

## ABSTRACT

### CHARACTERISTICS OF PARAMETER GENERALIZED EXPONENTIAL DISTRIBUTION USING GENERALIZED METHOD OF MOMENT

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Generalized Exponential distribution is a Generalization of the standard Exponential distribution by adding new parameter that shape parameter ( $\alpha$ ). Generalized Exponential distribution obtained from the Gompertz-Verhulst distribution with the value of  $p = 1$ . This distribution will work very well if their parameter estimator are known. Related to parameter estimation for continuous distribution we know several methods of estimation, one of methods is Generalized Method of Moment. In this study, we will examine the characteristics of parameter estimator  $(\hat{\alpha}, \hat{\lambda})$  Generalized Exponential distribution using Generalized Method of Moment that included the characteristic of unbiasedness, minimum variance, and consistent also investigate the asymptotic variance-covariance. The results show that the characteristics of parameter estimators  $(\hat{\alpha}, \hat{\lambda})$  are unbiased, minimum variance because the variance of  $(\hat{\alpha}, \hat{\lambda})$  attains Rao-Cramer lower bound and consistent also we are obtained the analytic of the asymptotic variance-covariance parameter estimator  $(\hat{\alpha}, \hat{\lambda})$ . Moreover, with using software R version 3.1.2 presented by the graph of probability density function of Generalized Exponential distribution to see the behavior of the Generalized Exponential distribution.

Keywords: *Generalized Exponential Distribution, Generalized Method Of Moment, Unbiasness, Minimum Variance, Consistent, Asymptotic Variance-Covariance.*