

Review of “Estimated Covid-19 burden in Spain: ARCH underreported non-stationary time series”

Reviewer 1

Reviewer Comment C 1 — Title, abstract, keywords weren’t fitted together. The main approach ARCH wasn’t interested within abstract in methods paragraph, while in title and keywords appear as main proposed approach.

Reply: XXXXXXXXXXXXXXXXXXXXXXXX

Reviewer Comment C 2 — The problems and objectives don’t mentioned clearly in abstract.

Reply: XXXXXXXXXXXXXXXXXXXXXXXX
“XXXXXXXXXXXXXXXXXXXXX”

Reviewer Comment C 3 — “Estimation” is not fitted with time series, while “Forecasting” or “prediction” is more appropriate.

Reply: XXXXXXXX

Reviewer Comment C 4 — The measurements of error should be used such as MAPE, RMSE, ans others.

Reply: XXXXXXXXXXXXXXXX

Reviewer Comment C 5 — Discussions and conclusions should include more details about ARCH and its results.

Reply: XXXXXXXXXXXXXXXXXXXXXXXX

Reviewer 2

Reviewer Comment C 1 — Good manuscript but the statistics in paper were beyond my expertise to comment.

Reply: We thank the reviewer for their critical reading of our work and their positive comment.

Reviewer 3

Reviewer Comment C 1 — In this paper, the authors employ a method to deal with under-reported data and apply it to a dataset of COVID-19 cases in Spain. Although the method is of interest, the authors are not providing new methodological tools, but only applying existing ones. Besides, I have the following specific comments:

Reply: We thank the reviewer for their critical reading of our work and their comments and suggestions, responded below.

Reviewer Comment C 2 — The simulation study carried out by the authors is not motivated enough, in my opinion. The method has already been tested by their authors, so why performing this simulation study?

Reply: XXXXXXXXXXXXXXXX

Reviewer Comment C 3 — In Figures 1 and 2 I feel that something is wrong with the plot. For instance, in Figure 2, I don't understand the values around 2022-01. Maybe the upper estimation for that time point is greater than the maximum value fixed for the y-axis?

Reply: XXXXXXXXXXXXXXXX

Reviewer Comment C 4 — I also feel that there might be some inconsistency between the results highlighted in page 18 and those provided in Table 2 (estimates of q for Aragon and Extremadura).

Reply: XXXXXXXXXXXXXXXX

Reviewer Comment C 5 — In the Conclusions, there are some comments referred to the covariates included in the model. I would consider moving these results from the Supplementary Material to the main text.

Reply: XXXXXXXXXXXXXXXX