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LETTER TO THE EDITOR

Letter to the Editor

M. C. Jones

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Dear Professor Müller,

(1) The generalized inverse Weibull distribution of de Gusmão et al. (2011) is not "generalized" at all: it is simply the original inverse Weibull distribution reparametrized. The reparametrization is to rewrite the original scale parameter α as $\alpha\gamma^{1/\beta}$, where γ is a newly introduced parameter. Far from the "new distribution [being] much more flexible than the inverse Weibull distribution" (p. 616), it is actually a disadvantaged version of the usual inverse Weibull distribution in which the parameters γ and α are not identifiable. All figures, formulae etc. in the paper are simply those of the inverse Weibull distribution with α replaced by $\alpha\gamma^{1/\beta}$.

(2) A further way in which readers are misled is in the multiple regression model fitting of Section 11.2. The considerable improvement observed by fitting using the log-generalized inverse Weibull distribution in place of the log-inverse Weibull distribution is, in fact, due to the log-generalized inverse Weibull model including an intercept—parameterized as $\sigma \log(\gamma)$, where $\sigma = 1/\beta$—whereas the fitted log-inverse Weibull model did not include an intercept. Had the log-inverse Weibull regression model been fitted with an intercept in the first place, no improvement would have been observed.

Reference

de Gusmão FRS, Ortega EMM, Cordeiro GM (2011) The generalized inverse Weibull distribution. Stat Pap 52:591–619

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