

Package ‘ech’

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Title Toolbox for ECH with R

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Description R toolbox for the processing of the Encuesta Continua de Hogares (ECH) from Uruguay at <<http://www.ine.gub.uy/encuesta-continua-de-hogares1>> conducted by the Instituto Nacional de Estadística (INE).

License GPL-3

Depends R (>= 3.5.0)

Imports assertthat, curl, dplyr (>= 1.0.0), fs, geouy (>= 0.2.3), glue, haven (>= 2.3.0), janitor, labelled, laeken, purrr, readxl, rlang, srvyr (>= 0.4.0), statar, stringr, survey (>= 1.2.0), tidyr, utils

Suggests knitr, rmarkdown, testthat (>= 2.1.0)

VignetteBuilder knitr

ByteCompile true

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

SystemRequirements 'unrar' (Linux/macOS) or '7-Zip' (Windows) to work with '.rar' files, GDAL (>= 3.0.2), GEOS (>= 3.8.0), PROJ (>= 6.2.1)

NeedsCompilation no

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<code>age_groups</code>	<i>This function allows you to calculate age groups</i>
-------------------------	---

Description

This function allows you to calculate age groups

Usage

```
age_groups(data = ech::toy_ech_2018, cut = c(0, 4, 11, 17, 24), e27 = "e27")
```

Arguments

<code>data</code>	data.frame
<code>cut</code>	breaks points to cut a numeric variable
<code>e27</code>	Variable name of age

Value

data.frame

See Also

Other demographic: [household_type\(\)](#)

Examples

```
toy_ech_2018 <- age_groups(data = ech::toy_ech_2018, cut = c(0, 4, 11, 17, 24))
```

archive_extract	<i>Extract compressed archives</i>
-----------------	------------------------------------

Description

Extract compressed archives

Usage

```
archive_extract(archive.path = NULL, dest.path = NULL)
```

Arguments

archive.path	Ruta de origen del archivo comprimido
dest.path	Ruta destino del archivo descomprimido

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

See Also

Other utils: [dates_ech\(\)](#), [unlabelled\(\)](#)

basket_goods	<i>This function allows you to get the Basket goods</i>
--------------	---

Description

This function allows you to get the Basket goods

Usage

```
basket_goods(data = ech::cba_cbna_mdeo, year = NULL)
```

Arguments

data	data.frame with the price of the basket of goods from Montevideo, Interior or Rural region
year	the ECH year

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other income: [deflate\(\)](#), [income_constant_prices\(\)](#), [income_quantiles\(\)](#), [labor_income_per_capita\(\)](#), [labor_income_per_hour\(\)](#), [organize_ht11\(\)](#)

Examples

```
df <- basket_goods(data = ech::cba_cbna_mdeo, year = 2018)
```

branch_ciiu

This function allows you to identify activity branches

Description

This function allows you to identify activity branches

Usage

```
branch_ciiu(
  data = ech::toy_ech_2018,
  f72_2 = "f72_2",
  group = TRUE,
  disaggregated = FALSE
)
```

Arguments

data	data.frame
f72_2	Variable name of ciiu code rev.4
group	logical to define 12 or 18 categories, if FALSE code 18. Default: TRUE
disaggregated	logical to define disaggregated branches or not. Default: FALSE

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other employment: [employment_restrictions\(\)](#), [employment\(\)](#), [underemployment\(\)](#)

Examples

```
toy_ech_2018 <- branch_ciiu(data = ech::toy_ech_2018)
```

cba_cbna_int	<i>A dataset containing the CBA and CBNA for the Interior Urbano region</i>
--------------	---

Description

A dataset containing the CBA and CBNA for the Interior Urbano region

Usage

```
cba_cbna_int
```

Format

A data frame with 234 rows and 4 variables:

fecha date from 2001 to 2020

cba_li CBA

cbna CBNA

cbt_lp CBT

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

cba_cbna_mdeo	<i>A dataset containing the CBA and CBNA for the Montevideo region</i>
---------------	--

Description

A dataset containing the CBA and CBNA for the Montevideo region

Usage

cba_cbna_mdeo

Format

A data frame with 234 rows and 4 variables:

fecha date from 2001 to 2020

cba_li CBA

cbna CBNA

cbt_lp CBT

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

cba_cbna_rur	<i>A dataset containing the CBA and CBNA for the Interior Rural region</i>
--------------	--

Description

A dataset containing the CBA and CBNA for the Interior Rural region

Usage

cba_cbna_rur

Format

A data frame with 234 rows and 4 variables:

fecha date from 2001 to 2020

cba_li CBA

cbna CBNA

cbt_lp CBT

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

ciiu4

A dataset containing Clasificación Industrial Internacional Uniforme Rev. 4 and 3

Description

A dataset containing Clasificación Industrial Internacional Uniforme Rev. 4 and 3

Usage

ciiu4

Format

A data frame with 738 rows and 3 variables:

ciiu_4 Code of Clasificación Industrial Internacional Uniforme Rev. 4

description Description of Clasificación Industrial Internacional Uniforme Rev. 4

ciiu_3 Code of Clasificación Industrial Internacional Uniforme Rev. 3 ...

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

dates_ech

This function allows you to organize dates

Description

This function allows you to organize dates

Usage

```
dates_ech(data)
```

Arguments

data data frame with an 'yy' variable for the year, and a 'mm' variable for the month

Value

data.frame

See Also

Other utils: [archive_extract\(\)](#), [unlabelled\(\)](#)

deflate

This function allows you to calculate a deflator coefficient

Description

This function allows you to calculate a deflator coefficient

Usage

```
deflate(  
  base_month = NULL,  
  base_year = NULL,  
  index = "IPC",  
  level = "G",  
  df_year = NULL  
)
```

Arguments

base_month	baseline month
base_year	baseline year
index	IPC or IPAB
level	General index ('G'), Montevideo index ('M') or Interior index ('I')
df_year	ECH year

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

See Also

Other income: [basket_goods\(\)](#), [income_constant_prices\(\)](#), [income_quantiles\(\)](#), [labor_income_per_capita\(\)](#), [labor_income_per_hour\(\)](#), [organize_ht11\(\)](#)

 dic

A dataset containing variables names change of the ECH 2006-2018

Description

A dataset containing variables names change of the ECH 2006-2018

Usage

```
dic
```

Format

A data frame with 976 rows and 19 variables:

codigos Code oh label

descripcion Description of label

modulo Module in the form 2017

obs Observations

unidad Level of variable household (H) individual (P) or general (G)

var06 ECH variables names 2006

var07 ECH variables names 2007

var08 ECH variables names 2008

var09 ECH variables names 2009

var10 ECH variables names 2010

var11 ECH variables names 2011

var12 ECH variables names 2012
var13 ECH variables names 2013
var14 ECH variables names 2014
var15 ECH variables names 2015
var16 ECH variables names 2016
var17 ECH variables names 2017
var18 ECH variables names 2018
var19 ECH variables names 2019 ...

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

ech

ech *package*

Description

Caja de Herramientas para el procesamiento de la Encuesta Continua de Hogares de Uruguay

Details

See the README on [Github](#)

employment	<i>This function allows you to calculate the variables: PEA, PET, PO, PD</i>
------------	--

Description

This function allows you to calculate the variables: PEA, PET, PO, PD

Usage

```
employment(data = ech::toy_ech_2018, pobpcoac = "pobpcoac")
```

Arguments

data	data.frame with microdata
pobpcoac	Variable name of definition of population by activity status. Default: "pobpcoac"

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

See Also

Other employment: [branch_ciiu\(\)](#), [employment_restrictions\(\)](#), [underemployment\(\)](#)

Examples

```
toy_ech_2018 <- employment(data = ech::toy_ech_2018, pobpcoac = "pobpcoac")
```

employment_restrictions	<i>This function allows you to identify workers with employment restrictions</i>
-------------------------	--

Description

This function allows you to identify workers with employment restrictions

Usage

```
employment_restrictions(
  data = ech::toy_ech_2018,
  f82 = "f82",
  underemployment = "underemployment"
)
```

Arguments

data	data.frame
f82	Variable name of contribution to the pension fund
underemployment	Variable name of underemployment

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other employment: [branch_ciiu\(\)](#), [employment\(\)](#), [underemployment\(\)](#)

Examples

```
toy_ech_2018 <- underemployment(data = ech::toy_ech_2018)
toy_ech_2018 <- employment_restrictions(data = toy_ech_2018)
```

enrolled_school	<i>This function allows you to calculate the people enrolled in school</i>
-----------------	--

Description

This function allows you to calculate the people enrolled in school

Usage

```
enrolled_school(  
  data = ech::toy_ech_2018,  
  e27 = "e27",  
  e193 = "e193",  
  e197 = "e197",  
  e201 = "e201",  
  e212 = "e212",  
  e215 = "e215",  
  e218 = "e218",  
  e221 = "e221",  
  e224 = "e224"  
)
```

Arguments

data	data.frame with necessary variables Defaults to ech.
e27	Variable name of age
e193	Variable name of attendance school
e197	Variable name of attendance primary
e201	Variable name of attendance secondary
e212	Variable name of attendance technical school (non-university)
e215	Variable name of attendance magisterio
e218	Variable name of attendance university
e221	Variable name of attendance tertiary
e224	Variable name of attendance postgrade

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other education: [level_completion\(\)](#), [level_education\(\)](#), [years_of_schooling\(\)](#)

Examples

```
toy_ech_2018 <- enrolled_school(data = ech::toy_ech_2018)
```

get_cba_cbna

This function allows you to get the CBA and CBNA data

Description

This function allows you to get the CBA and CBNA data

Usage

```
get_cba_cbna(folder = tempdir(), region, sheet = 1)
```

Arguments

folder	temporal folder
region	Montevideo ("M"), Interior Urbano ("I"), Interior Rural ("R")
sheet	sheet number. Default 1.

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other dwnld_read: [get_dictionary\(\)](#), [get_ipab_region\(\)](#), [get_ipab\(\)](#), [get_ipc_region\(\)](#), [get_ipc\(\)](#), [get_microdata\(\)](#), [read_microdata\(\)](#)

get_dictionary	<i>This function allows you to download ECH dictionaries from INE website</i>
----------------	---

Description

This function allows you to download ECH dictionaries from INE website

Usage

```
get_dictionary(year = NULL, folder = tempdir())
```

Arguments

year	allows download data from 2011 to 2019. Default the last year
folder	Folder where are the files or be download

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

unrar files from INE web and the respective data frame in tibble format

See Also

Other dwnld_read: [get_cba_cbna\(\)](#), [get_ipab_region\(\)](#), [get_ipab\(\)](#), [get_ipc_region\(\)](#), [get_ipc\(\)](#), [get_microdata\(\)](#), [read_microdata\(\)](#)

get_estimation_gini *This function allows you to estimate the Gini coefficient*

Description

This function allows you to estimate the Gini coefficient

Usage

```
get_estimation_gini(  
  data = ech::toy_ech_2018,  
  variable = NULL,  
  by = NULL,  
  level = NULL,  
  ids = NULL,  
  numero = "numero",  
  estrato = NULL,  
  pesoano = "pesoano",  
  bootstrap = FALSE,  
  r = NULL  
)
```

Arguments

data	ech data frame
variable	Variable name of income without rental value per capita deflated
by	data frame column
level	is household ("h") or individual ("i").
ids	Variable name of cluster
numero	Variable name of household id
estrato	Variable name of strata
pesoano	Variable name of weights
bootstrap	Logical value
r	A number of replicas

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

table

See Also

Other estimation: [get_estimation_gpg\(\)](#), [get_estimation_mean\(\)](#), [get_estimation_median\(\)](#), [get_estimation_qsr\(\)](#), [get_estimation_ratio\(\)](#), [get_estimation_total\(\)](#), [set_design\(\)](#)

Examples

```
toy_ech_2018 <- income_constant_prices(data = ech::toy_ech_2018, index = "IPC", level = "R",
                                     base_month = "01", base_year = "2005")
get_estimation_gini(data = toy_ech_2018, variable = "y_wrv_pc_d_r", level = "i")
```

get_estimation_gpg *This function allows you to estimate the Gender Pay Wage Gap (GPG)*

Description

This function allows you to estimate the Gender Pay Wage Gap (GPG)

Usage

```
get_estimation_gpg(  
  data = ech::toy_ech_2018,  
  variable = "total_income_per_hour",  
  e26 = "e26",  
  by = NULL,  
  ids = NULL,  
  estrato = NULL,  
  pesoano = "pesoano",  
  stat = "media"  
)
```

Arguments

data	data.frame
variable	Variable name of total income per hour
e26	Variable name of sex
by	data frame column
ids	Variable name of cluster
estrato	Variable name of strata
pesoano	Variable name of weights
stat	Media or Median

Value

table

See Also

Other estimation: [get_estimation_gini\(\)](#), [get_estimation_mean\(\)](#), [get_estimation_median\(\)](#), [get_estimation_qsr\(\)](#), [get_estimation_ratio\(\)](#), [get_estimation_total\(\)](#), [set_design\(\)](#)

Examples

```
toy_ech_2018 <- labor_income_per_hour(data = ech::toy_ech_2018, base_month = 6, base_year = 2018)
get_estimation_gpg(data = toy_ech_2018, variable = "total_income_per_hour", e26 = "e26")
```

get_estimation_mean *This function allows you to estimate mean variable at universe level.*

Description

This function allows you to estimate mean variable at universe level.

Usage

```
get_estimation_mean(
  data = ech::toy_ech_2018,
  variable = NULL,
  by.x = NULL,
  by.y = NULL,
  domain = NULL,
  level = NULL,
  ids = NULL,
  numero = "numero",
  estrato = NULL,
  pesoano = "pesoano",
  name = "estimacion"
)
```

Arguments

data	data frame with ECH microdata
variable	data frame column to estimate
by.x	data frame column
by.y	data frame column
domain	subpopulation reference setted as character expression of logical evaluation
level	is household ("h") or individual ("i").
ids	ids
numero	household id
estrato	strata
pesoano	weights
name	name for the estimation new column

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

table

See Also

Other estimation: [get_estimation_gini\(\)](#), [get_estimation_gpg\(\)](#), [get_estimation_median\(\)](#), [get_estimation_qsr\(\)](#), [get_estimation_ratio\(\)](#), [get_estimation_total\(\)](#), [set_design\(\)](#)

Examples

```
get_estimation_mean(data = ech::toy_ech_2018, variable = "pobre06", by.x = "dpto", level = "h")
```

`get_estimation_median` *This function allows you to estimate median variable at universe level.*

Description

This function allows you to estimate median variable at universe level.

Usage

```
get_estimation_median(  
  data = ech::toy_ech_2018,  
  variable = NULL,  
  by.x = NULL,  
  by.y = NULL,  
  domain = NULL,  
  level = NULL,  
  ids = NULL,  
  numero = "numero",  
  estrato = NULL,  
  pesoano = "pesoano",  
  name = "estimacion"  
)
```

Arguments

data	data frame with ECH microdata
variable	data frame column to estimate
by.x	data frame column
by.y	data frame column
domain	subpopulation reference setted as character expresion of logical evaluation
level	is household ("h") or individual ("i").
ids	ids
numero	household id
estrato	strata
pesoano	weights
name	name for the estimation new column

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

table

See Also

Other estimation: [get_estimation_gini\(\)](#), [get_estimation_gpg\(\)](#), [get_estimation_mean\(\)](#), [get_estimation_qsr\(\)](#), [get_estimation_ratio\(\)](#), [get_estimation_total\(\)](#), [set_design\(\)](#)

Examples

```
get_estimation_median(data = ech::toy_ech_2018, variable = "ht11", by.x = "dpto", level = "h")
```

get_estimation_qsr *This function allows you to estimate de Income Quintile Share Ratio*

Description

This function allows you to estimate de Income Quintile Share Ratio

Usage

```
get_estimation_qsr(  
  data = ech::toy_ech_2018,  
  variable = "y_pc_d_r",  
  by = NULL,  
  ids = NULL,  
  estrato = NULL,  
  pesoano = "pesoano"  
)
```

Arguments

data	data.frame
variable	Variable name of total income per hour
by	data frame column
ids	Variable name of cluster
estrato	Variable name of strata
pesoano	Variable name of weights

Value

table

See Also

Other estimation: [get_estimation_gini\(\)](#), [get_estimation_gpg\(\)](#), [get_estimation_mean\(\)](#), [get_estimation_median\(\)](#), [get_estimation_ratio\(\)](#), [get_estimation_total\(\)](#), [set_design\(\)](#)

Examples

```
toy_ech_2018 <- income_constant_prices(data = ech::toy_ech_2018, index = "IPC", level = "R",  
                                     base_month = "01", base_year = "2005")  
get_estimation_qsr(data = toy_ech_2018, variable = "y_pc_d_r", pesoano = "pesoano")
```

get_estimation_ratio *This function allows you to estimate ratio variables at universe level.*

Description

This function allows you to estimate ratio variables at universe level.

Usage

```

get_estimation_ratio(
  data = ech::toy_ech_2018,
  variable.x = NULL,
  variable.y = NULL,
  by.x = NULL,
  by.y = NULL,
  domain = NULL,
  level = NULL,
  ids = NULL,
  numero = "numero",
  estrato = NULL,
  pesoano = "pesoano",
  name = "estimacion"
)

```

Arguments

data	data frame with ECH microdata
variable.x	data frame column to estimate
variable.y	data frame column to estimate
by.x	data frame column
by.y	data frame column
domain	subpopulation reference setted as character expression of logical evaluation
level	is household ("h") or individual ("i")
ids	Variable name of cluster
numero	Variable name of household id
estrato	Variable name of strata
pesoano	Variable name of weights
name	name for the estimation new column

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

table

See Also

Other estimation: [get_estimation_gini\(\)](#), [get_estimation_gpg\(\)](#), [get_estimation_mean\(\)](#), [get_estimation_median\(\)](#), [get_estimation_qsr\(\)](#), [get_estimation_total\(\)](#), [set_design\(\)](#)

Examples

```
toy_ech_2018 <- employment(data = ech::toy_ech_2018, pobpcoac = "pobpcoac")
get_estimation_ratio(data = toy_ech_2018, variable.x = "po", variable.y = "pea", level = "i")
```

get_estimation_total *This function allows you to estimate total variable at universe level.*

Description

This function allows you to estimate total variable at universe level.

Usage

```
get_estimation_total(
  data = ech::toy_ech_2018,
  variable = NULL,
  by.x = NULL,
  by.y = NULL,
  domain = NULL,
  level = NULL,
  ids = NULL,
  numero = "numero",
  estrato = NULL,
  pesoano = "pesoano",
  name = "estimacion"
)
```

Arguments

data	data frame with ECH microdata
variable	data frame column to estimate
by.x	data frame column
by.y	data frame column
domain	subpopulation reference setted as character expression of logical evaluation
level	is household ("h") or individual ("i").
ids	ids
numero	household id
estrato	strata
pesoano	weights
name	name for the estimation new column

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

table

See Also

Other estimation: [get_estimation_gini\(\)](#), [get_estimation_gpg\(\)](#), [get_estimation_mean\(\)](#), [get_estimation_median\(\)](#), [get_estimation_qsr\(\)](#), [get_estimation_ratio\(\)](#), [set_design\(\)](#)

Examples

```
get_estimation_total(variable = "pobre06", by.x = "dpto", level = "h")
```

get_ipab	<i>This function allows you to get the IPAB (Indice de precios de alimentos y bebidas) data</i>
----------	---

Description

This function allows you to get the IPAB (Indice de precios de alimentos y bebidas) data

Usage

```
get_ipab(folder = tempdir(), sheet = 1)
```

Arguments

folder	temporal folder
sheet	sheet number. Default 1

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other dwnld_read: [get_cba_cbna\(\)](#), [get_dictionary\(\)](#), [get_ipab_region\(\)](#), [get_ipc_region\(\)](#), [get_ipc\(\)](#), [get_microdata\(\)](#), [read_microdata\(\)](#)

get_ipab_region	<i>This function allows you to get the IPAB (Indice de precios de alimentos y bebidas) data</i>
-----------------	---

Description

This function allows you to get the IPAB (Indice de precios de alimentos y bebidas) data

Usage

```
get_ipab_region(folder = tempdir(), region, sheet = 1)
```

Arguments

folder	temporal folder
region	Montevideo ("M"), Interior Urbano ("I")
sheet	sheet number. Default 1

Value

data.frame

See Also

Other `dwnld_read`: [get_cba_cbna\(\)](#), [get_dictionary\(\)](#), [get_ipab\(\)](#), [get_ipc_region\(\)](#), [get_ipc\(\)](#), [get_microdata\(\)](#), [read_microdata\(\)](#)

get_ipc	<i>This function allows you to get the IPC data</i>
---------	---

Description

This function allows you to get the IPC data

Usage

```
get_ipc(folder = tempdir())
```

Arguments

folder	ruta temporal para descargar el archivo
--------	---

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

See Also

Other dwnld_read: [get_cba_cbna\(\)](#), [get_dictionary\(\)](#), [get_ipab_region\(\)](#), [get_ipab\(\)](#), [get_ipc_region\(\)](#), [get_microdata\(\)](#), [read_microdata\(\)](#)

get_ipc_region	<i>This function allows you to get the IPC data</i>
----------------	---

Description

This function allows you to get the IPC data

Usage

```
get_ipc_region(folder = tempdir(), region, sheet = 1)
```

Arguments

folder	temporal folder
region	Montevideo ("M") or Interior ("I")
sheet	sheet number. Default 1.

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other dwnld_read: [get_cba_cbna\(\)](#), [get_dictionary\(\)](#), [get_ipab_region\(\)](#), [get_ipab\(\)](#), [get_ipc\(\)](#), [get_microdata\(\)](#), [read_microdata\(\)](#)

get_microdata	<i>This function allows you to download and read ECH from INE website</i>
---------------	---

Description

This function allows you to download and read ECH from INE website

Usage

```
get_microdata(year = NULL, folder = tempdir(), toR = TRUE)
```

Arguments

year	allows download data from 2011 to 2019. Default the last year
folder	Folder where are the files or be download
toR	write data frame in R format and delete download file and unpack files

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

unrar files from INE web and the respective data frame in tibble format

See Also

Other dwnld_read: [get_cba_cbna\(\)](#), [get_dictionary\(\)](#), [get_ipab_region\(\)](#), [get_ipab\(\)](#), [get_ipc_region\(\)](#), [get_ipc\(\)](#), [read_microdata\(\)](#)

household_type	<i>This function allows you to calculate the household type for each household in the survey. A household is composed of one or more people who occupy a housing unit.</i>
----------------	--

Description

This function allows you to calculate the household type for each household in the survey. A household is composed of one or more people who occupy a housing unit.

Usage

```
household_type(  
  data = ech::toy_ech_2018,  
  numero = "numero",  
  e26 = "e26",  
  e27 = "e27",  
  e30 = "e30"  
)
```

Arguments

data	data frame with ECH microdata
numero	Variable name of household id
e26	Variable name of sex
e27	Variable name of age
e30	Variable name of householder

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other demographic: [age_groups\(\)](#)

Examples

```
toy_ech_2018 <- household_type(data = ech::toy_ech_2018)
```

housing_conditions *This function allows you to calculate the housing conditions*

Description

This function allows you to calculate the housing conditions

Usage

```
housing_conditions(data = ech::toy_ech_2018, c2 = "c2", c3 = "c3", c4 = "c4")
```

Arguments

data	data.frame
c2	Variable name of predominant material on external walls
c3	Variable name of predominant roofing material
c4	Variable name of predominant flooring material

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other dwelling: [housing_deprivation\(\)](#), [housing_situation\(\)](#), [housing_tenure\(\)](#), [overcrowding\(\)](#)

Examples

```
toy_ech_2018 <- housing_conditions(data = ech::toy_ech_2018)
```

housing_deprivation *This function allows you to calculate the housing status*

Description

This function allows you to calculate the housing status

Usage

```
housing_deprivation(  
  data = ech::toy_ech_2018,  
  n = 1,  
  ht19 = "ht19",  
  d9 = "d9",  
  d10 = "d10",  
  d11 = "d11",  
  d12 = "d12",  
  d13 = "d13",  
  d16 = "d16",  
  d18 = "d18",  
  d19 = "d19",  
  c2 = "c2",  
  c3 = "c3",
```

```

    c4 = "c4",
    quintil = "quintil",
    region_4 = "region_4"
  )

```

Arguments

<code>data</code>	data.frame
<code>n</code>	number of deprivations to consider. Default 1
<code>ht19</code>	Variable name of number of individuals in the household
<code>d9</code>	Variable name of number of rooms
<code>d10</code>	Variable name of number of rooms to sleep
<code>d11</code>	Variable name of principal source of potable water
<code>d12</code>	Variable name of water supply network / water access
<code>d13</code>	Variable name of sanitary facilities
<code>d16</code>	Variable name of sewerage facilities
<code>d18</code>	Variable name of energy source for lighting
<code>d19</code>	Variable name of cooking space
<code>c2</code>	Variable name of predominant material on external walls
<code>c3</code>	Variable name of predominant roofing material
<code>c4</code>	Variable name of predominant flooring material
<code>quintil</code>	Variable name of income quintil
<code>region_4</code>	Variable name of region

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other dwelling: [housing_conditions\(\)](#), [housing_situation\(\)](#), [housing_tenure\(\)](#), [overcrowding\(\)](#)

Examples

```

toy_ech_2018 <- income_constant_prices(data = ech::toy_ech_2018)
toy_ech_2018 <- income_quantiles(data = toy_ech_2018)
toy_ech_2018 <- housing_deprivation(data = toy_ech_2018)

```

housing_situation	<i>This function allows you to calculate the housing situation</i>
-------------------	--

Description

This function allows you to calculate the housing situation

Usage

```
housing_situation(  
  data = ech::toy_ech_2018,  
  c5_1 = "c5_1",  
  c5_2 = "c5_2",  
  c5_3 = "c5_3",  
  c5_4 = "c5_4",  
  c5_5 = "c5_5",  
  c5_6 = "c5_6",  
  c5_7 = "c5_7",  
  c5_8 = "c5_8",  
  c5_9 = "c5_9",  
  c5_10 = "c5_10",  
  c5_11 = "c5_11",  
  c5_12 = "c5_12"  
)
```

Arguments

data	data.frame
c5_1	Variable name of roof condensation
c5_2	Variable name of roof drips
c5_3	Variable name of walls cracks
c5_4	Variable name of broken doors or windows
c5_5	Variable name of floors cracks
c5_6	Variable name of plaster drop on walls
c5_7	Variable name of detached ceilings
c5_8	Variable name of poor sunlight
c5_9	Variable name of poor ventilation
c5_10	Variable name of floods when it rains
c5_11	Variable name of in danger of collapse
c5_12	Variable name of dampness in the foundations

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other dwelling: [housing_conditions\(\)](#), [housing_deprivation\(\)](#), [housing_tenure\(\)](#), [overcrowding\(\)](#)

Examples

```
toy_ech_2018 <- housing_situation(data = ech::toy_ech_2018)
```

housing_tenure	<i>This function allows you to calculate the housing tenure</i>
----------------	---

Description

This function allows you to calculate the housing tenure

Usage

```
housing_tenure(data = ech::toy_ech_2018, d8_1 = "d8_1")
```

Arguments

data	data.frame
d8_1	Variable name of housing_tenure (owner, renter, rent-free occupancy, etc.)

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other dwelling: [housing_conditions\(\)](#), [housing_deprivation\(\)](#), [housing_situation\(\)](#), [overcrowding\(\)](#)

Examples

```
toy_ech_2018 <- housing_tenure(data = ech::toy_ech_2018)
```

`income_constant_prices`

This function allows you to calculate the household income constant prices

Description

This function allows you to calculate the household income constant prices

Usage

```
income_constant_prices(  
  data = ech::toy_ech_2018,  
  base_month = 6,  
  base_year = 2018,  
  index = "IPC",  
  level = "G",  
  mes = "mes",  
  ht11 = "ht11",  
  ht13 = "ht13",  
  ht19 = "ht19"  
)
```

Arguments

<code>data</code>	data.frame with ECH microdata
<code>base_month</code>	baseline month
<code>base_year</code>	baseline year
<code>index</code>	IPC or IPAB
<code>level</code>	General ("G") or Regional ("R")
<code>mes</code>	month
<code>ht11</code>	Variable name of income. Default: ht11
<code>ht13</code>	Variable name of rental value. Default: ht13
<code>ht19</code>	Variable name of number of individuals in the household. Default: ht19

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other income: [basket_goods\(\)](#), [deflate\(\)](#), [income_quantiles\(\)](#), [labor_income_per_capita\(\)](#), [labor_income_per_hour\(\)](#), [organize_ht11\(\)](#)

Examples

```
toy_ech_2018 <- income_constant_prices(data = ech::toy_ech_2018)
```

income_quantiles	<i>This function allows you to calculate the Household Income Quantiles</i>
------------------	---

Description

This function allows you to calculate the Household Income Quantiles

Usage

```
income_quantiles(  
  data = ech::toy_ech_2018,  
  quantile = 5,  
  weights = "pesoano",  
  income = "y_pc_d"  
)
```

Arguments

data	data.frame
quantile	Variable name of quintil (5) or decil (10). Default: 5
weights	Variable name of ponderation variable. Default: "pesoano"
income	Variable name of income constant price. Default: "y_pc_d"

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other income: [basket_goods\(\)](#), [deflate\(\)](#), [income_constant_prices\(\)](#), [labor_income_per_capita\(\)](#), [labor_income_per_hour\(\)](#), [organize_ht11\(\)](#)

Examples

```
toy_ech_2018 <- income_constant_prices(data = ech::toy_ech_2018)
toy_ech_2018 <- income_quantiles(data = toy_ech_2018)
```

integrated_poverty_measure

This function allows you to calculate an integrated poverty measure

Description

This function allows you to calculate an integrated poverty measure

Usage

```
integrated_poverty_measure(
  data = ech::toy_ech_2018,
  pobre06 = "pobre06",
  UBN_q = "UBN_q"
)
```

Arguments

data	data.frame
pobre06	Variable name of poverty
UBN_q	Variable name of UBN

Value

data.frame

See Also

Other poverty: [poverty\(\)](#), [unsatisfied_basic_needs\(\)](#)

Examples

```
toy_ech_18 <- enrolled_school(data = ech::toy_ech_2018)
toy_ech_18 <- years_of_schooling(toy_ech_18)
toy_ech_18 <- unsatisfied_basic_needs(toy_ech_18)
toy_ech_18 <- integrated_poverty_measure(data = toy_ech_18)
```

ipab_base2010 *A dataset containing the IPAB*

Description

A dataset containing the IPAB

Usage

ipab_base2010

Format

A data frame with 286 rows and 2 variables:

fecha date from 1997 to 2020

indice IPAB

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

ipab_base2010_int *A dataset containing the IPAB for the Interior region*

Description

A dataset containing the IPAB for the Interior region

Usage

ipab_base2010_int

Format

A data frame with 108 rows and 2 variables:

fecha date from 2011 to 2019

indice IPAB

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

ipab_base2010_mdeo *A dataset containing the IPAB for the Montevideo region*

Description

A dataset containing the IPAB for the Montevideo region

Usage

ipab_base2010_mdeo

Format

A data frame with 108 rows and 2 variables:

fecha date from 2011 to 2019

indice IPAB

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

ipc_base2010

A dataset containing the IPC base 2010

Description

A dataset containing the IPC base 2010

Usage

ipc_base2010

Format

A data frame with 990 rows and 5 variables:

fecha date from 1937 to 2019

indice IPC

mensual value of IPC

acum_ano accumulated IPC

acum_12_meses accumulated IPC last 12 month

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

ipc_base2010_int	<i>A dataset containing the IPC base 2010 only for the Interior region</i>
------------------	--

Description

A dataset containing the IPC base 2010 only for the Interior region

Usage

ipc_base2010_int

Format

A data frame with 120 rows and 2 variables:

fecha date from 2011 to 2019

indice IPC

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

ipc_base2010_mdeo	<i>A dataset containing the IPC base 2010 only for the Montevideo region</i>
-------------------	--

Description

A dataset containing the IPC base 2010 only for the Montevideo region

Usage

ipc_base2010_mdeo

Format

A data frame with 120 rows and 2 variables:

fecha date from 2011 to 2019

indice IPC

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#), [urls_ine](#)

labor_income_per_capita

This function allows you to calculate the labor income per capita

Description

This function allows you to calculate the labor income per capita

Usage

```
labor_income_per_capita(  
  data = ech::toy_ech_2018,  
  numero = "numero",  
  pobpcoac = "pobpcoac",  
  g126_1 = "g126_1",  
  g126_2 = "g126_2",  
  g126_3 = "g126_3",  
  g126_4 = "g126_4",  
  g126_5 = "g126_5",  
  g126_6 = "g126_6",  
  g126_7 = "g126_7",  
  g126_8 = "g126_8",  
  g127_3 = "g127_3",  
  g128_1 = "g128_1",  
  g129_2 = "g129_2",  
  g130_1 = "g130_1",
```



```

g131_1 = "g131_1",
g133_1 = "g133_1",
g133_2 = "g133_2",
g134_1 = "g134_1",
g134_2 = "g134_2",
g134_3 = "g134_3",
g134_4 = "g134_4",
g134_5 = "g134_5",
g134_6 = "g134_6",
g134_7 = "g134_7",
g134_8 = "g134_8",
g135_3 = "g135_3",
g136_1 = "g136_1",
g137_2 = "g137_2",
g138_1 = "g138_1",
g139_1 = "g139_1",
g141_1 = "g141_1",
g141_2 = "g141_2",
g142 = "g142",
g144_1 = "g144_1",
g144_2_1 = "g144_2_1",
g144_2_3 = "g144_2_3",
g144_2_4 = "g144_2_4",
g144_2_5 = "g144_2_5"
)

```

Arguments

data	data frame
numero	Variable name of household id
poppcoac	Variable name of definition of population by activity status
g126_1	Variable name of net salary
g126_2	Variable name of commissions, incentives, overtime payment, fringe benefits
g126_3	Variable name of non-surrendering expenses
g126_4	Variable name of tips
g126_5	Variable name of annual complementary salary
g126_6	Variable name of vacation pay
g126_7	Variable name of delayed payments
g126_8	Variable name of transportation tickets
g127_3	Variable name of received food or drink
g128_1	Variable name of received food tickets
g129_2	Variable name of received housing or accommodation
g130_1	Variable name of another type of compensation
g131_1	Variable name of received another type of supplement paid by the employer

g133_1	Variable name of the right to cultivate goods for own-consumption
g133_2	Variable name of the right to cultivate goods for own-consumption (amount received from the sale)
g134_1	Variable name of net salary
g134_2	Variable name of commissions, incentives, overtime payment, fringe benefits
g134_3	Variable name of non-surrendering expenses
g134_4	Variable name of tips
g134_5	Variable name of annual complementary salary
g134_6	Variable name of vacation pay
g134_7	Variable name of delayed payments
g134_8	Variable name of transportation tickets
g135_3	Variable name of received food or drink
g136_1	Variable name of received food tickets
g137_2	Variable name of received housing or accommodation
g138_1	Variable name of another type of compensation
g139_1	Variable name of received another type of supplement paid by the employer
g141_1	Variable name of the right to cultivate goods for own-consumption
g141_2	Variable name of the right to cultivate goods for own-consumption (amount received from the sale)
g142	Variable name of withdrawals for business household expenses you have or had
g144_1	Variable name of collected products for own consumption (non-agricultural worker)
g144_2_1	Variable name of collected products for own consumption (non-agricultural worker)
g144_2_3	Variable name of collected products for own consumption (non-agricultural worker)
g144_2_4	Variable name of collected products for own consumption (non-agricultural worker)
g144_2_5	Variable name of collected products for own consumption (non-agricultural worker)

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other income: [basket_goods\(\)](#), [deflate\(\)](#), [income_constant_prices\(\)](#), [income_quantiles\(\)](#), [labor_income_per_hour\(\)](#), [organize_ht11\(\)](#)

Examples

```
toy_ech_2018 <- labor_income_per_capita(data = ech::toy_ech_2018)
```

labor_income_per_hour *This function allows you to calculate the labor income per hour*

Description

This function allows you to calculate the labor income per hour

Usage

```
labor_income_per_hour(  
  data = ech::toy_ech_2018,  
  numero = "numero",  
  f85 = "f85",  
  pobpcoac = "pobpcoac",  
  pt4 = "pt4",  
  base_month = 6,  
  base_year = 2018,  
  mes = "mes"  
)
```

Arguments

data	data frame
numero	Variable name of household id
f85	Variable name of hours worked per week
pobpcoac	Variable name of definition of population by activity status
pt4	Variable name of total employment income
base_month	baseline month
base_year	baseline year
mes	month

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other income: [basket_goods\(\)](#), [deflate\(\)](#), [income_constant_prices\(\)](#), [income_quantiles\(\)](#), [labor_income_per_capita\(\)](#), [organize_ht11\(\)](#)

Examples

```
toy_ech_2018 <- ech::toy_ech_2018
toy_ech_2018 <- labor_income_per_hour(data = toy_ech_2018, base_month = "06", base_year = "2018")
```

level_completion	<i>This function allows you to calculate the level of school completion</i>
------------------	---

Description

This function allows you to calculate the level of school completion

Usage

```
level_completion(
  data = ech::toy_ech_2018,
  e197 = "e197",
  e197_1 = "e197_1",
  e201 = "e201",
  e51_4 = "e51_4",
  e51_5 = "e51_5",
  e51_6 = "e51_6",
  e51_7_1 = "e51_7_1",
  e51_7 = "e51_7",
  e51_8 = "e51_8",
  e51_9 = "e51_9",
  e51_10 = "e51_10",
  e212 = "e212",
  e215 = "e215",
  e218 = "e218",
  e221 = "e221",
  n = 4
)
```

Arguments

data	data.frame
e197	Variable name of attends primary school
e197_1	Variable name of completed primary
e201	Variable name of attends secondary
e51_4	Variable name of years passed in lower secondary
e51_5	Variable name of years passed in upper secondary
e51_6	Variable name of years passed in technical upper secondary
e51_7_1	Variable name of technical education requirements

e51_7	Variable name of years passed in technical education
e51_8	Variable name of years passed in magisterio/profesorado
e51_9	Variable name of years passed in university or similar
e51_10	Variable name of years passed in tertiary (non-university)
e212	Variable name of attendance technical school (non-university)
e215	Variable name of attendance magisterio
e218	Variable name of attendance university
e221	Variable name of attendance tertiary
n	years of tertiary

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other education: [enrolled_school\(\)](#), [level_education\(\)](#), [years_of_schooling\(\)](#)

Examples

```
toy_ech_2018 <- level_completion(data = ech::toy_ech_2018)
```

level_education	<i>This function allows you to calculate the highest level of education achieved</i>
-----------------	--

Description

This function allows you to calculate the highest level of education achieved

Usage

```
level_education(
  data = ech::toy_ech_2018,
  e51_2 = "e51_2",
  e51_3 = "e51_3",
  e51_4 = "e51_4",
  e51_5 = "e51_5",
  e51_6 = "e51_6",
  e51_7 = "e51_7",
  e51_7_1 = "e51_7_1",
  e51_8 = "e51_8",
  e51_9 = "e51_9",
  e51_10 = "e51_10",
  e51_11 = "e51_11",
  e193 = "e193",
  e49 = "e49"
)
```

Arguments

data	data.frame
e51_2	Variable name of years passed in primary
e51_3	Variable name of years passed in special primary
e51_4	Variable name of years passed in lower secondary
e51_5	Variable name of years passed in upper secondary
e51_6	Variable name of years passed in technical upper secondary
e51_7	Variable name of years passed in technical school
e51_7_1	Variable name of technical school requirements
e51_8	Variable name of years passed in magisterio/profesorado
e51_9	Variable name of years passed in university or similar
e51_10	Variable name of years passed in tertiary (non-university)
e51_11	Variable name of years passed in postgrade
e193	Variable name of attendance school
e49	Variable name of attendance school ever

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

See Also

Other education: [enrolled_school\(\)](#), [level_completion\(\)](#), [years_of_schooling\(\)](#)

Examples

```
toy_ech_2018 <- level_education(data = ech::toy_ech_2018)
```

organize_ht11	<i>This function allows you to fix ht11 from 2013 to 2015</i>
---------------	---

Description

This function allows you to fix ht11 from 2013 to 2015

Usage

```
organize_ht11(data, year, ht11 = "ht11", numero = "numero")
```

Arguments

data	data.frame
year	survey year
ht11	Variable name of ht11
numero	Variable name of numero

Value

data.frame

See Also

Other income: [basket_goods\(\)](#), [deflate\(\)](#), [income_constant_prices\(\)](#), [income_quantiles\(\)](#), [labor_income_per_capita\(\)](#), [labor_income_per_hour\(\)](#)

Examples

```
toy_ech_2018 <- organize_ht11(data = ech::toy_ech_2018, year = 2018)
```

organize_names	<i>This function allows you to organize the variables names of ECH with reference in 2017.</i>
----------------	--

Description

This function allows you to organize the variables names of ECH with reference in 2017.

Usage

```
organize_names(data, year, level = "hyp")
```

Arguments

data	data.frame contains the ECH microdata
year	numeric reference year of the data. Available from 2011 to 2019
level	(string) indicates whether the base to be labelled is of the type "household", "h", "individual", "i" or both, "hyp". Default "hyp"

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Examples

```
toy_ech_2018 <- organize_names(data = ech::toy_ech_2018, year = 2018, level = "h")
```

overcrowding	<i>This function allows you to calculate overcrowding in the household</i>
--------------	--

Description

This function allows you to calculate overcrowding in the household

Usage

```
overcrowding(data = ech::toy_ech_2018, ht19 = "ht19", d10 = "d10")
```

Arguments

data	data.frame
ht19	Variable name of umber of individuals in the household
d10	Variable name of number of rooms to sleep

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other dwelling: [housing_conditions\(\)](#), [housing_deprivation\(\)](#), [housing_situation\(\)](#), [housing_tenure\(\)](#)

Examples

```
toy_ech_2018 <- overcrowding(data = ech::toy_ech_2018)
```

poverty

This function allows you to calculate poor and indigent people or household

Description

This function allows you to calculate poor and indigent people or household

Usage

```
poverty(  
  data = ech::toy_ech_2018,  
  scale = 0.8,  
  region_4 = "region_4",  
  dpto = "dpto",  
  ht11 = "ht11",  
  ht19 = "ht19",  
  numero = "numero"  
)
```

Arguments

data	data.frame
scale	equivalency scale
region_4	Variable name of region. Default: region_4
dpto	Variable name of departamento. Default: dpto
ht11	Variable name of income. Default: ht11
ht19	Variable name of number of individuals in the household. Default: ht19
numero	household id

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other poverty: [integrated_poverty_measure\(\)](#), [unsatisfied_basic_needs\(\)](#)

Examples

```
toy_ech_2018 <- poverty(data = ech::toy_ech_2018)
```

read_microdata	<i>This function allows you to read ECH from a local folder</i>
----------------	---

Description

This function allows you to read ECH from a local folder

Usage

```
read_microdata(path = NULL)
```

Arguments

path Folder where are the files or be download

Details

Disclaimer: El script no es un producto oficial de INE.

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

an object called df

See Also

Other dwnld_read: [get_cba_cbna\(\)](#), [get_dictionary\(\)](#), [get_ipab_region\(\)](#), [get_ipab\(\)](#), [get_ipc_region\(\)](#), [get_ipc\(\)](#), [get_microdata\(\)](#)

set_design	<i>This function allows you to set the survey desing</i>
------------	--

Description

This function allows you to set the survey desing

Usage

```
set_design(  
  data = ech::toy_ech_2018,  
  level = "i",  
  numero = "numero",  
  ids = NULL,  
  estrato = NULL,  
  pesoano = "pesoano"  
)
```

Arguments

data	data frame with ECH microdata
level	is household ("h") or individual ("i")
numero	variables specifying the householder ids
ids	variables specifying the unit primary sampling (it's not a public variable)
estrato	variable specifying strata
pesoano	variable specifying weights

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

a list

See Also

Other estimation: [get_estimation_gini\(\)](#), [get_estimation_gpg\(\)](#), [get_estimation_mean\(\)](#), [get_estimation_median\(\)](#), [get_estimation_qsr\(\)](#), [get_estimation_ratio\(\)](#), [get_estimation_total\(\)](#)

Examples

```
set_design(data = ech::toy_ech_2018, level = "h")
```

toy_ech_2018

A dataset containing only 1000 rows of the ECH 2018

Description

A dataset containing only 1000 rows of the ECH 2018

Usage

toy_ech_2018

Format

A data frame with 1000 rows and 579 variables:

numero household id

nper

anio

mes

dpto

nomdpto

secc

segm

loc_agr_13

nom_loc_agr_13

ccz

barrio

nombarrio

estred13

region_3

region_4

pesoano

pesotri

pesomen

c1

c2

c3

c4

c5_1

c5_2

c5_3
c5_4
c5_5
c5_6
c5_7
c5_8
c5_9
c5_10
c5_11
c5_12
c6
d8_1
d8_2
d8_3
d8_4
d9
d10
d11
d12
d13
d14
d15
d16
d18
d260
d19
d20
d21_1
d21_2
d21_3
d21_4
d21_4_1
d21_5
d21_5_1
d21_6
d21_20
d21_7

d21_8
d21_9
d21_10
d21_11
d21_12
d21_13
d21_14
d21_14_1
d21_15
d21_15_1
d21_15_2
d21_15_3
d21_15_4
d21_15_5
d21_15_6
d21_16
d21_16_1
d21_16_2
d21_17
d21_18
d21_18_1
d21_19
d21_19_1
d181
d229
d230
d231
d232
d184
d184_1
d23
d24
d25
h155
h155_1
h156
h156_1

h252
h252_1
h158_1
h158_2
h159
h160
h160_1
h160_2
h161
h162
h163_1
h163_2
h164
h165
h227
h166
h269
h269_1
h167_1
h167_1_1
h167_1_2
h167_2
h167_2_1
h167_2_2
h167_3
h167_3_1
h167_3_2
h167_4
h167_4_1
h167_4_2
h169
h170_1
h170_2
h271
h271_1
h171
h171_1

h171_2
h172
h172_1
h173
h173_1
i228
i174
i259
i175
ht1
ht2
ht3
ht4
ht5
ht6
ht7
ht8
ht9
ht10
ht11
ht13
ht14
ht19
yhog
ysvl
lp_06
li_06
e557
e558
e26
e27
e29_1
e29_2
e29_3
e29_4
e29_5
e29_5_1

e29_6
e30
e31
e32
e33
e34
e35
e36
e185
e186_1
e186_2
e186_3
e186_4
e37
e37_2
e234_2
e38
e38_1
e39
e39_2
e235_2
e236
e236_2
e236_4
e45_1
e45_1_1
e45_1_1_1
e45_1_2
e45_1_2_1
e45_2
e45_2_1
e45_2_1_1
e45_2_2
e45_2_2_1
e45_3
e45_3_1
e45_3_1_1

e45_3_2
e45_3_2_1
e45_4
e45_4_1
e45_4_2
e45_4_3
e45_4_3_1
e45_5
e45_5_1
e45_5_1_1
e45_6
e45_7
e45_7_1
e237
e46
e47
e47_1
e190
e190_1
e190_1_1
e190_2
e190_2_1
e190_3
e190_3_1
e191
e192
e48
e49
e238
e239
e240_1
e240_2
e241
e242
e242_1
e193
e194

e243_1
e243_2
e244
e245
e245_1
e196
e196_1
e196_2
e196_3
e197
e197_1
e51_2
e51_3
e198
e199
e200
e200_1
e200_2
e200_3
e201
e201_1
e202_1
e202_2
e202_3
e202_4
e202_8
e202_5
e202_6
e202_6_1
e202_7
e51_4
e210_1
e51_5
e210_2
e51_6
e209_1
e210_3

e211
e211_1
e211_2
e211_3
e562
e212
e212_1
e213
e51_7
e51_7_1
e214_1
e215
e215_1
e216
e51_8
e217_1
e218
e218_1
e219
e51_9
e220_1
e221
e221_1
e222
e51_10
e223_1
e224
e224_1
e225
e51_11
e226_1
e559
e559_1
e559_2
e560
e560_1
e560_1_1

e560_2
e560_2_1
e561
e561_1
e59
e246
e246_1
e247
e60
e61
e248
e62
e249
e250
e64_1
e64_2
e64_3
e64_4
e64_5
e64_6
e64_7
e65
f66
f67
f261
f68
f69
f70
f71_2
f72_2
f73
f74
f75
f76_2
f262
f263
f264

f264_1
f265
f265_1
f77
f78
f79
f79_1
f80
f80_2
f81
f82
f83
f84
f266
f267
f268
f85
f86
f87
f88_1
f88_2
f89
f90_2
f91_2
f92
f93
f94
f94_2
f95
f96
f97
f98
f99
f100
f101
f102
f103

f104

f105

f106

f107

f108

f109

f110

f111

f112

f113

f114

f115

f116

f117

f118_1

f118_2

f119_2

f120_2

f121

f122

f123

f124_1

f124_2

f124_3

f124_4

f124_5

f125

g_id_1

g_id_2

g_id_3

g_id_1a

g_id_2a

g_id_3a

g126_1

g126_2

g126_3

g126_4

g126_5
g126_6
g126_7
g126_8
g250_1
g250_2
g250_5
g250_3
g250_4
g127
g127_1
g127_2
g127_3
g128
g128_1
g129
g129_1
g129_2
g130
g130_1
g131
g131_1
g132
g132_1
g132_2
g132_3
g133
g133_1
g133_2
g_st_1
g134_1
g134_2
g134_3
g134_4
g134_5
g134_6
g134_7

g134_8
g251_1
g251_2
g251_3
g251_4
g251_5
g135
g135_1
g135_2
g135_3
g136
g136_1
g137
g137_1
g137_2
g138
g138_1
g139
g139_1
g140
g140_1
g140_2
g140_3
g141
g141_1
g141_2
g_itnd_1
g142
g_itnd_2
g143
g144
g144_1
g144_2_1
g144_2_2
g144_2_3
g144_2_4
g144_2_5

g_itnd_3
g145
g146
g147
g_it_1
g148_1_1
g148_1_2
g148_1_3
g148_1_4
g148_1_5
g148_1_6
g148_1_7
g148_1_8
g148_1_9
g148_1_12
g148_1_10
g148_1_11
g_it_2
g148_2_1
g148_2_2
g148_2_3
g148_2_4
g148_2_5
g148_2_6
g148_2_7
g148_2_8
g148_2_9
g148_2_12
g148_2_10
g148_2_11
g148_3
g148_4
g148_5_1
g148_5_2
g149
g149_1
g150

g255
g256
g152
g151_5
g151_1
g151_2
g151_3
g151_3_1
g151_4
g257
g153
g153_1
g153_2
g258
g258_1
g154
g154_1
pobpcoac
subempleo
mto_cuota
mto_emer
mto_hogcon
mto_desay
mto_almue
mto_vacas
mto_oveja
mto_caball
lecheenpol
indaceliac
indaucc
indaemer
pt1
pt2
pt4
pobre06
indigente06
upm_id
estrato ...

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [urls_ine](#)

toy_ech_2018_income	<i>A dataset containing only 1000 rows of the ECH 2018 income variables</i>
---------------------	---

Description

A dataset containing only 1000 rows of the ECH 2018 income variables

Usage

```
toy_ech_2018_income
```

Format

A data frame with 1000 rows and 9 variables:

```
numero household id  
mes  
ht11  
ysvl  
ht13  
ht19  
dpto  
pesoano  
estred13  
anio  
region_4 ...
```

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018](#), [urls_ine](#)

underemployment	<i>This function allows you to identify underemployed people</i>
-----------------	--

Description

This function allows you to identify underemployed people

Usage

```
underemployment(
  data = ech::toy_ech_2018,
  pobpcoac = "pobpcoac",
  f85 = "f85",
  f98 = "f98",
  f101 = "f101",
  f102 = "f102",
  f103 = "f103",
  f104 = "f104"
)
```

Arguments

data	data.frame
pobpcoac	Variable name of definition of population by activity status. Default: "pobpcoac"
f85	Variable name of number of hours worked in the main job
f98	Variable name of Number of hours worked at the secondary job
f101	Variable name of reasons why you want another job
f102	Variable name of want to work more hours
f103	Variable name of are available to work more hours at this time
f104	Variable name of reasons why you dont work more hours

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other employment: [branch_ciiu\(\)](#), [employment_restrictions\(\)](#), [employment\(\)](#)

Examples

```
toy_ech_2018 <- underemployment(data = ech::toy_ech_2018)
```

unlabelled

This function allows you to labelled variables

Description

This function allows you to labelled variables

Usage

```
unlabelled(data = NULL)
```

Arguments

data data frame

Value

data.frame

See Also

Other utils: [archive_extract\(\)](#), [dates_ech\(\)](#)

Examples

```
df <- unlabelled(data = ech::toy_ech_2018)
```

unrarPath	<i>The known path for unrar or 7z</i>
-----------	---------------------------------------

Description

The known path for unrar or 7z

Usage

```
.unrarPath
```

Format

An object of class NULL of length 0.

unsatisfied_basic_needs

This function allows you to calculate de Unsatisfied Basic Needs

Description

This function allows you to calculate de Unsatisfied Basic Needs

Usage

```
unsatisfied_basic_needs(  
  data = ech::toy_ech_2018,  
  c2 = "c2",  
  c3 = "c3",  
  c4 = "c4",  
  d9 = "d9",  
  d11 = "d11",  
  d12 = "d12",  
  d13 = "d13",  
  d14 = "d14",  
  d15 = "d15",  
  d16 = "d16",  
  d18 = "d18",  
  d19 = "d19",  
  d21_1 = "d21_1",  
  d21_2 = "d21_2",  
  d21_3 = "d21_3",  
  d260 = "d260",  
  ht19 = "ht19",  
  pobre06 = "pobre06",
```

```

e27 = "e27",
school_enrollment = "school_enrollment",
years_schooling = "years_schooling",
e238 = "e238",
anio = "anio"
)

```

Arguments

data	data.frame
c2	Variable name of predominant material on external walls
c3	Variable name of predominant roofing material
c4	Variable name of predominant flooring material
d9	Variable name of number of rooms
d11	Variable name of principal source of potable water
d12	Variable name of water supply network / water access
d13	Variable name of sanitary facilities
d14	Variable name of bathroom presence
d15	Variable name of private bathroom use
d16	Variable name of sewerage facilities
d18	Variable name of energy source for lighting
d19	Variable name of cooking space
d21_1	Variable name of heater or termophon presence
d21_2	Variable name of instantaneous water heater presence
d21_3	Variable name of fridge presence
d260	Variable name of energy source for heating
ht19	Variable name of number of individuals in the household
pobre06	Variable name of poverty
e27	Variable name of age
school_enrollment	Variable name of school_enrollment
years_schooling	Variable name of years_schooling
e238	Variable name of attendance to initial education
anio	Variable name of survey year

Details

Based on http://www.ine.gub.uy/documents/10181/34017/Atlas_fasciculo_1_NBI_versionrevisada.pdf/57ea17f9-3fd9-4306-b9ca-948abc7fab73 Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Value

data.frame

See Also

Other poverty: [integrated_poverty_measure\(\)](#), [poverty\(\)](#)

Examples

```
toy_ech_18 <- enrolled_school(data = ech::toy_ech_2018)
toy_ech_18 <- years_of_schooling(toy_ech_18)
toy_ech_18 <- unsatisfied_basic_needs(toy_ech_18)
```

urls_ine

A dataset containing the urls of INE datasets and dictionaries

Description

A dataset containing the urls of INE datasets and dictionaries

Usage

```
urls_ine
```

Format

A data frame with 9 rows and 4 variables:

yy date from 2011 to 2019

md_sav url for microdata download

upm_sav url for upm download

dic url for dictionary download

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

Source

<http://www.ine.gub.uy/>

See Also

Other dataset: [cba_cbna_int](#), [cba_cbna_mdeo](#), [cba_cbna_rur](#), [ciiu4](#), [dic](#), [ipab_base2010_int](#), [ipab_base2010_mdeo](#), [ipab_base2010](#), [ipc_base2010_int](#), [ipc_base2010_mdeo](#), [ipc_base2010](#), [toy_ech_2018_income](#), [toy_ech_2018](#)

years_of_schooling *This function allows you to calculate the years of schooling*

Description

This function allows you to calculate the years of schooling

Usage

```
years_of_schooling(
  data = ech::toy_ech_2018,
  e193 = "e193",
  e51_2 = "e51_2",
  e51_3 = "e51_3",
  e51_4 = "e51_4",
  e51_5 = "e51_5",
  e51_6 = "e51_6",
  e51_7 = "e51_7",
  e51_7_1 = "e51_7_1",
  e51_8 = "e51_8",
  e51_9 = "e51_9",
  e51_10 = "e51_10",
  e51_11 = "e51_11",
  max_years = 22
)
```

Arguments

data	data.frame
e193	Variable name of attendance school
e51_2	Variable name of years passed in primary
e51_3	Variable name of years passed in special primary
e51_4	Variable name of years passed in lower secondary
e51_5	Variable name of years passed in upper secondary
e51_6	Variable name of years passed in bachillerato tecnologico
e51_7	Variable name of years passed in technical education
e51_7_1	Variable name of technical education requirements
e51_8	Variable name of years passed in magisterio/profesorado
e51_9	Variable name of years passed in university or similar
e51_10	Variable name of years passed in tertiary (non-university)
e51_11	Variable name of years passed in postgrade
max_years	Maximum years of schooling

Details

Disclaimer: This script is not an official INE product. Aviso: El script no es un producto oficial de INE.

See Also

Other education: [enrolled_school\(\)](#), [level_completion\(\)](#), [level_education\(\)](#)

Examples

```
toy_ech_2018 <- years_of_schooling(data = ech::toy_ech_2018)
```

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