Package: bacondecomp (via r-universe)

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Type Package

Title Goodman-Bacon Decomposition

Version 0.1.3

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Description Decomposition for differences-in-differences with variation in treatment timing from Goodman-Bacon (2018) <doi:10.3386/w25018>.

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Depends fixest, R (>= 2.10)

Suggests knitr, rmarkdown, testthat, ggplot2, covr

VignetteBuilder knitr

RoxygenNote 7.1.2

Encoding UTF-8

LazyData true

Repository https://evanjflack.r-universe.dev

RemoteUrl https://github.com/evanjflack/bacondecomp

RemoteRef HEAD

RemoteSha ec99dd079d00b0b94174c0519a00e5d4285e248b

Contents

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bacon   *Goodman-Bacon Decomposition*

Description

bacon() is a function that performs the Goodman-Bacon decomposition for differences-in-differences with variation in treatment timing (with or without time-varying covariates).

Usage

```
bacon(formula, data, id_var, time_var, quietly = TRUE)
```

Arguments

formula	an object of class "formula". Must be of the form y ~ D + controls, where y is the outcome variable, D is the binary treatment indicator, and 'controls' can be any additional control variables. Do not include the fixed effects in the formula.
data	a data.frame containing the variables in the model.
id_var	character, the name of id variable for units.
time_var	character, the name of time variable.
quietly	logical. If TRUE then bacon() does not print the summary of estimates/weights by type (e.g. Treated vs Untreated). Default is TRUE. You can also use bacon_summary() on the result to view this.

Value

If control variables are included in the formula, then an object of class "list" with three elements:

Omega	a number between 0 and 1, the weight of the within timing group coefficient
beta_hat_w	a number, the within timing group coefficient
two_by_twos	a data.frame with the covariate adjusted 2x2 estimates and weights

If not control variables are included then only the two_by_twos data.frame is returned.

Examples

```
# Castle Doctrine (Uncontrolled)
df_bacon <- bacon(l_homicide ~ post,
  data = bacondecomp::castle, id_var = "state", time_var = "year"
)

# Castle Doctrine (Controlled)
ret_bacon <- bacon(l_homicide ~ post + l_pop + l_income,
  data = bacondecomp::castle, id_var = "state", time_var = "year"
)
```

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bacon_summary *Summary of Goodman-Bacon Decomposition*

Description

Uses the two-by-two output produced by `bacondecomp::bacon` to produce average 2x2 estimate and total weight for the following three comparisons: Earlier vs. Later (Good), Treated vs. Untreated (Good), and Later vs. Earlier (Bad).

Usage

```
bacon_summary(two_by_twos, return_df = FALSE)
```

Arguments

two_by_twos   Data.frame produced by `bacondecomp::bacon`.

return_df   Logical. If TRUE, then the summary data.frame is returned. Default is False.

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castle *Data from Cheng and Hoekstra (2013, JHR)*

Description

Data from Cheng and Hoekstra (2013, JHR)

Usage

```
castle
```

Format

A data.frame with 520 observations and 159 variables

st The state (unit of analysis).

year Calendar year (time).

l_homicide Log of state/year homicide rate

post Indicator whether castle reform has been implemented

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divorce   *Data from Stevenson and Wolfers (2006, QJE)*

Description

Data from Stevenson and Wolfers (2006, QJE)

Usage

divorce

Format

A data.frame with 3366 observations and 147 variables

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math_reform   *Aggregated data from Goodman (In Press)*

Description

A data set containing state/year level data on an educational reform and future income. This is an aggregated version of the data used by Goodman (2019, JOLE) to estimate the effect of compulsory high school math coursework on future earnings.

Usage

math_reform

Format

A data.frame with 520 observations and 5 variables

state The state (unit of analysis).

class The high school class (time).

reform_math Indicator for whether the reform was in place for the state/class.

reformyr_math The year the math reform was first implemented for the state. Set to NA if never implemented.

incearn_ln Natural log of future income.

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