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Santanu Chakraborty* (schakraborty@utpa.edu), Department of Mathematics, University of Texas - Pan American, 1201 West University Drive, Edinburg, TX 78539. *Zero Inflated Negative Multinomial Distributions.*

Negative Multinomial distributions do exist in the literature for about half a century now. This particular multivariate distribution is considered if there is a possibility of more than one type of failures before achieving the required number of successes in an experiment. In such a case, Negative Multinomial distribution is the distribution of the failure vector where each vector component is a particular type of failure. Now it may so happen in an experiment that many of these failure types occur very rarely before getting the desired number of successes. So, for the corresponding data set in the experiment, there may be several zeros for some or even all of the components in the failure vector. For modeling such multivariate data, it makes sense to talk about zero inflated version of the Negative Multinomial distribution. In this article, we formally introduce Zero Inflated Negative Multinomial (ZINM) distribution. (Received August 29, 2014)