Package 'fwlplot'

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Title Scatter Plot After Residualizing Using 'fixest' Package

Version 0.2.0

Description Creates a scatter plot after residualizing using a set of covariates. The residuals are calculated using the 'fixest' package which allows very fast estimation that scales. Details of the (Yule-)Frisch-Waugh-Lovell theorem is given in Basu (2023) <arXiv:2307.00369>.

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Imports data.table, fixest, ggplot2

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Author Kyle Butts [aut, cre] (<https://orcid.org/0000-0002-9048-8059>)

Maintainer Kyle Butts <kyle.butts@colorado.edu>

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R topics documented:

`fml_breaker` *Break apart formula (from right to left) based on a symbole (~ or |)*

Description

Break apart formula (from right to left) based on a symbole (~ or |)

Usage

```
fml_breaker(fml, op)
```

Arguments

fml	Formula following fixest syntax.
op	String. Either ~ or |

Value

list of symbol or language from right to left that are split at each occurence of op.

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fwl_plot *FWL Plot*

Description

This function creates a bivariate plot of y and x after residualizing over a set of covariates w.

Usage

```
fwl_plot(fml, data, ggplot = FALSE, n_sample = NULL, ...)

fwlplot(fml, data, ggplot = FALSE, n_sample = NULL, ...)
```

Arguments

fml	Of the form y ~ x + covs | fes following the fixest formula syntax. The x variable you want plotted should come first.
data	A dataframe object that contains the variables in fml.
ggplot	Boolean. Default is to use base R plot but if TRUE, use ggplot.
n_sample	Numeric. Number of observations to sample for each facet. If NULL, will plot all rows.
...	Additional arguments passed to fixest::feols.

Value

Either NULL if ggplot = FALSE or a ggplot object if ggplot = TRUE.

Examples

```
fwl_plot(mpg ~ hp + wt | cyl, mtcars)
```

`get_fml_parts` *Split formula into terms*

Description

Split formula into terms

Usage

```
get_fml_parts(formula, parts_as_formula = FALSE)
```

Arguments

`formula`	Full formula following `fixest` syntax: `y ~ W	W_FE	T ~ Z	Z_FE`.
`parts_as_formula`	Logical. If `TRUE`, then each part will be a right-hand side formula. Default is `FALSE`

Value

List of expressions/formula for each part of the formula. It will be of type `symbol/language` unless `parts_as_formula = TRUE`. Can be used with `fixest::xpd` and the dot bracket syntax to create formula. Any missing elements will be given a value of `NULL`. The list contains the following:

`y_fml`	The LHS
`W_lin`	The linear part of the exogenous variables
`W_FE`	The fixed effects part of the exogenous variables
`T_fml`	The endogenous variable
`Z_lin`	The linear part of the instruments
`Z_FE`	The fixed effects part of the instruments

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