

Stochastic Multi-Variable Approach to Modeling Tourism Area Life Cycles

Shaul Krakover and Yuval Karplus - Ben-Gurion University of the Negev

Butler's (1980) tourist area cycle of evolution is re-examined by its application to the Dead-Sea resort area in Israel. The objective of the study is to examine the validity of the model while using a stochastic regression expression that should not necessarily yield to the logistic curve suggested by Butler. The regression model is a compound of endogenous and exogenous variables incorporated in an interactive manner with the temporal development process. Monthly bed-night data for the years 1974 to 2000 are used as measure of demand. Besides time, accumulated investment in terms of hotel rooms is applied as an endogenous variable and a security indicator is applied as an exogenous variable. The suggested interactive regression model was found to perform better ($R^2=0.92$) than the temporal expression ($R^2=0.70$). Despite the adoption of a stochastic flexible model, the Dead Sea development pattern was found to conform to Butler's tourist area cycle of evolution model.