Package: vottrans (via r-universe)

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Type Package

Title Voter Transition Analysis

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Author Michael Gampmayer

Maintainer Michael Gampmayer <michael.gampmayer@gmail.com>

Description Calculates voter transitions comparing two elections,
using the function solve.QP() in package 'quadprog'.

License GPL-3

Depends quadprog

NeedsCompilation no

Repository https://example237.r-universe.dev

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vottrans-package *Voter Transfer Analysis*

Description

Calculates the voter transfers between two elections

Details

Package:	vottrans
Type:	Package
Version:	1.0
Date:	2016-03-15
License:	GPL-3

'Vottrans' calculates voter shifts between the partys comparing two elections. Rn is the matrix with the results of the first election in total. Ro the matrix with the results of the second one. The first columns must contain the respective numbers of eligible voters.

Author(s)

Michael Gampmayer

Maintainer: Michael Gampmayer <michael.gampmayer@gmail.com>

Examples

```
data(X1) ## loading the example data of 2009

##    [,1]  [,2]  [,3] [,4]  [,5] [,6] [,7]
##  101131 21491 16006 7480 7095 2483 46576
##    4388  1463  1487  290  128   80   940
##    2658   744   940  250  124   79   521
##    1728   484   661  154   26   25   378
##     ...    ...   ...  ...      ...   ...   ...

data(Y1)  ## loading the example data of 2013

##    [,1]  [,2]  [,3]  [,4] [,5]   [,6] [,7]
##   99723 15204 13755 9402 16147 4752 40463
##    4396   979  1240  373   479  196  1129
##    2744   402   771  300   497  150   624
##    1702   308   594  195   129   71   405
##     ...   ...   ...     ...   ...  ...      ...

vottrans(X1,Y1,v=1)  ## calculating the estimated voter transitions
```

```
##       [,1]          [,2]          [,3]          [,4]       [,5]          [,6]
##  5.171150e-01 -6.904960e-18  1.051492e-01  1.992879e-02  8.083999e-02  2.769671e-01
##  0.000000e+00  7.593029e-01  2.750599e-02  8.736985e-02  6.013103e-02  6.569028e-02
## -1.738393e-18 -2.520292e-18  8.263083e-01 -8.776092e-19  4.631644e-02  1.273753e-01
## -1.242397e-17  3.955979e-17 -1.412332e-17  1.000000e+00  5.387532e-18 -1.168024e-16
##  5.551115e-17  0.000000e+00 -8.729910e-18  8.325580e-01  1.674420e-01 -2.108759e-17
##  6.898481e-02  2.959417e-02  1.703398e-02  1.273023e-01  3.641480e-02  7.206699e-01
```

`vottrans` *Voter Transfer Analysis*

Description

Calculates the voter transfers between two elections

Usage

```
vottrans(Ro, Rn, v = 1, nw = FALSE)
```

Arguments

`Ro`	Matrix containing the results of the first election in total. The first column has to contain the number of eligible voters.
`Rn`	Matrix containing the results of the second election in total. The first column has to contain the number of eligible voters.
`v`	Specifies how the entries are weighted. Version 1 calculates with the percentage values, but weights the residuals with the number of eligible voters per municipalities. Version 2 uses the percentage values without any weight. Version 3 calculates with absolute figures without any weight. (Default: v=1)
`nw`	Specifies whether the difference in the numbers of eligible voters between the two elections is added to the nonvoters of the second election or not. (Default= FALSE)

Value

Returns a matrix containing the percentage of voter shifts. The voter shifts from party 1 to party 2 are found in entry a_1,2

Author(s)

Michael Gampmayer

Examples

```
data(X1) ## loading the example data of 2009

##    [,1]  [,2]  [,3] [,4]  [,5] [,6] [,7]
##  101131 21491 16006 7480 7095 2483 46576
##    4388  1463  1487  290  128   80   940
##    2658   744   940  250  124   79   521
##    1728   484   661  154   26   25   378
##     ...    ...   ...  ...      ...   ...   ...

data(Y1)  ## loading the example data of 2013

##    [,1]  [,2]  [,3]  [,4] [,5]   [,6] [,7]
##   99723 15204 13755 9402 16147 4752 40463
##    4396   979  1240  373   479  196  1129
##    2744   402   771  300   497  150   624
##    1702   308   594  195   129   71   405
##     ...   ...   ...     ...   ...  ...      ...


vottrans(X1,Y1,v=1)  ## calculating the estimated voter transitions


##       [,1]           [,2]           [,3]           [,4]        [,5]           [,6]
## 5.171150e-01  -6.904960e-18  1.051492e-01  1.992879e-02   8.083999e-02  2.769671e-01
## 0.000000e+00   7.593029e-01  2.750599e-02  8.736985e-02   6.013103e-02  6.569028e-02
## -1.738393e-18 -2.520292e-18  8.263083e-01 -8.776092e-19   4.631644e-02  1.273753e-01
## -1.242397e-17  3.955979e-17 -1.412332e-17  1.000000e+00   5.387532e-18 -1.168024e-16
## 5.551115e-17   0.000000e+00 -8.729910e-18  8.325580e-01   1.674420e-01 -2.108759e-17
## 6.898481e-02   2.959417e-02  1.703398e-02  1.273023e-01   3.641480e-02  7.206699e-01
```

X1 *Example data X1*

Description

The package includes the official results of the state elections in Salzburg of 2009 and 2013. X1 contains the results of the election of 2009, Y1 the results of the election of 2013. Load data(X1) and data(Y1); 'loesung(X1,Y1)' calculates the voter shifts between the parties of the two elections. The example data set X1 contains the results of the following parties: SPOE, OEVP, FPOE, GRUENE, BZOE, OTHERS, NONVOTERS. Each row contains the result of one of the 119 municipalities.

Usage

```
data(X1)
```

Source

http://www.salzburg.gv.at/20003stat/wahlen/ltw/index.htm#dl.5

Y1 *Example Data Y1*

Description

Official results of the state election in Salzburg 2013. The example dataset Y1 contains the results of the following parties: SPOE, OEVP, FPOE, GRUENE, TEAM, OTHERS, NONVOTERS. Each row contains the result of one of the 119 municipalities.

Usage

```
data(Y1)
```

Source

http://www.salzburg.gv.at/20003stat/wahlen/ltw/index.htm#dl.5

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