

# The Economic Impact of COVID-19 on Africa and the Countermeasures

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## Abstract

The beginning of 2020 saw an outbreak of a deadly coronavirus disease. Economies and industries worldwide reported downward economic growth due to the closure of industries, airlines, shops, and markets. Africa has also been hard-hit by the effects of the global pandemic. Though some economies have bounced, many countries are yet to recover. The study assessed the economic losses to Africa from the impact of COVID-19. Journal publications, data from the World Bank, IMF, and the International Trade Centre were reviewed, organized, analyzed, and presented in a typical research environment that required modern statistical exploration techniques. We used PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (S1 Checklist) to conduct the review. Manuscripts that evaluated the impact of pandemics on the African economy passed the eligibility criteria. The search strategy was defined based on the PECOS format as follows: Population (P): Humans diagnosed with COVID-19; Exposition (E): Impacts on the different sections of economy (C): Without comparison; Outcome (O): Economic downturn in Africa as results of COVID-19 (S): review studies, analysis or discussion, case reports, case series. We then used basic descriptive statistics employing excel and Matlab to analyze economic indicator data and compare previous and current year's performances. The results show that the various economic indicators in Africa have suffered a downward decline. Textile, gold, and petroleum industries declined in production by almost a quarter of previous production performance. High economic fluctuations were recorded, and the debt to GDP ratio widened in all African countries. The downward trend continued into 2020, but a rebound is expected in 2021. This

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study systematically assessed the COVID-19's impact on the economy of Africa by comparing economic indicators before and during the pandemic. Our study indicates that major economic indicators of the continent have declined in growth. The study also revealed that the impact of the pandemic on Africa's major trading partners, including the USA, Europe, and China, has further exacerbated the problem. However, responses from various countries have slowed down the pandemic spread, and 2021 looks good with an expected bounce back in Africa's economy. Governments should continue to observe safety protocols as much as possible and embark on nationwide vaccinations to return to typical situations.

## Keywords

Coronavirus, Pandemic, Africa, Economic Impact, Countermeasures

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## 1. Introduction

At the beginning of 2020, the new coronavirus, scientifically reclassified as COVID-19, greatly influenced the sustainable and stable development of the global economy. The real impact of COVID-19 at present still depends on how the disease develops and the response of countries around the world. Even though COVID-19 was recorded relatively late in Africa, it spread to 52 countries in a short period, and the number of confirmed cases continues to increase. As of 5th November 2020, the total number of confirmed cases stood at 48,408,624, including 1,230,082 deaths and 34,656,274 recoveries reported by WHO since the virus erupted from Wuhan in December 2019. Ghanim, the World Bank's vice president for Africa, reported that the new outbreak is testing the economic and social resilience of countries around the world and is taking a heavy toll on the strength of people. African countries are even more severely affected. COVID-19 has brought severe economic and financial challenges to the African region. This study seeks to investigate the practical and theoretical significance of the impact of COVID-19 on economic and social development in Africa.

## 2. Literature Review

Researchers both in and outside Africa have conducted comprehensive analyses of the relationship between infectious diseases and the economy. However, these analyses have not reached consistent conclusions. Some scholars support the conclusion that the epidemic has a positive effect on the economy, while others arrive at the opposite conclusion. [Johnson & Mueller \(2002\)](#) studied the impact of the Black Death outbreak on the per capita income of British farmers and found that the Black Death caused a significant decline in the supply of labor

and resulted in the tripling of the average farmer's income. [Gallup & Sachs \(2001\)](#) pointed out that infectious diseases contribute to economic development through external intervention in addition to internal factors such as rising labor costs due to changes in the structure of labor supply and demand. For example, the medical system should be improved constantly to reduce the occurrence of epidemic diseases to achieve economic and social development. A study by [Bleakley \(2007\)](#) found a significant positive correlation between the severity of hookworm infection and the income of local students, as areas with high hookworm prevalence received attention from the health and education sectors. His study further found that as access to educational benefits increased for students in the region, so did their income. [Lou \(2020\)](#), through the analysis of the economic impact of the COVID-19, pointed out that in the short term, the epidemic has brought heavy pressure to the economic growth of countries, but in the long term, it has not changed the primary trend of economic development. He also noted that the epidemic had accelerated the application of new technologies in the economy. The perspective of economic growth rate studied in China during the SARS epidemic, predicted that the SARS would inevitably bring severe economic losses to China in the short term, but the long-term effects are limited. [Zhang et al. \(2012\)](#), using the grey system theory prediction model, estimated the negative impact of the SARS on the transportation industry by using data from 1997 to 2003. Their study concluded that the losses caused by SARS to the transportation industry were huge and that the distribution of losses was similar to that of the death toll.

In 2014, Abdoulaye Die, regional director for Africa at the United Nations Development Programme, noted that the Ebola virus disease has already caused about \$13 billion in economic losses in the worst concerned countries of Guinea, Sierra Leone, and Liberia. According to the World Bank in 2015, the economic damage caused by the Ebola outbreak in the three West African countries amounted to \$1.6 billion, and the economic damage to the entire West African region amounted to \$25 billion. Research by [Tracht et al. \(2012\)](#) shows that during the 2009 H1N1 flu outbreak in the United States, masks significantly reduced the number of flu cases and the economic costs of anemia, using estimates of the present value of future income, hospital costs, and disease-related losses. Their study estimated that 10 percent, 25 percent, and 50 percent of the population would lose \$478 billion, \$570 billion, and \$573 billion in economic losses, respectively. [Babuna et al. \(2020\)](#) studied the Impact of COVID-19 on the insurance industry by studying the case of Ghana. They indicated that the pandemic resulted in a ban on travels, events, closure of offices and businesses, and lockdown of entire communities and concluded that the pandemic has so far caused economic losses to the tune of GH¢112.00 million cedi to the Ghanaian economy. [He et al. \(2020\)](#) measured and analyzed the impact of the COVID-19 epidemic on the Chinese economy and found that the continued development of

the COVID-19 epidemic harmed the Chinese economy, including output decline, consumption decline, investment decline, foreign trade restrictions, loss of industrial development, increased risk to financial institutions and capital market short-term volatility. China's economic development is critical and needs to strive for sustained and stable economic development. Lou (2020), through the analysis of the new coronavirus pneumonia epidemic on the economic impact, pointed out that the epidemic has brought heavy pressure to countries' economic growth in the short term but will not change the essential trend in economics long term. He noted that the epidemic had accelerated the use of new technologies in the world. Chinese firms lost about 7 billion yuan at the box office and 500 billion yuan in the catering and retail industries and tourism market due to the epidemic. The epidemic spread globally at an alarming speed, which brought about a heavy negative impact on the world economy. Analyzing the impact of COVID-19 on economic development in sub-Saharan Africa, therefore, it is evidenced that the new epidemic posed a significant threat to the health of workers in sub-Saharan Africa, leading to a macroeconomic recession. The sharp rise in government financial pressure exacerbated the financial instability, food supply, and demand contradictions and made it challenging to achieve inclusive economic growth.

In summary, this current research focuses on how infectious disease outbreaks affect economic growth. By comparing the case of a developing continent such as Africa to a middle-class country like China, we seek to analyze the actual impacts of the pandemic on global economies. Some scholars believe that pandemics undoubtedly affect economic growth, but most researchers believe that pandemics hold back economic development. From the existing studies, we can find that, presently, there is little literature on the economic impact of COVID-19 on Africa. This study aims to assess the economic losses to Africa from the impact of COVID-19 by reviewing the literature on the present economic indicators in Africa and statistically comparing them to previous economic indicators.

### 3. Methodology

We conducted a systematic review of data before and during the COVID-19 pandemic period. Primary and grey literature on COVID-19 on Africa's economic variables were evaluated for periods before and during the pandemic. We used basic descriptive statistics employing excel and Matlab to analyze economic indicator data and compare previous and current years' performances.

## 4. Results

### 4.1. Selection of Articles and Study Materials

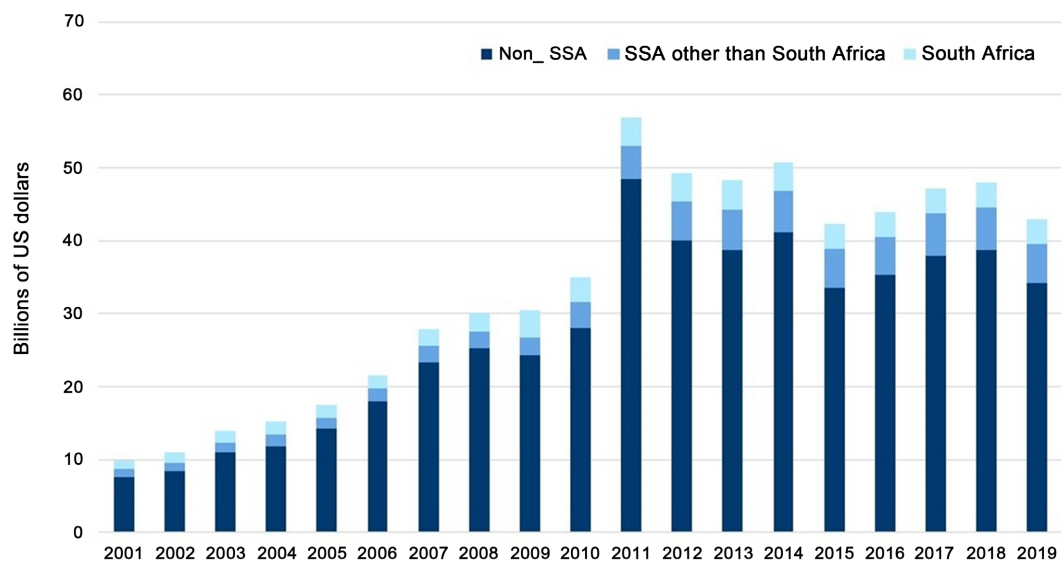
The initial searches identified 517 articles, 78 from Google scholar, 37 from Scopus, 71 from Web of Science, 2 from Cochrane Library, and 4 from LILACS.

We excluded duplicates and arrived at 434 studies. We further hand-selected relevant articles and arrived at 26 remaining articles evaluated by full text and 9 excluded.

### 4.2. Current Economic Situation in Africa

We have summarized in **Table 1** the GDP growth of Africa as reported by the *International Monetary Fund (2020)*, *World Bank (2020)*, *African Union Commission (2020)*, *McKinsey (2020)*, *African Development Bank (2020)*, *CNBCAFRICA (2020)*. We then present the impact on the significant revenue-generating sectors in the following sections, including oil, textile, tourism, and minerals.

Annual value of food commodities and products imported by sub-Saharan African countries



Source: International Trade Centre

**Table 1.** Summary of COVID-19’s impact on Africa’s GDP as estimated by economic think-tanks.

| Forecasts of COVID-19 impacts on Africa’s GDP growth                         |  |
|--|--|
| Institution, date  | Africa’s GDP growth prospect   |
| IMF Regional Economic Outlook: Sub-Saharan Africa, 15 April 2020 (IMF, 2020) | Growth in sub-Saharan Africa in 2020 is projected at –1.6%, the lowest level on record, a downward revision of 5.2 percentage points compared to six months ago. |
| World Bank, 9 April 2020 (World Bank, 2020)                                  | GDP growth in Sub-Saharan Africa could fall sharply from 2.4% in 2019 to between –2.1% to –5.1% in 2020.   |
| African Union Commission, 6 April 2020 (AUC, 2020)                           | Forecasts shows a negative growth from 3.4% to between –0.8% to –1.1%.   |

**Continued**

|  |   |
|--|---|
| McKinsey, 6 April 2020 (McKinsey, 2020)      | Africa's GDP growth will decrease by three to eight percentage points, from 3.9% in 2019 to between 0.4% and -3.9% in the worst-case scenario.        |
| African Development Bank, 3 April 2020       | Projected GDP growth contraction of between 0.7 and 2.8 percentage points in 2020.  |
| CNBCAFRICA, 26 March 2020 (CNBCAFRICA, 2020) | The coronavirus-related knock to economic growth in Africa's three largest economies alone could affect the continent's GDP growth from 3.8% to 2.8%. |

Source: Authors' compilation based on various sources reported in the references.

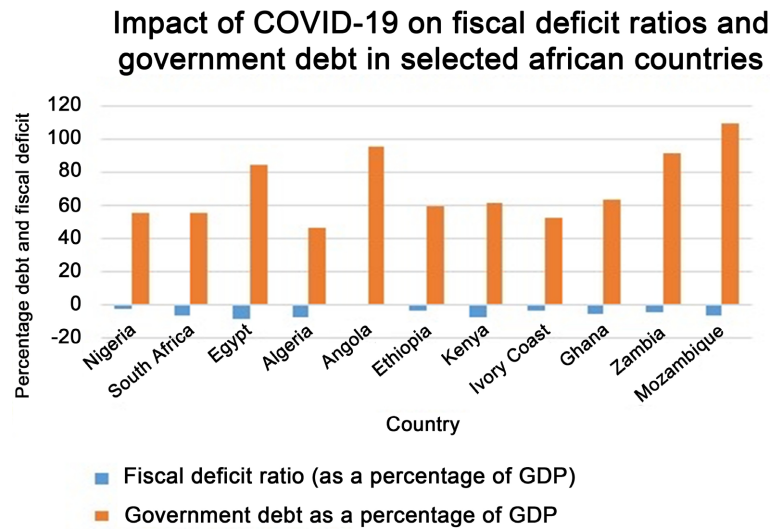
## 5. High Economic Fluctuations in Countries with High Debt Ratios

In the low-interest rates that followed the 2008 world financial crisis, many African countries ran up huge debts, rising from 20% of GDP in 2010 to 60% in 2019. The countries with the highest debt ratios are Egypt, Morocco, and Tunisia in North Africa; Angola and Ghana in West Africa; Ethiopia and Kenya in East Africa, and South Africa, Zambia, and Zimbabwe in Southern Africa. If the disease affects the socio-economic situation of these countries, there may be problems of non-payment of debt on time and lower ratings, leading to lower currency exchange rates. This is an issue that other countries or enterprises must pay attention to when they invest and trade in Africa. Moreover, even though Nigeria's debt ratio is not very high, the IMF believes that Nigeria should increase revenues other than oil to reduce its fiscal deficit further. According to an analysis by Trading Economics, Nigeria's government debt-to-GDP ratio is likely to be in the 25 - 26 percent range by the end of the year. The fiscal deficit ratios as a percentage of GDP are presented in **Figure 1**, while the debt ratios of African governments as a percentage of GDP are illustrated in **Table 2** below.

### 5.1. The Impact on Oil, Minerals, Textile, Tourism and Aviation Sectors

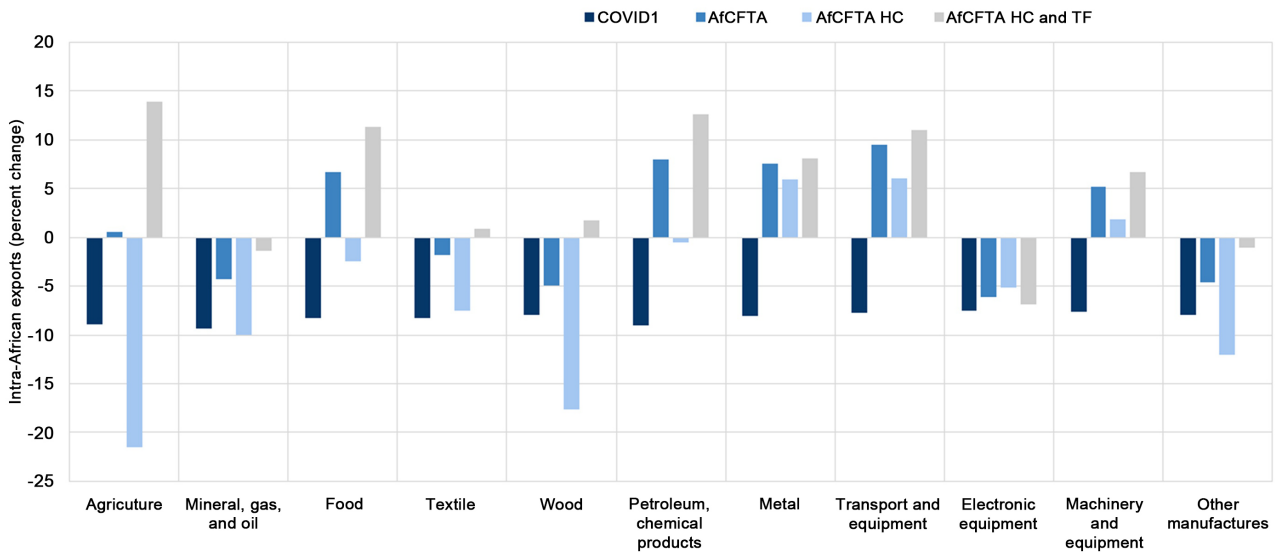
#### 5.1.1. Collapse of Oil Prices Has Sharply Reduced the Income of Oil-Exporting Countries

Oil exports account for about 40 percent of Africa's total exports and 7.3 percent of the region's gross domestic product. However, since the incidence of COVID-19, global oil prices have fallen significantly, and Africa's oil-exporting economies have been affected by fluctuations in oil prices. Africa's fuel revenues are forecast to shrink by more than \$65 billion by 2020, with Angola, Nigeria, Libya, and Algeria among the worst hit; their average oil exports from 2016 to 2018 accounted for 90 percent of total exports, while Congo and Gabon accounted for 55 percent. Due to the relatively small oil export of South Africa, Egypt and Ghana, their effects are relatively small. Specifically, if international



**Figure 1.** Fiscal deficit ratio and government debt as a percentage of GDP compared for 2019 and 2020.

Impact of COVID-19 on the various sectors of africa's economy



Source: Dynamic PEP recursive dynamic version, authors' simulations.

Notes: COVID19 = global -4% GDP recession; AfCFTA = COVID19 + tariff removal of 90% of intra-African trade; AfCFTA HC = AfCFTA + 5% increase of trade costs across the world; AfCFTA HC and TF = AfCFTA + 5% increase of trade costs across the world and -10% of intra-African trade costs.

**Table 2.** GDP to debt ratio of selected African countries based on current COVID-19 fiscal spending.

| African countries debt to GDP ratio |      |          |           |      |
|-------------------------------------|------|----------|-----------|------|
| Countries                           | Last | Previous | Reference | Unit |
| Sudan                               | 259  | 202      | 20-Dec    | %    |
| Cape Verde                          | 156  | 125      | 20-Dec    | %    |
| Libya                               | 155  | 110      | 20-Dec    | %    |



**Continued**

|                       |     |     |        |   |
|-----------------------|-----|-----|--------|---|
| Mozambique            | 122 | 108 | 20-Dec | % |
| Angola                | 120 | 111 | 20-Dec | % |
| Sao Tome and Principe | 103 | 93  | 20-Dec | % |
| Republic of the Congo | 102 | 83  | 20-Dec | % |
| Zambia                | 96  | 92  | 20-Dec | % |
| Seychelles            | 94  | 57  | 20-Dec | % |
| Egypt                 | 88  | 84  | 20-Dec | % |
| Tunisia               | 88  | 72  | 20-Dec | % |
| Gambia                | 83  | 81  | 20-Dec | % |
| South Africa          | 83  | 62  | 20-Dec | % |
| Ghana                 | 78  | 64  | 20-Dec | % |
| Morocco               | 77  | 66  | 20-Dec | % |
| Zimbabwe              | 77  | 66  | 19-Dec | % |
| Mauritius             | 73  | 59  | 20-Dec | % |
| Gabon                 | 73  | 60  | 20-Dec | % |
| Sierra Leone          | 72  | 72  | 20-Dec | % |
| Lesotho               | 70  | 50  | 20-Dec | % |

Source: the World Bank.

oil prices fall to \$35 a barrel and exports halved, Nigeria's oil revenues could plummet to \$14 billion from \$36 billion in the past, and this, to a large extent, will affect the country's fiscal revenue. In addition, the Nigerian national currency has been affected by the over-the-counter spot exchange rate and parallel markets due to the continued decline in international oil prices, and there has been a significant depreciation in oil prices. **Figure 2** compares oil production in Africa in 2019 and 2020. The trend of oil production in all oil-producing countries in Africa is shown in **Figure 3**.

International oil prices will fall significantly in 2020 because of lower demand in China, reflecting the negative impact of the new crown disease on the global economy. The price of crude oil will eventually fall to \$47 a barrel. Because of the outbreak of COVID-19, West Africa's crude oil exports in March 2020 have fallen significantly by about 30%. The pandemic affected Africa's largest trading partner, China, causing international oil prices to fall and forcing the IMF to cut its growth forecast for Nigeria. The socio-economic development of countries that are more dependent on African resources will be affected.

The IMF cut its growth forecast for Nigeria in mid-February 2020, reflecting the severity of the impact on Africa's largest economy in the face of the new crown disease. The IMF lowered its growth forecast for Nigeria from 2.5 percent to 2 percent, ostensibly to boost its strength through effective reforms that address the growing budget deficit and avert an economic crisis. However, according to



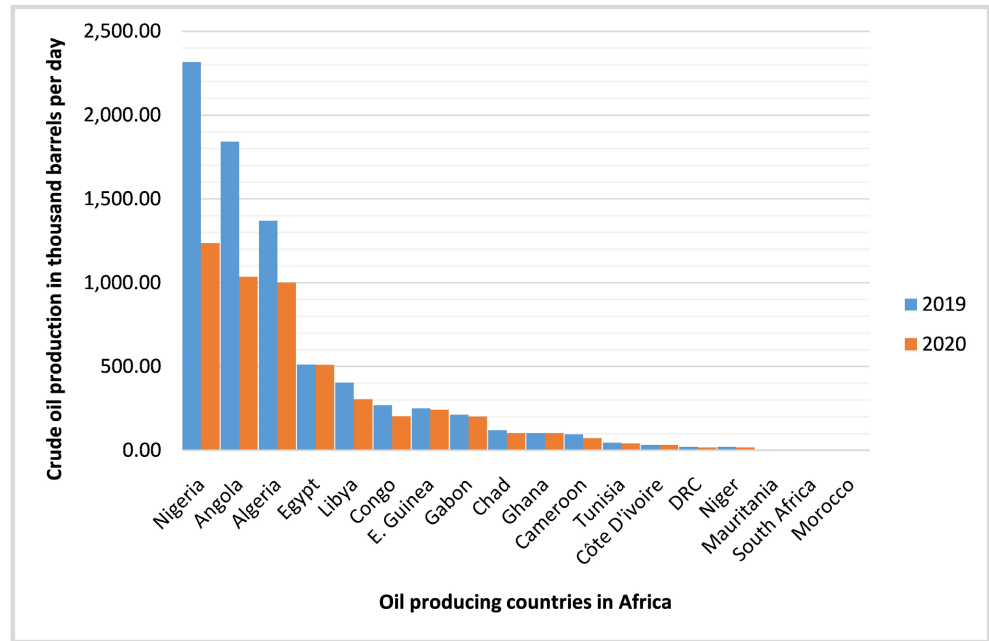


Figure 2. Crude oil production compared for 2019 and 2020 in Africa.

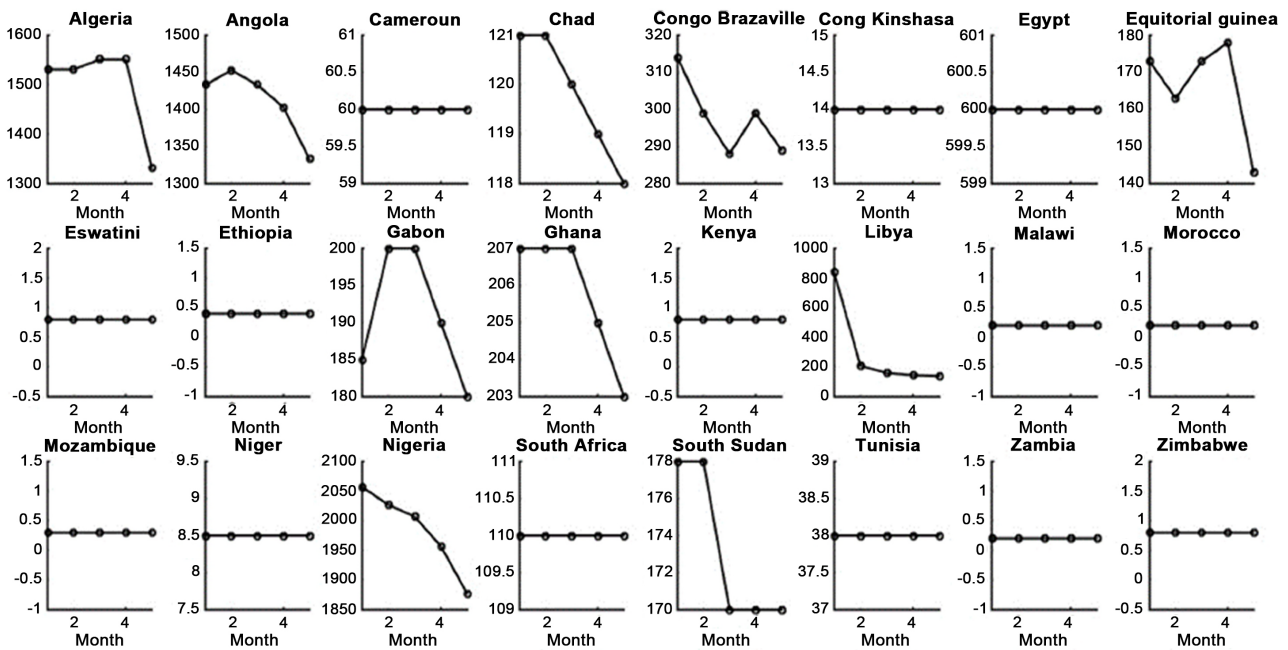


Figure 3. Trend of total petroleum and other liquids production of all African oil-producing countries from January to May 2020.

IMF statistics, oil is still the largest source of revenue for the Nigerian government, which has lost much foreign exchange because of the collapse in international oil prices caused by the pandemic.

### 5.1.2. Textile and Garment Exports Are Affected

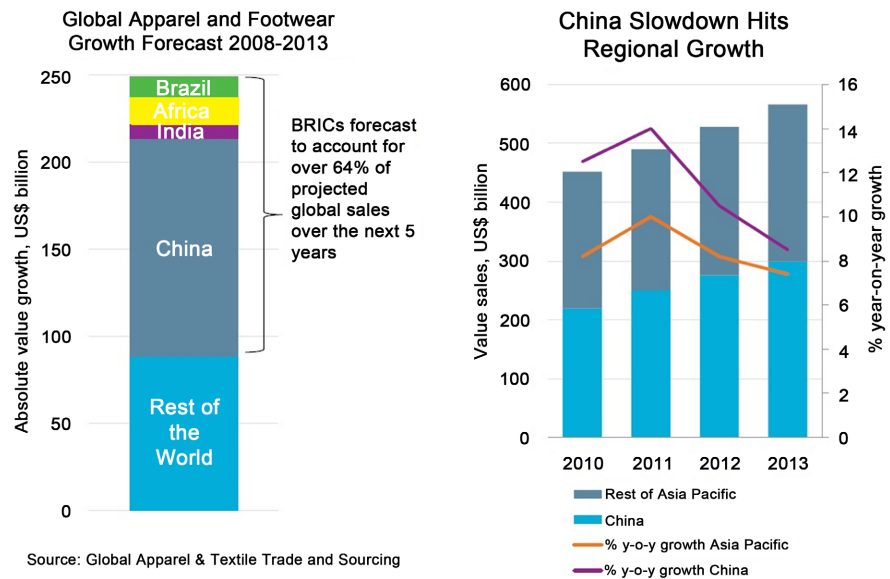
Africa's textile industry seems to have nosedived because of the COVID-19 crisis and some government importation policies. Before the pandemic, the textile and

clothing industry was one of the avenues to boost value-added benefits and job creation. At the beginning of 2019, the textile industry in Africa was estimated to grow at a CAGR of ~5% over the forecast period of 2019-2024. The economic income of the textile and garment industry is the main component of the foreign exchange income of many African countries. The textile and garment industry is an important pillar industry in the employment market of African countries. At present, the textile market in Africa is concentrated in the United States and the European Union. Due to the impact of the new disease, many cities have closed, and most consumers' spending on clothing has gradually shifted to food or medicine, which is bound to have an impact on Africa's textile exports. Countries such as Lesotho, Mauritius, and Madagascar account for 50 percent, 32 percent, and 21 percent of total annual exports. Tunisia, Morocco, and Egypt account for 18, 17, and 13 per cents respectively, while Kenya and Ethiopia, which account for 7 percent and 4 percent of the total, will also be affected to some extent. This impact will radiate into the incomes and employment of workers in these countries. For example, in 2018, Kenya employed more than 300,000 people in the textile industry, which provides 450,000 jobs in Ethiopia. Lower demand downstream of the supply chain resulted in a 26 percent drop in cotton prices compared with 2019, and cotton exports from countries such as Benin, Mali, and Chad were significantly affected. **Figure 4** compares textile production over the years.

### 5.1.3. Tourism Is on the Verge of Stagnation

Tourism accounts for about 8% of the region's GDP. With the spread of COVID-19, countries in Europe, the United States, and many other Asian cities are gradually closing their doors, causing the tourism industry in the region to stagnate; it is estimated that it will take more than two years to return to normal. As a result, Seychelles, Cape Verde, Mauritius, the Gambia, and Morocco, countries with the highest share of GDP (37 percent, 24 percent, 16 percent, 9 percent, and 8 percent, respectively, between 2016 and 2018, are the worst affected. Tourism production in Egypt, South Africa, Morocco, Tanzania, and Nigeria, the five largest African countries with a 2018 tourism output of \$11.5 billion, \$8.8 billion, \$7.6 billion, \$2.3 billion, and \$2 billion, respectively, have been significantly affected. Madagascar, São Tomé, Rwanda, Tunisia, and other countries with relatively advanced tourism sectors, including Sudan and Zambia, have suffered a significant socio-economic impact, while countries with small islands as the mainstay of tourism suffer the most.

According to a study released by the World Tourism and Travel Council, Kenya's tourism revenue was \$7.8 billion in 2018, accounting for 8.7 percent of the country's gross domestic product and supporting the employment of more than 1 million people. This report indicates that global tourist spending in Kenya reached \$1.5 billion in 2018, with the top five countries in terms of source of tourists being the United States (11 percent), the United Kingdom (9 percent), India (6 percent), China (4 percent), and Germany (4 percent).

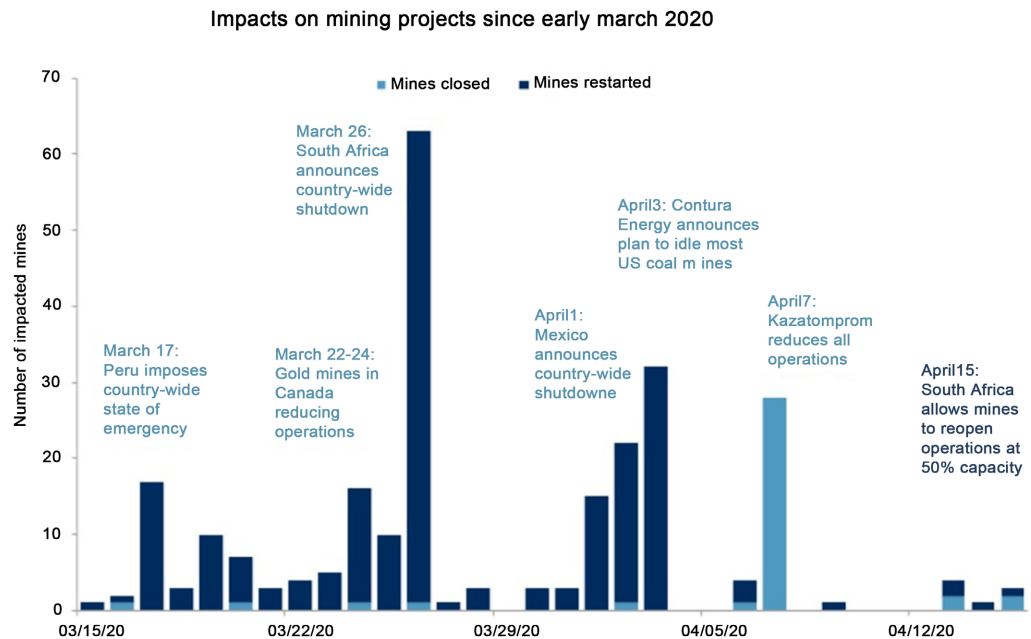


**Figure 4.** Textiles exports from Africa compared from 2008 to 2020.

Being an essential country in East Africa, the Kenyan capital, Nairobi, is home to the headquarters of many multinationals, including the United Nations Human Settlements Programme (UN-Habitat), UNEP, and the International Civil Aviation Organization's East African office in Nairobi, Kenya. Meanwhile, Kenya has one of east Africa's most critical ports, is a transportation hub, and receives many tourists per year. Rising youth unemployment in Kenya is also a significant factor in economic risk, with more than 13 million people aged 18 to 34 and more than 5 million unemployed. According to a report in Kenya's daily business, the unemployment rate is close to 40%. Because of the impact of COVID-19 on the supply chain, many factories in Nigeria are also facing problems that cannot be solved by mechanical equipment failure. Nigeria is one of the most economically developed countries in Africa, with a persistently high unemployment rate of more than 20 million people and 18 million underemployed in 2018, which gives it an unemployment rate of 43 percent. However, 29 percent of Nigerian youth are currently unemployed, and more than 25 percent are underemployed. With economies in sectors like oil, tourism, and logistics severely affected, the large number of unemployed young people in African countries is the most significant destabilizing factor in society.

#### 5.1.4. Sharp Decline in Metal Export Revenues

In Africa, metal minerals account for 12 percent of exports. Gold accounts for 7 percent. Metal prices have fallen by more than 20 percent compared with average prices in 2019, so the economies of major African mineral-exporting countries such as Congo have been severely affected. At the same time, the price of gold rose by 5%; therefore, Ghana and South Africa, which are big exporters of gold, saw some relief. The share of African exports of mineral and metal products in total exports is illustrated in **Figure 5**.



Source: S & G Global market and intelligence

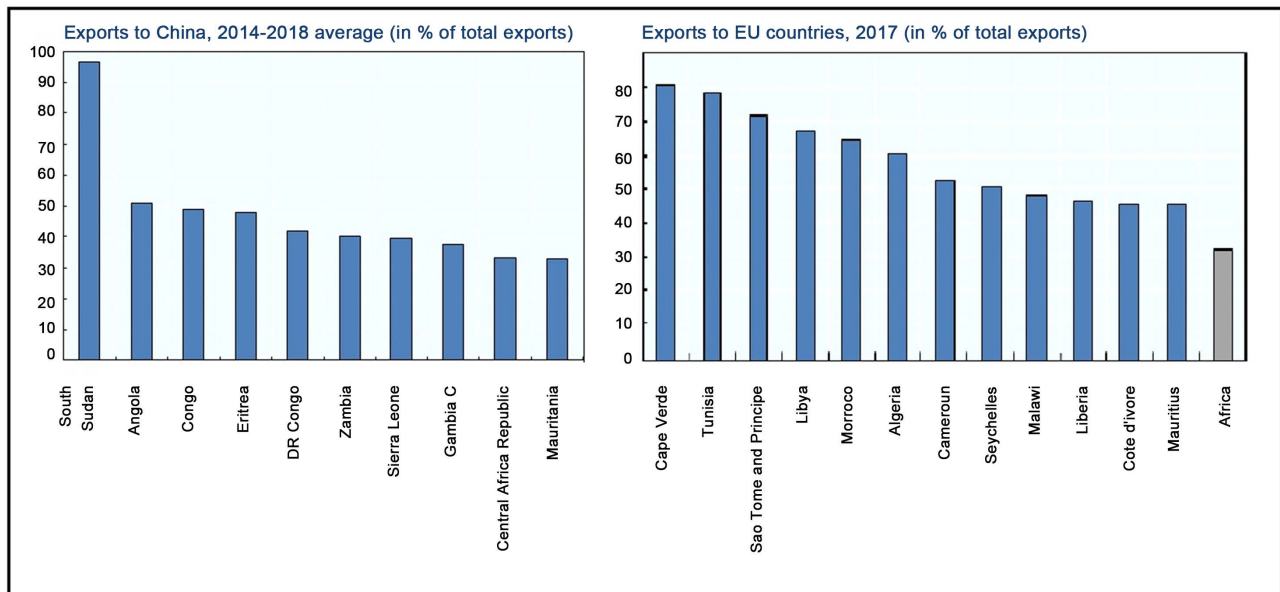
**Figure 5.** Trend of mineral exports in Africa from 2020.

### 5.1.5. The Development of the Aviation Industry Has Been Affected

In recent years, the rapid development of the aviation industry in Africa has solved the employment problem of more than 6 million people, which is of great significance in the African economy. Since the virus outbreak, Rwandair, Kenya Airways, and Mauritius Airlines have lost more than \$400 million in direct and indirect losses due to cancellations of flights to China. More cities are closing, and the airline industry has been hit harder. The International Air Transport Authority estimates that passenger mileage revenue for African airlines has fallen by 32%, and capital revenue has fallen by \$4 billion. Ethiopian Airlines, in particular, faces a loss of \$1.2 billion. The impact on the aviation sector alone led to a 32 percent drop in industrial output in Africa.

### 5.1.6. Disruption of the “China-Africa” Supply Chain

More Chinese goods have entered African markets since the beginning of the new century, gradually increasing from 3 percent of Africa’s total imports in 2001 to 19 percent in 2019. More than 60% of African countries see China as their most significant source of goods center. China’s exports to Africa totaled \$52.86 billion in the first half of 2019, but the outbreak of the virus directly affected export growth in 2020. As it stands, Nigerians who went to China in January 2020 to buy goods have not been able to return home because of the outbreak, and because the suppliers are mainly in China, they have not been supplied since the outbreak. Supply chain problems may be hidden in the normal state of operation, but the epidemic situation directly exposed the weakness in the African-China supply chain. **Figure 6** compares Africa’s export to china for 2019 and 2020 compared.



**Figure 6.** Major African exporters to China compared for 2019 and 2020.

### 5.1.7. Lack of Equipment, Loans, and the Shutdown of Infrastructure Construction

After the outbreak of COVID-19, more countries began to restrict the movement of people in various cities and countries, and many of the infrastructure projects that China has invested in Africa are at a standstill. In January 2020, most of the Chinese workers were stranded in Africa, the most critical issue being the relative fragmentation of the supply chain of critical materials, the inability to procure related equipment and machinery effectively, and the fact that China was affected by the epidemic, daily throughput many transport hubs and ports.

Chinese investment projects in Africa are based on China's advantages in infrastructure and heavy industry. As many industries gradually lose bank loans, more Sino-African cooperation projects do not have financial support; the arrival of the epidemic makes such advantages disappear and will undoubtedly impact Africa's economic construction.

### 5.1.8. Decrease in Natural Resource Exports from Africa to China

China is an important market for the export of natural resources in Africa. However, the slowdown of China's social and economic development caused by the virus will inevitably impact many African countries' export of natural resources. Trade between China and African countries totaled \$101.8 billion in the first half of 2019, with China importing \$49 billion. China's economic growth slowed to 4.5 percent in the first quarter of 2020 compared with the same period last year because of the outbreak of the new crown disease, but by June, it had stabilized, and China's economic output is now in the 50 percent range, there are some differences between the situation in 2003 and the SARS period. Currently, the epidemic is in a period of rapid social and economic growth in China, and

consumption is under pressure, while the manufacturing industry is challenging to develop. Just as China's expectations for 2015 have lowered, African countries tend to follow suit. If China's economy did not grow by more than 6.1% in 2019, 4.5% this year, it could significantly influence global economic markets. The hostile external environment is bound to reduce economic growth in South Africa by about 1.2 percent, but resource sales account for a substantial proportion of revenues in African countries as more than half of South Africa's exports of natural resources account for about 40 percent of GDP.

#### **5.1.9. Digital Economy and Digital Talents Have Become More Important**

During the 2014 Ebola virus outbreak in Zaire, anonymous voice and text messages were collected from 150,000 mobile phones handed over by Orange to a Swedish nonprofit organization in Senegal. The agency then used this information to map specific population movements in the region. Short messages, websites, and other public media can be more widely used for dynamic communication and online communication, in addition to choosing big data technologies for analysis and research. The public can grasp the development of the epidemic. At the same time, the rich products contained in the digital economy can effectively reduce the probability of below-line face-to-face contact. COVID-19 is the same as SARS in 2003, to a certain extent regarding promoting communications, entertainment, e-commerce, and other industries. At the same time, the rapid development of financial technology, modern logistics, data centers, and cloud service platforms in some African countries began to promote economic development towards information and digital transformation.

## **6. Discussion**

### **Challenges to Africa's Economic Development in the Context of the Epidemic**

First, social security is facing a more severe test; various terrorist incidents emerge one after another. As the epidemic has worsened, African governments have had to resort to all sorts of coercive measures to prevent it, thereby exacerbating the problems of unemployment, famine, refugees, and poverty that already exist in Africa. To avoid the spread of the epidemic in the prisons of most African countries, the release of suspects with less criminal responsibility has undoubtedly aggravated the already severe security situation. According to relevant data, the corresponding employees of Chinese multinational enterprises in Africa were subjected to various armed robberies, and three such violent incidents occurred in a single day on May 5, 2020. At the same time, there has been a rise in terrorist forces such as the Islamic state, as African governments have focused on the repatriation of NATO soldiers, the drawdown of US forces, and the fight against the epidemic.

Secondly, the establishment of the free trade area on the African continent has been affected by various factors and delayed the start of the process. In March

2020, the African leaders' initiative made it clear that while there is a high level of enthusiasm for the continent's free trade area among Africans and businesses, but the continent's preparations have fallen short of 50% of its commitments. Although secretary-general AFCFTA took office in the same year, the opening and functioning of the secretariat had been postponed indefinitely owing to staffing problems.

At the same time, the fight against the epidemic shows that African countries cannot pay great attention to the issue of AFCFTA for a long time. This will result in some countries the implementation of AFCFTA preparatory work cannot meet the established requirements. For example, a special AU summit is due to take place in South Africa on May 30 because the epidemic's impact has been delayed until the end of 2020. Maynes, the new secretary-general of AFCFTA, said that all people on the African continent should focus their attention on the fight against the new crown disease and spare no effort to save lives; it became clear that the meeting on free trade regulations in Africa scheduled for July 1 could not take place as scheduled.

Third, Africa has limited capacity to produce health-related supplies to combat the epidemic, making it difficult to spend on emergency health supplies. In total, some 600 million people, 40 percent of Africa's population, are urban dwellers, with more than 50 percent living in slums. Because of the greater population density and mobility, coupled with the more incredible difficulty in enforcing the law during quarantine, health care can not cover a larger area, detection, containment, and surveillance of the slum are complex, and new crown disease can quickly spread. Therefore, to effectively combat the new crown disease in Africa, only through the relevant sectors of various public health measures to control. At the same time, however, the shortage of medical equipment on the African continent has been exposed. According to relevant information, in South Sudan, a country with only two suction machines at the end of April 2020, there is a shortage of suction machines in 10 countries across the continent. The continent's counterparts should increase spending on emergency health care and social safety nets to combat the epidemic more effectively. Even if African countries follow China's lead in closing their cities to curb the spread of the new crown disease, the continent is also paying \$446 billion for its health. If nothing is done to stop the spread of the disease, the price of addressing the supply of health care will rise to \$446 billion, beyond the continent's reach.

Fourth, the continent has a narrow fiscal space to respond to the epidemic. On the one hand, the continent's tax revenues look meager. Because most of Africa's economic revenues are derived from complex sources and corruption is rampant, the industries that underpin national development are not well-established, resulting in relatively low tax revenues. Economic activity on the continent had decreased considerably as a result of the new crown disease, for example, in April 2020, when the loss of tax revenue in South Africa reached 285bn, a 20 percent decrease from the same period a year earlier, among them, import duties



fell by 20%, excise duties by 60% and corporate taxes by 55%. On the other hand, the continent's big tax-paying companies are facing more demanding challenges. Because of the impact of the new crown epidemic, tax-paying enterprises in most countries of the African continent have been walloped; Kenya Airways, Rwandair, SAA, and Air Madagascar, among others, have lost as much as \$8 million a month as a result of route reductions and route closures. And in 2019, rising spending on infrastructure of all kinds pushed fiscal deficits in parts of the continent to 3%. Most notably, Kenya, South Africa, and Algeria have deficits of 8.6 percent, 7.5 percent, and 5.9 percent, suggesting that the continent lacks sufficient fiscal space to respond effectively to the new crown disease.

Fifthly, the African continent countries have a relatively heavy debt burden and greater debt vulnerability than the rest of the continent (AUC/OECD, 2018, 2019; ECA, 2020). Because of the increasing volume of public investments such as infrastructure, combined with the shift in the composition of debt from officially concessional external debt to more costly and risky commercial external debt, and the proliferation of terrorism-related threats in some countries, the result has been rising security spending on the continent and the overall debt burden of African countries. In 2019, a total of 22 African countries, notably Angola, Zambia, and Mozambique, had a debt-to-GDP ratio well above the African average of 60 percent, its debt burden is already 60% higher, at 65.3%, 63.8%, and 61.6%, respectively as explained above in **Figure 1**.

As a result of the epidemic's impact, remittances of countries across the continent have been declining, which has led to a decline in the economic performance of international trade and tourism operations, as well as the investment in medicines needed to combat the disease. This has exacerbated the debt problem of African countries. Typically, Nigeria, which has to spend 60 percent of its annual revenue on debt servicing, is at an advanced stage of negotiations between the relevant government departments and creditors to postpone the date of repayment of the debt indefinitely.

Furthermore, the continent's sensitive climate conditions have led to an increased probability of new crown infections in humans and livestock. Given the frequency of natural disasters and the emergence of extreme weather events such as floods, heatwaves, and droughts on the continent, which provide a vehicle for the spread of disease, as a result, pressure on the continent's healthcare system has soared. At the same time, with climate change, land degradation, wild animals lose their original habitat, so the probability of human contact with animals will increase. Because of the lack of energy, most people in Africa have to rely on fuel in the wild to meet the growing energy demand, but this will make land degradation continue to increase; natural Habitats can also be severely eroded, increasing the risk of zoonotic diseases.

## **7. Recommendations for Economic Development in Africa in the Context of the Epidemic**

To recover a stronger economy, we recommend the following:

### **7.1. Deepen China-Africa Cooperation to Reduce the Negative Impact of the Epidemic on African Economies**

In the face of the current challenges, African countries should unite to fight against the new crown disease, but at the same time, they must take reasonable measures to put Africa's economic development back on track. In the global context, China has advanced experience in preventing and controlling new crown disease, and its industrial chain and supply chain have also been stabilized to a certain extent. Therefore, the African continent should actively promote China-Africa cooperation to effectively promote the African economy and minimize the new crown epidemic on the economic development of the African continent. China made it clear at the Forum on China-Africa Cooperation summit in Beijing in 2018 that China and Africa will jointly carry out the corresponding "eight major actions" it includes infrastructure connectivity, industrial promotion, Green Development, capacity building, people-to-people exchanges, trade facilitation, peace and security, and health and hygiene. At present, the African economy is facing a more severe test. To tide over the difficulties effectively, China and Africa should strengthen the development of these eight actions to minimize the speed of economic decline in Africa.

Chinese Premier Li Keqiang made it clear at the 13th National People's Congress that, in 2020, China should increase the guarantee of employment, market players, food and energy security, stable development of industrial supply chain, grassroots operation, and primary livelihood of the people. As the African continent is facing a severe test, it can also learn from China's initiatives. In particular, African countries should strengthen the following areas in line with the basic structure of the eight actions:

First, the agricultural cooperation between China and Africa should be strengthened to make the food produced in Africa more secure. Although Africa has a relatively abundant agricultural workforce, a sunny environment, and land resources, more than 7 percent of countries are currently unable to provide adequate food security, widespread food shortages in various African countries, coupled with the impact of the new crown disease outbreak, have compounded the already poor food supply. Therefore, African countries should vigorously promote cooperation in China-Africa agricultural projects to guarantee greater food supply security.

Secondly, African countries should strengthen the high-quality development of China's overseas economic and trade cooperation zones in Africa. China has set up several overseas economic and trade cooperation zones in Africa after vigorously pursuing its economic strategy of globalization. With the impact of the virus, the cooperation between China and African countries is not to build a new economic and trade cooperation zone, but to let the Chinese and African governments work together; encourage relevant enterprises in different cooperation and regions to speed up the process of resuming work and production, and ensure their regular operation; effectively enhance the production capacity of dif-

ferent enterprises and meet the growing social needs in order to maximize the protection of the primary livelihood of smooth development.

Thirdly, China and Africa should work together to ensure that China-Africa's industrial and supply chain is in a stable state. At present, China can speed up the process of trade facilitation if it can increase the import of commodities from Africa, especially the corresponding quantity of non-resource products. In addition, China should and keep the two sides working in concert to keep the cost of trade cooperation between her and African countries from falling and accelerate the pace of support for the development of trade infrastructure in Africa. This will accelerate the development of e-commerce in African countries and enable African countries to find new ways to achieve the goal of saving the curve.

### **7.2. To Strengthen China-Africa Cooperation in the Joint Fight against the New Epidemic**

It is well known that the most critical factor to minimize the adverse impact of COVID-19 on African economies is the strengthening of China-Africa cooperation in the joint fight against the virus. At present, China has set up corresponding specialized hospitals in different regions of Africa. A typical example is the upgrading project of the Wilkins Hospital of Zimbabwe COVID-19 fixed-point diagnosis and treatment hospital, funded and built by Chinese-funded private enterprises. The project, which took just 17 days to build, has become a site-specific isolation and treatment hospital for the new virus. At the same time, China has helped to raise the level of the fight against the new disease in various African countries. A typical example is how China organized a professional team to carry out corresponding medical activities in Ethiopia and to supervise the local medical institutions to complete the equipment debugging of the new coronavirus PCR detection reagent. Since then, Ethiopia has had some capacity to detect novel coronavirus nucleic acids. China has also shared its experience in prevention, diagnosis, and treatment with African countries through video conferences, telephone discussions, and the release of relevant materials; at the same time, it has helped some countries to train professional medical personnel to fight against the epidemic and raised the level of fighting against the epidemic in Africa.

### **7.3. China Continued to Assist Africa in its Fight against Epidemics and Its Economic Development**

At the G20 leader's special summit on new pneumonia, countries expressed deep concern about the severe challenges faced by developing countries and Least Developed Countries, particularly in Africa and small island states. The current chairman of the African Union, South African President Ramaphosa, called on the G20 to support an economic stimulus package for Africa to mitigate the impact of the outbreak on the African economy; it is also hoped that the International Monetary Fund and the World Bank will grant debt relief to African countries. The IMF steering committee is understood to be considering doubling

emergency lending of \$50 billion to poor and middle-income countries. At the same time, ECA called on G20 leaders to focus on Africa's vulnerability in the fight against the epidemic and strengthen Africa's support. Support and encourage open trade in medicines and other health supplies and upgrade health infrastructure; support countries to take immediate health measures to provide social security for the most vulnerable groups. Support Public Health campaigns and ensure information flow, sharing of information on outbreaks, etc. UN Deputy Secretary-General Villa Matsuhsa said that Africa was at the heart of the Global Public Health Response and addressing economic and employment issues and that concerted action was needed as part of a coordinated global response to avoid the worst. China has provided emergency assistance, including medical materials and medical, technical assistance to 26 African countries. Chinese experts on disease control and Prevention held a video conference with representatives of the African Center for Disease Control and Prevention and more than 20 countries in Africa to exchange experiences and discuss countermeasures. The China-Africa medical team has been sticking to its post to assist local institutions in carrying out epidemic prevention operations. Chinese companies have also donated facemasks, protective clothing, and test kits to various African countries. China is Africa's largest trading partner, and china-Africa economic and trade exchanges are of great significance to Africa's economic development. China has long been an important partner in Africa's infrastructure development, and building a "Belt and Road" is sustainable. Faster production recovery and living in China will increase demand for Africa's energy, minerals, and other raw materials. Therefore, China's continued assistance to African countries in the fight against the epidemic and economic recovery is significant.

## **8. Materials and Methods**

This systematic review was performed according to the rules of PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (S1 Checklist). Eligibility criteria manuscripts that evaluated the impact of pandemics on the African economy were included. The search strategy was defined based on the PECOS format as follows: Population (P): Humans diagnosed with COVID-19; Exposition (E): Impacts on the different sections of economy (C): Without comparison; Outcome (O): Economic downturn in Africa as results of COVID-19 (S): review studies, analysis or discussion, case reports, case series. The exclusion criteria involved studies that evaluated other disasters, including the global economic downturn, floods, bushfires, and other natural disasters which are not diseases related. The following electronic databases were searched: PubMed, Scopus, Web of Science, Cochrane Library, LILACS, OpenGrey, and Google Scholar. We also conducted a hand search by reading the references list of the included articles. We searched from January 2020 to November 2020.

## 9. Conclusion

In the global epidemic, the AU has repeatedly expressed its support for the Chinese people in fighting the epidemic and stands ready to strengthen cooperation with China. The AU council expressed its gratitude to the Chinese government for its support of Africa's response to a possible new outbreak of pneumonia and considered that China's substantial experience in fighting the epidemic would greatly help Africa. Once the outbreak is under control, Africa's economy could rebound quickly, and Chinese production capacity and supply chains disrupted by the outbreak could gradually recover after the outbreak is brought under control. In contrast, the resilient Chinese economy will continue to drive Africa's exports to China, the temporary surge in trade and investment between China and Africa caused by the outbreak will eventually pass. When we get back on track, perhaps we will have the good fortune to see a greater emphasis on media advocacy in Africa, a leap forward in Africa's digital economy, and essential Chinese investment in African manufacturing.

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## Author Contributions

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## Conflicts of Interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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