Package 'S2sls'

Type Package

Title Spatial Two Stage Least Squares Estimation

Version 0.1

Date 2016-01-06

Author Taha Zaghdoudi

Maintainer Taha Zaghdoudi <zedtaha@gmail.com>

Description Fit a spatial instrumental-variable regression by two-stage least squares.

License GPL-3

LazyData TRUE

Depends R (>= 2.12.0)

Imports stats, spanel

NeedsCompilation no

Repository CRAN

Date/Publication 2016-01-08 23:17:51

R topics documented:

S2sls-package | *Spatial Two Stage Least Squares estimation*

Description

Fit a spatial instrumental-variable regression by two-stage least squares.

Details

Package:	S2sls
Type:	Package
Version:	1.0
Date:	2016-01-06
License:	GPL-3

S2sls(Y~X,data,W) Spatial Two Stage Least Squares Estimation computes spatial instrumental variables s2SLS estimation where Y is the vector of the dependant variable, X is the matrix of the independent variables and W is the contiguity matrix.

Author(s)

Taha Zaghdoudi

Taha Zaghdoudi <zedtaha@gmail.com>

References

Amemiyia T. (1971), The estimation of the variances in a variance–components model, *International Economic Review*, **12**, pp.1–13.

Baltagi B.H. (1981), Simultaneous equations with error components, *Journal of econometrics*, **17**, pp.21–49.

Baltagi B.H. (2001), *Econometric Analysis of Panel Data*. John Wiley and sons. ltd.

Millo, G., Piras, G. (2012) splm: Spatial Panel Data Models in R. *Journal of Statistical Software*, **47(1)**, 1–38. URL http://www.jstatsoft.org/v47/i01/.

Examples

```
# Load data
data(Produc,package="spanel")
data(usaww,package="spanel")
# The contiguity matrix w must be a square matrix with size[nrow(log(gsp)),nrow(log(gsp))]
# so for our example we transform usaww to a square matrix:
ww<-as.matrix(usaww)
h<-kronecker(ww,diag(17))
# fit spatial two stage least squares model
ran<-s2sls(log(gsp) ~ log(pcap) + log(pc) + log(emp) + unemp,Produc,h)
summary(ran)
```

---

s2sls	*method*

Description

method

Usage

```
s2sls(x, ...)
```

Arguments

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

Author(s)

Zaghdoudi Taha

---

s2sls.formula   *formula*

Description

formula

Usage

```
## S3 method for class 'formula'
s2sls(formula, data = list(), w, ...)
```

Arguments

formula	log(gsp) ~ log(pcap) + log(pc) + log(emp) + unemp
data	the dataframe
w	is the contiguity matrix
...	not used

---

summary   *Summary*

Description

Summary

Usage

```
summary(object, ...)
```

Arguments

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

Index