

Measuring service quality by fuzzy linguistic asymmetric inverted normal  
loss function approach

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Abstract

SERVQUAL has been widely accepted in the domain of service quality measurement, however, there are still many arguments raised, such as the linear assumption; and gap scores only consider mean but with no reference to the variance. Some scholars used Taguchi loss function to measure the service quality, but Taguch loss function is not adequate for portraying the real situation in the service sector, because of the unbounded loss and asymmetric loss. In addition, the traditional Likert scale scoring methods include equidistant integer value and semantic selection requiring dichotomy to the answerer, it does not consider the implicit phenomenon in people' s mental decision behavior. Against these backgrounds, this study proposed an approach that using Fuzzy linguistic scoring instead of Likert scale scoring, via asymmetric Inverted Normal Loss Function (INLF) to translate the gap scores. An empirical case of two department stores in Taiwan demonstrate the feasibility and effectiveness of this approach.

Keyword : SERVQUAL; Loss function; Fuzzy Linguistic; Service quality.