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Swine Flu: Challenges and Impact on the Indian Economy

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The large-scale outbreak of infectious diseases can threaten the economic and regional stability of a country. In the recent past, HIV, H1N1 influenza (swine flu), H5N1 influenza (bird flu), SARS and Ebola epidemics and pandemics have affected people and economies of different lands. Swine flu has seen a worrisome spread in India recently. Given the inadequacy of the government's response, the flu has raised fears of another epidemic in the coming winter.¹ This paper explores the economic impact of swine flu and the challenges India faces in fighting the disease.

Introduction

The successful growth of any country is largely dependent on its citizens' health. A healthy population contributes to productivity, savings and progress. However, the quality of health services of a country is highly influenced by the role of its ministries, government departments, civil society groups and donor organisations. Dealing with public health requires multisectoral collaboration and interdisciplinary coordination.²

Since 1950, India has made remarkable improvements in its public health status. For instance, the maternal mortality rate, total fertility rate and levels of malnutrition have been significantly lowered. However, challenges still exist. With India undergoing a demographic and environmental transition, there is a considerable burden of communicable, non-communicable and emerging diseases that not only affect the lives of people, but also the working of various sectors of the economy. One such current burden is swine flu.

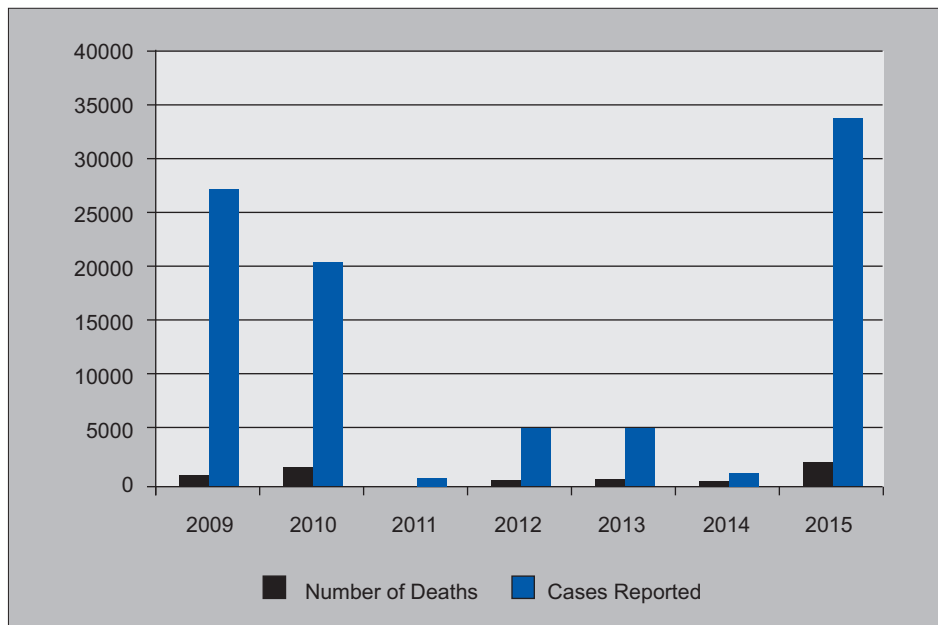
Swine flu refers to influenza in pigs, which is a communicable respiratory disease caused by Type A influenza virus. The swine flu virus was first identified in pigs in 1930 in the US.³ 2009 saw the first swine flu pandemic, starting in Mexico, from where it spread to 74 countries across the world, including India. A disproportionate number of deaths occurred in Southeast Asia and Africa, where

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access to prevention and resources for treatments were limited. Research conducted by the US Center for Disease Control and Prevention in 2012 showed that the pandemic of 2009 resulted in the death of as many as 579,000 people worldwide.

In India, in a span of eight months from May to December 2014, swine flu had killed 981 individuals, of which 93 percent were from western and southern states. What is worrisome is that swine flu continues to affect the lives of thousands of people (see figure below) and has been hampering businesses in many affected states. What is worse is that the 2014-15 winter seasons saw a sudden spurt in the number of reported cases and the fear of yet another big outbreak appears all too real for India.⁴

Number of Deaths and Cases Reported in India from 2009-2015⁵



As of March 2015, the data released by the Ministry of Health showed 2,035 deaths out of 33,761 reported cases from 22 Indian states, of which Gujarat, Maharashtra, Rajasthan, Madhya Pradesh and New Delhi are the worst affected (Rajasthan and Gujarat are the most badly affected so far).

Reported Cases and Number of Deaths Caused by Swine Flu in Indian States⁶

STATE	REPORTED CASES	NO. OF DEATHS
Rajasthan	6559	415
Gujarat	6495	428
Delhi	4137	12
Maharashtra	4000	394
Madhya Pradesh	2185	299
Telangana	2140	75
Tamil Nadu	320	14
Karnataka	2733	82
Punjab	227	53

Cont...

STATE	REPORTED CASES	NO. OF DEATHS
Andhra Pradesh	72	22
Uttar Pradesh	165	36
Chhattisgarh	-	17
Goa	7	1
Jammu and Kashmir	109	16
Himachal Pradesh	-	20
Kerala	25	12
Odisha	22	5
West Bengal	58	24
Uttarakhand	-	11
Assam	10	1
Manipur	5	2
Mizoram	4	-
Nagaland	1	-
Total	33,761	2,035

The economically productive age group (30-45 years and 45-60 years) has been the worst hit by the flu. Experts have cautioned that the situation is similar to the 2009 pandemic. Some experts, such as Dr. Aditya, head of Rajasthan's Integrated Disease Surveillance Programme (IDSP) and Deepak Bhatia, an IDSP officer in Punjab, have said that the outbreak has been sudden and challenging. But this only raises questions about the preparedness of the Government of India. It also demonstrates the lack of timely intervention. Given its inefficient healthcare system and low accessibility of medical facilities, India needs to act soon, since, in the words of World Health Organization (WHO) chief Margaret Chan in 2009, “the virus is unstoppable.”

India's Response

The fragile state of the healthcare system in India has raised questions on the country's capacity for monitoring respiratory diseases and giving timely warnings. If sufficient preventive and precautionary measures had been available, India could have dealt with the situation better and saved many lives.

After the 2009 pandemic, the WHO had declared that the virus would keep circulating and urged countries to put in place necessary surveillance measures. While India has responded to the current outbreak, it failed to respond ahead of time, or even as deaths began to be reported. It was only after January this year that both the Centre and the states mounted intensive public awareness campaigns, began monitoring the situation and distributing drugs to states to combat swine flu.

India currently does not have enough labs to carry out monitoring satisfactorily. At the Central level, the National Centre for Disease Control (NCDC) undertakes surveillance and monitoring, while at the state level the NCDC's Integrated Disease Surveillance Programme (IDSP) officers monitor new

diseases. There are only 12 central labs operating under the NCDC's IDSP and nine others under the Indian Council of Medical Research. The capacity of the states is even more limited. A densely populated state like Uttar Pradesh has only two laboratories, while Haryana relies on the NCDC in Delhi for all its testing. To make matters worse, the recent union budget has slashed the allocation for healthcare by 20 percent, from \$5 billion to \$4 billion—and this is when other countries are raising public health expenditures. Inadequacies in the provision of public health facilities have compelled people to seek private health services, resulting in high out-of-pocket expenditures. An impoverished Indian spends four times more on his health than the government does,⁷ which is very alarming. The low level of government spending is one of the major factors affecting the creation of a preventative health infrastructure.

The biggest challenge for most Indian states is creating awareness and getting people to report symptoms of swine flu early. Another challenge is drug supply. In the years after the 2009 pandemic, the production of Tamiflu in India, the anti-viral drug recommended by WHO to combat swine flu, stagnated. With the sudden outbreak of the disease last year, states initially faced challenges in procuring the medicine. In many states, there remains a lack of basic infrastructure too. Patients who were admitted late needed to be put on ventilator to survive, but states faced the dilemma of insufficient ventilators. At these hospitals, the first preference is given to VIPs, which further reduces the chances of common people getting timely intervention.

Another challenge is that India does not have a vaccine policy on influenza, although such a policy was recommended by the WHO. Since influenza viruses have immense capacity for mutation, there is no uniform vaccine for them. Effective vaccine development requires knowledge of the precise public health burden imposed by a disease. While Western countries are technologically advanced and sanction large budgets to carry out research to develop new influenza vaccines, India does not. Creating a new vaccine in India would cost more than half the entire health budget.

Inadequate health manpower is yet another deficiency. In the urban areas, doctors and other health personnel are often spurred solely by profit, while in rural areas doctors are unwilling to provide their service which puts the majority of people out of reach of healthcare services. An audit by the Ministry of Health has revealed that, of those affected by swine flu so far, 70 percent belong to the urban strata and 30 percent to the rural. Considering that the disease is communicable, the poor in rural areas may become more vulnerable if it remains unchecked. But compared to the urban areas, there is a notable shortage of specialists in the rural healthcare system. For instance, the rural areas of Chhattisgarh, Jharkhand and Rajasthan have more than a 90 percent shortage of manpower and both Uttarakhand and Odisha have an 86 percent deficiency.⁸

Until now swine flu has largely affected human lives, but if the situation is not addressed, it will gather renewed force from October onwards. According to emerging analysis, such a scenario will affect various segments of the economy, including stock markets, foreign institutional investment, consumption and ultimately the Gross Domestic Product (GDP), which is directly or indirectly the

driver of growth. The following section therefore looks at the likely economic consequences if the swine flu situation remains untackled.

Impact on the Economy

One of the most crucial industries, important both from the economic and employment point of views, is tourism. Tourism contributes about 6.8 percent to India's GDP. It is the third largest foreign exchange earner for the country. According to the sectoral document on Travel and Tourism under the “Make in India” campaign, every \$1 million spent in India has the potential to generate 78 jobs. Reports of swine flu and deaths arising from it have the potential to drastically affect the tourism industry of India. Rajasthan, Maharashtra, Gujarat and Delhi have the highest tourist concentrations—and they are also the most affected states.

A recent assessment by the Associated Chambers of Commerce and Industry (ASSOCHAM) showed that the outbreak of swine flu in Rajasthan and Maharashtra could result in a loss of INR 5,500 crore for the tourism and aviation industries.⁹ With an increasing number of cases being registered, domestic tourist flows to Jaipur, Udaipur, Jodhpur, Bikaner and other locations have already been affected. If not tackled, swine flu incidence is likely to increase in the coming winter months, which is incidentally the peak time for foreign tourists to visit India: During the winter season, the “golden triangle” of Delhi-Agra-Jaipur, along with other towns in Rajasthan, account for 200,000-250,000—or about 30 percent—of foreign tourist arrivals. Mumbai, which attracts the second largest number of foreign tourists in winter, is also likely to see its tourist numbers decrease. Thus, foreign exchange earnings will be hit, which currently amount to \$1.5-2 billion (INR 9-12,000 crore) a month during winter. As per ASSOCHAM's conservative assessment, net earnings of about INR 4,000 crore will be lost.

There will be another INR 1,200-1,500 crore of secondary losses because of decline of tourist traffic in hotels, airlines, taxi operators and restaurants.¹⁰ Delhi airport, which received the highest share of foreign tourist footfalls of about 29 percent in January 2015, will see a decrease in earnings if the incidence of swine flu increases. Nearly 800,000 foreign tourists arrive in Delhi every month and most of them generally head for the Golden triangle.¹¹ There have already been negative reactions from some countries. For instance, the United Arab Emirates' Ministry of Foreign Affairs has urged its citizens currently in India to avoid swine flu affected areas and warned its other citizens against travelling to India.¹² The death of a Swiss national in Rajasthan due to the virus has also raised concern in other countries.

The informal economy of India, which accounts for 90 percent of non-agriculture employment and constitutes 75 percent of all the Indian businesses,¹³ is largely dependent on the tourism industry and tourists to sell their products and services. With tourist arrivals slowing down, the earnings of workers in the informal sector will be affected. Considering that workers in this sector do not have any kind of social security or health insurance, their position will become even more vulnerable.

If the outbreak worsens, it might discourage foreign investment and may well prompt some foreign institutional investors to pull their money out of the Indian equity markets. This will not only affect the stock market, but will also lower stock prices and apply downward pressure on the rupee: The 2009 pandemic affected the financial system of various countries and led to the decline of stock market in several countries (Mexico, Spain, Britain, Germany, France, etc.). A similar case can be argued for India and Indian stock markets. The GDP may be affected because of lower consumption, as there is a tendency to consume less during a pandemic. September and October are festive months in India, when people tend to consume and buy more; depending on their intensity, pandemics tend to lower GDP growth rates by 0.5-2 percent.¹⁴ The swine flu outbreak and the monsoon season together are likely to lower India's GDP by one percent.¹⁵ Given an IMF forecast of 7.5 percent for the year 2015-16, GDP is thus likely to shrink to 6.5 percent if the current situation regarding swine flu persists or worsens.¹⁶

The outbreak is also likely to disrupt day-to-day functioning, whether in the Bollywood industry (for example, by disrupting shoots in locations reporting swine flu cases, as has already occurred in a few instances) or life in cities and towns (for instance, in February this year, NLU Jodhpur, schools in Ghaziabad, malls and cinema halls in some cities in western India were shut down because of concerns of swine flu infecting more numbers).

Furthermore, the pork business has been affected because of the widespread misconception that consuming pork could lead to swine flu. This mistaken impression will continue to affect the production, consumption and export of pork. In Mysore and Mandya district of Karnataka, there was a 10-20 percent decline in pork consumption in February 2015. With lowered demand, the price of pork in the wholesale market in this region has fallen from INR 95-100 to INR 72-80 a kg.¹⁷

Conversely, an industry that will benefit is pharmaceuticals. Recent data released by market research firm AIOCD Pharma Softtech AWACS showed that the Indian pharma market (IPM) recorded a growth of 18.9 percent, the highest in the last 19 months, in February 2015. In 16 regions, the growth is even higher. Rajasthan and Maharashtra recorded growth of 27 and 28.8 percent respectively. AIOCD data also revealed that the IPM yielded a turnover of about INR 7,194 crore in February 2015. Indian pharma companies have recorded 19.4 percent growth in February 2015 as compared to 17.6 percent the previous year. Cipla, Lupin and Pfizer recorded growth of 24 percent, 23.2 percent and 22.6 percent respectively. Such a rapid rise could be attributed to the sale of drugs to combat swine flu, although the phenomenon has not been closely analysed yet.¹⁸ Nonetheless, there will be a reasonable increment in the revenue of pharma industry as a result of the increase in the intake of medicine by swine flu patients.

Conclusion

To combat swine flu and prevent it from becoming an epidemic and affecting the health of the country's population and economy, judicious policies and programmes are required. Though the

National Rural Health Mission has been in operation for the last nine years, the public health system in the country continues to face formidable challenges.¹⁹ Poor sanitation facilities and malnutrition worsen the situation. Lack of toilets, which leads to defecation in the open, and inadequate sewage disposal systems contaminate water resources, soil and food, which in turn causes diseases such as diarrhea, cholera and trachoma. Malnutrition results in weakening of the immune system and lowers disease resistance capacity. All these factors contribute to the challenge of combating swine flu. There have been instances when co-morbidity has made patients immune-compromised and more vulnerable to swine flu, resulting in death. Therefore, foremost is the need to improve the health of the people to build up disease resistance.

India also needs to have a better monitoring and surveillance system for diseases. Better surveillance will also help scientists determine how to respond to this influenza variant. Although India in recent months has been carrying out an awareness campaign to educate people about the disease and the need for improved sanitation practices, this requires continued effort in the future. The Swachh Bharat Abhiyan, launched by Prime Minister Narendra Modi, is a commendable effort to promote cleanliness and improve sanitation, which will also tackle the issues of sewage and public defecation.

Swine flu could have serious consequences on the major sectors of the economy, such as tourism, aviation and the informal sector. The government therefore needs to take preventive measures so that potential losses can be avoided. The status of health, health habits and services needs to be improved, as already indicated, but measures can also be taken to protect earning economic sectors. Tourists, for example, are not familiar with the existing emergency infrastructure system, the language, or of the risks they face in the places they visit, which makes them vulnerable. The integration of travel and tourism with the National Emergency Plan²⁰ could help better respond to emergency situations like the swine flu outbreak. Airports, popular tourist spots and tourism operators could also be involved in the control and management of the epidemic. Further, to protect the earnings of workers in the informal sector, a social security net/health insurance schemes could be introduced.

India needs to learn several lessons from the current epidemic. It should launch another awareness campaign from around October this year and keep itself well stocked with the requisite drugs and vaccines to combat swine flu, since the incidence of the disease increases in winter. At present, as temperatures rise, it is expected that the number of reported cases and deaths from swine flu will decline. However, if India wants to save the lives of its people and protect its economy, it should act right away

Endnotes:

1. Jailkshmi K, "India: Over 200 swine flu deaths in less than two months raising concerns," *International Business Times*, February 9, 2015, <http://www.ibtimes.co.uk/india-over-200-swine-flu-deaths-less-two-months-raising-concerns-1487134>.
2. LS Chauhan, "Public health in India: issues and challenges," *NCBI*, 2011, <http://www.ncbi.nlm.nih.gov/pubmed/21941042>.
3. "Swine Flu," Apollo Health City, <http://apollohealthcity.com/swine-flu/>.
4. G. Pramod Kumar, "Swine flu outbreak: Blame gov't's shamefully low public health expenditure," *First Post*, February 19, 2015, <http://www.firstpost.com/india/swine-flu-outbreak-in-india-blame-govts-shamefully-low-public-health-expenditure-2106249.html>.
5. Pratyush Ranjan and Agencies, "Swine flu outbreak: 774 deaths, 13,000 cases set alarm bells ringing," *Hindustan Times*, February 22, 2015, <http://www.hindustantimes.com/india-news/swine-flu-outbreak-743-deaths-12000-positive-cases-set-alarm-bells-ringing-across-india/article1-1319158.aspx>.
6. "Swine flu toll inches towards 1,900," *The Hindu*, May 19, 2015, <http://m.thehindu.com/sci-tech/health/swine-flu-toll-inches-towards-1900-no-of-cases-crosses-31000/article7011912.ece/>.
7. Kumar, "Swine flu outbreak."
8. Vikas Bajpai, "The Challenges Confronting Public Hospitals in India, Their Origins, and Possible Solutions," *Advances in Public Health*, January 11, 2014, <http://www.hindawi.com/journals/aph/2014/898502/>.
9. Aarti Dhar, "Swine flu to cost tourism in Rajasthan, Maharashtra: ASSOCHAM," *The Hindu*, February 15, 2015, <http://www.thehindu.com/news/national/other-states/swine-flu-to-cost-tourism-in-rajasthan-maharashtra-assochem/article6898636.ece>.
10. Dhar, "Swine flu to cost tourism."
11. Jaideep Shenoy, "H1N1 outbreak could result in loss of up to Rs 5,500 crore in tourism, aviation sectors: Assocham," *Times of India*, February 15, 2015, <http://timesofindia.indiatimes.com/india/H1N1-outbreak-could-result-in-loss-of-up-to-Rs-5500-crore-in-tourism-aviation-sectors-Assocham/articleshow/46251148.cms>.
12. Mary Sophia, "UAE Warns Citizens against Travel to India over Swine Flu Fears," *Gulf Business*, March 5, 2015, <http://gulfbusiness.com/2015/03/uae-warns-citizens-travel-india-swine-flu-fears/#.VQvhANKUfa8>.
13. Cheri Chung, "The Informal Economy in India," *Berkley Centre*, March 6, 2015, India <http://berkeleycenter.georgetown.edu/letters/the-informal-economy-in-india>.
14. Vijay Prakash Gupta, "Impact of Swine Flu on India and its Economy," *indianmba.com*, August 21, 2009, http://www.indianmba.com/Faculty_Column/FC1066/fc1066.html.
15. Gupta, "Impact of Swine Flu."
16. Gupta, "Impact of Swine Flu."
17. Vincent D' Souza, "Pork Business Takes a Hit as Swine Flu Fear Rises," *Indian Express*, February 18, 2015, <http://www.newindianexpress.com/states/karnataka/Pork-Business-Takes-a-Hit-as-Swine-Flu-Fear-Rises/2015/02/18/article2674257.ece>.
18. Sohini Das, "Rajasthan, MP lead growth in Indian pharma market in February," *Business Standard*, March 13, 2015, http://www.business-standard.com/article/companies/rajasthan-mp-lead-growth-in-indian-pharma-market-in-february-115031301407_1.html.
19. Das, "Rajasthan, MP?"
20. Plans through which communities reduce vulnerability to hazards and cope with disasters.

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