

Vehicle Kilometres Travelled Estimates using Household Travel Survey

Gunathilaka S and Amarasingha N

Department of Civil Engineering, Sri Lanka Institute of Information Technology, Sri Lanka

*Corresponding author e-mail address: niranga.a@sliit.lk

Vehicle Kilometres Travelled (VKT) is a key factor in transport planning and managing, since data represent existing road transport demand or pattern in a specific area of concern. In Sri Lanka, the expansion and development of the transport sector should be complemented with timely updated data in order to fulfil current needs as well as future growth scenarios as a developing country. VKT is a valuable indicator in identifying these requirements; however, timely VKT data for the country is not available within transport communities so far. Very few researchers have attempted to estimate timely VKT over the past few years, and this too in few areas of Sri Lanka. This study aimed to estimate VKT in Southern, Northern, and Eastern areas of Sri Lanka using a questionnaire based - household travel survey. Three areas were visited and randomly selected respondents were interviewed on their travel information on weekdays, weekends, special seasons, holidays etc. Other than number of kilometres travelled, travel mode and socio demographic information of respondents, all of which are useful in estimating Personal Kilometres Travelled (PKT) were collected. Estimating PKT of individuals seems important in Sri Lanka since a majority of people do not own personal vehicles for travelling. PKT always refers to an individual while VKT refers to a vehicle. The travel distances of samples were aggregated to the annual level and weighted based on census and population data in the corresponding area of study in order to estimate VKT/PKT per person per year. Estimated VKT and PKT for the three areas were statistically compared based on selected socio demographic factors. The estimated VKT would be useful in the transport sector as well as in environmental agencies' computation of emissions and energy consumption in the country.

Keywords: Vehicle Kilometres Travelled, Questionnaire based- household survey method, Personal Kilometres Travelled, Transport planning and managing