ARTIFICIAL NEURAL NETWORK MODELING OF TOURISM DEMAND FORECAST

Sadık SERÇEK[a]

[a]Dicle Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, Diyarbakır, Türkiye (sadik.sercek@dicle.edu.tr)

EXTENSIVE SUMMARY

The accurate and reliable demand forecasts for future are great importance for tourism sector in terms of directing resources of tourist destination to correct locations with their marketing functions. Due to the unique nature of tourism sector and its flexibility in response to demanding factors, the correct forecasting becomes even more important. For this purpose, the data for 2012-2016 regarding variables affecting the tourism demand of Turkey were collected and analyzed. Then, according to this data, 12 months of tourism demand of 2017 was estimated with Artificial Neural Networks technique. It has been seen that models obtained with artificial neural networks have better prediction results than other methods in previous studies.

In this study, forecasting of tourism demand of Turkey was made using artificial neural network model of quantitative demand forecasting methods. The designed YSA model has a back-propagating neural network that is widely used in the related article. This network is preferred because of its high predictive success in both linear and non-linear models, ease of use and speed of convergence. The model was constructed using SPSS 18, Neural Network Multilayer Perception packet program and the results obtained were analyzed in detail.

As a result, it is quite gratifying to develop tourism demand forecasting models and achieve results close to actual values, especially in a period when the decline in tourism demand is increasing. From this point of view, it can be seen that the YSA model can be applied successfully when the tourism demand models are created and forecasts are obtained. Thus, it is expected that public and private sector representatives will play an important role in forward planning work. Especially these and similar studies, tourism-related organizations; It is expected that the tourism demand structure will be determined, the tourism demand will be met optimally, the related investment plans will be made and the national, regional and urban tourism policies will be determined.