Review of: "A Multi-factor Model of COVID-19 Epidemic in California"

Jianpeng Wang[1]

1 Central South University

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Review of article entitled ‘A Multi-factor Model of COVID-19 Epidemic in California’

In this paper, the authors mainly describe a multi-factor model of the spread of COVID-19 across the 58 counties of California from March 2020 to June 2023. The model provides estimates of cumulative cases and duration of the epidemic versus 5 independent variables. The independent variables are the following factors: population, population density, family income, Gini coefficient, and land area (size) of county. The correlation coefficients of these factors are used to reduce the error in their model. Below are comments that could be used to further refine the article.

Below are primary comments which the authors may, as well, wish to consider:

1“The model produces two linear equations – one for cumulative cases and the other for duration of infection” what’s this meaning? We can’t use the model to produce linear equations. This is misstatement.

2.The earliest K-M model is not SEIR, but SIR Model.

3.“Specifically, population and population densities range from 1,200 to 9.9 million and 1.6 to 17,688 people per square mile.” Can the number of people be 1.6?

4.As for the result in picture 2, I think it is incorrect. Especially, the relationship between Gini coefficient and Cumulative Cases.

5.As we all know, The spread of COVID-19 is a wave push. So, isn't your linear growth forecast in Pictures 3 and 4 a little unreasonable?