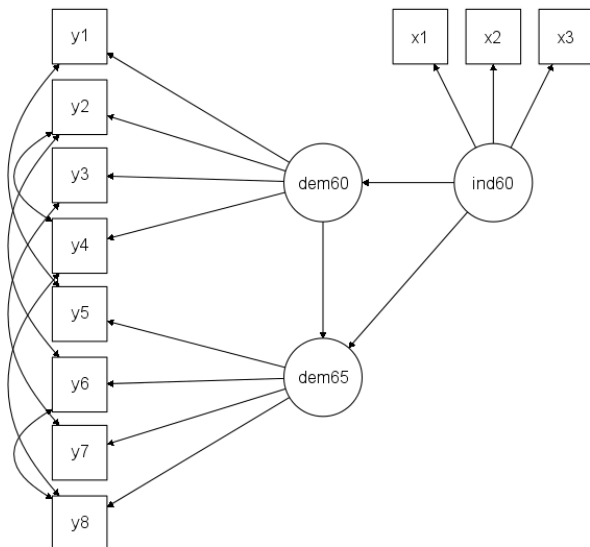


## Preconference workshop 5: Structural Equation Modeling with R and lavaan

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Structural equation modeling (SEM) is a vast field and widely used by many applied researchers in the social and behavioral sciences. SEM is a general framework to empirically test complex theories, often depicted by path diagrams. It naturally allows for measurement error by introducing latent variables, and it extends the regression framework by allowing for reciprocal and indirect effects. In recent years, the classical SEM framework has been extended to handle categorical outcomes, missing data, and multilevel data.



This one-day workshop will provide both a refresher of SEM concepts and practices, and a tutorial on how to use the open-source R package lavaan. After a brief general introduction to SEM, several specific topics will be discussed: meanstructures and multiple groups, measurement invariance, dealing with missing data and non-normal data, CFA with binary and ordinal data, and multilevel SEM. The workshop will be based on lecture-style presentations interchanged with practical sessions.

In principle, no prior knowledge of R is required, although it will help if you spend some time exploring R (and RStudio) before you come to this workshop. For example, you should be able to run a simple regression in R, and become familiar with the concept of an R script. There are many good tutorials on the web.

You should install R (and optionally RStudio) on your laptop. In addition, you must install lavaan. Instructions how to do this can be found on the lavaan website:

<http://lavaan.ugent.be/start.html>