Package 'whSample'

October 12, 2022

Type Package

Title Utilities for Sampling

Version 0.9.6.2

Depends R (>= 3.5.0)

Description Interactive tools for generating random samples. Users select an
.xlsx, .csv, or delimited .txt file with population data and are walked through selecting the
sample type (Simple Random Sample or Stratified), the number of backups
desired, and a ``stratify_on'' value (if desired). The sample size is determined
using a normal approximation to the hypergeometric distribution based on
Nicholson (1956) <doi:10.1214/aoms/1177728270>. An .xlsx file is created
with the sample and key metadata for reference. It is menu-driven and lets
users pick an output directory. See vignettes for a detailed walk-through.

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Encoding UTF-8

Imports data.table, magrittr, openxlsx, dplyr, purrr, tools, utils,
bit64

RoxygenNote 7.1.1

Suggests knitr, rmarkdown, testthat

VignetteBuilder knitr

NeedsCompilation no

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Repository CRAN

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R topics documented:

`sampler`	*Generate Sample Lists from Excel or CSV Files*

Description

`sampler` generates Simple Random or Stratified samples

Arguments

`ci`	the required confidence level
`me`	the margin of error
`p`	the expected probability of occurrence
`backups`	the number of available replacements
`seed`	the random number seed

Value

Writes samples to an Excel workbook and generates a report summary.

Details

`sampler` lets users select an Excel or delimited text (.csv or .txt) data file and the type of sample they prefer (Simple Random Sample, Stratified Random Sample, or Tabbed Stratified Sample with each stratum in a different Excel worksheet).

Examples

```
if(interactive()){
sampler(backups=3, p=0.6)
}
```

`ssize`	*Determine minimum sample size*

Description

`ssize` takes a population size and returns a sample size

Usage

```
ssize(N, ci = 0.95, me = 0.07, p = 0.5)
```

Arguments

N	The population size
ci	The desired confidence interval (default is 0.95)
me	The margin of error (default: +/- 0.07)
p	The expected rate of occurrence (default: 0.50)

Value

Returns the estimated minimum sample size, rounded up to the nearest integer.

Details

`ssize` uses a normal approximation of the hypergeomtric distribution approach.

Examples

```
ssize(1000)
ssize(1000, ci=0.90, p=0.60)
```

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