

Composite Likelihood Inference in Parameter Driven Models

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Abstract: In parameter driven models, the main problem is likelihood approximation and also parameter estimation. One approach to this problem is to apply simpler likelihoods such as composite likelihood. In this paper, we first introduce the parameter driven models and composite likelihood and then define a new model selection criterion based on composite likelihood. Finally, we demonstrate composite likelihood's capabilities in inferences and accurate model selection in parameter driven models throughout a simulation study.

Keywords: Count Data, Parameter Driven Models, MCEM Algorithm, Composite Likelihood, Kullback-Leibler Information, Window Subsampling.