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KEY WORD: PROBABILITY OF SURVIVAL

SANIT DUANGSAWAT : ESTIMATION OF THE PROBABILITY OF SURVIVAL IN
CASE OF RIGHT-CENSORED DATA. THESIS ADVISOR : ASSIST. PROF. CAPT.
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The objective of this study is to compare estimation methods for survival probability with right-censored data by comparing their mean absolute percentage errors (MAPE). The estimation methods in this study are The Actuarial Method, Estimator A, Estimator B, and Estimator C. The experimentation data are generated through the Monte Carlo Simulation technique. The analysis of data is performed in case of right-censored data from future-life-time Weibull and Gompertz Distribution and from withdrawal Uniform and Beta Distribution. This study is made on ages between 25 and 65 years old ; percent of withdrawal 10%, 20%, 30% and 40% ; sample sizes 300, 500, 700 and 1,000. The experiment is repeated 2,000 times under each case.

The results of this study are as follows :

For each distribution, sample size and percent of withdrawal, Estimator C has the lowest MAPE. In each percent of withdrawal, when the sample size increases, the MAPE's of all four methods decrease. But in each sample size, when the percent of withdrawal increases, the MAPE's of all four methods increases.

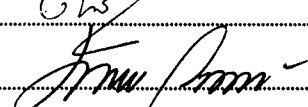
Mean absolute percentage error varies indirectly with sample size and varies directly with percent of withdrawal.

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