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# Testing homogeneity in Weibull error in variables models

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**Abstract** We discuss properties of the score statistics for testing the null hypothesis of homogeneity in a Weibull mixing model in which the group effect is modelled as a random variable and some of the covariates are measured with error. The statistics proposed are based on the corrected score approach and they require estimation only under the conventional Weibull model with measurement errors and does not require that the distribution of the random effect be specified. The results in this paper extend results in Gimenez, Bolfarine, and Colosimo (Annals of the Institute of Statistical Mathematics, 52, 698–711, 2000) for the case of independent Weibull models. A simulation study is provided.

**Keywords** Homogeneity test · Measurement errors · Corrected score · Accelerated failure time model