Anggi Pangestu Pratama, 2019. **Parameter Estimation of Pareto Distribution Type I Using Objective Bayesian Method**. This research is guided by Dr. Ardi Kurniawan, M.Si and Drs. Suliyanto, M.Si, Statistics Bachelor, Departement of Mathematic, Faculty of Science and Technology, Airlangga University, Surabaya.

ABSTRACT

This research is supposed to obtain the parameters estimation of Pareto distribution. Method used to obtain the parameters estimation result is objective Bayesian method. The parameters which will be estimated are shape parameter (θ) and scale parameter (β). Estimation of parameter β can't be done using Jeffrey's prior because its posterior distribution that is zero. Thus, estimation of both parameter θ and β using Uniform (0,1) can be done. The estimation result of parameter θ and β are implicit so that it will be done by data application. Data used is generated data from simulation result that is based on Pareto distribution with n = 25, 50, and 100, θ = 0.75, and β = 0.15. The data implementation as simulation process obtains the smallest MSE of parameter θ is 0.33924 on n = 100 and the parameter estimation is 0.1676. Therefore, the smallest MSE of parameter β is 0.009847 and the parameter estimation is 0.24923. Moreover, applying data with inflation data in 2014-2018 gives the estimation result of parameter θ that is 0,277975. Furthermore, estimation of parameters θ and β using Uniform (0,1) continuously, 0.996938 with MSE is 1.43248 and 1.0000 with MSE is 0.944978.

Keywords : Pareto Distribution, Jeffrey's Prior, Uniform (0,1) Prior, Objective Bayesian Method