

# Package ‘RDSsamplesize’

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**Type** Package

**Title** RDS Sample Size Estimation and Power Calculation

**Version** 0.3.0

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**Description** Provides functionality for carrying out sample size estimation and power calculation in Respondent-Driven Sampling.

**License** GPL-3

**Depends** R (>= 3.6.2)

**Imports** Rcpp

**LinkingTo** Rcpp

**Encoding** UTF-8

**RoxygenNote** 7.2.3

**NeedsCompilation** yes

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**Suggests** knitr, rmarkdown, dplyr, ggplot2, latex2exp

**VignetteBuilder** knitr

**Repository** CRAN

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calSize                      *Calculate the accumulated sample size distribution by each wave.*

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**Description**

Calculate the accumulated sample size distribution by each wave.

**Usage**

```
calSize(n0, m, maxT, p_list_vec, tol)
```

**Arguments**

n0	Number of seeds.
m	Number of coupons issued to each participant.
maxT	Planned field period.
p_list_vec	A vector of recruitment rates by each wave.
tol	Accuracy loss limit.

**Value**

a list consisting of the following elements:

Pr\_Extinction\_list

vector; a vector of extinction probability, i.e., probability of recruiting none at each wave.

Pr\_Size\_by\_Wave\_t

list; probability mass function of the accumulated sample size (excluding seeds) by each wave, t=1,...,maxT.

**Examples**

```
result <- calSize(n0=10,m=3,maxT=9,p_list_vec=rep(0.3,9),tol=0.005)
```

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