

## Comments on: An updated review of Goodness-of-Fit tests for regression models

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First of all, I would like to congratulate Professors W. González-Manteiga and R.M. Crujeiras for providing an excellent overview of goodness-of-fit (gof) techniques for regression models. The exposition of the ideas and methods is necessarily brief, given the wide scope of the paper. So, I strongly encourage the authors to write a monograph on the topic, where main procedures can be developed in detail. I am convinced that it will help researchers interested on the topic, fostering further advances in this field.

Although it is really hard to add something interesting to this nice review, I would like to draw attention to the following fact. The manuscript cites two papers, Van Keilegom et al. (2008) and Hušková and Meintanis (2009), which deal with the same problem, that of testing gof for a parametric model for the regression function, based on comparing the distribution of the residuals under the null hypothesis and without assuming it. This assessment is interpreted in terms of the cumulative distribution function in the first paper, and in terms of the characteristic function in the second one. It is interesting to observe that the second paper requires weaker conditions for the validity of the procedures than the first one. Moreover, the same can be said of the papers by Heuchenne and Van Keilegom (2010) and Hušková and Meintanis (2010), which deal with testing gof for the distribution of the errors based on the cumulative distribution function and on the characteristic function, respectively.

Although the last decades have witnessed an increasing number of statistical procedures based on functions of the empirical characteristic process in a wide range of models and settings—for example, in point estimation (Feuerverger and McDunnough 1981a, 1981b), for the  $k$ -sample problem (Alba Fernández et al. 2008; Hušková and Meintanis 2008), in regression models the two papers cited above, just

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to name a few—, it seems that the application of these procedures for regression models is still rather scarce. As observed before, much of the appeal of these procedures is that the application usually requires weaker conditions than their analogues based on the empirical distribution function.

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