

I am new to MPlus (although not SEM). I am using CFA to try to compare a single-factor model with 16 items and a first-order model with four correlating factors. I followed the helpful instructions in previous posts and on Web Notes 12 to calculate the strictly positive Satorra-Bentler chi-square (as I am using MLR estimation and have a negative scaling correction). However, I am having difficulty with the M10 model, as I am not certain what to do with parameters that are not in both models. Here is the input for Model M0 and Model M1:

MODEL M0

MODEL:

F1 by T1PGI01-T1PGI16;

MODEL M1

MODEL:

RC by T1PGI02 T1PGI08 T1PGI11 T1PGI16;

PL by T1PGI01 T1PGI03 T1PGI05 T1PGI10

T1PGI13;

UR by T1PGI06 T1PGI12 T1PGI14;

IB by T1PGI04 T1PGI07 T1PGI09 T1PGI15;

When creating M10, I know to copy the starting values for the parameters, but since I am using different factors, I am not certain how to do this correctly.

Thank you! Any help would be appreciated.

[Tihomir Asparouhov](#) posted on Wednesday, January 04, 2017 - 9:35 pm

You should read this paper first as there are some limitations in the likelihood ratio test for that purpose

Hayashi, K., Bentler, P. M., & Yuan, K. (2007). On the likelihood ratio test for the number of factors in exploratory factor analysis. *Structural Equation Modeling*, 14, 505–526.

Here is the proper setup for the strictly positive test

MODEL M0: F1 by T1PGI01-T1PGI16*1; [F1@1](#);

MODEL M10: (put in the starting values from M0 results)

RC by T1PGI02* T1PGI08* T1PGI11* T1PGI16*;
PL by T1PGI01* T1PGI03* T1PGI05* T1PGI10*
T1PGI13*;
UR by T1PGI06* T1PGI12* T1PGI14*;
IB by T1PGI04* T1PGI07* T1PGI09* T1PGI15*;
RC-IB with [RC-IB@1](#);
[RC-IB@1](#);

MODEL M1:

RC by T1PGI02*1 T1PGI08 T1PGI11 T1PGI16;
PL by T1PGI01*1 T1PGI03 T1PGI05 T1PGI10
T1PGI13;
UR by T1PGI06*1 T1PGI12 T1PGI14;
IB by T1PGI04*1 T1PGI07 T1PGI09 T1PGI15;
[RC-IB@1](#);