# Package 'StakeholderAnalysis'

January 20, 2025				
Version 1.2				
<b>Date</b> 2017-10-24				
Title Measuring Stakeholder Influence				
Author Anna Zamojska [aut], Piotr Zientara [aut], Sebastian Susmarski [aut], Lech Kujawski [aut, cre]				
Maintainer Lech Kujawski < lech.kujawski@ug.edu.pl>				
<b>Depends</b> R (>= $3.2.3$ )				
<b>Description</b> Proposes an original instrument for measuring stakeholder influence on the development of an infrastructure project that is carried through by a municipality, drawing on stakeholder classifications (Mitchell, Agle, & Wood, 1997) and input-output modelling (Hester & Adams, 2013). Mitchell R., Agle B.R., & Wood D.J. <doi:10.2307 259247=""> Hester, P.T., &amp; Adams, K.M. (2013) <doi:10.1016 j.procs.2013.09.282="">.</doi:10.1016></doi:10.2307>				
License GPL (>= 2)				
<pre>URL https://www.r-project.org</pre>				
NeedsCompilation no				
Repository CRAN				
<b>Date/Publication</b> 2017-11-13 21:18:07 UTC				
24.0/2 40.404.004 2027 11 10 21120107 0 10				
Contents				
StakeholderAnalysis-package       2         AttribIdent       3         AttribPict       4         BenefCost       6         CollabPotential       3         DataExp       3         Histograms       10         ImpactAnalysis       1         PrelCalc       1         RelationPict       1				

	espVerif	
Index		18
Stak	lderAnalysis-package  Measuring Stakeholder Influence	

# **Description**

This project was financed by The National Center of Reaserch and Development (grant number IS-2/88/NCBR/2015). This software is an original instrument for measuring stakeholder influence on the development of a publicly-funded infrastructure project and for estimating its cost and benefits, as preceived by different stakeholder groups. Its originality lies in application of Leontief's input-output analysis to estimating both stakeholder influence on a infrastructure project and its cost and benefits, as perceived by different stakeholder groups. Admittedly, in the literature there are studies that draw on Leontief's model to estimate stakeholder influence or, separately, to measure a project's perceived costs and benefits. That said, none of this research work - unlike our package - combines the two focuses. It follows that our software, uniquely, links together Leontief's input-output analysis, stakeholder influence measurement and estimation of a project's costs and benefits. Therefore, it constitutes a useful instrument that might be of particular interest to managers and municipality official responsible for implementation of a large-scale infrastructure projects. Proposes an original instrument for measuring stakeholder influence on the development of an infrastructure project that is carried through by a municipality, drawing on stakeholder classifications (Mitchell, Agle, & Wood, 1997) and input-output modelling (Hester & Adams, 2013). Mitchell R., Agle B.R., & Wood D.J. <doi:10.2307/259247> Hester, P.T., & Adams, K.M. (2013) <doi:10.1016/j.procs.2013.09.282>. Proposes an original instrument for measuring stakeholder influence on the development of an infrastructure project that is carried through by a municipality, drawing on stakeholder classifications (Mitchell, Agle, & Wood, 1997) and input-output modelling (Hester & Adams, 2013). Mitchell R., Agle B.R., & Wood D.J. <doi:10.2307/259247> Hester, P.T., & Adams, K.M. (2013) <doi:10.1016/j.procs.2013.09.282>.

#### **Details**

#### The DESCRIPTION file:

Package: StakeholderAnalysis

Version: 1.2

Date: 2017-10-24

Title: Measuring Stakeholder Influence

Authors@R: c(person("Anna", "Zamojska", role="aut", email="anna.zamojska@ug.edu.pl"), person("Piotr", "Zientara", rol

Author: Anna Zamojska [aut], Piotr Zientara [aut], Sebastian Susmarski [aut], Lech Kujawski [aut, cre]

Maintainer: Lech Kujawski <lech.kujawski@ug.edu.pl>

Depends: R (>= 3.2.3)

Description: Proposes an original instrument for measuring stakeholder influence on the development of an infrastructure proposed in the development of the developme

License: GPL (>= 2)

URL: https://www.r-project.org

AttribIdent 3

#### Index of help topics:

AttribIdent AttribIdent
AttribPict AttribPict
BenefCost BenefCost

CollabPotential CollabPotential

DataExp
Histograms
Histograms
ImpactAnalysis
PrelCalc
RelationPict
RespVerif
PataExp
Histograms
ImpactAnalysis
PrelCalc
PrelCalc
RelationPict
RespVefif

StakeholdClassif StakeholdClassif

StakeholderAnalysis-package

Measuring Stakeholder Influence

#### Author(s)

Lech Kujawski Anna Zamojska [aut], Piotr Zientara [aut], Sebastian Susmarski [aut], Lech Kujawski [aut, cre]

Maintainer: Lech Kujawski < lech.kujawski@ug.edu.pl>

#### References

Hester, P.T., & Adams, K.M. (2013) <doi:10.1016/j.procs.2013.09.282> Hester, P.T., Bradley, J.M., MacGregor K.A. (2012) <doi:10.1504/IJSSE.2012.052687>

AttribIdent AttribIdent

# Description

Identifies stakeholder attributes as well as benefits and costs

# Usage

AttribIdent(TestedResponses, NoAttrib, NoStakeholders, NameStakeholders)

#### **Arguments**

TestedResponses

the result of the RespVerif function

NoAttrib col numbers in the raw data set related to particular constructs. The \$NoAttrib

from the PreCalc function should be used

4 AttribPict

NoStakeholders the number of stakeholder groups. The \$NoStakeholders from the PreCalc function should be used

NameStakeholders

the names of stakeholder groups. The \$NameStakeholders from the PreCalc function should be used

# **Details**

Based on previously performed tests of means and fractions (see the RespVerif function), the function determines whether a particular attribute is statistically significant or not (.<05)

#### Value

Mean (the number of stakeholder groups) x 6 matrix. In each row, the "+" sign in-

dicates that an attribute is statistically significant, while the "-" sign indicates that an attribute is not statistically significant (based on the mean test). The "0" sign shows that the response is neutral, meaning that respondents do not know

whether they possess a particular attribute or not

Fra (the number of stakeholder groups) x 6 matrix. In each row, the "+" sign indi-

cates that an attribute is statistically significant, while the "-" sign indicates that an attribute is not statistically significant (based on the fraction test). The "0" sign shows that the response is neutral, meaning that respondents do not know

whether they possess a particular attribute or not

#### Author(s)

Sebastian Susmarski, Lech Kujawski, Anna Zamojska, Piotr Zientara

# **Examples**

```
# first import DataExp
data(DataExp)
# then execute PrelCalc(), RespVerif()
PrelCalcExp=PrelCalc(data=DataExp, NoAtt=c(2,11,13,15),NoPow=c(3,8,14,16),
NoUrg=c(4,6,10,12),NoLeg=c(5,7,9,17),NoBen=18:22,NoCos=23:27)
RespVerifExp=RespVerif(CountResponses=PrelCalcExp$CountResponses,
NoStakeholders=PrelCalcExp$NoStakeholders)
# AttribIdent()
AttribIdentExp=AttribIdent(TestedResponses=RespVerifExp, NoAttrib=PrelCalcExp$NoAttrib,
NoStakeholders=PrelCalcExp$NoStakeholders, NameStakeholders=PrelCalcExp$NameStakeholders)
AttribIdentExp
```

AttribPict

# Description

Draws a picture of stakeholder attributes in the form of three overlapping circles

AttribPict

AttribPict 5

#### Usage

```
AttribPict(path, tofile, AttribIdent, CollabPotential)
```

#### **Arguments**

path a path of a particular catalogue in which pictures are saved, set path="" when

tofile=0

tofile logical. 1=save-to-file. 0=show-on-screen

AttribIdent stakeholder attributes. The \$Mean or the \$Fra from the AttribIdent function

should be used

CollabPotential

potential for collaboration. The \$Mean or the \$Fra from the CollabPotential

function should be used

#### **Details**

The function draws a picture of stakeholder attributes in the form of three overlapping circles in different colours

#### Value

drow A drow of stakeholder attributes

# Author(s)

Sebastian Susmarski, Lech Kujawski, Anna Zamojska, Piotr Zientara

```
# first import DataExp
data(DataExp)
# then execute PrelCalc(), RespVerif(), AttibIdent(), CollabPotential()
PrelCalcExp=PrelCalc(data=DataExp, NoAtt=c(2,11,13,15),NoPow=c(3,8,14,16),
NoUrg=c(4,6,10,12),NoLeg=c(5,7,9,17),NoBen=18:22,NoCos=23:27)
RespVerifExp=RespVerif(CountResponses=PrelCalcExp$CountResponses,
NoStakeholders=PrelCalcExp$NoStakeholders)
AttribIdentExp=AttribIdent(TestedResponses=RespVerifExp, NoAttrib=PrelCalcExp$NoAttrib,
NoStakeholders=PrelCalcExp$NoStakeholders, NameStakeholders=PrelCalcExp$NameStakeholders)
CollabPotentialExp=CollabPotential(AttribIdent=AttribIdentExp)
# AttribPict()
AttribPict(path="",tofile=0,AttribIdent=AttribIdentExp$Mean,CollabPotential=CollabPotentialExp$Mean)
```

6 BenefCost

BenefCost BenefCost

#### **Description**

Calculates the benefit indicator (normalized on the 0-1 scale) and the cost indicator (normalized on the 0-1 scale), and performs a Student's t-test (with H0 stating that the mean of benefits and the mean of costs are equal)

#### Usage

BenefCost(CountResponses)

# **Arguments**

CountResponses the number of stakeholder groups x 30 matrix comprising counted responses to particular items. The \$CountResponses from the PreCalc function should be used

#### **Details**

Based on responses to relevant items, the function calculates the benefit indicator (normalized on the 0-1 scale) and the cost indicator (normalized on the 0-1 scale). Subsequently, it performs a Student's t-test (with H0 stating that the mean of benefits and the mean of costs are equal) with a view to ascertaining whether benefits are greater than costs (which is indicated by the "+" sign) or vice versa (which is indicated by the "-" sign)

#### Value

BenefCostInd the benefit indicator and the cost indicator

BenefCostTest the results of Student's t-tests

#### Author(s)

Sebastian Susmarski, Lech Kujawski, Anna Zamojska, Piotr Zientara

```
# first import DataExp
data(DataExp)
# then execute PrelCalc()
PrelCalcExp=PrelCalc(data=DataExp, NoAtt=c(2,11,13,15),NoPow=c(3,8,14,16),
NoUrg=c(4,6,10,12),NoLeg=c(5,7,9,17),NoBen=18:22,NoCos=23:27)
# BenefCost()
BenefCostExp=BenefCost(CountResponses=PrelCalcExp$CountResponses)
BenefCostExp
```

CollabPotential 7

CollabPotential	CollabPotential		
-----------------	-----------------	--	--

# **Description**

Determines the potential of particular stakeholder groups for collaboration

#### Usage

```
CollabPotential(AttribIdent)
```

# Arguments

AttribIdent Identifies stakeholder attributes. The \$Mean or \$Fra from the AttribIdent func-

tion should be used

#### **Details**

Based on responses to items measuring Power, Legitimacy and Urgency, the function determines the potential of particular stakeholder groups for collaboration ("high" and "low")

#### Value

Mean the potential for collaboration determined on the basis of the mean value

Fra the potential for collaboration determined on the basis of the fractions of re-

sponses

#### Author(s)

Sebastian Susmarski, Lech Kujawski, Anna Zamojska, Piotr Zientara

```
# first import DataExp
data(DataExp)
# then execute PrelCalc(), RespVerif(), AttibIdent()
PrelCalcExp=PrelCalc(data=DataExp, NoAtt=c(2,11,13,15),NoPow=c(3,8,14,16),
NoUrg=c(4,6,10,12),NoLeg=c(5,7,9,17),NoBen=18:22,NoCos=23:27)
RespVerifExp=RespVerif(CountResponses=PrelCalcExp$CountResponses,
NoStakeholders=PrelCalcExp$NoStakeholders)
AttribIdentExp=AttribIdent(TestedResponses=RespVerifExp, NoAttrib=PrelCalcExp$NoAttrib,
NoStakeholders=PrelCalcExp$NoStakeholders, NameStakeholders=PrelCalcExp$NameStakeholders)
# CollabPotential
CollabPotentialExp=CollabPotential(AttribIdent=AttribIdentExp)
CollabPotentialExp
```

8 DataExp

DataExp DataExp

#### Description

Example of data collected via servey reserch

# Usage

data(DataExp)

#### **Format**

A data frame with 112 observations on the following 39 variables.

- ID a factor with levels Consulting Agencies Firms Local Residents Project Implementers Research Units Local Authorities
- pyt1 a numeric vector on a five-point Likert scale. I have a positive view on the implementation of the project (Attitude).
- pyt2 a numeric vector on a five-point Likert scale. I have effective power over the implementation of the project (Power).
- pyt3 a numeric vector on a five-point Likert scale. I think that the implementation of the project is urgent (Urgency).
- pyt4 a numeric vector on a five-point Likert scale. I am entitled to be consulted about the implementation of the project (Legitimacy).
- pyt5 a numeric vector on a five-point Likert scale. The project should be implemented as soon as possible (Urgency).
- pyt6 a numeric vector on a five-point Likert scale. It is justified to consult me about the implementation of the project (Legitimacy).
- pyt7 a numeric vector on a five-point Likert scale. Changes to the implementation of the project depends on me (Power).
- pyt8 a numeric vector on a five-point Likert scale. Given my role in the project, I should be consulted abouts its implementation (Legitimacy).
- pyt9 a numeric vector on a five-point Likert scale. In my opinion, the implementation of the project is a matter of urgency (Urgency).
- pyt10 a numeric vector on a five-point Likert scale. My attitude to the implementation of the project is unambiguously positive (Attitude).
- pyt11 a numeric vector on a five-point Likert scale. The implementation of the project is very important to me (Urgency).
- pyt12 a numeric vector on a five-point Likert scale. Implementers of the project can count on me for support (Attitude).
- pyt13 a numeric vector on a five-point Likert scale. My power over the implantation of the project is considerable (Power).

DataExp 9

pyt14 a numeric vector on a five-point Likert scale. I support the implantation of the project (Attitude).

- pyt15 a numeric vector on a five-point Likert scale. I am in a position to influence the implantation of the project (Power).
- pyt16 a numeric vector on a five-point Likert scale. My role in the project justifies consulting me about its implementation (Legitimacy).
- prof1 a numeric vector on a five-point Likert scale. The implementation of the project will generate new jobs.
- prof 2 a numeric vector on a five-point Likert scale. The implementation of the project will enhance the technological potential of the region.
- prof3 a numeric vector on a five-point Likert scale. Thanks to the implementation of the project, more results of scientific research will be put into practice.
- prof4 a numeric vector on a five-point Likert scale. The implementation of the project will translate into a greater number of patents and inventions.
- prof5 a numeric vector on a five-point Likert scale. Thanks to the implementation of the project, local infrastructure will be modernized.
- cost1 a numeric vector on a five-point Likert scale. The implementation of the project will increase road traffic in the area.
- cost2 a numeric vector on a five-point Likert scale. The implementation of the project will negatively affect the environment.
- cost3 a numeric vector on a five-point Likert scale. The implementation of the project will increase air pollution.
- cost4 a numeric vector on a five-point Likert scale. The implementation of the project will increase noise.
- cost5 a numeric vector on a five-point Likert scale. The implementation of the project will make it harder to park a car.
- my1 a numeric vector on a five-point Likert scale. I have influence over Consulting Agencies.
- my2 a numeric vector on a five-point Likert scale. I have influence over Firms.
- my3 a numeric vector on a five-point Likert scale. I have influence over Local Residents.
- my4 a numeric vector on a five-point Likert scale. I have influence over Project Implementers.
- my5 a numeric vector on a five-point Likert scale. I have influence over Research Units.
- my6 a numeric vector on a five-point Likert scale. I have influence over Local Authorities.
- me1 a numeric vector on a five-point Likert scale. Consulting Agencies have influence over me.
- me2 a numeric vector on a five-point Likert scale. Firms have influence over me.
- me3 a numeric vector on a five-point Likert scale. Local Residents have influence over me.
- me4 a numeric vector on a five-point Likert scale. Project Implementers have influence over me.
- me5 a numeric vector on a five-point Likert scale. Research Units have influence over me.
- me6 a numeric vector on a five-point Likert scale. Local Authorities have influence over me.

#### **Examples**

data(DataExp)

Histograms

Histograms

Description

Draws histograms of responses

#### Usage

```
Histograms(path, tofile, CountResponses)
```

# Arguments

path a path of a particular catalogue in which pictures are saved, set path="" when

tofile=0

tofile logical. 1=save-to-file. 0=show-on-screen

Histograms

CountResponses the result of the PrelCalc function

# **Details**

The function draws histograms of responses

# Value

Histograms of responses

# Author(s)

Sebastian Susmarski, Lech Kujawski, Anna Zamojska, Piort Zientar

```
# first import DataExp
data(DataExp)
# then execute PrelCalc()
PrelCalcExp=PrelCalc(data=DataExp, NoAtt=c(2,11,13,15),NoPow=c(3,8,14,16),
NoUrg=c(4,6,10,12),NoLeg=c(5,7,9,17),NoBen=18:22,NoCos=23:27)
# Histograms()
Histograms(path="",tofile=0,CountResponses=PrelCalcExp$CountResponses)
```

ImpactAnalysis 11

#### **Description**

Calculates, based on the Leontief model, qS or the reduction in stakeholder ineffectiveness

# Usage

ImpactAnalysis(data, BenefCost, NoStakeholders, NameStakeholders)

# **Arguments**

data gathered from a questionnaire employing a five-point Likert scale. The csv

file is preferable due to the volume of data

BenefCost the benefit indicator and the cost indicator. The \$BenefCostInd from the Benef-

Cost function should be used

NoStakeholders the number of stakeholder groups (from the PrelCalc function)

NameStakeholders

the names of stakeholder groups (from the PrelCalc function)

#### **Details**

The function calculates, based on the Leontief model, qS or the reduction in stakeholder ineffectiveness and then determines the stakeholder influence (SI) indicator, as described by Hester and Adams (2013). In addition, it calculates the indicator of benefits and the indicator of costs, factoring in the Leontief coefficient matrix

#### Value

Leontief the first two columns show the indicator of benefits and the indicator of costs.

The middle column indicates qS. The two final columns show the indicator of benefits and the indicator of costs, factoring in the Leontief coefficient matrix

MyImpact, OnMeImpact, MeanImpact

matrices of impact-based stakeholder relationships

#### Author(s)

Sebastian Susmarski, Lech Kujawski, Anna Zamojska, Piotr Zientara

#### References

Hester and Adams (2013)

PrelCalc PrelCalc

#### **Examples**

```
# first import DataExp
data(DataExp)
# then execute PrelCalc(), BenefCost()
PrelCalcExp=PrelCalc(data=DataExp, NoAtt=c(2,11,13,15),NoPow=c(3,8,14,16),
NoUrg=c(4,6,10,12),NoLeg=c(5,7,9,17),NoBen=18:22,NoCos=23:27)
BenefCostExp=BenefCost(CountResponses=PrelCalcExp$CountResponses)
# ImpactAnalysis()
ImpactAnalysisExp=ImpactAnalysis(data=DataExp, BenefCost=BenefCostExp$BenefCostInd,
NoStakeholders=PrelCalcExp$NoStakeholders, NameStakeholders=PrelCalcExp$NameStakeholders)
ImpactAnalysisExp
```

PrelCalc PrelCalc

# **Description**

Performs preliminary calculations on raw data. Counts responses to items measuring stakeholder attributes as well as benefits and costs from a questionnaire employing a five-point Likert scale

# Usage

```
PrelCalc(data, NoAtt, NoPow, NoUrg, NoLeg, NoBen, NoCos)
```

# Arguments

data	data gathered from a questionnaire employing a five-point Likert scale. The csv file is preferable due to the volume of data
NoAtt	indicates col numbers related to the Attitude construct
NoPow	indicates col numbers related to the Power construct
NoUrg	indicates col numbers related to the Urgency construct
NoLeg	indicates col numbers related to the Legitimacy construct
NoBen	indicates col numbers related to the Benefits construct
NoCos	indicates col numbers related to the Costs construct

# **Details**

Data are collected by means of a questionnaire survey with a five-point Likert scale. PrelCalc performs preliminary calculations on raw data, counting responses to items measuring all the constructs (Attitude, Power, Urgency, Legitimacy, Benefits, Costs). These denote stakeholder attributes and benefits/costs. In addition, it identifies particular stakeholder groups (based on their names)

RelationPict 13

#### Value

CountResponses 30 x number of stakeholder groups matrix of counted responses related to all the

constructs

NoStakeholders the number of stakeholder groups

NameStakeholders

the names of stakeholder groups

NoAttrib \$Att, \$Pow, \$Urg, \$Leg, \$Ben, \$Cos

NoAttrib\$Pow col numbers in the raw data set related to the Attitude construct

NoAttrib\$Urg col numbers in the raw data set related to the Power construct

NoAttrib\$Leg col numbers in the raw data set related to the Urgency construct

NoAttrib\$Ben col numbers in the raw data set related to the Legitimacy construct

NoAttrib\$Cos col numbers in the raw data set related to the Benefits construct

NoAttrib\$Cos col numbers in the raw data set related to the Costs construct

#### Author(s)

Lech Kujawski, Sebastian Susmarski, Anna Zamojska, Piotr Zientara

# **Examples**

```
# first import DataExp
data(DataExp)
# PrelCalc()
PrelCalcExp=PrelCalc(data=DataExp, NoAtt=c(2,11,13,15),NoPow=c(3,8,14,16),
NoUrg=c(4,6,10,12),NoLeg=c(5,7,9,17),NoBen=18:22,NoCos=23:27)
PrelCalcExp
```

RelationPict

RelationPict

#### Description

Draws a picture of stakeholder relationships

# Usage

```
RelationPict(path, tofile, MeanImpact, StakeholdClassif)
```

#### **Arguments**

path a path of a particular catalogue in which pictures are saved, set path="" when

tofile=0

tofile logical. 1=save-to-file. 0=show-on-screen

MeanImpact the Leontief coefficient matrix. The \$MeanImpact from the ImpactAnalysis

function should be used

StakeholdClassif

the result of the StakeholdClassif function

14 RespVerif

#### **Details**

The function draws a picture of stakeholder relationships with arrows and circles in different colours

#### Value

A picture of stakeholder relationships

#### Author(s)

Sebastian Susmarski, Lech Kujawski, Anna Zamojska, Piotr Zientar

# **Examples**

```
# first import DataExp
data(DataExp)
# then execute PrelCalc(), RespVerif(), AttribIdent(), CollabPotential()
# BenefCost(), StakeholdClassif(), ImpactAnalysis()
PrelCalcExp=PrelCalc(data=DataExp, NoAtt=c(2,11,13,15),NoPow=c(3,8,14,16),
NoUrg=c(4,6,10,12), NoLeg=c(5,7,9,17), NoBen=18:22, NoCos=23:27)
RespVerifExp=RespVerif(CountResponses=PrelCalcExp$CountResponses,
NoStakeholders=PrelCalcExp$NoStakeholders)
AttribIdentExp=AttribIdent(TestedResponses=RespVerifExp,
NoAttrib=PrelCalcExp$NoAttrib, NoStakeholders=PrelCalcExp$NoStakeholders,
NameStakeholders=PrelCalcExp$NameStakeholders)
CollabPotentialExp=CollabPotential(AttribIdent=AttribIdentExp)
BenefCostExp=BenefCost(CountResponses=PrelCalcExp$CountResponses)
StakeholdClassifByMean=StakeholdClassif(BenefCostTest=BenefCostExp$BenefCostTest,
CollabPotential=CollabPotentialExp$Mean,AttribIdent=AttribIdentExp$Mean)
ImpactAnalysisExp=ImpactAnalysis(data=DataExp, BenefCost=BenefCostExp$BenefCostInd,
NoStakeholders=PrelCalcExp$NoStakeholders,
NameStakeholders=PrelCalcExp$NameStakeholders)
# RelationPict()
RelationPict(path="",tofile=0,MeanImpact=ImpactAnalysisExp$MeanImpact,
StakeholdClassif=StakeholdClassifByMean)
```

RespVerif

RespVefif

#### **Description**

Performs tests of statistical significance of the means and fractions of responses

#### Usage

RespVerif(CountResponses, NoStakeholders)

RespVerif 15

# **Arguments**

CountResponses the \$CountResponses result of the PreCalc function (i.e., 30 x number of stake-

holder groups matrix of counted responses related to all the constructs)

NoStakeholders the number of stakeholder groups (i.e., the \$NoStakeholders result of the Pre-

Calc function)

#### **Details**

The function performs two tests of statistical significance: (1) the means and (2) the fractions of responses. As regards (1), H0 states that the mean of responses to a particular item is equal to "3" (i.e., a neutral response on a five-point Likert scale); H1 states that the mean is not equal to "3" (i.e., a two-sides alternative hypothesis). As regards (2), H0 states that the fraction of the "1" and "2" responses is equal to the fraction of the "4" and "5" responses; H1 states that the fraction of the "1" and "2" responses is not equal to the fraction of the "4" and "5" responses (i.e., a two-sides alternative hypothesis)

#### Value

Mean (3 x the number of stakeholder groups) x 6 matrix. The first row indicates the

mean response. The second row reports stat value. The third row indicates prob.

The same pattern applies to each stakeholder group

Fra (3 x the number of stakeholder groups) x (3 x 6) matrix. The first row indicates

the number of negative ("1" and "2"), neutral ("3") and positive ("4" and "5") responses. The second row reports fractions of responses. The third row reports

stat/prob

# Author(s)

Sebastian Susmarski, Lech Kujawski, Anna Zamojska, Piotr Zientara

```
# first import DataExp
data(DataExp)
# then execute PrelCalc()
PrelCalcExp=PrelCalc(data=DataExp, NoAtt=c(2,11,13,15),NoPow=c(3,8,14,16),
NoUrg=c(4,6,10,12),NoLeg=c(5,7,9,17),NoBen=18:22,NoCos=23:27)
# RespVerif
RespVerifExp=RespVerif(CountResponses=PrelCalcExp$CountResponses,
NoStakeholders=PrelCalcExp$NoStakeholders)
RespVerifExp
```

16 StakeholdClassif

StakeholdClassif StakeholdClassif

#### **Description**

Classifies stakeholder groups and suggests communication strategies

#### Usage

StakeholdClassif(BenefCostTest, CollabPotential, AttribIdent)

# Arguments

BenefCostTest the result of a Student's t-test (with H0 stating that the mean of benefits and

the mean of costs are equal). The \$BenefCostTest from the BenefCost function

should be used

CollabPotential

the potential for collaboration. The \$Mean or the \$Fra from the CollabPotential

function should be used

AttribIdent identified stakeholder attributes. The \$Mean or the \$Fra from the AttribIdent

function should be used

#### **Details**

The function first classifies stakeholder groups into categories, as described by Mitchell, Agle and Wood (1997). It then determines their attitudes ("supportive", "non-supportive", "mixed", "neutral", "insignificant") and, with the potential for collaboration taken into account, suggests a communication strategy vis-a-vis a particular stakeholder group

# Value

The number of stakeholder groups x 3 data frame. The first column indicates stakeholder classification. The second column shows stakeholder attitudes. The third column suggests a communication strategy

#### Author(s)

Sebastian Susmarski, Lech Kujawski, Anna Zamojska, Piotr Zientara

#### References

Mitchell, Agle and Wood (1997)

StakeholdClassif 17

```
# first import DataExp
data(DataExp)
# then execute PrelCalc(), RespVerif(), AttibIdent(), BenefCost()
PrelCalcExp=PrelCalc(data=DataExp, NoAtt=c(2,11,13,15),NoPow=c(3,8,14,16),
NoUrg=c(4,6,10,12),NoLeg=c(5,7,9,17),NoBen=18:22,NoCos=23:27)
RespVerifExp=RespVerif(CountResponses=PrelCalcExp$CountResponses,
NoStakeholders=PrelCalcExp$NoStakeholders)
AttribIdentExp=AttribIdent(TestedResponses=RespVerifExp,
NoAttrib=PrelCalcExp$NoAttrib, NoStakeholders=PrelCalcExp$NoStakeholders,
NameStakeholders=PrelCalcExp$NameStakeholders)
CollabPotentialExp=CollabPotential(AttribIdent=AttribIdentExp)
BenefCostExp=BenefCost(CountResponses=PrelCalcExp$CountResponses)
# StakeholdClassif()
Stakehold Classif By Mean = Stakehold Classif (Benef Cost Test = Benef Cost Exp\$Benef Cost Test, Stakehold Classif (Benef Cost Test) + Benef Cost Test = Benef Cost Exp\$Benef Cost Test = Benef Cost Test = Bene
CollabPotential=CollabPotentialExp$Mean,AttribIdent=AttribIdentExp$Mean)
StakeholdClassifByFraction=StakeholdClassif(BenefCostTest=BenefCostExp$BenefCostTest,
CollabPotential=CollabPotentialExp$Fra,AttribIdent=AttribIdentExp$Fra)
StakeholdClassifByMean
StakeholdClassifByFraction
```

# **Index**

```
\ast datasets
    DataExp, 8
* packages
    StakeholderAnalysis-package, 2
AttribIdent, 3
AttribPict, 4
BenefCost, 6
CollabPotential, 7
DataExp, 8
{\tt Histograms}, {\color{red} 10}
ImpactAnalysis, 11
PrelCalc, 12
RelationPict, 13
RespVerif, 14
StakeholdClassif, 16
{\tt StakeholderAnalysis}
         ({\it Stakeholder Analysis-package}),
StakeholderAnalysis-package, 2
```