

### Review Form 3

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|--------------------------|---|
| Journal Name:            | <a href="#">Asian Journal of Probability and Statistics</a>   |
| Manuscript Number:       | Ms_AJPAS_130810   |
| Title of the Manuscript: | Application of Sensitivity & Principal Component Analyses for Modelling of Safety Parameters for Oil & Gas Companies in Niger Delta |
| Type of the Article      | Original 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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#### **Important Policies Regarding Peer Review**

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### Review Form 3

#### PART 1: Comments

|   | Reviewer's comment   | Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i> |
|---|--|---|
| <b>Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.</b> | In my opinion, this manuscript can be considered as an important contribution to the community. By addressing the limitations of classical multiple regression models and demonstrating the effectiveness of optimization techniques through PCR, the study offers insights into improving predictive accuracy and model performance. Additionally, the findings emphasize the role of safety constructs, such as management commitment and safety training, in enhancing employee productivity, which can inform better safety management practices in similar industrial contexts. |   |
| <b>Is the title of the article suitable? (If not please suggest an alternative title)</b>   | The title is descriptive and conveys the study's main focus.   |   |
| <b>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.</b>      | The abstract mentions the use of sensitivity analysis and principal component regression but does not clearly state the specific research questions or hypotheses being addressed. Adding a brief mention of the study's goals would make the abstract more informative.<br><br>Terms like "Gaussian method" or "optimization technique" might not resonate with all readers. Consider simplifying or briefly explaining these terms to make the abstract accessible to a broader audience.  |   |
| <b>Is the manuscript scientifically, correct? Please write here.</b>  | The manuscript employs valid statistical methods to analyze the relationship between safety parameters and employee productivity. These methods are appropriate for handling the study's research questions and dataset, and the results are presented clearly. Some improvements suggested would be to explain unusual results such as R square > 100% (section 3.4.1), and acknowledgment of limitations related to data collection and analysis.  |   |
| <b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b>                              | The manuscript includes a sufficient number of references, with some recent studies.   |   |
| <b>Is the language/English quality of the article suitable for scholarly communications?</b>  | I found a grammatical error on page 3, under the "safety knowledge" paragraph, 1 <sup>st</sup> line: "understanding that employees has regards to safety protocols". It should be has instead of have. The phrase "The goodness of fit values are most likely to exceed the maximum limit of 100% in classical multiple regression models" (section 3.4.1) could be rephrased for clarity.   |   |
| <b>Optional/General</b> comments  | The issues I noticed in this paper are mostly fixable and not to do with the findings itself.  |   |

#### PART 2:

|   | Reviewer's comment   | Author's comment <i>(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)</i> |
|---|--|--|
| <b>Are there ethical issues in this manuscript?</b> | <i>(If yes, Kindly please write down the ethical issues here in details)</i> |  |

#### Reviewer Details:

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|----------------------------------|---------------------------|
| Name:                            | Abhinav Chattaraj         |
| Department, University & Country | Rutgers University, India |