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Budgetary Allocations and Government Response to COVID-19 Pandemic in South Africa and Nigeria

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Abstract: The eruption of the novel virus brought to the global scene the prediction that Africa would be worse hit by the pandemic. This prediction was partly built on the widely recognized fact that Africa is the continent with the weakest public health care system and the lowest budgetary allocations to health. However, contrary to this prediction, the COVID-19 death rate in Africa has been low compared to in other continents. Debates on Africa's low COVID-19 death rate have generated mixed reactions, the majority of which have centred on beliefs and superstition about hot weather and Africa's youth-dominated society. Little or none of these reactions have attributed the low COVID-19 death rate to swift and prudent budgetary adjustment, which partly aided a swift response from some African governments. Indeed, not many studies have examined the swiftness in the response of some African governments and prudent budgetary adjustment in tackling the spread of COVID-19. This paper, through secondary data, advances knowledge on how budget revision aided government response to the COVID-19 pandemic in South Africa and Nigeria. It found that both countries adjusted their budgetary allocations in response to COVID-19. It further indicates that South Africa, through budgetary revision, allocated more funds to government agencies in charge of COVID-19 and various relief packages than Nigeria. Moreover, it indicates that the swift budgetary adjustment by both countries partly aided a quick government response that progressively flattened the curve and, in the long run, partly contributed to fiscal impulse and deferrals.

Keywords: allocation; budgetary; COVID-19; pandemic; response



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1. Introduction

Debate and research on the COVID-19 pandemic, essentially in respect of the intervention of the government in flattening the pandemic, is stimulated by the weak public health care systems in Africa and sometimes by low budgetary allocations to health by some African states. The response of some African governments to the pandemic has thus provoked studies (Gershuny et al. 2021; Chowdhury et al. 2020; Margraf et al. 2020) and mixed reactions that criticize and doubt the efficacy of the response of governments to the pandemic in Africa (Guleid et al. 2021; Staunton et al. 2020). This is partly because, in parts of Africa, empirical evidence by Massinga et al. (2020) shows that little or nothing had been instigated financially by the government to revamp the health sector before the outbreak of the pandemic on the continent (Lone and Ahmad 2020; Karamouzian and Madani 2020). This accounts for the reason why most African countries are vulnerable to COVID-19¹.

The poor funding of health, to a large extent, questions the level of preparedness and response of African states to the COVID-19 pandemic². This same circumstance has made Kollamparambil and Oyenubi (2021) and Chowdhury et al. (2020) concerned that low investment in health facilities could make most African states unfit to withstand the COVID-19 virus. Scientific evidence shows that despite the African Union agreement to allocate 15% of the national budget to health, some African states did not comply with this

declaration, except Botswana (17 percent), Rwanda (20 percent), and Zambia (16 percent) (Human Right Watch 2020), see Note 1.

While South Africa has maintained a steady percentage of between 12% and 13.2% of its national budget for health³, Nigeria has consistently allocated less than 10% of its national budget to health⁴. This determines the extent to which the governments in both countries responded to the spread of the virus. Oleribe et al. (2019) argued that one of the health challenges in Africa is the low budgetary allocation to health. It has not only resulted in a weak health care system but also makes people patronize health care overseas; it may have left countries largely unprepared for the handling of the COVID-19 pandemic. It is clear that most African countries were not prepared or ready to combat COVID-19 due to poor health funding.

However, even though evidence from scientific observations and the countries' regular updates on COVID-19 across Africa shows that African healthcare systems are yet to be overwhelmed by the virus, there is the perpetual fear that the protracted cases of the COVID-19 outbreak in Africa will lead to massive hospitalizations, which, in turn, limit the health capacities of most African countries⁵. This is consistent with the UN report that Africa's low budgetary allocation to health contributes to its low retention of skilled health workers, shortage of hospital beds, and procurement of medications, which in turn constrained Africa's health systems from adequately responding to the COVID-19 pandemic⁶. This has made many Africans gloss over the proactiveness of their government's response to COVID-19. However, in parts of Africa, the government has taken some actions to combat the pandemic. Some of these governments in Africa, such as the South African and Nigerian governments, have implemented response strategies that control the COVID-19 virus (Tessema et al. 2021; Staunton et al. 2020).

Of all the government responses deliberately put in place to address the problems of the COVID-19 pandemic through deliberate action, lockdown, social distancing, the nation-wide use of face masks, and quarantine measures by Nigeria and South Africa are the most important components of the governments' intervention in the pandemic. Regardless of criticisms against the governments' responses (lockdown, social distancing, economic relief packages, etc.) to the pandemic in South Africa and Nigeria, this response seems to be highly effective in flattening the curve in both countries (Tessema et al. 2021); it has been specifically noted that the lockdown measure is one of the governments' responses that has saved more lives and controlled the transmission of the virus (Staunton et al. 2020). However, this response strategy has been subjected to various critical analyses.

Given the above scenario, notwithstanding, little or no studies have examined how budgetary adjustment aided the governments' response as a vehicle for the flattening of the COVID-19 curve in Nigeria and South Africa. This article examines the nexus between fiscal allocations and the response strategy of the government to the pandemic. The paper seeks to identify whether fiscal allocations in terms of budget revision or adjustment could be instrumental to the government's response and flattening of the curve in Nigeria and South Africa. The paper hypothesizes that adjusted budgetary allocations during COVID-19 aided a swift government response to COVID-19 and, by extension, the low COVID-19 death rate in Africa. Given this, the article examines the implications of budgetary allocation for the response strategy of the government to the pandemic in South Africa and Nigeria.

For a proper understanding of this article, note that it specifically identifies and analyses the response of the government to the pandemic in South Africa and Nigeria within the context of each country's adjusted budgetary (fiscal) allocation to health during the outbreak of the virus. Second, it comparatively analyses lessons that both countries can learn from each other, especially in terms of policy initiatives of the government to cushion the crisis of the pandemic. Third, it identifies challenges undermining the response of the government to the pandemic in Nigeria and South Africa. The article is systematically structured as follows. The next section examines the literature, mapping the fiscal allocation and response of the government to the novel viruses in Nigeria and South Africa. This

is followed by a theoretical review, a comparative analysis of possible takeaways in both countries, and finally, the conclusion.

2. Theoretical Explanation of the Nexus between Budgetary Allocations and the Response of the Government to the COVID-19 Pandemic

Available evidence such as one in the report of World Health Organization has shown that the COVID-19 pandemic is a health, security, and socio-economic problem affecting the lives and peaceful co-existence of people across the globe⁷. It is a disease spread by humans who move from one society to another. It was first discovered in Wuhan, China, but today, almost all the countries in Africa bear the brunt of the virus. It came to Africa at a time when most African states were grappling with the economic recession, weak public healthcare systems, and poor revenue allocation to health⁸. These inherent problems have made global health organizations and other stakeholders doubt the capacity of African countries to manage the deadly virus. One such organization was the Melinda Gates foundation, which predicted a high COVID-19 mortality rate in Africa. This prediction was borne out of the recurrent cases of the underfunding of health in Africa. Given this, it is logically correct to predict that most African countries had no capacity to handle COVID-19.

However, contrary to this widely held opinion, the response strategy of some African countries (South Africa, Nigeria, Rwanda, Egypt, Ghana, and a few others), especially with the way some of them (Nigeria) managed EBOLA, occupies pride of place (Haider et al. 2020). Nonetheless, despite criticisms of their response strategy, it has played a role in the continent's COVID-19 pandemic being contained.

De Groot and Lemanski (2021) concluded that despite the challenges faced by African states in the treatment of COVID-19 cases, most of them still reacted quickly to the threat of the virus. The swift government response seems to have been positive, possibly because of its openness to the people in receiving and processing their interests through aggregation, harmonization, and extensive deliberations to reach a decision that could address their interests. The foregoing argument draws on the input–output analysis of systems theory.

Systems theory, first propounded by Easton (1965) but further improved by Fisher (2011), aptly fits the explanation of budgetary allocation and the response of the government to the pandemic in Nigeria and South Africa. Environmental problems or social issues are parts of an interrelated whole system (Amusan and Agunyai 2021; Hassan et al. 2020). According to this theory, the political system is defined as the interaction or set of interrelated components and processes through which binding or authoritative allocations are made in any society. The theory stipulates that the system, that is, the political system, through the input device, receives complaints about certain societal problems requiring government attention or response or that society makes demands (for a particular policy or action) on the system through an active input device. Society transmits its demands into the system (conversion box) through different channels.

Fisher (2011) explains that the conversion box represents the stage of aggregating all issues or demand flowing from the environment into an all-encompassing agreement or decision to address the demand. It is the stage where key stakeholders (in this case, lawmakers; ministers in charge of finance, health, environment, women's affairs, humanitarian services; clinical technocrats or specialists, and philanthropists, among others) come together to share knowledge through critical reviews, analysis, discussions, and debates to harmonize and aggregate demand from the environment, with the aim of reaching a generalized concrete decision that can possibly address the demand from the environment. In doing this, the parliament seems to be the theatre for the processing or conversion of the COVID-19 related demands in most countries. The parliament holds the statutory functions of approval of the annual budget, representation, and law-making (Agunyai and Ojatorotu 2021).

Furthermore, because finance is one of the means by which the government can adequately respond to COVID-19, the parliament must convert or process complaints about COVID-19 funding brought to it by other government organs. This explains the

involvement of other stakeholders mentioned above at the processing stage. At this stage, members of parliament invite other stakeholders, such as ministers of finance, health, environment, humanitarian services, and others, to be part of the discussion and debate on how the country can adequately respond to COVID-19 through budgetary allocations. The duty of other stakeholders at this stage is to defend their budget, that is, to explain and provide evidence why the parliament should approve the revised or supplementary allocation. After several deliberations and parliamentary sessions on the processing of the COVID-19 demand, a resolution is reached in the form of a decision or a response to address the demand. This represents the output element of systems theory.

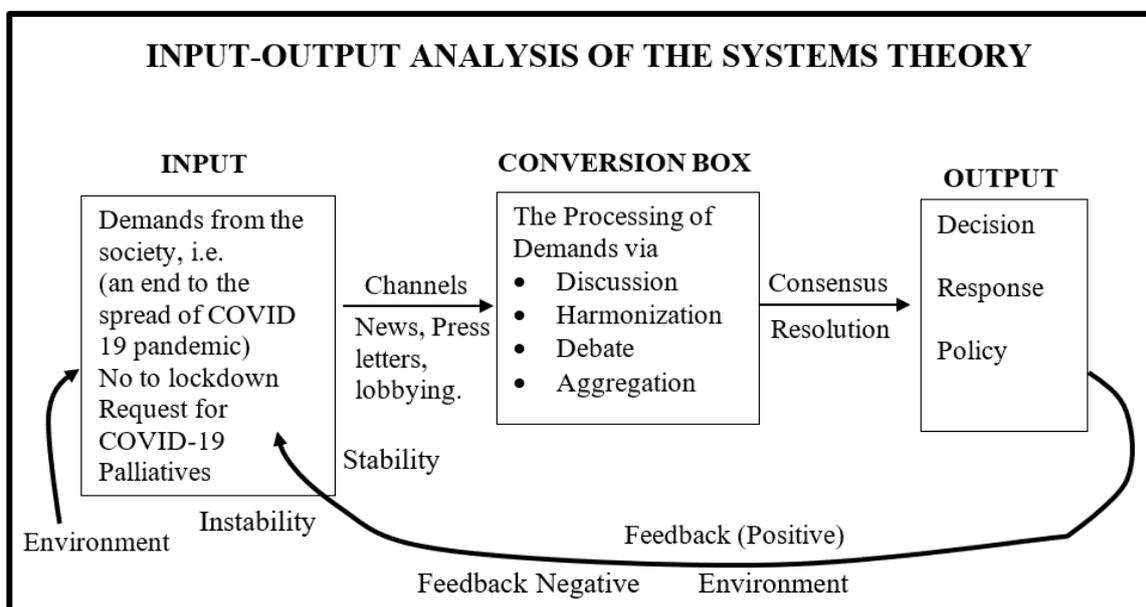
Applying the theory to the South African and Nigerian cases, the revision of the budget to accommodate all COVID-19 related costs to combat the virus could not have been possible without thorough debate, discussion, and analysis by members of parliament, whose duty it is to approve the annual or supplementary budget. The conversion box represents the South African and Nigerian parliaments, where issues of fund allocation, either for cutting-down or supplementary purposes, are extensively discussed for approval within the financial capacity of the country. Evidence from [Amusan and Agunyai \(2021\)](#) and [Awofeso and Irabor \(2020\)](#) showed that the response of any government to COVID-19 partly depends on the swiftness of the parliament to approve the revised or supplementary budget. Both countries' parliaments are involved in budget revision and adjustment, which in the long run results in fiscal impulse.

Response represents the output element of the theory ([Amusan and Agunyai 2021](#)). It is simply the outcome emanating from the processing or conversion of the COVID-19 demand from the environment. It is usually in the form of a resolution or consensus that is transmitted as the output, which represents the final decision, policy, response, or action taken to tackle or amicably address the societal problem. For [Ezeani \(2005\)](#), the quality of the decision or response is determined by the level of a change in society or the introduction of new methods to achieve the desired results. The response by some African governments to slowing down the spread of COVID-19 represents the output ([Pan et al. 2020](#)).

The output represents the decision that motivates the government's response, purposefully designed to address the demand or problem (COVID-19) affecting people in society. Thus, the theory further argues that if the response or policy is evaluated to be good, positive feedback in the form of the emergence of change could adequately contribute to the stability of the political system. The reverse is the case if the government's response to the problem (COVID-19) is seen to be bad and unproductive. This is called "negative feedback", which constrains change and destabilizes the whole system.

This theory aptly explains the response of governments to COVID-19 through budget revision or adjustment in South Africa and Nigeria. From the Figure 1 below, COVID-19 is a health challenge that triggers socio-economic and environmental problems that require a government response in the form of adjusted fiscal allocations. Thus, the government's decisions to revise the budget to accommodate COVID-19 emergency expenditures such as the purchase of COVID-19 treatment facilities, health infrastructure, palliatives, grants, loans to SMEs, and relief packages to vulnerable groups in society are classified as the output segment of systems theory ([Amusan and Agunyai 2021](#); [Ezeani 2005](#)). A revision or an adjustment of the budget could either be in the form of an increase in fiscal allocations (additional government spending on medical resources, keeping people employed, subsidising SMEs, or public investment) or deferrals (decision to defer certain payments such as taxes and social security contributions) and could be termed a response to the sudden health and socio-economic challenges imposed by COVID-19. According to this theory, normal responses normally trigger both positive and negative feedback. While positive feedback promotes the stability of the system, negative feedback destabilizes the system. In the cases of Nigeria and South Africa, the proper management of the lockdown policy in the form of decisions to increase budgetary allocations to accommodate palliatives for vulnerable citizens could go a long way in stabilizing both countries. However, both coun-

tries have experienced instability⁹ due to a breakdown in their governments’ responses (Staunton et al. 2020).



Source: Authors’ Computation

Figure 1. Systems theory.

3. Mapping the Nexus between Budgetary Allocation and the Response of the Government to the COVID-19 Pandemic in South Africa and Nigeria

In terms of socioeconomic status, South Africa and Nigeria share a resemblance. Both countries are significant in African history as British colonies. Although South Africa and Nigeria are grouped under different regions on the continent, that is, Southern and West Africa, they both account for the largest share of their sub-regional economies and populations (Adeniran and Sidiq 2018). The COVID-19 preventive measures (lockdown, social distancing, face masks, quarantine, inter-country and intra-country restrictions) are component parts of a government’s response that affect economic activities globally¹⁰. This situation may further complicate South Africa’s and Nigeria’s budgetary allocation to the health sector in the face of ineffective health facilities, inadequate test equipment for COVID-19, and contact tracing, etc., compared to developed countries¹¹. The International Monetary Fund predicted that the global oil slump and stringent restrictions that shut down businesses, trading, and movements would be factors limiting income generation and government expenditures on key sectors of the economy in developing countries¹². Similarly, De Groot and Lemanski (2021) revealed that the governments in Nigeria and South Africa suffered a setback in generating budgeted revenue and meeting their budgeted expenditures due to the COVID-19 pandemic. Total health expenses as a share of GDP have remained a source of concern in both countries, see Table 1. This is mainly because funds budgeted for health prior to COVID-19 were small compared to the huge health challenges.

Table 1. Health expenditure as a share of GDP in South Africa and Nigeria (before and after COVID-19 outbreak).

Year	2018	2019
Countries	% Share of the GDP	% Share of the GDP
South Africa	8.8	9.1
Nigeria	3.09	3.03

Source: Adapted from World Bank (2022) see Note 2.

Total health expenditure is the sum of public and private health expenditure. In South Africa, it includes healthcare goods and services consumed during each year. This indicator does not include capital health expenditures such as buildings, machinery, IT, and stocks of vaccines for emergencies or outbreaks, see Note 12 above. In Nigeria, it covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health. It does not include the provision of water and sanitation.

From the table above, South Africa was more committed to health expenditures (8.8%, 9.1% of GDP) than Nigeria (3.09%, 3.03%) before and after the COVID-19 outbreak. This difference could partly have been as a result of political will, commitment, economy, revenue generation, governance, and population, among others. It partly accounts for one of the reasons why most healthcare systems in Africa are classified as poor. Although, comparatively, from the data above, South Africa seems more committed to healthcare expenditures than Nigeria, this does not in any way translate to development in the South African healthcare system. Both countries were still highly vulnerable during the COVID-19 pandemic and largely depended on assistance from developed countries and international organizations to combat the virus because both governments lacked the financial resources to control the pandemic. As such, it will be useful and necessary to compare the responses of Nigeria and South Africa to the pandemic.

4. South African Response Perspective

4.1. The State of the Budget

The eruption of the COVID-19 pandemic in South Africa came when the country was already in a delicate fiscal position to meet expenditures in its critical sectors of the economy, especially the health sector¹³. Health fiscal allocation is a reflection of the government's commitment to health, but there is a difference between budgeted revenue and the actual amount expended on health. On several occasions, the government has failed to implement the budgeted revenue for health, and this has caused major health problems in the country, see Note 13 above.

Besides the fiscal deficiency problem, the COVID-19 pandemic exerts additional pressure on the country's annual budget, making it dangerously overstretched to meet health emergencies such as the COVID-19 pandemic. South Africa's commitment to health in terms of budgetary allocations and healthcare capacity are strong determinants in the management and control of the pandemic. Before the outbreak of the pandemic, South Africa operated with low fiscal allocations to health, as evidence shows that the country allocated 13.2% of its annual national budget to health in 2020. This is below the 2001 Abuja declaration on health, which recommended 15%. In addition to this, there is a lack of access to health care for South Africans (especially the poor black people), an understaffed healthcare system, inadequate Intensive Care Units (ICUs) and ventilators for patients under critical COVID-19 conditions, a lack of Personal Protective Equipment (PPE), etc. (Gilbert et al. 2020). These issues have had a significant impact on South Africa's response to the pandemic (De Groot and Lemanski 2021).

However, despite all odds and predictions about the effect of COVID-19 on South Africa's public finances or budget, the government has been able to respond swiftly to the pandemic. It is predicted that South Africa's GDP will contract by 7.2% in 2020, consequently leading to a 12% fiscal deficit and a debt-to-GDP ratio of 81% in 2020, according to the South African Reserve Bank. This certainly would exert more pressure on the country's overstretched public finances (De Villiers et al. 2020). Relatedly, this made Mboweni (2020) conclude that the risk of a debt spiral is now a reality in South Africa.

A critical analysis of the submissions of De Villiers et al. (2020) shows that fiscal prudence and budgetary allocations are the hallmarks of government response or commitment to healthcare services, including the effective management of the COVID-19 pandemic. For instance, government response or commitment to the flattening of the spread of the virus depends largely on budgeted finance. Without adequate fiscal allocations, there would be

little or no expenditure on health facilities that could facilitate the effective management of the COVID-19 pandemic. The allocation of 13.2% of the South African annual national budget to health in 2020 has implications for how the government manages the pandemic, according to [David et al. \(2020\)](#).

It was specifically revealed that the outbreak of the COVID-19 pandemic brought some drastic changes in budget revenue and expenditure in South Africa's annual budget. While the COVID-19 preventive measures led to a cut in the budgeted revenue from ZAR 1.398 trillion to ZAR 1.099 trillion—a shortage of ZAR 300 billion in expected revenue—the budgeted expenditure for the fiscal year was increased from ZAR 1.766 trillion to ZAR 1.809 trillion—an increase of ZAR 44 billion ([David et al. 2020](#)). The increase in expenditure during the fiscal year was a result of the special budgetary intervention planned to cushion the effect of the outbreak of the COVID-19 pandemic in South Africa. This decision pushed South Africa's budget deficit from 6.8% of the GDP to 14.6% of the GDP as a result of the COVID-19 pandemic ([David et al. 2020](#)).

One of the bold steps or responses taken by the South African government in tackling the spread of the virus was budget cuts from various budget lines and reallocating the same to COVID-19 expenditures. Budgeted revenue was reduced to accommodate an increase in COVID-19 expenditure, consequently making the government resort to the budget deficit as a result of increased expenditures on the COVID-19 pandemic. For instance, the sum of ZAR 101 billion was cut from various budget lines and added to ZAR 44 billion to make the total spending on COVID-19 measures ZAR 145 billion in that fiscal year ([David et al. 2020](#)).

Secondly, South Africa adopted a phased approach in the management of the pandemic. The first phase aimed at an instant, targeted, and effective response to preserve its economy through an equitable distribution of palliatives. The second phase focused on supporting employment and investment, which would in turn pull the country from the immediate effect of the pandemic. The third phase aimed at restoring the country's long-term posterity, that is, to prepare the economy for faster growth, see Note 13 above.

Thirdly, it was reported that parts of the fiscal response to the COVID-19 pandemic in South Africa were the special intervention fund of ZAR 500 billion in economic relief, which covered the main budget expenditure (ZAR 190 billion), support for livelihood and the protection of lives (ZAR 145 billion), support for short-term economic activity (ZAR 200 billion), and tax policy measures (ZAR 70 billion). A critical look at the report shows that fiscal allocations are critical to the government's response to the pandemic.

More importantly, as part of the South African government's response to the pandemic, the country's Reserve Bank lowered interest rates and effectively promoted the bond market. It also eased financial sector regulations to boost the flow of credit to business owners and households. Moreover, temporary payment holidays were given to customers by commercial banks. This monetary response of the South African government aimed at protecting the country's economy from economic shocks posed by the COVID-19 pandemic. In addition to this were the temporary COVID-19 grants to more than 18 million South Africans, totalling ZAR 41 billion. In the early stages of the outbreak, the government approved a COVID-19 loan, totalling ZAR 10 billion to businesses, and relief worth ZAR 23 billion.

Besides, the South African government, in its bid to cushion the effects of the pandemic on small- and medium-scale businesses, provided grants and interest-free loans to SMEs through the South Africa Future Trust and Sukuma Relief Programme. These loans and grants, even though there are still more grounds to cover, have helped salvage most small businesses and assisted in the steady rebooting of South Africa's economy ([Devereux et al. 2020](#)). The South African government also partnered with the private sector in response to the pandemic ([De Groot and Lemanski 2021](#)). The government collaborated with some private laboratories for a mobile drive-through COVID-19 testing site ([Gershuny et al. 2021](#)). The government–private partnership, especially with the Jenner Institute at Oxford University, has yielded positive results in the areas of intelligence sharing, testing, and provision of critical bed care at a reduced cost for the treatment of COVID-19

patients, human trials, and vaccine production. A private-led initiative (solidarity fund) for the procurement of private protective equipment and medical facilities complemented government efforts (Gershuny et al. 2021).

The foregoing justifications indicate that the South African government had a well-planned fiscal response strategy to flatten the spread of the virus and cushion the socio-economic effects of the COVID-19 pandemic, see Table 2. Moreover, South Africa had one of the best COVID-19 response strategies among African countries, see Note 13 above.

Table 2. South Africa’s fiscal response to the COVID-19 pandemic.

R Billion/Percentage of GDP	Main Budget Framework	
	2020/21 Budget 2020	Revised
Main Budget Revenue	1398.0 25.5%	1099.5 22.6%
Main Budget Expenditure	1766.0 32.52	1809.2 37.2%
Non-Interest Expenditure	1536.7 28%	1572.7 32.4%
Debt Service Costs	229.3 4.2%	236.4 4.9%
Main Budget Balance	−368.0 −6.8%	−709.7 −14.6%
Primary Balance	−138.7 −2.6%	−473.2 −9.7%

Source: South African National Treasury (2020), see Note 3.

The above Table 3 shows that the outbreak of the COVID-19 pandemic has had a significant impact on the decision of the South African government to revise the 2020 annual budget. The budgeted revenue was reduced due to the COVID-19 restrictions and lockdown that shut most businesses and economies down. The government could not generate income from taxes that could have been paid by small- and medium-scale businesses if they were opened. The inability of the government to generate most of its budgeted revenue led to the decision to revise the budget and the eventual reduction in the budgeted revenue by 2.9% of the main budget for the year 2020. It can also be deduced from the table that, while the budgeted revenue was reduced, the budgeted expenditure was increased. This could have also been influenced by the COVID-19 pandemic. The pandemic brought to the fore additional expenditures that required the injection of special intervention funds into the budget to cushion the crisis. The budgeted expenditure was increased by 4.68% of the main budget in order to cover COVID-19 expenses, such as economic relief grants, social relief grants, loans, and tax holidays for SMEs in South Africa.

Evidence from the Table 3 above shows how a total of ZAR 145 million was dispensed on non-interest commodities. A lot of money was spent to cushion the effect of the COVID-19 pandemic on vulnerable households, as they received the largest chunk of the COVID-19 fiscal relief package in South Africa. This goes to show that the vulnerable population was the worst hit by the pandemic. Following the amount spent on vulnerable households was health expenditure. A reasonable amount of money was also earmarked for the health sector (ZAR 21,544) to cover major COVID-19 health facilities such as treatments, medicines, PPE, hospital beds, recruitment, and payment of additional frontline health workers, etc. From the table, a huge sum of ZAR 122,425 was allocated for the COVID-19 fiscal relief package in South Africa.

Table 3. Main budget non-interest expenditures.

	R. Million	2020/21
1	Support to Vulnerable households for 6 months	40,891
2	Health	21,544
3	Support to Municipalities	20,034
4	Other Frontline Services	13,623
5	Basic and Higher Education	12,541
6	Small and Informal Business Support and Job creation and Protection	6061
7	Support to Public entities	5964
8	Other COVID-19 Interventions	1766
	Allocated for COVID-19 Fiscal relief package	122,425
9	Land Bank Equity Investment	3000
10	Provisional Allocations for COVID-19 Fiscal Relief	19,575
	Total	145,000

Source: South African National Treasury (2020), see Note 3.

The foregoing analysis shows a positive relationship or strong nexus between budgetary allocations and the government's response to the pandemic in South Africa. It would have been very difficult for the government to adequately and promptly respond to the pandemic if there had been no comprehensive fiscal plan or budget in place. The budget played a key role in the flattening of the virus because it entailed an authoritative allocation of funds to projected health expenditures aimed at cushioning the effect or crisis of the pandemic. For instance, all the government's responses to the pandemic, whether through the fiscal, distribution of palliatives, or private or international collaborations, required money or finance. The government's spending or ability to finance health facilities (PPE, beds, ventilators, drugs, tests, and contact tracing) depended largely on budgetary allocations. This explains why South Africa revised its budget to accommodate new COVID-19 expenses.

Another notable and highly effective response of the South African government is the lockdown affirmative order. Globally, this has proven to be very effective in the flattening of the spread of the virus, despite its socio-economic effects on the poorest and most vulnerable groups in society (Stanton et al. 2020; Gumbo 2020). South Africa was among the first countries in Africa to act and respond quickly to the COVID-19 pandemic through a nation-wide lockdown on the 26th of March 2020, when the confirmed cases rose from 62 to 402, with 2 deaths within just a little over one week (Gershuny et al. 2021).

COVID-19 testing, contact tracing, and treatments are components of the South African government's response strategy that have partly proven effective in the flattening of the virus. The truth is that the constant testing and tracing of contacts of people who have come into close contact with people carrying the virus are the best ways of detecting and flattening the spread of the virus in any country. One of the countries in Africa that is at the forefront of the COVID-19 test is South Africa. Unlike some other countries, South Africa, as of early April 2020, ramped up its efforts and carried out massive screening and COVID-19 testing. As of 9 November 2020, a total of 4,993,081 tests had been carried out. This helped the country in the control of the virus because, through constant testing, the country could detect and treat people carrying the virus. Tests lead to early detection, which has proven to save more lives than the late testing and detection of the virus. South Africa is one of the leading countries in Africa that is highly committed to COVID-19 testing. The essence of COVID-19 testing is to detect people who are carrying the virus, separate them from infecting the community, and present them for proper medical treatment to save lives and curb the spread of the disease. The commitment of South Africa to massive COVID-19 testing may have been motivated by a constant warning about the negative effect of not conducting or conducting late COVID-19 tests¹⁴. This specifically warned that a lack of testing led to the rapid community spread of the virus.

Evidence from Figure 2 above shows that the preventive measures (such as lockdown, social distancing, testing, and contact tracing, among others) of the COVID-19 pandemic yielded positive results at the start of August 2020, when the transmission of the virus

began to wane¹⁵. This could partly have been a result of the continual and rapid COVID-19 testing by the South African government, see Note 14 above. Tests have been very helpful in the management of the pandemic, as evidence shows that early detection or diagnosis of the virus through testing saves lives and slows down the spread of the virus (Gershuny et al. 2021).

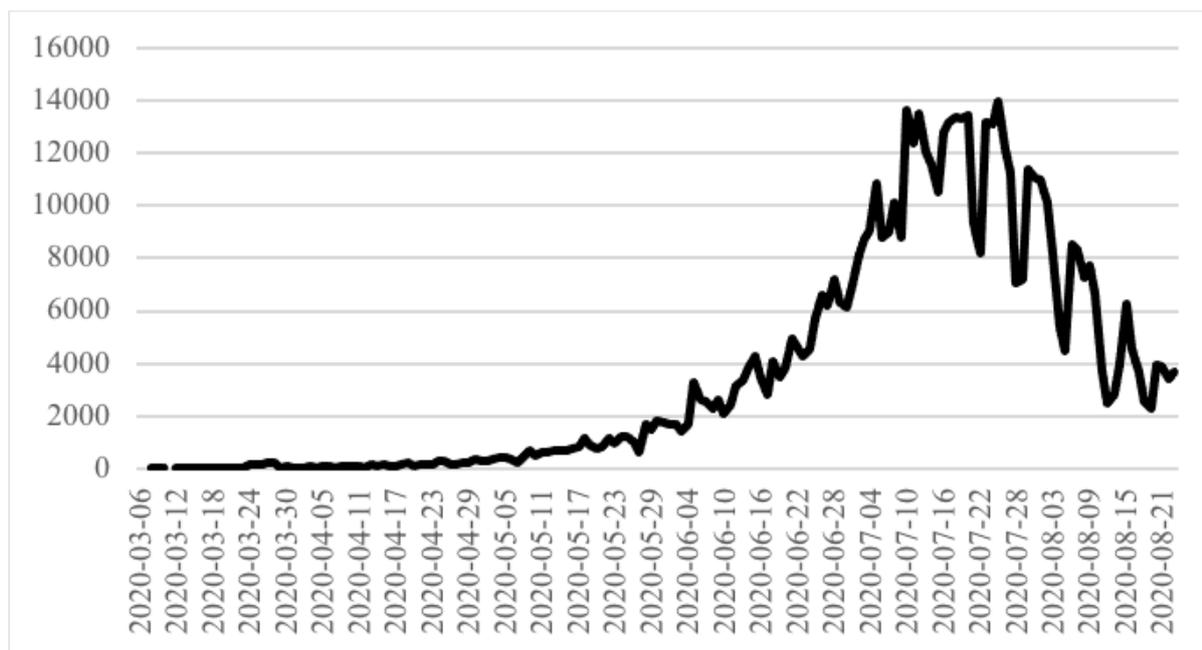


Figure 2. Flattening the COVID-19 curve in South Africa: 6 March–23 August 2020. Source: Naudé and Cameron (2020), see Note 15.

Social distancing, the nation-wide announcement of the use of face masks in public, and daily updates on the COVID-19 pandemic by South Africa’s National Institute of Communicable Diseases were other responses by the South African government to combat the pandemic. The social distancing measure of the government began with the approval of gatherings of no more than 100 people at one place and time. In addition, organizations dealing with alcohol or funerals were limited to a population of no more than 50 people at any given time (Staunton et al. 2020).

The reviews of the nexus between budgetary allocations and the response of the South African government to the COVID-19 pandemic indicate that, before the outbreak of the pandemic in South Africa, the country lacked the capacity to manage such a global pandemic. Thus, the outbreak of the pandemic further exposed the country’s poor budgetary allocations to health, which made it very difficult for the government to adequately respond to the COVID-19 pandemic. However, despite this problem, the South African government still managed the COVID-19 within its financial means.

4.2. The Nigerian Response Perspective

The government exists to preserve lives and property. The performance of this function is dependent on the budgeted fund towards ensuring the optimal performance of government policy. In the face of ineffective health facilities and inadequate test equipment for COVID-19, budgetary allocation to the health sector portended great consequences for minimizing COVID-19 infections and the death rate in Nigeria. Nigeria recorded its first index case of COVID-19 on 27 February 2020 through an Italian citizen who tested positive for the virus in Lagos. Since then, the death rate of COVID-19 in Nigeria has been relatively low compared to other countries, such as South Africa¹⁶. Based on its population and wealth of natural resources, Nigeria can be regarded as one of the largest economies

in Africa, with an estimated GDP of 145.64 trillion (\$448.12b) in 2019, see Note 11 above. The contradiction of this potential element, however, continues to present itself in Nigeria's inadequate budgetary allocations for health expenses.

Nigeria being a monolithic economy that relies on crude oil as a major source of government revenue, COVID-19 coping measures (lockdown, movement restrictions, interstate travel ban, and social distancing) led to the depletion of crude oil prices globally and a consequent decline in Nigeria's GDP from 2.3% in 2019 to 1.87% by the first quarter of 2020 (Awofeso and Irabor 2020). Although Nigeria had been striving to stabilize its economy since the 2016 economic recession, the economic hiccups induced by the COVID-19 pandemic amid dwindling oil prices made the government's response largely ineffective. Before the COVID-19 pandemic, Nigeria's 2020 health budget stood at NGN 44.4b, representing about 8% of the total budget but less than the African Union's 15% benchmark for health funding as agreed in the 2001 Abuja Declaration (Ejiogu et al. 2020). The 2020 health budget also signifies a reduction from the 2019 health budget, which was NGN 51.22b¹⁷.

With the inadequate funds allocated to the 2020 health budget, the budget pressure occasioned by the COVID-19 pandemic necessitated a review of the budget, resulting in a reduction of the health budget from NGN 44.4b to NGN 25.5b. This represents more than a 42.5% reduction of the 2020 health budget at the expense of recurrent expenditure by government officials, estimated at 40% of the whole budget¹⁸. The deficiency of Nigeria's health budget generated wide reactions from the public, resulting in strike actions by public health workers during the COVID-19 pandemic¹⁹. Further revelations into the strike actions by the health workers show complaints of inadequate personal protective equipment (PPE), payment of hazard and arrear salaries, as well as the reversal of disengaged resident doctors by the government. According to the NCDC, more than 800 health workers have been infected with COVID-19 due to inadequate PPE²⁰.

Since the government relies on external borrowing to finance public expenditure, the implication of crude oil depletion is further manifested in debt servicing, which is a major bane of economic development in Nigeria (Ejiogu et al. 2020) This explains why Nigeria's parliament approved the President's request to borrow USD 5.513 billion to finance the 2020 deficit budget.

However, despite budget pressure, the Nigerian government also put in place robust COVID-19 response strategies that helped to flatten the curve. One such response is the effective coordination of lockdown and movement restrictions in Nigeria. On 30 March 2020, the federal government announced a lockdown and movement restrictions at the epicenter of COVID-19 in Nigeria, including the Lagos and Ogun states, as well as Abuja (Federal Capital Territory) and, later, the Kano state (Awofeso and Irabor 2020). In the same vein, most state governments also adopted lockdown and movement restriction policies, culminating in the closure of schools, religious, social, and sports gatherings as well as the interstate travel ban.

Palliatives such as food items and "conditional cash transfers" were also distributed to cushion the effect of the COVID-19 pandemic on the poor and vulnerable citizens. Through regulatory measures by the Central Bank of Nigeria, the government also implemented fiscal stimulus policies, including a reduction in interest rates, tax cuts, and tax holidays to alleviate the effect of the COVID-19 pandemic on small and medium-scale enterprises. Tax holidays were implemented for small enterprises against company income tax, while the medium-sized businesses' tax rate was reduced from 30% to 20% (Ejiogu et al. 2020).

Figure 3 above shows that Nigeria had a limited capacity for the prevention and response to the COVID-19 pandemic and performed fairly well in the detection of the virus. The abysmal score of Nigeria in the prevention and response to the virus may have been a result of poor funding caused by the low earnings from oil. This is because a quick, effective, and adequate response to the pandemic requires funding. Nigeria's capacity to manage the virus largely depended on the sale of oil, which was at its lowest price during COVID-19²¹.

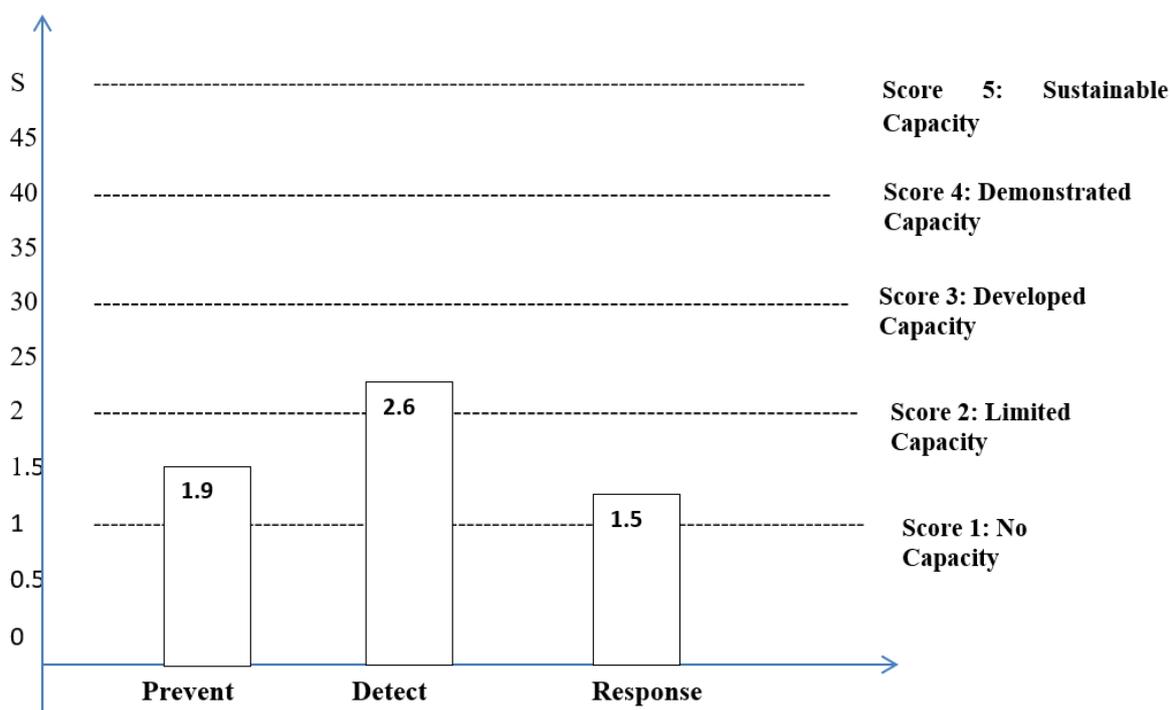


Figure 3. Nigeria’s response to COVID-19 pandemic. Source: Dixit, Ogundeji, and Owujekwe (2020), see Note 21.

5. Highlighting Possible “Takeaways” in the Response Strategy of South Africa and Nigeria to the COVID-19 Pandemic

South Africa and Nigeria are the biggest economies in Africa (IMF 2020) that have been severely affected by the outbreak of the pandemic. They both had pre-existing macroeconomic weaknesses before the pandemic hit the continent (Klantschnig and Huang 2019; Ozili 2020). Nigeria was faced with a dwindling GDP that contracted by 1.6%, indicating an economic recession.

The lessons that African states can learn from South Africa and Nigeria include the establishment of a government agency or task force that provides regular to daily briefings and updates on the COVID-19 pandemic. These agencies have performed remarkably well in the easing of the lockdown, educating the public about hand washing, wearing a mask, social distancing, and compliance with the lockdown.

Both countries responded swiftly to the socio-economic crisis of the pandemic by announcing fiscal and economic relief packages to cushion the effects of the pandemic. These economic relief, grants, and loans cover vulnerable groups, SMEs, unemployed people, and pharmaceutical companies. A fiscal stimulus package worth USD 1.4 billion has been announced in Nigeria. An additional one million vulnerable people have been added to the social register of the poor and vulnerable, bringing the total to 3.6 million households. In the same vein, economic relief and fiscal packages worth about 10% of the GDP were allocated as welfare packages, loans for businesses, and employment grants to preserve jobs in South Africa²².

The distribution and release of COVID-19 palliatives, relief, grants, loans, and social protection funds are shrouded in corruption, especially by politicians and government agencies in charge of distributions, in both countries. David et al. (2020) complained about the failure of the South African government to stop corruption and the mismanagement of the COVID-19 relief fund. Similarly, finding reveals how the South African government has been investigating over 600 COVID-19 relief corruption cases (David et al. 2020). Obiezu notes that the hoarding of COVID-19 palliatives meant for the poor and vulnerable people by some state governors in Nigeria is an act of corruption²³.

Both countries swung into action to revise their budgets in the form of a cut in budgeted revenue and an increase in COVID-19 expenditures. This enhanced the chances of the governments in both countries responding fairly and promptly to the management of the COVID-19 pandemic. Evidence shows that despite both countries sharing a similar history of weak fiscal allocations to health, their decision to adjust their budget in a timely way played a significant role in their response or intervention to the COVID-19 pandemic.

South Africa, unlike Nigeria, had a better COVID-19 response or plan that cushioned the effect of the virus on its educational system. Although the lockdown led both countries to close down all schools, South Africa had a better alternative plan that allowed students to study and learn from home through a virtual digital system. Part of the government's response to COVID-19 was to ensure the protection of students from the virus. The closure of schools adequately served this purpose, but it posed a more serious setback to students in Nigeria than in South Africa. This is partly because, just like health, Nigeria has consistently allocated low funds to education and technology, or the digital sector. This was further devastated by COVID-19, as students in Nigeria had no means of studying from home. Alluding to this, [Ozili \(2020\)](#) observes that not many Nigerian tertiary institutions provided online or virtual teaching services during the COVID-19 pandemic. Given this, Nigeria should be able to learn from South Africa's adoption of virtual learning, especially during an emergency such as this.

One other notable lesson from Nigeria and South Africa during their intervention to flatten the pandemic curve is the government's concern and adequate care and provisions for COVID-19 frontline health workers. Sadly, Nigeria, unlike South Africa, witnessed two nation-wide strikes by resident doctors in charge of the COVID-19 pandemic during lockdown over unpaid allowances, lack of PPE, and safety measures for frontline workers. It was revealed that COVID-19 frontline workers joined the strike to demand their allowance, insurance, and PPE amid the COVID-19 pandemic²⁴. A critical look at the foregoing analysis of possible takeaways or lessons from both countries shows that South Africa and Nigeria have proven experience in the management of diseases similar to the COVID-19 pandemic. For example, Nigeria's experience in the management of EBOLA was instrumental in its proactive response to COVID-19.

More importantly, both countries have been conducting free nation-wide COVID-19 test and contact tracing. While South Africa, unlike Nigeria, is leading in COVID-19 testing on the continent, the effort of the Nigerian government in contact tracing to identify and quarantine people in contact with COVID-19 confirmed positive cases has earned international recognition from the World Health Organisation. Currently, South Africa has conducted over 5 million COVID-19 tests with 20,011 deaths; Nigeria has just completed about 687,952 COVID-19 tests with 1162 deaths as of 12 November 2020, see Note 14 above. Comparatively, South Africa had a greater capacity to conduct COVID-19 tests than Nigeria. The low COVID-19 deaths in Nigeria may have been partly due to the low testing capability of the country and the country's past proven experience in the handling of EBOLA, polio, Lassa fever, and other similar diseases ([Muhammad et al. 2017](#)). It is imperative to note that COVID-19 testing in both countries and Africa at large is low compared to countries in other continents. The fact that the COVID-19 mortality rate is low in Africa, in particular in South Africa and Nigeria, could be a factor of low testing and accurate data on confirmed COVID-19 death cases. The table below shows the results of COVID-19 testing relative to selected countries' populations across six continents, see Table 4.

Table 4. Total COVID-19 tests relative to country population (per thousand)—test per 1000.

Country	Test per 1000	As at the Dates	Absolute Change	Relative Change
Chile	1877.31	14 April 2022	+1877.14	+1,097,742%
Argentina	780.63	13 April 2022	+780.61	+5,575,814%
US	2574.77	9 April 2022	+2574.77	+257,476,800%
Canada	1580.05		+1580.04	+39,501,100%
South Africa	402.05	14 April 2022	+402.05	+20,102,350%
Nigeria	23.21	7 April 2022	+23.19	+96,608%
UK	7227.15	13 April 2022	+7224.88	+317,577%
Italy	3445.80	14 April 2022	+3445.73	+4,785,731%
India	596.24	14 April 2022	+596.24	+11,924,760%
South Korea	1789.36	14 April 2022	+1789.13	+774,516%
Australia	2643.47	14 April 2022	+2643.21	+1,001,216%
Norway	2022.24	13 April 2022	+2021.52	+280,767%

Source: World Bank (2022), see Note 2.

Comparatively, the above Table 4 shows that selected countries, such as South Africa and Nigeria, in Africa, have the lowest COVID-19 tests per 1000 relative to their population. Countries in Asia, Europe, North America, South America, and Australia have conducted more COVID-19 tests relative to their population. Thus, the popular claim and belief that Africa has the lowest COVID-19 mortality rate seems to be doubtful and unrealistic considering the poor testing capacity of African countries. Relative to the African population, with examples from Nigeria and South Africa, COVID-19 testing is low compared to high-income countries. Africa's low COVID-19 testing could partly be a result of a poor capacity for tracing the virus and inaccurate data on confirmed COVID-19 death cases across African countries. Many African countries lack the equipment and technology for contact tracing of the virus. [Nachega et al. \(2021\)](#) argued that Africa's low COVID-19 death ranking may be inaccurate and underestimated due to a lack of operational and financial resources to detect, test, and report accurate COVID-19 cases in Africa. Other reasons why Africa's mortality rate has been low or inaccurately reported are partly due to the overwhelming workload of contact tracing in some populated African countries (such as South Africa), stigma, misinformation, and case detection for workers (among others) ([Nachega et al. 2021](#)). This goes to show the extent of incomplete data about Africa's COVID-19 testing, tracing, and death rate compared to those in high-income countries, where regular and up-to-date contact tracing and COVID-19 deaths are reported.

Further, low health expenses for COVID-19 as per the share of the GDP by African countries have been attributed to why Africa does not have the capacity to test, trace, and confirm COVID-19 cases ([Nachega et al. 2021](#)). In fact, the fatality rate of COVID-19 for the continent as a whole is estimated at 2.3 percent, compared to the global rate of 2.4 percent²⁵. Available data show that, notwithstanding the prevalence of a sound healthcare system and increased health expenses as per the share of GDP of some high-income countries during the COVID-19 pandemic, their fatality rate is high compared to Africa, which spent little. Of the 29 countries classified as high-income countries, despite their increased health spending per capita, which averaged \$4491 and accounted for 9% of GDP in 2019, up from \$2923 in real terms and 7% in 2000, some of them still suffer from high COVID-19 fatalities. Importantly, the United States alone accounts for more than 40% of global health expenditures 2021, and its average health expenditure per capita is roughly four times higher than the average GDP per capita of low-income countries²⁶. Despite this, the United States has one of the highest COVID-19 death rates in the world. This explains why Nigeria has 3143 deaths out of 256,000 cases, see Note 12 above. Additionally, South Africa has confirmed cases of 3.7 million and a fatality rate of 100,000, see in Table 5.

Table 5. Current health expenditures, COVID-19 confirmed cases, and deaths in selected countries as of 15 April 2022.

Country	Confirmed Cases	Confirmed Fatality	Current Health Expenditure as per % GDP
US	80.5 M	987,000	16.77
India	21.8 M	172,000	10.15
Brazil	30.2 M	662,000	9.59
France	26.8 M	141,000	11.06
South Africa	3.74 M	100,000	9.11
Nigeria	256,000	3143	3.03

Source: World Bank (2022), see Note 2.

The data in Table 5 above shows that despite increased spending by some countries during COVID-19, their fatality risk is higher than countries with less health expenditures as per GDP. Several factors could have been responsible for this result. It may be due to a lack of complete or accurate data on countries' health expenses as per GDP and COVID-19 deaths during COVID-19, especially among countries from low-income countries. Information on South Africa's and Nigeria's actual revised budgetary allocations to COVID-19 and its actual fatalities are hardly accurate or known compared to other countries in the table above. This could explain why African countries, such as Nigeria and South Africa, maintain low fatality rates despite high healthcare spending as a percentage of GDP.

6. Conclusions

The pre-COVID-19 Nigerian and South African states were devoid of adequate fiscal allocations to health. The degree of compliance with the African Union's minimum allocation of 15% of a country's budget to health, however, differed between Nigeria (less than 10%) and South Africa (13.2%). This gap in remittances to health by the government in both countries has had a considerable impact on the health sector, swinging the pendulum to a lack of capacity to adequately respond to health-related problems (such as COVID-19) in both countries. Against this background, the paper examined budgetary allocations and the intervention of the government in the pandemic in South Africa and Nigeria. Both countries adjusted their budgetary allocations for health to adequately respond to COVID-19 challenges.

Thus, for an effective and quick response to the spread of COVID-19, a multi-level approach requiring global cooperation and full compliance with COVID-19 preventive measures by citizens should be adopted. Similarly, efforts should be made by specialized agencies to continue with the daily update of the country's data on the COVID-19 pandemic. Amid the findings, we advise that the government's quest and commitment to ending the COVID-19 pandemic in South Africa and Nigeria require the continual review of the budget to adequately accommodate the prevailing cost of medical infrastructure, including special remuneration for health officers in charge of the treatment of COVID-19 patients.

Limitations and Implications

Inaccurate data on health expenses as a share of GDP in most African countries, including South Africa and Nigeria, make it very difficult to unravel if the low COVID-19 fatalities in Africa are connected to budgetary allocations. Similarly, the inability to retrieve up-to-date data on actual COVID-19 deaths, tests, and tracings relative to the population of South Africa and Nigeria makes it difficult to ascertain if the government's response to the virus through the revision of the budget is one of the reasons for the low COVID-19 fatalities in both countries. Although South Africa and Nigeria altered their budgets in response to COVID-19, it was difficult to determine whether the revised budgets were the exact financial answer to COVID-expenses in both countries. The limitations above offer the opportunity for further studies and investigations in the area of evaluating how successful

budget revisions or adjustments were in aiding government responses to COVID-19 in South Africa and Nigeria.

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