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A novel framework for customer-driven service strategies: A case study of a restaurant chain

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HIGHLIGHTS

- We propose a quality–performance analysis for quality improvement strategies.
- We develop the strategic positioning portfolio for service activity design.
- We propose a signal-to-noise method for classifying Kano's quality attributes.
- We use a real case study to demonstrate the effectiveness of the proposed approach.

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ABSTRACT

Importance–performance analysis (IPA) is a popular customer-driven tool that enables companies to understand market competition and identify improvement priorities for various attributes of products and services. Despite the widespread use of IPA, previous studies have identified specific deficiencies. For example, the managerial improvement directions derived from IPA are potentially misleading because they ignore the asymmetric and nonlinear relationships between attribute performance (AP) and customer satisfaction (CS). Furthermore, the relationship between AP and importance is erroneously assumed to be independent. By contrast, the Kano model offers useful insight into quality attributes based on the asymmetric and nonlinear relations between AP and CS. In this study, a customer-driven framework is proposed, integrating the advantages of traditional IPA and the Kano model to elucidate the market competition position of each service and product attribute, providing strategic improvement guidelines for managers to design service activities. By conducting a case study of a restaurant chain, we demonstrate the effectiveness of the proposed approach.

1. Introduction

The importance–performance analysis (IPA) was introduced by Martilla and James (1977) and has been a popular customer-driven tool among researchers and practitioners, elucidating the market competition of companies and facilitating the identification of improvement opportunities and strategic planning (Azzopardi & Nash 2013; Garver, 2003; Oh, 2001). Typically, IPA can be implemented by scoring the importance and performance of specific product or service attributes based on the voice of customers. These data were plotted on a matrix comprising four quadrants (Fig. 1). According to their positions on the matrix, the following improvement strategies can be recommended: (a) keep up the good work; (b) concentrate here; (c) low priority; and (d) possible overkill. IPA is an appealing tool because it is simple and easy to use, allowing the managerial implications of IPA to be intuitively interpreted (Arbore & Busacca, 2011). Thus, IPA has been applied in numerous industries such as tourism and hospitality (Chang, Chen, & Hsu 2012; Deng, 2007), health care (Yavas & Shemwell, 2001), education (O'Neill & Palmer, 2004), and banking (Matzler, Sauerwein, & Heischmidt, 2003).

Despite its widespread use, the specific limitations of IPA have been criticized in extant literature. For example, various methods of calculating importance or performance may lead to different interpretations and subsequent means of correcting perceived problems (Garver, 2003; Oh, 2001). In addition, a slight difference in the position of an attribute could cause its inferred priority to change dramatically (Bacon, 2003). Another critical problem of IPA is that ignoring nonlinear and asymmetric relations between attribute performance (AP) and customer satisfaction (CS), and erroneously assuming that the relationship between AP and importance is independent, could cause the improper commitment

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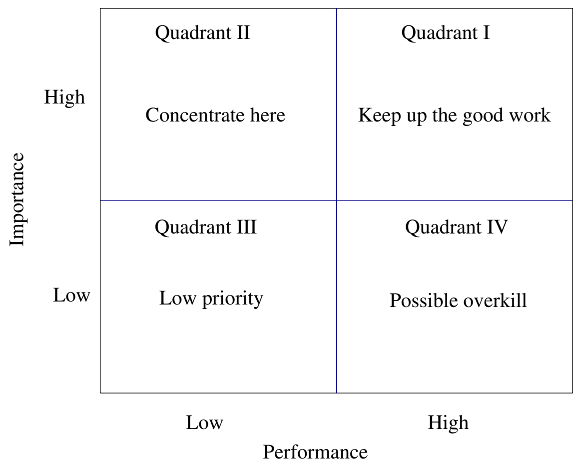

Fig. 1. Traditional IPA matrix.

of scarce resources to misguided improvement efforts (Bacon, 2003; Mikulić & Prebežac, 2008; Oh, 2001).

Since its introduction in the 1980s, the Kano model has become a popular model for evaluating quality attributes, and has been applied numerous industries. The Kano model facilitates exploring the nonlinear and asymmetric relations between AP and CS, classifying quality attributes into the following categories: (a) must-be; (b) one-dimensional; (c) attractive; and (d) indifferent (Kano, Seraku, Takahashi, & Tsuji, 1984). The performance level of different quality attributes results in varying effects on the perception of CS and customer dissatisfaction (CD). When the CS is proportional to the level of performance, it is considered a one-dimensional factor. The increasing level of performance of a must-be factor does not increase the CS, but any decrease in this factor causes CD. Conversely, an increase in the level of performance of an attractive attribute enhances CS, but a low level of performance does not specifically cause CD. Regardless of the level of performance of an attribute, if it results in neither CS nor CD, an indifferent factor is attained (Chen, 2012).

To avoid misinterpretations when using IPA, it is crucial to consider the Kano's quality categories (Arbore & Busacca, 2011; Mikulić & Prebežac, 2008; Tontini & Picolo, 2010). For example, when customers rate a must-be factor as highly important, then its corresponding improvement strategy is either "keep up the good work" or "concentrate here." However, managers should consider the possibility that further improvement might be unnecessary if an increase of this attribute would not create a significant improvement in CS. By contrast, when customers rate an attractive factor as unimportant, then its corresponding improvement strategy could be "low priority" or "possible overkill." However, because an attractive factor can generate substantial customer delight, enlarging differentiation, a company can lose competitive opportunities by overlooking that item.

Nevertheless, the Kano model possesses certain deficiencies that must be addressed. For example, it cannot identify relative importance of attributes in the same category, e.g., one-dimensional attributes (Bi, 2012). Therefore, quantitative measures must be developed to evaluate the asymmetric impacts on CS/CD. Furthermore, without emphasizing the current performance levels of product and service attributes, the Kano model is limited in identifying improvement opportunities (Tontini & Silveira, 2007). Despite the debate in the extant literature regarding IPA and the Kano model, scant studies have attempted to address these problems by integrating both models (Tontini & Silveira, 2007).

The purpose of this study is to develop a quality–performance analysis (QPA) method that provides a customer-driven framework for identifying strategic service positions and providing quality improvement guidelines. The proposed QPA approach integrates the advantages of the Kano model and IPA, allowing managers to plan service activities. In addition, a signal-to-noise ratio (SNR) approach is designed to measure how AP asymmetrically affects CS and CD. This approach can be used to classify the Kano quality categories and define priorities for improvement. By using a case from the food and beverage industry, we show the effectiveness of the proposed QPA approach, comparing between the proposed QPA and the traditional IPA. Finally, specific methods are selected to compare the power of the SNR approach for classifying the Kano's quality categories.

2. Literature review

2.1. Importance–performance analysis (IPA)

The IPA allows companies to identify improvement priorities for various service attributes and elucidating market competition. Typically, the performance aspect of IPA can be measured using CS surveys in which customers rate the level of performance (i.e., satisfaction) of products and services. This is an absolute measure of performance. Relative performance measures, such as gap analyses (Tontini & Picolo, 2010), performance ratios, and comparative scales are also suitable for use in IPA (Garver, 2003). IPA studies have described two types of importance measures: (a) stated importance; and (b) derived importance, both of which demonstrate advantages and limitations. Stated importance can be obtained by asking customers to rate the importance attributes by using Likert-scale ratings (typically ranging from *not important* to *very important*). Although this method is commonly applied, it substantially increases survey length, causing poor response rates. In addition, customers may rate all the attributes as important, potentially yielding a low power of discrimination (Garver, 2003).

To assess derived importance, customers rate the AP and overall CS for the service being evaluated. The data are subsequently employed to derive the importance of attributes by applying several statistical methods, such as conjoint analysis, correlation analysis, multiple regression, normalized pairwise estimation, partial least squares, and principal components regression (Gustafsson & Johnson, 2004). Using statistically-derived methods for evaluating importance can substantially decrease the survey length and respondent bias. However, because the multicollinearity among service attributes is typically extremely high, any derived importance would be naive, inadequate, uninterpretable, and invalid (Bi, 2012). Therefore, it is critical to select an appropriate method for measuring importance in IPA.

Determining the positions of gridlines is another critical factor for IPA. The majority previous IPA studies have reported using scale means (scale-centered approach) or grand means (data-centered approach) to divide the collected data into high- and low-score groups for importance and performance measures (Mikulić & Prebežac, 2008). In the scale means method, for example, a "3" on a five-point scale would be used to classify the high- and low-performance groups. However, Peterson and Wilson (1992) showed that "virtually all self-reports of CS possess a distribution in which a majority of the responses indicate that customers are satisfied and the distribution itself is negatively skewed" (p. 62). This characteristic of satisfaction data majorly limits the scale means method when most of the attributes fall into the high-performance group. Compared with the scale means method, the grand means method is more suitable for grouping data. However, the grand means method also exhibits limitations; for example, if