

# Package ‘ech’

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**Title** Toolbox for ECH with R

**Version** 0.1.0

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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

**Encoding** UTF-8

**ByteCompile** true

**LazyData** true

**RoxygenNote** 7.1.1

**Depends** R (>= 3.5.0)

**Imports** assertthat, fs, glue, dplyr (>= 1.0.0), haven (>= 2.3.0), janitor, magrittr, srvyr (>= 0.4.0), statar, survey (>= 1.2.0), stringr, readxl, laeken, rlang, pdftables, tidyr, textclean, rstudioapi, geouy, purrr, labelled, tidysselect, ggplot2, ggthemes, ggspatial, methods, sf, viridis

**Suggests** knitr, testthat (>= 2.1.0), rmarkdown, covr

**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)

**VignetteBuilder** knitr

**NeedsCompilation** no

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add_geom	<i>This function allows you to add a geom variable with a code variable of "zona", "barrio", "localidad", "segmentos", "secciones" or "departamentos".</i>
----------	--

## Description

This function allows you to add a geom variable with a code variable of "zona", "barrio", "localidad", "segmentos", "secciones" or "departamentos".

## Usage

```
add_geom(data, unit, variable, crs = 32721)
```

## Arguments

data	data.frame
unit	spatial unit of data, may be: "Departamentos", "Secciones", "Secc MVD 2004", "Segmentos", "Segm MVD 2004", "Segm URB INT 2004", "Zonas", "Zonas MVD 2004", "Zonas URB INT 2004", "Localidades pg", "Municipios" o "Barrios".
variable	Variable name of unit code (without duplicates)
crs	Coordinates Refence Sistem, usually in region 32721 or 4326 (default 32721)

## 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 geo: [plot\\_geouy\(\)](#)

**Examples**

```
pobre_x_dpto <- get_estimation_mean(variable = "pobre06", by.x = "nomdpto", level = "h") %>%
  dplyr::filter(pobre06 == "No pobre")
pobre_x_dpto_geo <- add_geom(data = pobre_x_dpto, unit = "Departamentos", variable = "nomdpto")
```

---

age\_groups

*This function allows you to calculate age groups*

---

**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**

data	data.frame
cut	breaks points to cut a numeric variable
e27	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: [unlabelled\(\)](#)

**Examples**

```
archive_extract()
```

---

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](#)

---

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\(\)](#)

## Examples

```
deflate(base_month = 6, base_year = 2016, index = "IPC", level = "G", df_year = 2018)
```

---

 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 <i>package</i>
-----	--------------------

---

**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

*This function allows you to identify workers with employment restrictions*

---

**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

*This function allows you to calculate the people enrolled in school***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(), sheet = NULL, region = NULL)
```

**Arguments**

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

**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\\_ciiu\(\)](#), [get\\_dictionary\(\)](#), [get\\_ipab\\_region\(\)](#), [get\\_ipab\(\)](#), [get\\_ipc\\_region\(\)](#), [get\\_ipc\(\)](#), [get\\_microdata\(\)](#), [read\\_microdata\(\)](#)

**Examples**

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

---

get_ciiu	<i>This function allows you to get the CIIU data</i>
----------	--

---

### Description

This function allows you to get the CIIU data

### Usage

```
get_ciiu(folder = tempdir(), version = 4)
```

### Arguments

folder	temp folder
version	by default the last ciiu version

### 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\\_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\\_ciiu\(\)](#), [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	<i>This function allows you to estimate the Gender Pay Wage Gap (GPG)</i>
--------------------	---

---

**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	<i>This function allows you to estimate mean variable at universe level.</i>
---------------------	--

---

**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 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\\_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	<i>This function allows you to estimate de Income Quintile Share Ratio</i>
--------------------	--

---

## 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 expresion 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**

<code>data</code>	data frame with ECH microdata
<code>variable</code>	data frame column to estimate
<code>by.x</code>	data frame column
<code>by.y</code>	data frame column
<code>domain</code>	subpopulation reference setted as character expresion of logical evaluation
<code>level</code>	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 = NULL)
```

### Arguments

folder	temporal folder
sheet	sheet number

### 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\\_ciiu\(\)](#), [get\\_dictionary\(\)](#), [get\\_ipab\\_region\(\)](#), [get\\_ipc\\_region\(\)](#), [get\\_ipc\(\)](#), [get\\_microdata\(\)](#), [read\\_microdata\(\)](#)

**Examples**

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

---

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(), sheet = NULL, region = "M")
```

**Arguments**

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

**Value**

data.frame

**See Also**

Other dwnld\_read: [get\\_cba\\_cbna\(\)](#), [get\\_ciiu\(\)](#), [get\\_dictionary\(\)](#), [get\\_ipab\(\)](#), [get\\_ipc\\_region\(\)](#), [get\\_ipc\(\)](#), [get\\_microdata\(\)](#), [read\\_microdata\(\)](#)

**Examples**

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

---

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\\_ciiu\(\)](#), [get\\_dictionary\(\)](#), [get\\_ipab\\_region\(\)](#), [get\\_ipab\(\)](#), [get\\_ipc\\_region\(\)](#), [get\\_microdata\(\)](#), [read\\_microdata\(\)](#)

**Examples**

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

---

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 = "M", sheet = NULL)
```

**Arguments**

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

**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\\_ciiu\(\)](#), [get\\_dictionary\(\)](#), [get\\_ipab\\_region\(\)](#), [get\\_ipab\(\)](#), [get\\_ipc\(\)](#), [get\\_microdata\(\)](#), [read\\_microdata\(\)](#)

**Examples**

```
get_ipc_region(folder = tempdir(), region = "M")
```

---

get\_microdata

---

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


---

**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\\_ciiu\(\)](#), [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	<i>This function allows you to calculate the housing conditions</i>
--------------------	---

---

## 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

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

c4	Variable name of predominant flooring material
quintil	Variable name of income quintil
region_4	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

*This function allows you to calculate the housing tenure*

---

**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**

data	data.frame with ECH microdata
base_month	baseline month
base_year	baseline year
index	IPC or IPAB
level	General ("G") or Regional ("R")
mes	month
ht11	Variable name of income. Default: ht11
ht13	Variable name of rental value. Default: ht13
ht19	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	<i>A dataset containing the IPAB for the Interior region</i>
-------------------	--

---

**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	<i>A dataset containing the IPAB for the Montevideo region</i>
--------------------	--

---

**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
pobpcoac	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**

<code>data</code>	data frame
<code>numero</code>	Variable name of household id
<code>f85</code>	Variable name of hours worked per week
<code>pobpcoac</code>	Variable name of definition of population by activity status
<code>pt4</code>	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 = ech::toy_ech_2018,
  year = 2018,
  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)
```

---

plot\_geouy

*plot\_geouy*

---

**Description**

This function allows you to set ggplot2 theme in our suggested format.

**Usage**

```
plot_geouy(x, col, viri_opt = "plasma", l = NULL, other_lab = NULL, ...)
```

**Arguments**

x	An sf object like load_geouy() results
col	Variable of "x" to plot (character)
viri_opt	A character string indicating the colormap option to use. Four options are available: "magma" (or "A"), "inferno" (or "B"), "plasma" (or "C"), "viridis" (or "D", the default option) and "cividis" (or "E")
l	If NULL none label added, if "%" percentage with 1 decimal labels, if "n" the value is the label, if "c" put other variable in other_lab. Default NULL
other_lab	If l is "c" put here the variable name for the labels.
...	All parameters allowed from ggplot2 themes.

**Value**

ggplot object of a choropleth map with x geometries and col values.

**See Also**

Other geo: [add\\_geom\(\)](#)

## Examples

```
pobre_x_dpto <- get_estimation_mean(data = ech::toy_ech_2018, variable = "pobre06",
                                   by.x = "nomdpto", level = "h", name = "Pobreza")
pobre_x_dpto <- pobre_x_dpto %>% dplyr::filter(pobre06 == "Pobre")
pobre_x_dpto_geo <- add_geom(data = pobre_x_dpto, unit = "Departamentos", variable = "nomdpto")
plot_geouy(x = pobre_x_dpto_geo, col = "Pobreza", l = "%")
```

---

poverty	<i>This function allows you to calculate poor and indigent people or household</i>
---------	--

---

## 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

*This function allows you to read ECH from a local folder*

---

**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\\_ciiu\(\)](#), [get\\_dictionary\(\)](#), [get\\_ipab\\_region\(\)](#), [get\\_ipab\(\)](#), [get\\_ipc\\_region\(\)](#), [get\\_ipc\(\)](#), [get\\_microdata\(\)](#)

---

`set_design`*This function allows you to set the survey desing*

---

## 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

<code>data</code>	data frame with ECH microdata
<code>level</code>	is household ("h") or individual ("i")
<code>numero</code>	variables specifying the householder ids
<code>ids</code>	variables specifying the unit primary sampling (it's not a public variable)
<code>estrato</code>	variable specifying strata
<code>pesoano</code>	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  
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e60  
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**f125**

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**g\_id\_2**

**g\_id\_3**

**g\_id\_1a**

**g\_id\_2a**

**g\_id\_3a**

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**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

*This function allows you to identify underemployed people*


---

**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\(\)](#)

**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	<i>This function allows you to calculate de Unsatisfied Basic Needs</i>
-------------------------	---

---

**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",
e201_1 = "e201_1",
e212_1 = "e212_1",
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
e201_1	Variable name of
e212_1	Variable name of
e238	Variable name of
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](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	<i>This function allows you to calculate the years of schooling</i>
--------------------	---

---

**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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