Using Clustering Analysis and SN Ratio to Classify Quality Attributes in the Kano Model: An Empirical Study

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Service and product quality have the most significant and direct impact on customer satisfaction. However, customers have different impressions on various service or product quality attributes. Therefore, it is essential for enterprises to fully understand the quality attributes of their service or products. The concept of Kano's two-dimensional model evaluates quality attributes with the asymmetric and nonlinear relationship. Classifying quality attributes in the Kano model with typical satisfaction data is another issue that people keen to know. The main objective of this study is to identify the quality attributes in the Kano model with the relationship between the attribute performance and customer satisfaction.

This study applied the clustering analysis and signal-to-noise ratio to determine the quality attribute of service or product characteristics in the Kano model. First, the related data were collected and the similarities of attributes were calculated. Second, the thresholds to group the attributes were defined. Finally, the signal-to-noise ratio of each attribute was computed and the quality attributes were identified. The proposed approach was validated using data collected from a food and beverage industry. The result shows that the proposed approach performs better than the regression methods and others.