Package ‘inters’

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Title Flexible Tools for Estimating Interactions
Imports stats, fixest, glmnet
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Suggests knitr, ggplot2, lmtest, rmarkdown
Description A set of functions to estimate interactions flexibly in the face of possibly many controls. Implements the procedures described in Blackwell and Olson (2022) <doi:10.1093/restud/rdt044>.
License GPL (>= 2)
URL https://mattblackwell.github.io/inters/
BugReports https://github.com/mattblackwell/inters/issues
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post_ds_interaction: Post-double selection estimator for interactions

Description

post_ds_interaction applies post-double selection to the estimation of an interaction in a linear model.

Usage

```r
post_ds_interaction(
  data,
  treat,
  moderator,
  outcome,
  control_vars,
  panel_vars = NULL,
  moderator_marg = TRUE,
  cluster = NULL,
  method = "double selection"
)
```

Arguments

data: data.frame to find the relevant variables.
treat: string with the name of the treatment variable.
moderator: string with the name of the moderating variable.
outcome: string with the name of the outcome variable.
control_vars: vector of strings with the names of the control variables to include.
panel_vars: vector of strings with the names of categorical variables to include as fixed effects.
moderator_marg: logical indicating if the lower-order term of the moderator should be included.
cluster: string with the name of the cluster variable.
method: string indicating which method to use. The default is "double selection" which selects variables based on the outcome and treatment/interaction variables and "single selection" only selects on the outcome.

Details

The post_ds_interaction implements the post-double selection estimator of Belloni et al (2014) as applied to interactions, which was proposed by Blackwell and Olson (2019). Variables passed to panel_vars are considered factors for fixed effects and whose "base effects" are removed by demeaning all variables by those factors. Interactions between the moderator and all variables (including the factors generated by panel_vars) are generated and passed to the post-double selection procedure. Base terms for the treatment, moderator, and control variables are forced to be included in the final post-double selection OLS. The cluster argument adjusts the lasso
**primary**

**Value**

Returns an object of the class `lm` with an additional `clustervcv` object containing the cluster-robust variance matrix estimate when `cluster` is provided.

**References**


**Examples**

```r
data(remit)

controls <- c("l1gdp", "l1pop", "l1nbr5", "l12gr", "l1migr", "elec3")

post_ds_out <- post_ds_interaction(
  data = remit, treat = "remit",
  moderator = "dict", outcome = "Protest",
  control_vars = controls,
  cluster = "caseid"
)
```

**primary**  
*Data on the direct primary in US congressional elections*

**Description**

A data set on the presence of the direct primary in U.S. congressional elections and the vote shares for the Democratic, Republican, and third parties. Based on ICPSR Study 6985

**Usage**

primary

**Format**

A data frame with 1164 observations and the following 7 variables:

- **state**: name of the state
- **year**: year of the congressional election
- **dem_share**: percentage of the total vote cast for the Democratic candidate, 0-100
- **rep_share**: percentage of the total vote cast for the Republican candidate, 0-100
**other_share** percentage of the total vote cast for other parties, 0-100

**primary** binary variable indicating if the state had the direct primary (=1) or not (=0)

**south** binary variable indicating if the state is in the South (=1) or not (=0)

**Source**

[https://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/6895](https://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/6895)

**References**


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**Description**

A data set to replicate the findings of Escribà-Folch, Meseguer, and Wright (2018). Data and data descriptions are from that paper’s replication data, available at doi:10.7910/DVN/TVZQG6

**Usage**

remit

**Format**

A data frame with 2429 observations and 14 variables:

- **Protest** standardized measure of latent protest from Chenoweth et al. (2014)
- **remit** natural log of the 2-year lagged moving average of total remittances received in constant US dollars
- **dict** binary indicator of autocracy or democracy from Geddes, Wright, and Frantz (2014)
- **l1gdp** natural log of one-period lagged gdp per capita
- **l1pop** natural log of one-period lag of population
- **l1nbr5** lagged mean latent level of protest in countries with capital cities within 4000km of the target country’s capital
- **l2gr** two-year lagged moving average of GDP per capita growth (in percent)
- **l1migr** natural log of lagged net migration in millions
- **elec3** indicator for multiparty election in that year, year prior, or year after
- **cowcode** country code from correlates of war dataset
- **period** six ordinal time periods
- **caseid** numerical code for autocratic regime case name
- **year** year
Source

doi:10.7910/DVN/TVZQG6

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