Panel time series methods in R

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In the last decade, econometricians have devoted increasing attention first to the issues of nonstationarity and cointegration in pooled time series data (Phillips and Moon, 1999), then to the related problem of cross-sectional dependence induced by common factors (Pesaran, 2006). Among different approaches, Pesaran's Common Correlated Effects (CCE) augmentation has proved particularly promising both for consistent estimation and unit root testing under nonstationarity and cross-sectional strong dependence. An extension of package plm (Croissant and Millo, 2008) is described, comprising pooled and heterogeneous CCE estimators in both the pooled mean groups and the generalized fixed effects (CCEP) styles. The same software framework allows for cross-sectional-correlation robust, so-called “second generation” unit root tests as cross-sectionally augmented Dickey-Fuller (CADF) regressions (Pesaran, 2007). A practical demonstration of panel cointegration and error correction model estimation highlights the usefulness of the existing plm infrastructure for lagging and differencing in this new context.

**References**


