

Identifiability of regular and singular multivariate autoregressive models from mixed frequency data

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Abstract

This paper is concerned with identifiability of an underlying high frequency multivariate AR system from mixed frequency observations. If we have identifiability, the parameters and thus all second moments of the output process can be estimated consistently from mixed frequency data. Then linear least squares methods for forecasting, nowcasting and interpolation of nonobserved output variables can be applied. The main results show that on a generic subset of the parameter space identifiability holds. We deal with AR systems with nonsingular and singular innovation variance matrices, the latter being important for dynamic factor models. Finally, exact interpolation is discussed.

JEL classification: C32, C51

Keywords: Mixed frequency data, Multivariate autoregressions, Factor models, Exact interpolation