

SARS (Severe Acute Respiratory Syndrome)

- **Cause**

SARS is caused by a virus called the SARS-associated coronavirus (SARS-CoV) identified in April, 2003. This virus is speculated to be an animal virus from an as-yet-uncertain animal reservoir, possibly bats, that spread to other animals (civet cats) and humans by close contact, butchering or eating undercooked meat in parts of Southern China. The first infected human was found in Guangdong, China in 2002.

- **Transmission**

An epidemic of SARS affected 29 countries worldwide causing large outbreaks in Hong Kong, Taiwan, Vietnam, Canada, and etc. resulted in more than 8000 cases in 2003.

Transmission of SARS-CoV is initially from close person-to-person contact that has direct contact with respiratory secretions or body fluids of a patient with SARS. Apart from normal activities like shortly walking by a person with more than 3 feet and no close interaction which is not included in close contact, This virus can be transmitted by the spread of respiratory droplets when an infected person coughs or sneezes which in general, the droplets are propelled up to 3 feet through to air. Moreover, it can be spread by touching your mouth, nose, or eyes after accidentally touching infectious droplets on objects.

Nature of the disease

Symptoms are similar to influenza which include fever, malaise, myalgia, headache, diarrhoea, and shivering (rigors). No individual symptom or cluster of symptoms has proved to be specific for a diagnosis of SARS. Although fever is the most frequently reported symptom, it is sometimes not present on initial measurement, especially in elderly and immunosuppressed patients.

Cough (initially dry), shortness of breath, and diarrhoea are present in the first and/or second week of illness. Severe cases often evolve rapidly, progressing to respiratory distress and requiring intensive care.

- **Geographical distribution**

The distribution is based on the 2002–2003 epidemic. The disease appeared in November 2002 in the Guangdong province of southern China. This area is considered as a potential zone of re-emergence of SARS-CoV.

Other countries/areas in which chains of human-to-human transmission occurred after early importation. The epidemic reached the public spotlight (spread to other regions) in February 2003, when an American businessman traveling from China became afflicted while on flight to Singapore and went to the hospital in Vietnam leading several staff who treated him soon developed the same disease and rapidly spread out.

- **Risk for travellers**

Currently, no areas of the world are reporting transmission of SARS. Since the end of the global epidemic in July 2003, SARS has reappeared four times – three times from laboratory

accidents (Singapore and Chinese Taipei), and once in southern China where the source of infection remains undetermined although there is circumstantial evidence of animal-to-human transmission.

Should SARS re-emerge in epidemic form, WHO will provide guidance on the risk of travel to affected areas. Travellers should stay informed about current travel recommendations. However, even during the height of the 2003 epidemic, the overall risk of SARS-CoV transmission to travellers was low.

Economic Impact of SARS

First, fear of SARS infection leads to a considerable decline in consumer demand, especially for travel and retail sales service. The fast speed of contagion makes people avoid social interactions in affected regions. The adverse demand shock becomes more substantial in regions that have much larger service-related activities and higher population densities, such as Hong Kong or Beijing, China. The psychological shock also undulates around the world, not only to the countries of local transmission of SARS, because the world is so closely linked by international travel.

Second, the uncertain features of the disease reduce confidence in the future of the affected economies. This effect seems to be potentially very important, particularly as the shock reverberates through China, which has been a key center of foreign investment. The response by the Chinese government to the epidemic was fragmented and nontransparent. The greater exposure to an unknown disease and the less effective government responses to the disease outbreaks must have elevated concerns about China's institutional quality and future growth potential. Although it is difficult to measure directly the effects of diseases on decision making by foreign investors, the loss of foreign investors' confidence would have potentially tremendous impacts on foreign investment flows, which would in turn have significant impacts on China's economic growth. This effect is also transmitted to other countries competing with China for foreign direct investment (FDI).

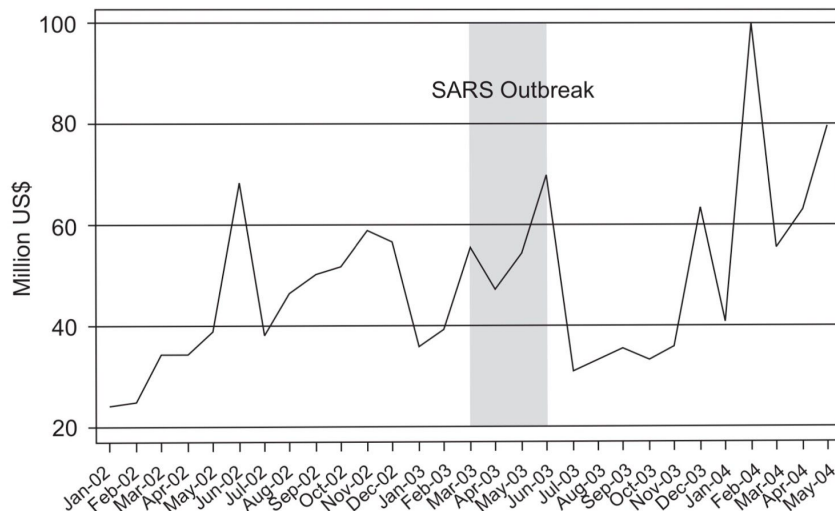
The outbreak in Asia brought into sharp focus the linkages between health and the macroeconomy. The economic impact of SARS was largely driven by fear and uncertainty, resulting in sharp declines in tourism and consumer confidence. Foreign direct investment (FDI) in SARS-affected countries such as People's Republic of China (PRC) saw a significant decline in the immediate aftermath of the outbreak. The decline in FDI, however, did not last very long: the numbers rebounded after a lag period.

Third, SARS undoubtedly increases the costs of disease prevention, especially in the most affected industries such as the travel and retail sales service industries. This cost may not be substantial, at least in global terms, as long as the disease is transmitted only by close human contact. However, the global cost could become enormous if the disease is found to be transmitted by other channels such as through international cargo.

Foreign direct investment (FDI) in SARS

The economic impact of SARS was largely driven by fear and uncertainty, resulting in sharp declines in tourism and consumer confidence. Foreign direct investment (FDI) in SARS affected countries such as People's Republic of China saw a significant decline in the immediate aftermath of the outbreak. The decline in FDI, however, did not last very long: the numbers rebounded after a lag period.

Figure 1. Time Trend of FDI Inflows to the PRC, Jan 2002-Jun 2004



Source: China Monthly Statistics (CSICC various years).

Nevertheless, the SARS outbreak has brought to surface the following question: if episodic health "shocks" such as SARS can put a brake on FDI and trigger capital flight, what might be the consequences of high levels of prevalence of more endemic communicable diseases for international investment? From the perspective of FDI, a health shock such as SARS is likely to have economic effects akin to those seen after a political shock such as a revolution or an assassination. This is quite different from the effects of widespread endemic prevalence of other communicable diseases such as HIV/AIDS, malaria, and tuberculosis. The latter signify low levels of human capital, lower labor productivity, higher absenteeism, and likely higher costs of operations due to health-related expenditures. More generally, widespread disease prevalence contributes to the perception of operational risk in the investment climate of a country. And, as is argued in this policy brief, poor levels of population health can deter FDI because they can act as potent signals of institutional weaknesses and, more broadly, of lower levels of government effectiveness.