

# Power and sample size in measurement invariance testing

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Measurement invariance testing has become a standard procedure in the psychometric toolbox. Power analysis is also considered an integral part of any statistical hypothesis testing procedure. Surprisingly, however, there is little guidance in the literature regarding the statistical power of measurement invariance testing procedures and associated sample size requirements. This may be due to the fact that effect size indicators of measurement bias have received relatively little attention from researchers. Nevertheless, some general suggestions regarding the interpretation of effect size indicators have recently been made. The aim of this study was to estimate the power to test the measurement invariance hypothesis at different levels of effect size and as a function of factors such as the type of effect size measure (signed vs. unsigned), the scaling of the latent variable, and the size of the factor loadings. I will discuss the determinants of statistical power, explain some counterintuitive results, and offer a tentative summary of guidelines for applied research.

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