Estimating the number of visitors in a destination using indirect and flash indicators

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The estimation of the numbers of visitors in a destination is crucial for many purposes. On the one hand, destination management organizations (DMOs) need to have *timely* information in order to make proper marketing decisions at the right moment. On the other hand, accurate evaluation of economic impact on a destination means being able to spell out the numbers of visitors by their categories: hotels, self-catering, camping and day-trippers.

Traditional statistical research on this subject use econometrical or time series methods with explanatory macroeconomic variables. Most of the time, these variables cannot be used as advance indicators for practical reasons regarding the timing of their publications. There are, nevertheless, some other variables such as the numbers of receipts in supermarkets at the destination, the counting of cars on roads, the weight of garbage, etc, which can be available only few days after the end of the month. In this framework, these latter variables, not belonging to the macroeconomic family will be call *indirect indicators.* One of the aims of this paper is to present the exploratory research carried out at the Institute of Tourism on a destination in Valais using indirect indicators. It seems that the utilization of indirect indicators in the framework of Structural Times Series developed by Professor Andrew Harvey and disaggregation methods developed by Canada Statistics allow us to spell out the number of visitors in destinations by their category: hotels guests, self-catering, camping and day-trippers.

The other aim is the application of *flash indicators* in tourism frequentation forecasting. Flash indicators are short-term estimations, namely *nowcasting* of relevant information for policymakers which is often used by Central Banks to calculate relevant variables like national or regional GDP. Flash indicators are a compromise between timeliness, higher frequency and accuracy and they allow a snapshot of the ongoing economic situation. Another characteristic is that they use a number of predictors in the model. In order to get through the collinearity problems, these methods use dynamic factor decomposition of predictor variables by Stock and Watson. The Institute of Tourism is leading a research using as predictors not only a huge amount of indirect indicators but also some other financial variables such as volatility of stock option markets and exchange rates in order to nowcast the number of visitors as soon as the month is over. Tourism is a complex phenomenon closely linked to the ongoing state of the global economy. In order to obtain good estimations, this research tries to integrate all the information available in the model, both proximity ones, like indirect indicators and information about world economic trends.