Fuzzy Importance-Performance Analysis for Determining Critical Service Attributes

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Abstract

Purpose - The purpose of this paper is to propose a novel approach of fuzzy importance-performance analysis (FIPA) to replace conventional importance-performance analysis (IPA) for determining critical service attributes those really need to improve for achieving superior customer satisfaction.
Design/methodology/approach - First, referring numerous studies, conventional IPA has some erroneous assumptions, the customer satisfaction of attribute performance has the characteristic of three-factor theory and the novel approach which integrates natural logarithmic transformation and partial correlation analysis is feasible for acquiring the implicitly derived importance of attributes. Second, according the fact and nature of fuzziness in human perception, this study applies fuzzy set theory to revise conventional IPA. Finally, the FIPA is proposed and subsequently implemented in a Taiwanese hot spring hotel case study.
Findings - The implementation of FIPA shows the determined critical service attributes are almost completely different from those attributes acquired by conventional IPA. Hence, the application of conventional IPA may cause practitioners make incorrect decisions of improvement priorities for service attributes and direct unsuitable quality-based marketing strategies.

Originality/value - The proposed FIPA which integrates fuzzy set theory, three-factor theory,
partial correlation analysis and natural logarithmic transformation avoids the erroneous assumptions
of conventional IPA, considers the nature of fuzziness in human perception and includes the actual
importance of service attributes. Therefore, the proposed FIPA can effectively assist business
managers in determining critical service attributes to improve service quality or customer satisfaction
and to achieve competitive advantage

Keyword：Fuzzy logic, Customer services quality, Performance measures