V. KESIMPULAN

Berdasarkan hasil penelitian yang telah dilakukan dapat diperoleh kesimpulan sebagai berikut:

1. Diperoleh momen ke-r dari distribusi log-logistik (β,α) adalah

$$M^r{}_X(t|0) = \beta^r \boldsymbol{B}\left(\frac{\alpha+r}{\alpha}, \frac{\alpha-r}{\alpha}\right)$$

2. *Cumulans* dari distribusi log-logistik (β,α) adalah

$$K_r = \beta^r \boldsymbol{B}\left(\frac{\alpha+r}{\alpha}, \frac{\alpha-r}{\alpha}\right) - \sum_{n=1}^{r-1} \binom{r-1}{n-1} K_n \beta^{r-n} \boldsymbol{B}\left(\frac{\alpha+(r-n)}{\alpha}, \frac{\alpha-(r-n)}{\alpha}\right)$$

Kemiringan dari distribusi log-logistik (β,α) adalah

$$Skew[X] = \frac{\left(\begin{array}{c} \boldsymbol{B}\left(\frac{\alpha+3}{\alpha}, \frac{\alpha-3}{\alpha}\right) - 3\boldsymbol{B}\left(\frac{\alpha+2}{\alpha}, \frac{\alpha-2}{\alpha}\right) \boldsymbol{B}\left(\frac{\alpha+1}{\alpha}, \frac{\alpha-1}{\alpha}\right) \\ +2\left(\boldsymbol{B}\left(\frac{\alpha+1}{\alpha}, \frac{\alpha-1}{\alpha}\right)\right)^3 \end{array}\right)}{\left(\boldsymbol{B}\left(\frac{\alpha+2}{\alpha}, \frac{\alpha-2}{\alpha}\right) - \left(\beta\, \boldsymbol{B}\left(\frac{\alpha+1}{\alpha}, \frac{\alpha-1}{\alpha}\right)\right)^2\right)^{\frac{3}{2}}}$$

Keruncingan dari distribusi log-logistik (β,α) adalah

$$\alpha_4 = \frac{\left(\boldsymbol{B}\left(\frac{\alpha+4}{\alpha},\frac{\alpha-4}{\alpha}\right) - 4\ \boldsymbol{B}\left(\frac{\alpha+1}{\alpha},\frac{\alpha-1}{\alpha}\right)\boldsymbol{B}\left(\frac{\alpha+3}{\alpha},\frac{\alpha-3}{\alpha}\right) - 3\left(\boldsymbol{B}\left(\frac{\alpha+2}{\alpha},\frac{\alpha-2}{\alpha}\right)\right)^2\right) + 12\,\boldsymbol{B}\left(\frac{\alpha+2}{\alpha},\frac{\alpha-2}{\alpha}\right)\left(\boldsymbol{B}\left(\frac{\alpha+1}{\alpha},\frac{\alpha-1}{\alpha}\right)\right)^2 - 6\left(\boldsymbol{B}\left(\frac{\alpha+1}{\alpha},\frac{\alpha-1}{\alpha}\right)\right)^4}{\left(\left(\boldsymbol{B}\left(\frac{\alpha+2}{\alpha},\frac{\alpha-2}{\alpha}\right) - \left(\beta\,\boldsymbol{B}\left(\frac{\alpha+1}{\alpha},\frac{\alpha-1}{\alpha}\right)\right)^2\right)\right)^2}$$

Dan fungsi karakteristik dari distribusi log-logistik (β,α) adalah

$$\Phi_X(t) = \sum_{n=0}^{\infty} \frac{(it\beta)^n}{n!}\ \boldsymbol{B}\left(\frac{\alpha+n}{\alpha},\frac{\alpha-n}{\alpha}\right)$$