## Abstract

In an effort to provide a long-term traffic solution, On December 5, 1999, the first urban rail transit system began operations in Bangkok. This system, known as the Tanayong project or Skytrain, operated by Bangkok Mass Transit System Co. Ltd. (BTSC), a subsidiary of Tanayong Group, running above the business district, where traffic problems are among the worst. Longer-term effects on the city's environment are, of course, much harder to quantify, but the use of a pollution-free power source, and adoption of a new alignment above the congested streets are sure to offer an attractive alternative to many people unwilling to tolerate any more traffic jams. To reach such objectives, it is important to study the behavior of commuters in order to find appropriate measures for service improvement.

This study is proposed to achieve main objective: To determine what component of travel-related factors make a meaningful contribution to the fit of the model explaining the variation of the usage of BTS train which focus on number of trip per week.

Travel-related factors which are safety, comfort, convenience, accessibility, reliability, cost, time and feeder system, are the independent variable to be tested with dependent variable which is number of trip per week. These independent variables will be put in the model together with dependent variable forming up multiple linear regression analysis.

Survey technique focused on structured interview with the help of closed-ended questionnaire is applied for gathering primary data form the target population. The target population is respondent who travel by BTS sky-train in Bangkok during conducted survey(10-19 October, 2001)

From the research results, multiple regression analysis, four out of eight travel-related factors which are cost, safety, comfort and feeder system can explain the variation of number of trip per week at the percentage of 14.14%, 9.36%, 8.35% and 4.54% respectively.

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