

## ABSTRACT

### CHARACTERISTICS OF PARAMETER ESTIMATOR GENERALIZED LOGISTIC DISTRIBUTION OF TYPE IV USING GENERALIZED METHOD OF MOMENT

By

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Generalized logistic distribution of type IV is a generalization of the standard logistic distribution by adding two new parameters that shape parameter  $(\alpha, \beta)$ . Standard logistic distribution obtained from the general logistics distribution with the value of  $\mu = 0$  and  $\sigma = 1$ . 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  $(\hat{\alpha}, \hat{\beta})$  generalized logistic distribution of type IV 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  $(\hat{\alpha}, \hat{\beta})$  are unbiased, minimum variance because the variance of  $(\hat{\alpha}, \hat{\beta})$  attains Rao-Cramer lower bound and consistent also we are obtained the analytic of the asymptotic variance-covariance parameter estimator  $(\hat{\alpha}, \hat{\beta})$ . Moreover, presented by the graph of probability density function of generalized logistic distribution of type IV using software R version 3.1.2, to see the behavior of the generalized logistic distribution of type IV.

Keywords : *Generalized Logistic Distribution Of Type IV, Generalized Method Of Moment, Unbiasness, Minimum Variance, Consistent, Asymptotic Variance-Covariance*