HANDBOOK ON TOURISM FORECASTING METHODOLOGIES

THE MOST WIDELY USED FORECASTING METHODS IN THE TOURISM INDUSTRY

Causal methods
- Describe the relationships between the response and the predictor variables.
  - Simple linear regression
  - Multiple Linear Regression
  - Structural Econometric Methods

Extrapolative methods
- Work by extrapolating a historical sequence, of the variable of interest, into the future.
  - Naïve (no-change) and simple moving average (SMA)
  - Exponential smoothing: simple, double, & triple
  - Autoregressive & seasonal autoregressive integrated moving average - (ARIMA) & (SARIMA)

AI & Hybrid Methods
- AI models’ ability to capture nonlinear relationships and patterns among time series and exogenous variables.
- AI is an effective set of statistical tools to deal with a set of data that has seasonal, trend and cyclic patterns

Qualitative Methods
- Qualitative methods represent alternative ways of capturing the complexity of the real world in forecasting.
- Qualitative forecast is among others used when there is a lack of data, when statistical forecasts need judgmental adjustment.

CHOOSING A FORECASTING METHODOLOGY

Before selecting a forecasting methodology it is important to consider:
1. The purpose of the forecast
2. The horizon of the forecast
3. The data available
4. The resources and benefits of the forecast

There are many forecasting methodologies to choose from and choosing the right one is a challenge.

PRACTICAL CONSIDERATIONS WHEN APPLYING FORECAST MODEL(S)

1. Clearly determine what to forecast - and why
2. Choice of forecasting model(s)
3. Step-by-Step Guide
   - Step 1: Problem definition
   - Step 2: Gathering information and data
   - Step 3: Preliminary exploratory analysis
   - Step 4: Choosing and fitting models
   - Step 5: Use and evaluation of model

SEVEN GOOD HABITS WHEN WORKING WITH ORGANISATIONAL FORECASTING

1. Forecasting is to be done in two directions
2. Get data in place and available in a timely matter
3. People in the organisation need to be accountable for forecast accuracy
4. Improving the data quality is a never-ending process
5. Always keep an eye on the objective and the profitability
6. Modernise processes with the use of technology
7. Forecasting needs to be agile