Back-propagation neural network based importance-performance analysis for determining critical service attributes

鄧維兆, 陳文欽, 裴文
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. Therefore, this study presents a revised IPA which integrates back-propagation neural network and threefactor theory to effectively assist practitioners in determining critical service attributes. Finally, a customer satisfaction improvement case is presented to demonstrate the implementation of the proposed Back-Propagation Neural Network based Importance–Performance Analysis (BPNN-IPA) approach.

Keyword：Back-propagation neural network; IPA; Three-factor theory; Critical service attribute