linearFeedbackModel

March 28, 2019

R topics documented:

`lfm` *Estimate the linear feedback model in Blundell, Griffith and Windmeijer (2002)*

Description

Estimate the linear feedback model in Blundell, Griffith and Windmeijer "Individual effects and dynamics in count data models", Journal of Econometrics 108 (2002) 113-131

Usage

```
lfm(formula, data, effect = "individual", model = "onestep",
    weight.matrix = "instruments", index = NULL, start = NULL)
```

Arguments

`formula`	Similar to the `pgmm()` function in package `plm`. A symbolic description for the model to be estimated. Indicate a multi-part formula, the first two parts describing the covariates and the gmm instruments and, if any, the third part the 'normal' instruments. The first independent variable must be the lag of the dependent variable.
`data`	A `pdata.frame`, or a `data.frame` if using the `index` option.
`effect`	Either `"individual"` or `"twoways"`. The former only includes individual fixed effects while the latter also includes time fixed effects.
`effect`	Either `"onestep"` or `"twosteps"`. Whether to do one-step GMM or two-step GMM.
`weight.matrix`	Either `"identity"` or `"instruments"`. Whether to use the identity matrix of the cross product of the instruments for the first-step weight matrix.

index	If data is not a pdata.frame, use this option to declare the names of the individual and time indexes.
start	An optional vector of starting values for optimization.

Value

call	The matched call
coefficients	The estimated coefficient
fitted.values	data.frame of fitted values
first	The first stage estimates
fixed.effects	Estimates of the individual fixed effects
model	The variables used for estimation for each individual
residuals	data.frame of residuals
vcov	The covariance matrix of the coefficients
W1	The first-stage weight matrix used
W2	The second-stage (efficient) weight matrix used (only returned if model = "twosteps" is used)
Z	The instrument matrix for each individual

Examples

```
## Not run:
lfm(y ~ lag(y, k = 1) + x | lag(y, k = 2:4) + lag(x, k = 1:4),
    data = data, effect = "individual", model = "onestep", index = c("i", "t"))

## End(Not run)
```

Index