes produce and the way they interact in the consumers' judgments.

Accounting for asymmetry and moderator effects is essential from a practical standpoint as well. Attribute-level performances should be optimized, not simply maximized, to increase overall satisfaction. Both academics and practitioners have reported that equally investing in greater performance along all service attributes in order to increase satisfaction would not be effective and not justify additional investments (Cadotte and Turgeon, 1988; Hui et al., 2004; Kano, 1984; Matzler et al., 2004; Matzler and Sauerwein, 2002; Mittal et al., 1998; Ting and Chen, 2002).

The existing system of measuring CS however is not tailored for performance optimization. Rather, it strives for maximization. It is based on the assumption that the nature of the relationship between attribute-level performance and satisfaction is linear or symmetric and, therefore, it is assumed that the better the performance on a certain attribute, the more it contributes to overall satisfaction.

Though strong support of non-linear nature of CS function exists, no explanation to the observed effects was provided (Deng et al., 2008; Kano, 1984; Matzler and Sauerwein, 2002). This study addressed this gap by introducing interactions among attributes as the cause of this phenomenon. Additionally, this study examined attribute performance optimization in the lodging settings and looked at the complexity of the relationship between factors that play significant roles in customers' minds during assessment process.

2. Background

2.1. Conceptualization of attributes

Marketing literature defines attributes as dimensions of a product or service. All products and services are viewed as a bundle of attributes or features that influence consumer choice (Kotler et al., 2003). When consumers evaluate an offering, their opinion is extensively affected by the performance of attributes associated with the offering (Oliver, 1997).

Many attempts have been made to categorize the attributes' dimensions in a way that would be applicable across industries. One of the most commonly used views on product or service attributes describes attributes in the *ring model* proposed by Levitt (1983). The innermost ring of this model defines *core* attributes of the offering, the "musts" that encompass consumer expectations for what the basic offering should constitute. The outer rings, *delights* or *satisfier* (*or "facilitators"*), support and enhance core attributes. This outer group of attributes constitutes embellishments to the consumer's standard set.

Similarly to Levitt (1983), Kano (1984) divided attributes into three major categories: *basic* factors (minimum requirements that are fully expected by customers) and *performance* and *excitement* factors (attributes with high impact on CS if delivered).

One major limitation of these similar conceptualizations is instability of attributes' positions within the frameworks. Competitive actions often cause the content of the outer rings to migrate into the center over time, as all competitors replicate satisfiers/delights or excitement factors, thus raising consumer standards and expectations for what a basic offering should constitute (Oliver, 1997).

Some researchers tried to develop alternate views to the traditional ring model. Gronroos (1984) and Lehtinen and Lehtinen (1991) proposed to categorize attributes into two groups: *process* or *technical* quality and *outcome* or *functional* quality. Process quality attributes capture *how* customers receive services. Outcome quality attributes refer to *what* customers receive as a result of obtaining services. Though having received support from many scholars, this categorization has been criticized because it has remained largely on a theoretical level without any strong empirical evidence validating these dimensions (Ekinci, 2002).

Swan and Combs (1976) applied a different approach and categorized attributes into two categories: *instrumental* and *expressive*. Instrumental attributes refer to the physical performance of an offering, such as the level of bed comfort; expressive attributes derive from psychological performance, such as personnel friendliness. Swan and Combs further suggest that expressive attributes tend to have a greater positive effect on satisfaction when performed well. Low performance on instrumental attributes leads to a more pronounced negative effect resulting in dissatisfaction. Though providing some advances, Swan and Comb's study had limitations. For example, it focused on products only and may not be generalizable to services.

Chowdhary and Prakash (2005) took a slightly different approach and classified attributes as *vantage* or *qualifying* depending upon the state and nature of competition. According to them, attributes can be divided into the *vantage* factors that enable offerings to qualify for competition or the *qualifying* factors that put companies above competition by motivating customers to consume the offering as opposed to that of the competitor. Though this classification provided a distinct view on the division of attributes, it appeared analogous to the core/facilitating attribute topology in that, when the performance of the qualifying factors was below the acceptable level, consumers felt dissatisfied regardless of the performance of the vantage factors.

To summarize, all described attribute conceptualizations have limitations. Only Levitt's (1983) ring model and the classifications by Gronroos (1984) and Lehtinen and Lehtinen (1991) provide theoretical explanations as to why attributes should be categorized in the way they were proposed. However, because the latter classifications lack supporting empirical evidence, Levitt's categorization appears to have a stronger position than the other topologies and is employed in this study.

2.2. Attribute-level performance and CS

The attribute-based approach involving importance-performance analysis prevails in CS literature (Matzler and Sauerwein, 2002). In this approach, a list of key product or service attributes is generated first and, then, consumers are asked to rate an offering with reference to how each attribute on the list is delivered. Additionally, consumers are asked to rate attributes in terms of their importance. An overall attribute score is then computed as