Economics of Lockdown: Balancing Health and the Economy in the Philippines

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Introduction

The Philippines is an archipelagic country comprised of 7,641 islands located in Southeast Asia. With an almost 110 million population, a growing middle class, and increasing urbanization, it is one of the most dynamic economies in the world (World Bank 2022). The country's Gross Domestic Product (GDP) has been steadily growing from 2012-2019, with an average GDP growth rate of 6.5% until the COVID-19 pandemic caused a contraction in the economy and resulted in a negative GDP growth rate of -9.6% in 2020 (World Bank 2021). Since the first COVID-19 case was confirmed on 30 January 2020 (i.e. a 38-year-old Chinese national) in the Philippines, COVID-19 cases have since shot up to 12,718 confirmed cases, with 831 deaths in less than four months since that first case. At the time of writing this article, two years later, the Philippines has registered well over 3.7 million cases and over 60,000 deaths (World Health Organization 2022).

The benefits of controlling the spread of COVID-19 include better-managed health risks and diminished economic disruption. The policy problem, however, is that some means of disease control—anchored around minimizing human contact and limiting the possible transmission of the disease—also create the conditions for a potentially severe economic downturn. This dilemma prompts policymakers to consider nuanced crisis relief and recovery plans to flatten the epidemiological curve without flattening the economy. And once COVID-19 is controlled, and a cost-efficient containment system is in place, hard lockdown and mobility restrictions could be relaxed, allowing the economy to recover. Hence, countries that seemed to fare better in controlling the pandemic also minimized the economic damage they suffered due to comparatively shorter lockdown periods (Oxford Economics 2021).

The Philippines implemented one of the world's most stringent and longest lockdowns. According to a COVID-19 Stringency Index developed by the University of Oxford, the Philippines ranked 12th out of 185 countries in terms of strictness of government response to the pandemic (Oxford Covid-19 Government Response Tracker

(OxCGRT) and Blavatnik School of Government 2022). The index included response indicators, including school closures, workplace closures, and travel bans. The Philippines also had the longest school closure in the world, which disrupted the education of 27 million students for 20 months (UNICEF 2021). From the start of the pandemic in March 2020 until around January 2022, the Philippine government implemented hard lockdowns six times, each with varying stringency. However, despite the draconian measures imposed to control the spread of COVID-19 in the country, health outcomes did not improve --- the Philippines could not flatten the curve but flattened its economy instead.

This paper examines the rationale, approaches, and consequences of the Philippines pandemic management, focusing on lockdowns. It elaborates on the governance challenge of pandemic response by outlining a theoretical framework for pandemic management in Section 1 and explains the Philippines' pandemic response and its impact in Section 2. Section 3 contains a brief synthesis of key lessons moving forward, while Section 4 provides a conclusion.

1. Theoretical Framework for Pandemic Control: Balancing Health and the Economy

In pandemic response, there are several main and interlinked objectives. The first is to contain the spread of COVID-19 and, as already mentioned, flatten the epidemiological curve so that domestic health systems are not swamped with cases. A second objective is focused on a sustained and stable recovery, aspiring towards a V-shaped recovery rather than a w-shaped one. The latter implies the risk of relapse if the virus flares up again, triggering another round of demand- and supply-side shocks.

However, there are several main challenges as COVID-19 crisis relief efforts transition to crisis recovery. Policymakers grapple with the benefit-cost trade-offs between tempering the risk of COVID-19 contagion and mitigating its adverse impact on the economy due to social distancing, quarantine, and lockdown measures. When exactly to open up has become the subject of intense debate. On the one hand, opening up too soon may risk a relapse, while on the other hand, opening up too late may cause a deeper than necessary economic contraction. In addition, the timing and coherence across different relief and recovery interventions could also be clarified to enhance their effectiveness.

To help illustrate these points, Figure 1.1 juxtaposes the two curves of interest to a country's efforts to "flatten the epidemiological curve without flattening the economy". The first is the epidemiological curve illustrating the number of cases of people infected by COVID-19. The goal is to "flatten that curve" by slowing the rate of infection so that the peak infection incidence (1a) is a number that the country's health system can handle (indicated by the red line). Hence, the flatter epidemiological curve has a peak (1b) which is smaller and more manageable compared to a scenario with limited interventions by the government (1a). These interventions include social distancing, travel restrictions,

quarantine measures, and lockdown protocols that most countries have implemented during the global pandemic. Essentially, these disease control measures are the result of collective action.

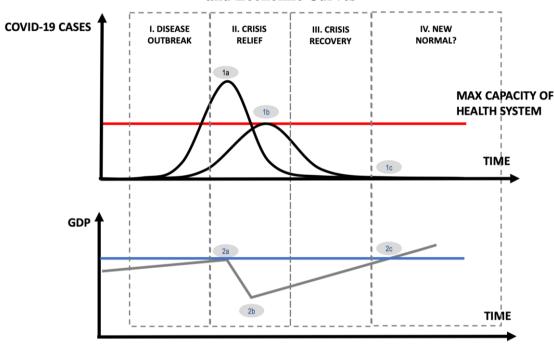


Figure 1.1 Stages of Crisis Management Juxtaposed against the Epidemiological and Economic Curves

Source: Authors' elaboration, drawing from Centers for Disease Control and Prevention (2007) and International Monetary Fund (2020).

However, these policies designed to contain COVID-19 could result in a dramatic economic contraction. Hence, the second curve for policymakers to monitor is the economic curve represented by total GDP. Figure 1 roughly illustrates how policies designed to lower the peak incidence from 1a to 1b will also likely contract the economy. This contraction is illustrated by the drop in output from 2a to 2b. This period can be roughly described as the crisis response and relief stage when COVID-19 containment measures must be complemented by relief efforts for the disruptions caused by the lockdown period.

And roughly speaking on the timing, only when the COVID-19 incidence starts to decline will it be ideal for the policies on lockdown and quarantine to be relaxed. Therefore, that is also when one expects the economy to begin to recover. We "timebox" this in figure 1. Still, it is unclear to what extent the two will coincide, given other factors, such as the lingering effect of the demand-side chilling effect, complicated further by the possible emergence of new variants. These new variants can strain even existing well-functioning systems as scientists and medical experts continue to learn about the properties of the disease (and its new variants). Regarding the delta and omicron variants, for example, the higher infectiousness of the new variants forced countries back into

tighter lockdowns as containment measures were upgraded to deal with the new variant. Full output recovery occurs when the economic curve intersects the blue line in figure 6 so that the total output implied by 2a is equal to 2c.

Figure 1 also illustrates the four possible stages of crisis management (Disease/Crisis Outbreak, Crisis Relief, Crisis Recovery, and the New Normal). In practice, crisis management policies probably overlap across these different phases. However, it could still be helpful to illustrate them distinctly, to understand better how policy objectives evolve over the entire crisis period and eventually the post-crisis situation (which some have begun to describe as the "new normal").

2. Lockdown Rationale, Approaches, and Consequences in the Philippines

2.1. Background

The Philippines is composed of 81 provinces, 146 cities, 1,488 municipalities, and 42,046 barangays (village-level government units) located in three major islands: Luzon, Visayas, and Mindanao. Administratively, the country is subdivided into 17 regions. The National Capital Region (NCR) or Metro Manila is the metropolitan area where Manila, the country's capital, is located. With a population of 13.48 million in 2020 (Philippine Statistics Authority 2021b), Metro Manila is among the most densely populated areas in the world. NCR's regional gross domestic product (RGDP) was at 32.24% of the total GDP in 2019, making it the largest contributor to the economy (Philippine Statistics Authority 2021a). Given the NCR's population density, the most stringent lockdowns were implemented in the region.

In response to the growing threat of COVID-19 (then called novel coronavirus (NCov), the Philippine government activated the Inter-Agency Task Force for the Management of Emerging Infectious Diseases (IATF-EID) on 28 January 2020. The task force, mandated to facilitate inter-sectoral collaboration for pandemic management, comprises members from different national government agencies, led by the Department of Health (DOH). In April 2020, the national government organized regional COVID-19 task forces to respond to localized issues and concerns.

Through the IATF-EID, four major classifications of lockdowns from March 2020 until November 2021, ranging from the strictest to least strict: a) ECQ: Enhanced Community Quarantine, b) MECQ: Modified Enhanced Community Quarantine, c) GCQ: General Community Quarantine, and d) MGCQ: Modified General Community Quarantine. Table 2.1 provides a summary of the quarantine classifications.

Table 2.1.1 Summary of community quarantine classifications in the Philippines.

Quarantine level		Date First	Description	
		Implemented	_	
Enhanced Community Quarantine (ECQ)		17 March 2020	Total/absolute lockdown that included 1) restrictions on all forms of transportation 2) cancellation of mass gatherings, 3) strict stay-at-home protocols 4) school closure and 5) businesses (non-essential) closure.	
Modified Enhanced Community Quarantine (MECQ)		16 May 2020	Some restrictions lifted and allowed limited outdoor exercise, small gatherings, essential-sector skeletal workforce allowances, and controlled inbound air travel (e.g. by repatriating Filipinos).	
General Community Quarantine (GCQ)	Regular	1 May 2020	Even more restrictions lifted, allowing for public transport with safe distancing guidelines, a skeletal workforce for schools, select businesses allowed to operate at 50-100 per cent capacity, and shopping malls opened.	
	With heightened restrictions	15 May 2020	Allowed the operations of 1) lottery and horse racing with off-track betting stations, 2) non-contact sports, 3) personal care services at 30%, 4) outdoor tourist attractions at 30% capacity, 5) staycation hotels up to 100% capacity (no age restrictions), and 6) indoor restaurant dining at 20% capacity and outdoor dining at 50%.	
	With some restrictions	16 June 2021	Allowed the operations of 1) gyms and fitness centres at 40% capacity and indoor sports courts at 50% capacity, 2) historical museums at 40%, 3) meetings, conferences, and exhibitions at 40% capacity but 10% only for social events, 4) personal care services at 50%, 5) outdoor tourist attractions at 50%, 6) indoor restaurant dining at 40% and outdoor dining at 50% capacity.	
	With heightened and additional restrictions	30 July 2021	Allowed interzonal travel of authorized persons.	
Modified General Community Quarantine (MGCQ)		16 May 2020	Allowed full operations of government offices, public and private transportation, and maximum capacity for businesses.	

Sources: IATF (2020), IATF (2021).

In September 2021, the IATF revised the classification into an alert level system (ALS) with five tiers ranging from Alert Level 5 to Alert Level 1. This classification is based on the degree of case transmission and utilization rate of hospital beds and intensive care units (ICUs) and was implemented in November 2021. Table 2.2 summarizes the ALS for COVID-19.

Table 2.1.2 Summary of COVID-19 Alert Levels System in the Philippines.

Alert Level	Dogues of Cose Anonomicaion	Utilization Rate of			
	Degree of Case transmission	Hospital Beds	Intensive Care Units		
5	Critical				
4	High (and increasing)	High			
3	High (and increasing)	Increasing			
2	Low (but increasing)	Increasing			
	Low (and decreasing)	Increasing			
	Low (and decreasing)	Low			
1		Low	_		

Source: IATF (2021).

2.2 Timeline of Lockdowns

The crisis outbreak stage is usually characterized by incomplete information and initial proclivity by policymakers to belittle the risks posed by the crisis. In some cases, it is difficult for policymakers to discern whether and to what extent a full-blown crisis will occur. In the case of COVID-19, different countries responded to this threat with varying urgency. In the Philippines, the initial response was to downplay the threat of the virus.

The first reported case of COVID-19 was on 30 January 2020 (i.e. a 38-year-old Chinese national). However, several weeks before this, there were already calls to ban flights from China as reported cases in that country (the epicentre of the disease) had already reached 41 by 11 January 2020, 93 by 21 January 2020, and 1,741 by 30 January 2020 (World Health Organization, 2020). The WHO declared COVID-19 an international public health emergency on 30 January 2020.

On 2 February 2020, Philippine President Rodrigo Duterte finally banned foreign travellers from China, Hong Kong, and Macau (Jalea 2020). Nevertheless, he continued to publicly downplay the risks of the disease, noting in a press briefing on 3 February 2020 (Presidential Communications Operations Office 2020).

The first part of crisis response focused on social distancing, travel restrictions, and quarantine protocols, among many other virus-contagion-fighting policies that different countries have adopted, with varying intensity. The Philippines' response on this front was somewhat delayed, but this was the case for many other countries. On 7 March 2020, the Department of Health acknowledged the possibility of community transmission, as they could no longer associate some cases with a travel history and existing infection tracing (GMA News 2020).

After initially denying the gravity of the risks posed by this disease, and well over a month after the WHO declared COVID-19 an international public health emergency, President Duterte eventually signed Proclamation 922 on 8 March 2020, placing the entire Philippines under a state of public health emergency due to the threat of COVID-19. By then, there were 10 COVID-19 cases reported in the Philippines, even as many suspected there were many more cases unreported due to a shortage of test kits.

On 11 March, the WHO declared COVID-19 a global pandemic. And the next day, on 12 March 2020, President Duterte announced the community quarantine of Metro Manila, which would commence on 15 March and last until 14 April 2020. The timeline of quarantine regimes is illustrated in Figure 2.2. as the first red arrow on the timeline of quarantine regimes and the number of daily cases. On 16 March 2020, President Duterte extended this by declaring an enhanced community quarantine (ECQ) covering the Luzon area to take effect on 17 March, extending to 14 April 2020. However, by then, there were already 187 COVID-19 cases in the Philippines (as of 17 March 2020).

Alert Level 3 ECQ 20000 Peak: Jan 10 ECQ* 18000 22: 18 7k cases New Daily COVID-19 Cases in NCR **MECO** MECQ 16000 MECQ* MECQ* Alert 14000 GCQ* Level 4 12000 GCQ GCO 10000 Sep 11' 21: 9.1k cases Alert 8000 FCO* Apr 2 '21: 7.9k Level 3 14. 2022 - only 6000 Aug 10 '20: 4.1k 87 cases Alert Alert 4000 Level 2Alert Level 2 2000 Level 1 20/26/20 21/16/20 12/16/20 1/26/21 2/16/21 3/16/21 6/16/21 7/16/21 8/16/20 9/16/20 A/16/21 5/26/21 8/16/21

Figure 2.2.1 Community quarantine regimes during the COVID-19 pandemic, Philippine National Capital Region (NCR), March 2020 to May 2022 2022

Sources: DOH official data drop (data until 14 May 2022), Rappler, CNN PH, ABS CBN News, Inquirer, Sunstar, PNA, cebudailynews

Duterte later announced two extensions of the ECQ: first extending it to the end of April 2020 (announced 7 April 2020) and later extending it to 15 May 2020 (announced 24 April 2020). In late April, Duterte also announced the extension of the ECQ in high-risk areas (NCR, Central Luzon. Calabarzon, Cebu, and Davao), while the ECQ was relaxed to a general community quarantine (GCQ) in areas with zero reported COVID-19 infections (Casas 2020).

On 12 May 2020, the government announced the lifting of community quarantine measures in low-risk 41 provinces and 11 cities in the country. Still, due to appeals from local government unit (LGU) executives, a modified general community quarantine (MGCQ) was imposed instead.

Emerging studies on lockdowns during this period showed that there is empirical evidence of the effectiveness of these contagion control policies. For instance, researchers analyzing big data on mobility in the Chinese city of Wuhan conclude that the lockdown reduced 65 per cent of cases in Chinese cities outside Hubei province and 53 per cent

more in 16 Hubei province cities than in Wuhan (Fang, Wang, and Yang 2020). On the other hand, it also quickly became clear that the cure could be worse than the disease if the lockdown generates an economic contraction with all of its social and economic costs mounting over time. Based on a customized survey of over 100,000 respondents in the U.S., for example, Coibion, Gorodnichenko, and Weber (2020) found evidence that the lockdown caused income and wealth losses and increased unemployment.

Starting June 2020, the IATF lifted the ECQ in NCR and two other major regions, while the rest of the country was placed under MGCQ. The easing of restrictions was aimed at reviving the economy put on hold. Workers from select industries were allowed to go outside to work, but restrictions on public transportation were not lifted. COVID-19 cases and deaths soon started rising again in June and July, prompting medical groups to appeal for the imposition of ECQ in NCR and neighbouring provinces from August 1-15, 2020. This was the second hard lockdown, illustrated in the 2nd red arrow of Figure 2.2. During this time, the government introduced the Coordinated Operations to Defeat Epidemic (CODE) protocol, which aimed to operationalize a "government-enabled approach, local government-led, people-centred response, with health taking the primacy in the approach" (Department of Health, Republic of the Philippines 2020).

The ECQ was lifted, and GCQ was imposed again in September 2020. There were no lockdowns for six months until April 2021 (see 3rd arrow of Figure 2.2), when cases peaked at almost 8,000 daily. Three months after, the 4th lockdown, as indicated by the 4th arrow in Figure 2.2, was imposed in August 2021. The 5th and the most recent lockdown was in January 2022, when the country recorded the highest number of cases at 17,000 due to the omicron variant.

In summary, the Philippines was in hard lockdowns six times during the following periods: a) March 2020, b) August 2020, c) April 2021, d) August 2021, e) September 2021, and f) January 2022. Whenever there is a threat of a surge of cases, the government will implement a lockdown and then relax the restrictions a few months after to let the economy "breathe".

2.3 Why weren't the lockdowns effective?

The Philippines failed to develop a more cost-efficient containment strategy, so it was forced back into draconian and comprehensive lockdowns several times to temper each surge in COVID-19 in the country so far. The economic environment flip-flopped from very closed to slightly more open and back several times. And yet crisis managers never achieved full economic openness nor total flattening of the COVID-19 curve, resulting in one of the longest lockdowns in the world along with fragile containment results in tempering COVID-19 cases. Despite stringent measures for the pandemic, why was the Philippines unsuccessful in its lockdowns?

2.3.1. Weak and exclusive health system

The healthcare system in the Philippines is characterized by mixed public and private healthcare providers, a devolved structure of service delivery, and fragmented health financing (M. Dayrit et al. 2018). Public and privately managed health systems were designed to be complementary in healthcare service delivery. However, due to the inability of the government to regulate the expanding private sector, out-of-pocket expenses for health continue to increase --- more than 50% of total health spending in 2018 was out-of-pocket (M. Dayrit et al. 2018). The country has a ratio of ten (10) hospital beds and six (6) physicians per 10,000 people, and only 2,335 critical care beds that are unevenly distributed nationwide (World Bank 2019a; 2019b; Phua et al. 2020). The public health system has suffered decades of underinvestment, with health spending reaching only 3-4% of the GDP from 1995 to 2010. Given this context, it is unsurprising that the Philippines was poorly prepared to deal with COVID-19, as public health experts reported (Amit, Pepito, and Dayrit 2021).

The implementation of pandemic measures in the country was heavily reliant on local government units (LGUs), which do not have enough resources and are chronically beset with patronage politics. Nevertheless, several LGUs successfully reduced COVID-19 cases using innovative methods while providing adequate support to their constituencies (World Health Organization 2021; Amit, Pepito, and Dayrit 2021).

For an effective containment strategy, the health care system must be strong to absorb the possible surging cases. If the hospitals can absorb these cases, the government can reduce the number of people who may die of COVID-19. However, the Philippines was unable to strengthen its healthcare system during lockdowns. Inefficiencies and controversies in the use of funds for pandemic response further strained the country's weak and fragmented health system. Since the pandemic began, over 40 per cent of nurses in private hospitals have resigned due to extreme physical and mental stress, low wages, and unpaid pandemic-related benefits (Alibudbud 2022). In October 2021, healthcare workers demanded the resignation of the Health Secretary amid allegations of corruption in the procurement of medical supplies (Baclig 2021).

Lastly, health-seeking behaviour among Filipinos has been declining, not because of fear of COVID-19 but because of the fear of expensive treatment fees. Those who may have COVID-19 don't go to the hospitals or testing centres, resulting in a higher risk of community infections. For instance, data from October 2020 showed that 56% of COVID-19 deaths were "dead on arrival", meaning they did not receive medical treatment at hospitals, even if 50% of critical care beds were vacant during that time (Ramos 2020).

2.3.2 Insufficient COVID-19 testing

Testing is part of the backbone of an effective pandemic management strategy. It is the window that provides a clear picture of the spread of COVID-19 --- who is infected by the virus and how many are dying from the infection. Without testing, there is no data (Hasell 2020). Without data, there is no way to predict the scale of the infections and the

resources that the health system and citizens need. Epidemiologists and public health experts claimed at the start of the pandemic that mass testing – or conducting millions of tests per country per week – was the most practical way out of the COVID-19 crisis (Guglielmi 2020; Ricciardi, Verme, and Serajuddin 2020). However, for a developing economy like the Philippines, scaling up testing would require a lot of resources for equipment, laboratory facilities, and manpower.

Due to this difficulty, there were extensive debates on the extent to which the country needs to test. Groups from different sectors advocate for mass testing (Saludes 2020; Navallo and Merez 2020; Romero et al. 2020). The national government turned down these calls for mass testing, saying that "it is not yet needed" (Gita-Carlos 2020) and "indiscriminate mass testing of asymptomatic individuals is neither feasible nor practical" (Crismundo 2021). Instead, the government pursued a "risk-based" testing strategy, prioritizing health workers and patients with critical symptoms.

On a 7-day rolling average, about 30,000 to 40,000 tests were conducted daily in the Philippines in 2020 and 2021 (Our World in Data 2021) (See Figure 2.3.1).

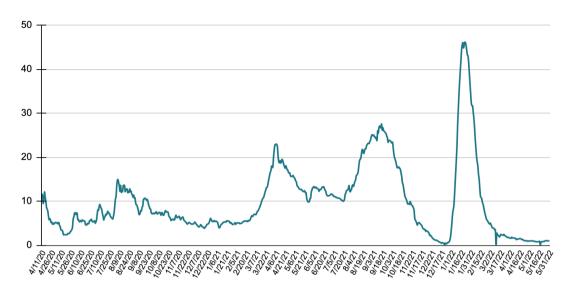
1.00 0.75 0.50 0.00 7/1/20 10/1/20 1/1/21 4/1/21 7/1/21 10/1/21

Figure 2.3.2.1 Daily COVID-19 tests per thousand people in the Philippines (2020-2021).

Source: Our World in Data (2022).

To understand if countries are sufficiently testing is to ask: what share of the tests confirm a case? What is the positivity rate? The Philippine daily positive rate peaked at around 27.5 per cent in September 2021 and 46.11 per cent in January 2022 (see Figure 2.3.2.2). The WHO has recommended a positive rate lower than 10% – but better is lower than 3% – as a general benchmark of adequate testing.

Figure 2.3.2.2 The share of COVID-19 tests that are positive. Daily positive rate, given as a rolling 7-day average (April 2020 – May 2022)



Source: Our World in Data (2022).

Testing was supposed to make the test-trace-treat and containment strategy cost-efficient and effective. However, the Philippines was not able to prioritize that. Detailed and disaggregated data are needed to inform urgent policy decisions to contain the possible risk of a surge in COVID-19 cases. The disaggregated data will show which areas have a surge, and that's the only area that needs lockdown. However, the response has been one-size-fits-all: everyone will be locked down. Evidence-based pandemic response remains a challenge but is crucial to recovery.

2.3.4 Worsening contact tracing

Contact tracing is complementary to testing; it allows the health authorities to identify persons who may have contracted the virus upon contact with a COVID-positive patient and carry out health measures such as isolation to prevent the spread of the disease. A year after the pandemic, in March 2021, the Philippine contact tracing chief lamented that in many areas in the country, contact tracing does not go beyond the household of COVID-19 cases (Talabong 2021). He also said that the country's contact tracing average is only 1:3, far from the standard 1:15 ratio. This ratio means that for every COVID positive case, authorities can trace only three close contacts.

One reason for the country's inefficient and worsening contact tracing is the lack of a uniform data collection tool among LGUs. Although the national government introduced contact tracing platforms such as COVID KAYA, Kontra COVID Bot, and Stay Safe, they were ineffective and were not fully used. Some LGUs and private sector establishments introduced contact tracing apps independently, but they were not integrated and therefore cannot provide accurate data. Moreover, the contact tracing

system was beset with challenges, including the lack of trained contact tracers, issues in encoding data, and the lack of capacity of LGUs in contact tracing (Talabong 2021). Contact tracing remains the weakest link of pandemic management in the Philippines.

2.3.5 Inadequate social transfers

When ECQ was implemented in March 2020, it quickly became apparent that the country lacked the immediate resources for sufficient crisis relief, so legislators rushed the Bayanihan to Heal as One Act (See Figure 2.3.5.1) which was proposed and rushed through Congress on 23 March 2020 and signed into law on 24 March 2020 (Republic Act 11469). Its implementing rules were published on 1 April 2020 (Official Gazette 2020), yet further delays in the bureaucracy are said to have affected part of its rollout that month. This law allowed the Executive branch to reallocate resources among other powers that fell short of taking over private sector entities as part of crisis response.

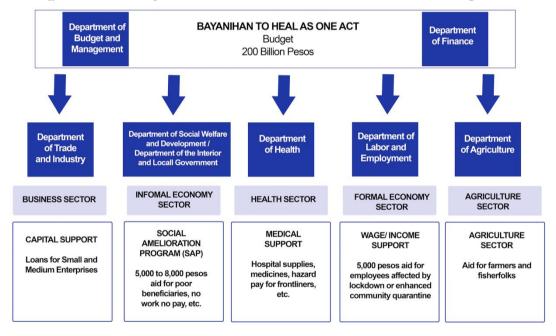


Figure 2.3.5.1. Bayanihan to Heal as One Social Protection Components

Source: Presidential Communications Operations Office (2020).

The Philippines had implemented hard lockdowns six (6) times. Despite the long periods of severe mobility restrictions, the government has only given two months' worth of social transfers to low-income households, from PHP 5,000 or USD 98 per person with a maximum of PHP 8,000 or USD 158 per family. Two (2) months after the 1st lockdown, only around 71% of the 18 million household beneficiaries and PhP70 billion PhP100 billion were disbursed to families. The Department of Interior and Local Government (DILG) also received numerous complaints in early May that some local officials prioritized their relatives and political allies in the cash distribution, while others divided

the total cash and tried to spread it for distribution to a large set of families in the area (Cabrera 2020).

The amount of social transfers is insufficient and could force people to leave their homes despite the mobility restrictions. The situation is exceedingly more difficult for coastal communities, which comprise 60% of the population and rely on fishing activities for subsistence. A study on the effects of the pandemic on small-scale fishers by Macusi et al. (2022) revealed that despite the restrictions, most fishers still fished every day and disregarded the possibility of COVID infection because they had no other livelihood. If the government is not giving enough cash aid to the most vulnerable population, it will be difficult for them to adhere to quarantine protocols.

2.3.6 Slow, delayed, and inequitable vaccinations

As many scientists and public health experts put it, COVID-19 vaccination offers a way out of the pandemic. While other countries started vaccinating in December 2020, the Philippines began vaccinating health workers only in March 2021, with about a 7-day average of 5,000 doses administered (See Figure 2.3.6.1). There have been delays at the start, and progress was slow due to supply issues. Vaccination peaked from 29 November 2021 to 7 December 2022 with 12.48 million vaccines administered due to the massive vaccination drive by the national government, then slowed down again.

Figure 2.3.6.1 COVID-19 vaccine doses administered in the Philippines, 7-day rolling average (March 2021 – May 2022)

Source: DOH (2021).

The Philippines remains a laggard in mass vaccination in Southeast Asia, administering only 137 vaccine doses per 100 people, compared to Singapore's 259 doses per 100 people in May 2022 (Our World in Data, 2022). The government's target vaccination coverage was 70% in 2021, then increased to 90% in early 2022. As of May 2022, only

58% are fully vaccinated. In addition to the slow vaccination progress, vaccine coverage among regions in the country is unequal. Table 2.3.6.1 shows the uneven vaccination coverage in the Philippines. More than 98 per cent of the target population are vaccinated in NCR, while only 16.47 per cent are vaccinated in BARMM (Bangsamoro Autonomous Region in Muslim Mindanao). The rest of the regions have 37 per cent up to 66 per cent coverage.

Table 2.3.6.1. Regional distribution of fully vaccinated individuals in the Philippines as of May 2022.

Region	Target	Fully Vaccinated	Total # of Cases	Poverty Rate (2018)
National Capital Region (NCR)	9,776,356	98.20%	1,173,324	1%
CAR (Cordillera Administrative Region)	1,275,903	66.66%	119,155	3%
3 (Central Luzon)	8,759,693	62.42%	361,947	5%
1 (Ilocos Region)	3,719,256	60.94%	133,701	7%
2 (Cagayan Valley)	2,585,565	59.77%	162,331	12%
4A (CALABARZON)	11,452,775	59.09%	655,951	5%
11 (Davao Region)	3,759,878	55.04%	140,619	14%
6 (Western Visayas)	5,579,386	49.19%	194,894	12%
8 (Eastern Visayas)	3,362,637	45.56%	64,405	24%
10 (Northern Mindanao)	3,552,194	45.49%	106,153	17%
4B (MIMAROPA)	2,248,548	44.35%	44,176	10%
13 (CARAGA)	1,947,553	42.98%	61,955	24%
7 (Central Visayas)	5,638,340	42.22%	193,214	13%
9 (Zamboanga Peninsula)	2,666,678	41.65%	66,040	25%
5 (Bicol Region)	4,335,047	40.26%	65,747	20%
12 (SOCCSKSARGEN)	3,490,115	37.24%	75,858	22%
BARMM	2,989,135	16.47%	25,853	54%
ROF (returning overseas Filipinos)			39,239	
Unknown			3,360	
Total PH	77,139,059	58.06%	3,687,922	12%

Sources: Department of Health (2022) as of 18 May 2022, # of Cases c/o DOH COVID19 Tracker (Department of Health 2022a) as of 22 May 2022; Philippine Statistics Authority.

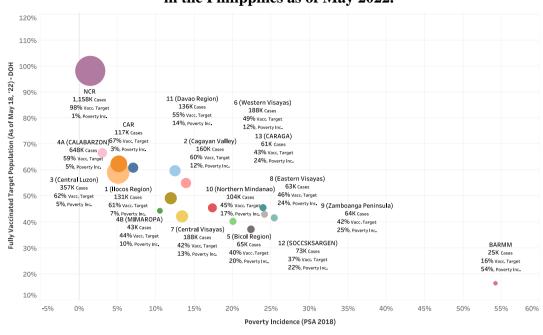


Figure 2.3.6.2 Regional distribution of fully vaccinated individuals in the Philippines as of May 2022.

Sources: DOH COVID-19 Vaccination Dashboard of 18 May 2022, # of Cases c/o DOH COVID19 Tracker as of 22 May 2022; Philippine Statistics Authority.

Figure 2.3.6.2 further illustrates the gap in vaccination coverage, with poorer regions being left behind. The inequitable distribution of vaccination will create significant problems in pandemic management. The pace in poorer regions is too slow to prevent deaths that could have been avoided if vaccine distribution and roll-out were faster. Now that supply is no longer a hurdle, vaccine hesitancy and logistical issues continue to hamper vaccination progress.

A survey by the World Bank revealed that vaccine acceptance in the Philippines is only 41%; this is very low compared to Indonesia's 70%, Malaysia's 80%, Vietnam's 83%, and Laos' 85% (The World Bank 2021). The findings further showed that the main reasons for vaccine hesitancy are the "a) lack of information about vaccines, b) misinformation about their efficacy or side effects, c) mistrust, and e) underestimation of benefits compared to overestimation of risks and costs of vaccination" (The World Bank 2021). There were also instances when people would refuse Sinovac vaccines, which comprise the majority of the country's stocks in 2021, and would rather wait for other brands of vaccines such as Pfizer (Alfonso et al. 2021). The lingering mistrust of vaccines resulted from the dengue vaccine controversy in 2018, which caused a crisis of confidence in public health authorities (M. M. Dayrit, Mendoza, and Valenzuela 2020).

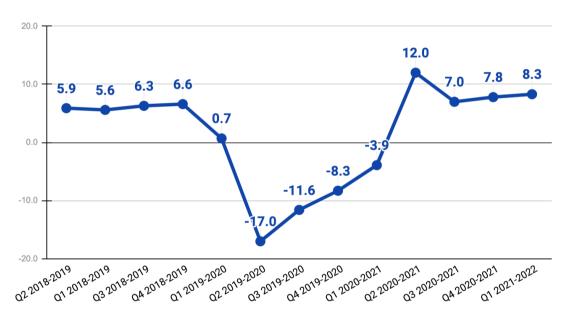
Now that vaccine supply is no longer a hurdle, logistical issues, including the difficulties in transportation and access, lack of adequate storage capacity, and lack of manpower, are also affecting the pace of vaccination. Rappler (2022) described this situation in an article:

In geographically isolated areas, the lack of personnel means health workers play the role of vaccinator, manager, and coordinator, to name just a few. Jory Allorde, a rural health worker serving in Barangay Dikapinisan, a coastal village of 2,500 people in San Luis, Aurora, told us there were more than enough doses to vaccinate all willing people in his community. However, arranging a two- to three-hour boat ride into town, gathering additional health personnel, ensuring stable power supply, and facilitating documentation with barangay officials, regional offices, and community members took up more time than actually getting doses into people's arms. These were tasks Allorde had to manage all by himself (Rappler 2022).

2.4 Socio-economic consequences of on-again, off-again lockdowns

Due to the pandemic, the country encountered one of the deepest economic contractions since 1985, posting a negative 17 per cent GDP growth in the 2nd quarter (Q2) of 2020 (See Figure 2.4.1)

Figure 2.4.1. Philippines Gross Domestic Product (At Constant 2018 Prices). Year-on-Year Growth Rates (in per cent) Q1 2018-2019 to Q1 2021-2022



Source: Philippine Statistics Authority (2022).

Moreover, the Philippine government debt to GDP ratio rose to 53.5 per cent in 2020 from 39.6 per cent in 2019 (See Figure 2.4.2) as a result of borrowings for the COVID-19 response. The last time the country was on 54 or anywhere near 60 per cent was around 2006-2009. According to the Philippine Institute for Development Studies (PIDS), the government's think tank, it may take ten years before the country to bring down its debt to GDP ratio to 40% (Gumban 2022).

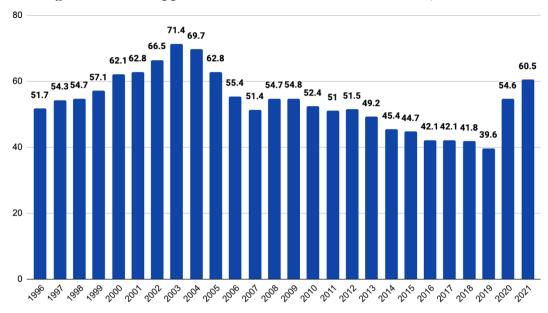


Figure 2.4.2. Philippines Government Debt to GDP Ratio, 1996-2021

Source: Bureau of Treasury (2021)

The consequences of pandemic mismanagement in the Philippines are most evident in the closure of businesses and loss of income and jobs, students dropping out of schools, and increased hunger and poverty.

Before the pandemic, there were 957,620 business enterprises in the country, with 99.51% categorized as micro, small, and medium enterprises (MSMEs) (Department of Trade and Industry 2020). These MSMEs created a total of 5,380,815 jobs, or 62.66% of the country's total employment, while large enterprises created a total of 3,206,011 jobs or 37.34% (Department of Trade and Industry 2020). The on-again, off-again lockdowns and the unclear guidelines from the government severely affected the operations of these businesses and their employees. The DTI reported that 26% of firms had to close in 2020 (Crismundo 2020), and even after the easing of restrictions in November 2021, 10% remained closed (Business World 2021). Over 7.2 million workers were unemployed in 2020, resulting in a record-high unemployment rate of 17.6 per cent compared to only 5.1% in 2019 (Philippine Statistics Authority 2020). With the loss of income, an additional 4.2 million families experienced hunger in May 2020 (CNN Philippines 2020), and 3.1 million families remained hungry in the 1st quarter of 2022 (Sarao 2022).

The National Economic Development Authority (NEDA) reported that the Philippines lost USD 86 billion in economic output in 2020 and that the pandemic and the lockdowns will cost the country PHP 41.4 trillion for the next 40 years (NEDA 2021). This is due to reduced consumption and investments, reduced productivity because of untimely deaths and sickness, and loss in future wages based on the impact of lower quality education from online and distance learning.

While some children and young people were able to transition to online education, millions didn't have the resources to do so --- further widening the digital divide. Around

one-fifth Filipino elementary and high school students or more than five million children did not enroll for the academic year 2020-2021, and most likely will not enroll in the succeeding school year due to difficulties brought by the pandemic (Gamboa 2021).

The digital divide is similar to the workers' situation – a separation of adaptive capabilities between the "technology haves" and the "technology have nots". There is a growing concern over a "lost generation" whose human capital will suffer during the crisis, and some may permanently fall through the cracks of the social safety net. These are the long-term risks and consequences of the COVID-19 pandemic, which will likely COVID-19 will impose deep and long-term human development costs on the country and exacerbate inequality.

3. Lessons learned

Among the main lessons learned from pandemic management include the transition from total lockdowns to granular lockdowns, the crucial role of LGUs, private sector, and civil society groups in crisis response and recovery, and the importance of healthcare and social protection systems for the most vulnerable populations.

3.1. Graduating from total lockdowns to granular lockdowns

After 18 months of implementing the total lockdown strategy, the Philippine government finally introduced the Alert Level System that simplified the guidelines for quarantine and started the transition to granular or localized lockdowns (See Table 2.1.2). Under this new system, only areas tagged as "COVID-19 hotspots" will be placed under lockdowns, allowing areas outside the hotspots to continue to operate businesses and other activities. From a regional level before, the lockdowns are now localized to a group of houses in a street or a subdivision. Although delayed, the transition to granular lockdowns will allow the control of COVID-19 cases while ensuring that the rest of the economy functions normally.

3.2. Crucial role of LGUs, private sector, and civil society groups in crisis response

While the national response to the pandemic had many shortcomings, the COVID-19 crisis also demonstrated the capacity and agility of local government units, the private sector, and civil society groups to implement innovative solutions and mobilize resources. Within days of the ECQ in March 2020, the private sector, civil society, and Church groups, followed later by local and central governments, pushed for various crisis response and relief efforts. The relative agility of civil society, the private sector, local governments, and central government (in that order) appears to be a pattern in crisis relief efforts in the Philippines. Private sector groups adjusted their operations to the ECQ period, with some ensuring salaries for their employees and suppliers and others adapting

work arrangements so that some staff could work from home. In contrast, others could follow schedules and arrangements allowed by the ECQ.

Nevertheless, around 40% of the country's 45 million labour force are less likely to have formal work arrangements, with little access to social protection and insurance (International Labour Organization 2019). Hence, at least 16 million workers and their families immediately need support to supplement their incomes. Civil society and Church groups mobilized food donations and other needs for lockdown-affected poor and lowincome communities. In contrast, many small and large donors mobilized domestic production capacity to manufacture PPEs (personal protective equipment) due to an apparent lack of equipment for health sector frontliners in public and private sector hospitals. Some of the country's largest firms and conglomerates mobilized to support poor and low-income communities, displaced workers, and medical frontliners, collectively mobilizing several billion pesos of crisis relief and support by early April 2020. These initiatives included direct cash transfer programs like Project Ugnayan, organized by several large Philippine corporations, and the PDRF (Philipine Disaster Resilience Foundation 2020). Project Ugnayan sought to transfer PhP1000 food vouchers to almost 8 million Filipinos in crisis-affected communities in Metro Manila (Philippine Disaster Resilience Foundation, 2020) and Bayan Bayanihan, a partnership involving the Asian Development Bank, the Department of Social Welfare and Development (DSWD), the Philippine Army, Philippine Chamber of Commerce and Industry and PDRF (Asian Development Bank, 2020b). Bayan Bayanihan is a bridge program to provide quick emergency relief for about 55,000 of the most vulnerable households in Metro Manila.

Among the most notable initiatives of some LGUs in increasing vaccination are opening more vaccination sites in partnership with the private sector and providing incentives to encourage people to be vaccinated. For instance, the LGU of Quezon City, the largest city in the country, partnered with malls to set up vaccination sites (Quezon City Local Government 2021). Some LGUs and establishments also provided incentives such as discounts for food products. These efforts by the local government, private sector, and civil society groups not only supplemented the national government's shortcomings but also showed the significance of social cohesion during crises.

3.3 Importance of healthcare and social protection

The global pandemic has also re-emphasized the importance of inclusive social safety nets and a robust domestic healthcare system. In addition to its usefulness for many citizens who may fall into poverty from catastrophic health spending, strong and inclusive social safety nets and healthcare systems also anchor most countries' resilience strategies, particularly against health shocks like COVID-19. In countries with weak healthcare systems, such as the Philippines, contagion control becomes more complex and is often delayed, allowing the health crisis to fester and generate much higher social and economic costs (Gilbert et al. 2020; Chalkido and Krubiner 2020). The landmark Philippine Universal Health Care Law was only recently passed in February 2019, but it has created an appetite for health care reform in the country. This is a distinct opportunity for

collective action to drive greater investments in health, improved social protection, and more equitable health coverage and access in the "new normal".

4. Conclusion

COVID-19 exposed the weaknesses in healthcare and social protection systems—notably, inequality in coverage and access—and this same inequality has been shown to exacerbate the social costs of the crisis. The case of the Philippines provides important lessons in pandemic management. It emphasizes how important it is to build resilient and inclusive health systems so that pandemic response is much more effective and building containment systems can be swifter. Lockdowns are only effective if they buy more time to strengthen health and test-trace-treat systems. If the country is unable to graduate to more efficient containment strategies, it is stuck with an on-again, off-again lockdown, which is severely damaging to the economy and the lives of the people.

The Philippines' healthcare system can be further strengthened through important innovations and reforms. For instance, ICT systems and innovative apps for telemedicine could be used to share and manage information in collaboration with the central and local governments and across public and private hospitals, testing centres, and other healthcare units.

Before a crisis, one could set up emergency coordination mechanisms to rapidly re-arrange and re-align the local health system to form "surge capabilities" anchored on public-private solid partnerships for crisis response. Policymakers could also pursue integrative health crisis planning and investments in both institutions- and skills-development to strengthen resilience against future health shocks. Reforms and investments could help enhance affordable healthcare by minimizing out-of-pocket expenses, notably for poor and low-income citizens and more effectively managing costs through inclusive social insurance and efficient public-private balance in healthcare provision (Hartigan-Go, Mendoza, and Ong 2020).

In summary, what appears in the literature and the emerging COVID-19 experience is that stronger and more inclusive healthcare and social protection systems build upon and reflect the level of social cohesion in countries. Unsurprisingly, those same countries tend to have a deep well of social capital and public trust in crisis responses of the State, in turn making it much more effective in crisis response. For the Philippines, early missteps in pandemic response notwithstanding, it will be key to address these reforms to build back better.

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