

## Correlation Matrix Input to SPSS

[Here is an example](#) doing a simple path analysis via regression. Below, I provide an example of a slightly more complex path analysis. You can find the path model in Figure 7 of [my introductory document on path analysis](#).

```
MATRIX DATA Variables = rowtype_ F_Educ F_Occup Sibs Educ Occup Income
 / format = lower diagonal.
BEGIN DATA.
MEAN 0 0 0 0 0 0
STDDEV 1 1 1 1 1 1
N 50 50 50 50 50 50
CORR 1.0000
CORR 0.5300 1.0000
CORR -.2871 -.2476 1.0000
CORR 0.4048 0.4341 -.3311 1.0000
CORR 0.3194 0.3899 -.2751 0.6426 1.0000
CORR 0.2332 0.2587 -.1752 0.3759 0.4418 1.00
END DATA.
regression matrix=in(*) /dep Income/enter F_Educ F_Occup Sibs Educ Occup.
regression matrix=in(*) /dep Occup/enter F_Educ F_Occup Sibs Educ.
regression matrix=in(*) /dep Educ/enter F_Educ F_Occup Sibs.
```

Copy and paste the syntax above into a syntax window in SPSS and then run it. You can find this syntax in [an sps file](#) and simply download it and then double-click on it. That is all there is to it. Do note that when using matrix input you must provide the syntax for doing the analyses rather than using the GUI interface. Since I am a novice with SPSS syntax, I would normally do this with SAS instead of SPSS.

Correlation matrix input can also be used with AMOS – see my introductory lesson, [SEM with AMOS](#)

### Summary of SPSS Syntax for MATRIX DATA

```
MATRIX DATA VARIABLES=varlist
[/FILE= {INLINE**}]
      {file      }
[/FORMAT=[{LIST**}] [{LOWER**}] [{DIAG**}]]
      {FREE  }  {UPPER  }  {NODIAG}
      {FULL  }
[/SPLIT= varlist] [/FACTORS= varlist]
[/CELLS= number of cells] [/N= sample size]
[/CONTENTS=[CORR**] [COV] [MAT] [MSE] [DFE] [MEAN] ]
      [SD] [PROX] [STDDEV] [N_SCALAR] [N_VECTOR] [N]
      [N_MATRIX] [COUNT]
**Default if the subcommand is omitted.
```

This worked

```
MATRIX DATA VARIABLES=ROWTYPE_ female race ses schtyp.  
BEGIN DATA  
MEAN 0 0 0 0  
STDDEV 1 1 1 1  
N 200 200 200 200  
CORR          1  
CORR  -.02425329          1  
CORR  -.17389495  .30832494          1  
CORR  .02920402  .24444337  .23757881          1  
END DATA.
```

regression matrix=in(\*) /dep ses/enter female race.

---

**From:** Deon De Bruin [mailto:gpdb@lw.rau.ac.za]  
**Sent:** Friday, May 28, 2004 7:34 AM  
**To:** Wuensch, Karl L  
**Subject:** Correlation matrix in SPSS

Dear Dr. Wuensch

I hope you can help. After performing a first order factor analysis with oblique rotation I wish to subject the correlations between the factors to a second order factor analysis. Can you please give advice on how to use the correlation matrix as input for a factor analysis?

Sincerely  
Deon de Bruin

**From:** T. Z. Keith [mailto:tim.keith@mail.utexas.edu]  
**Sent:** Wednesday, June 02, 2004 4:17 PM  
**To:** Bolen, Larry M  
**Subject:** RE: Correlation matrix in SPSS

Yes, quite easy. This assumes the matrix is in an open spreadsheet. You can also read the matrix in as part of the job. I'll see if I can find an example of that if you're interested.

Tim

---

factor

```
  /matrix=in(cor=*)  
  /analysis M_reas to recog  
  /PRINT def, corr  
  /plot=rotation  
  /CRITERIA factors(2) ITERATE(50)  
  /EXTRACTION paf  
  /ROTATION norotate  
  /METHOD=CORRELATION .
```

factor

```
/matrix=in(cor=*)  
/analysis M_reas to recog  
/PRINT def, corr  
/plot=rotation  
/CRITERIA factors(2) ITERATE(50)  
/EXTRACTION paf  
/ROTATION varimax  
/METHOD=CORRELATION .
```

#### REGRESSION

```
matrix=in(*)  
/var=M_reas to recog  
/STATISTICS COEFF OUTS R ANOVA  
/CRITERIA=PIN(.05) POUT(.10)  
/NOORIGIN  
/DEPENDENT m_reas  
/METHOD=ENTER compute1 compute2 r_comp1 r_comp2 recog .
```

---

[Return to Wuensch's SPSS Lessons Page](#)

[Karl L. Wuensch](#), December, 2013