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## **Chapter - 1** Lessons from the COVID-19 Pandemic for an Urban Economy: The Case of urban Resilience in Jakarta **Author** Posma Sariguna Johnson Kennedy Universitas Kristen Indonesia, Universitas Pertahanan, Jakarta, Indonesia

#### Chapter - 1

## Lessons from the COVID-19 Pandemic for an Urban Economy: The Case of urban Resilience in Jakarta

Posma Sariguna Johnson Kennedy

#### **Abstract**

The purpose of this study is to review the (historical) experience of the economic impact of the COVID-19 pandemic in urban areas, especially in the Capital Region (DKI) of Jakarta. This paper is qualitative research with a descriptive analysis method. The data collection technique used is a literature study by collecting data from books, news media, reports, and previous research journals. The Provincial Government of DKI Jakarta continuously provides the best response in the short and long term. In the short term, preventive policies (implementation of large-scale social restriction policies), curative policies (care for patients affected by Covid), and supportive policies (social assistance and education) are implemented. Meanwhile, in the long term, the DKI Jakarta Provincial Government will continue improving health infrastructure and services and carrying out better city governance, including using technology towards a Jakarta Smart City. As the City begins to recover, the top priority will be developing the economy damaged by the impact of this pandemic. Addressing inequality is a long-term priority by building housing, health services, and urban transportation accessible to the poor. It is expected that the substantial impact of the pandemic in the cities, moving the government, local authorities, and city planners more attention to the development of more resilient in the face of various disasters that overshadow the City of his.

Keywords: Pandemic COVID-19, urban economics, urban resilience

#### 1. Introduction

We need to learn from previous experiences to prepare for new problems. There is much to learn from the COVID-19 pandemic to prepare for future pandemics and health, social, economic, and other threats. The COVID-19 pandemic has touched everyone, spreading through aerosols, droplets, fomites and feces. Overcrowding problems are predominant, challenging to measure and even more challenging to solve. (Litman, 2021)

A study by Simon Wren-Lewis (University of Oxford) shows that the most significant impact of a pandemic on the economy is predicted to occur for 3 to 6 months, with a decrease in the economic growth of approximately five percent (5%). After this period, economic growth will bounce back. In addition to dealing with COVID-19 in terms of health and its impact on society, we must learn lessons from COVID-19 to boost future economic growth. (Mediakeuangan, 2020)

Before COVID-19, history recorded the emergence of four pandemics during the 21st century, namely N1H1 or bird flu in 2009, SARS in 2002, MERS in 2012 and Ebola in 2013 - 2014. From the spread of the pandemic, the fatality rate of COVID-19 is not the highest but the most easily transmitted from person to person, so the spread is swift. From December 2019 to June 2020, there were 7.69 million cases of COVID-19 worldwide to WHO data. Countries affected by the COVID-19 outbreak initially experienced a health crisis that subsequently spread to an economic crisis and could lead to a financial sector crisis. (Mediakeuangan, 2020)

In that history, pandemic outbreaks have led to radical urban changes and improvements. The cholera outbreak in the 19th century led to the Hausmann reform in Paris. The upgrades seen include better community organizing, quarantine sites and public transport by providing more trains and buses and increasing bicycle lanes. The Ebola Virus Disease Epidemic has made us aware that the key to controlling and eradicating the outbreak is to work with the community. Controlled fragmented populations cannot fight the pandemic in an integrated manner (Seidlein *et al.*, 2021). Countries in the Asia-Pacific region face significant challenges in dealing with the COVID-19 pandemic outbreak. The pandemic is causing planners to 'rearrange' sustainable urban development to build back better. (UN ESCAP, 2020)

Pandemics differ from most other disasters because they do not damage infrastructure, have a long duration, and have a significant economic impact. So, mitigation is primarily concerned with protecting people and providing financial security, with little need for infrastructure protection and repair. (Litman, 2021). Identifying the populations and geographic areas most at risk of infection is essential to direct interventions where they are most needed. Reducing the disease risk in the most affected population will benefit the entire population. Only when transmission across the population is cut off can life return to normal if there is no lingering risk of another wave. (Seidlein *et al.*, 2021)

The COVID-19 pandemic situation demands the government's active role as the party with the resources to provide social security for its citizens. In a case like this, ideally, the government will act as an anchor capable of maintaining the balance of the social system in the region through adequate steps to uphold order and protect the livelihoods of its people. (Supriatna, 2020). An epidemic very easily transmitted from human to human has caused the country to finally make policies to limit physical activities such as work, school, and recreation, which also stops economic activities.

From the economic impact of the COVID-19 pandemic, we need to learn from this situation, look at existing experiences, correct mistakes and continue development in a better direction, especially in urban areas, especially the Jakarta Capital Region (DKI-Jakarta).

#### 2. Methods

The COVID-19 pandemic has greatly impacted various people's lives, including urban areas' social and economic sectors. This paper is qualitative research with a descriptive analysis method. The data collection technique used is a literature study by collecting data from books, news media, reports, and previous research journals, especially from the Governor's Team for the Acceleration of Development of the Special Capital Region (TGUPP-DKI). The focus of the writing is to see how the Provincial Government of the Special Capital Region of Jakarta (Pemprov-DKI Jakarta) handled COVID-19, which has an economic impact on urban areas and can be a lesson in the future to build better city resilience. This study will explain thematically how cities learn from the COVID-19 pandemic outbreak and how to deal with it, both in the short term or immediately and in the long term.

#### 3. Discussion

#### The COVID-19 pandemic, economy and cities

A. Lessons from the COVID-19 Pandemic for Cities (Shari and Khavarian-garmsir, 2020).

Protecting life and livelihoods remains a top priority for the City. The disproportionate impact of COVID-19 on racial, indigenous and justice-seeking communities has deepened the inequality experienced by residents, neighborhoods, and communities across the City. Uncertainty has become a common characteristic of how COVID-19 has changed people's lives and will continue to do so for the foreseeable future. Cities have the opportunity to address these injustices as they focus on the critical needs of residents and businesses and the economic, health, and social hardships they face and lay

the groundwork for solid recovery together. Building back better also means learning from the past and embarking on continuous improvements that make a difference for future generations. Recovery efforts must see a long-term view toward the desired urban development. (Toronto City Manager, 2020)

The lessons to be reviewed in this study are based on two thematic focuses, namely the socioeconomic impacts and city governance, including the development of cities as smart cities. The COVID-19 crisis allows planners and policymakers to take transformative action toward creating a more just, resilient, and sustainable city.

### a) Impact on urban socio-economy (Shari and Khavarian-Garmsir, 2020)

COVID-19 has attacked the vulnerable groups of the poor urban harder. In many parts of the World, the rapid and non-uniform development of cities has resulted in conditions where many urban populations live in slum areas with poor living and sanitary conditions. The combination of factors such as overcrowding, inadequate access to essential infrastructure services, and precarious livelihoods prevents the spread of COVID-19 in slum areas difficult, if not impossible, through social distancing promotion and restrictive measures. Slum conditions and informal developments are exacerbated by a lack of access to medical care (e.g., hospital beds) and essential services such as clean water to meet hand washing recommendations. Also, the precarious economic conditions and the fact that many communities depend on close social interaction for their livelihoods make adherence to the 'stay at home commandment a challenge. Hopefully, we will make more efforts to resolve this problem through more inclusive planning in the post-COVID era. (Shari and Khavarian-garmsir, 2020)

There are several opinions about how COVID-19 affects urban settlements, especially in informal urban settings or slum settlements (Seidlein *et al.*, 2021)

- The slum population tends to be younger than the overall population. A lower number of older adults reduces pandemic morbidity and mortality in slum areas.
- Many slum populations have high mobility. By returning to their ancestral village, residents can avoid the risk of overcrowding and reduce overcrowding in a particular area, but it can spread COVID-19 to other regions.

• The detection and registration of COVID-19 cases depend on the patient who visits the health care provider. If the risks of visiting a health care center outweigh the potential benefits, the patient may choose not to seek treatment.

The limitation of long-term economic activity due to the COVID-19 pandemic negatively impacts the urban economy. Complicated consequences occur in a variety of ways and on a wide scale. Preliminary findings from various studies indicate that the outbreak has significantly affected city tax revenues, citizen incomes, tourism and hotels, micro, small and medium enterprises, urban food supply chains, and workers. Meanwhile, the handling of social and spatial distribution is still uneven from the effects of the pandemic. Experts conclude that COVID-19 has exacerbated pre-existing social inequalities and created new forms of inequality. The poorest and most marginalized people will likely experience more extensive social and economic damage due to the pandemic. Migrant workers and laborers are other vulnerable groups that are disproportionately affected. It will reduce job opportunities dramatically. (Shari and Khavarian-garmsir, 2020)

Another study group has discussed that the global pandemic has exposed the extreme vulnerability of cities and called for reconsidering urban tourism methods, food, and environmental systems to be more regulated and developed. The self-sufficiency paradigm towards a more diverse economic structure needs to be emphasized. This crisis may present an opportunity to redefine existing mass tourism policies and return to a global tourism development path consistent with sustainable development goals. The restrictions imposed have disrupted food supply chains in cities. It is a momentum for the urban agricultural movement, aiming to increase urban self-sufficiency by growing local food. We hope to pay more attention to local supply chains in the post-COVID era. (Batty, 2020). (Shari and Khavarian-garmsir, 2020)

Because the pandemic has reduced the tax base in many cities, urban development is expected to experience a significant financial deficit. For this reason, it is necessary to prioritize investment and postpone or cancel some plans that may be considered less critical. However, it is too early to say the exact scale of economic losses in cities and how they will respond to and stand against them. Some actions are an initial response to this pandemic, such as providing an economic stimulus plan and enabling tax breaks. However, its effectiveness remains to be seen. There are also arguments about the possible long-term economic benefits of limiting activities that need further exploration due to reduced air pollution. (Kunzmann, 2020) (Shari and Khavariangarmsir, 2020)

Qian and Fan (2020) reject the view that global epidemics "systematically limit the economic activity of nearly everyone, regardless of socioeconomic status or geographic location. Rich people can buy more space than poor people, for example avoiding public transportation and working from home Low-income populations do not have this kind of luxury. People who work informally must earn their daily wages. Therefore, it is inefficient to implement infectious control strategies that increase other problems, for example, by reducing physical activity and social interactions, or vice versa, also increase in vehicle travel and traffic. Therefore, control and prevention of COVID-19 must prioritize settlements, incredibly informal urban settlements or slum settlements (Litman, 2021).

Low-income informal settlements must be recognized as a continuous reservoir and transmission source. The solution to excessive density should find a solution to the pandemic and future. Given the ongoing risk faced by the slum for the entire population, we must take essential steps to rehabilitate them. It provides community infrastructure for diagnosis and treatment and ensures that basic needs (food, water, sanitation, health care and public transportation) are met during periods of social distancing. Furthermore, the community members with the highest risk need to be identified and protected (Seidlein *et al.*, 2021).

Since housing and transportation are the two most significant household expenses, affordable housing and transportation programs are important for urban resilience planning. It is necessary to build efficient public infrastructure and a multi-modal transportation system that provides easy access to essential services and activities without needing a car. Also, it is required to provide for those with low income, physical disabilities, or other special needs to find suitable affordable housing in a walkable environment. (Litman, 2021)

But for men, in the face of a pandemic, in maintaining the resilience of cities, communities need an effective emergency response program, transmission control, decent housing for all residents, and physical and mental support for isolated people affordability. Intercity travel can spread infection in the community, and local travel can spread it. All shared vehicles can spread germs, including taxis, ride-hailing, public transport, and private cars that carry family and friends. It suggests that occupants should minimize shared vehicle travel to improve safety, and shared vehicle operators and passengers must ensure appropriate spacing, sanitation, and hygiene practices. Walking and cycling are generally the safest and most affordable modes, improve physical and mental health and help reduce social isolation. Improving walking and cycling conditions tends to increase endurance. (Litman, 2021)

#### b) City Governance (Shari and Khavarian-garmsir, 2020)

As the trend of urbanization continues to increase globally, the importance of city governance in addressing social challenges is growing. The literature shows that an integrated city governance strategy involves a long-term vision, planning, adequate investment in the primary health care system, early warning, and coordination of activities across multiple sectors. Stakeholders must be more conducive to timely and effective responses, coping with pandemics and disease outbreaks in cities. Integrated city governance has enabled several cities to successfully prevent the spread of the virus by quickly detecting infected individuals through increased testing, increased surveillance, and timely restrictions on activities and social distancing measures. Such actions need to be supported by providing economic and social support. As in Vietnam, which is widely praised for its success in flattening the curve, local governments offer financial aid to the poor, disadvantaged and vulnerable (Duggal, 2020). (Thoi, 2020) (Shari and Khavarian-garmsir, 2020)

A long-term vision and appropriate plans for mitigation, absorption, recovery, and adaptation are vital factors determining urban resilience to any disruptive event, including a pandemic. It allows the City to learn from past experiences and proactively design strategies to minimize the impact of future disruptive events. In this regard, in countries such as Singapore, Taiwan, and South Korea, cities have made outstanding achievements by developing contingency plans and applying lessons learned from the SARS and H1N1 pandemics. Also, the case of the municipality of Setubal in Portugal demonstrates how immediately activating the Municipal Emergency Plan has enabled a timely response. On the other hand, the absence of proactive planning and contingency plans in Bangladesh made it difficult for cities to respond to the crisis effectively. They have failed to increase the healthcare system's capacity, analyze the situation, assess risks, and take necessary action promptly coordinating the activities of different actors and sectors. (Santos *et al.*, 2020). (Duggal, 2020) (Shari and Khavarian-garmsir, 2020)

Coordination of various actors and sectors is essential to avoid confusion/conflict and ensure the effective and efficient use of limited resources. Such conflicts are partly due to limited regional independence and high reliance on the central government to coordinate action. Fragmented governance, with differing priorities and conflicts between different levels of governance over limited resources, is responsible for and is blamed for limited success in spreading the virus in contexts such as the U.S. and Australia. While top-down management through a multi-level governance system is essential

for coordinating activities, multiple local leaders are required to take prompt and timely action. (Steele, 2020). (Shari and Khavarian-garmsir, 2020)

For example, in Australia, problems with the governance of fragmented cities have been exposed by the COVID-19 outbreak. In response to the pandemic, the Australian government is taking initiatives to reduce the impact and contain the spread of the virus. However, their actions were uncoordinated, and their priorities were different. State Government is primarily trying to relieve pressure on hospitals and ensure the safety of teachers and students through the imposition of lockdown measures. These divergent priorities have confused and undermined the effectiveness of action at the city level. It is exacerbated by the fact that city-level governance is not well recognized in the constitution. Cities have limited financial resources and thus depend on the Commonwealth and State Governments. The result of this lack of integrated city governance as urban management is also heavily influenced by the interests of the large private sector". Therefore, more integrated control at the city level is needed, supported by a long-term community vision, strong leadership, and stakeholder participation (Steele, 2020).

Successes due to integrated approaches have been reported in China and Vietnam, where top-down and country-centric measures to coordinate activities across cities and provinces have been combined with a certain level of bottom-up and community-based activities at the city level. The combined approach has facilitated timely action to prevent the spread of the virus and reduce the pandemic's socioeconomic impact. Based on this, several arguments exist for the possibility of more state involvement in urban governance in the post-COVID era. However, it should mention that two important factors have contributed to the success of this combined model. One of them is the high level of trust in the government and its initiatives, the absence of which can make it difficult to achieve predetermined goals (Thoi, 2020). (Shari and Khavarian-garmsir, 2020)

Another critical factor has the mechanisms to involve citizens in initiatives. For example, successful cases such as community-based organizations in the City of Setubal (Portugal) and Ho Chi Minh City (Vietnam) have made significant contributions to local governments regarding information dissemination and provision of economic and social support for vulnerable groups. Public space and implementing social distancing and 'stay at home measures Strengthening Non-Governmental Organizations (NGOs) and community-based initiatives may also be necessary when country-centered initiatives are lacking or fail to respond well. For example,

community-based activities such as distributing food and other necessities have prevented famine during India's lockdown. Overall, community involvement is recommended to design a more informed contingency plan and improve the prospects for implementation. (Thoi, 2020) (Santos *et al.*, 2020) Duggal (2020)

The literature suggests combining top-down and multi-level governance approaches with strong, democratic, and integrated city-level governance to enable an effective and agile response to the pandemic. Such an integrated system facilitates the development of a suitable long-term development vision. A contingency plan helps avoid sectoral conflicts and maximizes the benefits derived from stakeholder engagement. As discussed in the following section, smart city solutions can promote integrated city management. (Shari and Khavarian-garmsir, 2020)

#### Lessons from the COVID-19 Pandemic for Jakarta

The COVID-19 disaster is a valuable lesson for a city. City governments should create comfortable, green, intelligent, and sustainable cities and prepare resilient cities to face pandemics of disease, not only the City's infrastructure but also its citizens. Suppose the cities of London, Paris, or Philadelphia could withstand the plague in the past without moving the City. Today, cities in Indonesia can survive by involving and working with various parties and levels of society. (Rosalina, 2020)

#### A. The impact of the pandemic on the city of Jakarta

The domino effects of the COVID-19 pandemic on socioeconomic activities can be grouped into several issues, including health, economy, and society. For health issues, the COVID-19 pandemic is spreading rapidly and widely. This condition is exacerbated by the limited experience and medical personnel and equipment. Social issues restrict social distancing so that social activities and movements decrease. Teaching and learning activities are carried out at home (study from home), and workers are doing their work from home so that the presence of workers in the work environment is limited. Community activities are reduced because they are limited in distance, and many people carry out their activities from home. (Tjahjaprijadi and Munandar, 2020)

The disruption of economic activity will harm economic growth. For two consecutive quarters, Jakarta's economy contracted and officially entered recession. Jakarta's economic growth in the second quarter of 2020 was minus 8.23 percent, and in the third quarter, it improved to minus 3.82 percent (quarter-to-quartal/q-t-q), while in the fourth quarter, it increased by 2.54

percent. Cumulatively, Jakarta's economic growth remained minus 2.36 percent from January to December 2020 (year-to-date). It means that the economy of Jakarta, compared to 2019, has decreased by 2.36 percent. Meanwhile, the Bank Indonesia Jakarta Representative Office projects economic growth in 2021 to return to 5% to 5.4% and in 2022 it will further improve in the range of 5.8% to 6.2%. (Iskandar and Riyanto, 2020) (Wahyudi, 2021)

The level of open unemployment in Jakarta Province in August 2020 was 10.95 percent or the equivalent of 572,780 people. During the pandemic period, the formal sector lost 453,295 workers, but the informal sector could absorb only 259,597 workers, and as a result, 193,698 people lost their jobs. The pandemic implications are for the workforce reduction and workers' productivity because as many as 1,673,028 workers have experienced a reduction in working hours. (Iskandar and Riyanto, 2020)

The Jakarta Regional Revenue and Expenditure Budget (APBD) amount for 2020 based on Regional Regulation Number 7 of 2019 is IDR 87.95 trillion. However, the COVID-19 pandemic impacts reduce Jakarta's APBD figure by 29% to IDR 63.23 trillion. For 2021 and 2022, projected s structures are at the budget unchanged at IDR 84 trillion. The COVID-19 pandemic has also impacted decreasing Local Own Revenue (PAD), especially in regional tax and levies. There was a decrease from IDR 50.17 trillion to IDR 32.48 trillion (TGUPP DKI Jakarta, 2020). Meanwhile, the National Budget (APBN) is IDR 2,739.2 trillion after two revisions with a deficit of 6.34%, whereas the realization of the National Economic Recovery (PEN) program is IDR 579.78 trillion. (Dalyono, 2020) (Kennedy, 2021)

The Jakarta Provincial Government has made various efforts to increase regional income. Including the initiative to provide tax relaxation by extending the period of payment of Land and Building Tax (PBB) to the public to ease the burden on taxpayers and encourage economic activity, which is expected to promote revenue optimization. Meanwhile, the DKI Jakarta Provincial Government provides incentives for affected communities and business actors in the levy income sector. Including exemption of apartments, retribution is leasing temporary locations, fostering locations for Micro, Small, and Medium Enterprises (MSMEs) traders, and eliminating sanctions. With the provision of incentives and relaxation by the Jakarta Provincial Government during this pandemic, it is hoped that it can maintain the wheels of the economy and people's purchasing power. (TGUPP DKI Jakarta, 2020)

To meet the needs of people affected by the pandemic, the 2020 APBD is prioritized for Unexpected Shopping posts (BTT), which are then prioritized for handling COVID-19. The COVID-19 budget post, among others, is divided into constructing a Regional Health Laboratory (Labkesda), providing a place for patient care, health workers, and medicines. In addition to handling COVID-19, the BTT budget is also used for flood management and food aid as a social safety net for the poor and vulnerable to poverty. (TGUPP DKI Jakarta, 2020)

## B. Pandemic management policies that have been implemented in Jakarta (TGUPP DKI Jakarta, 2020)

The ongoing COVID-19 pandemic has changed urban life, namely how people and communities live, work, and interact. Establishing a solid local system and capacity to prevent the spread of infectious diseases is necessary. In integrating the strategic objectives of urban health, it is essential to focus on response actions, namely immediate or short-term actions and mediumlong-term actions, on current environmental, social and economic aspects. (Capolongo *et al.*, 2020)

In efforts to deal with COVID-19 in Jakarta, the policies of the DKI Jakarta Provincial Government (Pemprov DKI) in tackling COVID-19 can be categorized as short-term activities. Jakarta is a smart city consisting of preventive, curative, supportive, and long-term activities consisting of urban health development and city governance.

#### a. Short term activities

#### a) Preventive policy (TGUPP DKI Jakarta, 2020)

With the increase in the number of COVID-19 patients who are included in People Under Monitoring (ODP), Patients Under Monitoring (PDP), and positive patients, the Minister of Health Regulation Number 9 of 2020 concerning Large-Scale Social Restrictions (PSBB) was issued on March 30, 2020. (Menkes-RI, 2020). According to the Minister of Health, on April 10, 2020, Governor No. 33 of 2020, the PSBB came into effect in Jakarta. The implementation of the PSBB was then carried out with restrictions on all residents of Jakarta, including the temporary suspension of work activities in the workplace/office.

In its development, PSBB has undergone several changes related to the tightness of the restrictions imposed. It is because formulated the PSBB policy based on the indicators of study and assessment carried out by the Provincial level COVID-19 Task Force involving stakeholders, including

epidemiological studies, evaluation of public health conditions, and evaluation of health facilities' readiness.

In June 2020, the DKI Jakarta Provincial Government began implementing the Transitional PSBB by restoring office activities and other public spaces with a maximum number of workers or visitors of 50% capacity. The implementation of the PSBB in the Transitional Period is carried out in conjunction with Local-Scale Strict Control (PKBL), namely social restrictions on the R.W. scale that have a significant number of active, positive cases or what is known as the red zone. In the areas included in the red site, self-quarantine is imposed and carried out by residents.

On September 14, 2020, the DKI Jakarta Provincial Government withdrew the emergency brake by re-enforcing the PSBB regulations that were in effect for March to May 2020; this was based on a spike in COVID-19 cases in Jakarta in September 2020 with more new positive points per day of 1,000 cases. It then impacts the availability of isolation care places in hospitals, especially for patients who need an Intensive Care Unit (ICU). In contrast to the PSBB implementation in March-May 2020, the PSBB application in the emergency brake is classified as looser. Especially with the allowance of places of worship that are in the green zone or safe zone where no active cases of COVID-19 are found, to be able to continue, carry out its activities with a maximum number of congregations as much as 50% of the house's total capacity.

The cases of patients infected with COVID-19 are increasing every day in Indonesia, especially in Jakarta, although March 2021 and April 2021 saw a downward trend. As of April 21, 2021, Jakarta's specific data received were, for total positive cases of Covid as many as 401,110, a total of 388,083 people recovered, a total of 6,587 deaths, with a death rate of 1.6% and a cure rate of 96.8%. For Indonesian data, there were 1,620,569 positive cases of covid, 1,475,456 people recovered and 44,007 deaths, with a death rate of 2.7% and a cure rate of 91.0%. A comparison chart between Jakarta and the national (Indonesia) case can see in the figure below. (Dinkes DKI Jakarta, 2021)

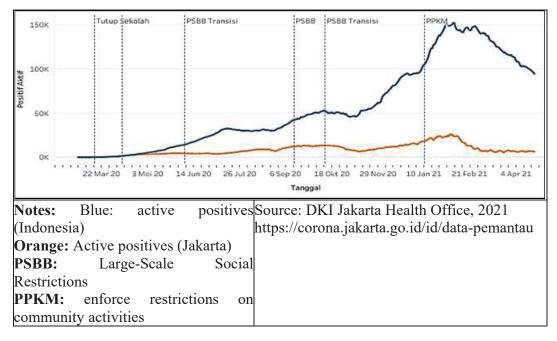


Fig 1: Comparison Chart of Jakarta and National Cases (Except Jakarta)

The percentage of using daily isolation beds or inpatient rooms and Intensive Care Units (ICU) at Referral Hospitals in DKI Jakarta has increased over the past month at the end of 2020. The Jakarta Provincial Government is committed to improving the capacity of isolation beds and ICUs. The target of increasing the capacity of isolation beds is 7,171, and ICU is 1,020 in the Jakarta COVID-19 Reference Hospital, especially the RSUD. Increasing the power of these facilities is also accompanied by the quantity increase and quality of health personnel. Jakarta's average daily positivity rate per month has been stable at 9% over the past three months, namely 9.6% in October, 9.1% in November and 9.6% in December (detikcom, 2020). The graph of daily case additions can be seen in the image below. (Dinkes DKI Jakarta, 2021)

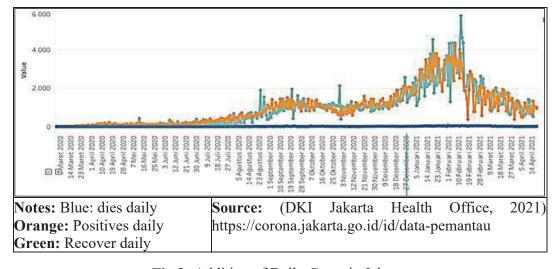


Fig 2: Addition of Daily Cases in Jakarta

#### b) Curative Policy (TGUPP DKI Jakarta, 2020)

Handling COVID-19 is continued with curative or healing steps. The most crucial thing in this step is to find out the number of positive cases of COVID-19 by conducting testing. The rate carried out by the DKI Jakarta Provincial Government has exceeded up to 11,000 people/day. In addition to the test, do also searches (tracing). The search target up to 30 contacts if there is one positive case of COVID-19 by conducting tests on people who have close contact with the positive patient cases and those who live in one house and associate work. This search was carried out, among others, through the publication of the transmission cluster on the corona. Jakarta.go.id website. We are also strengthening tracing by sharpening the psychosocial aspects of tracing implementation and adding 1,545 tracer professionals and 10 data managers who collaborated with BNPB.

In the early days of the pandemic in Indonesia, there was a crucial problem related to testing COVID-19 samples. The rapid and massive virus transmission has caused Jakarta to lack the number of laboratories to test COVID-19 samples, which previously could only be done at the Health Research and Development Agency (Litbangkes) of the Ministry of Health where examined not only representatives from Jakarta in that place. Therefore, the DKI Jakarta Provincial Government will soon form a laboratory network to be able to carry out the testing independently. Currently, as many as 67 agencies are a combination of agencies belonging to the Jakarta Provincial Government, the Central Government, BUMN and the private sector members of the laboratory network.

**Table 1:** Total Availability of Covid-19 Special Facilities

(As of November 22, 2020)

Laboratory Networks	Referral Hospital for COVID-19	Isolation Room Bed	Intensive Care Unit (ICU) Bed	Self-Controlled Isolation Facility Room
67	98	6016	837	896

Source: TGUPP DKI Jakarta (2020)

As of November 2020, 98 COVID-19 referral hospitals have been allocated, with 6,016 beds in isolation rooms and 837 ICU beds specifically designated for treating COVID-19 patients in Jakarta. The DKI Jakarta Provincial Government also provides a Controlled Self-isolation Facility (FIMT) for residents who are confirmed positive for COVID-19 but without symptoms or have mild symptoms. The location of the FIMT is at the Center for Islamic Studies and Development (Jakarta Islamic Center), Graha Wisata

Taman Mini Indonesia Indah, and Graha Wisata Ragunan, with a total of 896 room facilities. There are about 30,000 health workers recorded to deal with COVID-19 in Jakarta.

Also, developed several technology-based innovations related to handling COVID-19 in addition to the corona. Jakarta.go.id website, namely:

- Corona Likelihood Metric (CLM) is a collaboration between the Jakarta Health Office, Jakarta Smart City, Harvard CLM Team, and Klakkli.id, which produces independent testing or screening application with machine learning technology. CLM is intended to assist the public in measuring the risk of a possible positive Covid-19 and recommending what to do next based on the results obtained. The public can do CLM through the Jakarta Kini (JAKI) application. Through the JAKI application, reporting violations of the COVID-19 protocol and monitoring checkpoints can also be carried out, namely, monitoring the capacity of the building based on Q.R. code to monitor building visitors in real-time.
- Dashboard dkitanggapcovid.id is a monitoring system that can be accessed by employees of the health service and hospitals and includes information on the number of available beds, medical devices, PPE and health workers.
- Executive Information System (EIS) includes all data on COVID-19 cases, including the number of cases, test results, and other data integrated with all health centers and hospitals in Jakarta.

#### c) Supportive policy (TGUPP DKI Jakarta, 2020)

Supportive policies are not directly related to efforts to reduce COVID-19 cases but are carried out to support these preventive and curative efforts. The occurrence of the COVID-19 pandemic, coupled with the implementation of the PSBB, had an impact on decreasing economic activity in Jakarta. The temporary suspension of face-to-face office and school activities and restrictions on the business sector that can operate has reduced income for some people in Jakarta, especially those in the middle to the lower class who rely on daily revenue.

#### Food social assistance

The Jakarta Provincial Government distributes social assistance (bansos) as a Social Safety Net for vulnerable residents to COVID-19. Social assistance phase I distribution in Jakarta is carried out from April 9, 2020, which is given every month from April to December 2020. The value of social assistance

residents receive is IDR 300,000 / family consisting of nine basic food items and cleaning tools and the cost of packing and distribution to residents. Social assistance was provided to 2.4 million heads of households (K.K.) through synergy with the Ministry of Social Affairs (Kemensos), which provided 1.3 million families by the Ministry of Social Affairs and 1.1 million households by the DKI Provincial Government. This social assistance is provided to people registered in all Jakarta social security card programs plus people who are economically affected by the COVID-19 pandemic, including residents with non-DKI Identity Cards (KTP) who live in Jakarta. The latest scheme for social assistance to be provided to the community is to change the type of food social assistance to Direct Cash Assistance (BLT).

#### Education assistance for private schools/madrasahs

The Jakarta Provincial Government, at the time of admission of new students in 2020, provides assistance in the form of admission fees for students from underprivileged families to enter private schools. It provides this assistance explicitly during the COVID-19 pandemic for students who failed the 2020 Jakarta New Student Admissions (PPDB) to enter public schools. This group of residents prioritized for assistance with admission fees for private schools is residents affected by the COVID-19 pandemic.

#### b. Long-term city development activities

#### a) Urban Health Service Development (TGUPP DKI Jakarta, 2020)

Sumadilaga explained that the COVID-19 pandemic that is taking place in Indonesia provides essential lessons in future urban development, including (Liputan6.com, 2020):

- It is necessary to pay attention to meeting the needs of medical facilities as a standard for city health services and controlling population density in urban areas. It can be seen from the spread of the Corona Virus, which tends to be high in cities with high population densities.
- It is necessary to provide good public transportation that guarantees security, safety, comfort, and health.
- Availability of green open space and community center. During the COVID-19 pandemic, the existence of green open spaces and community centers can function for various purposes, such as isolation and socialization rooms. At the same time, in normal times, they become instruments to increase social cohesion and foster social capital in situations of crisis or disaster.

- It is necessary to pay attention to the provision of reliable basic infrastructure and facilities, such as the availability of drinking water and sanitation-the need for an approach towards an innovative, competitive and technology-based City.
- The use of Information Technology infrastructure can be a breakthrough for effective ways of working in the pandemic or the future.
- The need to increase public awareness of the importance of environmental health.

Urban health covers all roles from across sectors to build a healthy and prosperous Jakarta. Regarding health, interventions focus on preventive efforts such as active surveillance, public health information, health promotion, screening, treatment, counseling, and the Social Security Administration (BPJS).

Activities that later emerged related to COVID-19 were the need to reform the Provincial Government's health facilities, namely the Public Health Center (Puskesmas) and the Regional General Hospital (RSUD)/Regional Special Hospital (RSKD), which were increasingly highlighted during the COVID-19. The COVID-19 pandemic provides lessons for Jakarta to strengthen its health systems and services toward a "pandemic-proof city Health". Facility reforms are also carried out to anticipate the possibility of an increase in certain diseases due to the COVID-19 pandemic.

Related to this, the Puskesmas, which is usually used to promote public health units in the current pandemic condition, is deemed necessary to improve the function of curative services for treatment/healing. Therefore, it is currently being planned to collaborate for curative services at the Puskesmas. Meanwhile, it is considered that the appearance, facilities, and services, work culture of the Provincial General Hospital (RSUD) are still inferior to those of the private sector. Therefore, it is planned to do things that can improve the RSUD or rebrand a better RSUD image. This rebranding is not only from buildings but also from employees and services. This health facility reform has also conducted in-depth comparative studies on several private hospitals and State-Owned Enterprises (BUMN) in Jakarta.

Several short-term targets related to health facility reform that is expected to be achieved in 2020 include:

1) The design of the regional public hospitals (RSUD) Organizational Structure and Work Procedure (SOTK).

- 2) Performance assessment and Health Minimum Service Standards (SPM) by cascading Health SPM, Key Performance Index (KPI), Integrated Performance Agreement (Perkin) with SPM, and to improve SPM achievement.
- 3) Increasing health resources, including competency standards for health workers, standardized hospitality services, standardization of medical devices in regional public hospitals (RSUD), e-logistics and an integrated inventory system.
- 4) Education and training related to hospitality, services, and e-learning;
- 5) Standardization of buildings and housekeeping in RSUD and Puskesmas.
- 6) Development of grand design hospital services, including superior services and special services.
- 7) Integrated information technology for online registration in all RSUDs.

For Community Health Insurance (Jamkesjak), d I the end of 2019 has formed Unit Technical Management (UPT) Jamkesjak. D I 2020, three things are driven by performance-related field Jamkesjak, the membership management of the National Health Insurance (JKN), the socialization of the UPT Jamkesjak to the public, and the formalization of the complaint hotline channels.

Regarding the socialization of UPT Jamkesjak, it is still in the stage of introducing and publishing the complaint hotline and various services provided by UPT Jamkesjak to the public. It is still not optimal. Therefore, it will be encouraged to be published via social media, regional, and cross-sector channels within the scope of the DKI Jakarta Provincial Government.

Until November 2020, the achievement of the utilization of non-quota funds from health service insurance that was borne by the Provincial Health Office of the Special Capital Region of Jakarta was a total of IDR 47 billion, with the following details:

- IDR 15 billion for guaranteed Emergency Ambulance (AGD) services.
- IDR 27 billion for the benefit of the Indonesian Red Cross (PMI) blood service with the Nucleic Acid Test (NAT).
- IDR 3 billion for health services for victims of violence, including violence against children and women.

• IDR 169 million for guaranteed periodic health check services for the former Governor/Deputy Governor.

Regarding the management system for verification, validation, and reconciliation of BPJS JKN membership, the Health Office already has a data collection system connected to the Dukcapil and the Office of Communication, Informatics and Statistics (Diskominfotik) server, which UPT manages. This digitization is essential, especially for data management from the middle to lower-class communities whose BPJS JKN membership costs are borne by the DKI Jakarta Provincial Government.

Jamkesjak also has a special service hotline that can access 24 hours for Jakarta residents who wish to obtain information or submit complaints regarding JKN membership, health services provided by the Jakarta Provincial Government, and especially the use of particular services provided by Jamkesjak. The hotline differs from other Citizen Relations Management (CRM) channels because health-related complaints are usually emergency. So, they can be immediately handled by the relevant unit at the Health Office.

Digitalization is also planned to be carried out in the hospital claim system, AGD, PMI Jakarta, and the Provincial Government. However, this must hamper the progress due to two things, namely the impact of refocusing the budget, which is more focused on building a COVID-19 handling system, and the focus on human resources. Both the health office and the Disco Communications and Information Agency at this time are also handling COVID-19.

In urban and regional planning, it is not only about counting the number of health and sanitation facilities or only determining the location. It is necessary to review urban planning standards with Health Resilience. The health system's resilience enables health actors, institutions, and the community to be ready to respond efficiently and maintain routine health services against crises and learn from crisis experiences to adjust the capacity and resilience of services. We should prepare health facilities with epidemic response facilities and public facilities such as meeting/sports halls, government offices, and shopping centers. This "temporary place" should not only serve as an evacuation site for natural disasters but must also meet predetermined health standards. (Rosalina, 2020)

#### b) City governance (TGUPP DKI Jakarta, 2020)

During the pandemic and crisis period, there were many valuable lessons and experiences taken by the DKI Jakarta Provincial Government. The development direction of the Jakarta Provincial Government is towards City 4.0, where city development is carried out in an optimal way of collaboration between all elements, government, business, and civil society. For this reason, the Governor feels the need to develop a vision and policy for the development of the City of Jakarta so that in the future, Jakarta will not only be able to survive during the pandemic but will be better after the pandemic. It was said by Jakarta Governor, Anies Baswedan, in opening the implementation of the Development Plan Consultation (Musrenbang) Change) The Regional Medium-Term Development Plan (RPJMD) of the Jakarta Special Capital Region (DKI) for 2017-2022, virtually December 22, 2020). (Nafian, 2020) (Iskandar and Riyanto, 2020)

Different visions made for the development of the City of Jakarta include (Nafian, 2020) (Iskandar and Riyanto, 2020):

- Based on spatial planning, a neighborhood in which all citizens need to be met without the need to travel long distances. Regarding largescale social restrictions, each region must be self-sufficient and meet its needs without traveling far.
- Durable basic city facilities and services. It is very necessary to be able to continue running as a society despite restrictions. Jakarta's dependence on basic needs, including food, must be anticipated in the future.
- We are increasing digital infrastructure as the backbone of modern data-based governance. As soon as everyone has to work and learn from home, the need for technology and data infrastructure suddenly becomes very high.
- Population data integration to produce appropriate social interventions. Accurate and location-based data is required when you have to do good help, health aid, social assistance, and economic assistance to residents affected by any crisis. That is why integration is absolute.
- Economic reforms by encouraging industry based on experience and added value.

The relaxation of various policies shows that the lengthy and time-consuming bureaucracy must be simplified for Jakartans to obtain permits and participate in government programs, such as IUMK and KJP Plus registration requirements. So far, residents have complained about the lengthy bureaucratic process of the government and complicated document requirements. The COVID-19 pandemic, which must limit Jakarta residents' mobility and social contact, opens opportunities for the DKI Provincial

Government to carry out bureaucratic reform in terms of bureaucratic effectiveness.

In the Jakarta Mid-Term Development Plan (RPJMD) until 2022, efforts are needed to restore the economy and restore social activities, educational activities and others to realize its aspirations as a developed city. In entering a new phase, a new post-pandemic era, the urban, health, economic and social sectors must undergo adjustments.

The development of Jakarta requires funding that must be creative in the future and come from the government budget and develop other potential sources. Collaboration mechanisms involving various parties need to be carried out as creative financing. It can carry out all development plans correctly and funding does not always have to be from the government because of a contraction in the Regional Revenue Expenditure Budget (APBD). For this reason, the Jakarta Development Collaboration Network or JDCN will be implemented in the spirit of collaboration. Through JDCN, it is hoped to reach new sources and financing methods that will later be able to participate in funding development activities previously financed through the APBD. (Iskandar and Riyanto, 2020)

The plan that needs to be carried out by the Jakarta Provincial Government (TGUPP DKI Jakarta, 2020):

- Continuing development has been delayed due to budget refocusing and evaluation of several development plans by observing the urgency and projected amount of the APBD.
- Implementation of National Economic Recovery Programs (PEN) to rebuild Jakarta after COVID-19. Apart from efforts to tackle COVID-19, economic revitalization is another critical priority for the Jakarta Provincial Government. So, although there is no certainty about when will find a solution to COVID-19, economic recovery policies must be implemented so that the economy can experience improvement without waiting until the pandemic has wholly subsided.
- Monitoring of projects financed using the National Economic Recovery (PEN) loan from the Central Government. Since the PEN Loan was the first to be granted during this period of government and its vast amount is the concern of many people in Indonesia, it is necessary to monitor the development process of these priority projects by the plans submitted to the Central Government.

• Collaboration with researchers and trusted institutions related to COVID-19 response policies. Jakarta's efforts to suppress active cases of COVID-19 must be based on a scientific approach; this is done so that the Jakarta Provincial Government does not take wrong policies regarding the handling of COVID-19. Although related to several policies, it must go through a permit and coordination with the Central Government; the Jakarta Provincial Government has an accurate and reliable source as a basis for making policies.

#### Jakarta Smart City (TGUPP DKI Jakarta, 2020)

Digitalization is the key to running everyday life, including in the running and governance. With the pandemic, the need for digitalization is getting bigger, in line with the Vision of making Jakarta a 'Smart City' connected with digital access, increasing the importance of Jakarta's target to become a digitally advanced city.

The philosophy of Smart City is how to manage a city efficiently using technology. The DKI Jakarta Provincial Government embodies a command center, the Jakarta now (JAKI) application, and the Jakarta Satu website. Jakarta Smart City (JSC) is an enabler for many things in the government because the operationalization of this activity can support the performance of other units in the DKI Jakarta Provincial Government. Smart city planning is expected to change society's paradigm and common perception of life in the City of Jakarta.

In simple terms, the flow and objectives of the JSC are as follows (TGUPP DKI Jakarta, 2020):

- Integration of existing data and systems in the DKI Jakarta Provincial Government. To produce up-to-date data-based policies is one of the objectives of the JSC, and it is hoped that data collection from this activity is not only the responsibility of the Informatics and Statistics Office (Diskominfotik) but is a collaboration from within the DKI Jakarta Provincial Government. The data obtained by each work unit does not belong to a Regional Work Unit (SKPD) but belongs to DKI Jakarta to develop Jakarta. It will integrate data collected and exchanged by applicable standards to realize data-based governance.
- Digitalization is an essential requirement in provincial management.
   It is increasingly important, especially for administration in times of pandemics. The occurrence of a pandemic teaches how to manage cities more efficiently through technological sophistication; an example is a corona. Jakarta.go.id site. The digitalization and the JSC

- program immensely helped the implementation of the PSBB. The future Regional Medium-Term Development Plan (RPJMD) includes one of the development goals for digitally advanced cities.
- Make it easy for the provincial government to make policies based on accurate and current data. From the managed data, it is then targeted to be implemented into the Governor's Dashboard. There are still challenges to realizing this goal, which includes: the related Regional Apparatus Organizations (OPD) do not yet have human resources and a special division capable of processing data; Views on data ownership among Regional Work Units (SKPD); and the understanding that to create a JSC requires collaboration from various SKPDs, not only the task of Diskominfotik.

#### Digital transformation in the health sector (TGUPP DKI Jakarta, 2020)

The DKI Jakarta Provincial Government plans a digital transformation in the health sector, namely e-registration, e-pharmacy, telemedicine, and emedical records. With a pandemic, these four things have become increasingly relevant to be developed.

E-registration was developed for online registration to Puskesmas so that patients no longer need to come in in the morning and wait for queues in crowds that do not comply with health and social distancing protocols. This e-registration has been tested in 44 sub-district health centers in Jakarta. In the future, there will be an e-registration ecosystem that can make it easier for the people of DKI Jakarta to schedule all health facilities owned by the DKI Jakarta Provincial Government.

E-pharmacy was developed not only to record the logistics of drug availability but also to order drugs. The purpose of e-pharmacy is to make it easy for people who seek treatment through Pemprov health facilities but require a long waiting time to get prescribed drugs. Through e-pharmacy, residents who seek treatment can use a delivery service to deliver the drug directly to their home, which aims to reduce queues at the hospital, especially for vulnerable groups such as the elderly.

Telemedicine was developed by looking at the potential that the people of DKI Jakarta need facilities for conducting online health consultations, coupled with the COVID-19 pandemic, limiting the mobility of citizens; the need for this is becoming increasingly relevant. In this regard, the Provincial Government is drafting explicit regulatory references, especially regarding which diseases can be diagnosed through telemedicine and which cannot. E-Medical Records is a medical records system integrated between health facilities belonging to the DKI Jakarta Provincial Government.

#### 4. Closing

Many cities around the World are still battling the COVID-19 pandemic. Experts have attempted to shed more light on the underlying dynamics. Based on experience and literature, this study seeks to understand the significant impact on various sectors in urban areas. Identify the main factors that should be considered to better respond to and prepare for similar events in the future and highlight gaps that need attention studied further in the future. Indeed, total prevention is currently not possible. Still, as protection and prevention, we must require pre-pandemic preparedness, providing more vaccines, undertaking more vaccine research and development, stockpiling antiviral drugs and increasing surveillance capacity to track disease patterns. (United States Department of Homeland Security, 2005).

The Provincial Government of the Special Capital Region of Jakarta (Pemprov DKI) continues to provide the best response in the short term or immediately and in the long term. In the short term, preventive policies (implementation of large-scale social restriction policies), curative policies (care for patients affected by Covid), and supportive policies (social assistance and education) are implemented. Meanwhile, in the long term, the DKI Provincial Government must continue improving health infrastructure and services and carrying out better city governance, including using technology towards a Jakarta Smart City.

At the implementation level, the Supreme Audit Agency has highlighted various findings, especially in social assistance programs, namely the quality of social assistance and the speed and distribution of each social service to the target recipients of the grant (Tegar Arif, 2021). The government has not consistently implemented regulations related to aid distribution; many rules have changed at the policymaker level. The use of integrated social welfare data that is not updated, resulting in many misdirections, has become the root of distributing this program. The lack of public access, especially to the middle to lower class, to banking and all assistance provided is minimal. The DKI Jakarta Provincial Government needs to run the program optimally to accelerate economic and social recovery. Even though physical mobility is limited, work patterns must remain productive with the help of technology. Pandemic conditions have forced the city government to accelerate the reform process of Information, Communication, and Technology.

We can observe some general patterns, but it is difficult to provide recommendations for the most appropriate response. COVID-19 provides lessons on critical issues that arise and better planning going forward. The City of Jakarta needs to re-evaluate its policies in various sectors, for example, improving existing socioeconomic inequalities, especially for the poor who live in urban slum settlements. Such disparities can threaten public health by making it difficult to enforce protective measures, such as social distancing and other policies. Addressing inequality is a long-term priority as cities recover from the pandemic by building housing, health services, and urban transportation accessible to the poor.

The actions taken in the next few years will be essential and determine whether a post-COVID city will be developed and managed in a more and more sustainable manner. As cities start to recover, their top priority is the development of the economy damaged by the impact of this pandemic. However, apart from economic growth, social and environmental dimensions also deserve consideration. In the end, this crisis made us critically reflect on the City's importance and how to manage the City in the best possible way. It is hoped that a substantial impact of the pandemic on cities will provide a strong impetus for governments, local authorities, and urban planners to pay more attention to more resilient development in the face of various disasters looming over the City.

This study is recognized as having limitations, given the evolving nature of the pandemic and findings of new and different viruses that may emerge in the next few months, so more review and analysis are needed. Long-term studies also need to provide insights into currently under-studied issues such as socioeconomic and environmental consequences and adapting to pandemics that will change citizen behavior and urban governance for the foreseeable future.

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