

Determining the Number of Single Models in a Combined Forecast

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Abstract : Combining various forecasting models is an important tool for researchers to attain more accurate forecasts. A great number of papers have shown that selecting single models as dissimilar models, or methods based on different information as possible leads to better forecasting performances. However, there is not a certain rule regarding the number of single models to be used in any combining methods. This study focuses on determining the optimal or near optimal number for single models with the help of statistical tests. An extensive experiment is carried out by utilizing some well-known time series data sets from diverse fields. Furthermore, many rival forecasting methods and some of the commonly used combining methods are employed. The obtained results indicate that some statistically significant performance differences can be found regarding the number of the single models in the combining methods under investigation.

Keywords : combined forecast, forecasting, M-competition, time series

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