Review Form 3

Journal Name:	**Asian Journal of Probability and Statistics**
Manuscript Number:	**Ms_AJPAS_127301**
Title of the Manuscript:	**On a New Decile-Mean Confidence Interval Estimator of Mean for Normal and Skewed Distributions**
Type of the Article	**Research Article**

General guidelines for the Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	**In this article, the authors proposed a new confidence interval method called the corrective decile t confidence interval (cdt-CI) to address the limitations of the decile t confidence interval (dt-CI), which needs to be improved with maintaining coverage probability, especially for larger sample sizes and skewed data Through simulations involving normal, chi-squared, log-normal, and gamma distributions, as well as real-life examples, the cdt-CI demonstrates improved performance and robustness compared to dt-CI and is often on par with or better than other methods like the bootstrap-t CI (bt-CI). The study concludes that cdt-CI is an efficient, non-bootstrapping alternative for constructing confidence intervals, particularly useful when data exhibits skewness. The paper provides a valuable contribution to interval estimation for the mean of symmetric and skewed distributions, ensuring its suitability for publication in this journal.**	
Is the title of the article suitable? (If not please suggest an alternative title)	**Yes, the title "On a New Decile-Mean Confidence Interval Estimator of Mean for Normal and Skewed Distributions" is suitable. It clearly indicates that the article introduces and discusses a novel type of confidence interval estimator for the mean, specifically based on decile means, and highlights that the method is applicable to both normal and skewed distributions. This provides readers with a good understanding of the focus and applicability of the research.**	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	**The abstract is well-written and effectively conveys the main points of the study. However, I have two suggestions for improvement:** **(i) The authors reference their previous work ("Mokhtar, Yusof & Sapiri, 2024") multiple times throughout the abstract. To enhance readability and reduce redundancy, it would be more effective to mention the previous work only once and then refer to it as "prior research" in subsequent references.** **(ii) The abstract is somewhat lengthy and could benefit from being condensed. Summarizing it in a more concise manner would make it simpler and more engaging, ensuring that the key points are communicated efficiently.**	
Are subsections and structure of the manuscript appropriate?	**Yes, the subsections and structure of the manuscript are well-organized and appropriate. They contribute to a clear and logical flow, making the content easy to follow and understand.**	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	**The manuscript is scientifically robust and technically sound due to its comprehensive approach and detailed methodology. The authors carefully evaluate the performance of various CI methods using both real-life examples and simulations, ensuring their analysis is grounded in practical and theoretical relevance. The statistical methods applied are appropriate for assessing CI performance across different distribution types, including normal and skewed data, which adds to the rigor and breadth of the study. Additionally, the development and validation of the new cdt-CI method are well-documented and supported by substantial evidence, highlighting its effectiveness and making the study's conclusions credible and reliable.**	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	**The provided references are both sufficient and recent, meeting the needs of the study and effectively supporting the work. However, some corrections are required in the "REFERENCE" section to improve consistency and accuracy. Specifically:** **(i) In reference [1], there should be an "&" between the authors Abu-Shawiesh, M. O. A. and Saghir, A.** **(ii) Reference [2] has been split into two separate references, [2] and [3], and should be merged.** **(iii) The journal names are not presented uniformly. For example, in reference [1], the full name**	
	"Journal of Modern Applied Statistical Methods" is used, while in reference [5], the abbreviated form "Ann. Math. Statist" appears. Please ensure that journal names are	

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	presented consistently throughout the reference list. **(iv) Additionally, it is recommended that the references be cross-checked for any other potential inconsistencies or errors, ensuring they are formatted correctly and accurately reflect the sources cited.**	
Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	**Yes, the language is suitable for scholarly communication. It is clear and well-structured. The authors should correct the following typing and grammatical mistakes:** **(i) In the first paragraph of section 1 (Introduction), the sentence "Many classical estimation methods ... distribution is normal." is repeated.** **(ii) In the last paragraph of section 1 (Introduction), the second last line contains a grammatical error: "... studied section 5", which should be corrected to "... studied in section 5".**	
Optional/General comments	**Additionally, the authors should consider the following technical clarifications:** **(i) In subsection 2.1, equation (2), the variable s_2 is used but not defined. Please define it.** **(ii) In subsection 2.3, the authors define SE(\bar(X)_b) incorrectly. Please correct this definition.**	

PART 2:

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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