Innovations

Comparative Analysis of the Effects of Covid-19 on Tourism and Agricultural Development in West Africa

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Abstract

Covid-19 has threatened socio-economic and recreational activities across the world and this have adversely affected the global trade, food production, socio-economic activities and indeed the tourism industry. This study is therefore carried out to examine the impact of the Covid-19 pandemic on the tourism industry across West African. The study utilized both primary and secondary sources of data collection. The primary source involved the use of telephone survey to elicit information of perception and level of involvement in tourism activities within the study locations while the secondary source involved the use of documented information on the internet, journals, textbooks and bulletins. Six West African countries (Nigeria, Ghana, Gambia, Cape Verde, Cote d'ivoire and Senegal) were purposively selected for the study based on their viability in terms of tourism facilities, event and activities. The study observed that there was a rapid reduction in the activities of the tourism industry due to the lock down in travels, business, socio-economic and recreational activities. The study advocates that there should be a gradual commencement of economic and recreational activities and that tourist should adhere strictly to the precautions of Covid-19 to ensure that the virus does not spread to avoid another lockdown. **Keywords:** Comparative, West Africa, Covid-19, Tourism Growth, Arrivals.

Introduction

The world is currently confronted by an acute public health emergency caused by the ongoing COVID-19 global pandemic.Coronavirus commonly known as Covid-19, started in Wuhan, one of the most densely populated cities in China. It was caused by a severe acute respiratory syndrome (Yang et al., 2020). Coronavirus as of 1st August, 2020, had infested 7,788, 543 people globally with 683,516 death occurrence

(World meter online, 2020). African countries, was the last to be infected with COVID-19, it was first detected in Egypt and Algeria on the 14th and 15th of February 2020 respectively, followed by Nigeria on the 27 February, 2020 (Lone and Ahmad, 2020). There was an increasing rate of confirmed COVID-19 in Africa, as of 1st August, 2020 there were 928,439 COVID-19 reported cases, with a mortality rate of 19,684 (Africa Argument, 2020). Agricultural production that gives rise to massive food production has generally declined as the pandemic. According to Okang et al (2023) food production is not only conditioned upon the proper functioning of the climatic parameters but a function of other variables including human wellbeing. This implies that once human health is implicated food production is negatively affected as well.

The pandemic has been described as one of the greatest challenges the world has had to face since World War II; and with the speed of spread and the very minimal preparedness for a pandemic of this magnitude, COVID-19 is uncharted territory. As of 16 March 2021, over 120 million people had tested positive to SARS-CoV-2, the virus responsible for the outbreak; and deaths had exceeded 2.6 million globally. Africa, despite being the last continent to be affected by the virus, has not experienced as much devastation as other continents. For example, West Africa, with a population of 367 million people, had confirmed 412 178 cases of COVID-19 with 5363 deaths as of 14 March 2021; compared with the USA which had recorded almost 30 million cases and 530 000 deaths, despite having a slightly smaller population (328 million). As a result of this global health calamity, there was a global unrest as all economic, political and socio-economic activities were affected including tourism that is considered as the number one global revenue earner (Chakraborty and Maity., 2020; Ajake and Amalu, 2012b; Ajake et. al, 2016; Amalu and Ajake, 2012, 2014, 2015; Ige and Odularu, 2007). Prior to 2020, Africa's tourism industry was very lucrative, as the continent was considered to have got the second fastest growing tourism industry in the world, but with the recent invasion of COVID-19, the tourism potential of Africa has suddenly reduced (Amalu et al, 2012; Amalu et. al, 2016; 2017a, 2017b; 2018a, 2018b; 2019; Cai-Nebe, 2020). This research therefore is directed at filling the knowledge gap of the effect of COVID-19 on tourism industry activities of selected West African countries, by presenting a comparative analysis of visitor's arrival to designated tourism sites before and during COVID-19. This will help West Africa nations to evolve strategies that will aid to mitigate the devastating effect of the pandemic on the tourism potentials. Also the research will add to existing studies carried out on the growth of tourism potentials during pandemics periods in Africa continent.

Overview of the emergence of Corona-virus

There exists no one universally acceptable definition of the word pandemic, however there are underlining components in any disease outbreak that can be considered to be pandemic, such as extensive geographic extension, disease movement from one place to another, attack on many people within a short period of time with insignificant population immunity. The outbreak must be new and associated with fresh alternatives existing organisms. In addition, they may also be viewed as infectious, contagious and severe (Morens et al., 2009 as in Hall et al., 2020). As a result of the above attributes found in the current global health crises, WHO in March 11, 2020 declared COVID-19 a pandemic (Ajake and Amalu, 2012a; Buranyi,2020).

Corona-viruses belong to the Corona-viridae family in the Nidoviralesorder. Corona represents crown-like spikes on the outer surfaceof the virus; thus, it was named as a corona-virus.Coronaviruses are minute in size (65–125 nm in diameter) and contain a single-stranded RNA as a nucleic material, size rangingfrom 26 to 32kbs in length. The subgroups of coronavirusesfamily are alpha (a); beta (b); gamma (c); and delta (d) coronavirus.The severe acute respiratory syndrome coronavirus (SARS-CoV),H5N1 influenza A, H1N1 2009 and Middle East respiratory syndromecoronavirus (MERS-CoV) cause acute lung injury (ALI) and acute respiratory distress syndrome (ARDS) which leads to pulmonaryfailure and result in fatality. These viruses were thoughtto infect only animals until the world witnessed a severe acute respiratorysyndrome (SARS) outbreak caused by SARS-CoV, 2002 inGuangdong, China. Only a decade later, another pathogeniccoronavirus, known as Middle East respiratory syndrome coronavirus(MERS-CoV) caused an endemic in Middle Eastern countries (Zhong et al., (2003). Recently at the end of 2019, Wuhan an emerging

business hubof China experienced an outbreak of a novel coronavirus that killedmore than eighteen hundred and infected over seventy thousand individuals within the first fifty days of the epidemic (Wang et al., (2013). This viruswas reported to be a member of the b group of corona-viruses. The novel virus was named as 2019 novel coronavirus (2019-nCov) by the Chinese researchers. The International Committeeon Taxonomy of Viruses (ICTV) named the virus as SARS-CoV-2and the disease as COVID-19.In the history, SRAS-CoV(2003) infected 8098 individuals with mortality rate of 9%, across26 countries in the world; on the other hand, novel corona virus (2019) infected 120,000 individuals with mortality rate of 2.9%, across 109 countries, till date of this writing. It shows that thetransmission rate of SARS-CoV-2 is higher than SRAS-CoV and thereason could be genetic recombination event at S protein in the RBD region of SARS-CoV-2 may have enhanced its transmission ability (Peiris et al., 2004; Cui and Shi, 2019). Cui and Shi, (2019) also discussed the transmission of humancoronaviruses briefly. In 2003, the Chinese population was infected with a virus causingSevere Acute Respiratory Syndrome (SARS) in Guangdong province. The virus was confirmed as a member of the Beta-coronavirussubgroup and was named SARS-CoV(). The infected patients exhibited pneumonia symptoms with a diffused alveolarinjury which lead to acute respiratory distress syndrome (ARDS) (Lai et al., (2020).SARS initially emerged in Guangdong, China and then spreadrapidly around the globe with more than 8000 infected personsand 776 deceases. A decade later in 2012, a couple of Saudi Arabiannationals were diagnosed to be infected with another corona-virus (WHO, 2019).

Recently, by the end of 2019, WHO was informed by the Chinesegovernment about several cases of pneumonia with unfamiliaretiology (WHO, 2020).

Corona-virus and world economy

The most-affected countries with more than 30,000 confirmed cases of SARSCoV-2 are the United States of America, Spain, Italy, Germany, France, the United Kingdom, China, Iran, Turkey, Belgium, the Russian Federation, Canada and Brazil (Ruth, 2020). However, the number of cases continues torise throughout the globe and became a serious menaceto public health.COVID-19 is majorly affecting many countries allover the world, whereas Africa is the last continentto be hit by the pandemic (WHO, 2020). However, Africa isexpected to be the most vulnerable continentwhere COVID-19 spreading will have a majorimpactThe continent confirmed its first case of COVID-19 in Egypt on 14th of February, 2020, and from sub-Saharan Africa the first case wasreported in Nigeria on 27th of February, in an Italianpatient who flew to Nigeria from Italy on 25th of February, 2020 (WHO, 2020). Interestingly, most of the identified cases of COVID-19 in Africahave been imported from Europe and the UnitedStates, rather than from the original COVID-19 epicentre China. The continent's weak health care system and a largeimmune-compromised population owing to highprevalence of malnutrition, anemia, malaria, HIV/AIDs, tuberculosis and poor economic discipline, make it distinct from the other continents that have experienced COVID-19 to date (Rahman and Sarkar, 2019). Experts alsoanticipated that under these circumstances the pandemicin Africa could be challenging to control, and the consequences could be dismal (Moore et al., (2017). On the otherhand, there is no drug/vaccine currently available totreat COVID-19; therefore, implementation of precautionarymeasures to contain the spread of this virus isbeing practiced throughout the globe; which includessocial distancing, isolation and quarantine, communitycontainment, national lockdowns, and travel restrictions. So far, these measures are helping to controland reduced the spread of COVID-19; but subsequentlyhit the global economy and thereby pushing the nations towards recession (The World Economic Forum, 2020). African economieswere already struggling when COVID-19 hit thecontinent; which could further amplify the economiccrisis. A unique COVID-19 response needs to be developed for Africa, where all these issues which make the continent more vulnerable and different to the rest of the world, will be taken into consideration (United Nations Human Right, 2020).

In research paper by Ige and Odularu (2008), in which a panel data from 2000 to 2004 were used to investigate the impact of tourism on ten West Africa countries' economy, the study revealed that tourism has indeed contributed enormously to economy growth of West Africa. Their findings corroborate with the assertion of

World Tourism Organization (WTO) which pointed that tourism potentials inherent in seaside, environmental, cultural, sports, and discovery of West Africa countries have a lot to contribute to growth of their economy. The initial phase of the COVID-19 pandemic was allabout clinical and epidemiological aspects however, the shift is now changing towards the global economy. The focus of effect of COVID-19 pandemics needs toshift to the developing nations, and particularly to Africancountries which rely mostly on developed countries. Economists had estimated Africa's growthin 2020 at 3.9%, which can now drop to 0.4% (in thebest case) to -3.9% (in the severely hit case) (WHO, 2020). Experts also believe that growth in Sub-Saharan Africamay fall to between -2 and -5% in comparison to 2.4% in 2019, with a risk of the first recession in the last 25 years (Ruth, 2020). The major factors which may affect the African economy related to COVID-19 are: reduction of importation of Chinese goods to thelevel that it inflates the African markets; decreasing oil consumption due to travel bans, borderclosures, social distancing and lock downs lowering down the demand for oil; reduction of tourism activities across West Africa and the whole world; withdrawal of investors; the shift of budgets from other sectors to the health sector as a timely need, and this caused a furtherdecline in the economic growth of countries across the world; reduction in revenues accruing to countries through tax (The World Economic Forum, 2020).

Experts are calculatingaround 20 million job losses, which will further increase the unemployment rates of African countries. Increase in unemployment could possibly leadto social unrest and increasing crime rates in the countries with a history of sectarian violence (Lai et al., (2020).

Effects of Covid-19 on tourism activities in West Africa

Global health calamity of the century and the greatest challenge that human-kind have faced since the Second World Waris the effects of covid-19. The outbreak of covid-19 has been observed to affect the tourism industry so much as visitor arrivals to destination countries between the first quarter of 2019 and first quarter of 2020 not been what it used to be with precautionary measures to avoid the continuous spread of the pandemic to countries which are yet to have high case situation and this has certainly given researchers the concern to investigate and examine the discrepancy in the number of recorded visits or arrivals before, during and after the lockdown period which was occasioned by the pandemic (Ruth, 2020).

In order to restrict further transmission of the disease in the community, many of the affected countries had decided to undergo complete lock down. Major international flights and also all types of business transports had been deferred amid different countries. Due to lockdown all domestic flights, railway service (except goods trains), bus, truck, and vehicles transports were suspended with special exemption to those associated with essential commodities. In almost all the COVID-19 stricken countries, the entire educational, commercial, sports and spiritual institutions were closed in a bid to safe guard the people from contacting and having an indiscriminate spread of the pandemic. Industries suffered alot as many of these except those related to essential amenities, were closed from business for a long time in many countries (Rahman and Sarkar, 2019). People belonging to the tourismand transportation industry were also facing utmost economic difficulties as people were not allowed to move freely and as such their businesses were closed and no income, revenue or salaries were paid nor received. Production level was very low as even some products went out of stock as their producers were shot down and sometimes no means of transportation to move or distribute them to reach the consumers. Economy of many so called powerful countries are now facing the threat of high inflation and increasing unemployment as a result of lack of productivity and excessive expenditure for the treatment and rehabilitation of the COVID-19 victims and their families (OECD Interim Economic Assessment, 2 March 2020). Lockdown will directly affect the GDP of each country (United Nations Human Rights (2020).

Methodology

The study adopted causal and observational route to explanation. The causal design was adopted to enable an in-depth study of the subject matter to enable the study understand the impact of the outbreak of covid-19

pandemic on the activities of the tourism industry. The study utilized both primary and secondary sources of data collection. The study purposively selected six countries in West Africa for the study based on their viability in tourism activities. The six selected countries were Nigeria, Ghana, Gambia, Cape Verde, Cote d'ivoire and Senegal (figure 1). The primary source was elicited through the use of telephone survey while the secondary sources involved the use of information from internet sources, textbooks, journals and daily or monthly bulletins. The study collected data on confirmed cases of Covid-19 at the end of 2020, tourists' arrivals, employment structures, available tourism hotspots and level of patronage of the tourism facilities in the various selected countries in West Africa. The data were analyzed using parametric and non-parametric statistics such as tables, charts, simple percentages, graphs and two-way anova statistical method.



Figure 1: Map of West Africa Countries (Population)

Results and discussion

Information on table 1 presented the number of confirmed cases of COVID-19 in countries in West Africa. From the table, Nigeria had the highest confirmed cases of COVID-19 (43.537) followed by Ghana (37,014), Cameroon (17.255), Cote D'Ivoire (16109), and Senegal (10284), Cape Verde with 2,480 confirmed cases. Table 1: Confirmed Cases of COVID-19 in West African countries (2019)

Country	Population	Confirmed Cases
Benin Republic	12,123,200	1805
Cape Verde	<mark>548,800</mark>	2480
Saint Helena	16,425,864	936
Cote D' Ivoire	<mark>26,378,274</mark>	16109
Equatorial Guinea	963,629	4821
Gabon	1,906,738	7531
Gambia	2,421,636	498
Ghana	<mark>31,072,940</mark>	37014
Guinea	13,132,795	7308
Guinea Bissau	1,874,303	1981
Liberia	4,818,973	1189
Mali	20,250,833	2522
Mauritania	4,649,658	6319
Niger	24,206,644	1138

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Nigeria	206,139,589	43537
Senegal	<mark>16,743,927</mark>	10284
Sierra Leone	7,976,983	1835
Togo	8,278,724	758
Cameroon	26,545,863	17255
Total		165320

Information on table 2 and figure 2 contains the volume of tourist arrivals in 2018, 2019 and 2020 in the selected West Africa countries, (that is prior and during COVID-19 era). The table shows that a total of 18,988,000visitors visited the countries in 2018 (representing 75% of the entire visits to the countries between 2018 and 2020), in 2019a total of 5,729,777 visitors (representing 23% of the entire arrivals) visited the countries while 540,901 visitors(representing 2% of visitors between 2018 and 2020) visited the countries in 2020 showing the impact of the covid-19 pandemic on the movement and activities of tourists. This called for us to look at the situation in 2019 which was the main period of lookdown due to the covid-19 pandemic.

Country/tourists	Nigeria	Senegal	Cape	Cote	Ghana	Gambia	Total	%
			Verde	D'Ivoire				
2018	8,324,000	1,433,000	1,710,000	2,965,000	1,929,000	2,627,000	18,988,000	75
2019	1,190,091	602,122	990,121	950,093	997,680	999,670	5,729,777	23
2020	196,500	67,000	32,001	99,300	83,600	62,500	540,901	2

Source: World Bank Online, 2021

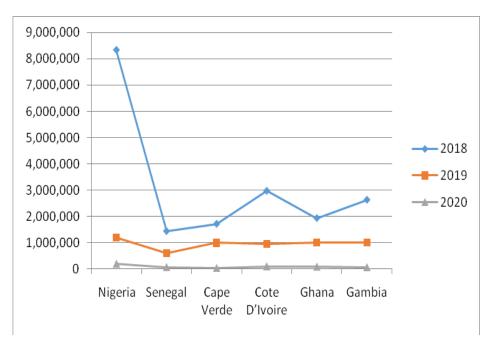


Figure 2: Tourists arrival between 2018 and 2020 within the study locations

Information on table 3 presents data of number of confirmed cases of COVID-19 and comparing it with the volume of tourist arrivals in 2020 in tourist sites of West African countries. The table shows that a total of 540,901 visitors visited the selected West African countries and that a total of 111,280 people were reportedly

affected by covid-19. With this rapid increase in cases of covid-19, the tourism industry was worse-off and seriously affected.

Table 3: Numbers of 2020 Confirmed Cases of COVID-19 and Tourist Arrivals in Selected West Africa Countries

Country/tourists	Nigeria	Senegal	Cape	Cote	Ghana	Gambia	Total
			Verde	D'Ivoire			
2020 visitor'	96,500	67,000	32,001	99,300	83,600	62,500	540,901
arrivals							
2020 confirmed	43537	10284	710	2480	37014	17255	111,280
Cases of Covid-							
19							

Source: World Tourism Barometer, 2021

The study went further to investigate the impacts of covid-19 pandemic on the operations of recreational/tourism outfits within the study locations. Information on table 4 shows that a total of 32,958 government recognized tourism outfits operated within the study countries while towards the end of 2019 after the lockdown period due to the outbreak of covid-19 pandemic, 3,082 tourism outfits representing 9% of the usual available outfits were able to operate within the study locations. The table also revealed that in 2020, 3,282 tourism outfits representing 17% of the usual available tourism outfits were in operation within the study locations. Further investigation revealed that most of the tourism outfits went bankrupt, hence went out of business due to the fact that they could not sustain their capital as they couldn't pay their staff or maintain their facilities.

Country	Nigeria	Senegal	Cape Verde	Cote D'Ivoire	Ghana	Gambia	Total	d%	
/outfits									
2018	15,068	2,341	1,020	3,220	5,311	3,980	32,958	100	
2019	431	92	68	124	189	159	3,082	9	
2020	2,050	202	126	293	431	501	5,623	17	

Table 4: Number of functional recreational/tourism outfits in 2018 and 2020.

Source: World Tourism Barometer, 2021

The study compared the number of employees in tourism related jobs in government recognized outfits and the number of employees in government recognized non-tourism related outfits. Information on table 5 shows that in 2018 before the covid-19 outbreak in 2019, a total of 6,008,628 people were employed in government recognized outfits across the study locations. Out of the employed persons, 3,823,065 persons representing 63% of the entire employees were recorded to be employed in tourism related outfits while 2,185,563 persons representing 27% of the entire employees in both tourism and non-tourism outfits across the study locations. Furthermore, the table also revealed that after the outbreak of covid-19, a total of 709,282 persons representing 27% of the entire employed in tourism related jobs across the study locations while 1,942,138 persons representing 73% of the entire employed persons were observed to be retained and actively employed in non-tourism related outfits across the study locations. Further investigation revealed that after the covid-19 outbreak, most tourism related outfits went bankrupt and out of business due to the fact that there was no patronage to help them generate income to pay their bills and staff. This has really showed how the covid-19 pandemic has affected tourism activities within West African countries and the world at large.

Table 5: Tourism and non-tourism related job/employment in West African countries

Employment status in 2018						
Country/employ	Tourism related jobs	%	Non-tourism	related	%	Total

ed			jobs		
Nigeria	981,345	60	655,089	40	1,636,434
Senegal	502,130	60	334,508	40	836,638
Cape Verde	299,219	71	120,870	29	420,089
Cote D'Ivoire	658,890	66	341,445	34	1,000,335
Ghana	780,359	61	501,111	39	1,281,470
Gambia	601,122	72	232,540	28	833,662
Total	3,823,065	63	2,185,563	27	6,008,628
Employment stat	us in 2020		·		·
Nigeria	201,111	26	559,231	74	760,342
Senegal	92,110	23	302,123	77	394,233
Cape Verde	54,270	35	102,223	65	156,493
Cote D'Ivoire	110,760	27	298,100	73	408,860
Ghana	133,431	23	451,230	77	584,661
Gambia	117,600	34	229,231	66	346,831
Total	709,282	27	1,942,138	73	2,651,420

Source: ECOWAS annual business bulletin, 2020

The study also examined the level of patronage/visits to accommodation facilities across West African countries before and after the covid-19 pandemic. Information on table 6 shows that in 2018 (before the covid-19) outbreak, 1,036,684 people representing 81% of the entire patronage within the time of study, patronized accommodation facilities across the study locations while in 2020 (after the covid-19 outbreak), 228,094 people representing 19% of the entire patronages were observed in major accommodation facilities across the study locations.

Table 6: Patronage (visits)	of hotels/accommodation	facilities in West African	countries (2018 and 2020)

Country/ patronage	Nigeria	Senegal	Cape Verde	Cote D'Ivoire	Ghana	Gambia	Total	d%
2018	346,333	123,021	78,901	134,650	198,999	154,780	1,036,684	81
2020	56,120	24,210	9,230	45,100	54,784	38,650	228,094	19

Source: ECOWAS annual business bulletin, 2020

Information on table 7 shows the opinion of respondents on the perceived impacts of COVID-19 across the study locations. The table revealed the observed impacts of COVID-19 on the people of study area. The opinion level of the listed possible impacts of the pandemic had more than 50% response level. This simply reveals that COVID-19 had several impacts on the socio-cultural and socio-economic activities of the study locations.

Table 7: Observed impacts of COVID-19 in selected	West African countries
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S/N	Possible impacts of COVID-19	X≥50%	X≤49%
1	Challenges in diagnosis and treatment of victims	×	

2	Overburdened medical system	×
3	Short of medical facilities	×
4	Short of medical staff	×
5	Negligence by medical personnel	×
6	High risk on medical personnel	×
7	Restriction on movement of goods and social services	×
8	Restriction on movement of people within cities	×
9	Restriction on movement across cities	×
10	Loss of international and national trade activities	×
11	Poor cash flow in markets	×
12	Slow down on revenue generation and growth	×
13	Cancellation of sports activities/tournaments	×
14	Restriction on international travels	×
15	Restriction on cultural, religious and festive events	×
16	Increase in poverty level	×
17	decrease in family income	×
18	Scarcity of food	×
19	Cancellation of social events	×
20	Postponement of educational activities/examinations	×

From the study responses, it was observed that the impacts of COVID-19 on daily life activities were extensive, numerous and had far reaching consequences. These can be divided into various categories:

A) Healthcare

- Challenges in the diagnosis, quarantine and treatment of suspected or confirmed cases
- High burden of the functioning of the existing medical system
- Patients with other disease and health problems are getting neglected
- Overload on doctors and other healthcare professionals, who are at a very high risk
- Overloading of medical shops
- Requirement for high protection
- Disruption of medical supply chain

B) Economic

- Slowing of the manufacturing of essential goods
- Disrupt the supply chain of products
- Losses in national and international business
- Poor cash flow in the market
- Significant slowing down in the revenue growth

C) Social

- Service sector is not being able to provide their proper service
- Cancellation or postponement of large-scale sports and tournaments
- Restrictions and avoidance of national and international travelling and cancellation of travelling services
- Disruption of celebration of cultural, religious and festive events
- Undue stress among the population
- Social distancing with our peers and family members
- Closure of the hotels, restaurants and religious places

• Closure of places for entertainment such as movie and play theatres, sports clubs, gymnasiums, swimming pools, and so on.

• Postponement of educational activities and examinations

Conclusion

In summary, this study on comparative analysis of effect of COVID-19 on tourism growth of selected African countries: Nigeria, Senegal, Cape Verde, Cote'Divoire, Ghana and Gambia, sought to compare the volume of visitors to tourist centers before and during the COVID-19 pandemic. The result showed a drastic dropped in tvlhe volume of visitors to tourist destinations during peak period of the pandemic in the study area. This is attributable to the fear of contacting the deadly disease, fliight cancellation, unavailability of local tourist involvement in tourism activities, Deuttschawelk (2020). The impact of COVID-19 also showed a negative effect on the tourism as observed by Lone and Amad (2020), who noted that the declaration of COVID-19 as a pandemic by March 11, 2020 brought a great havoc to tourism growth in West Africa. Based on the result stated above, another study should be carried out covering the entire Africa. Also local tourists should be encouraged to participate actively in tourism development so as to reduce or if possible completely eliminate the devastating socio-economic and social effects of pandemic that might deter the world's economy.

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