

ABSTRACT

MOMENT, CUMULANT AND CHARACTERISTIC FUNCTION OF GENERALIZED LAMBDA DISTRIBUTION

By

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Generalized Lambda Distribution originally proposed by Ramberg and Schmeiser (1974) is a four parameter generalization of Tukey's Lambda Family. Characteristic of distribution can be known by using moment, cumulant and characteristic functions. Karian and Dudewics (2000) introduced the moment method estimation on the Generalized Lambda Distribution using Z expectation where Z is the transformation of one of the parameters from Generalized Lambda Distribution when the lambda value is equal to 1. On the other hand, in this research we derive the moment based on the moment generating function of Generalized Lambda Distribution. Moreover, based on moment generating function, we also develop characteristic function of Generalized Lambda Distribution by decomposing e^{itx} and e^{tx} into MacLaurin series. Using simulation, the skewness of generalized Lambda distribution is skew to the left and kurtosis of generalized Lambda distribution is leptokurtic.

Keywords: *Generalized Lambda Distribution, Moment, Cumulant, Characteristic Function*