**Service Quality Assessment of Public Transportation along Kathmandu Ring Road (NH-39)**

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**Abstract**

Rapid population growth, urban sprawl, and increasing motorization in Kathmandu Valley are creating many complexes like traffic congestions, road traffic crashes, poor Public Transport System, and air pollution. The situation is similar in Ring Road of Kathmandu, where urbanization continues to happen rapidly and numbers of operating vehicles are increasing daily, but the numbers of public vehicles are not. It is facilitated by many bus companies, but their Service Qualities are not seen satisfying, due to which numbers of private vehicles are in trend of increasing on the streets of Kathmandu. It is intrinsic to evaluate the performance of public transport service operators to suggest them the necessary improvements to draw more people towards using the services provided.

This study aimed to find out the existing Service Quality, of the buses plying on Ring Road of Kathmandu valley, based on the use of SERVQUAL method. SERVQUAL is one of the most important factors that increase the usage of Public Transportation. It is a multi-dimensional tool to capture consumer expectations and perceptions of a service along the five dimensions that are believed to represent Service Quality. The five dimensions are: Reliability, Tangibles, Assurance, Empathy, and Responsiveness. It was used for classifying the Public Transportation under SERVQUAL evaluation criteria and was obtained through the series of questions asked to the users of the bus companies.

On a broader perspective, this study dealt with the Service Quality provided by four bus companies namely: MahaNagar Yatayat, Orange Bus Sewa, Sundar Yatayat (known as Electric Bus) and Other Bus providing their services in the Ring Road. Statistically significant number of sample at 95% confidence interval for every gender, age group, occupations was taken. A series of questionnaire was asked to the users of these bus companies. Since, it is difficult for users to express their perception with a particular number, they were asked to respond to the questionnaires in linguistic terms and the results obtained from this questionnaire survey was converted to fuzzy numbers later. Altogether 20 numbers of sub- criteria under those five dimensions of SERVQUAL were taken for perception evaluation survey for all those bus companies. Using the linguistic terms, Defuzzification was done on those 20 criterions. Based on the values of calculated defuzzification numbers, User satisfaction was checked and higher the score obtained lesser was the user satisfaction level among the each criterion. In conclusion, comparing all the Bus Companies, parameter “Information about Bus Route” scored highest Perception Score in case of MahaNagar Yatayat Bus. Similarly, same parameter had gained lower score in case of Orange Bus Sewa and Other Bus while “Bus Frequency” parameter had the higher score in case of Other Bus. So in this way, using SERVQUAL method Service quality of Public Transportation along Kathmandu Ring Road was assessed.

Keywords: SERVQUAL, Fuzzy Numbers, Defuzzification