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## SARS: Economic Impacts and Implications

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# **SARS: Economic Impacts and Implications**

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May 2003

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## Introduction

The recent outbreak of Severe Acute Respiratory Syndrome (SARS) has threatened short-term growth prospects in Asia. As of 5 May 2003, SARS has infected more than 6,500 people worldwide, and caused mounting concern. A number of East and Southeast Asian economies, including People's Republic of China (PRC); Hong Kong, China; Singapore; Taipei, China; and Viet Nam have been put under considerable strain. The epidemic has also affected other economies, although to a lesser extent.

Some positive developments and improved public health measures in recent weeks have added weight to arguments that SARS, although serious, will cause only a temporary shock to economic growth. However, the implications stemming from SARS extend beyond the short-term horizon. The impact of SARS, and reactions to it, raise many questions. Two are particularly important:

- (i) Why has attention to SARS been so prominent given its relatively low morbidity and mortality?
- (ii) How should governments deal with unexpected shocks related to the outbreak of contagious diseases?

This brief assesses the economic impact of SARS in a number of East and Southeast Asian economies and explores these issues.

### Short-term Economic Impact of SARS

#### Channels through which the Impact of SARS is Felt

In the short term, SARS mainly affects economic growth by reducing demand:

- (i) Consumer confidence has dramatically declined in a number of economies, leading to a significant reduction in private consumption spending. Much of the impact stems from the great uncertainty and fear generated by SARS. People have opted to stay at home to reduce the probability of infection.
- (ii) Service exports, in particular tourism-related exports, have been hard hit.
- (iii) Investment is affected by reduced overall demand, heightened uncertainties, and increased risks. Excess capacity will emerge or increase. Furthermore, foreign

investment inflow may be delayed or reduced in reaction to SARS.

- (iv) While increased government spending will mitigate the impact, the ability of governments to revive economies facing widespread reductions in private spending is limited.

Although SARS has affected every component of aggregate demand, private consumption has particularly borne the brunt of the impact. Services involving face-to-face contact have been dealt a severe blow by the widespread fear of infection through such interactions. Tourism, transportation (particularly airlines), and retailing have been the hardest hit sectors as consumers shun shops, restaurants, and entertainment venues; and travelers cancel trips. As visitor arrivals have dropped, hotel occupancy rates have fallen significantly in Hong Kong, China and in Singapore. The reduction of hotel rates has not been able to lure travelers back. Airlines such as Cathay Pacific have canceled a large number of flights. Tourism accounts for over 9% of GDP in East Asia and about 11% in Southeast Asia. The SARS-induced stress on this industry will be felt by other industries in the two subregions.

While the East and Southeast Asian subregions have been the most affected, the impact of SARS has spread elsewhere, through (i) the spread of the virus and the disease itself; (ii) reduction in import demand by Asian economies, especially for tourism-related services; and (iii) weakened consumer and investor sentiment because of increased uncertainty.

One factor that might offset this negative impact is the rebound of private spending when SARS is brought under control. Consumers may compensate for their reduction in consumption by subsequently increasing their spending. While domestic consumption could quickly change once confidence resumes, it may take a longer period for foreign travelers and investors to return.

## **The Impact of SARS—Macroeconomic Simulations**

The impact of SARS critically depends on

- (i) the seriousness of SARS
- (ii) the duration of SARS
- (iii) the structure of an economy, particularly the importance of service industries in GDP

The recently published *Asian Development Outlook 2003* forecasts (ADB 2003) reflect an assumption that the most intensive impact will be confined to 2 months. The implementation of effective containment measures against SARS in a number of economies since March has lent support to this perspective. However, many questions remain unanswered about the development and nature of SARS, and these unknown factors complicate analysis of its impact. In order to allow for these lacunae, two scenarios are considered here. One assumes that SARS will have a serious impact in the second quarter of 2003, and the other assumes that it will have a major impact in the second and third quarters of 2003. Given the uncertainties involved, we need to monitor and evaluate developments closely, and to be prepared to revisit the estimates as circumstances change. Furthermore, any scenario design will involve a degree of arbitrariness and judgment. The results are thus indicative rather than definitive.

It is also assumed that the initial impact will mainly be through reduced demand for services. The reduction in service sector growth is then translated to an equivalent reduction in autonomous consumption expenditure, which is used as the input for the scenarios. The macroeconomic simulations use the Oxford Economic Forecasting model (OEF). The results show that GDP growth in East and Southeast Asian economies is likely to be reduced by around 0.2-1.8 percentage points in 2003 if SARS persists for a quarter in individual economies. If the impact of SARS extends into the third quarter of 2003, GDP growth is likely to be reduced by 0.5 to 4.0 percentage points in individual economies (Table 1).

A reduction in GDP growth of this magnitude will mean large losses in income and output. The estimated income loss ranges from US\$12.3-28.4 billion for East and Southeast Asia as a whole under the two scenarios. Of particular concern is the fact that SARS will not only induce hardship for many, but also intensify the problems faced by the poorest and most vulnerable groups in society due to their limited access to medical services.

The weakening of demand will further reduce inflation and intensify deflationary pressure in some economies, including PRC; Hong Kong, China; and Taipei, China. Weakened demand will also cause the unemployment rate to rise. Although reduced service exports will lower foreign exchange receipts, imports may be lowered even more due to a significant weakening of domestic demand in the economies concerned. This means that the current account balance may not worsen in the short run.

**Table 1. Estimation of the Impact of SARS  
on Selected Asian Economies, 2003**

Economies	Estimated Reduction in Annual GDP Growth		Estimated Reduction in Annual GDP Levels	
	If SARS Lasts 1 Quarter (percentage point)	If SARS Lasts 2 Quarters (percentage point)	If SARS Lasts 1 Quarter (US\$ billion)	If SARS Lasts 2 Quarters (US\$ billion)
<b>East Asia</b>	<b>0.4</b>	<b>1.0</b>	<b>9.1</b>	<b>20.7</b>
PRC	0.2	0.5	2.3	5.8
Hong Kong, China	1.8	4.0	3.0	6.6
Republic of Korea	0.2	0.5	1.3	3.0
Taipei, China	0.9	1.9	2.5	5.3
<b>Southeast Asia</b>	<b>0.5</b>	<b>1.4</b>	<b>3.2</b>	<b>7.7</b>
Indonesia	0.5	1.4	0.7	2.0
Malaysia	0.6	1.5	0.5	1.3
Philippines	0.3	0.8	0.2	0.6
Singapore	1.1	2.3	1.0	2.0
Thailand	0.7	1.6	0.8	1.8

Source: Economics and Research Department using OEF model, staff estimates.

### **Why has the Impact of SARS been so Pronounced?**

While SARS poses significant medical risks and has major economic implications, it has exerted a disproportionately large psychological impact on people in relation to its relatively low morbidity and mortality. The pronounced impact of SARS can be attributed to the combination of two aspects of information about the illness:

- (i) the almost costless and rapid transmission of information due to the development of modern media and communication technologies, and
- (ii) the lack of sufficient medical information on SARS.

Information is a valuable resource. A lack of information creates difficulties for individuals to accurately evaluate the consequences of a particular event. SARS is a new disease. It will take time for scientists to totally understand the virus. Developing an effective diagnosis and treatment is an even more difficult and time-consuming process. On the other hand, information on the causalities induced by SARS is freely available and tends to dominate the media while

effective treatment remains elusive. This naturally leads to a somewhat exaggerated perception about the danger of the disease. Consequently, there has been heightened uncertainty and perhaps a degree of overreaction in some cases.

### **How should Governments Respond to SARS and Similar Situations?**

Two aspects of SARS warrant government intervention. The first is that the information that needs to be collected and disseminated to effectively assess SARS displays the characteristics of a public good. Second, there are externalities related to contagious diseases in the sense that they affect third parties in ways that are not reflected in market transactions. Public goods and externalities are typical areas where there are market failures, and government action is needed to correct such failures.

### **Provision and Acquisition of Accurate Information**

The accurate, timely, and transparent provision of information on the nature and extent of SARS by governments is critical for containing the epidemic and reducing public fears and uncertainty. Governments need to work closely with medical professionals to generate and disseminate accurate information about the risks and extent of a disease, and preventative measures available. A balance needs to be struck between alerting people to the risks involved and preventing people from panicking and overreacting. Due to the highly effective channels of information transmission now in place, any apparent lack of transparency in providing information is likely to cause second-guessing and panic among the general population. Governments therefore need to utilize the increasing influence and reach of the modern media to disseminate information so as to ensure rational thinking and sensible actions prevail.

### **Containing the Disease**

The SARS epidemic demonstrates that with the increased flow of people, goods and services, and information across borders, both positive and negative developments can quickly be transmitted within a country and spill over to other countries. Early identification and containment are critical, as any delays will create greater costs later on. As pointed out by Baltimorem (2003), Nobel prize laureate in



medicine, targeted and aggressive public health responses need to be combined with a rational evaluation of risks so as to minimize disruption to people's lives.

## **Government Budget**

The occurrence of sudden, unexpected shocks such as SARS stretches government resources. At the same time, the resulting decrease in economic activity will reduce government revenue. This, together with increased public spending to prevent and combat the disease, will worsen government fiscal positions. In some cases, active stimulus packages may also be needed to revive the economy. The possibility of episodes like SARS emphasizes the need for governments to implement prudent fiscal policies, to accumulate primary surpluses, and to set aside appropriate amounts in their budgets for unexpected contingencies.

## **Beyond SARS—Developing Long-term Strategies and Capacities to Deal with Contagious Diseases**

SARS is not the first outbreak of a contagious disease in the modern era. One can be certain that it is not the last one either. Furthermore, the rise of drug-resistant microbes and global resurgence of formerly controlled diseases such as tuberculosis means that the provision of effective public health measures is more important than ever. In the longer term, as SARS abates, attention needs to be directed toward considering broad issues germane to all epidemics such as:

- (i) how to minimize the occurrence of contagious diseases,
- (ii) how governments can best respond to such emergency situations,
- (iii) how health systems can be strengthened to cope with such situations, and
- (iv) how international cooperation can most effectively be carried out.

The relatively effective containment of SARS in Hong Kong, China and in Singapore shows that the capacity of the health system is critical in reducing the duration of diseases such as SARS. In addition to improving the health system itself, two aspects are particularly relevant:

- (i) Sufficient and suitably targeted public spending to generate research that ensures effective diagnosis and treatment of diseases is imperative. Public funding devoted to forward-looking research on contagious and communicable diseases is essential.
- (ii) Given the global implications of contagious diseases, governments need to intensify cooperation and coordination. As well as coming up with common responsive measures to diseases that have already struck such as SARS, there is a particular need for developed countries and more advanced developing member countries to devote funds toward undertaking collaborative anticipatory and proactive research on combating such diseases. Much effort is also needed to develop effective policy measures and institutional capacity for preventing, reporting, monitoring, and containing all contagious diseases.

## **Conclusions**

SARS has caused serious disruption to short-term economic growth. Its long-term impact largely depends on whether governments can speedily implement effective public health policies. Given the externalities related to contagious diseases, governments need to play a major role in preventing and containing diseases, and in generating research outcomes to facilitate rapid and effective diagnosis and treatment.

The SARS epidemic demonstrates that:

- (i) The accurate, timely, and transparent provision of information on the nature and extent of diseases by governments is critical for educating the public about the real risks and reducing public fears and uncertainties. A balance needs to be struck between alerting the public to the potential dangers involved and preventing panic and overreaction to the danger concerned.
- (ii) Early identification and containment is critical, as any delays will create greater costs later on.
- (iii) SARS is merely one of many contagious diseases that could potentially flare up. Public policy needs to go beyond SARS to make provisions for all contagious diseases. Efforts need to be put into applying and maintaining the

lessons learned from the SARS crisis after it is controlled. In particular, there is a need to minimize the occurrence of all contagious diseases; to effectively respond to emergency situations; and to strengthen health systems so that they have the ability to cope with similar situations in the future.

- (iv) The global implications of serious contagious diseases means that governments need to intensify cooperation and coordination. There is a particular need for developed countries and more advanced developing member countries to devote funds toward undertaking collaborative, proactive, and forward-looking research on combating such diseases. Countries also need to commit to collaborative schemes to develop effective policy frameworks and institutional capacity for preventing, reporting, monitoring, and containing all contagious diseases.
- (v) The occurrence of emergency situations such as the outbreak of SARS shows that government budgets need to be prudent so that they are capable of handling unheralded public health crises. An appropriate amount of funds should be set aside to cope with such contingencies.

If good strategies can be drawn up from the lessons learned in combating the spread of SARS, the world at large will benefit in the long run.

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