

# **A model selection criterion for MAR data**

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## **Abstract**

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**Selection of the best model among candidate models is considered when the data are missing at random (MAR). The problem in using the MAR data is that a subset of the MAR data may not be MAR and thus the maximum likelihood (ML) estimator of the parameter of interest is not consistent. Although various information criteria have been developed to those data, they cannot be applied because of their assumption that subsets of data on the candidate models are also MAR. Thus, we develop a method to obtain the consistent ML estimator and develop a model selection criterion that can be used for subset data that are not MAR. Through numerical simulations, we show how well our method works under some practical conditions. This is a joint work with Dr. Keiji Takai (Kansai University).**