



An overview of the impact of COVID-19 on the cruise industry with considerations for Florida

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ABSTRACT

This paper provides an overview of the current state of the world's cruise industry, with a focus on the chronology and the main impacts that the COVID-19 has had on the industry. Florida is presented as a micro context of the pandemic's impacts on the local economies of cruise-dependent regions. As a result of the COVID-19 pandemic and the many infected ships in the first quarter of 2020, the entire cruise industry was stopped and a prohibition on resuming this industry was imposed worldwide. This paper presents some of the consequences of stopping the cruise industry and the recommended protocols for resuming. Due to the dramatic impacts on the entire industry, some cruise lines are trying to resume despite the fact that the COVID-19 is not yet under control. The first aim of this paper is to cover the cruise industry and its importance for society, introduce the main facts of the COVID-19 outbreak, and the correlation between cruise ships and the spread of this disease. The second aim is to present the new pattern to resume the cruise industry and its challenges.

Introduction

COVID-19 is not the first international crisis faced by the cruise industry. This industry faced the Spanish, Asian, and Hong Kong flus of the 20th century. In the 21st century, the cruise industry has needed to cope with the consequences of the 2001 terrorist attacks on 9/11, the 2002 SARS epidemic, the 2008 global financial crisis, the H1N1 2009 Influenza pandemic, and the unprecedented worldwide COVID-19 crisis. This pandemic has been the largest crisis faced by the cruise industry to date, there are no precedents, neither in size nor in consequences. The first quarter of 2020 saw 54 infected ships with 2592 ill crew members and passengers around the world (Harrold, 2020). At least 65 people died on board a cruise ship while the entire world was watching the lethal impacts of COVID-19 on the cruise industry. The ships stopped one by one at the end of March in different parts of the world, and after that, cruise lines dealt with sending crew members and passengers home while the borders were closed.

Over a year into the pandemic, the cruise industry remains sidelined while the other industries are getting back to business. Requirements for resuming business are stricter for the cruise industry than for other transportation industries, such as airlines, trains and buses. Some people argue that the cruise industry is about leisure and vacation whereas airlines supply livelihood necessities. However, both industries are responsible for providing services for leisure and work (due

to the enormous quantity of direct and indirect employees who work for the cruise industry). Moreover, it is helpful to see how the whole picture involves a complete supply chain of the cruise industry. Some cities and companies are cruise-driven and provide everything for this industry. They are also struggling and may have permanent economic impacts if cruises do not open as soon as possible.

The cruise industry plays an innovative and important role in the world economy as well as many local economies. This industry has also made large contributions to different communities and stakeholders around the world. The shutdown of the cruise industry due to the COVID-19 impacts every country where it plays an important role. The aims of this paper is to present the cruise industry background, explore the timeline of the pandemic and cruise lines shutting down, analyze the major impacts of COVID-19 on the cruise industry, using the impact in the state of Florida as an example of its magnitude. The paper will then introduce some frameworks that are being required worldwide in order to allow resumption the cruise industry. The research question that the paper attempts to answer is why is the cruise industry worth resuming and how what will its resumption require.

This article is divided into five sections. First, it presents the main characteristics of the cruise industry, trends, challenges in the pre-pandemic. The second section includes the chronology and characteristics of the infected cruise ships, their itineraries, and how they coped

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with this issue. The third section presents data on the relationship between the cruise activities and the increase of COVID-19 in some countries. The fourth section introduces an overview on the cruise industry in Florida and its outbreak impacts in this state and the actual situation to resume sailing again. The next section shows the new framework to resume the cruise industry and some recent experiences of ships sailing with new protocols. Finally, new recommendations for the cruise industry to resume are discussed in the conclusion.

The main characteristics of the cruise industry and its importance for society

This section presents an overview of the cruise industry, including the cruise lines' background, the most popular regions to sail, and the countries that bring more passengers to cruise ships.

The main cruise lines, their revenues and Cruise's trends

The cruise industry is a strong example of a well-planned and successful industry. Before this worldwide pandemic crisis, all ship information was available three years in advance; this included its future location, itineraries, rates, and even on-board menus were planned in advance. The success of this industry is shown in their average annual growth rate of 5.4% between 2009 and 2019 (Clia, 2020), which is higher than regular land-based tourism (4.9%) over the time period 1980 – 2017 (Perucic, 2019). Because of its popularity and success, the number of new ships launched every year and also the size of these ships is increasing (Clia, 2020). Another strategy for regular cruise lines is the decrease of cruise fares, which is possibly due to the expectation of having more expenditures on board by selling services and products at an extra price. As a consequence of new and larger ships that are the destination themselves, decreasing fares, great itineraries, and other factors, the number of tourists has been rising as well. Not only does the cruise line benefit from this incredible increase, but also the ports of call, the salesforce, workforce, and the supply chain as a whole. The cruise industry is part of a global chain, which demands capital-intensive and long-term planning.

The cruise industry is composed of more than 50 cruise lines and 250 ships, but only three large companies with 15 different brands were responsible for 75% of the market share in 2018 (Crockett, 2020). Carnival Corporation was responsible for 41% of this market and has nine different brands, Royal Caribbean Cruises had 21% of the market share with three different brands, and Norwegian Cruise Line represented 13% of the market share with three different brands. These three cruise lines were responsible for 34.2 billion USD in revenue, in 2018 (Crockett, 2020). Cruise revenue comes from ticket sales, which normally represents 62% of total revenues, and onboard purchase (38%). Onboard purchases have different impacts on different types of cruise lines. Normally, in low-price companies, the onboard purchases have more influence on their revenues due to the quantity of extra price products and the services available, while most of the high-price cruise lines have almost all of services and products already included in their fare. As a result, for the majority of cruise lines, having as many passengers as possible on board spending money on extra expenditures is the best way to increase profits. Despite the high cost of fuel, marketing, payroll, and commissions, cruise activities gain around 17% in net margins, larger than the tourism sector average (Crockett, 2020).

As a means to improve their profits, cruise lines have been increasing the size of their ships to allow more passengers on board for each itinerary. In 2017, the biggest ship launched, using passenger capacity metrics, was Harmony of the Seas with 5496 passengers (Peručić, 2020). In 2020 many ships under construction would permit more than six thousand passengers on board and adding their crew members could hold almost 10 thousand people on each cruise. However,

according to Peručić (2020), there are also cruise lines which focus on smaller ultra-luxury ships tailored to specific segments in different parts of the world, including 14 new entrants in the cruise industry that focus on this niche (Peručić, 2020). With so many options in terms of prices, ship sizes and levels of luxury, passengers can easily fit these options within their dream vacations, making the option of cruising more popular year by year.

The cruise industry is very dynamic and before the outbreak, it was celebrating some innovations, such as connectivity through social media (being connected during a cruise is fundamental for people who are posting and researching online all the time), wellness (ships are investing money to create wellness experiences on board and in the port of calls), focus on experiences (high-gastronomy, visiting exotic destinies, special lectures and classes on board are some examples that contribute to make a cruise an unforgettable experience for many passengers) high technology on board (racing simulators, robotic bar, and planetarium are some examples of this trend), conscious behavior onboard and ashore (passengers expect to minimize their interferences in the environmental issues), special sights on destinations (increasing of untraditional or new ports of call), lifetime experience (high expectations from customers who are filling their bucket lists), tourists that combine leisure and work on board (there are some people who have decided to live on a cruise or spend time being on a cruise and working there in the same time, which allows them to be on board with more frequency and longer), female or sole-centered cruising (these customers are increasing today and the cruise lines offer special deals for them) (Peručić, 2020).

The most popular cruise itineraries and the origin of their passengers

Another important trend of the cruise industry is the fact that most ships have been following the sun; in the other words, they are expanding to cover every place with an inviting climate. The most popular region for cruising is the Caribbean, which represents 38.9% of total itineraries. Asia and the Pacific together represent 15.7% of the total. The Mediterranean represents 13.6%, North and West Europe represent 9.0%, and Australia represents 4.3% of total cruise destinations (Peručić, 2020).

In 2018, almost half of cruise tourists were from North America (14,240,000). In second place in providing tourists was Western Europe (6,731,000), and in third place was Asia (4,240,000). The most significant increase in demand for cruises can be seen in Asia, Australia, and New Zealand in the last six years. Australia, New Zealand, and the Pacific had together 1,450,000 passengers in 2018, while South America was in 5th place with 883,000 passengers (CLIA, 2020). Highlighting each region, the United States had 11.9 million cruise tourists, China had 2.4 million, Germany had 2.19 million, the United Kingdom had 1.93 million, and Australia had 1.34 million in 2017. Together in 2017 they were the top 5 source markets, representing about 74% of total passengers in that year (Peručić, 2020). The cruise industry is a perfect example of running an international business with international stakeholders; it is also clear that shutting down cruise lines impacts every country where this industry plays this important role.

The chronology and characteristics of infected cruise ships and their itineraries

The entire cruise industry and the world have faced an unprecedented crisis due to COVID-19. The current pandemic situation began in December 2019 in Wuhan city, China. The new virus was identified and named COVID-19 in January 2020. Since that time, the coronavirus has been present and multiplied in a reported 220 countries, covering all continents. As of November 22, 2020, the world had 57,882,183 confirmed cases, 1,337,395 confirmed deaths (WHO,

2020b). Globalization and international travel habits have been identified as a major cause in the quick spread of COVID-19. In this scenario, the cruise industry played a dangerous role due to the enormous quantity of ships, passengers and different destinations around the globe. In addition, passengers and crew members come from different parts of the world. It is very common to have crew members transferred among ships, while passengers from different parts of the world go on and off the ship in different places every day (İlhan, 2020).

Between January and April of 2020, there were 54 ships in different parts of the world that were infected with COVID-19, which represents one-fifth of the global ocean cruise fleet (Harrold, 2020). According to Harrold, there were at least 2592 infected people and 65 deaths on these ships. The first and most famous case was the Diamond Princess, which underwent quarantine off the coast of Japan. COVID-19 was reported on this ship in February 2020; in total, more than 700 passengers and crew members aboard became infected, and nine people died. This ship contained 2670 passengers and 1100 crew members. Its itinerary started on January 20 and finished in the same port, Yokohama, Japan, on February 3. This fourteen-day trip went to three countries and made six stops. The first COVID case reported on the ship was an 80-year-old guest, causing the ship to remain quarantined with 3700 people on board. These people on board were from Argentina, Australia, Canada, Hong Kong, Japan, the Philippines, the United Kingdom, and the United States, which brings to light how the virus can spread broadly in a cruise ship with people from different countries.

The correlation between cruise ships and the spread of COVID-19

Trying to determine the correlation between the cruise industry and the fast spread of COVID-19, Ito et al. (2020) attempted to demonstrate a correlation between the cruise industry and the COVID-19 outbreak. To address this problem, the authors conducted two studies. The first study focused on discovering a correlation between the number with COVID-19 cases and the estimated number of passengers landing in departure ports and arrival ports, where people spend some days before or after their cruises, and ports of call, where only a few hours are spent during cruise itineraries and in those cities. The number of COVID-19 cases divided by number of passengers landing is 12.85% in the country of arrival and departure and 1.5% in the country only at the port of call. As a result, the cities that are located at arrival and departure cruise ports are more infected than the cities that are only ports of call. However, the authors suggest that it is not possible to isolate the other factors that could have contributed to this conclusion, especially because the departure or arrival cities tend to have airports and other facilities that could also play an important role to spread the COVID-19. This problem remains to be addressed by further research.

Another study presented by Hanaoka & Kawasaki (2020) attempted to determine the main characteristics of ships and their itineraries to find a pattern among the cruise ships that were infected with COVID-19. They found that large ships tended to be infected more than smaller ones. The worst itineraries, those with the highest possibility of being infected, were cruises with seven or eight days of sailing that had the same weekly itineraries, cruises with fixed arrival and departure ports, and cruises with fixed ports of call. Another important contributor to infection rates was the practice of welcoming new passengers every week; this situation is more dangerous than having the same passengers for several weeks.

Another important finding is that there is no correlation between the number of passengers received in ports of call in a country and the number of COVID-19 in the same country. According to Ito et al. (2020), the three countries with the largest number of passengers in their ports from January until March were the US, Mexico, and Bahamas. When this data was compared with the numbers of COVID-19

infected people, the Bahamas had only 49 infected people despite the fact that it had the third highest number of cruise passengers who had gone ashore in Nassau (Bahamas) from January until March 2020. However, COVID-19 had spread faster in the countries that kept accepting cruises until early April than in the others that quickly banned cruise ships from entering their ports (Ito et al., 2020). When analyzing the ship size and itineraries and the quantity of cruise passengers per country, it is not possible to confirm a strong cause correlation between cruise and the spread of COVID-19.

Radic et al. (2020) brought to light some weakness from cruise industry management during COVID-19 and made recommendations. The authors affirmed that the core issues were communication and contingency plans. The lack of these skills has driven the entire industry to face more difficult scenarios during this outbreak. The authors, based on their analysis, recommended the several improvements. Improving the cruise lines' ability to communicate with society is one of the necessities showed in this study. Passengers need to be educated on how to protect themselves and others on board, including good practices as washing frequently their hands and wearing masks all the time when it is not possible to keep a safe distance from others. In addition, cruise lines need to update the best practice on board to avoid spreading illness in their ships. Adopting a previous mandatory quarantine in cruise departure cities should be better analyzed too. Moreover, the cruise industry needs to work with the local government not only to build contingency plans but also to cope with infections and infected people that need to go onshore. The COVID-19 outbreak, according to these authors, brings to the cruise lines a great opportunity to review their cultural aspects, leadership styles, and risk management (Radic et al., 2020).

The necessity of improving contingency plans and communication of these plans with the whole society are issues that need to be addressed in order to restart the cruise industry. These points include important information to bear in mind for creating good practices that will help the cruise industry to resume.

An overview on the cruise industry in Florida and its outbreak impacts in this state

The cruise industry plays a crucial role in Florida. The headquarters of many cruise lines are located in this state. It also has strategic ports of call, including the top-three cruise ports in the world representing 59 percent of total embarks in the United States. This industry is also responsible for over 149,000 jobs, which represent \$7.69 billion USD in wages in Florida (Sauders, 2020). The state of Florida has been directly impacted since the cruise industry has been laid-up since March 2020.

The importance of the cruise industry in the US and Florida

The cruise industry plays an important role in the US. This economic impact in 2018 was over \$52.7 billion USD, a 10% increase from 2016. In 2019, the economic impact was around \$55.5 billion USD, a 5.3% increase from 2018 (CLIA, 2020). Florida, California and Texas are the top three American states in this industry based on Direct Expenditures, Total Employment and Wage Impacts in 2018 (CLIA, 2019).

Alaska is also playing an important role as a cruise destination. Florida represented 35.4% of Americans' direct purchases in cruise (8.485 million dollars), had 154,646 of total employment with an average annual wage of \$46.5 thousand USD in 2018. Florida received 12.48 million cruise passengers and crew members visiting or arriving in 2018. The number of cruise passenger embarkations has been increasing in previous years. Florida was responsible for 59% of all cruise embarkations in the US with 7.51 million embarkations in 2018 (Safety4Sea, 2020a).

Florida ports were responsible for 13% of state GDP, which includes cargo and passenger activities, and provided over 900,000 jobs before the COVID-19 pandemic (Florida Ports Council by Martin Associates, 2020). Florida hosts the three busiest cruise ports in the world, Port Miami, Port Canaveral, and Port Everglades in terms of the number of passengers handled annually. In addition, there is Port of Tampa, which hovers around the thirtieth position on the list of busiest cruise ports by passengers in the world. Key West is a port of call, which only receives ships with passengers, without arrivals and departures. Together these Florida cities were responsible for welcoming a million cruise passengers from different parts of the world annually before the pandemic. Port Miami received a world record of 6.8 million cruise passengers before the COVID pandemic. This port provides over 30,000 local jobs, \$5.8 billion USD in economic value, and \$188 million USD in taxes for the municipalities and the state of Florida. Port Canaveral had around 13,000 direct workers and 23,745 including indirect workers until March 2020 (Saunders, 2020).

The importance of the cruise industry for Florida (and for other places where the cruise industry plays the same important role for their economies) not only is related to Florida's ports, but also includes its airlines, hotels, food and beverage, shopping, transportation, and tourist hotspots. These sectors are composed of small, medium, and big-sized businesses, which together play an important role in Florida, one of the most popular tourist destinations in the world.

The impact of the cruise industry outbreak in Florida

The impact of Covid outbreak has been serious globally, but it is worse in places that are tourism-driven, such as Florida is. Florida has directly received around USD 8.49 billion per year from the cruise industry. The current lack of this huge contribution has become a source of serious concern to the state government of Florida (Saunders, 2020). In the US, not only Florida but also Alaska and other cruise destination spots are complaining about the enormous consequences of a "no sail order" has made in their economies. The estimated economic losses suffered by Florida's ports (including cargo and cruise ports) in 2020 was \$22.2 billion USD (Florida Ports Council by Martin Associates, 2020). Port Miami alone estimated losses up to \$55 million USD in 2020. Port Canaveral's losses included at least 80% of its passengers and 16,000 jobs in 2020. The cruise industry contributes 15% of its tax base and employs 16,000 of its residents (Saunders, 2020). Like Key West, there are many cities and ports of call around the world in this same dire situation due to the COVID-19 outbreak.

The situation in the United States and Florida to resume the cruise industry

The CDC plays an important role in the cruise industry. During the beginning of the COVID-19 pandemic, while some cruise-infected cases came to light, the CDC strongly recommended the Americans to "not travel by cruise ship". As a consequence, cruise lines coped with huge quantities of cancellations, and cruise stocks plummeted by 60%, which illustrates how important the CDC's role in this industry operation is (Crockett, 2020).

Despite the fact that some cruise ships have resumed sailing in some areas of the world, as shown in Table 1 in the next section, when the cruise industry should be allowed to resume in the US remains a controversial issue. Although the Center for Disease Control (CDC) lifted the order banning the operation of cruises in October 2020 (for US based cruises), these cruise lines need to fit the new CDC's requirements before they will be permitted to sail. Although these cruise lines could restart sailing, they remain working to fit the new framework.

The CDC's new framework has 74 requirements that must be met before ships are allowed to sail in American ports, as better presented in the next section. While cruise lines are working through this new

pattern, the CDC has increased the warning level for cruises to the highest level that means "a very high level of COVID-19" (Coulter, 2020a). According to the requirements for this Level 4, passengers should take a COVID-19 test after 3–5 days of disembarking and remain in quarantine at least for 1 week. If these passengers don't take a COVID-19 test, their quarantine will be for 14 days (Coulter, 2020a). These strict rules for passengers and cruise lines have postponed the cruise industry's resumption in the US. In order to first address all the requirements, including the implantation of simulated cruises, the lack of cruising is causing more losses for all cruise dependents areas, including Florida.

Some people argue that the cruise industry is responsible for spreading COVID-19 worldwide, being much more dangerous than other industries, such as airlines, trains, buses, or resorts because for their capacity of spreading illnesses. Reinforcing this idea, the first cruise ship to sail the Caribbean since March 2020, the SeaDream, began sailing on November 7, and five days later this small, luxury ship had seven passengers and two crew members infected, despite testing twice before cruising and one more time during sailing. The dangers of sailing could be true without the COVID-19 vaccine; however, this industry has been working hard since the beginning of this pandemic to create a new and safe environmental place for their passengers, crew members, and communities.

The fate of the SeaDream brings to light some new lessons about how to create a real bubble of COVID-free passengers and crew. Among the recommendations suggested by Bryant (2020) is that passengers should remain in quarantine in the departure city after being accepted on the cruise to be sure that they were not contaminated in their recent trip to the departure city. The passengers should be outside the ship with fresh air as much as possible, wear a mask in public areas, and go onshore only with well-planned excursions. The cruise lines should provide fast and assertive communication involving passengers and crew and take quick actions when infected cases are discovered. It is also recommended that cruise line should make ships quarantine as comfortable as possible for their passengers and trace infected people's contact. These are some of the learning lessons with this new case of COVID-19 onboard of the SeaDream (Bryant, 2020). It is not sure that these are all of the successful lessons for the cruise industry resume safely, but as a work in progress, each new case brings new lessons learned.

Providing the new requirements frameworks, associated with learning lessons from successful and unsuccessful resuming ships in the world, the cruise industry should be more prepared to restart in the US and Florida, which will be a relief not only for many cruise industry's stakeholders, but also for people that depend on this industry for living or leisure.

The new pattern to resume the cruise industry

There are some initiatives to provide guidelines and frameworks to help restart the travel and tourism sector. The World Travel & Tourism Council has been producing global safe travel protocols. There are already nine protocols available for the following sectors: hospitality, outdoor retail, aviation, airports, tour operations, short-term rental industry, attractions, car rental, and convention centers, meetings and events. The cruise protocol, according to WTTC, is still under development (WTTC, 2020). All of these protocols have included operational and staff preparedness, ensuring a safe experience, rebuilding trust and confidence, and implementing enabling policies. The WTTC also created the Safe Travels Stamp as a recognition of implementing health and hygiene protocols that are aligned with their recommendations (WTTC, 2020).

In September 2020, after a four-month effort by a group of experts in public health, infectious disease, biosecurity, epidemiology, hospitality, and maritime operations, the recommendations from the

Healthy Sail Panel was launched. The Healthy Sail Panel was sponsored by Royal Caribbean Group and Norwegian Cruise Line Holding Ltd and was co-chaired by the former secretary of the U.S. department of Health and Human Services and the former Commissioner of the U.S. Food and Drug Administration. The panel was composed of 9 expert members, 2 public health advisors, and observed from CDC, CLIA, Carnival Cruise Line & plc, and MSC Cruises. Trying to make the cruise experience healthier and safer, the Healthy Sail Panel provides 74 recommendations in 25 different areas, including testing, health screening, denial of boarding, policy on guests at increased risk of severe illness, guest information and education, onboard symptom tracking and monitoring, personal protective equipment usage, capacity restrictions, general distancing guidelines; terminal, boarding, debarkation controls; sanitation, hand hygiene; ventilation, HVAC, filtration controls; medical personnel, onboard clinic design and operations, treatment plan, contact tracing, isolation and quarantine, debarkation scenarios, destination and itinerary planning, guest excursions, prevention, training and culture, validation of implementation, and the new pattern for the future (Safety4Sea, 2020b). The 74 recommendations are a work in progress to protect guests, crew, and communities; they will contribute to reducing the risk of transmission in the cruise industry, make it lower than in the other industries.

The World Health Organization (WHO) also published an interim guidance for managing COVID-19 cases or outbreaks onboard ships. These operational considerations have been detailed by health authorities in several countries and cruise lines. The WHO's guidance recommends cruise lines develop a written plan that covers all activities prior, during and after sailing. Managing a suspected case on board, managing contacts tracing, taking measures on board to avoid risks and cope with the infection including activities with the port health authority, and conducting outbreak investigations to build knowledge to control and prevent new cases are covered by this guidance.

Prior to boarding and disembarking, the cruise lines need to collect passenger information. These documents should be kept on board to help contact tracing, if necessary. A pre-boarding screening to defer or reschedule people that could be infected should also be required. The crew members must be educated on how to identify suspicious cases. In the case of having a suspicious illness on board, the cruise line must activate an outbreak plan. The outbreak plan includes several new routines, including isolation with the door closed, disembarkation and transfer of infected people to health care onshore, and laboratory testing. The ship needs to inform the health authorities at the next port of call and facilitate the needed measures. The disembarkation of suspected cases requires an extraordinary effort to protect other people and environmental contamination. This new pattern also requires notifying the WHO as soon as possible. After the suspicious case has been identified, it is also necessary to start contact-tracing to segregate other suspicious people to avoid new cases on board and to begin an epidemiological investigation. If it is difficult to identify people who were in contact with infected people and if new cases begin to appear on board, all travelers should be quarantined. The end of the cruise should be determined, and the next cruise will occur only after the ship is cleaned and disinfected (WHO, 2020a).

Not only the WHO, but also the European Centre for Disease Prevention and Control - ECDC and Center for Disease and Control and Prevention - CDC in the US, among other centers have prepared guidelines for safe resuming of the cruise industry. The ECDC determines detailed plans for places, processes and people, while the CDC presents all of the requirements to attain a COVID-19 Conditional Sailing Certificate, which also includes a simulated voyage with volunteers' guests. The ECDC guidance applies to cruise ships in the European Union for a gradual and safe resumption of operations. In their guidelines there is a review of shipboard operations including recommendations about information and communication from pre-boarding to disembarkation; good practices evolving physical distancing, hand-washing hygiene and health screening prescriptions; complete plans

for cleaning and disinfection; strategy and measures for people going ashore and re-embarking; detailed emergency procedures; waste management; measures to avoid infection through heating, ventilation and air conditioning systems; procedures to handle visitors, pilot, and other people onboard (ECDC, 2020).

The CDC guidelines require a COVID-19 Conditional Sailing Certificate to resume in the US waters and ports. The standards for mitigating the risk of COVID-19 onboard include agreement with port and local health authorities; minimum standards for restricted passenger voyages (including requirements for advertisement; length of itineraries; laboratory testing of passengers and crew before, during and after cruises; standards for hand hygiene, face coverings, social distance, meal service and entertainment venues, and ship sanitation); simulated voyages with many requirements. The simulation voyages with no paid guest intend to replicate real-world onboard conditions of cruising and tests the new measures required. These voyages must include embarkation and disembarkation procedures, onboard activities, private island shore excursions if there is one planned in the future itineraries, evacuation procedures, transfer of symptomatic passengers or crew, quarantine of all remaining people onboard, and other activities (CDC, 2020).

The routine on board for cruise ships is different in the cruise lines that are sailing post COVID-19. The departure process is taking more time now due to the new strict health protocols. These protocols include screening travelers' temperature, filling health questionnaire, the COVID-19 swab test, and the medical review. According to the new patterns onboard, passengers should be wearing a mask where and when it is not possible to keep a physical distance; hand-washing should be required everywhere, including alcohol-based hand rub solution availability; buffet restaurants, now with a reduced number of tables, should have crew members serving food for all passengers during mealtime; there is more availability of shows in the theater, in order to split guests during each session. The ships should reduce the number of people in sports and entertainment activities, and for most of the cruise lines, passengers should go onshore only if they book cruise lines' excursions that provide the same sanitary and health conditions as being on board, as a bubble. Some cruise lines are offering passengers wristbands that automatically open doors and contactless on board payment. The cruises should be sailing with less than 70% of the ship's capacity during the COVID-19. The ships should be well-equipped with labs and health care. The itineraries available should be shorter and have fewer ports of call than usual; there is a cruise for nowhere in order to minimize the risks. In this beginning, the cruise lines are avoiding having different nationalities of passengers together and many ports of call in these experimental cruises.

As examples of following these protocols, the first giant ship that started sailing in Europe in August 2020 was MSC Grandiosa, followed by Costa Deliziosa and Costa Diadema in September 2020, and Costa Smeralda in October 2020, all of them from Italian brands. They have had successful experiences thus far, which is inspiring other cruise lines to resume in different parts of the world, where cruise lines are already allowed to it. Since December 2020, there have been some ships sailing for short time with local customers in some specific regions of the world, as seen in Table 1. Their successful operations have brought hope for clients, the workforce, and other stakeholders in the cruise industry.

Table 1 shows ocean cruises that have resumed with new protocols to prevent being infected. These ships are sailing only in some authorized areas as a means to restart their activities step by step. The main goal is to prove that those new protocols guarantee a safe routine on board for passengers and crew members. Despite the fact that over a year has passed since the world pandemic was declared, the cruise industry is not resuming globally yet. However, the predictions for this industry in 2022 and 2023 are encouraging. Their sales have been increasing since the vaccination started, which brings enthusiasm to the entire industry.

Table 1
Ships Operating Ongoing Cruises Until the End of December 2020.

Cruise Line	Where
Aida	Canary Islands
Aranui	French Polynesia
Costa Cruise	Italy and Western, Mediterranean Taiwan
Dream Cruises	Taiwanese Islands and Nowhere
Hapag-Lloyd	North and Baltic seas, Canary Islands
Metropolitan Touring	Galapos Islands
MSC Cruises	Italy, Spain
TUI	Canary Islands
Hurtigruten	Norway
Paul Gauguin	French Polynesia
Royal Caribbean	Singapore, Nowhere
Coral Expeditions	Australia
True North Cruises	Australia
Asuka Cruise Line	Japan
Mitsui O.S.K.	Japan
Venus Cruise	Japan
Heritage Expeditions	New Zealand
NYK Cruise	Japan

Note: Based on Coulter, 2020b; Cruise Industry News, 2020; The Japan Times, 2020.

Another trend that has been more frequent in the first semester of 2021 is sailing to nowhere only with a local vaccinated guest. The P&O Cruises announced cruises departing from Southampton next July 2021, while Royal Caribbean is launching its new ship in May 2021 in Israel only for local vaccinated guests.

Conclusion

The cruise industry was presented in this paper, including its background, the major impacts of COVID-19 and some of the new frameworks required worldwide in order to allow resuming this industry. The state of Florida was presented as an example of the cruise industry's role and its shutting down impacts in a cruise-dependent region.

This paper presents explanations as to why the COVID-19 crisis has been the worst crisis to face the cruise industry. There is a consensus of how dangerous having infected people in a cruise ship could be and also how it is easy to spread worldwide. It is also important to have in mind that COVID-19 is a crisis that has been disseminating fear and uncertainty because of its unprecedented and not known characteristics.

However, this industry is capital intensive, has an enormous dependent supply chain, serves to improve many ports of call economies, hires an immense quantity of people worldwide, and provides leisure and entertainment. The state of Florida's data illustrated how the effects of cruises shutting down could be. As a consequence of the cruise industry's importance, there are collective initiatives, such as the Healthy Sail Panel, the WHO's guidance, and the CDC framework among others that examined every aspect of the cruise journey and recommended new patterns to increase protection for all people involved. These new protocols have been bringing hope for resuming the cruise industry, in addition to the COVID vaccine, which will be also play an important role in this resuming.

The cruise industry has the right to resume, but it must resume with responsibility, with coordinated plans, with high health protocols, and with a good communication plan. The way this industry is striving to address the current challenges demonstrates its capacity to innovate to meet the challenges of the current crisis; its making the cruise experience healthier and safer for its guests, crew, and the communities they affect.

Studying COVID-19 and the cruise industry is a work in progress and there are many opportunities to build this field of knowledge. New studies should take into consideration all the stakeholders, such as people in charge of ports of call and their municipalities, executives from the cruise industry, salesforce, companies in the supply chain, passengers and crew members, and also using a huge sample for each one of these players. There are also great opportunities to reevaluate the trends before and after COVID-19 and how these trends could affect the customer's cruise experience.

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