Prequential Guidelines When Making Predictions Using Short Time Series

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ABSTRACT

Many methodological difficulties arise when dealing with small samples. Such insufficient information content usually results in instability in prediction estimates. This paper intends to provide useful guidelines when making predictions using panel data collected over a short period in time. Hoping to enrich the information content hence to obtain improved forecasts, we exploit both serial dependence within each component series and interdependence across different components. We provide a measure to assess prequential performance of a model. We use this measure together with a set of different models to identify the latent structure of the underlying process.