

# Impact of COVID-19 Pandemic on Global Travel System

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**Abstract-** *The study investigated impact of COVID-19 pandemic in global travel system. The aim of the study is to ascertain the implication of the COVID-19 on the travel system. Survey research design was used as the study design and structured questionnaire addressing the objectives of the study was developed as instrument for data collection. Eighty (80) participants made up of 40 males and 40 females were purposefully selected bearing in mind the major aim of the study and objectives. Data collected were analyzed using simple descriptive analysis which comprises of frequency of responses and percentage responses from participants. From the analysis of data, result findings showed that COVID-19 has a significant negative impact on global travel system as it infringes on the level of revenue generation from transport system, makes accessibility to both local and international travel and tourism more difficult from users. Hence, contributing to low economic growth as well as making the standard and mode of travelling quite inaccessible. The study therefore concluded that COVID-19 pandemic has as really caused damage in global travel system, as it has declined the level of revenue generation from the industry which can be used to uplift the standard of living of the individual as well as for economic development. Not only that it reduced revenue generation, but it made it more difficult for tourist, travelers, business men and women alike find it more difficult to get mobility and to access their destination with easy. This as result create economic hardship and inflation.*

**Indexed Terms-** *COVID-19, Impact, Pandemic, Global Travel System*

## I. INTRODUCTION

COVID-19 pandemic has been spread from its place of origin to the entire globe; the pandemic risk has not been confined only to threaten lives due to infection, but also has inflicted most citizens of the countries around the world (Cao *et al.*, 2020). This pandemic has also turned out to be an economic challenge (Erokhin & Gao, 2020). It is causing massive damage to all sectors without any exception; however, the damage varies from one sector to another and from one country to another (Mouloudj, Bouarar, & Fechit, 2020). By mid-February, global air transportation had already transmitted the virus to all continents and, by mid-March, it has reached 146 countries (Gössling, Scott, & Hall, 2020). And by 15 April, confirmed cases neared 2 million, causing the death of more than 125,000 in more than 200 countries (ECDC, 2020). The COVID-19 pandemic has resulted in over 6 million confirmed cases and over 370,000 Deaths globally. In Algeria, according to the official website of the Algerian Ministry of Health, there were 9394 confirmed cases and 653 deaths cases of COVID-19 in Algeria as of 31 May 2020 (Algerian Ministry of Health, 2020). This relatively large number of infections and deaths, created a tremendous pressure on government, medical and healthcare providers, and the general public. So, facing the impossibility of curbing the propagation of the virus, the entire world-imposed mobility restriction on travels and on social gatherings (Idres, Lassassi, Djani, & Yousfi-halimi, 2020).

The entire world is encountering an unparalleled global health, social and economic emergency with the COVID-19 pandemic. Like any other industries travelling from one location to another in turn has been at stake from the health, economic and emotional repercussions ensued by the COVID-19 pandemic, all the indicators prognosticate that we are going to experience a shift of paradigm, a new world and new

context that is yet to be unraveled, to which we must comprehend, accept and cope (Santos Del Valle, 2020). Countries initiatives to ban flights travelling from nations with H1N1 outbreaks in 2009 were proved futile in containing the virus; and the estimated loss regarding the H1N1 outbreak of the virus some countries citizens like Mexican travel and tourism industry was \$5 billion.

Airline industry complains of travel restriction which has been causing low-income generation which threatens a high level of bankruptcy in the industry (Foo *et al.*, 2020). Undoubtedly travelling has become a significant tool in promoting sustainable human development such as: alleviating poverty, environmental regeneration, job creation, women empowerment, and other disadvantaged categories (Bharathi, 2017). Constraints on freedom of movement laid down by several governments around the world due to COVID-19 to halt the propagation of the corona virus, have not only affected the just one sector of human activities but as well affected other area of life like traveling and tourism services whom incurred a massive turnover loss, but have also impacted tourism demand (Scaglione, Larpin, Mabillard, & Schegg, 2020). In order to be able to evaluate the in-depth effect of the pandemic there is a need to assess the economic implications of COVID-19 of the travelling system and this is why the study focus on investigating the impact of COVID-19 pandemic in global travel system.

The world has been in a panic in the past year, and travelling with it related activities in the industries have suffered unprecedented significant effects ranging from the disappearance of both local and international tourists to the instantaneous cessation of the tourism market, many related industries that ceased operations. This COVID-19 pandemic has caused a significant crisis to all of the industries in the world, and this crisis has a significant impact on the travel industry. It is believed that movements of people from one place to another have caused the emergence or re-emergence of infectious diseases as one inevitable result of such movements. The early evidence of the effects of travel, flights, cruise ships and accommodations under the pandemic is devastating. The global pandemic of COVID-19 has also severely hit economic industries such as tourism,

hospitality and airlines Travel and tourism have always been significant factors in globalization, and are the industries most affected by the COVID-19 pandemic. The COVID-19 pandemic has not been totally controlled yet, and the situation is unpredictable; therefore, research is essential for the restoration of complete travelling system and it and the associated industries. This is why in a very recent time, many studies have been conducted to verify and evaluate the impact of COVID-19 epidemic on global economy and its implications on global macro economy, like food Security, e-business among. Unfortunately, in attempt to provide solution to all these problems, researchers fails to investigate how COVID-19 pandemic has affected the global travel system which has created a big gap in knowledge and which this study aim to bridge the gap by investigating the effect of COVID19 pandemic in global travel system.

The aim of the study is to investigate the impact of COVID-19 pandemic in global travel system. Specifically, the objective will be to ascertain the (1) effect of COVID-19 pandemic on transportation industry and (2) How COVID-19 affect global travel system and tourism.

COVID-19 pandemic has restricted interpersonal interaction, and many industrial activities, including hotel, travels and tourism (Seyito ğlu *et al.*, 2021). The uncertainty of economic recovery and the continuous spread of COVID-19 have caused millions of people to suddenly lose their jobs; the hospitality industry was one of the first industries to do so (Tappe *et al.*, 2020). Hospitality and tourism, especially in Nigeria, Asia, Europe and North America, have been affected in a manner unseen in half a century (Baum *et al.*, 2020). Many travelling industries and hospitality businesses face existing global challenges (Sharma, & Nicolau, 2020). Some of these are significantly detrimental to international business operations, including the long-term inflicts of the COVID-19 pandemic (Filimonau *et al.*, 2020). COVID-19 pandemic has also introduced difficulties to traveling companies in major cities of the world like in the United States as they continue to operate. In Hong Kong, COVID-19 is seriously damaging the operations of the global travel and tourism hotel industry (Wu *et al.*, 2020). In Malaysia, COVID-19 has severely affected the rate of travelling

and occupancy rate of hotels, with Kuala Lumpur having the largest number of cancellations (Foo *et al.*, 2020). This has affected the economic development of the travelling system and that of national development.

- Effect of COVID-19 Pandemic on Transportation Industry

Transportation is the vector through which pathogens are distributed on a regional and global scale. Given that travelling system has the characteristic of making people to move from one place to another, it indirectly supports pandemics spread (Gössling, 2020). Since the outbreak of COVID-19, the scale of the global crisis has been huge due to restrictions on the use of transportation by countries' authorities around the world; global mobility has ceased (Abu-Rayash & Dincer, 2020). Tourists were infected with COVID-19 on cruise ships, which occurred in countries such as France, Japan, the United States and Australia, resulting in many countries banning cruise ships from docking in their ports (ALJAZEERA, 2020). A high risk of pandemic disease infection has been found in transportation vehicles, such as cruises, airplanes, or travel groups and through frequent long-distance travel, massive cruise ships, and short distance flights (Degrowth.info 2020). COVID-19 pandemic outbreak has also caused border closures, domestic and international travel has been stopped, and 65 international airlines have reduced flights by 95% (Luo, & Lam, 2020). The All-plane website released a piece of news, indicating that the airline bankruptcy list has been made public and that airline around the world is struggling to survive (IATA, 2020) Approximately 25 million jobs in the traveling and tourism industry, the aviation industry, and related value chains are at risk in China and other part of world during the COVID-19 crisis (IATA, 2020). In Australia, domestic flights have only reached 10% of their pre COVID-19 numbers (IATA, 2020). There is a low demand crisis faced by European airport operations under the COVID-19 pandemic, and the cost to achieve viability (Forsyth, Guiomard, & Niemeier, 2020). According to Geneva ATAG, there is a decline in air transportation in year 2020 due to COVID-19 pandemic which resulted in the loss of 46 million jobs provided by global aviation travel industry (ATAG, 2020). COVID crisis have actually, led to an unprecedented reduction in the number of

travelling activities, tourism, and airport travelling revenues generation.

Another facet of transportation research related to the pandemic examined trends in the use of transportation modes. Air transportation was one of the most affected sectors during the COVID-19 pandemic, exhibited by a substantial reduction of air passengers and a large number of flight cancellations worldwide (Suau-Sanchez *et al.*, 2020; Sun *et al.*, 2021). Using Flightradar24 data that covered 150 airlines between 2,751 airports globally, Sun *et al.* (2020) examined the changes in global passenger flights from December 16th, 2019, to May 15th, 2020. They found that starting from Mid-March of 2020, the number of served origin–destination airport pairs dropped by about 75%, and the number of active aircraft decreased by two-thirds. In a related paper, Sun *et al.* (2021) investigated the influence of COVID-19 on air transportation systems, air passenger experience, and the long-term effects on aviation by reviewing 110 research papers. This review uncovered several important trends that are likely to occur in the aviation industry post-COVID including: the emergence of hub-operation reducing super long-haul flights, the application of a worldwide immunity license, and the development of competing and substitute transportation modes (eg., high-speed rail and connected and automated vehicles).

The impacts of the pandemic were also noticeable from changes in consumer spending. In the early portion of the pandemic (February 26-March 10), consumer spending increased by over 40% in efforts to stockpile goods and in anticipation of an inability to visit retailers (Baker *et al.*, 2020). Consumers also spent between 25% and 30% less on restaurant, entertainment and travel related expenses during this period retailers (Baker *et al.*, 2020). Perhaps most visible were the reductions in mobility across multiple sectors of the transportation industry, as a variety of global restrictions (e.g., border restrictions, travel bans, quarantines and curfews, stay-at-home orders, closure of various amenities and services) reduced demand in the transportation sector (AbuRayash & Dincer, 2020).

This reduction in mobility had impacts on the transportation industry. Globally, direct aviation jobs

potentially fell by 43% and total aviation supported jobs fell by 52.5% from pre-COVID levels (Air Transport Action Group, 2020). In the U.S., the number of total commercial flights fell from a total of 218,346 on March 8 to 58,113 on April 19, 2020; a reduction of 73% (U.S. Bureau of Transportation, 2020). Truck tonnage in the U.S. fell by 9.18% between March and April 2020 (U.S. Bureau of Transportation, 2020). On March 13, 2020 the U.S. government declared a state of emergency in response to the pandemic (The White House, 2020). Highway congestion in major cities dropped substantially in 2020 compared to the previous year: 36% in Los Angeles, 30% in New York and 25% in Miami (Kelly and Sharafedin, 2021).

- COVID-19 Effect on global travel system and tourism

Due to globalization factors, transporting system has been made available to many people, especially the middle class. Therefore, transportation sector has become one of the largest industrial fields worldwide in the past two decades (Streimikiene *et al*, 2021). The global economic issues caused by the outbreak of the COVID-19 pandemic are unprecedented for the travelling industries, despite it having been previously afflicted by various crises. The transportation industry is one of the sector most affected by the situation; because the borders are closed, global destinations are inaccessible (Wojcieszak-Zbierski, 2020). The number of international tourists therefore, decreased by 1 billion in 2020 (UNWTO, 2020). A study in South Korea focused on exploring the impact of COVID-19 risk perception on the behavioral intentions of untact-tourists, based on the framework of the health belief model and extended planning behavior theory; indicated timely and insightful enlightenment for tourism practitioners (Bae & Chang, 2011). In Vietnam, they studied the impact of COVID-19 on the tourism showed that the government's stimulus plan helped the tourism industry recover, and various practices and opportunities for travel stakeholders were explored (Quang *et al*, 2020). In the Czech Republic, research has discussed the impact of the COVID-19 pandemic on rural tourism (Vaishar & Št'astná, 2020). In Queensland, Australia, the relationship between COVID-19 social distancing measures, travel restrictions and cultural tourism in four regions and result showed a decline in the number

of travel and revenue generation (Flew & Kirkwood, 2021). In Africa, the current pandemic highlights the fragility of the tourism industry's globalization, and the continent, which relies on global visits and global capital, has suffered huge losses (Rogerson & Baum, 2020). Stakeholders in the tourism industry, such as hotels, agents and attractions, are mostly small and medium-sized companies or family-run businesses with independence characteristics (Baggio, 2021).

These stakeholders are the key players in strategic planning, tourism management, or operations (Bhati & Agarwal, 2020). Evidence shows that, during the pandemic, the transportation industry, the hospitality industry, and travel companies are reducing labor and increasing layoffs (Baum *et al*, 2020). Stakeholder relationships come from issues that are critical to creating and distributing value (Freeman, 2010). A study in China analyzed the conflicts between road- and roadless-access tourism in China's large new national park, and a differential tourism stakeholder analysis which showed that there is a serious decline in the rate of transportation, development and revenue generation from the transport and tourism sector (Buckley *et al*, 2021). A study in Samoa, a tourism destination in the South Pacific, discussed the COVID-19 pandemic posing a public health threat to Pacific Island countries travelers and tourists (Olayemi *et al*, 2020). From the above review of different studies, it is evident that around the global economy of most countries in the world have been severely impacted by the COVID-19 pandemic, including stakeholders in the hospitality industry, transportation industry, travel companies, the government and tourists, etc.

In this study, parasite-stress theory, is used to anchor the study. This theory as propounded by Corey & Randy (2008) posit that human parasites and diseases encountered by a species shape the development of species' values and qualities. The differences in how parasites and diseases stress people's development is what leads to differences in their biological mate value and mate preferences, as well as differences across culture. Parasites causing diseases like COVID-19 pose potential ecological hazards and, subsequently, selection pressures can alter psychological and social behaviors of humans, as well as have an influence on

their immune systems. This theory implies that the evolution of pandemic disease shape the way people leaves and react towards the pandemic to avoid it spread.

II. MATERIAL AND METHOD

Since the major objective of the study is to ascertain the impact of COVID-19 pandemic in global travel system, a survey research design was adopted to ascertain the opinion of participants and the area of the study focused on three different states in Nigeria (Anambra, Rivers and Delta state). The research population is made of commuters (Land, air and sea). Out of the population of the study, 80 participants made up of 40males and 40 females were purposively selected. The purposive selection includes both workers and passengers and this was done by randomly selecting twenty 28) land commuters in Awka, 26 Airport commenters in Asaba and 26 sea port commuters in port Harcourt as shown in table ‘A’ below.

Table A: Participant purposively selected

Commuters	Location	State	Number purposively selected
Lands	Awka	Anambra	28
Sea port	Port Harcourt	Rivers	26
Air port	Asaba	Delta	26
Total			80

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A structure questionnaire was used for the collection of participant’s opinion. The data collected were analyzed using frequency and simple percentage as shown by the formula  $N = \frac{X}{T} \times 100$ . (N =percentage ;X=responses; T= total number of responses).

III. RESULTS

Table 1: Effect of COVID-19 pandemic on transportation industry

Options	Frequency	Percentage (%)
Closure of both domestic and	20	25%

international travelling spaces		
Reduces revenue generation from transportation system	18	23%
Limit growth in transport industry	15	18%
limit the level of commuter’s movement	13	16
Changes in transportation mode	10	13
Limit both import and export cargo goods due to the large-scale shutdown of factories.	4	5
Total	80	100

Table 1 shows participants agreed that COVID-19 pandemic affect the transport industry as it causes the closure in both domestic and international travelling space around the globe, reduces the amount of revenue that are generated from the industry, limit the level at which commuters move, changes the mode of transport, and as well limit both the rate of import and export of cargo goods due to shutdown of factories. The responses of the respondent implies that some of the effects had more effect on the transport system as compared to others. This can be seen in the high and low percentage rating of some the respondents.

Table 2: How COVID-19 affect global travel system and tourism

Options	Frequency	Percentage (%)
Limitation in global transport system and tourism	12	15%
Borders closure on transport and tourism	12	15%
Global travel destinations are inaccessible	10	13%

Limit tourist's movement	8	10%
Decline in the number of travel and revenue generation	10	13%
Global fragility of tourism industry	8	10%
Global huge capital losses in travel system and tourism.	8	10%
Creates social distancing among travelers and tourist.	9	11%
Measures, travel restrictions and cultural		
Tourist restrictions toward cultural activities	3	3%
<b>Total</b>	<b>80</b>	<b>100</b>

Table 2 shows that respondents(participants) agree that COVID-19 affected the global travel and tourism system by limiting global traveling and tourism, caused boarder closure to travelling and tourism and made global travel destination inaccessible. The responses of respondents also indicated that movement of tourist was constrained, decline in the level of travel and revenue generation were seen, global fragility of tourism industries occurred, global huge capital losses in the travel system as well as tourism is experienced and social distancing among travelers and tourist were also highly experience. There high percentage rating from the responses of participants proved that those effects were severe and actually impacted negatively to the global world economic activities.

#### DISCUSSION AND CONCLUSION

COVID-19 has created a huge economic losses in the global travel system. The short down of eventually all the travelling activities made it more difficult for tourist and business to thrive in COVID-19 period. This has as well infringed on the quality and standard to living and has seriously crumbled to a high measure the transport system of the world. The short down of economic activities like the travel system made it more hard for people to move about for their daily activities

which is used to maintain their needed and as well that of the nation that help to contributed to economic growth of the nation and that of international economy. The ban on the rate of travel created availability of few means of transportation for traveler. This caused serious demand crisis on the availability of mobilities. The finding of this study corroborated with the finding of Forsyth, Guiomard, & Niemeier, (2020) who reported that low demand crisis faced by European airport operations under the COVID-19 pandemic, and the cost to achieve viability. Of a fact, the decline in the number of travelling tourist means a low revenue generation for countries that depend more on tourism as the national source of revenue for economic development of their nation. This is in consonance with the finding of Wojcieszak-Zbiersk,(2020), that reported transportation industry as one of the sectors mostly affected by the situation; because the borders are closed, global destinations are inaccessible(Wojcieszak-Zbiersk,2020). This therefore, implies that such economic will be affected gruesomely as tourist number decline. The number of international tourists therefore, decreased by 1 billion in 2020(UNWTO. 2020).

In conclusion, COVID-19 pandemic as really caused damage in global travel system, as it has declined the level of revenue generation from the industry which can be used to uplift the standard of living of the individual as well as for economic development. Not only that it reduced revenue generation, but it made it more difficult for tourist, travelers, business men and women alike find it more difficult to get mobility and to access their destination with easy. This as result create economic hardship and inflation.

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