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## Actual Problem

### The Impact of Health on Economic Development: Ghana's COVID-19 Management So Far

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#### Abstract

The COVID-19 pandemic as a public health crisis also has a major effect on development. Though there has been a prediction of economic decline worldwide, developing African countries are anticipated to have the worst form of impact. In this paper, we reviewed the impact of COVID-19 on the economic development of Ghana. We observed that Ghana's gross domestic product (GDP) growth rate had been reviewed downwards by the International Monetary Funds from 5.8 % to 1.5 %. This would be seen as the least recorded GDP growth since the year 1983. The Minister of Finance in a statement to the Parliament of Ghana indicated that COVID-19 would directly affect production, trade, and investment within Ghana and between Ghana and the world. He added that the pandemic will affect the prices of global commodities (crude oil, gold, and cocoa), tourism, fiscal stance, and human life, mainly the health and life of the most vulnerable. Also, COVID-19 would indirectly affect Ghana's economic growth through the decline of global economic growth and supply chain interferences. In light of the socio-economic challenges created by the pandemic, Ghana has so far thrived immensely in the management of this crisis. Despite the future inevitable economic impacts of the COVID-19 pandemic, Ghana will be able to endure with a good system of governance, adequate public health measures, and a strong macroeconomic foundation.

**Keywords:** COVID-19, economic development, Ghana, health.

#### 1. Introduction

The novel coronavirus is one of the recent deadliest global pandemics which has affected both the developed and developing countries (Kapata et al., 2020). The World Health Organization (WHO) on 12 January 2020 officially announced that the novel coronavirus first affected the inhabitants of Wuhan City, Hubei Province, China in December 2019. Caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), novel coronavirus cases have shown significantly lesser mortality rates than the 2003 Severe acute respiratory syndrome (WHO, 2020).

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This outbreak was declared a Public Health Emergency of International Concern on 30th January 2020. On 11th February 2020, WHO gave an announcement on the name of the new Coronavirus as COVID-19 (Aljazeera, 2020). As the infection progressed, most countries closed their borders and restricted travels which have hindered the movement of travellers. Additionally, several countries have imposed lockdowns to reduce the spread of the virus. These have tremendously resulted in the reduction of the demand for air travel in 2020. Thus, there is an expectation that this reduction will persist in the next six months (International Air Travel Association, 2020).

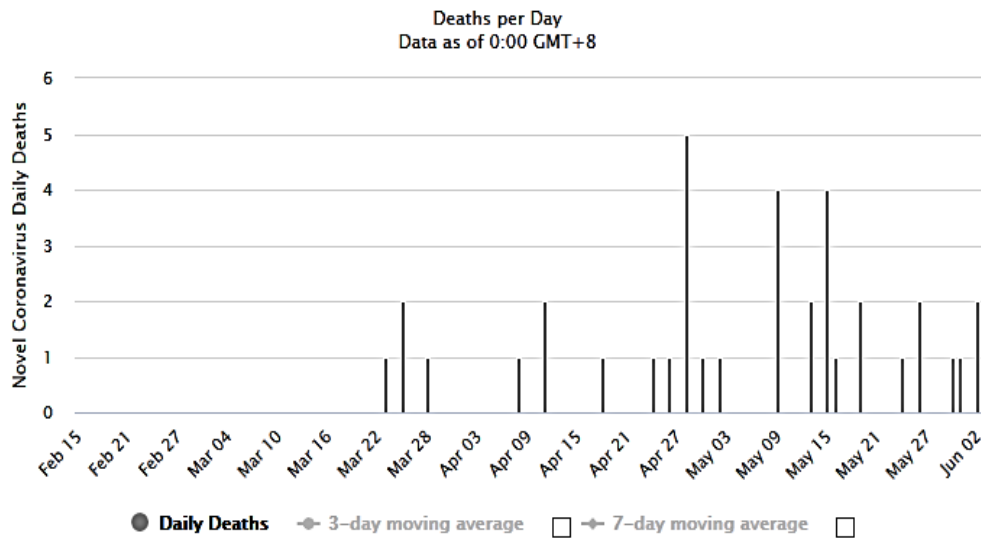
In addition to air travel restrictions, the COVID-19 pandemic also affected the demand and supply of commodities. Due to the direct impact of lockdowns and restrictions on movements, there have been supply-chain disruptions, a fall in oil prices, and a decline in global economic growth (Anderson et al., 2020; Mhalla, 2020). Despite the tolerable level of supplies to most of the food markets, global trade restrictions announcements, and excess buying by most countries have raised concerns for food insecurity (Loopstra, 2020). Globally, there has been observed to have substantial international spread and increasing death toll (Aljazeera, 2020; Kapata et al., 2020). As of 30<sup>th</sup> May 2020, the global case rate stood at 5,991,102 confirmed cases, 2,530,050 recovered cases, and 366,875 deaths (Google News, 2020). Currently, a total of 213 countries and territories and two international conveyances have been affected by the COVID-19 pandemic (Worldometer, 2020). Since 13<sup>th</sup> May 2020, all African countries with Lesotho being the last country had recorded a case of the COVID-19 (Shaban, 2020). Unfortunately, developing countries, especially in Africa have been predicted to be more likely to be worst affected due to the lapses in their healthcare and economic systems (Kapata et al., 2020; Nkengasong, Mankoula, 2020).

## **2. Results and discussion**

### **Ghana's COVID-19 National Management**

Ghana, a country in Sub Saharan Africa, recorded its first two imported cases of COVID-19 infection on 13th March 2020 from Norway and Turkey (MyJoyOnline, 2020). As of 11<sup>th</sup> March 2020, the President of the Republic of Ghana, His Excellency Nana Akufo-Addo directed the Hon. Ken Ofori-Atta (Minister of Finance) to make available the Ghana Cedi equivalent of 100 million US Dollars to augment the preparedness and response plan of Ghana (Ministry of Health, 2020). Later on, the Minister of Finance confirmed in Parliament that the said amount was not ready. Consequently, the sincerity of the government was severely criticised by some Ghanaians on various social media platforms (Ghanaweb, 2020). After the number of infected persons reached six, on the 14<sup>th</sup> March 2020, Ghana's president announced a ban on all public gatherings on the 15<sup>th</sup> March 2020 to lessen the spread of COVID-19. Additionally, all educational institutions were closed except final-year junior high, and senior high students were allowed to remain in school under social distancing protocols to prepare for Basic Education Certificate Examination and West African Senior Secondary Certificate Examination respectively (Nyabor, 2020). Furthermore, the Ministry of Foreign Affairs and Regional Integration announced on the 19<sup>th</sup> March 2020, of suspension of passport services (Graphic Online, 2020).

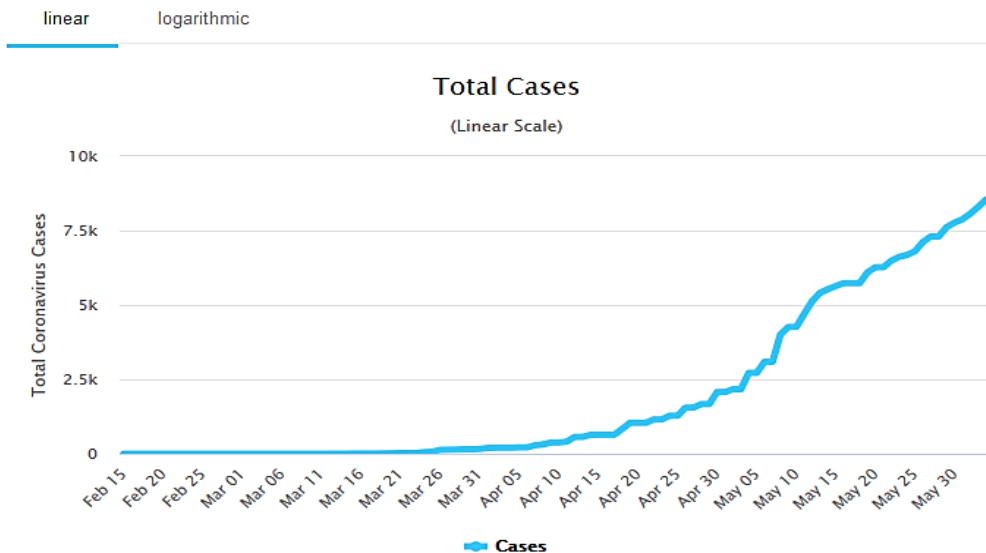
As Ghana's cases increased to 19 persons, the then Deputy Health Minister, Hon. Alex K. Abban, on the 21<sup>st</sup> March 2020 announced Ghana's first COVID-19 death (see Figure 1) in an interview on TV3 (Azumah, 2020). Subsequently, Ghana's borders were closed for two weeks from the midnight of 22<sup>nd</sup> March 2020 by the government in a State Address. Additionally, individuals arriving in the country after the closure were mandatorily quarantined and tested (Dapatem, Nunoo, 2020). Furthermore, the Local Government Minister on the 23<sup>rd</sup> March 2020 announced that 137 markets in the Greater Accra Region were to undergo disinfection exercises. Similar disinfection exercises of public places ensued in other regions with time (Aklorbortu, 2020; Modernghana.com, 2020).



**Fig. 1.** Daily COVID-19 deaths per day record of Ghana  
 Link: <https://www.worldometers.info/coronavirus/country/ghana/>

With a total of 132 confirmed COVID-19 cases, the Director-General of the Ghana Health Service, Dr. Patrick Kuma-Aboagye, on the 26<sup>th</sup> March 2020 wrote a letter to request all healthcare personnel on study leave in Ghana return to work, after the closure of all training institutions in Ghana, to augment the increasing workload at their respective healthcare facilities (Frimpong, 2020). A day after, the President of Ghana gave a State Address on COVID-19 and placed Accra, Tema, Kasoa, and Greater Kumasi (the four biggest cities) under 21-day partial-lockdown from 30<sup>th</sup> March 2020. This restriction on movements only excluded providers of essential services like health personnel, those operating within the food chain, members of the Executive, Legislature, and the Judiciary (Essien, 2020). Due to the partial lockdown, Ghanaians complained of a shortage of food, lack of revenue, an increase in the prices of goods and other essentials, and heavy vehicular traffic cross some major roads (CGTN Africa, 2020).

On 19 April 2020, the President of Ghana lifted the three-week partial lockdown but urged Ghanaians to maintain all other preventive protocols. At this point, Ghana had improved its case testing rates and had a total of 1,042 confirmed cases. Though the lifting of the partial lockdown was criticised by some people as premature, others praised the government for such effort as many Ghanaians survived on daily wages (Knott, 2020; Nunoo, 2020). In a State Address by the President on 10<sup>th</sup> May 2020, he reported that COVID-19 cases had increased to 4,700 with 494 recoveries (see Figure 2).



**Fig. 2.** Daily confirmed COVID-19 cases per day record of Ghana  
Link: <https://www.worldometers.info/coronavirus/country/ghana/>

In the address, the President extended the ban on public gatherings until the end of May 2020 (AllAfrica Global Media, 2020). However, just a day after President's State Address, the Ghana Tourism Authority (GTA) announced that hotels, bars, and restaurants were allowed to begin operating under the preventive protocols. This directive by the GTA was cancelled on the 13<sup>th</sup> March 2020 by the Minister of Tourism, Arts and Culture, Hon. Barbara Oteng-Gyasi [MP], but allowed food chains and restaurants including hotel restaurants to reopen while drinking bars and night clubs remain closed (Graphic.com, 2020).

On 31<sup>st</sup> May 2020, President Nana Akufo-Addo in his 10<sup>th</sup> address to the nation stated that COVID-19 case count numbered 8,070 after 218,425 tests have been completed. He also added that Ghana has 5,087 active cases with 36 deaths (Figures 1, 2). Also, he lessened the restrictions imposed on public gatherings and activities in the country by allowing a maximum of 100 persons to attend religious gatherings from 5<sup>th</sup> June 2020, following the mandatory one-meter rule of social distancing. Also, the final year junior high, senior high, and university students from 15<sup>th</sup> June 2020 were to resume classes to prepare for their specified exit examinations. However, he extended a ban on large public gatherings like funerals, political gatherings, and big religious gatherings. Also, he announced an extension of closure of all of Ghana's borders (by air, land, and sea) for human traffic until further notice. Nonetheless, Ghanaians who are stuck abroad were to undergo mandatory quarantine and safety procedures when evacuated back to Ghana (Daily Guide Network, 2020).

### Impact of COVID-19 on Ghana's Economy

According to Hon. Ken Ofori-Atta, the economy of Ghana had been badly affected directly and indirectly by the COVID-19 pandemic. In a statement to the Parliament of Ghana, the Minister of Finance noted that COVID-19 would directly affect production, trade, and investment within Ghana and between Ghana and the world. Specifically, he mentioned global commodity (crude oil, gold, and cocoa) prices, tourism, fiscal stance, and human life, mainly the health and life of the most vulnerable. Furthermore, this pandemic indirectly would affect Ghana's economic growth through the decline of global economic growth and supply chain interferences (Ofori-Atta, 2020).

In a similar vein, the International Monetary Funds (IMF) revised projection for the real gross domestic product (GDP) growth rate for Ghana was reviewed downwards from 5.8 % to 1.5 %. This would be seen as the least recorded GDP growth since 1983. This would certainly affect GDP per capita, referring to what happened in 2015 as the 2.5% GDP growth recorded pushed the GDP per capita for that year to a figure lower than zero (IMF, 2020). Also, Deloitte had projected that the global GDP growth of 3.3 % for 2020 would slow to less than 2.9 % due to the COVID-19

pandemic. Consequently, Ghana's estimated GDP growth downward from 6.8 % to 2.8 % due to the economic disruptions the country is experiencing as a result of the pandemic (Deloitte, 2020).

The economy of Ghana is increasingly becoming export-oriented. Noted from 2018, export accounted for over 35 % of the GDP. This is higher than the proportion expected from a country at the lower to middle-income level. Meanwhile, a higher percentage of Ghana's exports are primary commodities with cocoa, oil, and gold collectively summing up to over 80 % of exports. Therefore, the collapse in international demand for oil and the fall in the prices of oil would certainly cause a severe disruption in the Ghanaian economy. In 2018, 30 % of export revenue by the country was accrued from its oil revenue. Out of this revenue, over 50 % of the exports went to China. Certainly, a substantial reduction in Chinese demand for oil as a result of the global pandemic will decrease Ghana's export revenue for the first quarter of 2020, as stated by the Minister of Finance, to an estimated value of GH¢5.7 billion shortfalls in oil revenue (Ofori-Atta, 2020).

The COVID-19 pandemic had led to a fall in prices of cocoa, 27.2 % globally (Myers, 2020). Meanwhile, it accounts for about one-fifth of Ghana's export revenue since 2018. The reduction in cocoa export revenue resulting from less international demand for cocoa might lead to poverty in the rural areas since most of the households who engage in the cocoa industry are vulnerable (Kolavalli, Vigneri, 2017). Likewise, Ghana is likely to experience a substantial decline in the revenue from tax (Deloitte, 2020). Revenue from import duties is expected to fall by GH¢808 million. Similarly, revenues from other non-oil taxes and non-oil taxes are expected to fall by GH¢1,446 million and GH¢2,254 million respectively. These shortfalls will harm the Ghanaian economy (Ofori-Atta, 2020).

Furthermore, the disruptions of international supply chains particularly because Ghana depends more on imports during the COVID-19 pandemic will affect the national economy indirectly (Ofori-Atta, 2020). Deloitte (2020) points out that the greatest impact of the pandemic is likely to manifest in the form of shortfalls in revenue. Currently, Ghana is experiencing GH¢9.5 billion deficits, partly due to shortfalls in revenue. Part of the GH¢9.5 billion (approximately GH¢600 million) according to Deloitte was allocated to the fight towards COVID-19. Also, the government incurred GH¢572 million as the start-up cost of the response plan and preparing for the fight against COVID-19.

Similarly, due to the impact of the pandemic on the revenue from petroleum, it is expected that the Stabilisation Fund, Heritage Fund, Annual Budget Funding, and transfers to Ghana National Petroleum Commission (GNPC) will also be affected. The Stabilization Fund is expected to fall by GH¢1,058 million, while the Heritage Fund also falls by GH¢453 Million. Also, the annual budget funding is expected to experience a shortfall of about GH¢3,526 million while the transfers to GNPC also fall by GH¢642 million (Deloitte, 2020). Presently, treasury bill rates and stock prices both globally and locally have been affected with five out of the eight listed banks in Ghana experiencing falls in their share price (Adoteye, 2020). Nonetheless, Adoteye noted that gold as a global commodity might have the potential of saving countries and banks with exposure to the mining sector. Though the precious metal accounts for about one-third of Ghana's total export, strategists of the Bank of America have indicated that the price of gold is projected to increase by 78 % [US \$3000 an ounce] in 18 months (Levisohn, 2020). Notwithstanding the negative impacts of COVID-19 pandemic on Ghana's economy, Ghana's gold is likely to cushion the economy to some extent (Adoteye, 2020).

### 3. Conclusion

The paper demonstrates that the effect of the COVID-19 pandemic on the Ghanaian economy requires an equally integrated response. A comprehensive plan from the State with a focus on health, business development, and the social economy will ensure Ghana's resilience to adjust to future shocks. Though Ghana seems to be making progress in handling COVID-19, it is obvious that the pandemic will affect the national economy in these times of uncertainty. Undoubtedly, there are mutual reciprocal relations between the health and economy of the world. To date, the government of Ghana, its stakeholders, and partners have taken various health and socio-economic measures to handle the COVID-19 pandemic. Yet, McKee and Stuckler (2020) advise that the world will face serious future health consequences after the COVID-19 pandemic if they fail to protect the global economy from the negative effects of the pandemic. In this case, the vulnerable

population in developing countries like Ghana in the worst case will suffer the health, economic, and general quality of life and well-being costs post-COVID-19.

#### 4. Author's contribution

IB, JOS, EWA, and SKA designed the study concept and drafted the manuscript. All authors read and approved the manuscript.

#### 5. Competing Interest

The authors (IB, JOS, EWA, and SKA) declare they have no competing interests.

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#### References

- [Adoteye, 2020](#) – *Adoteye, D.* (2020). Economic impacts of COVID-19 on Ghana's banking industry. Accra: KPMG. [Electronic resource]. URL: <https://home.kpmg/gh/en/home/insights/2020/05/economic-impact-of-covid-19.html>
- [Aklorbortu, 2020](#) – *Aklorbortu, P.* (2020). Coronavirus: 1,300 sprayers assigned to disinfect 137 markets in Accra. YEN. [Electronic resource]. URL: <https://www.msn.com/en-xl/africa/ghana/coronavirus-1300-sprayers-assigned-to-disinfect-137-markets-in-accra/ar-BB11zkTI>
- [Aljazeera, 2020](#) – Aljazeera (2020). COVID-19: WHO names disease caused by new coronavirus. [Electronic resource]. URL: <https://www.aljazeera.com/news/2020/02/covid-19-renames-deadly-coronavirus-200211172638418.html>
- [AllAfrica Global Media, 2020](#) – AllAfrica Global Media. (2020). Ghana: President Akufo-Addo lifts partial lockdown, but keeps other enhanced measures in place. [Electronic resource]. URL: <https://allafrica.com/stories/202004210046.html>
- [Anderson et al., 2020](#) – *Anderson, R.M., Heesterbeek, H., Klinkenberg, D., Hollingsworth, T.D.* (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? *The Lancet*. 395(10228): 931-934.
- [Azumah, 2020](#) – *Azumah, O.* (2020). Ghana records first coronavirus death. MyJoyOnline.com. [Electronic resource]. URL: <https://www.myjoyonline.com/news/national/ghana-records-first-coronavirus-death/>
- [CGTN Africa, 2020](#) – CGTN Africa (2020). Ghana citizens have mixed emotions as Accra reopens for business. [Electronic resource]. URL: <https://africa.cgtn.com/2020/04/21/ghana-citizens-have-mixed-emotions-as-accra-reopens-for-business/>
- [Daily Guide Network, 2020](#) – Daily Guide Network (2020, May). President Akufo-Addo's 10th update on COVID 19. [Electronic resource]. URL: <https://dailyguidenetwork.com/president-akufo-addos-10th-update-on-covid19/>
- [Dapatem, Nunoo, 2020](#) – *Dapatem, D.A., Nunoo, C.* (2020). Ghana closes its borders for 2 weeks to fight Coronavirus. [Electronic resource]. URL: <https://www.graphic.com.gh/news/general-news/ghana-news-coronavirus-borders-closed-directive-will-last-2-weeks.html>
- [Deloitte, 2020](#) – Deloitte (2020). Economic impact of the COVID-19 pandemic on the economy of Ghana. [Electronic resource]. URL: [https://www2.deloitte.com/content/dam/Deloitte/gh/Documents/about-deloitte/gh-economic-Impact-of-the-Covid-19-Pandemic-on-the-Economy-of-Ghana\\_06042020.pdf](https://www2.deloitte.com/content/dam/Deloitte/gh/Documents/about-deloitte/gh-economic-Impact-of-the-Covid-19-Pandemic-on-the-Economy-of-Ghana_06042020.pdf)
- [Essien, 2020](#) – *Essien, J.* (2020). Akufo-Addo announces partial lockdown of Accra, Kumasi, Tema to curb COVID-19 spread. Focus FM. [Electronic resource]. URL: <https://focusnewsroom.com/2020/03/28/akufo-addo-announces-partial-lockdown-of-accra-kumasi-tema-to-curb-covid-19-spread/>
- [Frimpong, 2020](#) – *Frimpong, E.D.* (2020). All Ghana Health Service staff on study leave recalled for Coronavirus 'fight'. Graphic Online. [Electronic resource]. URL: <https://www.graphic.com.gh/news/general-news/all-ghana-health-service-staff-on-study-leave-recalled-for-coronavirus-fight.html>

**Ghanaweb, 2020** – Ghanaweb, 2020. (2020). Are you a magician to spend money you don't have? – Akufo-Addo blasted over \$100m coronavirus money. [Electronic resource]. URL: <https://www.ghanaweb.com/GhanaHomePage/NewsArchive/Are-you-a-magician-to-spend-money-you-don-t-have-Akufo-Addo-blasted-over-100m-coronavirus-money-897598>

**Google News, 2020** – Google News. (2020). Coronavirus (COVID-19): Worldwide. [Electronic resource]. URL: <https://news.google.com/covid19/map?hl=en-GH&gl=GH&ceid=GH:en>

**Graphic Online, 2020** – Graphic Online. (2020). Coronavirus: Foreign Ministry suspends all passport services. Graphic Online. [Electronic resource]. URL: <https://www.graphic.com.gh/news/general-news/ghana-news-coronavirus-foreign-ministry-suspends-all-passport-services>

**Graphic.com, 2020** – Graphic.com (2020). Ministry says 'No' to Tourism Authority over reopening drinking bars. Graphic.com.gh [Electronic resource]. URL: <https://www.businessghana.com/site/news/general/212975/Ministry-says-No-to-Tourism-Authority-over-reopening-drinking-bars>

**International Air Travel Association, 2020** – International Air Travel Association. (2020). COVID-19 puts over half of 2020 passenger revenues at risk. Press Release No: 29. [Electronic resource]. URL: <https://www.iata.org/en/pressroom/pr/2020-04-14-01/>

**International Monetary Funds, 2020** – International Monetary Funds (2020). Real GDP growth. [Electronic resource]. URL: [https://www.imf.org/external/datamapper/NGDP\\_RPCH@WEO/OEMDC/ADVEC/WEOWORLD/GHA](https://www.imf.org/external/datamapper/NGDP_RPCH@WEO/OEMDC/ADVEC/WEOWORLD/GHA)

**Kapata et al., 2020** – Kapata, N., Ihekweazu, C., Ntoumi, F., Raji, T., Chanda-Kapata, P., Mwaba, P., ... , Mfinanga, S. (2020). Is Africa prepared for tackling the COVID-19 (SARS-CoV-2) epidemic? Lessons from past outbreaks, ongoing Pan-African public health efforts, and implications for the future. *International Journal of Infectious Diseases*. 93: 233-236.

**Knott, 2020** – Knott, S. (2020). Ghana's decision to lift partial COVID-19 Lockdown criticized by some. Voice of America. [Electronic resource]. URL: <https://allafrica.com/stories/202004210016.html>

**Kolavalli, Vigneri, 2017** – Kolavalli, S., Vigneri, M. (2017). The cocoa coast: The board-managed cocoa sector in Ghana. Washington, D.C.: International Food Policy Research Institute (IFPRI).

**Levisohn, 2020** – Levisohn, B. (2020). Gold is heading for \$3,000, Bank of America says. 'The Fed Can't Print Gold.' [Electronic resource]. URL: <https://www.barrons.com/articles/the-fed-cant-print-gold-bank-of-america-says-sees-gold-hitting-3-000-51587496123>

**Loopstra, 2020** – Loopstra, R. (2020). Vulnerability to food insecurity since the COVID-19 lockdown: Preliminary report. London: King's College. [Electronic resource]. URL: [https://foodfoundation.org.uk/wp-content/uploads/2020/04/Report\\_COVID19FoodInsecurity-final.pdf](https://foodfoundation.org.uk/wp-content/uploads/2020/04/Report_COVID19FoodInsecurity-final.pdf)

**McKee, Stuckler, 2020** – McKee, M., Stuckler, D. (2020). If the world fails to protect the economy, COVID-19 will damage health not just now but also in the future. *Nature Medicine*. 26(5): 640-642.

**Mhalla, 2020** – Mhalla, M. (2020). The Impact of Novel Coronavirus (COVID-19) on the Global Oil and Aviation Markets. *Journal of Asian Scientific Research*. 10(2): 96-104.

**Ministry of Health, 2020** – Ministry of Health. 2020. (2020). "\$100 million provided to enhance coronavirus preparedness and response plan" – President Akufo-Addo. [Electronic resource]. URL: <https://www.worldometers.info/coronavirus/>

**Modernghana.com, 2020** – Modernghana.com (2020, April). COVID-19: Disinfection of Eastern Regional markets today. [Electronic resource]. URL: <https://www.modernghana.com/news/993582/covid-19-disinfection-of-eastern-regional-markets.html>

**Myers, 2020** – Myers, A. (2020, May). Cocoa prices dip on markets in wake of coronavirus pandemic. [Electronic resource]. URL: <https://www.confectionerynews.com/Article/2020/05/25/Cocoa-prices-dip-on-markets-in-wake-of-coronavirus-pandemic>

**MyJoyOnline, 2020** – MyJoyOnline. (2020). Timeline: Ghana's fight against Covid-19 exactly a month after recording first cases. [Electronic resource]. URL: <https://www.myjoyonline.com/news/national/timeline-ghanas-fight-against-covid-19-exactly-a-month-after-recording-first-cases/>

**Nkengasong, Mankoula, 2020** – *Nkengasong, J.N., Mankoula, W.* (2020). Looming threat of COVID-19 infection in Africa: act collectively, and fast. *The Lancet*. 395(10227): 841-842.

**Nunoo, 2020** – *Nunoo, F.* (2020). Coronavirus: 'Prez Akufo-Addo decision to lift lockdown be bad move' – Ghanaians react. BBC News Pidgin, Ghana. [Electronic resource]. URL: <https://www.bbc.com/pidgin/tori-52351593>

**Nyabor, 2020** – *Nyabor, J.* (2020). Coronavirus: Government bans religious activities, funerals, all other public gatherings. Citi Newsroom. [Electronic resource]. URL: <https://citinewsroom.com/2020/03/government-bans-church-activities-funerals-all-other-public-gatherings/>

**Ofori-Atta, 2020** – *Ofori-Atta, K.* (2020). Statement to parliament on economic impact of the COVID-19 pandemic on the economy of Ghana. Accra: Ministry of Finance. [Electronic resource]. URL: [https://www.mofep.gov.gh/sites/default/files/news/MoF-Statement-to-Parliament\\_20200330.pdf](https://www.mofep.gov.gh/sites/default/files/news/MoF-Statement-to-Parliament_20200330.pdf)

**Shaban, 2020** – *Shaban, A.R.A.* (2020). Coronavirus in Africa: 135,375 cases; 3,923 deaths; 56,401 recoveries. [Electronic resource]. URL: <https://www.africanews.com/2020/05/31/coronavirus-in-africa-breakdown-of-infected-virus-free-countries/>

**World Health Organization, 2020** – World Health Organization. (2020). Emergencies preparedness, response: Pneumonia of unknown cause – China. 2020. [Electronic resource]. URL: <https://www.who.int/csr/don/05-january-2020-pneumonia-of-unknown-cause-china/en/>

**Worldometer, 2020** – Worldometer. 2020. (2020). COVID-19 Coronavirus Pandemic. [Electronic resource]. URL: <https://www.worldometers.info/coronavirus/>