**Paper ID: 8402210**

**Paper title:** An Analytical Framework for Measuring Inequality in the Public Opinions on Policing – Assessing the impacts of COVID-19 Pandemic using Twitter Data

Dear editor,

Thank you for accepting our paper for publication in your journal, and the opportunity to improve the paper by responding to the referee’s comments. We have categorised the reviews of the referee into three themes, namely: the **General issues**; **No. 1 Issues**; and, **No. 2 Issues**. Firstly, we detail our response to these issues raised and the subsequent amendments that we have made to the manuscript. Secondly, we made a request regarding the placement of **Figure 5** in the final manuscript. And thirdly, we provide a *list of final revised documents* submitted.

Yours faithfully,

Monsuru Adepeju and Fatai Jimoh

**\*\*\***

**Issue 1: General Issue.**

**\*\***

***Reviewer comment 1:*** *The “Related Work ” part seem to partly overlap with the literature review of the Introduction section. For the sake of coherence, I suggest to combine these two sections into one portion.*

**Author(s) response:** Thank you very much for your observation.We have now identified the overlapping parts between the two sections and addressed them accordingly. While we agree that both sections can be combined into one portion, we will like each section to be separate because of their separate focus.

**\*\***

***Reviewer comment 2:*** *In my opinion, the “Sentiment Analysis” and “Opinion analytics” have some difference in meaning. The heading* “3.2 *Sentiment Analysis” could be replaced with* “3.2 *Opinion analytics” so that it agree with the content in the Figure* 1.

**Author(s) response:** Thank you for this observation. We have now changed the heading “3.2 Sentiment Analysis” to “3.2 Opinion Analysis”, and modified related sections accordingly.

**\*\***

***Reviewer comment 3:*** *The authors should include either define each abbreviation used (e.g. AFINN), the first time it appears in the manuscript.*

**Author(s) response:** Thank you. This issue has now been addressed accordingly.

**\*\***

***Reviewer comment 4:*** *The source of the equation* (1) *should be indicated clearly.*

**Author(s) response:** Thank you very much. We have now referenced the equation accordingly.

**\*\***

***Reviewer comment 5:*** *Your conclusion is rather too bulky. Rewrite the conclusion and let it be in a summarized form. References in the Conclusion part should be avoided.*

**Author(s) response:** We thank the reviewer for this observation. We have now modified the conclusion into a summarized form. References in the Conclusion part are removed.

**No. 1 Issues.**

**\*\***

***Reviewer comment 1-9: “****Notes on format*:**…..”**

**Author(s) response:** We have now addressed all the notes on formatting as highlighted by the reviewer (Please, see the final revised manuscripts provided on the journal’s template)

**No. 2 Issues.**

**\*\***

***Reviewer comment 1: “****Firstly, my general comment would be “How many people use twitter? Does the twitter represent the entire population to be represented for public opinion? Other social media accounts such as Facebook has higher public opinion compared to Twitter*”

**Author(s) response:** We have now addressed these questions briefly in relation to our own paper by providing a summary statistics describing the representativeness of our sampled data in relation to the entire population (please, see section 3.1(b).

**\*\***

***Reviewer comment 2: “***The full form of abbreviations such as Police Force Areas (PFA) need to be in the title case i.e. first alphabet needs to be capital”

**Author(s) response:** Thank you very much.We have now changed the abbreviation “PFA” to “Pfa”.

**\*\***

***Reviewer comment 3: “****Page* 2 4th paragraph: “[15] *provides an overview….” This sentence does not makes sense. Use name of author when starting with a reference such as Paradis et al.* [15] ….

**Author(s) response:** Thank you.We have now addressed this issue accordingly.

**\*\***

***Reviewer comment 4:*** *Section* 2.1 1st *paragraph: I did not understand this. The dates authors present are January* 2019 – *March* 2020 *and December* 2019 *and May* 2020. *I think these dates overlap so categorizing with positive or negative reviews does not make sense.*

**Author(s) response:** Thank you for the observation. We have double-checked the reference and we found the dates to be correct (overlapping) as the author of the article presented in their work.

**\*\***

***Reviewer comment 5****: Author claim that no study suggest use if Twitter data to examine policing Covid 19 pandemic. Please check the following reference “Nikolovska, M., Johns….”*

**Author(s) response:** Thank you for your observation. What we intended to say is that *no study have examined policing Covid 19 pandemic using both Twitter data and Opinion Analysis approach. We have re-written this claim very clearly in order to prevent confusion (Please, see the Introduction section).*

**\*\***

***Reviewer comment 5****: “Bigram based sentiment analysis has been obsolete technique for analyzing sentiments. There are advanced versions of sentiment analysis tools. Please check the paper…..2*

**Author(s) response:** Thank you for the observation. Our goal is to deploy the ‘Lexicon-based’ opinion analysis approach. We plan to look into machine learning approach in the future.

**\*\***

**\*\*\***

**Request for the placement of Figure 5**

For easy readability, we request that **figure 5** should be placed to cover double columns, instead of single column format that will be used for the **figures 1, 2, 3, 4,** and **6**.

**\*\*\***

**List of revised documents submitted**

|  |  |  |
| --- | --- | --- |
| **SN** | **File name** | **Description** |
| 1 | Figure 1.png, figure 2.png, figure 3.png, figure 4.png, figure 5.png, figure 6.png | Figures |
| 2 | “SUPPLEMENTARY\_material\_....doc” | Supplementary material |
| 3 | “REVISED\_MANUSCRIPT\_with\_TRACKED\_CHAN…doc” | Revised manuscript with tracked changes. |
| 4 | “FINAL\_REVISED\_MANUSCRIPT\_typeset\_on\_the\_Temp..doc” | Final revised manuscript already typesetted on the journal’s template. |