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KUANT Guides

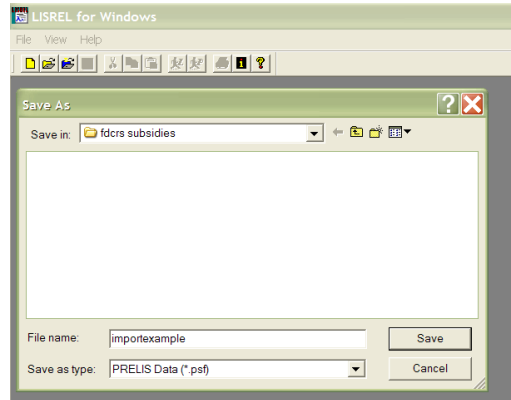
Guide No.
KUANT 002.2

Reading Data Into LISREL: Using Prelis, sufficient statistics, and text files

McConnell, E.K., Geldhof, G.J. & Selig, J.P. (2008)

1. Using PRELIS to import data

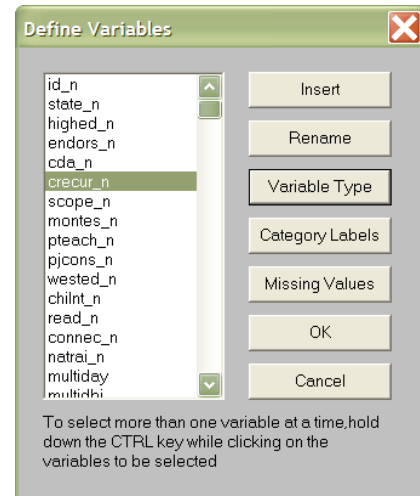
- File → Import Data
 - select file type from drop-down box, locate data file to be imported (many file types, including SAS, SPSS, and Excel)
 - complete Save As procedure in new dialog box (save as .psf)



- New data appears in spreadsheet format

	id_n	highed_n	endors_n	cda_n	crecur_n	scope_n	montes_n	pleach_n
1	4.000	2.000	0.000	0.000	0.000	0.000	0.000	0.000
2	3.000	6.000	0.000	0.000	0.000	0.000	0.000	0.000
3	3.000	4.000	0.000	1.000	1.000	0.000	0.000	1.000
4	3.000	2.000	0.000	0.000	1.000	0.000	0.000	0.000
5	3.000	2.000	0.000	0.000	2.000	0.000	0.000	0.000
6	47.000	3.000	4.000	0.000	0.000	0.000	0.000	0.000
7	49.000	4.000	2.000	0.000	1.000	0.000	0.000	0.000
8	51.000	4.000	3.000	0.000	0.000	0.000	0.000	0.000
9	54.000	4.000	3.000	0.000	0.000	0.000	0.000	0.000
10	58.000	3.000	3.000	-999999.000	0.000	1.000	0.000	0.000
11	70.000	3.000	2.000	0.000	0.000	0.000	0.000	0.000
12	83.000	4.000	6.000	1.000	0.000	0.000	0.000	0.000
13	100.000	4.000	3.000	0.000	0.000	0.000	0.000	0.000
14	104.000	3.000	3.000	0.000	0.000	1.000	0.000	0.000
15	105.000	3.000	3.000	0.000	0.000	1.000	0.000	0.000
16	108.000	4.000	3.000	0.000	0.000	0.000	0.000	0.000
17	130.000	3.000	3.000	0.000	0.000	0.000	0.000	0.000
18	140.000	3.000	2.000	0.000	0.000	1.000	0.000	0.000
19	154.000	3.000	1.000	0.000	0.000	1.000	0.000	0.000
20	188.000	4.000	2.000	0.000	0.000	0.000	0.000	0.000
21	194.000	4.000	2.000	0.000	0.000	0.000	0.000	0.000
22	211.000	4.000	7.000	0.000	0.000	0.000	1.000	0.000
23	241.000	4.000	5.000	0.000	0.000	0.000	0.000	0.000
24	249.000	3.000	3.000	0.000	0.000	0.000	0.000	0.000
25	277.000	4.000	2.000	0.000	0.000	0.000	0.000	0.000
26	770.000	1.000	2.000	0.000	0.000	1.000	0.000	0.000

- Checking imported data:
 - Data → Define Variables:
 - Select variable, click Variable Type, switch variables to continuous (assumption of SEM); *note*: “apply to all” option in dialog box
 - Missing Values: define your missing values; *note*: the global missing value = -999999.000 (the number assigned by PRELIS when a number is missing)
 - Data Screening: Statistics → Data Screening (gives basic descriptive statistics and response patterns)



2. Putting sufficient statistics directly into LISREL syntax

- Obtain the means, standard deviations and correlation matrix (sufficient statistics) for the data in separate statistical package (SAS, SPSS, etc.)

ME →	12.740	12.720	12.580	7.060	7.100	7.200	→ means
SD →	1.3218	1.1787	0.9916	0.7669	0.7889	0.8806	→ standard deviations
KM →	1.000						→ correlation matrix
	0.476	1.000					
	0.491	0.578	1.000				
	0.096	0.177	0.195	1.000			
	0.241	0.184	-0.050	-0.246	1.000		
	0.081	0.153	0.308	0.103	-0.176	1.000	

- Insert these sufficient statistics directly into the LISREL syntax after the DA command. Note the two-letter LISREL commands:

3. Reading in data from text files

Option A: Using a text file that contains raw data

• In most cases this will require an export of data from its original format into either an ASCII or tab delimited file with no variable names

7.768	6.984	7.423	18.933	18.253	19.104
6.874	7.276	8.014	20.104	19.403	19.205
.
.
.

• Reference the raw data using an RA command. The below example references a data file called "posneg.txt" that is located in the same folder as The LISREL syntax file:

RA=posneg.txt

Option B: Using a text file containing sufficient statistics

• Obtain the means, standard deviations and a correlation matrix (sufficient statistics) for the data from a separate statistical package (SAS, SPSS, etc.)

- Create a tab delimited file that contains the means, SD's, and the lower half of the correlation matrix of your data:

12.740	12.720	12.580	7.060	7.100	7.200	← M
1.3218	1.1787	0.9916	0.7669	0.7889	0.8806	← SD
1.000						
0.476	1.000					← CORR matrix
0.491	0.578	1.000				
0.096	0.177	0.195	1.000			
0.241	0.184	-0.050	-0.246	1.000		
0.081	0.153	0.308	0.103	-0.176	1.000	

• Reference the file in the LISREL syntax with the following commands:

- note: No specification of path needed (in any data import procedure) if syntax and data file are saved in the same folder on your computer

```
ME FI=posneg.dat
SD FI=posneg.dat
KM FI=posneg.dat
```



Useful data transformations



Excel → SAS

- Open SAS
- File → Import Data
- Select 'Standard data source' box, *Next*>
- Locate Excel workbook to be imported, *Next*>
- Select table in workbook to be imported, *Next*>
- Choose where data will be located in SAS
 - select library and enter filename (member) to create data set in SAS
- Optional PROC IMPORT
 - writes syntax into a SAS program to do IMPORT process (useful if working in SAS repeatedly)
- Click 'Finish' if not creating IMPORT statement

SPSS → SAS

- With active data set in SPSS window...
 - File → Save As
 - save as type:
 - SAS v7+ Windows short extension (*.sd7) **OR**
 - SAS v7+ Windows long extension (*.sas7bdat)

SAS → Excel

- File → Export Data
- Select Library and file name (Member), *Next*>
- Check 'Standard data source' box
 - select 'Microsoft Excel 97,2000 or 2002 Workbook' from drop-down menu, *Next*>
- Save to an existing Excel workbook
 - either replace file or append to file, *OK*
- Assign table name for Excel workbook, *Next*>
- Optional PROC EXPORT
 - this writes syntax of the export process to save time if this export will be done repeatedly
 - saves to existing SAS program
- Click 'Finish' if not creating PROC EXPORT statement

SPSS → Excel

- Same 'Save As' process as SPSS → SAS procedure, but select **.xls** format instead of .sd7 or .sas7bdat