

## ECONOMIC FINDING

# Post-Lockdown Economic Recovery in China

*Qin Chen, Business Big Data; Zhiguo He, Fuji Bank and Heller Professor of Finance, Chicago Booth; Chang-Tai Hsieh, Phyllis and Irwin Winkelried Professor of Economics and PCL Faculty Scholar, Chicago Booth; Zheng Michael Song, Professor, Department of Economics, The Chinese University of Hong Kong*

The end of Wuhan's economic lockdown on April 8, 2020 saw a quick uptick in manufacturing but slower growth in services and among businesses.

The Chinese government ended the 76-day lockdown of Wuhan on April 8, 2020. Outside Wuhan, many local governments had already eased restrictions on movement and shifted their focus to reviving the economy. In this work, the authors document the post-lockdown economic recovery in China. The main findings are summarized as follows:

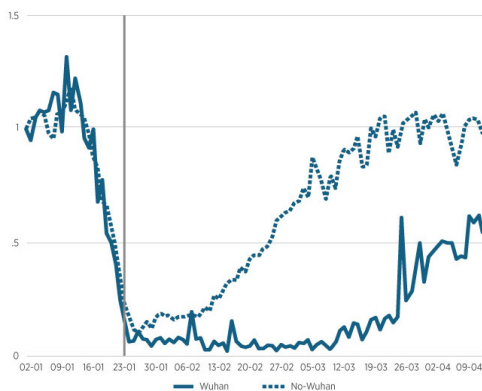
Official statistics suggest a quick recovery in manufacturing, which is corroborated in non-official data on city-to-city truck flows (see Figure 1) and air pollution emissions (see Figure 2).

Electricity consumption, retail sales and catering income suggest a much more persistent output decline in services. Business registration data also show less firm entry in services.

There is huge cross-region heterogeneity, with the southeast region experiencing the strongest initial recovery, according to the authors' data.

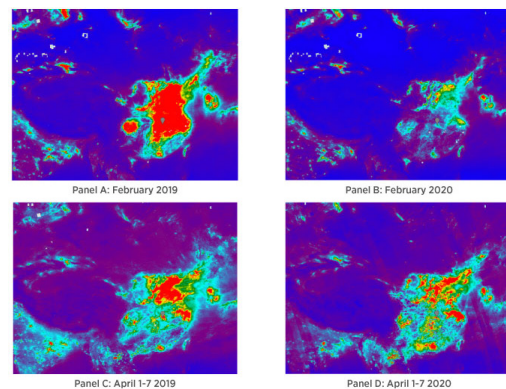
Small businesses were hit hard, with February sales down 35% from 2019, and they grew slowly in March. April will be the key month to determine the recovery speed.

**Figure 1** • Truck Flows Among Provincial Chinese Capital Cities



Notes: This figure shows truck flows among provincial Chinese capital cities, with the beginning day of the year normalized to one. The black bar marks Wuhan lockdown. The solid and dotted lines are for truck flows that involve and do not involve Wuhan, respectively. Based on 2018 regional trade flow data as weights for aggregation. Data Source: G7.

**Figure 2** • Nitrogen Dioxide and Economic Activity



Notes: These heat maps gauge the intensity of industrial activities by satellite observation of nitrogen dioxide. Panel A and B show a dramatic reduction of nitrogen dioxide concentration in February, while the bottom panels suggest a revival in industrial output.