ABSTRACT

THE CHARACTERISTICS OF PARAMETER ESTIMATORS GENERALIZED GAMMA DISTRIBUTION (α, β, θ) USING METHOD OF GENERALIZED MOMENT

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Generalized gamma distribution (α, β, θ) is a continous probability distribution with three parameters, where as $\alpha > 0$, $\beta > 0$, and $\theta > 0$. Parameters α and β called shape parameters and parameter θ called scale parameter. If parameter β is equal to 1, then *generalized* gamma distribution (α, β = 1, θ) become gamma distribution (α, θ). In this research, we will examine the characteristics of unbiasness, minimum variance, and consistent also investigate the asymptotic variance – covariance. The results show that the characteristics of parameter estimators generalized gamma distribution ($\hat{\alpha}$, $\hat{\beta}$, $\hat{\theta}$) are unbiased, minimum variance and consistent also we are obtained the analytic of the asymptotic variance – covariance of parameter estimators ($\hat{\alpha}$, $\hat{\beta}$, $\hat{\theta}$). Moreover, presented by the graph of probability density function of *generalized* gamma distribution using software R.3.1.2 to see the behavior of *generalized* gamma distribution.

Keywords: *Generalized Gamma Distribution, Parameter Estimation, Method of Generalized Moment.*