

COVID-19 AND TOURISM SECTOR DYNAMICS IN AFRICA: CHALLENGES AND POSSIBLE SOLUTIONS

Mr. Takudzwa. C. MARADZE

Department of Economics, Midlands State University, Harare, Zimbabwe

Mr. Thabani NYONI

Department of Economics, University of Zimbabwe, Harare, Zimbabwe

Dr. Smartson. P. NYONI

ZICHIRE Project, University of Zimbabwe, Harare, Zimbabwe

ABSTRACT

The coronavirus disease (COVID-19) is a new pandemic that spreads primarily through contact with an infected person when they cough, sneeze or are physically in contact with contaminated objects or surfaces. The pandemic is like no other causing suffering to the human race across all aspects of life. Of the aspects devastated is tourism, which of late; has helped increase the development of most nations, developed and developing ones by increasing employment levels, tax revenues to governments and contributing to exports of nations. COVID-19 has resulted in nations across the world implementing lockdown procedures in a bid to stop the importation and exportation of the virus. These lockdowns induced by COVID-19 have disrupted life for billions of people and have led to massive socio-economic collapse with record unemployment rates, loss of revenues and a rise in crime and mental health related illnesses. This systematic review gathers studies that have looked at the impacts of COVID-19, lessons learnt from developed nations and then helps devise the diverse action plans for Africa to be put into action after recovery. Since Covid-19 affected the whole globe various research standards were used and different settings were analyzed. The results showed us that because of the government-imposed lockdowns, panic and health concerns by the public, there was less or no demand for the tourism industry. The study also found out that because of the vulnerability of African nations to COVID-19, lockdown rules were inevitable. The findings of this study are very important to governments in developing countries to help them to be better equipped to deal with the pandemic now and post the pandemic era. The study will also proffer initiatives that will help tourism industries bounce back in Africa. The results of the study can also be generalized to other developing nations around the globe.

Keywords: - Africa, COVID-19, Tourism Sector

INTRODUCTION

Coronaviruses are a great family of viruses that cause respiratory illness, that ranges from common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The 2019 novel coronavirus was named Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) while the disease associated with it is referred to as COVID-19. COVID-19 is known to be a new strain of coronavirus that has not been previously recognized in humans. The disease was identified as the cause of an outbreak of a highly transmissible respiratory illness first detected in Wuhan, China in December 2019 (National Health Laboratory Services, 2020). Since then,

COVID-19 has grown into a global pandemic and spreading across many countries. Yang et al (2020) found that the illness was spread through contact with other infected individuals, with symptoms such as fever, cough, and breathing problems. Transmission may also be aided by asymptomatic individuals, with up to 40% of infected persons remaining asymptomatic Oron, D et al (2020). Other aspects that enable infection include (a) speed and efficiency of COVID-19 transmission; (b) close contact between infected and non-infected individuals; (c) airborne transmission Morawska et al 2020; (d) vulnerability of immunocompromised individuals with specific underlying health conditions (for example, hypertension, diabetes, cardiovascular disease, respiratory problems); (e) susceptibility of persons over the age of 65 years; and (f) contact with persons who have traveled to locations with a high number of cases Peeri et al (2020).

The African region, according to the WHO (2020b), first recorded low infection rates as compared to the European region, Indian region and the United States. As at 24th April, 2020, South Africa had the highest number of confirmed cases at 3953 with a death toll of 75. Algeria recorded 407 deaths from 3007 confirmed cases and Cameroon recorded 49 cases from 1401 cases. Death toll in Malawi stood at 3 from 33 confirmed cases whilst in Zimbabwe 4 deaths were recorded from 28 confirmed cases. Comoros and Lesotho had not recorded any confirmed cases of COVID-19 during that time. The World Economic Forum (WTO) (2020) argued that the low infection rates in Africa were and are still accredited to the population structure of Africa. Only 3% of the population in Sub-Saharan Africa is above 65 years, much lower than similar age brackets in China (11%) and Italy (23%). Many people who have succumbed to this pandemic are above the age of 65 with underlying medical conditions. Starting with regions out of the African region, critical global responses to control the spread of the COVID-19 pandemic have included travel restrictions, shelter-in-place, improved hygiene, disinfection of public areas and social distancing orders. Connor P et al (2020), highlighted that, most countries around the world have imposed partial or complete border closures, with travel bans affecting the majority of the world's populace. Detrimental effects have been the sudden unemployment of once employed personnel, uncertainty over economic recovery, and global fears of continuing COVID-19 spread and its future waves, the hospitality industry was among the first industries affected, and it will be among the last industries to recover Tappe and Luhby (2020). Starting in August 2020 it has been seen that the second wave of the virus has started again especially in the European region where the winter season is upon them, calls by locals are of cost-efficient lockdowns that ensure partial opening of businesses and regulated travelling.

EPIDEMIOLOGY OF COVID-19 IN AFRICA

After considering that most developing countries are geographically located in Africa, this paper went on forward to have a separate analysis of Africa and some of its characteristics that made it face different challenges brought about by COVID-19. Du Toit A (2020) considered COVID-19 as one of the biggest pandemic human kind has ever faced. His sentiments were built upon the fact that in only three months the illness had spread around the globe from Wuhan City. As the plague is still ongoing, the number of countries affected, confirmed cases and mortality rates are changing on a daily basis. As the virus enters different nations at different time points, these countries are at different phases of the epidemic. With this complicity, true epidemiology is only possible at the end of this pandemic. According to (World Health Organization 2020), as of 18th April, 2020, the novel SARS-CoV-2 has emerged in all seven continents and affects 213 countries and territories with 2,121,675 confirmed cases, and a mortality rate of 6.7%. To date, the top three most-affected countries with COVID-19 include the United States of America (confirmed cases at 13 088 821 and 2% mortality), India (confirmed cases 9 351 109 and 1% mortality), and Italy (confirmed cases 1 538 217 and 13.1% mortality) (WHO, 2020).

With the currently available data and reviewed literature this paper attempts to monitor, track and report on the epidemic of SARS-CoV-2 in the African continent and the impacts it has imposed on the tourism

sector. According to Africa Centers for Disease Control (CDC) (2020) the African continent is the last one and least to be affected by COVID-19 pandemic to date. As of 18th of November 2020, Africa has reported just above 2 million confirmed cases from 52 countries with a mortality rate of 5.1% CDC (2020). The virus was first seen in Egypt on 14th of February 2020, now the coronavirus has been detected in almost all African countries. Chronologically, Egypt was followed by Algeria, with its first case reported on 25th February, followed by Nigeria on 27th of February WHO (2020). Apart from these three countries, the first cases in other African countries were only detected in March with the most-affected countries so far being South Africa (confirmed cases = 2 134 290), Morocco (confirmed cases = 340 684), Egypt (confirmed cases=114 684), Ethiopia (confirmed cases = 107 660 and Tunisia (confirmed cases = 92 475), Africa CDC (2020)

However, due to inadequate testing capacity for COVID-19 in Africa the true number of cases may remain undetected, this makes it challenging to predict or conclude the factual epidemiology of COVID-19 in the continent. Quite a lot of major factors, such as late arrival of the pandemic, weak diagnostics like inadequate COVID-19 testing, lack of essential medical supplies and a large susceptible population will significantly affect and change the epidemiology of COVID-19 in the continent ¹².

VULNERABILITY AND PREPAREDNESS FOR COVID-19 IN AFRICA

To Africa the COVID-19 pandemic came as a wake-up call considering the ill factors we already have that make us a vulnerable continent to this pandemic. Some of these factors include, the high burden of infectious diseases, weak health systems, poverty and the arrival of the winter “flu” season in Southern Africa. According to the Infectious Disease Vulnerability Index (IDVI) 2016, out of 25 countries most vulnerable to infectious diseases, 22 are in the African region WHO (2020). WHO Africa estimated that there are 26 million people infected with HIV, 2.5 million have tuberculosis, 71 million have hepatitis B or C and those with malaria are around 213 million in the African region only ³. Furthermore, the double burden of noncommunicable diseases (NCDs) such as cardiovascular diseases, cancers, chronic respiratory diseases and diabetes are also immensely significant in Africa.

Mudie K et al (2020) highlighted that all these conditions compromise the body’s immunity and it could be reasonably hypothesized that the majority of the African populace, due to their immunocompromised situations, will likely be at high risk for COVID-19. Gossling S (2020), advocated that a country’s healthcare capacity plays a vital role in COVID-19 management and control. The Boston Consulting Group (2020) further found that, when compared to the developed nations such as USA, the UK and China, which over the years have proved to have cutting-edge health care systems but are still struggling to cope with the current pandemic. African countries (the majority) have weaker healthcare sectors and one can only imagine the magnitude of the effect of COVID-19 on the African region, when compared to their developed counterparts. McKenzie B (2020) went on to highlight that the continent was still in a deep pool of health- related issues which make it more vulnerable to the COVID-19 pandemic. These include, limited testing capacity, shortage of trained staff required for diagnostics and intensive care units (ICU), inadequate ventilators and ICU facilities (needed in severe cases of COVID-19), absence of personal protective equipment (PPE) for healthcare workers and insufficient funds for fueling the health sector operations.

¹ The World Economic Forum. Why Sub-Saharan Africa needs a unique response to COVID-19. [cited 2020 Nov 10]. Available from: <https://www.weforum.org/agenda/2020/03/why-sub-saharan-africa-needs-a-unique-response-to-covid-19>

² Africa Center for Strategic Studies. Mapping risk factors for the spread of COVID-19 in Africa. [cited 2020 Nov 10]. Available from: <https://africacenter.org/spotlight/mapping-risk-factors-spread-covid-19-africa/>

³ World AIDS Day. (2019). Africa: World Health Organization, 2019. Available from: <https://www.afro.who.int/regional-director/speeches-messages/world-aids-day-2019messagewhoregional-director-africa-dr>

Nachege JB et al (2020) also looked at the late arrival of COVID-19 in Southern Africa and they discovered that all respiratory viruses spread more effectively in winter, no wonder the intensity of COVID-19 increased in the winter months between May and September 2020. Experts have already predicted that the growth of the African continent will be significantly impacted by the ongoing COVID-19 outbreak⁴ Nevertheless, the magnitude of the impact will depend on the management, proactiveness and control of COVID-19 within the individual countries. One can see that because of this level of vulnerability the African states (mostly all) were not reluctant to enforce lockdown rules advised by WHO as they knew the impact the novel virus would have on their populace. These strategic measures adopted, include complete lockdowns, travel bans, closing of schools, companies, and offices ban on large gatherings (including religious, sports, social and other events), systematic quarantines, amplified testing capacity and firm infection control measures, are being executed all over the African continent to control the spread of COVID-19⁵. The virus has had a toll on various aspects of the economy including the tourism sector but what's key at this juncture is saving the human race, businesses can be rebuilt, but human life cannot be re-claimed.

SOCIO-ECONOMIC IMPACT OF COVID-19 IN AFRICA

The preliminary phase of the COVID-19 pandemic was all about clinical and epidemiological aspects however, the shift has since now changed towards the global economy. The focus on effects of COVID-19 with time maybe expected to move to the developing nations, particularly African countries which rely mostly on developed countries in almost all economical aspects. Economists from the African Development Bank Group (2020 estimated that Africa's growth in 2020 was at 3.9%, which in the best case may can now drop to 0.4% to -3.9%. Other experts from the Centre of Global Development (2020) trust that growth in Sub-Saharan Africa may fall to between -2 and -5%, this is in comparison to 2.4% recorded in 2019, with a risk of the first recession, one like the one recorded in the last 25 years. The chief aspects which may be affected by COVID-19 and will distress the African economy will be: (a) Reduction of importation of Chinese goods to a level that may leave African markets dry, (b) Decreasing oil consumption due to travel bans, border closures, social distancing and lock downs dropping down the demand for oil, (c) No market for the African mining industry, (c) Reduction of tourism, (d) Withdrawal of investors, (e) Shift of budgets from other sectors to the health sector is a timely need, and this will cause a further decline in the economic growth of these countries. Lower or no taxes lead to lower revenues for governments, which will in turn affect developing countries as the governments will be broke⁶. Of utmost importance among these economic impacts is the effect of COVID-19 on the tourism sector of Africa, this paper is going to dwell much on that and try to blend in all the indirect effects brought about.

TOURISM AS A DRIVER OF ECONOMIC GROWTH IN DEVELOPED AND DEVELOPING COUNTRIES

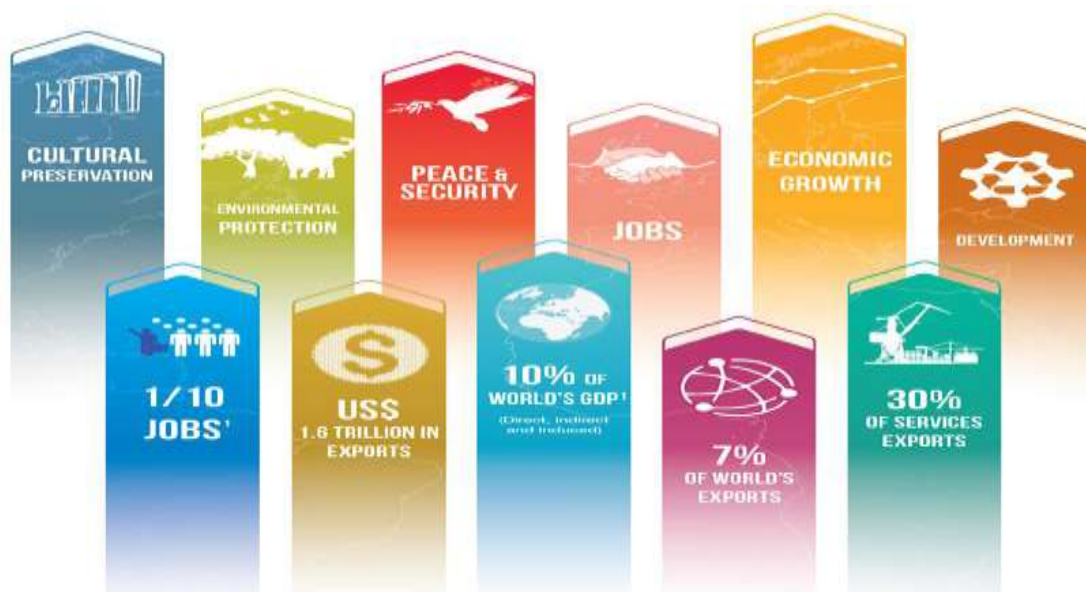
FIGURE 1 : WHY TOURISM MATTERS

The diagram below depicts a summary of why the tourism sector is of utmost importance to developed and developing countries. It also shows tourism's contributors to each nation's development.

⁴ Center for Global Development. The economic impact of COVID-19 in Africa: A round-up of this week's analysis. [cited 2020 Nov 13]. Available from: <https://www.cgdev.org/blog/economic-impact-covid-19-africa-weeks-latest-analysis>

⁵ International Monetary Fund. Policy responses to COVID-19. Available from: <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>

⁶ African Union. Impact of the coronavirus (COVID-19) on the African economy. Available from: <https://www.tralac.org/documents/resources/covid-19/3218-impact-of-the-coronavirus-covid-19-on-the-african-economy-african-union-report-april-2020/file.html>



Source of Data: UNWTO Highlights 2018

FIGURE 2 : Tourism is the world’s third largest export category



Source of Data: World Tourism Organization (UNWTO) and World Trade Organization (WTO).

Figure 2 above shows that tourism is a critical sector of the international economy. In 2019, the tourism sector was responsible for 29 % of the world’s services exports and nearly 300 million jobs around the globe. It is an important source of income and employment for developed and developing countries. The universal contraction in tourism tourist arrivals might have overwhelming economic consequences, this is so as most developing countries are extremely reliant on tourism. D’Orazio M et al, (2020) highlighted that in some countries, such as several small island developing states (SIDS), tourism accounts for more than half of the GDP, thus importance and relevance for the overall economy.

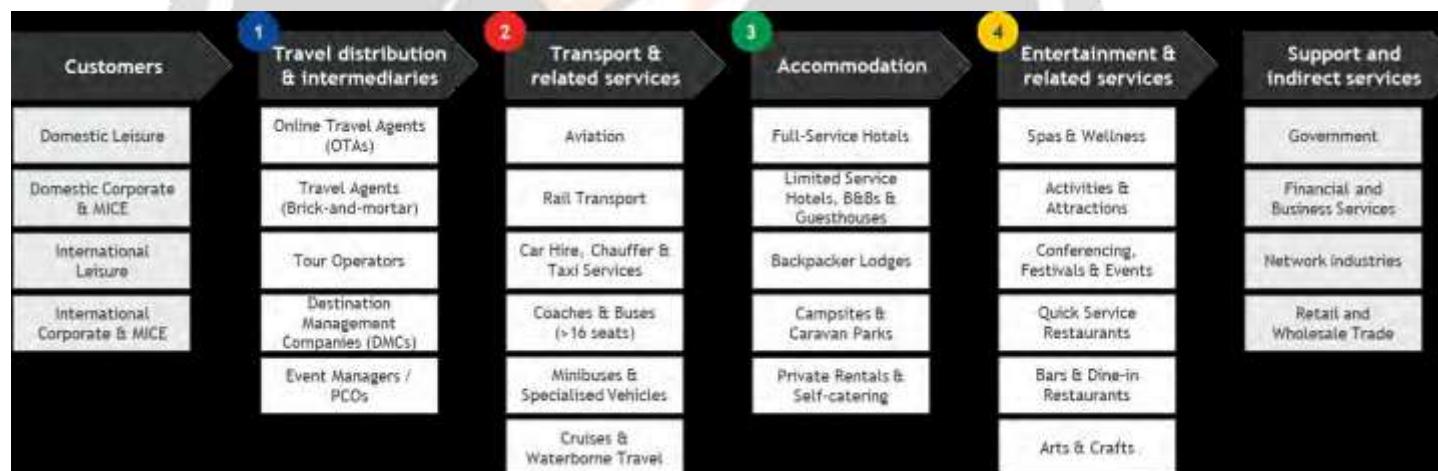
Noteworthy shares of the labor force of major economies are employed in the tourism sector (UNWTO, 2020). Tourism has an employment contribution incorporating both direct and indirect employment. Italy,

currently the country with the second-most COVID-19 cases in the world (John Hopkins University 2020), has almost 15% of its workforce directly or indirectly employed in the tourism industry. With, mature economies of developed nations (Germany, UK, France, and US) exhibiting shares of around 10% of employment for the tourism industry, coronavirus will lead to an extremely fast drop in employment in the tourism and hospitality industry. This will leave substantial gaps in the overall Gross Domestic Product (GDP) in countries with a high relative share of tourism in the economy

According to (WTO, 2020), tourism has developed to be a major global industry with an annual average growth rate of 4-5% and creating 8% of the global GDP and 10% of employment. However, Yozcu & Cetin, (2020) found that the tourism industry is very susceptible to crises of different origins, examples include natural disasters, political crises, epidemics, economic crises, and terror. The tourism product thus, hotel beds, airline seats, restaurant tables and guide services are perishable, this is unlike physical goods, perishables cannot be stored for future use. Past crises with few exceptions (for example 2008 Financial Crisis) had regional impacts and their global impact on tourism volume were limited. Until now, considering the speed and impact, COVID-19 is the most serious crises the tourism industry has ever faced. This calamity is estimated to have a seven times larger impact on tourism than the 2008 Financial Crises. The effects of Covid-19 are expected to outspread for a year or two and result in a decrease of 39% in global tourism volume. Tourism Economics (2020), expects the tourism industry to recover to 2019 pre-crisis levels not before 2023 but much later because of the effects of COVID-19.

FIGURE 3: Tourism Value chain

Below is the tourism value chain which shows how various of the economy interact to bring out one tourism product. The effects are both direct and indirect and in the face of Covid-19 there was an umbrella effect.



Source: WTO (2019)

RELEVANCE OF THE STUDY

The impact of the COVID-19 disease on the global economy is poised to be much higher as compared to the impact of the global financial crisis of 2007-2008, (Yozcu & Cetin, 2020). To date COVID-19 is responsible for abetting human suffering, destabilizing global economies and laying profound inequalities and exposing exactly the failures that are talked of in the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change WHO (2020). WHO targets on ending COVID-19 by taking bold steps that can steer the world back on track towards the Sustainable Development Goals. It also highlights the need for profound systematic shifts to more sustainable economies that work for both the people and the planet .Main SDGs that relate to the pandemic and the tourism sector are that of ensuring No poverty(1), Good health and well-being (3),Decent work and Economic growth and

industry(8), innovation and infrastructure, just to name a few(9). Faced with such targets it is the aim of this paper to highlight through a systematic review of both developed and developing nations the challenges, impacts, lessons and solutions to combating COVID-19 adverse economic effects on the tourism sector. Though the novel virus started by affecting developed nations, Africa and other developing nations have been hit last and worry is on Africa's under developed health infrastructure and vulnerability to the virus. There have been socio-economic impacts experienced and they have been seen to be greatly diffused through, among others; reduced travel, reduced visa receipts, currency exchange bureaus, hotels, restaurants, travel insurance, arts markets, and throughout taxi and vehicle rental activities. As both developed and developing nations tightened restrictions on travel into individual countries, the volumes of tourists have declined markedly. This paper will also discuss the resumption of activities during and after the pandemic and developing simulation & scenario modeling that will mainly benefit and proffer solutions to developing countries possible practical policy response to mitigate its negative consequences and achieve the SDGs.

This review is structured as follows: the methodology section discusses inclusion; the results, research approaches used, subject matter studies, geographical area and discussion sections provide outputs of the literature search and describes the socio-economic status of the hospitality industry brought about by COVID-19.

STATEMENT OF OBJECTIVES

Main objective of the study

- i. The objective of this study is to conduct a systematic review on the socio-economic challenges brought about by COVID-19 on the tourism sector in both developed and developing countries.

Specific objectives of the study

- ii. To have a consolidation of literature that will help understand the impacts of COVID-19 on the tourism sectors of African nations and have context-based interventions primarily for the provision of solutions to the problems brought about by the pandemic.
- iii. More so, this systematic review will also adopt lessons from developed nations that will assist policymakers, stakeholders and humanitarians to make informed and evidence-based decisions and policies mainly in developing countries of Africa where the pandemic has more detrimental effects because of our health sector.

METHODOLOGY

The studies for this review were found by searching for articles published between January 2020 and November 2020. Titles, abstracts, reference lists and full texts were assessed for inclusion and a search was conducted using combinations of the following terms: COVID-19 and hospitality industry, COVID-19 and event industry, COVID-19 and hotel industry, COVID-19 and restaurant industry and COVID-19 and tourism industry. Article sources included Google Scholar, PubMed, Embase and WHO COVID-19 databases. Studies were included in this review if they were in English. The qualitative approach used is supported by relevant statistics and figures from the official websites of organization like WHO and the World Bank. All included articles were categorized and stored in the main database according to year, source of publication, the industry segment, geographic location, research approach, aspect of the hospitality industry, and methodology.

CHARACTERISTICS OF STUDIES SELECTED FOR REVIEW

First author and year	Title	Segment of industry	Geographic Location	Approach
Thams, A et al, 2020	An Initial Assessment of Economic Impacts	Tourism-related businesses	Ghana	Reporting the impacts of the COVID-19

	and Operational Challenges for the Tourism & Hospitality Industry due to COVID-19			pandemic
Dube K et al, 2020	COVID-19 cripples' global restaurant and hospitality industry	Restaurant and hospitality industry	South Africa	Reporting the impacts of the COVID-19 pandemic
Hao F et al 2020	COVID-19 AND China's hotel industry: impacts, a disaster management framework, and post pandemic agenda	Hotel industry	China	Discussing the resumption of activities during and after the pandemic
Williams C, et al, 2020	COVID-19 and undeclared work: Impacts and policy responses in Europe	Hospitality workforce	Europe	Reporting the impacts of the COVID-19 pandemic
Karim W et al, 2020	The Movement Control Order (MCO) for COVID-19 crisis and its impact on tourism and hospitality sector in Malaysia	Tourists arrivals	Malaysia	Reporting the impacts of the COVID-19 pandemic
Lapointe D et al 2020	Reconnecting tourism after COVID-19: The paradox of alterity in tourism areas	6-foot tourism	Canada	Discussing the resumption of activities during and after the pandemic
Gossling S et al, 2020	Pandemics, tourism and global change: A rapid assessment of COVID-19	Airlines, Accommodation, sports events, restaurants, cruises	Global	Comparing COVID-19 with previous public health crises
Sonmez S et al 2020	Understanding the effects of COVID-19 on the health and safety of immigrant	Hospitality workforce	United States	Discussing resumption of activities during and after the pandemic

	hospitality workers in the United States			
Sheresheva M.Y et al 2020	Coronavirus and tourism	Behavior and preferences of tourists	Russia	Discussing resumption of activities during and after the pandemic
Higgins-Desbiolles, F. et al, 2020	Socialising tourism for social and ecological justice after COVID-19	Socializing tourism	Global	Discussing resumption of activities during and after the pandemic
Bakar, N, A et al , 2020	Effect of Coronavirus disease (COVID-19) to the tourism industry	Supply-demand in tourism industry	Global	Developing simulation & scenario modeling
Ulak N, 2020	A preliminary study of novel Coronavirus disease (COVID-19) outbreak: A pandemic leading crisis in tourism industry of Nepal	Tourism related business	Nepal	Reporting the impacts of the covid 19 pandemic
Kumar V, 2020	Indian tourism industry and COVID-19: Present scenario	Tourism sectors	India	Reporting the impacts of the COVID-19 pandemic
D’Orazio M et al, 2020	Sustainable and resilient strategies for touristic cities against COVID-19: An agent-based approach	Touristic cities	Italy	Developing simulation & scenario modeling
Chen H et al, 2020	A content analysis of Chinese news coverage on COVID-19 and tourism	Different aspects of tourism industry	China	Reporting the impacts of the COVID-19 pandemic
Rogerson, C.M & Rogerson J.M. (2020).	COVID-19 and Tourism Spaces of Vulnerability in South Africa	Vulnerable touristic cities	South Africa	Reporting the impacts of the COVID-19 pandemic
Mehtar S et al,	Limiting the	Airlines,	Africa	Developing simulation

2020	spread of COVID-19 in Africa: one size mitigation strategies do not fit all countries	Accommodation, sports		& scenario modeling
Chirisa I et al, 2020	Scope for Virtual Tourism in the Times of COVID-19 in Select African Destinations	Vulnerable touristic cities	Zimbabwe and Africa	Discussing resumption of activities during and after the pandemic
Hillis A et al, 2020	Sex tourism, disease migration and COVID-19: lessons learnt and best practices moving forward	Sex tourism	Senegal and Africa	Discussing resumption of activities during and after the pandemic

Source: Reviewed literature (2020)

SUMMARY OF KEY FINDINGS OF COIVD 19 AND THE TOURISM SECTOR

Author	Sector studied	Challenges faced	Possible solutions/Strategies
Thams, A et al, 2020	Tourism related businesses	-60% decline in demand for most hotels, restaurants, tourist attractions, car rental and tourism related transport among other tourism and leisure related businesses.	-Temporary tax cuts and reductions, principally transaction-based taxes for hotels and airlines. -Reactivation of markets
Dube K et al, 2020	Restaurant and hospitality industry	-Sit-in guests dropped to zero -movement restrictions and lockdowns -Loss of employment and revenue	-Extra-ordinary financial and other support measures for the sector -Safety and health protocols as the industry gradually reopens. -Empowerment and equipment of destination management companies to orchestrate the recovery plan
Hao F et al 2020	Hotel industry	-Aspects of hotel industry permanently affected -Product design affected	-Market reshuffling -Intelligence transformation -Digitalization
Williams C et al , 2020	Hospitality workforce	-Lack of protection and support measures for undeclared work	-Voluntary disclosure initiatives/schemes
Karim W et al, 2020	Tourist arrivals	-Pausing of all airline's operations -No occupancy of hotel rooms which let to laying	-Customers ought to take precautions that ensure they are safe while flying and in hotel rooms

		off of workers	-Social distancing and hygiene at all times
Lapointe D et al 2020	6 foot-tourism	-Complete halt of tourism operations	-Relinking of tourism to the needs of the host communities as part of a survival strategy in a time when there are no tourists -Controlled tourism development -Ensuring sanitary safety
Gossling S et al, 2020	-Airlines -Accommodation -Sports events -Restaurants -Cruises	-20-30% decline in international arrivals -Quarantines -Accommodation occupancy dropped -Unemployment in accommodation and food industries	-Discounted prices for cruise ships -Fast-track vaccine research and disease monitoring -Rebuilding of readiness for the next pandemic - ending mass tourism and pilgrimage tourism - conference tourism, virtual reality tourism, and medical tourism;
Sonmez S et al 2020	Hospitality workforce	-Laying off of immigrant service workers -Devastation of tourism-dependent destinations -Increase in occupational stress thus increase in mental health and physical health stresses. -Chronic stress levels shooting	-Development of frameworks that eradicate health and safety disparities especially among immigrants -Workplace safety measures that are aggressive i.e disinfecting of hotels
Sheresheva M.Y et al 2020	Behavior and preferences of tourists	-Restrained demand and mobility	-Administrative mutual assistance which supports domestic and inbound tourism -Tax holidays
Higgins-Desbiolles, F. et al, 2020	Socializing tourism	-Neoliberal injustices and exploitation	-Make tourism responsive and answerable to the society in which it occurs i.e socialize tourism -Introduction of social licenses to operate -Tourism corporations must pay taxes -Cooperatives and social enterprises should be

			facilitated to support tourism -The types of tourism developed should be decided by the local community
Bakar, N, A et al, 2020	Supply-demand in tourism industry	Record surge in unemployment Low product and service demand by consumers	Research that helps on developing an anti-virus for COVID-19
Ulak N, 2020	Tourism related business	-Uncountable job losses immobility of traveler's -Hotel rooms and car hire cancellations	-Conducting background briefings for journalists, tour operators and travel agents -Effective tourism planning and networking with international intermediaries -Safety and security at a destination assurance
Kumar V, 2020	Tourism sectors	-Reservation cancellations -A drop of tourist arrivals -International airports closed -Forced leaves with no pay for employed	-The government and stakeholders should offer financial aid to tourism industry -Suspension of unnecessary operational material purchases -Conducting online training and development programs for the employees
D'Orazio M et al, 2020	Touristic cities	Travel limitations Closure of touristic cities	-Social distancing -Facial mask implementation
Chen H et al, 2020	Different aspects of tourism industry	-A fall in internal tourism revenue by 20.6 % for many operators. -Closing down of most sight-seeing scenic spots -Psychological pressure on tourists	-Emergency plans and strictly restricting tourism activities -Providing a full refund to tourists -Eliminating related processing fees due to changes and extensions
Rogerson, C.M & Rogerson J.M. (2020).	Vulnerable touristic cities	-Civil unrest -Drop in tourist arrivals -Cancellations of reservations -Unemployment	-Stiffer laws to covid 19 regulation offenders -Social distancing -Handouts and allowances for those affected
Mehtar S et al, 2020	Airlines and tourism cottage industries	-Heavy burden on informal economic and	-Scaling up of public health infrastructure

		casual labor sectors	-Massive testing and capacity building -Information campaigns for personal hygiene
Chirisa I et al, 2020	Vulnerable touristic cities	-Confidence levels among traveler's -Loss of revenue among industry investors entrepreneurs -Loss of jobs among employees -Lots of xenophobia	Packaging Virtual Tourism
Hillis A et al, 2020	Sex tourism	-Physical sex tourism industry is currently non-existence -Poverty for sex workers Increase in cyber-sexual activities and bullying	-Decentralization of sexual health services -Public health messaging scale-up preparedness

Source: Reviewed literature (2020)

DISCUSSION OF THE CHALLENGES (IMPACTS) AND LESSONS BROUGHT ABOUT BY COVID-19 ON THE TOURISM SECTOR IN DEVELOPED AND DEVELOPING NATIONS

The reviewed papers used different research approaches and focused on various subjects related to the hospitality industry during the COVID-19 pandemic. However, all papers have been classified into four groups as follows: (1) developing simulation and scenario modeling, (2) reporting impacts of the COVID-19 pandemic, (3) comparing the COVID-19 pandemic with previous public health crises and (4) discussing the resumption of activities during and after the pandemic

(a) Developing Simulation & Scenario Modeling

Authors like Bakar and Rosbi (2020) utilized the supply and demand curve to analyze the impacts of COVID-19 on the hospitality industry. In developing the supply and demand function, the demand function was created using factors of price setting of selected goods, tastes and preferences of customers, customers' expectations, the average income of certain countries, and the number of buyers. Meantime, the supply function was built using basics of production techniques, product price, price expectations, price of substitute and complementary goods, supply stocks, and the number of available sellers. The supply and demand curve were then developed in the market equilibrium condition where the demand in the market is equal to the supply in the market. It was found that there was high supply facing low demand and even after the reduction of fees, there is low demand due to customer preferences and current behavior,

Lastly, changes in market equilibrium as the result of the COVID-19 outbreak were examined. The results indicate that the pandemic formed the high panic levels among people and consequently decreased overall demand in the tourism and hospitality industry, Bakar and Rosbi (2020). In the final part of the paper in scenario modelling the study urged governments to discover a vaccine as quickly as possible and identify policies to prevent the further reduction in the demand for tourism and hospitality services during the period after the pandemic.

Another author D'Orazio et al, (2020), determined the spread of the virus in tourist-oriented cities and managed to develop what he called sustainable and resilient strategies for these cities. In doing so he used

the agent-based model, this model evaluated the number of infectors within the touristic urban area over time and the number of visitors who return home being infected over time. After thorough analysis the model discovered that social distancing-based measures such as social distancing-based measures and facial mask implementation were related to significant economic losses. The author went on to allude that the phenomenon appeared to be an effective policy in locations with the highest infection rates.

(b) Reporting the Impacts of the COVID-19 Pandemic

On this paragraph, papers applied secondary data analysis to report COVID-19 pandemic's socio-economic impacts on the hospitality industry. The studies reported effects of the novel virus on different aspects of the hospitality industry, including job and revenue losses, no or low access to loans, market demand, emerging new markets, unfriendly treatment of foreigners, and domestic and formal matters of hospitality workers and hotel cleaners. Numerous papers reviewed, reported the impact of COVID-19 on specific critical domains of the hospitality industry, examples include the virus' effects on undocumented employees and hotel cleaners. Williams and Kayaoglu (2020) argued that the most vulnerable workers in the industry need governmental financial support but cannot receive assistance, most likely because they are undocumented immigrants who were working without declaring their work. Other studies focused on the pandemic's impacts on specific countries, including China, Malaysia, Nepal, and India, Ulak (2020)

(c) Comparing COVID-19 with Previous Public Health Crises

Gössling et al (2020) reviewed the impact of previous crises on global tourism, including the Middle East Respiratory Syndrome (MERS) outbreak (2015), the global economic crisis (2008–2009), the SARS outbreak (2003), and the September 11 terrorist attacks (2001). The authors proved that crises in the past did not have long-term effects on tourism of the world. The writers also warned about increasing pandemic intimidations for several reasons, to note was the fast-growing world populace, the increase in the intake of processed/low-nutrition foods and rapidly developing global public transportation systems, these poised to be breeding grounds of the virus if not well managed. Gössling et al (2020) also discussed the impact of COVID-19 on different hospitality value chain. He further distinguished the impact of COVID-19 in view of two different aspects of (1) observed impacts (for example, the lowering in hotel occupancy rates and liquidity glitches in the restaurant industry) and (2) projected effects (for example accommodations sector revenue forecasts and the estimation of revenues)

(d) Discussing resumption of activities during and after the pandemic

Several papers discussed redesigning and transforming the tourism and hospitality industry after COVID-19 pandemic. Proposed ideas include increasing resilience and security of the tourism and hospitality workforce in after the pandemic by cross-training and schooling different skills to workers, transforming and refocusing the tourism and hospitality industry towards domestic attractions rather than global destinations and the redesigning spaces and touristic sites to assure a 6-foot distance between tourists Higgins-Desbiolles, F (2020).

Another author, Hao et al (2020) developed a COVID-19 management framework as a result of reviewing the overall impacts of the COVID-19 pandemic on China's hotel industry. He devised an anti-pandemic process. The anti-pandemic process adopted the six phases of disaster management, thus the (a) pre-event phase (taking prerequisite actions), (b) the prodromal phase (observing the warning signs), (c) the emergency phase (taking urgent actions), (d) the intermediate phase (bringing back essential community services), (e) the recovery phase (taking self-healing measures), (f) the resolution phase (restoring the routine)

Sönmez et al (2020) reviewed the impacts of the COVID-19 pandemic on immigrant hospitality workers' health and safety. A significant rise in occupational stress was observed in immigrant hospitality workers, this was proved to have been recorded over the past 15–20 years. With this evidence one may see that COVID-19 pandemic may lead to more straining of workers and potentially weaken their mental and

physical health state. The authors recommended different actions in aspects of public and corporate policy and workplace policy to be adopted.

DISCUSSION OF THE SOCIO-ECONOMIC IMPACTS OF COVID 19 ON THE TOURISM SECTOR

Market demand: No matter the scenario, tourism will see a sharp and long-term decrease in tourism spending as this pandemic will have economic ripple effects. The purchasing power will decline significantly, Bakar and Rosbi (2020). A majority of events (e.g. meetings, Olympics) have already been cancelled, business travels will also continue declining and digitalization through virtual meetings and online systems will take over. Thams, A et al, 2020 and Hao et al (2020) highlighted that product design of the tourism sector was greatly affected. The results indicate that the pandemic formed the high panic levels among people and consequently decreased overall demand in the tourism and hospitality industry, Bakar and Rosbi (2020).

Revenue losses: A significant number of papers in this review focused on the revenue losses brought about by COVID-19 to the hospitality sector. Chirisa I et al (2020) , Mehtar S et al (2020), Rogerson, C.M & Rogerson J.M. (2020), Kumar V (2020), Bakar, N, A et al (2020), Ulak N (2020) and Kumar V (2020) found out that the sector faces particular challenges due to this cross-cutting, multi-level, and fragmented nature of the tourism value chain. Tourism services are heavily codependent and a predicament in one sub-sector, for example the aviation sector, may have devastating follow-on trickle down effects on the tourism value chain as it ensures tourist fly from various destinations to book hotels, rent cars and eat. A key challenge as the sector looks to re-open is how to get all these interlinked parts of the tourism supply chain working together again, to provide a seamless tourism experience for visitors. The tourism value chain which consists of airlines, cruise lines, railways, hotel resorts, restaurants, tour guides, sports and recreation and travel technology companies, these all lost a great deal in monthly revenues and recovery from this will take time.

Job loss: Thams, A et al (2020), Dube K et al (2020), Hao F et al (2020) and Lapointe D et al 2020 highlighted the effects of the coronavirus on the employment status of various workers in both developed and developing countries. Those who were affected significantly were those unregistered workers with undeclared work, when there was time to receive unemployment and relief benefits, they didn't receive anything as they were not in the database. In developing countries this however was not the case, to note was a loss of family incomes and an increase in poverty levels, unrest and a possible shoot in crime levels as people resort to malicious ways of fending for their families. Further, there is a net loss to the economy due to unemployed labor and capital. The tourism sector has contracted dramatically and this may mean many workers may become unemployed or displaced permanently or temporarily. Displaced workers may resort to other sectors within countries; however, it may be difficult to find employment in other sectors or industries especially during an economic downturn caused by an unpredictable pandemic. Employment may increase in sectors not closely linked to tourism; this may happen through the absorption of the displaced workers from the tourism industry. Lucky workers may have all round qualifications which are not too specialized or may fit in any job regardless of the qualifications required, examples include accounting personnel's, general hands and security guards. In many developing countries tourism offers an opportunity to enter the job market, though frequently with precarious working conditions. Tourism often serves as a first entry point into work especially for women, youth, migrant workers and rural population (ILO, 2013), this is so as the tasks are easy to grasp and mainly require character and not qualifications.

Safety and Health: This aspect was seen to affect both the customer and the supplier in the sense that if proper hygiene was not enforced it will mean everyone would suffer. However, Sonmez S et al (2020) highlighted that this was of utmost importance to workers on and off duty as since the lockdowns have

been enforced high levels of stress and chronic disease development have been recorded among laid off workers, while the health of most workers exposed to clients with the virus have deteriorated. To take note are those that were making a living out of sex tourism. Hillis A et al, (2020), notes that positive impacts brought about by COVID-19 were the reduction in sexual activities between locals and tourists. Usually these activities are unsafe as both parties will be intoxicated and usually end in importation and exportation of sexually transmitted diseases and HIV/AIDS. Now with locals locked down, time had been taken to identify these populations and better reach them with Sexual Reproductive Health Services they need and track their performance, especially those on ART, though some had challenges accessing them and called for decentralized provision of health services Hillis A et al, (2020)

Hospitality workers: A majority of tourism workers in developed nations are immigrants that are under 35 years, Sonmez S et al (2020). A report by the UNWTO (2019) stated that, women's work in tourism is dominated by informality. This is so due to (a) high staff turnover, (b) long working hours, (c) subcontracting, (d) flexible working conditions, (e) the prevalence of casual workers and (f) seasonal variations in employment, this is hardly appealing to domestic citizens. Considering these characteristics of the tourism job market low-skilled, casual and temporary workers are likely to be the first to lose their jobs and they will face difficulty in seeking employment in other sectors of the corporate sector. Due to the specialized nature of their qualifications, many workers failed to be absorbed into other industries leading to massive unemployment levels and a great deal being repatriated back home. Civil unrest and rise in stress levels was also highlighted by Sonmez et al (2020).

Social costs: Social costs found were those that include the separation of families, closed recreational areas and the closing down of borders. Hillis A et al, (2020), found various costs that affected the nonexistence of physical sexual activities especially for sex workers who later succumbed to cyber bullying or poverty as most of their clients were locked down in their home countries. Other social costs include neoliberal injustices highlighted by Higgins-Desbiolles, F. et al, (2020) Long distance relationships that survived on frequent weekly visits were affected, some failed to attend burials because of the maximum number of attendees and some lost bread winners and were left in abject poverty.

Recovery of the industry. Most authors focused on the recovery of the tourism industry during and after the pandemic. The notable contribution was from Dube k et al (2020 and Gossiling et al (2020)), who buttressed on the need to adopt virtual tourism measures, focusing more on the domestic market for domestic tourism, ending mass tourism and pilgrimage tourism

RECOMMENDATIONS FOR AFRICAN COUNTRIES AND OTHER DEVELOPING NATIONS

According to (John Hopkins University, 16 March 2020), they reported that the developed nations have almost 15% of its workforce directly or indirectly employed in the tourism industry. Also, these mature economies such as Germany, the UK, France, and the US exhibit shares of around 10% of employment for the tourism industry. The current crisis will lead to an extremely fast drop in employment in the tourism and hospitality industry. This will leave substantial gaps in the overall GDP in countries with a high relative share of tourism in the economy, this is so as the tourism industry contributes mostly over 30% of these nations' GDP. Hence when comes to deal with the effects of the virus Africa and all other least developed nations may learn a lot of how to recover from this deadly spell and ensure the tourism industries recover and keep contributing to the global economy. The paper below gives a consolidation of the lessons and solutions that have been devised into notable recommendations that may be used in least developed nations:

- 1) **Visitor protection.** In the tourism sector it is a proved model that tourists outside their normal environment often suffer from an information deficit. This has led countries are taking steps to provide assistance and vital information in multiple languages and formats. Hence in order to boost the tourists service sector adequate safety and health procedures

should be adopted, thus at airports, in trains, by hotels and car rental agencies. Proper, visible and understandable instructions should be posted everywhere and anywhere. Thus, in emails, stickers in vehicles and rooms should be in languages and with illustrations i.e pictures, formats and diagrams of how to stay clean and toll-free numbers and COVID-19 nearby clinics highlighted. The room service should be adopted and more common, standards for hygiene and sanitation should be enhanced, disposable materials should also be more popular, rooms will also be redesigned to include portable kitchens to ensure effective social distancing. Sharing combos and the sharing economy should also be let go to ensure privacy and social distancing. This also applies for tour operators, tour guides and travel agencies especially in Africa a more professional and formal structure ought to be adopted in handling foreign clients. The African governments should follow the Abuja Declaration of 2000 now, more than ever and allocate enough funds (15% of annual budgets) to the health sector that ensure proper hygiene is enforced, scaling up of the public health infrastructure and conducting of massive testing which in turn attracts visitors.

- 2) **Worker and business support.** Some developed nations have introduced recovery measures specifically aimed at the self-employed, which is particularly relevant for many micro and small tourism businesses. In countries where the impact of the pandemic on tourism businesses has been particularly momentous, governments and private well-wishers have focused on the provision of financial relief to tourism cottage industries, by way of postponed VAT payment. Non-financial include, information provision, research on possible cures, disinfectants and advisory services to help these growing companies observe with new rules. Governments in developing nations are encouraged to have initiatives and policy frameworks that ensure the tourism industry boosts back. Examples include VAT exemptions, Built-Operate-Transfer (BOT) initiatives, duty scrapping for fixed assets being imported for the tourism industry, short term debt relief schemes. In cases where some enterprises are unlikely to recover wage subsidies should be designed to help workers move to new industries, support of the ICT infrastructure and investment in enhanced sanitation conditions, provision of potable water and urban infrastructural improvements, and also collaboration with other nations on bilateral terms to increase monitoring of epidemic outbreaks and increase response readiness.
- 3) **Political and Financial commitments.** WHO also suggests that “political and financial commitments are key to ensure that tourism leads wider economic and social recovery, as proven in times past on the back of the highly resilient nature of the sector and its ability to bounce back strongly” (WHO, 2020). Developing nations can also adopt this strategy by creating private and public partnerships in the tourism sector that ensure commitment in out beating the pandemic is ensured. Politicians and economists should have one common goal of conducting cost efficient initiatives that ensure bouncing back of the tourism sector, in cases where there are conflicting interests the use of consultants is advised for example those from the humanitarian sector. There should also be an all-round management of the outbreak as well as practical publicity campaigns implemented effectively at all levels especially by politicians. Technocrats should also build bilateral agreements with super powers who wish to invest directly into nations, by easing the way of doing business in host nations, by for example shortening number of days to open a company, tax holidays and favorable foreign exchange rates
- 4) **Destination support.** The effect of COVID-19 on destinations varies depending on a variety of factors, with those most dependent on international markets likely to be most affected. Additional key influences include the nature of the tourism offer, the impact of travel restrictions on visitor flows, the scale and complexity of business operations, domestic tourism market size, and the place of tourism in the broader economy. Tailored responses will often be required. To note is that of packaging virtual tourism and harnessing the domestic market. For the tourist virtual marketing and tourism is the way to go until travel restrictions have been removed, while ensuring the locals have access to the destinations at affordable prices. Thus, discounts for the locals are advised to keep the touristic cities and sites viable. Destination should ensure minimal human contact and overcrowding, African nations may focus on building

more airports and improving railway lines to decongests main airports and main roads, this will ensure tourists have fast immigration processes in uncrowded places. Also, destinations to do with nature should be heavily invested in for example Botanic gardens, lakes and hiking areas that ensure social distancing and have less congested surfaces.

CONCLUSION

This paper provided a systematic review of the published research topics pertinent to the hospitality industry in the time of COVID-19 pandemic, thus before, during and after. It started off by entailing why the tourism sector is of utmost importance to both developed and developing countries' economies. The study also unearthed the vulnerability of African nations to COVID-19 and the socio-economic impacts it brings to developing communities. Government and corporate responses, that influence the long-term health and safety of tourism and hospitality workers were also highlighted from the reviewed literature. One may see that in order for the tourism sector to bounce back to the third best GDP contributor, development and application of new technologies and equipment in the hospitality industry that protect guests and workers should be adopted. Hence the victims of the pandemic, especially developing countries should be able to create diverse action plans for each setting to be put into action after recovery.

REFERENCES

- Bakar, N.A.; Rosbi, S. Effect of Coronavirus disease (COVID-19) to tourism industry. *Int. J. Adv. Eng. Res. Sci.* **2020**, *7*, 4.
- Boston Consulting Group. South Africa. Fighting COVID-19 in Africa will be different. Available from: <https://www.bcg.com/en-za/publications/2020/fighting-covid-in-africa.asp>
- Boston Consulting Group. South Africa. Fighting COVID-19 in Africa will be different. [cited 2020 Nov 6]. Available from: <https://www.bcg.com/en-za/publications/2020/fighting-covid-in-africa.aspx>
- CDC. (2020). COVID-19 dashboard. [cited 2020 Nov 18]. Available from: <https://africacdc.org/covid-19/> Center for Global Development. The economic impact of COVID-19 in Africa: A round-up of this week's
- Chen, H.; Huang, X.; Li, Z. A content analysis of Chinese news coverage on COVID-19 and tourism. *Current. Issues Tour.* **2020**, 1–8.
- Chirisa, Innocent, Tafadzwa Mutambisi, Marcyline Chivenge, Elias Mabaso, Abraham R. Matamanda, and Roselin Ncube. "The urban penalty of COVID-19 lockdowns across the globe: manifestations and lessons for Anglophone sub-Saharan Africa." *GeoJournal* (2020): 1-14.
- Coronavirus disease (COVID-19) outbreak situation. Geneva: World Health Organization, 2020 COVID-19: An agent-based approach. arXiv **2020**, arXiv:2005.12547. Available online: <https://arxiv.org/abs/2005.12547>
- D'Orazio, M.; Bernardini, G.; Quagliari, E. Sustainable and resilient strategies for touristic cities against despite external shocks. [cited 2020 Nov 11]. Available from: <https://www.afdb.org/en/news-and-events/>
- Du Toit A. Outbreak of a novel coronavirus. *Nat Rev Microbiol.* **2020**;18:123. doi:10.1038/s41579-020-

- Gössling, S.; Scott, D.; Hall, C.M. Pandemics, tourism and global change: A rapid assessment of COVID-19. *J. Sustain. Tour.* **2020**, 1–20.
- Hao, F.; Xiao, Q.; Chon, K. COVID-19 and China's Hotel Industry: Impacts, a Disaster Management Framework, and Post Pandemic Agenda. *Int. J. Hosp. Management.* **2020**, 90, 102636.
- Higgins-Desbiolles, F. Socialising tourism for social and ecological justice after COVID-19. *Tour. George.* **2020**, 22, 610–623.
- Hillis, Alyson, Conan Leavey, Stephanie Kewley, Susan Church, and Marie Claire Van Hout. "Sex tourism, disease migration and COVID-19: lessons learnt and best practices moving forward." *Journal of travel medicine* 27, no. 7 (2020): taaa144.
- Hopman, Joost, Benedetta Allegranzi, and Shaheen Mehtar. "Managing COVID-19 in low-and middle-income countries." *Jama* 323, no. 16 (2020): 1549-1550.
- Humphrey, Christopher. The African Development Bank: Ready to Face the Challenges of a Changing Africa?. Article 4 of 2015.
- International Labour Organization (2013), International perspectives on women and work in hotels, catering and tourism, ILO, Geneva (online), available at: www.ilo.org
- John, Ann, Chukwudi Okolie, Emily Eyles, Roger T. Webb, Lena Schmidt, Luke A. McGuiness, Babatunde K. Olorisade et al. "The impact of the COVID-19 pandemic on self-harm and suicidal behavior: a living systematic review." *F1000Research* 9, no. 1097 (2020): 1097.
- Johns Hopkins School. (2020). COVID-19: School of Public Health Insights, available @ www.jhsph.edu/covid-19, accessed on (21-11-2020).
- Kaitano Dube, Godwell Nhamo & David Chikodzi (2020) COVID-19 cripples global restaurant and hospitality industry, *Current Issues in Tourism*, DOI: [10.1080/13683500.2020.1773416](https://doi.org/10.1080/13683500.2020.1773416)
- Karim, W.; Haque, A.; Anis, Z.; Ulfy, M.A. The Movement Control Order (MCO) for COVID-19 Crisis and its Impact on Tourism and Hospitality Sector in Malaysia. *Int. Tour. Hospitality J.* **2020**, 3, 1–07.
- Kumar, V. Indian Tourism Industry and COVID-19: Present Scenario. *J. Tour. Hosp. Educ.* **2020**, 10, 179–185.
- Lapointe, D. Reconnecting tourism after COVID-19: The paradox of alterity in tourism areas. *Tour. George.* **2020**, 22, 633–638.
- McKenzie B. The impact of COVID-19 on key African sectors. [cited 2020 Nov 17]. Available from: [https:// www.bakermckenzie.com/en/insight/publications/ 2020/03/](https://www.bakermckenzie.com/en/insight/publications/2020/03/)
- McKenzie B. The impact of COVID-19 on key African sectors. Available from: <https://www.bakermckenzie.com/en/insight/publications/2020/03/the-impact-of-covid19-on-key-africansectors>

Mining Review Africa. The impact of COVID-19 on The mining sector. [cited 2020 Apr 19]. Available from: <https://www.miningreview.com/investment/theimpact-of-covid-19-on-the-global-mining-sector/>

Mizumoto, K.; Kagaya, K.; Zarebski, A.; Chowell, G. Estimating the asymptomatic proportion of coronavirusdisease 2019 (COVID-19) cases on board the Diamond Princess cruise ship, *Yokohama, Japan*, 2020.Eurosurveillance 2020, 25, 2000180

Morawska, L.; Cao, J. Airborne transmission of SARS-CoV-2: The world should face the reality. *Environ. Int.* **2020**, 139, 105730.

Mudie K, Tan MMJ, Kendall L, et al. Non-communicable diseases in sub-Saharan Africa: a scoping review of large cohort studies. *J Glob Health.* 2019;9:020409.[doi:10.7189/jogh.09.020409](https://doi.org/10.7189/jogh.09.020409)

Nachega JB, Seydi M, Zumla A. The late arrival of COVID-19 in Africa – Mitigating pan-continental spread. *Clin Infect Dis.* 2020.;pii:ciaa353. [doi:10.1093/cid/ciaa353](https://doi.org/10.1093/cid/ciaa353)

Oron, D.P.; Topol, E.J. Scripps Research. Available online: <https://www.scripps.edu/science-and-medicine/translational-institute/about/news/sarc-cov-2-infection/> (accessed on 22 November 2020).

Oron, D.P.; Topol, E.J. Scripps Research. Available online: <https://www.scripps.edu/science-and-medicine/translationalinstitute/about/news/sarc-cov-2-infection/>

Peeri, N.C.; Shrestha, N.; Rahman, M.S.; Zaki, R.; Tan, Z.; Bibi, S.; Baghbanzadeh, M.; Aghamohammadi, N.; Zhang, W.; Haque, U. The SARS, MERS and novel coronavirus (COVID-19) epidemics, the newest and biggest global health threats: What lessons have we learned? *Int. J. Epidemiol.* **2020**, 49, 717–726.[press-releases/african-economic-outlook-2020-africas-economy-forecast-grow-despite-externalshocks-33839](https://doi.org/10.1093/ije/dyaa033)

Rosemberg, M.-A.S. Health and safety considerations for hotel cleaners during COVID-19. *Occupational. Medicine.* **2020**, 70, 214–215.

Shabir Ahmad Lone & Aijaz Ahmad (2020) COVID-19 pandemic– an African perspective, *Emerging Microbes & Infections*, 9:1, 1300-1308, DOI: 10.1080/22221751.2020.1775132

Sheresheva, M.Y. Coronavirus and tourism. *Population. Econ.* **2020**, 4, 72–76.

Sönmez, S.; Apostolopoulos, Y.; Lemke, M.K.; Hsieh, Y.-C.J. Understanding the effects of COVID-19 on the health and safety of immigrant hospitality workers in the United States. *Tour. Management. Perspective.* **2020**, 35,100717.

Stefan Gössling, Daniel Scott & C. Michael Hall (2021) Pandemics, tourism and global change: a rapid assessment of COVID-19, *Journal of Sustainable Tourism*, 29:1, 1–20, DOI: [10.1080/09669582.2020.1758708](https://doi.org/10.1080/09669582.2020.1758708)

Tappe, T. Luhby A, 2020. 22 Million Americans have filed for unemployment benefits in the last four weeks CNN Business (2020)Retrieved from <https://www.cnn.com/2020/04/16/economy/unemployment-benefits-coronavirus/index.html>

- Thams, A.; Zech, N.; Rempel, D.; Ayia-Koi, A. An Initial Assessment of Economic Impacts and Operational Challenges for the Tourism & Hospitality Industry due to COVID-19. *EconStor*. Available online: <https://www.econstor.eu/bitstream/10419/216762/1/1696970539.pdf>
- Tourism Economics (2020). Total Travel Industry Impact. Çevrimiçi: <https://www.ustravel.org/toolkit/covid-19-travel-industry-research>, Erişim tarihi: 12.04.2020.
- Ulak, N. A Preliminary Study of Novel Coronavirus Disease (COVID-19) Outbreak: A Pandemic Leading Crisis in Tourism Industry of Nepal. *J. Tour. Hosp. Educ.* **2020**, 10, 108–131.
- UNWTO (2020). World Tourism Organization, Compendium of Tourism Statistics dataset [Electronic], UNWTO, Madrid, data updated on 20/01/2020.
- WHO. (2020). A second COVID-19 case is confirmed in Africa. [cited 2020 Nov 5]. Available from: <https://www.afro.who.int/news/second-covid-19-caseconfirmed-Africa>
- Williams, C.C.; Kayaoglu, A. COVID-19 and undeclared work: Impacts and policy responses in Europe. *Serv. Ind. J.* **2020**, 40, 914–931.
- World Health Organization (WHO). "WHO Director-General's opening remarks at the media briefing on COVID-19-11 March 2020. 2020b."
- World Health Organization. Operational Considerations for COVID-19 Management in the Accommodation Sector Interim Guidance; World Health Organization: Geneva, Switzerland, 2020. Available online: <https://www.who.int/publications/i/item/operational-considerations-for-covid-19-management-in-theaccommodation->
- WTO (2020). International Tourism Highlights.: <https://www.e-unwto.org/doi/pdf/10.18111/9789284421152>, 12.04.2020.
- Yang, Y.; Zhang, H.; Chen, X. Coronavirus pandemic and tourism: Dynamic stochastic general equilibrium modeling of infectious disease outbreak. *Ann. Tour. Res.* **2020**, 83, 102913.
- Yozcu, O. K., & Cetin, G. (2019). A Strategic Approach to Managing Risk and Crisis at Tourist Destinations. *In Tourist Destination Management* (pp. 273-287). Springer, Cham.