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

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COMMENTS:

The paper "A Multi-factor Model of the COVID-19 Epidemic in California" focusses on fitting the data to a *model* rather than making predictions.

The selection of the factors – independent variables – used to estimate the infection severity –dependent variable – is based on the author's hypotheses on the *temporal association* among factors.

Extension of the paper:

It would have been nice if authors included *spatial factors* in the model, by clustering counties based on data or correlation. This will allow authors to see the *spatial correlation* between counties with close proximity which influence the spread of COVID-19 epidemic in California.

Spatial autocorrelation:

Spatial autocorrelation allows us to understand the variation of a phenomenon within a geographical framework of analysis. If the analyzed phenomenon tends to form clusters, then the existence of positive autocorrelation is evident. On the contrary, if the measures of the variable in neighboring units are dissimilar, that is, if the phenomenon tends to be dispersed, then the spatial autocorrelation is negative. In this case, if an attribute is present in a given location, it will tend to be different in neighboring locations. Finally, when the phenomenon behaves randomly and no defined or structured behavior is identified, it is said that there is no spatial autocorrelation. In practical terms, this last case implies that the presence or absence of an attribute in a given location does not apparently influence the extent of that attribute in neighboring locations.

Best regards

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