Fuzzy Neural Based Importance-Performance Analysis for Determining Critical Service Attributes

鄧維兆,Wen Pei
Leisure and Recreation Management
Tourism
simond@chu.edu.tw

Abstract

Importance-performance analysis (IPA) is a simple but effective means of assisting practitioners in prioritizing service attributes when attempting to enhance service quality and customer satisfaction. As numerous studies have demonstrated, attribute performance and overall satisfaction have a non-linear relationship, attribute importance and attribute performance have a causal relationship and the customer's self-stated importance is not the actual importance of service attribute. These findings raise questions regarding the applicability of conventional IPA. Furthermore, Human perceptions and attitudes are subjective and vague. Traditional assessments of service quality or customer satisfaction that used Likert scale to represent customer perceptions based on linguistic assessments are impractical. Moreover, some revised IPA that used statistical methods to acquire the implicitly derived importance of attributes always had some unreality assumptions. Therefore, this study presents a Fuzzy Neural based IPA (FN-IPA) which integrates fuzzy set theory, back-propagation neural network and three-factor theory to effectively and adequately assist practitioners in identifying critical service attributes.

Keyword：Fuzzy set theory
Back-propagation neural network

IPA
Three-factor theory
Critical service attributes