

## THE NEGATIVE BETA BINOMIAL DISTRIBUTION

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- **ABSTRACT:** Distribution mixture are flexible methods in the modeling of complex probability distributions starting from more simple tractable elements. In this work we obtain the mixture of the negative binomial and beta distributions, denominated negative beta binomial distribution. It depends on three parameters, shown over dispersion a infinity number of moments. Using an approximation of the log likelihood equations we estimate the parameters of the model. As an application we adjusted the negative beta binomial to data found in the literature and already analyzed using negative binomial distribution..
- **KEYWORDS:** Mixture of distributions; negative beta binomial distribution; beta distribution; moments; maximum likelihood estimators.

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