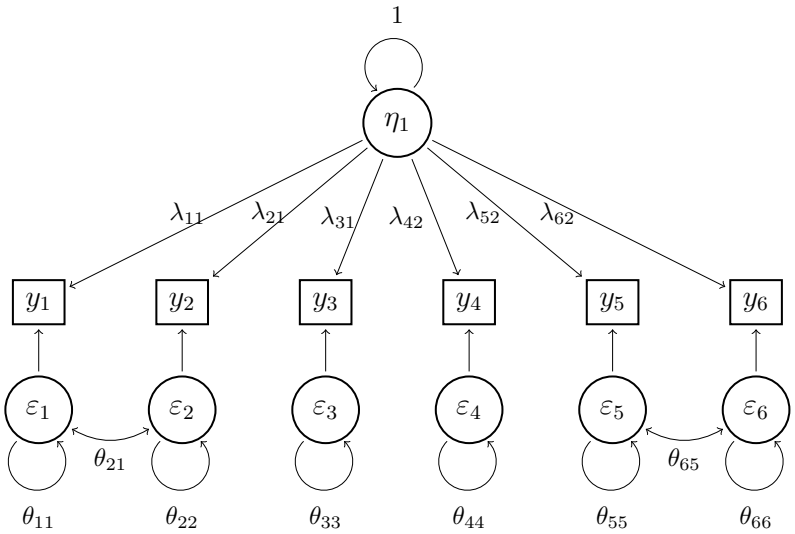
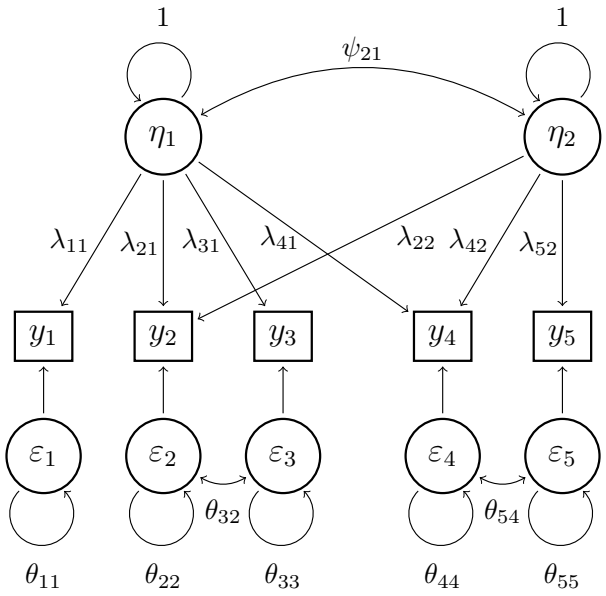
PSYC 4301: Psychological Tests and Measurements

Tarleton State University | Homework 9 | Spring 2020

1. Consider the following two path models. For each, answer the following questions:
   (a) How many observations does this model account for?
   (b) How many parameters are in the model?
   (c) How many degrees of freedom does this model have?
   (d) Is the model identified? Why/why not?





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2. For this exercise, you'll use the `hw8data.csv` file from the last homework assignment.

   (a) Draw a path model based on the factor structure you extracted in the last homework. You should have 3 factors and no cross-loadings.

   (b) Perform a confirmatory factor analysis for this model in JASP. Write down your estimates for (1) the factor loadings, (2) the factor covariances, and (3) the residual variances.

   (c) Report and interpret two measures of model fit to assess how well your model explains the observed data: (1) the χ^2 test, and (2) the RMSEA.