

Package: cvap (via r-universe)

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Title Citizen Voting Age Population

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Description Works with the Citizen Voting Age Population special tabulation from the US Census Bureau
<<https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>>.

Provides tools to download and process raw data. Also provides a downloading interface to processed data. Implements a very basic approach to estimate block level citizen voting age population from block group data.

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Encoding UTF-8

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Imports censable, cli, dplyr, fs, readr, rlang, stringr, tidyr

URL <https://github.com/christopherkenny/cvap>,
<https://christophertkenny.com/cvap/>

BugReports <https://github.com/christopherkenny/cvap/issues>

Depends R (>= 4.1)

Suggests testthat (>= 3.0.0)

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Repository <https://christopherkenny.r-universe.dev>

RemoteUrl <https://github.com/christopherkenny/cvap>

RemoteRef HEAD

RemoteSha db9d73b237812ed5a76190c2162dfd475c9f21b8

Contents

| | |
|------------------------------------|---|
| cvap_census_url | 2 |
| cvap_distribute | 3 |
| cvap_distribute_censable | 4 |
| cvap_get | 5 |
| cvap_get_raw | 6 |
| cvap_process_dir | 6 |
| cvap_process_file | 7 |
| de_block | 8 |
| de_block_group | 8 |
| vest_crosswalk | 9 |

| | |
|--------------|-----------|
| Index | 10 |
|--------------|-----------|

| | |
|-----------------|--|
| cvap_census_url | <i>Get Zip File URL for CVAP Special Tabulation Data</i> |
|-----------------|--|

Description

Get Zip File URL for CVAP Special Tabulation Data

Usage

```
cvap_census_url(year = 2022)
```

Arguments

year numeric. Year for the data in 2009 to 2022.

Value

string

Examples

```
cvap_census_url()
```

| | |
|-----------------|---|
| cvap_distribute | <i>Estimate CVAP at the Block Level</i> |
|-----------------|---|

Description

Assuming citizenship homogeneity within block group race/ethnicity, estimates down from block groups to the block level, proportionally by group if possible, otherwise by total population.

Usage

```
cvap_distribute(cvap, block, wts = "pop", include_implied = TRUE)
```

Arguments

| | |
|-----------------|--|
| cvap | cvap data at the block group level, using default settings of <code>get_cvap()</code> |
| block | block data data for the Census before (or the same as) the year of the cvap data |
| wts | 'pop' (default) or 'vap' for the group to distribute by. |
| include_implied | logical if a column for the implied total (<code>impl_cvap</code>) should be included. Default is TRUE |

Value

cvap tibble estimated at the block level

Examples

```
## Not run:  
# Requires API set up with tidycensus  
state <- 'DE'  
cvap <- cvap_get(state, year = 2019)  
de_block <- censable::build_dec(geography = 'block',  
state = state, year = 2010, geometry = FALSE)  
  
## End(Not run)  
# Alternatively, using example data  
state <- 'DE'  
cvap <- cvap_get(state, year = 2019)  
data('de_block')  
cvap_block <- cvap_distribute(cvap, de_block)
```

`cvap_distribute_censable`*Distribute CVAP at the Block Group and Download Data*

Description

Downloads CVAP, block data, and block group data all together. Calls `cvap_distribute` within.

Usage

```
cvap_distribute_censable(  
  state,  
  year = 2022,  
  clean = TRUE,  
  wts = "pop",  
  include_implied = TRUE  
)
```

Arguments

| | |
|------------------------------|--|
| <code>state</code> | character. The state to get data for or nation for the nation file. |
| <code>year</code> | numeric. Year for the data in 2009 to 2022. |
| <code>clean</code> | Should variable names be standardized? Default is TRUE. |
| <code>wts</code> | 'pop' (default) or 'vap' for the group to distribute by. |
| <code>include_implied</code> | logical if a column for the implied total (<code>impl_cvap</code>) should be included. Default is TRUE |

Value

cvap tibble estimated at the block level

Examples

```
## Not run:  
# Requires API set up with tidycensus or censable  
cvap_distribute_censable('DE', 2019)  
  
## End(Not run)
```

`cvap_get`*Download Processed Citizen Voting Age Population Data*

Description

Downloads processed CVAP data for a state. CVAP data is rounded to the nearest 5 so totals may not sum properly, but will be close.

Usage

```
cvap_get(  
  state,  
  year = 2022,  
  geography = "block group",  
  out_file = NULL,  
  moe = FALSE,  
  clean = TRUE  
)
```

Arguments

| | |
|------------------------|---|
| <code>state</code> | character. The state to get data for or nation for the nation file. |
| <code>year</code> | numeric. Year for the data in 2009 to 2022. |
| <code>geography</code> | character. Level of geography. Default is 'block group'. See Details. |
| <code>out_file</code> | file to save downloaded rds to |
| <code>moe</code> | Include margin of error? Default is FALSE. |
| <code>clean</code> | Should variable names be standardized? Default is TRUE. |

Details

Geography options are

- 'block group': block group level data
- 'cd': congressional district data (years 2016+)
- 'county': county-level data
- 'place': place-level data
- 'shd': state house district data (years 2016+)
- 'ssd': state senate district data (years 2016+)
- 'state': state-level data
- 'tract': tract-level data
- 'nation': nation-wide data

Value

tibble of data

Examples

```
cvap_get('DE')
```

| | |
|--------------|--|
| cvap_get_raw | <i>Get Raw Citizen Voting Age Population Files</i> |
|--------------|--|

Description

Get Raw Citizen Voting Age Population Files

Usage

```
cvap_get_raw(url, out_dir)
```

Arguments

| | |
|---------|---|
| url | URL to CVAP zip to download. Use <code>cvap_census_url()</code> . |
| out_dir | Directory to unzip to. Defaults to temp directory. |

Value

string, path where the data is saved

Examples

```
# takes 10-20 seconds
path <- cvap_get_raw(cvap_census_url())
```

| | |
|------------------|--|
| cvap_process_dir | <i>Process Directory of CVAP Files</i> |
|------------------|--|

Description

Process Directory of CVAP Files

Usage

```
cvap_process_dir(dir, year, out_dir, moe = TRUE, csv = FALSE)
```

Arguments

| | |
|---------|---|
| dir | Path to directory with the CVAP files |
| year | file year |
| out_dir | directory to create files in |
| moe | Boolean. Default is TRUE. Should margin of error be kept? |
| csv | Boolean. Default is FALSE, which creates an rds file instead. |

Value

list of tibbles of cvap

Examples

```
path <- fs::path_package('cvap', 'extdata')
cvap_process_dir(path, year = 2019, out_dir = tempdir())
```

| | |
|-------------------|---------------------------------|
| cvap_process_file | <i>Process Census CVAP File</i> |
|-------------------|---------------------------------|

Description

Process Census CVAP File

Usage

```
cvap_process_file(path, year, out_dir, moe = TRUE, csv = FALSE)
```

Arguments

| | |
|---------|---|
| path | path to csv file |
| year | file year |
| out_dir | directory to create files in |
| moe | Boolean. Default is TRUE. Should margin of error be kept? |
| csv | Boolean. Default is FALSE, which creates an rds file instead. |

Value

tibble of cvap data

Examples

```
path <- fs::path_package('cvap', 'extdata', 'County.csv')
cvap_process_file(path, year = 2019, out_dir = tempdir())
```

`de_block`*Delaware Block Example Data*

Description

This data set contains block level data for Delaware for 2010.

Usage

```
data("de_block")
```

Format

A tibble with population data for Delaware blocks from Census 2010

Examples

```
data(de_block)
```

`de_block_group`*Delaware Block Group Example Data*

Description

This data set contains block group level data for Delaware for 2019 from the American Community Survey. This is the five year variant (2015-2019).

Usage

```
data("de_block_group")
```

Format

A tibble with population data for Delaware blocks groups from ACS 2019

Examples

```
data(de_block_group)
```

| | |
|----------------|--|
| vest_crosswalk | <i>Download Processed VEST Block Crosswalk</i> |
|----------------|--|

Description

Provides a friendlier data format for R for working with VEST crosswalks. Data can be retallied with `PL94171::pl_really()` using this crosswalk.

Usage

```
vest_crosswalk(state)
```

Arguments

`state` character. The state to get the VEST crosswalk for.

Value

tibble

References

Amos, Brian, 2021, "2020 Census Block Crosswalk Data", <https://doi.org/10.7910/DVN/T9VMJO>, Harvard Dataverse, V2

Examples

```
de_cw <- vest_crosswalk('DE')
```

Index

- * **data**

- de_block, 8

- de_block_group, 8

- * **distribute**

- cvap_distribute, 3

- cvap_distribute_censable, 4

- * **download**

- cvap_get, 5

- * **raw**

- cvap_census_url, 2

- cvap_get_raw, 6

- cvap_process_dir, 6

- cvap_process_file, 7

cvap_census_url, 2

cvap_distribute, 3

cvap_distribute_censable, 4

cvap_get, 5

cvap_get_raw, 6

cvap_process_dir, 6

cvap_process_file, 7

de_block, 8

de_block_group, 8

vest_crosswalk, 9