

Abstract

Services provided at Indian Railway stations cater to a large section of people having different travel characteristics. The perception of service quality of infrastructure at a railway station is relative and varies with the preferences of the passengers which lead to variation in their assessment of importance and satisfaction of various service attributes. Decision on improvements of the services for passenger satisfaction depends on how effectively the passenger responses are measured and analyzed. This research suggests a two step methodology for assessing the infrastructural services provided at Indian Railway stations, at attribute level and at component level. This method is distinct from the prevailing methods of assessment. Responses collected for importance and satisfaction on attributes in five point rating scale is converted to interval scale for obtaining mean values and corresponding intervals or level for different passenger groups. Law of Categorical Judgment has been used for scale conversion. This proposed approach of measuring service quality represented by levels takes care of expected variation in results due to varying passengers' responses. Degree of dissatisfaction is defined as the difference in importance level and satisfaction level and an attribute with higher degree of dissatisfaction are given priority for improvement. Scale conversion provides scope of comparing performances of two or more railway stations at attribute level and has been applied for three railway stations chosen as case studies. They are Howrah, Kharagpur, and Panskura railway stations in eastern India. The effects of satisfaction on components which explains the satisfaction in functioning of individual attributes is measured. Path analysis is used for component level prioritization as it allows the simultaneous modeling of several related relationships. The levels of satisfaction of passengers on attributes obtained from the two stages of the methodology are found consistent. Improvement in *security system* is of highest priority for all the three stations. For Howrah railway station *travel associated facilities* and *extent and nature of waiting* are also of highest priority. Attributes *accessibility* and *passenger amenities* are of next order of priority for improvement. Components like adequacy and visibility of *security systems*; status of operation and location of *travel related facilities* need improvement for effective improvement of station infrastructure. The uniqueness of this methodology is that the evaluation process is realized through a top down reflective approach where the physical attributes and their respective components are individually assessed.

Key words: *Service quality, passenger satisfaction, Indian railway station, scale conversion, security system, accessibility, passenger amenities*

