



COVID-19: Implication to Food Security

N. Ihsan Fawzi, I. Zahara Qurani, A. Noyara Rahmasary

INTRODUCTION

On 11 March 2020, the World Health Organization (WHO) declared Coronavirus disease 2019 (COVID-19) a pandemic. COVID-19 is the disease caused by a new strain of coronavirus called Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2). The declaration is after 42 days of stating that the SARS-CoV-2 outbreak constituted a Public Health Emergency of International concern. COVID-19 has become a global epidemic and disrupts every aspect of life. The declaration from WHO is two months after the lockdown of Wuhan city in Hubei Province, China. The first case was recorded on 17 November 2019, and four months later more than 1 million people from 192 countries have been infected. The number keeps increasing by the time this brief is published.

THE PANDEMIC PROGRESSION

Pandemic is defined as a new disease that affects worldwide with a significant population becoming affected. Prior to COVID-19, the most recent pandemic was the re-emergence of the Ebola virus in 2014. The Ebola pandemic had 15,188 confirmed cases with a 75% mortality rate. A century ago, the pandemic of Spanish Influenza killed more than 50 million people worldwide (Martini et al., 2019). Recent influenza flu of severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS) also had

significant numbers in the mortality rate. The previous pandemics led to the improvement in public health, such as health education, isolation, sanitation, and surveillance, and improved our knowledge.

The pandemic progression of COVID-19 is circulating within the population and spread through contact, droplets, and fomites (WHO, 2020). The cases have different mortality rates according to age, where the elderly are more at risk of life-threatening diseases. The COVID-19 virus can persist in the inanimate surface for up to 9 days (Kampf et al., 2020). The infection indications vary; 80% of infections are mild or asymptomatic, 15% are severe infections that require oxygen, and 5% are critical infections that need ventilators in place. The COVID-19 is highly transmissible—the spread progression of COVID-19 characterized by the long incubation rate of the virus. The incubation is 2 - 14 days, made the carrier of the virus looks healthy, and contaminates others (Lauer et al., 2020).

Preventing the spread over communities is what the government does to contain the SARS-CoV-2. Slowing down the spread of the virus is important, so infected people can be well treated and prevent the health facilities from becoming overloaded. The curve below shows the surging number of positive cases. Through the implementation of physical distancing, regional and national lockdown, mass testing, healthcare

improvement, and a range of social and economic stimulus the governments are expected to be able to flatten the curve.

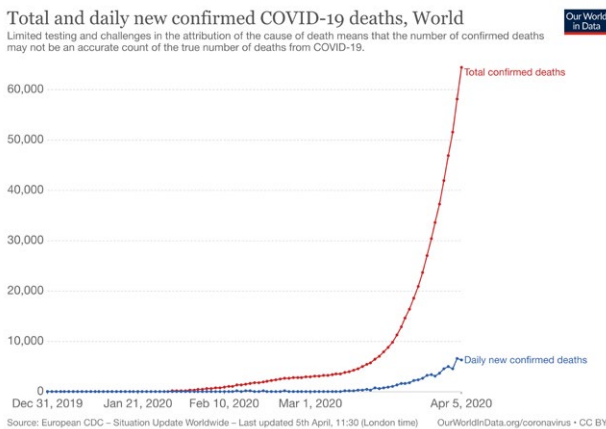


Figure 1. Total new daily confirmed cases and an accumulated case of COVID-19 from 21 January 2020 to 5 April March 2020 (Our World in Data, 2020).

Inadequate initial control and violation of quarantine regulation made the progression of COVID-19 spread even higher (Figure 1). The efforts to overcome the spread of COVID-19 have shown sluggish progress. The hospital capacity is overwhelmed with limited emergency supplies and respiratory devices. To flatten the curve, many countries have been deploying national lockdown. While it is still too early to define its effectiveness, this policy has resulted in different outcomes in many countries. For example, in China, provincial lockdown has proven to significantly decrease the number of infected people (Tian et al., 2020). Italy also takes similar action at the national level, which drives lower death toll. However, national lockdown in India is more challenging as it leads to other problems, especially for thousands of migrant workers who have no choice but to return to their hometowns by foot, resulting in several death cases due to extreme fatigue and starvation.

In Indonesia, the government has been urging people to do physical distance yet there is no strict regulation of self-isolation taking place. Although some regional leaders and doctors associations have demanded for lockdown, the national government constantly refuses the idea to prevent a harsher impact on the economic sector. To respond to the situation, the President has issued a USD 12 billion stimulus package to help low-income families and support the corporations to survive.

PANDEMIC IMPACT ON FOOD SECURITY

COVID-19 seems to have a more significant impact on food accessibility and availability as it indicates decreasing food stock and rising food price. If the pandemic continues to deteriorate, it will also hamper people's food utilization and stability. Essentially, COVID-19 hinders our food system from all directions. The effect of COVID-19 on food security is mainly the impact of preventive measurement implemented by the governments. To have a clear view of the situation, this paper examines the matter from downstream and upstream courses.

The effect on food consumption

The previous pandemic, SARS in 2002 to 2003, had a little impact on food security. With 8,098 of the total confirmed cases, it did not affect large scale food production and prices. The COVID-19 physical distance and lockdown scheme have made higher demand for food because people spend more money to stock up. Some cases led to panic buying, which ran out the grocery supplies. Regulation to stabilize the supply has been implemented in many countries, including Indonesia which limits the purchase of several grocery items like rice, cooking oil, sugar, and instant noodles.

In the longer-term, the lockdown to contain the virus will result in a decline in the economic and social sector, especially if the pandemic continues to be uncontrollable and the world hits a financial crisis. Social isolation measures will contribute to a rise in unemployment. The lockdown forces the factories and informal sectors to close. Many people lost their jobs, and if this continues, it can extend to other industries. Marginal people are the most impacted since it would be harder for them to afford food. They might have deteriorating health due to limited consumption of nutrition since processed foods are very popular with its wide availability and low price. If the country can provide food or set up proper economic incentives, these problems can be avoided.

The effect on agriculture productivity

The measures taken to contain viruses hamper food production and food distribution. Food production is a long process from planting,

harvest, commodity shipment, and labor. The food and agriculture sectors are considered less resilient due to its dependency on the process from production into the market. These activities are hindered by travel limits imposed by governments across the globe to stem the spread of coronavirus. Quoted from TIME, the regulations hamper seasonal migrant labor in Mexico to work in American and Canadian farms and slaughterhouses. Overseas workers fill approximately one-third of seasonal farming jobs. Since many farmers are on the older side, they are also more vulnerable toward this COVID-19.

Next to human resources, the availability of other resources will be a challenge as well. As happened in Africa during the Ebola outbreak in 2014, it created a significant impact on economies and agricultural production. The lockdown and blockages had brought adverse impact, including limited access to seed, fertilizer, pesticide, and labor. The report indicated this condition has made 40% of productive land abandoned. International trade and aid were delayed or canceled because of the lockdown.

Every country may have a different approach to avoid the depletion of the food supply. In Indonesia, even without COVID-19, the food demand is normally increasing as the Ramadhan approaches. In addressing this issue, the government has decided to modify its import tariff. Yet, this could pose another problem if the food exporter countries start to limit or ban their supplies. Recently, Vietnam has temporarily suspended new rice export contracts. Kazakhstan, one of the world's biggest shippers of wheat flour, banned its exports along with carrots, onion, sugar, and potatoes. Serbia has stopped the flow of its sunflower oil, while Russia is planning to ban the export shipment if the situation gets worse (Almeida & de Souza, 2020).

This situation could drive the international community into the worst scenario where the global food crisis as happened in 2008 may occur. Food crises are categorized into two main accounts: food shortage and food price. Disruption in food production and distribution can cause a food shortage. It is a dilemmatic situation whether to let agriculture labor to work and risk their lives or stop the production with a

chance of food shortage and spiking commodity price. The extension of COVID-19 containment may result in food insecurity and economic problems.

STRATEGY FOR MORE RESILIENT FOOD SECURITY

The government uses the incubation time of SAR-CoV-2 to define the length of the lockdown of their country or region. In reality, they use the entire new confirmed cases as a parameter. If the government found a high number of cases, the lockdown will be extended. During this period, food prices and supply in the market have to be monitored while ensuring the citizens will not fall into panic buying. The government should create social safety for all people, especially the most vulnerable groups. The strategies to secure the food supply during the outbreak may involve following recommendations:

- Measure food availability during early periods, especially in the lockdown scheme, when regular supplies of food may be disrupted. The government must secure the food stock and availability for certain periods. Lifting necessary food import restrictions and commodity tax reduction may be a temporary measure to expedite the process to meet the national demand.
- Ensure affordable food access for everyone, particularly prioritization of vulnerable groups to meet their immediate needs (FAO, 2020). This could be done via direct cash transfer, food stamps, support for community kitchens, direct deliveries of food, and funds for unemployment insurance. This will enhance their nutrition and health, as well as strengthen their safety net. To make this approach effective, transparency, valid recipients data, accountability, and participative monitoring need to be implemented to prevent corruption and mismanagement.
- Food price stabilization through market monitoring and adequate supply provision. High demand due to panic buying has led to goods scarcity or increasing prices. Undertaking proper public education not to hoard essential items and maintain basic hygiene are vital to do.
- In the longer term, public spending should be allocated more to support local farmers and improve the supply chain so that local crops are more accessible for all than imported ones. The government can provide subsidies and soft loans

for smallholders and develop cultivation strategies that empower farmers to continue food production. It is necessary to conduct decentralization of agricultural product procurement from core producing areas and investment in logistics to advance food distribution across the country.

At the current stage, the global food supply is relatively stable. Although some countries start to limit or ban their exports, many others persist. This raises optimism in the stability of global food security. However, no one can be sure how long this pandemic will last. The Indonesian government has announced to provide food assistance and small cash to help low-income households and informal sector workers to survive the next 6-9 months. Even with the best scenario, it takes 12-18 months to find the vaccine and recover from the social and economic fall down. Meanwhile, the idling land has no plant to harvest, and the food stock will decline. This is why the resilient food system is vital in case we face the worst of COVID-19 or the next pandemic.

MOVING FORWARD

Disease and illness have changed world history. Humanity had faced many pandemics that wiped out a population higher than war (e.g., yellow fever, cholera, Italian plague, Great Plague of London, measles). In recent centuries, the world faced Hong Kong flu (H3N2) and Asian flu (H2N2) with total death up to one million each and Spanish flu (H1N1) with total death up to 50 million. Learn from the COVID-19 experience, education on daily hygiene to all people becomes more important. COVID-19 is a zoonotic disease – which is a bacteria, virus, and parasite transmitted between animals and humans that cause infectious disease – in this case, transmitted from bats. The authority can prevent other pandemic and prohibit eating animals that host the virus. Meanwhile, in the following months, we need to employ measures to secure our end-to-end food system. Improvement in public health and efficient food distribution are the critical factors to overcome the COVID-19 pandemic.

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ABOUT THE AUTHORS

N. Ihsan Fawzi - Researcher
contact: ihsan@tayjuhanafoundation.org
I. Zahara Qurani - Research Coordinator
contact: zara@tayjuhanafoundation.org
A. Noyara Rahmasary - Program Manager
contact: noyara@tayjuhanafoundation.org

ABOUT TJF

Tay Juhana Foundation (TJF) is a nonprofit organization dedicated to promote the advocacy of the conversion and cultivation of suboptimal lands into productive lands, through the most environmentally, economically, and socially sustainable manner.

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