ID158 Miriam Scaglione (University of Applied Sciences and Arts Western Switzerland Valais) - Forecasting tourism frequentation series using regional grouped time series-The case of the canton of Valais in Switzerland, co-authors: Michele Hibon, INSEAD; Pascal Favre, HES-SO Valais-Wallis/Institute of Tourism

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Abstract: The canton of Valais has 19 different destinations. At the lowest level, tourism frequentation data, namely overnights, are collected for each of its 127 municipalities. The destinations are classified into three majors regions and the overnights sorted into Swiss residents and foreigners. It this way, the hierarchy of time series is composed of a tree of depth equal to 5. When forecasting the total tourism frequentation for the Valais at the aggregate level, the effect of winter holidays is difficult to model in the forecast, i.e., intervention variables. On the one hand, the 26 cantons set school vacation independently but try to stagger them as much as possible. On the other hand, tourists from different cantons have different preferred Valais ski resorts but these preferences are only partially known. The aim of this research is to assess whether the use of regional grouped time series forecast give better forecasts than on the aggregates levels. The ultimate objective of the current research is to find general empirical rules for identifying the level of aggregation that is appropriate for each case: Destination, origins (national or foreign) regions and above all canton.