

# COVID-19 Risk Level Dataset and Impact of China's Zero-COVID Policy on Economic Activities \*

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## Abstract

This paper presents the first investigation into the economic consequences of the zero-Covid policy implemented by the Chinese government as a pilot experiment in using big data for country management from 2020 to 2022. Our study includes an original county-daily panel data set on the COVID risk level issued by the State Council of the PRC. To measure economic performance, we use satellite data on nightlight and PM2.5, and cell phone data on mobility index. Our findings indicate that the zero-Covid policy did not result in significant economic loss in 2021. However, the policies had a significant negative impact on economic performance measured by night light, pollution, and mobility in 2022, when the Omicron variant emerged. Our research indicates that despite the Chinese government's control of big data to mitigate the information asymmetry between the local and central government, an inflexible target setting could still fail easily.

**Keywords:** COVID-19, zero-Covid policy, unemployment, labor market

**JEL codes:** I12, J20, J18

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