

**A STUDY ON EFFECTS OF REAL EXCHANGE RATES AND GDP ON
INTERNATIONAL TOURISM DEMAND FOR THE SRI LANKA FROM SOME
EUROPEAN COUNTRIES**

K. Luxshayini, N. Satkunanathan and A. Laheetharan

Department of Mathematics and Statistics, University of Jaffna, Sri Lanka
nalini25@gmail.com

In the recent past, the Sri Lanka's tourism industry has remarkable rapid growth of both in terms of tourist arrivals and earnings. The predicting of tourist arrivals helps the Government and other tourism related organizations in their future planning. The count data of tourist arrivals to Sri Lanka from various countries is collected by the Sri Lanka Tourism Development Authority (SLTDA) reports. The objective of this paper is to investigate the effects that the real exchange rates and GDP (destination country) have on inbound tourism demand (tourist arrivals) from Europe country's as Austria, Denmark, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland, and the UK to the Sri Lanka over the period 2008–2017. The count data regression models explain the relationship between the tourist arrivals and some covariates. In addition, the Poisson regression model is a popular model for modelling count data. Generally, much of the count data are over-dispersed and invalidating the use of the Poisson distribution. In these scenarios, some extensions of Poisson model are usually used to deal with over-dispersion, including Quasi-Poisson and Negative binomial. Model parameters are estimated by using the maximum likelihood method. The likelihood ratio test is used on the overall fit of the model. According to the results of test for the dispersion parameter and the likelihood ratio test, the Negative binomial model performs as good as the other regression models. The results show that tourists visiting the Sri Lanka are more sensitive to changes in the exchange rate than changes in GDP. While international tourists positively respond to the exchange rate, negatively respond to the GDP. Although, all the countries effects are positively responding to the tourist arrivals. The resulting model reveals that much number of tourist arrivals in the Sri Lanka comes from Western Europe (mainly the Germany, France and the UK).

Keywords: *Over-dispersion, Poisson, Quasi-Poisson, Negative binomial, Tourism demand, Exchange rate, GDP.*