

A NEW METHOD OF DETECTING THE POWER OF MISSPECIFIED LINK FUNCTIONS IN LOGISTIC REGRESSION MODEL

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ABSTRACT

In this paper a new technique of detecting the power of incorrectly specified link function based on family of segmented logistic regression model was proposed. The results of the simulation study indicate that the proposed method performs better than the commonly existing goodness of fit tests such as Classical Person and Deviance Test Statistic, Hosmer-and Lemshow Statistics, Osius and Rojek Normal approximation and Stukel's Test Statistics.

Keywords: logistic regression, link function, maximum likelihood estimates, goodness of fit