Spatial Characteristics and Influencing Factors of Tourism Efficiency: A Case Study of Yunnan Province, China

Zhuolin Liu
Chonnam National University, Department of Statistics, South Korea

Ye Yuan
Chonnam National University, Department of Statistics, South Korea

Abstract:

The tourism industry has become a powerful engine for economic growth, with tourism efficiency crucial for improving sector quality. This study takes Yunnan Province, China, as an example and employs the entropy weight method and the DEA-Malmquist model to analyze tourism efficiency from 2016 to 2022. Additionally, a Tobit regression model examines the key influencing factors. The results show: (1) Efficiency and scale efficiency change across various districts remained relatively stable, with values close to 1, suggesting that technological progress is the primary driver of total factor productivity growth. (2) Most regions exhibited stable scale efficiency change and pure technical efficiency change values close to 1, indicating minimal changes in scale adjustment and technology utilization. (3) The DEA-CRS model reveals that most districts experienced significant fluctuations in technical efficiency, particularly with a notable decline in 2020 due to COVID-19. However, Kunming maintained relatively stable, while districts such as Chuxiong, Lijiang, Pu'er, and Qujing sustained relatively high technical efficiency levels, indicating strong management capabilities and efficient resource allocation. (4) The total factor productivity in Kunming and Yuxi was the highest, highlighting their advanced resource use and technology. (5) Tourism efficiency is positively influenced by government intervention, human resources, and infrastructure.

Keywords:

Tourism Efficiency; DEA-Malmquist Index Model; Tobit Model; Yunnan Province, China.