

# We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900

Open access books available

186,000

International authors and editors

200M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index  
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?  
Contact [book.department@intechopen.com](mailto:book.department@intechopen.com)

Numbers displayed above are based on latest data collected.  
For more information visit [www.intechopen.com](http://www.intechopen.com)



# Introductory Chapter: The Outbreak of Coronavirus (COVID-19) - Death and Terror in 2020

*Syed Abdul Rehman Khan and Zhang Yu*

## 1. Death and terror

Until now, the world still has been experiencing challenges, such as weapon war, poverty, and bombing attacks for different reasons, which almost makes the people living in peace accustomed to the continuous bad news from other places. However, we cannot act as outsiders when trade war and bioterrorism become the new members of the world challenges, especially when they are combined.

In December 2019, the first patient of coronavirus diagnosed in Wuhan city of China's Hubei province [1]. According to the Centers for Disease Control, after we stepped into 2020, the coronavirus, causing never-before-seen respiratory illness, started spreading fast inside and outside the border of China. Further, the World Health Organization [2] declared the coronavirus a public health emergency of "international concern." So far, the virus has infected more than 90,000 people around the globe and entered in 50+ countries (see **Table 1**).

## 2. World factory shutdown

China is known as "The World Factory" for that China has been using mass manufacturing strategy, continuing to improve production technology, making other countries their stable clients (**Figure 1**). It has created a world dependency on China [3]. The virus that has hijacked China for months is severely affecting the logistics and supply chain operations. In fact, the worst is yet to come. As per our prediction, the real impact of coronavirus on global supply chains will occur during March [4]. Because, due to the Chinese New Year festival, multinational firms usually stored materials for a couple of weeks for their smooth manufacturing operations. Also, due to long lead-time between China and European markets, there were in-transit shipments, which will arrive late February/Beginning of March. But what next?—It is terrible.

In the upcoming days, the prices of products in international markets will hike due to the shortage of supply. The most vulnerable firms are those who depend solely on Chinese suppliers [5]. Since last months, Chinese manufacturers are hardly fulfilling the domestic demand. Besides, the equilibrium of supply and demand has already been started to unbalance.

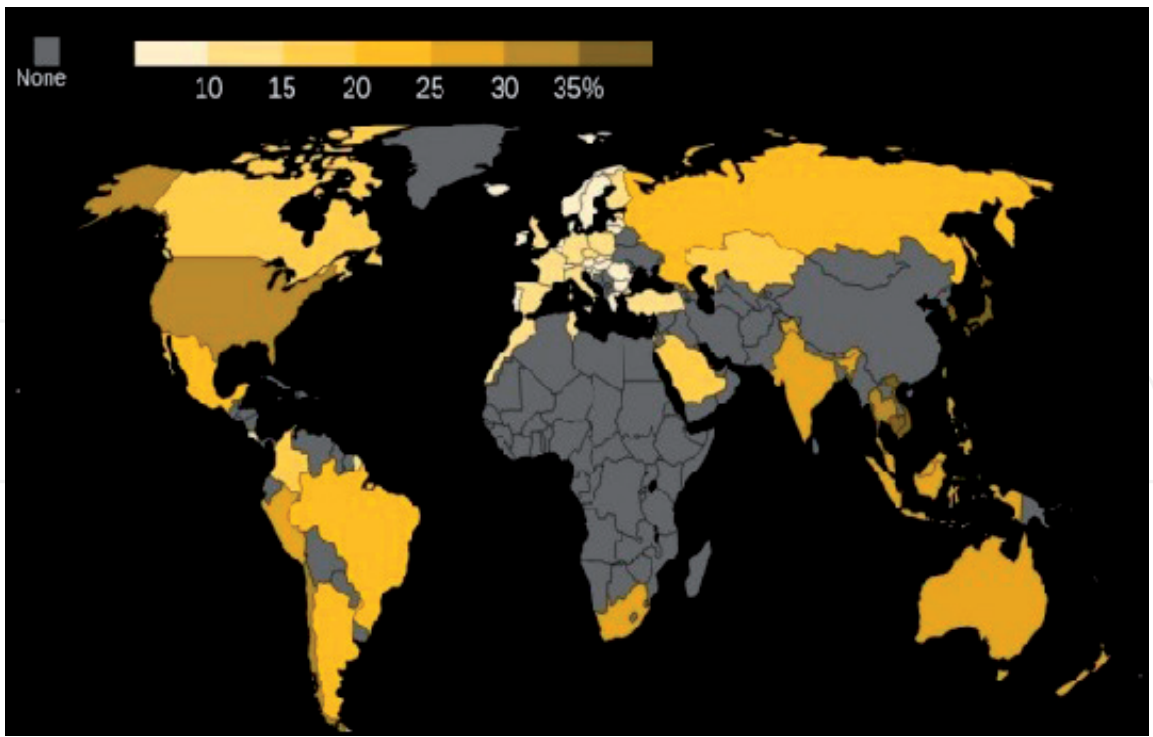
S. no	Country	Cumulative diagnosis	Total cure	Total death
1	<i>China</i>	79,968	41,849	2873
2	Korea	3526	27	18
3	Italy	1128	50	29
4	Japan	947	41	11
5	Iran	593	123	43
6	Singapore	102	72	—
7	France	100	12	2
8	Germany	99	16	—
9	U.S.A	64	3	1
10	Spain	58	2	—
11	Kuwait	45	—	—
12	Thailand	42	28	1
13	Bahrain	41	—	—
14	Australia	26	15	1
15	Malaysia	25	20	—
16	Switzerland	24	—	—
17	England	23	8	—
18	United Arab Emirates	21	5	—
19	Canada	20	6	—
20	Vietnam	16	16	—
21	Norway	15	—	—
22	Sweden	13	—	—
23	Iraq	13	—	—
24	Austria	10	—	—
25	Israel	9	3	—
26	Netherlands	7	—	—
27	Greece	7	—	—
28	Oman	6	—	—
29	Croatia	6	—	—
30	Russia	5	2	—
31	Mexico	4	—	—
32	India	3	3	—

Significance of italicized values 1. Virus started to spread from China; 2. The greater numbers of affected people in Chinese region.  
Source: National Health Commission of the People’s Republic of China (Last updated on February 29, 2020).

**Table 1.**  
List of top coronavirus infected countries.

**3. Coronavirus in emerging economies of Asian region**

China, Japan, and South Korea contribute to 25% of the world economy, but due to coronavirus, the production lines have stopped, which disrupted the global supply chain [6]. These countries’ yearly trading volume is more than US720 billion, and have the most integrated international economic blocs.



**Figure 1.**  
*China export to the world.*

Due to the risk of decoupling from the United States, Chinese firms have been attempting to boost investment and trade with South Korea and Japan. Further, because of the “trade war” between China and the US, Chinese firms have started to import their supplies and material from Japan and South Korea. However, unfortunately, the epidemic already spreads in South Korea and Japan, which probably will bring the second shock to the downstream manufacturers in China and multiplier effects into the global supply chain.

According to the Chinese customs data, in 2019, Japan was fourth largest trade partner of the mainland China, behind the EU, the ASEAN economic block, and the US, with annual bilateral exports and imports valued at US\$315 billion approximately, with South Korea sixth at US\$285 billion. On the other hand, during 2019, they also both ranked in the top five for imports into mainland China. Both the countries (South Korea and Japan) export chemical and electrical components, which are essential for China’s massive manufacturing.

According to Chinese analysts, due to the faster spread of coronavirus in South Korea and Japan, more firms are reducing their manufacturing or even shut down. Chinese firms heavily import steel, shipbuilding, electronics, and automotive equipment from Japanese and South Korean suppliers [6]. There is no doubt that China is exporting and fulfilling the demand of global customers with its “mass customization” strategy. It is expected that in upcoming weeks, the consequences of coronavirus will spread from the Asian region toward American and European regions. Due to the shortage of supply from China, the world economy already started to shake.

Many analyses compare the current coronavirus with the SARS (Severe Acute Respiratory Syndrome) epidemic 2002–2003, which created just a small breakdown in the global supply chain and financial markets [4]. This comparison is dangerous and misleads to the facts because the relative significance of mainland China in the global economic ecosystem has amplified massively in the past 18 years: China has more than doubled its share of trade with the rest of the world between the SARS epidemic and today, and many more industries are now heavily dependent on China.

In 2019, the GDP (gross domestic product) of China represented 16% of the global GDP. However, in 2003, the GDP of China represented only 4.31% of the global GDP, an almost four-fold increase. Due to the dependence on Chinese manufacturers, we cannot imagine the consequences and adverse effects on the global supply chain. The time will speak louder than words.

### **Author details**


Syed Abdul Rehman Khan<sup>1\*</sup> and Zhang Yu<sup>2</sup>

1 School of Economics and Management, Tsinghua University, Beijing, China

2 School of Economics and Management, Chang'an University, Xi'an, China

\*Address all correspondence to: sarehman\_cscp@yahoo.com

### **IntechOpen**

© 2020 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. 

## References

[1] Chinese Center for Disease Control and Prevention. COVID-19 Prevention and Control. 2020. Available from: <http://www.chinacdc.cn/en/> [Accessed: 01 March 2020]

[2] WHO. Rolling Updates on Coronavirus Disease (COVID-19). 2020. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>

[3] Khan SAR, Zhang Y. Strategic Supply Chain Management. Switzerland AG: Springer Nature; 2019. ISBN: 978-3-030-15058-7. Available from: <https://www.springer.com/gp/book/9783030150570>

[4] Haren P, Simchi-Levi D. How coronavirus could impact the global supply chain by mid-march. Harvard Business Review. 2020. Available from: <https://hbr.org/2020/02/how-coronavirus-could-impact-the-global-supply-chain-by-mid-march> [Accessed: 01 March 2020]

[5] Meyer C. Economic effects of coronavirus to be felt for months. Arab News. 2020. Available from: <https://www.arabnews.com/node/1622551> [Accessed: 29 February 2020]

[6] Wang O. Coronavirus: China, Japan, South Korea supply chains under threat from 'second wave' of disruptions. South China Morning Post. 2020. Available from: <https://www.scmp.com/economy/china-economy/article/3052646/coronavirus-china-japan-south-korea-supply-chains-under> [Accessed: 01 March 2020]