

Review

The response of local governments in financing related to the COVID-19 pandemic: A literature review

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Abstract

Not only the Central Government, local governments also have a role to shape, adapt and provide a holistic response to the COVID-19 pandemic. One of the most important actions taken by local governments during the COVID-19 pandemic is to make immediate, timely, and targeted decisions for the right institutions in order to give an effective response. Regarding financing, the main point is to focus on increasing support and accelerating fiscal transfer funds to local governments in an effort handle COVID-19. This paper wants to observe the empirical practice of local governments in various countries in responding to the COVID-19 pandemic, especially in terms of financing various programs and activities related to the COVID-19 response. Literature was obtained from several databases, namely PubMed, ScienceDirect, Cochrane Library and Google Scholar. Of the 783 articles obtained at the start of the search, in the end only 11 articles met the inclusion and exclusion criteria of this study. The impact of the COVID-19 pandemic is apparent in all parts of the world, including in countries' local governments, that forced them to carry out various efforts of mitigating the severity of the pandemic. Although the details of local governments budgeting were not found in most of the articles studied in this literature review, it is sufficient to provide a fairly significant picture of the function of local government in tackling the spread of COVID-19.

Introduction

In recent times, the governments of every countries are facing the need for emergency response due to the COVID-19 pandemic. The impact of this pandemic is worldwide, with 218,946,836 confirmed cases of COVID-19 and 4,539,723 death globally as of September 3, 2021 at 6.16 PM CEST. ¹ Since the first case was reported, the World Health Organization (WHO) has been work-

ing with the Chinese government and global experts to learn more about the virus, including the transmission of the virus, populations at the most risk, and the most effective way to detect, stop, and control the human-to-human transmissions.

To handle a problem this big, a quick and targeted new guidelines was needed, as public policy is an act that assists government in overcoming problems faced by society.² The next step was to formulate the preparedness documents and strategic response plans that detailed the public health steps to help all countries prepare for the COVID-19 outbreak. The strategic response are:

- i) Establish international coordination quickly to provide strategic, technical and operational support through existing mechanism and partnership.
- ii) Improve countries' preparedness and response, including strengthening readiness to quickly identify, diagnose and treat cases; contact tracing, infection prevention and control, risk communication to the community, as well as community involvement.
- iii) Accelerate priority researches and innovations, especially those related to therapeutic modal candidates, vaccines and diagnostics.³

In addition to country or national levels of interventions, COVID-19 shows the importance of quick and effective local or regional interventions in order to slow down the spread of the virus. The role of local governments is to shape, adapt and provide a holistic response to the COVID-19 pandemic. A study by Brandtner *et al.* stresses the role of local governments in responding to the virus outbreak, especially if there is a lack of fast or adequate response from the central governments.⁴

In most countries, the effectiveness of the response to COVID-19 varies widely in the sub-national level with different approaches. The experiences of China and South Korea demonstrate the importance of effective local government in mobilizing community responses. One of the most important actions taken by local governments during the COVID-19 pandemic is to make immediate, time-

Significance for public health

COVID-19 has been declared a pandemic in March 2020. The impact of this COVID-19 pandemic covers all sectors of life. The financing required is not only for the provision of health services, but also includes the costs of risk communication and community empowerment, social protection, enforcement of regulations related to infection prevention and control, continuation of essential services and measures to ensure the survival of the local economy. COVID-19 demonstrates the importance of fast and effective local intervention. The effectiveness of the response to COVID-19 varies widely at the local government level, with different approaches taken. Any measure related to COVID-19 requires resources and has a fiscal aspect. To finance the response to this pandemic, local governments rely on three main sources: Regional Original Revenue, Balancing Funds, and Regional Loans. This study wants to take lessons learned on public health policies related to financing by local governments in dealing with COVID-19.

ly, and targeted decisions for the right institutions in order to give an effective response. Regarding financing, the main point is to focus on increasing support and accelerating fiscal transfer funds to local governments in an effort to handle COVID-19. In China, although the overall response in Wuhan Province was coordinated by the central government, the actual implementation was the responsibility of the Wuhan province and local government. The Chinese Government set an initial transfer to Wuhan of USD 8.6 billion (120 trillion rupiah), then an additional USD 16 billion (227 trillion rupiah) was allocated from the central government to the local government for the period December 2019 to March 2020.⁵ It is not surprising that this pandemic has put countries on financial restraint. Not only low- and middle-income countries (LMIC), higher income countries are also struggling directing their sources, protecting at-risk groups, and caring for the COVID-19 confirmed cases in their countries.⁶ In Indonesia, for example, the effects of lockdown orders on several sectors had put the nation's finance state in a depressed situation, and is predicted to be so for some time.⁷

To help navigate this inevitable financial hardship on regional level, The United Nations Capital Development Fund (UNCDF) has set local government financing responses to the COVID-19 pandemic situation that should cover six general areas, namely:

- i) Increase the capacity of local healthcare services;
- ii) Improving risk awareness and community empowerment;
- iii) Improve social protection measures;
- iv) Enforce public order and regulations to prevent and control the infection;
- v) Continued provision of essential services (such as education, staple foods);
- vi) Take action regarding local economic reliefs.

The scope of specific responses and actions depends on the competence and responsibilities of local governments and their fiscal capacity, which determines the amount of financial resources available.⁵

To fund the response to this pandemic, local governments rely on three main sources: Regional Original Revenue (PAD), Balancing Funds, and Regional Loans. The latter is only available in countries with supportive legislative bodies and policies.^{5,8,9}

Regarding PAD, it is actually the most flexible source of financing that can be easily allocated towards epidemic response. But in many countries, especially developing countries, PAD is usually less than 10 percent of the total local government budget and is insufficient for an effective pandemic response. In addition, the public health response to COVID-19 has significantly reduced PAD for three reasons:

- i) Social distancing forcing work to be done from home and large-scale social restrictions, such as lockdowns, have a negative impact on the retail and transportation industries and eliminate tax revenues from local governments.
- ii) Increased unemployment reduces property and rent tax payments.

- iii) Reduced economic activity reduces business tax revenues.

Surely, with such great pressure on the health care system due to this pandemic, governments are required to overcome these pressures and provide broad-based fiscal support in response to the ongoing economic crisis. Public financial management systems are critical in supporting the success of the government's emergency response. Governments need to ensure that their systems are equipped to meet requirements and address challenges in terms of:

- a. Support the delivery of emergency health services (including the direct provision of health services); purchase of goods and services; placing the necessary human resources to monitor, control, and mitigate the COVID-19 outbreak;
- b. Ensure continuous delivery of essential public services that may be under pressure during the outbreak;
- c. Implement new fiscal measures (including various support mechanisms) to help businesses and people under economic hardship; and
- d. Ensure smooth public financial management services, even though the majority of government staff have to work from home.^{5,9}

This paper observes the empirical practice of local governments in various countries in responding to the COVID-19 pandemic, especially in terms of financing various programs and activities related to the COVID-19 response.

Design and Methods

The research was conducted using the literature review method. Literature was obtained from the PubMed, Science Direct, Cochrane Library, and Google Scholar databases which were accessed online. In searching the literature, inclusion and exclusion criteria were set to obtain relevant literature, as stated in Table 1. The study search was carried out with the following keywords on PubMed and Science Direct; (((Local government) OR (government response) OR (local government policy))) AND ((Covid-19) OR (coronavirus) OR (SARS-CoV-2)) AND ((financial response) OR (financing))). The keywords used for Cochrane Library and Google Scholar searches are as follows; "Local government" AND "financing" OR "financial response" AND "Covid-19". The different search strategy was carried out because expected articles were not found with the previous search strategy. Both searches found a total of 715 articles from PubMed, 68 from Science Direct, 18 from Cochrane Library, and 34 from Google Scholar.

The reference list was then processed through Mendeley application to eliminate duplicate articles. The remaining articles were then selected according to inclusion and exclusion criteria. This process resulted in 11 literature that were included in this study. Critical appraisal was conducted using the STROBE (Strengthening the Reporting of Observational Studies in

Table 1. Inclusion and exclusion criteria for study selection.

Criteria	Inclusion	Exclusion
Publication year	2020, 2021	Books and documents, review, practice guidelines,
Type of publication	Government publication, journal article, meta analysis, multicenter study, observational study, technical report, systematic review, clinical trial, randomized control trial	lecture, legal case, consensus development conference
Language	English, Indonesian, Malay	Outside those 3 languages
Study population	Local government(s) in various countries that carry out financing responses in dealing with the covid-19 pandemic; can only 1 local government as a case study	
Study outcome	The financing mechanism carried out by the local government in dealing with the covid pandemic; areas financed by local governments	

Epidemiology) guide to measure the quality of each article. From there, data extraction was done to properly group the information obtained from each literature into a table, to further facilitate information mapping.

Results

Selected literature characteristics

The documentation of the literature search flow is illustrated in Figure 1. Table 2. As seen on Table 2, five out of 11 of the selected literature were published in Indonesia, 3 articles were published in the United States and 1 article in United Kingdom. Two articles were published in European countries, Slovakia and Bulgaria. Given that the COVID-19 pandemic emerged at the end of 2019, all publication years are only between 2020 to 2021.

Increasing the capacity of local healthcare system

A study by Herdiana, Mukhlis, and Madya the four biggest problems local governments face is the lack of human resources, the lack of health care facilities, budgeting, leadership and coordination, and law enforcement.¹⁰ In the efforts of strengthening local governments capacity in handling the Coronavirus outbreak, this study believes that a comprehensive assessment of the current performance of the local government, from which they can carry out several steps needed to increase the governments' capacity. Budget reallocation is stated to be the key in determining the success or failure of each local governments' response of COVID-19, given that a large amount of their budget would have to be allocated for handling the virus outbreak. Aligning with this study, Hasibuan *et al.* stated in their article that the Indonesian government has set out a Government Regulation in Lieu of the Law of the Republic of Indonesia (Perppu) Number 1 of 2020 that arranges financial assistance accumulating to IDR 75 trillion for health incentives.¹¹ However, both of these studies did not go into the details of how local government utilizes the reallocated budgets.^{10,11}

Rokhmah *et al.* stated in their study that the financial budgeting of COVID-19 for East Java Province in Indonesia is divided into four categories, which are curative, promotive-preventive,

social security net, and recovery needs.¹² From a total of IDR 2,102,600,000,000 of the COVID-19 mitigation budget for the province, the biggest percentage is allocated for social safety net (42%), followed by curative needs (34%) and recovery (19%). Preventive-promotive needs only make up 5% of the total budget. Though not stated explicitly, it can be concluded that most of the budget goes into healthcare system (curative, promotive-preventive and recovery needs). Another study done in Indonesia but in a different province, Banten, explained in detail the amount of Regional Revenue and Expenditure Budget (APBD) allocated for healthcare strengthening; IDR 161 billion for phase I, and IDR 105 billion for phase II.¹³

Okfitasari *et al.* in their study on 540 local governments divided into 34 provinces, 413 districts, 93 cities revealed changes in budget before and after COVID-19.¹⁴ The local government budget for provinces before COVID-19 was IDR 417.24 trillion down to IDR 332.93 trillion, and IDR 881.26 trillion for district/cities before the pandemic down to IDR 774.82 trillion after COVID-19. This study further explains that the health sector received the biggest allocation sectors of the budget reduction for IDR 29.19 trillion (39.26%). However, this study did not go into details of the health expenditure from the budget reallocation.

Community awareness and mobilization

In the efforts of reducing the virus transmission, Centers for Disease Control and Prevention (CDC) has stated that local governments in the USA have full control over local events, and therefore are responsible to limit any events, while also keeping in mind the revenue they might need from local events themselves.¹⁵ Wilson *et al.* highlighted the efforts of keeping the communities of Washington, USA safe by forbidding dine-in at restaurants, while also campaigning restaurants and cafe available for take-outs and deliveries to keep the economy in motion.¹⁶ Perez *et al.* also stated that local governments were responsible in mitigating hoaxes relating to COVID-19 that might be dangerous to the process of controlling the community mobilization.¹⁵ These articles, however, did not discuss the total budget needed for taking the needed steps in increasing their communities' awareness.

Social protection measures

Social protection measures on a local governmental level can

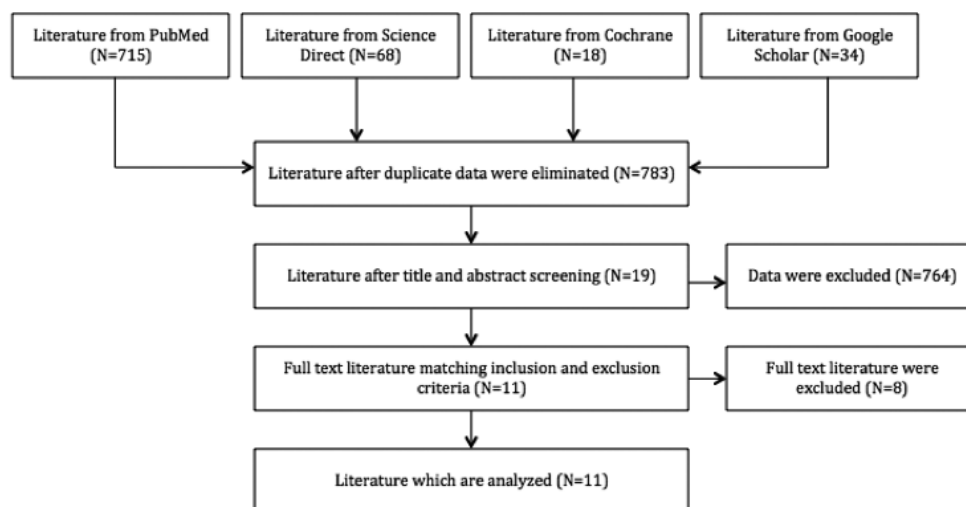


Figure 1. Documentation of the literature search flow.

Table 2. Extraction of data from selected literature.

Author, year, location	Journal	Type of study	Study objective	Sample	Study design	Data collection method	Key findings
Alrens and Ferry, 2020, UK	Emerald Insight	Qualitative	To explore the financial management responses of English local government due to the sudden emergence of the COVID-19 pandemic	Non experimental; cross-sectional	Participation in Chancellor's budget speech, expert conversations, and online parliamentary committee sessions, as well as close readings of official reports and news media (from 11 March to 20 July 2020)		English local government appeared to be financially resilient to the COVID-19 pandemic. However, the pandemic was still developing during the research, and the pressures from Brexit is still imminent. Therefore, the financial framework of central government who funds the local government remained on an unreliable footing in terms of COVID-19.
Perez <i>et al.</i> , 2021, USA	Public Budgeting & Finance	Qualitative	To investigate the role of Medicaid as a stabilizing unit for local government budgets in facing the COVID-19 pandemic	Non experimental; cross-sectional	Desk study of secondary data		Medicaid acts as mitigator from the effect of unemployment shocks on county government expenditures during the COVID-19 pandemic.
Mager <i>et al.</i> 2020, USA	Public Administration Review	Quantitative	To navigate the fiscal effects of COVID-19 on local governments with Resilience, Intension, Sustain, Endurance (RISE) framework	Non experimental; cross-sectional	Survey		All sectors were still figuring out the fiscal effects of COVID-19, however nonprofit organizations were hit harder and faster. This caused nonprofit organizations to respond more immediately to survive said fiscal shock.
Wilson <i>et al.</i> , 2020, USA	Public Administration Review	Qualitative	To examine the local governments' collective action in partnering with other governments and organizations in attempts to stabilize their economy in facing the COVID-19 pandemic	Non experimental; Cross-sectional	Desk study of the secondary data		Reviewed with the Institutional Collective Action (ICA) framework during COVID-19, this study finds collaborative economic development actions taken by local governments, which are uniquely rare, but now offers multi-institutional grants as well as low-interest loans.
Neškova and Kalcheva, 2021, Bulgaria	Scientific Papers of UNWE	Quantitative	To examine the changes in revenue and spending of local governments in Bulgaria due to the COVID-19 pandemic	Non experimental; Cross-sectional	Desk study of the secondary data		Data of recent years ahead of the pandemic showed increases of local budgets at a steady pace. The COVID-19 pandemic has caused a sharp decline in the rate of local governments' tax revenue. The decline threatens underfunding of certain activities, freezing of capital expenditure, and may also lead to an increase of financial difficulties in local areas.
Hasibuan <i>et al.</i> , 2020, Indonesia	International Journal of Research and Review	Qualitative	To determine the source of the government's budget in the efforts of dealing with the COVID-19 pandemic	Non experimental; Cross-sectional	Desk study of secondary data obtained using documentation method		The financing source of COVID-19 handling budget is State's Budget known as APBN, which has been altered in response to the virus outbreak. The central government has prepared 405.1 trillion Rupiahs accumulated from APBN and Remaining Over budget (SAU), endowment funds, funds managed by Public Service board, as well as funds from capital participation reduction to State-Owned Enterprises. Local governments were also given authority to arrange strategic plans in response to the pandemic.
Čeménko <i>et al.</i> , 2021, Slovakia	Scientific Papers of the University of Pardubice	Quantitative	To examine the impact of COVID-19 Slovak local governments' budgets further propose measures to help prepare similar financial shocks in the future	Non experimental; cross-sectional	Review of secondary data from Budget Information System, as well as aggregated data from Ministry of Finance of the Slovak Republic		The COVID-19 outbreak does not threaten the local governments tax revenue in the short term. However, the pandemic revealed several economic limits of local governments of Slovakia, such as the low efficiency of small governmental areas. This may be an indication of the unsustainable structure of the Slovakia government. Local governments are vulnerable to economic fluctuations due to the high concentration of tax revenues. This calls for the need to strengthen revenues from fees and other taxes.

Table 2. Extraction of data from selected literature.

Author, year, location	Journal	Type of study	Study objective	Sample	Study design	Data collection method	Key findings
Sanjaya, 2020, Indonesia	Jurnal Ilmu Administrasi	Qualitative	To determine the local budgeting policy in response to the COVID-19 pandemic, specifically on the local government of Banten Province, Indonesia	Direct observation, interviews, documentation	The local government of Banten has refocused and repurposed budgets, which are obtained from State Revenue and Expenditure Budget (APBN) and Regional Revenue and Expenditure Budget (APBD) in response to the COVID-19 outbreak. The steps taken was under the direction of central government.		The Banten government also administered a countercyclical principles in effort to managing the deficit of APBD, in which the government increases spending and/or lower tax rates to stimulate aggregate demand and prevent the use of economic resources that are less than optimal.
Rokhmah <i>et al.</i> , 2020, Indonesia	National Public Health Journal	Qualitative	To describe the spending of funds for COVID-19 in East Java Province, Indonesia	Non-experimental; Cross sectional	Secondary data obtained from the Regional Development Agency of East Java Province of COVID-19 fund in 31 districts within March 23-April 23, 2020		The East Java Province had a budget of IDR 2,102,600,000,000, which evened out to IDR 1,997,139 per capita. This number is then utilized for curative, preventive-promotive, social safety net, and recovery needs. The budgets varies in different districts, with the highest per capita funds in the city of Batu (IDR 487,747), and the lowest in Tulungagung (IDR 1,725).
Okfiansari <i>et al.</i> , 2021, Indonesia	2 nd International Conference Health, Science and Technology	Qualitative	To describe the refocusing and reallocation of local government budgets for COVID-19 in Indonesia	Non-experimental; cross sectional	Secondary data obtained from the Indonesian Ministry of Home Affairs		The Ministry of Home Affairs and Ministry of Finance has constructed a Joint Decree concerning the Acceleration of 2020 Local Government Budget Adjustments in the Context of Handling Corona Virus Disease 2019 (COVID-19), but the implementation of refocusing and reallocation of budgets had not been on target in several local governments. Three provinces that performed best in refocusing and reallocating budgets were DKI Jakarta, Southeast Sulawesi, and East Kalimantan (49.22%, 33.11%, 29.11% respectively). Only one of these provinces, however, are in the top three provinces with the highest COVID-19 cases, which is DKI Jakarta. This shows the utilization of the program had not been linear with the number of cases.
Herdiana <i>et al.</i> , 2020, Indonesia	Universitas Lampung International Conference on Social Sciences	Qualitative	To analyze the capacity of local governments in handling the COVID-19 outbreak and review the efforts made to strengthen the capacity of local governments in Indonesia	Non-experimental; cross sectional	Secondary data obtained from book reviews, journals, regulations, web pages, and other relevant sources		Local governments face five main areas of problems in handling the pandemic: human resources, health facilities, budget, leadership and coordination, and lastly law enforcement. Added to the burden is the very strategic position of local governments' handling of COVID-19 which may result in the success or failure of the pandemic handling on a national level. The study points out four stressing points of strengthening local governments, which are policy, human resources, and organizational restructuring, and budget reallocation.

be translated into social safety-net programs. A study on the role of Medicaid, USA's insurance program, in mitigating possible financial hardships on local governments due to COVID-19 showed that the presence of Medicaid helped soften the blows of unemployment shocks of the pandemic.¹⁵ With people having the option to rely on their insurance, local governments' expenditure on COVID-19 can be reduced, specifically safety-net programs and debt.

In the article of Okfitasari *et al.*, they mentioned a big percentage (38.30% or 28,47 trillion) of local government budget reallocation for social safety-net.¹⁴ An interview with a local government official done by Sanjaya, revealed that Banten Province of Indonesia had prepared IDR 934 billion and IDR 229 billion for social safety-net budgets divided into two phases, though this study did not state the average amount of budget per capita.¹³ East Java Province, Indonesia had prepared IDR 877,301,513,766 for social safety-net, with an average of IDR 833,299 per capita.¹²

Enforcement of public order and regulations

As stated on the previous section, law enforcement is one of the four biggest problems local governments face in mitigating COVID-19.¹⁰ Though several article stated regulations in budget allocation in tackling the pandemic,^{11,13,14,17} only one article discussed the role of local governments in enforcing public order of lockdowns.¹⁸ Nenkov and Kalcheva also pointed out the Bulgarian Government role in enforcing lockdown orders by discounting the garnishment of regional or local bank accounts for two months after lockdown orders had been lifted.

Continued provision of essential services

To ensure the continuity of essential services, Hasibuan *et al.* stated that the Indonesian government has established many programs, including food packages, pre-employment cards, family hope programs and direct social assistance to communities in need, though the programs and budgets were not discussed in details.¹¹ Herdiana, Mukhlis, and Madya also stated the need for financial assistance for the community in Indonesia during lockdowns to secure essential needs, however this was only a suggestion and the authors did not get into the steps that the local governments needed to take.¹⁰

Relief measures for local economies

One study on collaborative economic development actions discussed how abrupt closings of non-essentials small businesses due to the spread of the Coronavirus has impacted local economies.¹⁶ Wilson *et al.* proposes the use of Institutional Collective Action (ICA) framework to map the needed actions in stimulating local economies through collaborations between business to either suppress their supply costs or increase consumers' spending. The most common action for local governments is providing loans or grants for small businesses, e.g. grants of USD 100,000 has been given to small businesses owners in Kentucky, USA, or the offer of loans with low-interest rate of up to USD 10,000 in North Carolina, USA. An interesting action, however, is an action without money involved, where in Puget Sound, Washington the local government started a #SupportPugetSoundSmallBiz campaign that maps out restaurants and cafes in the area that are open for take-out, drive-thru, and delivery.

Ahrens and Ferry¹⁹ also highlighted grants given to local governments and business in the United Kingdom, in a total of over GBP 27 billion, however this study did not discuss in detail about said grants. Similarly, Nenkov and Kalcheva mentioned in their article that the central government of Bulgaria set EUR 70 million to support of small and medium-sized local government investment projects, though there was no further discussion about the uti-

lization of the budget.¹⁸ A recommendation was made by Herdiana, Mukhlis and Madya¹⁰ of how both central and local government should develop policies concerning ease of licensing in opening new businesses, so that communities and governments can work hand-in-hand in restoring the economy after the pandemic. A survey on non-profit organizations (NGOs) done by Maher, Hoang and Hindery also highlighted that a lot of NGOs favored to rely on government grants for financial assistance during the pandemic.²⁰

Conclusions

The impact of the COVID-19 pandemic is apparent in all parts of the world, including in countries' local governments. Added to the pressure is the big role local governments' have to carry out in efforts of mitigating the severity of the pandemic. Although the details of local governments budgeting were not found in most of the articles studied in this literature review, it is sufficient to provide a fairly significant picture of the function of local government in tackling the spread of COVID-19. Further research is needed to make a more comprehensive calculation of the local governments budgeting response to the COVID-19 pandemic.

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