Package ‘SocialPosition’

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Type Package

Title Social Position Indicators Construction Toolbox

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Description Provides to sociologists (and related scientists) a toolbox to facilitate the construction of social position indicators from survey data. Social position indicators refer to what is commonly known as social class and social status. There exists in the sociological literature many theoretical conceptualisation and empirical operationalization of social class and social status. This first version of the package offers tools to construct the International Socio-Economic Index of Occupational Status (ISEI) and the Oesch social class schema. It also provides tools to convert several occupational classifications (PCS82, PCS03, and ISCO08) into a common one (ISCO88) to facilitate data harmonisation work, and tools to collapse (i.e. group) modalities of social position indicators.

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\textbf{R topics documented:}

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Description

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Details

Package: SocialPosition
Type: Package
Version: 1.0.1
Date: 2015-07-07
License: GPL-2 | GPL-3

Three main types of functions are available in the package:

The "collapse" functions: These functions collapse (i.e. group) different modalities of an occupational grid together

The "convert" functions: These functions convert different occupational classifications into another one. This can be very useful when you want to harmonize different datasets.

The "recode" functions: These functions are specifically the ones which enable you to construct social position indicators

For the moment, we have developed conversion tools mostly on:

- The French Professions et Categories Socioprofessionnelles 1982 and 2003 (PCS)
- The International Standard Classification of Occupations 1988 and 2008 (ISCO)

The following conversions are possible:

<table>
<thead>
<tr>
<th>From...To...</th>
<th>PCS1982</th>
<th>PCS2003</th>
<th>ISCO1988</th>
<th>ISCO2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCS1982</td>
<td>X</td>
<td>Yes</td>
<td>in two steps</td>
<td>No</td>
</tr>
<tr>
<td>PCS2003</td>
<td>No</td>
<td>X</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>ISCO1988</td>
<td>No</td>
<td>No</td>
<td>X</td>
<td>No</td>
</tr>
<tr>
<td>ISCO2008</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>X</td>
</tr>
</tbody>
</table>

The following social position indicators constructed from ISCO1988 are at the moment available for recoding:
The International Socio-Economic Index of Occupational Status (ISEI)

The Oesch class schema

In the future, we will implement more conversion and recoding tools. If you would like to see some of your tools implemented in the package, please get in touch!

Author(s)
Julie Falcon (University of Lausanne)
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collapse_PCS2003_2l

The collapsing of the French Professions et Categories Socioprofessionnelles (PCS 2003) from 2 levels

Description
This function collapses the French Professions et Categories Socioprofessionnelles (PCS 2003) from 2 levels (niveau 2) into 1 level (niveau 1)

Usage
collapse_PCS2003_21(PCS2003_21, data)

Arguments

PCS2003_21 The name of the variable containing the French PCS 2003 coded on 2 levels
data The name of the dataset

Author(s)
Julie Falcon (University of Lausanne)

References
Documentation on the French Professions et Categories Socioprofessionnelles (PCS) 2003 can be found on the French National Statistic Agency, the INSEE (in French only):

Examples
#load the data
data(data_PCS2003_2l)

#visualize the data
str(data_PCS2003_2l)
head(data_PCS2003_2l)

table(data_PCS2003_2l$codes_2_level)

#Then, you can run the function:
The collapsing of the French Professions et Categories Socioprofessionnelles (PCS 2003) from 3 levels

Description

This function collapses the French Professions et Categories Socioprofessionnelles (PCS 2003) from 3 levels (niveau 3) into 1 level and 2 levels (niveaux 1 and 2)

Usage

\[
collapse\textunderscore PCS2003\_3l(PCS2003\_3l, data)
\]

Arguments

- \texttt{PCS2003\_3l} The name of the variable containing the French PCS 2003 coded on 3 levels
- \texttt{data} The name of the dataset

Author(s)

Julie Falcon (University of Lausanne)

References

Documentation on the French Professions et Categories Socioprofessionnelles (PCS) 2003 can be found on the French National Statistic Agency, the INSEE (in French only):


Examples

\[
\begin{align*}
\text{#load the data} & \\
\text{data(data\_PCS2003\_3l)} & \\
\text{#visualize the data} & \\
\text{str(data\_PCS2003\_3l)} & \\
\text{head(data\_PCS2003\_3l)} & \\
\text{#check the variable PCS2003\_3l needed for the conversion} & \\
\text{table(data\_PCS2003\_3l\$codes\_3\_level)} & \\
\text{#Then, you can run the function:} & \\
\text{data\_PCS2003\_3l <- collapse\_PCS2003\_3l(} & \\
\text{PCS2003\_3l=data\_PCS2003\_3l\$codes\_3\_level,} & \\
\text{data=data\_PCS2003\_3l)} & \\
\end{align*}
\]
collapse_PCS2003_4l

Two variables corresponding each to one different level of collapsing were created:

```r
names(data_PCS2003_3l)
table(data_PCS2003_3l$PCS2003_2l) # CSP 2003 on 2 levels
table(data_PCS2003_3l$PCS2003_1l) # CSP 2003 on 1 level
```

The collapsing of the French Professions et Categories Socioprofessionnelles (PCS 2003) from 4 levels

**Description**

This function collapses the French Professions et Categories Socioprofessionnelles (PCS 2003) from 4 levels (niveau 4) into 1 level, 2 levels and 3 levels (niveaux 1, 2 and 3)

**Usage**

```r
collapse_PCS2003_4l(PCS2003_4l, data)
```

**Arguments**

- **PCS2003_4l**: The name of the variable containing the French PCS 2003 coded on 4 levels (i.e. 3 digits followed by 1 letter, such as 226a)
- **data**: The name of the dataset

**Author(s)**

Julie Falcon (University of Lausanne)

**References**

Documentation on the French Professions et Categories Socioprofessionnelles (PCS) 2003 can be found on the French National Statistic Agency, the INSEE (in French only):


**Examples**

```r
# load the data
data(data_PCS2003_4l)

# visualize the data
str(data_PCS2003_4l)
head(data_PCS2003_4l)

# check the variable PCS2003_4l needed for the conversion
(table(data_PCS2003_4l$codes_4_level)

# Then, you can run the function:
data_PCS2003_4l <- collapse_PCS2003_4l(
  PCS2003_4l=data_PCS2003_4l$codes_4_level,
  data=data_PCS2003_4l)

# Three variables corresponding each to one different level of collapsing were created:
names(data_PCS2003_4l)
```
convert_from_ISCO08_to_ISCO88_3d

Description
This function converts occupational codes of the ISCO 2008 classification into the occupational codes of the ISCO 1988 classification on 3 digits

Usage
convert_from_ISCO08_to_ISCO88_3d(ISCO08, data)

Arguments
ISCO08 The name of the variable containing the ISCO 2008 codes, ideally coded on 4 digits, although the function also supports variables coded on 3 digits, and even on 2 digits
data The name of the dataset

Author(s)
Julie Falcon (University of Lausanne)

References
Documentation on the ISCO 2008 and 1988 can be found on the ILO website:
• For ISCO 2008: http://www.iло.org/public/english/bureau/stat/isco/isco08/

Examples
#load the data
data(data_ISCO2008)

# visualize the data
str(data_ISCO2008)
head(data_ISCO2008)

# check the variable ISCO2008 needed for the conversion
table(data_ISCO2008$ISCO2008)

# Then, you can run the function:
data_ISCO2008 <- convert_from_ISCO08_to_ISCO88_3d(
ISCO08=data_ISCO2008$ISCO2008,
data=data_ISCO2008)
#Check the created variable:
names(data_ISCO2008)
table(data_ISCO2008$ISCO88_3d)

convert_from_PCS1982_4l_to_PCS2003_4l

The conversion of the French PCS 1982 into the French PCS 2003

Description

This function converts occupational codes of the French Professions et Categories Socioprofessionnelles from the 1982 codes into the 2003 codes

Usage

convert_from_PCS1982_4l_to_PCS2003_4l(PCS1982_4l, data)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCS1982_4l</td>
<td>The name of the variable containing</td>
</tr>
<tr>
<td>data</td>
<td>The name of the dataset</td>
</tr>
</tbody>
</table>

Author(s)

Julie Falcon (University of Lausanne)

References

Documentation on the French Professions et Categories Socioprofessionnelles (PCS) 1982 and 2003 can be found on the French National Statistic Agency, the INSEE (only in French):


Examples

#load the data
data(PCS1982)

#visualize the data
str(data_PCS1982)
head(data_PCS1982)

#check the variable PCS1982 needed for the conversion
table(data_PCS1982$PCS1982)

#Then, you can run the function:
data_PCS1982 <- convert_from_PCS1982_4l_to_PCS2003_4l(
PCS1982_4l=data_PCS1982$PCS1982,
data=data_PCS1982)
# Check the variables created:
names(data_PCS2003_4l)
table(data_PCS1982$PCS2003_4l)  # CSP 2003 4 digits (4 niveaux)
table(data_PCS1982$PCS2003_3l)  # CSP 2003 3 digits (3 niveaux)
table(data_PCS1982$PCS2003_2l)  # CSP 2003 2 digits (2 niveaux)
table(data_PCS1982$PCS2003_1l)  # CSP 2003 1 digit (1 niveau)

convert_from_PCS2003_4l_to_ISCO88_3d

The conversion of the French PCS 2003 into the ISCO 1988 codes

Description
This function converts occupational codes of the French Professions et Categories Socioprofessionnelles 2003 into the occupational codes of the ISCO 1988 classification on 3 digits

Usage
convert_from_PCS2003_4l_to_ISCO88_3d(PCS2003_4l, data)

Arguments

PCS2003_4l    The name of the variable containing the French PCS 2003 coded on 4 levels (i.e.
               3 digits followed by 1 letter, such as 226a)
data           The name of the dataset

Author(s)
Julie Falcon (University of Lausanne)

References
Documentation on the French Professions et Categories Socioprofessionnelles (PCS) 2003 and on
the ISCO 1988 can be found:

- For the French PCS 2003 on the French National Statistic Agency website, the INSEE (in
  pcs2003.htm
  isco/isco88/index.htm

Examples
# load the data
data(data_PCS2003_4l)

# visualize the data
str(data_PCS2003_4l)
head(data_PCS2003_4l)

# check the variable needed for the conversion
table(data_PCS2003_4l$codes_4_level)
# Then, you can run the function:
data_PCS2/zero.noslash/zero.noslash3_4l <- convert_from_PCS2/zero.noslash/zero.noslash3_4l_to_ISCO88_3d(
  PCS2/zero.noslash/zero.noslash3_4l=data_PCS2/zero.noslash/zero.noslash3_4l$codes_4_level,
  data=data_PCS2/zero.noslash/zero.noslash3_4l)

# Check the variable created:
names(data_PCS2/zero.noslash/zero.noslash3_4l)
table(data_PCS2/zero.noslash/zero.noslash3_4l$ISCO88_3d)

---

**data_ISCO2008**  
*Dataset with ISCO 2008 codes on 4 digits*

**Description**

This dataset contains occupational codes of the ISCO 2008 classification coded on 4 digits

**Usage**

```r
data(data_ISCO2008)
```

**Format**

A data frame with 1500 observations on the following variable:

- **ISCO2008** a numeric vector

**Source**

The data was randomly generated

---

**data_MCH2007**  
*Random subsample of the MOSAiCH 2007 dataset*

**Description**

This dataset is a random subsample of the Swiss MOSAiCH survey 2007

**Usage**

```r
data(data_MCH2007)
```

**Format**

A data frame with 300 observations on the following 2 variables:

- **iscoR** a numeric vector with ISCO 1988 codes
- **nb_emp_SE** a numeric vector containing informations on the number of employees of the self-employed (continuous variable)

**Source**

The data was generated from the Swiss MOSAiCH 2007 survey distributed by FORS
data_PCS1982  
*Dataset with the French PCS 1982 codes on 4 digits*

**Description**

This dataset contains codes of the French Professions et Categories Socioprofessionnelles 1982 (PCS1982) coded on 4 digits (levels)

**Usage**

`data(data_PCS1982)`

**Format**

A data frame with 1500 observations on the following variable:

PCS1982  a numeric vector

**Source**

The data was randomly generated

---

data_PCS2003_2l  
*Dataset with the French PCS 2003 codes on 2 digits*

**Description**

This dataset contains codes of the French Professions et Categories Socioprofessionnelles 2003 (PCS2003) coded on 2 digits (levels)

**Usage**

`data(data_PCS2003_2l)`

**Format**

A data frame with 1000 observations on the following variable:

codes_2_level  a numeric vector

**Source**

The data was randomly generated
**data_PCS2003_3l**

*Dataset with the French PCS 2003 codes on 3 digits*

**Description**

This dataset contains codes of the French Professions et Categories Socioprofessionnelles 2003 (PCS2003) coded on 3 digits (levels)

**Usage**

```r
data(data_PCS2003_3l)
```

**Format**

A data frame with 1000 observations on the following variable:

- `codes_3_level` a numeric vector

**Source**

The data was randomly generated

---

**data_PCS2003_4l**

*Dataset with the French PCS 2003 codes on 4 digits*

**Description**

This dataset contains codes of the French Professions et Categories Socioprofessionnelles 2003 (PCS2003) coded on 2 digits (levels)

**Usage**

```r
data(data_PCS2003_4l)
```

**Format**

A data frame with 1000 observations on the following variable:

- `codes_4_level` a factor with levels

**Source**

The data was randomly generated
The recoding of the ISEI index from ISCO 1988 codes

**Description**
This function recodes the International Socio-Economic Index of Occupational Status (ISEI) from ISCO 1988 codes.

**Usage**
```r
code_from_ISCO88_to_ISEI(ISCO88, data)
```

**Arguments**
- `ISCO88` The name of the variable containing ISCO 1988 codes, ideally coded on 4 digits, although the function also supports variables coded on 3 digits, and even on 2 digits.
- `data` The name of the dataset.

**Author(s)**
Julie Falcon (University of Lausanne)

**References**
The ISEI index was constructed by Harry Ganzeboom, Paul De Graaf and Donald Treiman. Please refer to the following article to find out more about this index and to cite it:

The function was constructed from Harry Ganzeboom’s SPSS syntax available on his website: [http://www.harryganzeboom.nl/isco88/index.htm](http://www.harryganzeboom.nl/isco88/index.htm)

This syntax is part of the "International Stratification and Mobility File" project which provides several social position conversion tools in SPSS format:
Ganzeboom, Harry B.G.; Treiman, Donald J., 'International Stratification and Mobility File: Conversion Tools'

**Examples**
```r
# load the data
data(data_MCH2007)

# visualize the data
str(data_MCH2007)
head(data_MCH2007)

# check the variables needed for social position coding
table(data_MCH2007$iscoR, useNA="always")

# Then, you can run the function:
data_MCH2007 <- recode_from_ISCO88_to_ISEI(
```
recode_from_ISCO88_to_Oesch

The recoding of the Oesch class schema from ISCO 1988 codes

Description
The function recodes the Oesch class schema from ISCO 1988 codes and a variable specifying the employment status of the corresponding occupation reported. Please note that this function does NOT uses an educational variable to construct the Oesch class schema.

Usage
recode_from_ISCO88_to_Oesch(ISCO88, EMP_STA, SE_zero_emp, SE_one_to_nine_emp, SE_ten_plus_emp, not_SE, data)

Arguments
ISCO88 The name of the variable containing ISCO 1988 codes, ideally coded on 4 digits, although the function also supports variables coded on 3 digits, and even on 2 digits
EMP_STA The name of the variable containing the corresponding employment status of the occupation. This variable must specify for the self-employed the number of employee they employ. Ideally, this number should be coded in the form of a continuous variable, although in some surveys it takes the form of a categorical variable. It must also have a modality for those who are not self-employed. What is important is to be able to distinguish:
1. The self-employed without employee
2. The self-employed with one to nine employee-s
3. The self-employed with ten or more employees
4. Those who are not self-employed (i.e. most likely those who are employees if they declared an occupation)
SE_zero_emp Indicate here the modality corresponding to the self-employed without employee
SE_one_to_nine_emp Indicate here the modality / modalities corresponding to the self-employed with one to nine employee-s
SE_ten_plus_emp Indicate here the modality / modalities corresponding to the self-employed with ten or more employees
not_SE Indicate here the modality corresponding to those who are not self-employed (i.e. most likely those who are employees if they declared an occupation)
data The name of the dataset
recode_from_ISCO88_to_Oesch

Author(s)

Julie Falcon (University of Lausanne)

References

The Oesch class schema was constructed by Daniel Oesch. Theoretical foundations and empirical assessment of it can be found in the following publication:

Oesch, Daniel. 2006. Redrawing the class map: stratification and institutions in Britain, Germany, Sweden and Switzerland. Basingstoke: Palgrave Macmillan

He also published an article which relates to the book:


Further information can also be found on Daniel Oesch’s website:

http://people.unil.ch/danieloesch/socialclasssyntax/

Examples

#load the data
data(data_MCH2007)

#visualize the data
str(data_MCH2007)
head(data_MCH2007)

#check the variables needed for social position coding
table(data_MCH2007$nb_emp_SE,useNA="always")
table(data_MCH2007$iscoR,useNA="always")

#Then, you can run the function:
data_MCH2007 <- recode_from_ISCO88_to_Oesch(
ISCO88=data_MCH2007$iscoR, 
EMP_STA=data_MCH2007$nb_emp_SE, 
SE_zero_emp=0, 
SE_one_to_nine_emp=1:9, 
SE_ten_plus_emp=10:100, 
not_SE=NA, 
data=data_MCH2007)

#Three variables were created:
names(data_MCH2007)
head(data_MCH2007)
table(data_MCH2007$Oesch17,useNA="always")
table(data_MCH2007$Oesch8,useNA="always")
table(data_MCH2007$emplnum,useNA="always")

#If you dont need the emplnum variable, you can delete it by writing:
data_MCH2007$emplnum <- NULL
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