

Package ‘twopiece’

November 27, 2025

Type Package

Title The family of twopiece distributions

Version 0.1.0

Author F. Javier Rubio

Maintainer The package maintainer <fxrubio@gmail.com>

Description Density, distribution function, quantile function and random generation for the 3-parameter twopiece distribution with 3 parameterizations: two-piece (tp), epsilon-skew (eps), and inverse scale factors (isf).

License GPL-3

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

Contents

dtp3	1
dtp4	2
ptp3	3
ptp4	3
qtp3	4
qtp4	4
rtp3	5
rtp4	6

Index

7

dtp3	<i>Probability Density Function for 3-parameter twopiece distributions</i>
------	--

Description

Probability Density Function for 3-parameter twopiece distributions

Usage

```
dtp3(x, mu, par1, par2, FUN, param = "tp", log = FALSE)
```

Arguments

log	log.p: logical; if TRUE, probabilities p are given as log(p).
x:	vector of quantiles.
p:	vector of probabilities.
n:	number of observations. If length(n) > 1, the length is taken to be the number required.
mu:	location parameter.
par1:	scale parameter 1.
par2:	scale parameter 2.
FUN:	a symmetric density f.
param:	parameterizations used.

Description

Probability Density Function for 4-parameter twopiece distributions

Usage

```
dtp4(x, mu, par1, par2, delta, FUN, param = "tp", log = FALSE)
```

Arguments

log	log.p: logical; if TRUE, probabilities p are given as log(p).
x:	vector of quantiles.
p:	vector of probabilities.
n:	number of observations. If length(n) > 1, the length is taken to be the number required.
mu:	location parameter.
par1:	scale parameter 1.
par2:	scale parameter 2.
delta:	shape parameter.
FUN:	a symmetric density f.
param:	parameterizations used.

ptp3

*Cumulative Probability Function for 3-parameter twopiece distributions***Description**

Cumulative Probability Function for 3-parameter twopiece distributions

Usage

```
ptp3(x, mu, par1, par2, FUN, param = "tp", log.p = FALSE)
```

Arguments

- x: vector of quantiles.
- p: vector of probabilities.
- n: number of observations. If length(n) > 1, the length is taken to be the number required.
- mu: location parameter.
- par1: scale parameter 1.
- par2: scale parameter 2.
- FUN: a symmetric density f.
- param: parameterizations used.
- log: log.p: logical; if TRUE, probabilities p are given as log(p).

ptp4

*Cumulative Probability Function for 4-parameter twopiece distributions***Description**

Cumulative Probability Function for 4-parameter twopiece distributions

Usage

```
ptp4(x, mu, par1, par2, delta, FUN, param = "tp", log.p = FALSE)
```

Arguments

- x: vector of quantiles.
- p: vector of probabilities.
- n: number of observations. If length(n) > 1, the length is taken to be the number required.
- mu: location parameter.
- par1: scale parameter 1.
- par2: scale parameter 2.

delta: shape parameter.
FUN: a symmetric density f.
param: parameterizations used.
log log.p: logical; if TRUE, probabilities p are given as log(p).

qtp3*Quantile Function for 3-parameter twopiece distributions*

Description

Quantile Function for 3-parameter twopiece distributions

Usage

```
qtp3(p, mu, par1, par2, FUN, param = "tp")
```

Arguments

x: vector of quantiles.
p: vector of probabilities.
n: number of observations. If length(n) > 1, the length is taken to be the number required.
mu: location parameter.
par1: scale parameter 1.
par2: scale parameter 2.
FUN: a symmetric density f.
param: parameterizations used.
log log.p: logical; if TRUE, probabilities p are given as log(p).

qtp4*Quantile Function for 4-parameter twopiece distributions*

Description

Quantile Function for 4-parameter twopiece distributions

Usage

```
qtp4(p, mu, par1, par2, delta, FUN, param = "tp")
```

Arguments

- x: vector of quantiles.
p: vector of probabilities.
n: number of observations. If length(n) > 1, the length is taken to be the number required.
mu: location parameter.
par1: scale parameter 1.
par2: scale parameter 2.
delta: shape parameter.
FUN: a symmetric density f.
param: parameterizations used.
log log.p: logical; if TRUE, probabilities p are given as log(p).
-

rtp3*Random Number Generation Function for 3-parameter twopiece distributions***Description**

Random Number Generation Function for 3-parameter twopiece distributions

Usage

```
rtp3(n, mu, par1, par2, FUN, param = "tp")
```

Arguments

- x: vector of quantiles.
p: vector of probabilities.
n: number of observations. If length(n) > 1, the length is taken to be the number required.
mu: location parameter.
par1: scale parameter 1.
par2: scale parameter 2.
FUN: a symmetric density f.
param: parameterizations used.
log log.p: logical; if TRUE, probabilities p are given as log(p).

rtp4

Random Number Generation Function for 4-parameter twopiece distributions

Description

Random Number Generation Function for 4-parameter twopiece distributions

Usage

```
rtp4(n, mu, par1, par2, delta, FUN, param = "tp")
```

Arguments

x:	vector of quantiles.
p:	vector of probabilities.
n:	number of observations. If length(n) > 1, the length is taken to be the number required.
mu:	location parameter.
par1:	scale parameter 1.
par2:	scale parameter 2.
delta:	shape parameter.
FUN:	a symmetric density f.
param:	parameterizations used.
log	log.p: logical; if TRUE, probabilities p are given as log(p).

Index

dtp3, 1
dtp4, 2

ptp3, 3
ptp4, 3

qtp3, 4
qtp4, 4

rtp3, 5
rtp4, 6