# OMP SEM Results

**Test Setup:**

*p \in* {4, 5, …, 19, 20}.

T = 1000.

Resampling: 25 times.

# Other Methodology

Nothing “smart”, but capitalize on the slow running time of NOTEARS compared to other fast methods when we have a permutation.

Can make it “smarter” using MCMC. However, travelling takes time.

# Implemented all methodologies

“The Nine”

# OMP vs F-GLS

<https://eprints.soton.ac.uk/142469/1/BDOMPvsOLS07.pdf> Discusses this in great detail.

OMP

# Talked About SEM

Derivations showed the problems that a SEM has, also some more conceptual questions like what do the covariances mean?

Also talked about extending this to larger dimensions. Perhaps, for larger *p*. This is not such a problem?

# B-V-GLS

Talked about backwards, Alex liked the bump when there is a violation.

Devil’s advocate: Is it meaningful, as there is a model mismatch.

# OMP vs F-GLS

Are they the same?

Most likely not, entries added to the basis. Coefficients would not change, as they are orthogonal?? I do not think so.

Paper showed that they are not the same, but how is this for time series?

# For next meeting

Compare OMP and NOTEARS for larger dimensions p, see why 8 was fishy.

Compare the methodologies

Compare OMP and F-GLS, where do they differ?