Forecasting economic variables with high-dimensional time series

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Abstract. *We discuss the problem of forecasting a given economic variable, based on the information contained in a large ensemble of (stationary) time series which, typically, exhibit both serial and cross-sectional correlation. The problem is formulated as a linear regression problem and, as an alternative to the standard principal component approach, we consider penalised methods such as ridge or lasso regression. Asymptotic consistency results can be derived for the case where both the number of time samples and the number of time series tend to infinity. We present new asymptotic rates for ridge regression, under the assumption that the series obey a so-called factor model.*