Package 'Gini'

January 20, 2025

Type Package

Title Gini Coefficient

Version 0.1.0

Description Providing various equations to calculate Gini coefficients.
The methods used in this package can be referenced from Brown MC (1994) <doi:10.1016/0277-9536(94)90189-9>.

License GPL-3

Encoding UTF-8

NeedsCompilation no

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Repository CRAN

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Contents

gini *Gini Coefficient*

Description

To calculate the Gini coefficient according to the following literature: Brown MC. Using Gini-style indices to evaluate the spatial patterns of health practitioners: theoretical considerations and an application based on Alberta data. Soc Sci Med, 1994, 38(9): 1243-1256.

Usage

```
gini(x,y)
```

Arguments

x	vector, population of each region
y	vector, health resource of each region

Value

G	Gini coefficient. Critria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=un-fairness, >0.6=highly unfair

Note

Please feel free to contact us, if you have any advice and find any bug!

Update:

Version 0.1.0: The first version.

See Also

gini.1994 gini.1997 gini.2000 gini.2002 gini.2007 gini.1994b

Examples

```
x=c(382.8,522.7,192.4,227.4,490.2,108.0,222.5,220.5,231.2,375.3,323.9,79.9,305.7,98.7,46.1,35.3)
y=c(2778,3333,1673,1708,2118,1077,1850,1557,2010,2587,2482,616,2010,936,633,582)
gini(x,y)#0.1216807
```

gini.1994 *Gini Coefficient*

Description

To calculate the Gini coefficient according to the following literature: Hansheng Ding, Shanlian Hu. A study on the equity of distribution of health resources in China(in Chinese). Zhongguo Wiesheng Shiye Guanli, 1994, (2): 105-107.

Usage

```
gini.1994(x,y)
```

Arguments

x	vector, population of each region
y	vector, health resource of each region

Value

G	Gini coefficient. Critria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=unfairness, >0.6=highly unfair

Note

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Update:

Version 0.1.0: The first version.

See Also

gini gini.1997 gini.2000 gini.2002 gini.2007 gini.1994b

Examples

```
x=c(382.8,522.7,192.4,227.4,490.2,108.0,222.5,220.5,231.2,375.3,323.9,79.9,305.7,98.7,46.1,35.3)
y=c(2778,3333,1673,1708,2118,1077,1850,1557,2010,2587,2482,616,2010,936,633,582)
gini.1994(x,y)#0.1216807
```

gini.1994b *Gini Coefficient*

Description

To calculate the Gini coefficient according to the following literature: Brown MC. Using Gini-style indices to evaluate the spatial patterns of health practitioners: theoretical considerations and an application based on Alberta data. Soc Sci Med, 1994, 38(9): 1243-1256.

Usage

```
gini.1994b(x,y)
```

Arguments

x	vector, population of each region
y	vector, health resource of each region

Value

G	Gini coefficient. Critria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=unfairness, >0.6=highly unfair

Note

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Update:

Version 0.1.0: The first version.

See Also

gini.1994 gini.1997 gini.2000 gini.2002 gini.2007 gini.1994b

Examples

```
x=c(382.8,522.7,192.4,227.4,490.2,108.0,222.5,220.5,231.2,375.3,323.9,79.9,305.7,98.7,46.1,35.3)
y=c(2778,3333,1673,1708,2118,1077,1850,1557,2010,2587,2482,616,2010,936,633,582)
gini.1994b(x,y)#0.1216807
```

gini.1997 *Gini Coefficient*

Description

To calculate the Gini coefficient according to the following literature: Weiguo Shi. A simple method of calculating the Gini coefficient(in Chinese). Jiangsu Tongji, 1997, (2): 16-18.

Usage

```
gini.1997(x,y)
```

Arguments

x	vector, population of each region
y	vector, health resource of each region

Value

G	Gini coefficient. Critria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=unfairness, >0.6=highly unfair

Note

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Update:

Version 0.1.0: The first version.

See Also

gini.1994 gini gini.2000 gini.2002 gini.2007 gini.1994b

Examples

```
x=c(382.8,522.7,192.4,227.4,490.2,108.0,222.5,220.5,231.2,375.3,323.9,79.9,305.7,98.7,46.1,35.3)
y=c(2778,3333,1673,1708,2118,1077,1850,1557,2010,2587,2482,616,2010,936,633,582)
gini.1997(x,y)#0.1216807
```

gini.2000 *Gini Coefficient*

Description

To calculate the Gini coefficient according to the following literature: Jianlin Dai. How the Gini coefficient is calculated. Zhejiang Tongji, 2000, (3): 37.

Usage

```
gini.2000(x,y)
```

Arguments

x	vector, population of each region
y	vector, health resource of each region

Value

G	Gini coefficient. Critria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=unfairness, >0.6=highly unfair

Note

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Update:

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See Also

gini.1994 gini.1997 gini gini.2002 gini.2007 gini.1994b

Examples

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x=c(382.8,522.7,192.4,227.4,490.2,108.0,222.5,220.5,231.2,375.3,323.9,79.9,305.7,98.7,46.1,35.3)
y=c(2778,3333,1673,1708,2118,1077,1850,1557,2010,2587,2482,616,2010,936,633,582)
gini.2000(x,y)#0.1216807
```

gini.2002 *Gini Coefficient*

Description

To calculate the Gini coefficient according to the following literature: Rihong Zang. Economics. Beijing: China Agricultural University Press, 2002, 201-202.

Usage

```
gini.2002(x,y)
```

Arguments

x	vector, population of each region
y	vector, health resource of each region

Value

G	Gini coefficient. Critria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=unfairness, >0.6=highly unfair

Note

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Examples

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x=c(382.8,522.7,192.4,227.4,490.2,108.0,222.5,220.5,231.2,375.3,323.9,79.9,305.7,98.7,46.1,35.3)
y=c(2778,3333,1673,1708,2118,1077,1850,1557,2010,2587,2482,616,2010,936,633,582)
gini.2002(x,y)#0.1216807
```

gini.2007 *Gini Coefficient*

Description

To calculate the Gini coefficient according to the following literature: Jianhua Zhang. An easy-to-use method for calculating the Gini coefficient. Journal of Shanxi Agricultural University (Social Science Edition)(in Chinese), 2007, 6(3): 275-278,283.

Usage

```
gini.2007(x,y,group)
```

Arguments

x	vector, population of each region
y	vector, health resource of each region
group	integer, the number of groups, usually 5 to 10

Value

G	Gini coefficient. Critria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=unfairness, >0.6=highly unfair

Note

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gini.1994 gini.1997 gini.2000 gini.2002 gini gini.1994b

Examples

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x=c(382.8,522.7,192.4,227.4,490.2,108.0,222.5,220.5,231.2,375.3,323.9,79.9,305.7,98.7,46.1,35.3)
y=c(2778,3333,1673,1708,2118,1077,1850,1557,2010,2587,2482,616,2010,936,633,582)
gini.2007(x,y)#0.1216807
```

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