Package 'PNADcIBGE'

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Type Package

Title Downloading, Reading and Analyzing PNADC Microdata

Version 0.7.5

Description Provides tools for downloading, reading and analyzing the Continuous National Household Sample Survey - PNADC, a household survey from Brazilian Institute of Geography and Statistics - IBGE. The data must be downloaded from the official website <https://www.ibge.gov.br/>. Further analysis must be made using package 'survey'.

Depends R (>= 3.2.0)

Imports dplyr, httr, magrittr, projmgr, RCurl, readr, readxl, survey, tibble, timeDate, utils

Suggests convey, SIPDIBGE, srvyr

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Author Douglas Braga [aut],
Gabriel Assuncao [aut, cre],
Luna Hidalgo [ctb],
Viviane Quintaes [ctb]

Maintainer Gabriel Assuncao <pacotesipd@ibge.gov.br>

BugReports https://github.com/Gabriel-Assuncao/PNADcIBGE/issues

Repository CRAN

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get_pnadc	*Download, label, deflate and create survey design object for PNADC microdata*

Description

Core function of package. With this function only, the user can download a PNADC microdata from a year or quarter and get a sample design object ready to use with survey package functions.

Usage

```
get_pnadc(
  year,
  quarter = NULL,
  interview = NULL,
  topic = NULL,
  selected = FALSE,
  vars = NULL,
  defyear = NULL,
  defperiod = NULL,
  labels = TRUE,
  deflator = TRUE,
  design = TRUE,
  reload = TRUE,
  curlopts = list(),
  savedir = tempdir()
)
```

Arguments

year	The year of the data to be downloaded. Must be a number between 2012 and current year. Vector not accepted.
quarter	The quarter of the year of the data to be downloaded. Must be number from 1 to 4. Vector not accepted. If NULL, interview or topic number must be provided.
interview	The interview number of the data to be downloaded. Must be number from 1 to 5. Vector not accepted. Using this option will get annual per interview data. If NULL, quarter or topic number must be provided.
topic	The quarter related to the topic of the data to be downloaded. Must be number from 1 to 4. Vector not accepted. Using this option will get annual per topic data. If NULL, quarter or interview number must be provided.
selected	Logical value. If TRUE, the specific questionnaire for selected resident will be used. If FALSE, the basic questionnaire for household and residents will be used. For more information about these supplemental topics, please check the survey official website.
vars	Vector of variable names to be kept for analysis. Default is to keep all variables.

defyear	The year of the deflator data to be downloaded for annual microdata. Must be a number between 2017 and the last available year. Vector not accepted. If NULL, the deflator year will be defined as the last year available for interview microdata, or as equal to year for topic microdata. When quarter is defined, this argument will be ignored. This argument will be used only if deflator was set as TRUE.
defperiod	The quarter period of the deflator data to be downloaded for annual per topic microdata. Must be number from 1 to 4. Vector not accepted. If NULL, the deflator period will be defined as equal to topic. When quarter or interview is defined, this argument will be ignored. This argument will be used only if deflator was set as TRUE.
labels	Logical value. If TRUE, categorical variables will presented as factors with labels corresponding to the survey's dictionary.
deflator	Logical value. If TRUE, deflator variables will be available for use in the microdata.
design	Logical value. If TRUE, will return an object of class survey.design or svyrep.design. It is strongly recommended to keep this parameter as TRUE for further analysis. If FALSE, only the microdata will be returned.
reload	Logical value. If TRUE, will re-download the files even if they already exist in the save directory. If FALSE, will be checked if the files already exist in the save directory and the download will not be performed repeatedly, be careful with coinciding names of microdata files.
curlopts	A named list object identifying the curl options for the handle when using functions from RCurl package.
savedir	Directory to save the downloaded data. Default is to use a temporary directory.

Value

An object of class survey.design or svyrep.design with the data from PNADC and its sample design, or a tibble with selected variables of the microdata, including the necessary survey design ones.

Note

For more information, visit the survey official website <https://www.ibge.gov.br/estatisticas/sociais/trabalho/9171-pesquisa-nacional-por-amostra-de-domicilios-continua-mensal.html?=&t=o-que-e> and consult the other functions of this package, described below.

See Also

read_pnadc for reading PNADC microdata.
pnadc_labeller for labeling categorical variables from PNADC microdata.
pnadc_deflator for adding deflator variables to PNADC microdata.
pnadc_design for creating PNADC survey design object.
pnadc_example for getting the path of the quarter PNADC toy example files.

Examples

```
pnadc.svy <- get_pnadc(year=2017, quarter=4, selected=FALSE, vars=c("VD4001","VD4002"),
                       defyear=2017, defperiod=4, labels=TRUE, deflator=TRUE, design=TRUE,
                         reload=TRUE, curlopts=list(), savedir=tempdir())
# Calculating proportion of employed and unemployed people
if (!is.null(pnadc.svy)) survey::svymean(x=~VD4002, design=pnadc.svy, na.rm=TRUE)
pnadc.svy2 <- get_pnadc(year=2017, interview=5, selected=FALSE, vars=c("V4112","V4121B"),
                       defyear=2017, defperiod=4, labels=TRUE, deflator=TRUE, design=TRUE,
                         reload=TRUE, curlopts=list(), savedir=tempdir())
# Calculating average hours dedicated to the care of people or household chores
if (!is.null(pnadc.svy2)) survey::svymean(x=~V4121B, design=pnadc.svy2, na.rm=TRUE)
pnadc.svy3 <- get_pnadc(year=2017, topic=4, selected=FALSE, vars=c("S07006","S07007"),
                       defyear=2017, defperiod=4, labels=TRUE, deflator=TRUE, design=TRUE,
                         reload=TRUE, curlopts=list(), savedir=tempdir())
# Calculating proportion of cell phone for personal use with internet access
if (!is.null(pnadc.svy3)) survey::svymean(x=~S07007, design=pnadc.svy3, na.rm=TRUE)
```

---

pnadc_deflator	*Add deflator variables to PNADC microdata*

Description

This function adds deflator variables to PNADC microdata. For deflation of income variables, the documentation provided through the following addresses must be used:
Quarter - https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_continua/Trimestral/Microdados/Documentacao/PNADcIBGE_Deflator_Trimestral.pdf.
Annual per Interview - https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_continua/Anual/Microdados/Visita/Documentacao_Geral/PNADcIBGE_Deflator_Anual_Visita.pdf.
Annual per Topic - https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_continua/Anual/Microdados/Trimestre/Documentacao_Geral/PNADcIBGE_Deflator_Anual_Trimestre.pdf.

Usage

```
pnadc_deflator(data_pnadc, deflator.file)
```

Arguments

data_pnadc	A tibble of PNADC microdata read with read_pnadc function.
deflator.file	The deflator file for selected survey available on official website: Quarter (select the deflator zip file) - https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_continua/Trimestral/Microdados/Documentacao/. Annual per Interview (select a deflator xls file, according to the appropriated year) - https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_

por_Amostra_de_Domicilios_continua/Anual/Microdados/Visita/Documentacao_
Geral/.
Annual per Topic (select a deflator xls file, according to the appropriated period
and, then, inside the documentation folder, choose the desired year) - https://
ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_
de_Domicilios_continua/Anual/Microdados/Trimestre/.

Value

A tibble with the data provided from PNADC survey and the deflator variables added for use.

Note

For more information, visit the survey official website <https://www.ibge.gov.br/estatisticas/
sociais/trabalho/9171-pesquisa-nacional-por-amostra-de-domicilios-continua-mensal.
html?=&t=o-que-e> and consult the other functions of this package, described below.

See Also

get_pnadc for downloading, labeling, deflating and creating survey design object for PNADC mi-
crodata.
read_pnadc for reading PNADC microdata.
pnadc_labeller for labeling categorical variables from PNADC microdata.
pnadc_design for creating PNADC survey design object.
pnadc_example for getting the path of the quarter PNADC toy example files.

Examples

```
# Using data read from disk
input_path <- pnadc_example(path="input_example.txt")
data_path <- pnadc_example(path="exampledata.txt")
dictionary.path <- pnadc_example(path="dictionaryexample.xls")
deflator.path <- pnadc_example(path="deflatorexample.xls")
pnadc.df <- read_pnadc(microdata=data_path, input_txt=input_path, vars=c("VD4001","VD4002"))
pnadc.df <- pnadc_labeller(data_pnadc=pnadc.df, dictionary.file=dictionary.path)
pnadc.df <- pnadc_deflator(data_pnadc=pnadc.df, deflator.file=deflator.path)

# Downloading data
pnadc.df2 <- get_pnadc(year=2017, quarter=4, selected=FALSE, vars=c("VD4001","VD4002"),
                  defyear=2017, defperiod=4, labels=TRUE, deflator=FALSE, design=FALSE,
                     reload=TRUE, curlopts=list(), savedir=tempdir())
deflator.path2 <- pnadc_example(path="deflatorexample.xls")
pnadc.df2 <- pnadc_deflator(data_pnadc=pnadc.df2, deflator.file=deflator.path2)
```

---

pnadc_design   *Create PNADC survey object with its sample design*

Description

This function creates PNADC survey object with its sample design for analysis using survey pack-age functions.

Usage

```
pnadc_design(data_pnadc)
```

Arguments

data_pnadc   A tibble of PNADC microdata read with read_pnadc function.

Value

An object of class survey.design or svyrep.design with the data from PNADC and its sample design.

Note

For more information, visit the survey official website <[https://www.ibge.gov.br/estatisticas/](https://www.ibge.gov.br/estatisticas/sociais/trabalho/9171-pesquisa-nacional-por-amostra-de-domicilios-continua-mensal.html?=&t=o-que-e) [sociais/trabalho/9171-pesquisa-nacional-por-amostra-de-domicilios-continua-mensal.](https://www.ibge.gov.br/estatisticas/sociais/trabalho/9171-pesquisa-nacional-por-amostra-de-domicilios-continua-mensal.html?=&t=o-que-e) [html?=&t=o-que-e](https://www.ibge.gov.br/estatisticas/sociais/trabalho/9171-pesquisa-nacional-por-amostra-de-domicilios-continua-mensal.html?=&t=o-que-e)> and consult the other functions of this package, described below.

See Also

[get_pnadc](#) for downloading, labeling, deflating and creating survey design object for PNADC microdata.
[read_pnadc](#) for reading PNADC microdata.
[pnadc_labeller](#) for labeling categorical variables from PNADC microdata.
[pnadc_deflator](#) for adding deflator variables to PNADC microdata.
[pnadc_example](#) for getting the path of the quarter PNADC toy example files.

Examples

```
# Using data read from disk
input_path <- pnadc_example(path="input_example.txt")
data_path <- pnadc_example(path="exampledata.txt")
dictionary.path <- pnadc_example(path="dictionaryexample.xls")
deflator.path <- pnadc_example(path="deflatorexample.xls")
pnadc.df <- read_pnadc(microdata=data_path, input_txt=input_path, vars=c("VD4001","VD4002"))
pnadc.df <- pnadc_labeller(data_pnadc=pnadc.df, dictionary.file=dictionary.path)
pnadc.df <- pnadc_deflator(data_pnadc=pnadc.df, deflator.file=deflator.path)

pnadc.svy <- pnadc_design(data_pnadc=pnadc.df)
# Calculating proportion of employed and unemployed people
```

```
if (!is.null(pnadc.svy)) survey::svymean(x=~VD4002, design=pnadc.svy, na.rm=TRUE)

# Downloading data
pnadc.df2 <- get_pnadc(year=2017, quarter=4, selected=FALSE, vars=c("VD4001","VD4002"),
                  defyear=2017, defperiod=4, labels=TRUE, deflator=TRUE, design=FALSE,
                     reload=TRUE, curlopts=list(), savedir=tempdir())
pnadc.svy2 <- pnadc_design(data_pnadc=pnadc.df2)
# Calculating proportion of employed and unemployed people
if (!is.null(pnadc.svy2)) survey::svymean(x=~VD4002, design=pnadc.svy2, na.rm=TRUE)
```

---

pnadc_example | *Get the path of the quarter PNADC toy example files*

Description

This function provides the path of the microdata from quarter 4 of year 2017 of the PNADC toy example files, loaded with this package.

Usage

```
pnadc_example(path = NULL)
```

Arguments

path   Name of file. If NULL, the quarter PNADC toy example files names will be listed.

Value

A vector with names of all the available quarter PNADC toy example files or the path for specific requested quarter PNADC toy example file.

Note

For more information, visit the survey official website <https://www.ibge.gov.br/estatisticas/sociais/trabalho/9171-pesquisa-nacional-por-amostra-de-domicilios-continua-mensal.html?=&t=o-que-e> and consult the other functions of this package, described below.

See Also

[get_pnadc](#) for downloading, labeling, deflating and creating survey design object for PNADC microdata.
[read_pnadc](#) for reading PNADC microdata.
[pnadc_labeller](#) for labeling categorical variables from PNADC microdata.
[pnadc_deflator](#) for adding deflator variables to PNADC microdata.
[pnadc_design](#) for creating PNADC survey design object.

Examples

```
pnadc_example()
pnadc_example(path="exampledata.txt")
pnadc_example(path="input_example.txt")
pnadc_example(path="dictionaryexample.xls")
pnadc_example(path="deflatorexample.xls")
```

---

pnadc_labeller	*Label categorical variables from PNADC microdata*

Description

This function labels categorical variables from PNADC microdata.

Usage

```
pnadc_labeller(data_pnadc, dictionary.file)
```

Arguments

data_pnadc   A tibble of PNADC microdata read with read_pnadc function.

dictionary.file

The dictionary file for selected survey available on official website:
Quarter (select the dictionary and input zip file) - https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_continua/Trimestral/Microdados/Documentacao/.
Annual per Interview (select a dictionary xls file, according to the appropriated interview and, then, inside the documentation folder, choose the desired year) - https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_continua/Anual/Microdados/Visita/.
Annual per Topic (select a dictionary xls file, according to the appropriated quarter related to the topic, inside the documentation folder) - https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_continua/Anual/Microdados/Trimestre/.

Value

A tibble with the data provided from PNADC survey and its categorical variables as factors with related labels.

Note

For more information, visit the survey official website <https://www.ibge.gov.br/estatisticas/sociais/trabalho/9171-pesquisa-nacional-por-amostra-de-domicilios-continua-mensal.html?=&t=o-que-e> and consult the other functions of this package, described below.

See Also

get_pnadc for downloading, labeling, deflating and creating survey design object for PNADC microdata.

read_pnadc for reading PNADC microdata.

pnadc_deflator for adding deflator variables to PNADC microdata.

pnadc_design for creating PNADC survey design object.

pnadc_example for getting the path of the quarter PNADC toy example files.

Examples

```
# Using data read from disk
input_path <- pnadc_example(path="input_example.txt")
data_path <- pnadc_example(path="exampledata.txt")
dictionary.path <- pnadc_example(path="dictionaryexample.xls")
pnadc.df <- read_pnadc(microdata=data_path, input_txt=input_path, vars=c("VD4001","VD4002"))
pnadc.df <- pnadc_labeller(data_pnadc=pnadc.df, dictionary.file=dictionary.path)

# Downloading data
pnadc.df2 <- get_pnadc(year=2017, quarter=4, selected=FALSE, vars=c("VD4001","VD4002"),
                  defyear=2017, defperiod=4, labels=FALSE, deflator=FALSE, design=FALSE,
                      reload=TRUE, curlopts=list(), savedir=tempdir())
dictionary.path2 <- pnadc_example(path="dictionaryexample.xls")
pnadc.df2 <- pnadc_labeller(data_pnadc=pnadc.df2, dictionary.file=dictionary.path2)
```

---

read_pnadc	*Read PNADC microdata*

Description

This function reads PNADC microdata.

Usage

```
read_pnadc(microdata, input_txt, vars = NULL)
```

Arguments

microdata
    A text file containing microdata from PNADC survey, available on official website:

Quarter (select a microdata file, according to the appropriated year and, then, quarter) - https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_continua/Trimestral/Microdados/.

Annual per Interview (select a microdata file, according to the appropriated interview and, then, inside the data folder, choose the desired year) - https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_continua/Anual/Microdados/Visita/.

Annual per Topic (select a microdata file, according to the appropriated quarter related to the topic and, then, inside the data folder, choose the desired year) -

https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_
por_Amostra_de_Domicilios_continua/Anual/Microdados/Trimestre/.

input_txt   A text file, related to the microdata, containing the input script for SAS, avail-
                   able on official website:
                   Quarter (select the dictionary and input zip file) - https://ftp.ibge.gov.br/
                   Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_
                   continua/Trimestral/Microdados/Documentacao/.
                   Annual per Interview (select a input txt file, according to the appropriated in-
                   terview and, then, inside the documentation folder, choose the desired year) -
                   https://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_
                   por_Amostra_de_Domicilios_continua/Anual/Microdados/Visita/.
                   Annual per Topic (select a input txt file, according to the appropriated quarter re-
                   lated to the topic, inside the documentation folder) - https://ftp.ibge.gov.
                   br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_
                   continua/Anual/Microdados/Trimestre/.

vars   Vector of variable names to be kept for analysis. Default is to keep all variables.

Value

A tibble with selected variables of the microdata, including the necessary survey design ones.

Note

For more information, visit the survey official website <https://www.ibge.gov.br/estatisticas/
sociais/trabalho/9171-pesquisa-nacional-por-amostra-de-domicilios-continua-mensal.
html?=&t=o-que-e> and consult the other functions of this package, described below.

See Also

get_pnadc for downloading, labeling, deflating and creating survey design object for PNADC mi-
crodata.
pnadc_labeller for labeling categorical variables from PNADC microdata.
pnadc_deflator for adding deflator variables to PNADC microdata.
pnadc_design for creating PNADC survey design object.
pnadc_example for getting the path of the quarter PNADC toy example files.

Examples

```
input_path <- pnadc_example(path="input_example.txt")
data_path <- pnadc_example(path="exampledata.txt")
pnadc.df <- read_pnadc(microdata=data_path, input_txt=input_path, vars=c("VD4001","VD4002"))
```

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