ABSTRACT

Estimation of Value of Travel Time in Trinidad and Tobago

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Given the local economic climate, new ways have to be sought to fund public sector infrastructure development. In the past, government administrations have shown an interest in implementing toll roads to provide the necessary aid for highway capital investments. However, critical to the success of such initiatives is the determination of the value of travel time to effectively assess their viability. This study utilized stated preference methods to determine the local value of travel time. A questionnaire was developed that incorporated a stated preference survey that involved binary choices between faster, expensive travel options and slower, cheaper ones and also captured socioeconomic data and work trip characteristics of the respondents. It was administered using convenience sampling via the Whatsapp mobile messaging app. To develop the survey, a preliminary estimate of value of travel time was the wage rate was made based on both national Gross Domestic Product and average income data. Analysis of the descriptive data revealed that the sample was biased as a result of the distribution methods. Due to the nature of the stated preference survey, the data was analyzed using binary logistic regression for which the parameters were determined using the maximum likelihood method. The overall value of travel time estimate obtained was found to be reasonable in comparison to the wage rate calculated using Gross Domestic Product. Further subgroup analyses done using the socioeconomic data and trip characteristics collected showed trends similar other studies done, particularly for variations in income, travel distance, and mode of travel. It was also found that congested travel and time constraints during the work trip also influenced the values of travel time observed for some of the subgroups.

Keywords: value of travel time; binary logistic regression; stated preference survey; Trinidad and Tobago.