

## Solutions to Exercise #1

### Descriptive statistics

It is always better to check the Mplus file to make sure the software is reading it properly and nothing went wrong while creating the file you are going to use for analyses (whether you are creating using STATA, SPSS, etc.).

If you use STATA, the process of creating an MPLUS data file and a standard input file is facilitated by the stata2mplus command (see <http://www.ats.ucla.edu/stat/stata/faq/stata2mplus.htm>)

In your files you will find a BASIC.inp file.

Open it with Mplus (from the main menu FILE → Open: )

The file has already the variable names (see Page 1 for a description of the variables), and the missing value indicator.

(NOTE that Mplus imposes a limit of 8 characters on the variable names).

#### TASKS:

1. Specify the variables **cou rpsppsgv ractrolg rpsppi1 rcptppol rptcpplt retapap1** as the variables to be included in analyses (HINT: “usevar”...)

**ANSWER:** See Input File “Exer1.inp”

```
retapap1 . RECODE OF retapap1 (easy to take part in politics);

Data:
  File is ess_ex1.dat ;
Variable:
  Names are
    essround idno polintr rpsppsgv ractrolg rpsppi1 rcptppol rptcpplt
    retapap1 cou ess7id nutslen nuts2en nuts3en;
  Missing are all (-999) ;

Usevariables = cou rpsppsgv ractrolg rpsppi1 rcptppol rptcpplt retapap1;

CATEGORICAL= cou rpsppsgv ractrolg rpsppi1 rcptppol rptcpplt retapap1 ;
```

2. Specify which variables are categorical (at least for descriptive analyses)

**ANSWER:**

CATEGORICAL = **cou rpsppsgv ractrolg rpsppi1 rcptppol rptcpplt retapap1**;

3. Use Analysis: TYPE = BASIC; to invoke descriptive analyses.

**ANSWER:** See Input File “Exer1.inp”

```

Data:
  File is ess_ex1.dat ;
Variable:
  Names are
    essround idno polintr rpsppsgv ractrolg rpsppi1 rcptppol rptcpplt
    retapap1 cou ess7id nutslen nuts2en nuts3en;
  Missing are all (-999) ;

Usevariables = cou rpsppsgv ractrolg rpsppi1 rcptppol rptcpplt retapap1;

CATEGORICAL= cou rpsppsgv ractrolg rpsppi1 rcptppol rptcpplt retapap1 ;

Analysis:
  Type = Basic;

```

4. How many observations are in the dataset? (see output file "exer1.out"): **8938**

#### SUMMARY OF ANALYSIS

Number of groups	1
Number of observations	8938
Number of dependent variables	7
Number of independent variables	0
Number of continuous latent variables	0

#### Observed dependent variables

##### Binary and ordered categorical (ordinal)

COU	RSPSPSGV	RACTROLG	RSPPIPL	RCPTPOL	RPTCPPLT
RETAPAPL					

5. What is the proportion of respondents from France (category 5)? **It is 0.214 (1917 respondents).**

#### UNIVARIATE PROPORTIONS AND COUNTS FOR CATEGORICAL VARIABLES

COU		
Category 1	0.201	1795.000
Category 2	0.198	1769.000
Category 3	0.171	1532.000
Category 4	0.215	1925.000
Category 5	0.214	1917.000
RSPSPSGV		
Category 1	0.524	4604.000

6. What is the proportion of respondents providing the lowest score to item **rcptppol** ? **It is 0.417 (3,680 respondents):**

## UNIVARIATE PROPORTIONS AND COUNTS FOR CATEGORICAL VARIABLES

COU			
Category 1	0.201	1795.000	
Category 2	0.198	1769.000	
Category 3	0.171	1532.000	
Category 4	0.215	1925.000	
Category 5	0.214	1917.000	
RSPPPSGV			
Category 1	0.524	4604.000	
Category 2	0.315	2761.000	
Category 3	0.161	1414.000	
RACTROLG			
Category 1	0.519	4586.000	
Category 2	0.274	2427.000	
Category 3	0.207	1830.000	
RSPPIPL			
Category 1	0.552	4847.000	
Category 2	0.315	2762.000	
Category 3	0.133	1165.000	
RCPTPOL			
Category 1	0.417	3680.000	
Category 2	0.334	2949.000	
Category 3	0.249	2199.000	
RPTCPPLT			
Category 1	0.572	5052.000	
Category 2	0.333	2939.000	
Category 3	0.095	840.000	
RETAPAPL			
Category 1	0.523	4582.000	
Category 2	0.325	2842.000	
Category 3	0.152	1333.000	

7. Are there missing data in any of these variables ? **Yes. For example, the missing data pattern information indicates that 8,437 (out of 8,938) respondents do not have any missing data, 90 respondents have missing data in variable **retapapl**, and so on...:**

## SUMMARY OF MISSING DATA PATTERNS

## MISSING DATA PATTERNS (x = not missing)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
COU	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
RSPSPSGV	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
RACTROLG	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
RSPPIPL	x	x	x	x	x	x	x	x									x	x	x	x
RCPTPOL	x	x	x	x					x	x	x	x					x	x	x	x
RPTCPPLT	x	x			x	x			x	x			x	x			x	x		x
RETAPAPL	x		x		x		x		x		x		x		x	x		x		x

	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
COU	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
RSPSPSGV	x	x	x	x																
RACTROLG					x	x	x	x	x	x	x	x	x	x	x	x	x			
RSPPIPL	x				x	x	x	x	x	x								x	x	x
RCPTPOL		x	x		x	x	x	x			x	x	x	x				x	x	
RPTCPPLT	x	x	x		x	x			x		x	x			x			x	x	x
RETAPAPL		x			x		x		x		x		x		x	x		x		

	41	42	43	44	45	46
COU	x	x	x	x	x	x
RSPSPSGV						
RACTROLG						
RSPPIPL						
RCPTPOL	x	x	x			
RPTCPPLT	x			x	x	
RETAPAPL	x	x		x		

## MISSING DATA PATTERN FREQUENCIES

Pattern	Frequency	Pattern	Frequency	Pattern	Frequency
1	8437	17	4	33	7
2	90	18	5	34	2
3	47	19	1	35	5