

Package ‘Gini’

October 12, 2022

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](https://doi.org/10.1016/0277-9536(94)90189-9)>.

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NeedsCompilation no

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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. Criteria: <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**

<code>x</code>	vector, population of each region
<code>y</code>	vector, health resource of each region

Value

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

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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. Criteria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=un-fairness, >0.6=highly unfair
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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	<i>Gini Coefficient</i>
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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=un-fairness, >0.6=highly unfair
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Note

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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**

<code>x</code>	vector, population of each region
<code>y</code>	vector, health resource of each region

Value

<code>G</code>	Gini coefficient. Criteria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=un-fairness, >0.6=highly unfair
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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.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**

<code>x</code>	vector, population of each region
<code>y</code>	vector, health resource of each region

Value

<code>G</code>	Gini coefficient. Criteria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=un-fairness, >0.6=highly unfair
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[gini.1994](#) [gini.1997](#) [gini.2000](#) [gini](#) [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.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. Criteria: <0.3=best fairness, 0.3-0.4=relative fairness, >0.4=un-fairness, >0.6=highly unfair
---	---

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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.2007(x,y)#0.1216807
```


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