

This paper deals with the zero-inflated Poisson distribution. First the Poisson model is defined and generalized to a zero-inflated model. The basic properties of this generalized model are derived. Afterwards the basics of the method of moments and the maximum likelihood method are described. Both of these are used to derive parameter estimates of such distribution. The feasibility of calculating the distribution of moment method estimates is analyzed. Then the asymptotic distribution of maximum likelihood estimates is derived and used to create confidence intervals. In the last chapter a numeric simulation of the derived asymptotic properties is performed. Special attention is paid to situations where regularity conditions are not met.