

Package ‘yotover’

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Title An Advanced Guide to Trade Policy Analysis

Version 0.3.5

Description On-disk embedded database with SQL versions of the original datasets from Yotov, et al (2016, ISBN: 978-92-870-4367-2) and functions to report regressions with clustered robust standard errors.

URL <https://pacha.dev/yotover/>

BugReports <https://github.com/pachamaltese/yotover/issues/>

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Encoding UTF-8

LazyData true

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Suggests devtools, testthat, covr

Depends R (>= 4.0)

NeedsCompilation no

Author Mauricio Vargas [aut, cre] (<<https://orcid.org/0000-0003-1017-7574>>), Alexey Kravchenko [ths], The United Nations [dte, cph, fnd]

Maintainer Mauricio Vargas <mvargas@dcc.uchile.cl>

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yotov_clustered_glm *GLM Regression With Clustered Standard Errors*

Description

Fits a regression with robust clustered standard errors. This uses a quasi-poisson family and returns the estimated coefficients after computing a clustered variance-covariance matrix.

Usage

```
yotov_clustered_glm(
  formula,
  data,
  pair = "pair_id",
  fe_pattern = "^exporter|^importer"
)
```

Arguments

formula	A formula for the model
data	A tibble or data.frame
pair	Inter-national fixed effects column (defaults to "pair_id")
fe_pattern	A pattern for the fixed effects variable, allows character or regex (defaults to "^exporter ^importer")

`yotov_clustered_summary`*Stata-Like Clustered Standard Errors Summary*

Description

Returns a list for a a general `lm` or `glm` which returns number of observations, F-statistic (with degrees of freedom and p-value), R-squared (and pseudo R-squared for poisson-type generalized models), root MSE and clustered standard errors for estimated coefficients.

Usage

```
yotov_clustered_summary(model, cluster)
```

Arguments

<code>model</code>	Any <code>lm</code> or <code>glm</code> object
<code>cluster</code>	The clustering variable in the model data (e.g. "pair_id")

Examples

```
# THESE REGRESSIONS ARE JUST FOR TESTING!!!

model1 <- lm(mpg ~ wt, data = mtcars)
yotov_clustered_summary(model1, "cyl")

model2 <- glm(mpg ~ wt, data = mtcars, family = quasipoisson)
yotov_clustered_summary(model2, "cyl")
```

`yotov_data`*Yotov applications data*

Description

Returns a remote database table with the data required to replicate the exercises from the book.

Usage

```
yotov_data(table)
```

Arguments

<code>table</code>	A string indicating the table to extract
--------------------	--

Value

A `dplyr` tibble (`dplyr::tbl()`)

Examples

```
if (yotov_status()) {
  yotov_data("ch1_application1")
}
```

yotov_db

The local Yotov database

Description

Returns a connection to the local yotov database. This is a DBI-compliant duckdb database connection. When using **dplyr**-based workflows, one typically accesses tables with `yotov_data()`, but this function lets the user interact with the database directly via SQL.

Usage

```
yotov_db(dbdir = yotov_path())
```

Arguments

`dbdir` The location of the database on disk. Defaults to `yotovdb` under `rappdirs::user_data_dir()`, or the environment variable `yotov_DB_DIR`.

Examples

```
if (yotov_status()) {
  DBI::dbListTables(yotov_db())

  ch1_application1 <- DBI::dbReadTable(yotov_db(), "ch1_application1")

  DBI::dbGetQuery(
    yotov_db(),
    "SELECT * FROM ch1_application1"
  )
}
```

yotov_db_delete

Remove the local Yotov database

Description

Deletes all tables from the local database.

Usage

```
yotov_db_delete()
```

Examples

```
## Not run:  
yotov_db_delete()  
  
## End(Not run)
```

yotov_db_disconnect *Disconnect from the Yotov database*

Description

A utility function for disconnecting from the database.

Usage

```
yotov_db_disconnect()
```

Examples

```
yotov_db_disconnect()
```

yotov_db_download *Download the Yotov database to your local computer*

Description

This command downloads the Yotov trade database and populates a local database. The download is 31.4 MB, and the database uses 3 GB on disk. During import over 3.5 GB of disk space may be used temporarily.

Usage

```
yotov_db_download(  
  tag = NULL,  
  destdir = tempdir(),  
  cleanup = TRUE,  
  verbose = interactive()  
)
```

Arguments

tag	What release tag of data to download. Defaults to the most recent. Releases are expected to come twice per year. See all releases at https://github.com/pachamaltese/yotover/releases .
destdir	Where to download the compressed file.
cleanup	Whether to delete the compressed file after loading into the database.
verbose	Whether to display messages and download progress

Details

The database is stored by default under `tools::R_user_dir("yotover")`, or its location can be set with the environment variable `YOTOV_DB_DIR`.

Examples

```
## Not run:
yotov_db_download()

## End(Not run)
```

yotov_db_tables	<i>Yotov available tables</i>
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Description

Yotov available tables

Usage

```
yotov_db_tables()
```

yotov_fixed_effects	<i>Extract fixed effects from regression object</i>
---------------------	---

Description

Takes an `lm/glm` object and extracts the fixed effects estimated coefficients. This function was created to be used with `left_join()` and `predict()` as it pastes the effects and allows to create a column with the predicted output.

Usage

```
yotov_fixed_effects(fit)
```

Arguments

fit	A regression object
-----	---------------------

yotov_model_summary	<i>Traditional Gravity Estimates Reporting Style</i>
---------------------	--

Description

Computes clustered standard errors, tests on coefficients with clustered standard errors and obtains RESET test p-value.

Usage

```
yotov_model_summary(
  formula,
  data,
  method = "lm",
  pair = "pair_id",
  etfe = "exp_year",
  itfe = "imp_year"
)
```

Arguments

formula	A formula for the model
data	A tibble or data.frame
method	Regression method, which can be "lm" (default) or "glm"
pair	Inter-national fixed effects column (defaults to "pair_id")
etfe	Exporter time fixed effects column (defaults to "exp_year")
itfe	Importer time fixed effects column (defaults to "imp_year")

yotov_model_summary2	<i>The "Distance Puzzle" Resolved Reporting Style</i>
----------------------	---

Description

Computes clustered standard errors, tests on coefficients with clustered standard errors and uses the delta method to obtain changes in time-based distance estimated coefficients.

Usage

```
yotov_model_summary2(
  formula,
  data,
  method = "lm",
  pair = "pair_id",
  etfe = "exp_year",
  itfe = "imp_year",
  dist = "log_dist",
  intr = "log_dist_intra",
  csfe = "intra_pair"
)
```

Arguments

formula	A formula for the model
data	A tibble or data.frame
method	Regression method (lm or glm)
pair	Inter-national fixed effects column (defaults to "pair_id")
etfe	Exporter time fixed effects column (defaults to "exp_year")
itfe	Importer time fixed effects column (defaults to "imp_year")
dist	Distance column (defaults to "log_dist")
intr	Intra-national distance column (defaults to "log_dist_intra")
csfe	Country-specific fixed effects (defaults to "intra_pair")

yotov_model_summary3 *Regional Trade Agreements Effects Reporting Style*

Description

Computes clustered standard errors, tests on coefficients with clustered standard errors and returns total RTAs effect with its associated standard error.

Usage

```
yotov_model_summary3(
  formula,
  data,
  method = "lm",
  pair = "pair_id",
  pair2 = "pair_id_2",
  etfe = "exp_year",
  itfe = "imp_year",
  dist = "log_dist",
  intr = "log_dist_intra",
  brdr = "intl_brdr"
)
```


Arguments

formula	A formula for the model
data	A tibble or data.frame
method	Regression method, which can be "lm" (default) or "glm"
pair	Inter-national fixed effects column (defaults to "pair_id")
pair2	Intra-national fixed effects column (defaults to "pair_id_2")
etfe	Exporter time fixed effects column (defaults to "exp_year")
itfe	Importer time fixed effects column (defaults to "imp_year")
dist	Distance column (defaults to "log_dist")
intr	Intra-national distance column (defaults to "log_dist_intra")
brdr	Inter-national borders column (defaults to "intl_brdr")

yotov_pane

Open Yotov database connection pane in RStudio

Description

This function launches the RStudio "Connection" pane to interactively explore the database.

Usage

```
yotov_pane()
```

Examples

```
if (!is.null(getOption("connectionObserver"))) yotov_pane()
```

yotov_status

Get the status of the current local Yotov database

Description

Get the status of the current local Yotov database. It displays informative message about how to create the local database if it can't be found or it is corrupt.

Usage

```
yotov_status(verbose = TRUE)
```

Arguments

verbose	Whether to print a status message
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Value

TRUE if the database exists, FALSE if it is not detected. (invisible)

Examples

```
yotov_status()
```

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