ABSTRACT

THE MOMENT, CUMULANT AND CHARACTERISTIC FUNCTION OF GENERALIZED GAMMA DISTRIBUTION

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In this paper introduces characteristic of generalized gamma distribution. Generalized gamma distribution is a family of continue probability distribution used in modeling survival data. The generalized gamma distribution is generalization of gamma distribution. Gamma distribution have two parameters, shape parameter (d) and scale parameter (a). Although, generalized gamma distribution have three parameters, shape parameters (d, p) and scale parameter (a). Where, generalized gamma distribution will be gamma distribution when $p = 1$. This research are to determine the momen, cumulant and characteristic function of the generalized gamma distribution. The results show that the momen generating function of generalized gamma distribution defined in this research is same as to the momen generating function of generalized gamma distribution from Stacy's Journal. The cumulant obtained can be determine skewness and kurtosis of generalized gamma distribution. Then, will be determine momen of (itX) or expectations of e^{itX} or characteristic function of generalized gamma distribution. And then, simulation graphs show that graphs probability density function of generalized gamma distribution, skewness of generalized gamma distribution is skew to the right and kurtosis of generalized gamma distribution is leptokurtic.

Keywords : *gamma distribution, generalized gamma distribution, momen, cumulant, characteristic function, skewness, kurtosis.*