



## Properties of a class of residuals in the zero adjusted inverse Gaussian regression models

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Residuals play an important role in checking model adequacy and in the identification of outliers and influential observations. In this paper, we studied a class of residuals for the zero adjusted inverse Gaussian regression model. This class of residuals is a function of a residual for the continuous component of the model and the maximum likelihood estimate of the probability of the observation assuming the zero value. Monte Carlo simulation studies are performed to examine the properties of this class of residuals in the zero adjusted inverse Gaussian regression model. Results showed that one residual of this class has some similar properties to the standard normal distribution in the studied model.

**Keywords:** diagnostic analysis; inflated regression models; quantile residual; ZAIG models.