Response to the Reviewer 2

Journal: Symmetry

Article ID: symmetry-2409880

Title name: Confidence intervals for mean and difference between means of delta-lognormal distributions based on left-censored data

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We revised the manuscript in accordance with your advice.

1. **Avoid using abbreviations in the abstract.**
   Response: Abstract (Page 1 of the revised manuscript), we revised it.

2. **It is not clear whether the mean, for example, belongs to the log-normal distribution or normal distribution. The authors said that the random variable X follows the log-normal distribution, then used Y=log(X) and obtain the properties of Y. My question now is what is the distribution of Y?**
   Response: Lines 127-128 (Page 3 of the revised manuscript), we added "Since Y_i has the normal distribution.".

3. **More detail should be added regarding the Bayesian approach. What are the used priors? How to get the posterior distribution?**
   Response: Lines 184-186 (Page 5 of the revised manuscript), we added "The prior distribution is based on the experimenter's belief. In this paper, the Jeffreys Independence prior is used, which is defined as $p(\mu,\sigma^2) = p(\mu)p(\sigma^2)$.".

4. **More discussion should be added regarding the left censoring with examples.**
   Response: Lines 576-578 (Page 22 of the revised manuscript), we added "such as particulate matter 2.5 data and rainfall data. Owen and DeRouen [21] estimated the mean for LN distribution containing zeroes and left-censored values.".

5. **In the Bayesian approach, the authors used confidence intervals based on the Bayesian approach. This is incorrect, use credible interval instead of confidence interval.**
   Response: We changed from "confidence interval" to "credible interval" in the revised manuscript.

6. It is known that the mean of the log-normal distribution is positive. How the authors selected negative values for mu in the simulation, see Table 1.

Response: Lines 450-453 (Page 14 of the revised manuscript), we added "Note that the estimate of μ is the maximum likelihood estimator for the censored log-normal distribution. The estimate of μ is the range between $-\infty$ and ∞. If $\mu+\frac{1}{2}\sigma^2$ is greater than zero, then $\theta=\exp\left(\mu+\frac{1}{2}\sigma^2\right)$ is positive value.".

7. The same thing in real data analysis. The estimate of mu is negative. How?

Response: The estimate of mu is not the mean of the log-normal distribution, but the estimate of mu is the maximum likelihood estimator of censored log-normal distribution. It is the range between $-\infty$ and ∞.

Best Regards,
Warisa Thangjai and Sa-Aat Niwitpong
The authors