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Bivariate jointness measures in Bayesian Model Averaging: Solving the conundrum*

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Abstract

We introduce a new measure of bivariate jointness to assess the degree of inclusion dependency between pairs of explanatory variables in Bayesian Model Averaging analysis. Building on the discussion concerning appropriate statistics to assess covariate inclusion dependency in this context, a set of desirable properties for bivariate jointness measures is proposed. We show that none of the proposed measures so far meets all these criteria and an alternative measure is presented which fulfils all of them. Our measure corresponds to a regularised version of the Yule's Q association coefficient, obtained by combining the original measure with a Jeffreys prior to avoid problems in the case of zero counts. We provide an empirical illustration using cross-country data on economic growth and its determinants.

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