



Poster Session PD – Social Sciences & Management

PD – 01

Technical efficiency of international tourism industry in Sri Lanka: Empirical evidence using data envelopment analysis

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Sri Lankan government views the tourism industry as an engine for economic growth. It has taken various steps to improve the performance of the sector. However, only few studies have focused on the performance of the industry. Therefore, current study evaluates the technical efficiency of tourism using different Data Envelopment Analysis (DEA) with specifications related to different outcomes of tourism. Tourism earnings, direct employment generation and foreign guest nights were the outputs considered whereas number of beds / number of hotel rooms, international tourist arrivals and all item tourist price index were treated as inputs used in different models. Finally, a single model was estimated amalgamating all three different outputs into one model. All DEA models were estimated using multi – stage DEA estimation procedure. Then, causality tests between economic growth and technical efficiency of tourism industry were performed to detect contribution from tourism to economic growth. Findings of this study revealed that the tourism industry has been operating inefficiently during last 30 years and has possibilities for improvements altering the inputs of the industry. According to the granger causality test, the level of technical efficiency of tourism industry directly affects economic growth in Sri Lanka and not vice versa. It revealed that investing on construction of hotels is a waste of resources and some strategies should be formulated to control tourist prices. Marketing or promotional strategies need to be initiated to increase international visitor arrivals as well as average room occupancy rates. It further revealed that tourism industry has been operating under decreasing returns. When earnings considered as an output, decreasing earnings directly affects the productivity of the sector.

Keywords: Data Envelopment Analysis, technical efficiency, tourism, Granger causality