Package ‘dynpanel’

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Type Package

Title Dynamic Panel Data Models

Version 0.1.0

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Description Computes the first stage GMM estimate of a dynamic linear model with p lags of the dependent variables.

License GPL-3

LazyData TRUE

RoxygenNote 5.0.1

Depends R (>= 3.3.0)

Imports stats, gtools

NeedsCompilation no

Repository CRAN

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Dynpanel-package Dynamic Panel Data Models

Description

This package computes the first stage GMM estimate of a dynamic linear model with p lags of the dependent variables.

Details

Package: dynpanel
Type: Package
Version: 1.0
Date: 2016-08-26
License: GPL-3

In this package, we apply the generalized method of moments to estimate the dynamic panel data models.

Author(s)

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References


Examples

```r
# Load data
data(Produc)
# Fit the dynamic panel data using the Arellano Bond (1991) instruments
reg<-dpd(log(gsp) ~ log(pcap) + log(pc) + log(emp) + unemp,Produc,index=c("state","year"),1,4)
summary(reg)
```
# Fit the dynamic panel data using an automatic selection of appropriate IV matrix
#reg<dpd(log(gsp) ~ log(pcap) + log(pc) + log(emp) + unemp, Produc, index=c("state","year"),1,0)
#summary(reg)

# Fit the dynamic panel data using the GMM estimator with the smallest set of instruments
#reg<dpd(log(gsp) ~ log(pcap) + log(pc) + log(emp) + unemp, Produc, index=c("state","year"),1,1)
#summary(reg)

# Fit the dynamic panel data using a reduced form of IV from method 3
#reg<dpd(log(gsp) ~ log(pcap) + log(pc) + log(emp) + unemp, Produc, index=c("state","year"),1,2)
#summary(reg)

# Fit the dynamic panel data using the IV matrix where the number of moments grows with kT
# K: variables number and T: time per group
#reg<dpd(log(gsp) ~ log(pcap) + log(pc) + log(emp) + unemp, Produc, index=c("state","year"),1,3)
#summary(reg)

dpd method

Description
method

Usage
dpd(x, ...)

Arguments
x
a numeric design matrix for the model.
...
not used

Author(s)
Zaghdoudi Taha

dpd.formula formula

Description
formula

Usage
## S3 method for class 'formula'
dpd(formula, data = list(), index = c("id", "time"), p,
meth = c(0, 1, 2, 3, 4), ...)
Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>formula</td>
<td>PIB-INF+TIR</td>
</tr>
<tr>
<td>data</td>
<td>the dataframe</td>
</tr>
<tr>
<td>index</td>
<td>: id is the name of the identity groups and time is the time per group</td>
</tr>
<tr>
<td>p</td>
<td>scalar, autoregressive order for dependent variable</td>
</tr>
<tr>
<td>meth</td>
<td>scalar, indicator for the Instruments to use</td>
</tr>
<tr>
<td>...</td>
<td>not used</td>
</tr>
</tbody>
</table>

Description

- state: the state
- year: the year
- pcap: private capital stock
- hwy: highway and streets
- water: water and sewer facilities
- util: other public buildings and structures
- pc: public capital
- gsp: gross state products
- empl: labor input measured by the employment in non-agricultural payrolls
- unemp: state unemployment rate

Usage

```r
data(Produc)
```

Format

A data frame with 816 rows and 10 variables
## Summary

**Description**

Summary

**Usage**

```r
## S3 method for class 'dpd'
summary(object, ...)
```

**Arguments**

- `object` is the object of the function
- `...` not used
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