

ISSN 1732-4254 quarterly

BULLETIN OF GEOGRAPHY. SOCIO-ECONOMIC SERIES

journal homepages:
<https://apcz.umk.pl/BGSS/index>
<https://www.bulletinofgeography.umk.pl/>

COVID-19 and the global cruise ship industry: potential recovery and reformation pathways

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How to cite:

Chikodzi, D., Nhamo, G. & Dube, K. (2022). COVID-19 and the global cruise ship industry: potential recovery and reformation pathways. *Bulletin of Geography. Socio-economic Series*, 55(55): 17-33. DOI: <http://doi.org/10.12775/bgss-2022-0002>

Abstract. The cruise ship industry was one of the fastest growing subsectors of the tourism industry before the advent of COVID-19. This paper examines the prospects and recovery of the cruise ship industry from the devastating impacts of COVID-19 on the industry. The study relied mostly on event study and secondary data, including survey data from authoritative sources, data from representative organisations, news reports and academic literature. The results show that the industry exhibited high levels of customer loyalty and resilience to the COVID-19-induced downturn. The industry also adopted additional protocols to improve public health on board and protect the health and safety of customers, crews and visited communities. However, continued travel restrictions at both source and destination markets, as well as the continued resurgence of the virus and related uncertainties, threaten the recovery of the industry. Mandatory vaccination of both crew and passengers needs to be considered.

Article details:

Received: 17 August 2021
Revised: 16 November 2021
Accepted: 12 December 2021

Key words:

COVID-19,
cruise ships,
tourism,
recovery,
reformation

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1. Introduction

Cruise lines are passenger ships operated for pleasure and leisure voyages. The primary purpose of cruise line tourism is to accommodate guests and to visiting one or more glamorous ports of calls (Lau and Yip, 2020). A cruise ship represents a destination in itself and essentially acts as a floating resort with all leisure related facilities and attractions, such as restaurants, bars, theatres, casinos, sport facilities and swimming pools (Rodrigue and Notteboom, 2013). The cruise ship industry has had vibrant growth over the past 40 years, with the initial boom in demand for its services coming from North America. However, more recently, the demand for cruise ships has spread across all regions of the world, including Europe, Asia and Australia, in particular (Peručić, 2019). Cruise lines offer a variety of packages, from short cruises, to those lasting several days, weeks and or months. There are also thematic cruises, around- the- world cruises and expedition cruises. Rodrigue and Notteboom (2013) observe the modern cruise ship industry to be a salient symbol of the globalisation of the tourism industry in terms of market coverage, and practices such aslike customer services, workforce and the mobility of assets.

In the early 1980s, there were slightly fewer than two million cruise line passengers in the world (Cruise Lines International Association-CLIA, 2019). These numbers rose to four million by the end of the 1980s and to over nine million passengers by the end of the 1990s. In 2017, nearly 27 million cruise passengers undertook voyages, with the figure rising to 28.2 million in 2018 and 30 million in 2019. Up to 32 million passengers were expected to cruise in 2020 before the emergence and rapid spread of the COVID-19 pandemic (Ibid.). The dynamic growth in demand for ocean cruises prompted companies to invest in the construction of new and larger ships to enrich their offer of numerous itineraries and offer a choice of the most modernly equipped and designed ships (Peručić, 2019).

The industry has in the past survived outbreaks of infectious diseases such as H1N1, SARS, norovirus and legionnaires' (Liu-Lastres et al., 2018). It has also outlived disasters such as the emergency evacuation of the Viking Sky (Dahl, 2019), the sinking of the

Costa Concordia with 32 deaths (Alexander, 2012) and mechanical failures on some cruise ships, as well as piracy (Button, 2016). Lessons from these previous shocks were, however, not enough to prepare them for the unprecedented impacts of the COVID-19 pandemic (Nhamo et al., 2020a). The adverse impacts of the pandemic on the cruise ship industry were due to official travel restrictions from source and destination markets, no-sail orders and conditional sailing orders issued by health officials from key source markets, infodemia and travellers' fear of infection during the cruise (Bulin and Tenie, 2020).

Given the foregoing, this paper seeks to respond to the question: What prospects of recovery and reformation from the cruise ship industry in the aftermath of the COVID-19 pandemic exist, and how are they manifesting? Derived from the research question, the study adopts the objective to examine and determine the prospects and recovery of the cruise ship industry following the COVID-19 outbreak.

2. Literature survey

The cruise ship industry's growth and economic impact has made it a key component of global economic development, as well as a crucial job creator for tourism-based regions and economies (CLIA, 2020). Despite the resilience that the industry has shown in the face of economic, socio-political and other crises over the past decades, it has become one of those most affected by the COVID-19 outbreak that was declared a global pandemic in 2020 (Notteboom et al., 2021).

Table 1 shows the top eight ranked cruise companies in terms of market share and number of ships. Carnival Corporation, Royal Caribbean and Norwegian Cruises based in the USA had a combined 70.9% of the market revenue in the industry in 2021 (Cruise Market Watch, 2021). Of particular interest is the fact that the cruise ships have been growing in size and number annually. In the Cruise Ship Order Book (2019), a total of 125 new cruise ships were scheduled for delivery between the 2019 and 2027 period, with an average capacity of 2,227 passengers and a total value of USD 69.8 billion.

Table 1. Top eight ranked cruise shipping companies

Cruise ship company	Country	% Revenue
Carnival	USA	37.1
Royal Caribbean	USA	21.2
Norwegian Cruise	USA	12.6
MSC	Switzerland	6.5
TUI Group	Germany	3.8
Disney Cruise Line	USA	2.7
Viking Ocean Cruises	Norway	1.7

Source: Authors, data from Cruise Market Watch, 2021

Table 2 and Fig. 1 show the global cruise ship deployment of capacity from 2014 to 2019, popular cruise routes and major source markets. It emerges that the geographical expansion of the cruise industry is on the increase, as is the deployed bed capacity. The Caribbean is the largest cruise ship region, representing close to 65.24 million in bed capacity and over 40% of the world cruise market in 2019. The Asian cruise region witnessed the highest expansion in the industry, registering growth of over 190% in bed capacity from 2014 to 2019. The region also expanded from about 8% market share in 2003 to 15.7% in 2019 (Cruise Industry News, 2019). Almost all the regions of the world have deployments of cruise assets, making the industry truly global.

The close-to 29.7 million passengers who cruised in 2019 were sourced from about ten countries. These countries are the USA, Brazil, France, Spain, Italy, Canada, Australia, United Kingdom, Germany and China (Fig. 1). These countries accounted for

about 86% of global cruise passengers. The USA had 11.9 million passengers and was the largest source market, accounting for 45% of global cruise passengers. This was followed by China and Germany, who accounted for 17% of global passengers, with 4.59 million passengers. The United Kingdom and Australia had 3.27 million cruisers, accounting for 12% of global passengers (Peručić, 2020; CLIA, 2021). In terms of economic impact, the cruise ship industry created over 1.11 million jobs worth over USD 45.6 billion in wages and salaries in 2019 (CLIA, 2019). In the United Kingdom, the cruise ship industry directly employs over 40000 people and pays salaries totalling GBP 1.35 billion (Lawrey, 2020). The value chain of the cruise ship industry is associated with income from the spending of crew members and passengers on land, income from fees and other services that are offered to the ship by different parties, income from fees where the ships dock, and income from fees for repair and maintenance (Lau and Yip, 2020).

Table 2. World's global cruise ship deployment of capacity, 2014 to 2019 (millions of bed days)

Region	2014	2015	2016	2017	2018	2019	5-year Growth
Caribbean	51.00	53.58	55.07	59.27	62.83	65.24	27.9%
Australia/New Zealand/ Pacific	7.09	8.36	9.97	10.21	10.18	9.34	31.7%
Mediterranean	25.14	29.93	30.53	28.02	29.69	32.98	31.2%
North/West Europe	14.88	17.48	19.16	18.80	20.51	21.22	42.6%
Alaska	6.15	6.65	6.77	7.33	7.76	8.90	44.7%
Asia	6.17	11.33	15.06	17.76	18.50	17.94	190.7%
Rest of the World	20.63	22.81	22.49	25.38	26.89	30.74	49.0%

Source: Authors, data from Cruise Market Watch, 2021

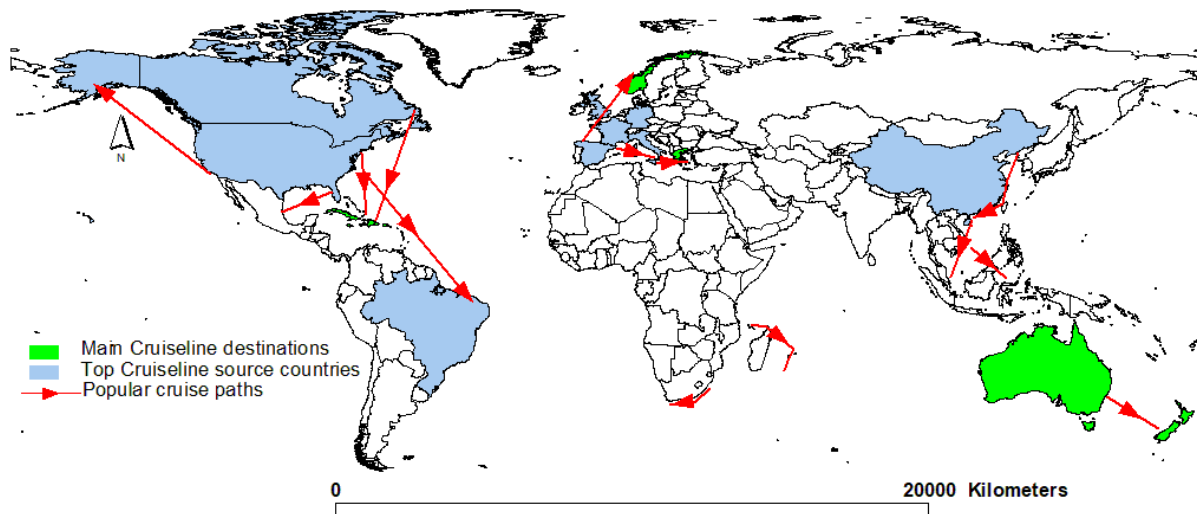


Fig. 1. Popular cruise paths, source markets and destinations
Source: Authors, data from CLIA, (2020)

The United Nations World Tourism Organization (UNWTO) (2020) highlights that the COVID-19 pandemic brought a pause to the global economy, with the tourism sector being the worst affected. More specifically, the UNWTO argued that the sudden and unexpected fall in tourism demand caused by COVID-19 placed millions of jobs and livelihoods at risk, while at the same time jeopardising the advances made in achieving sustainable development and equality over recent years. In the case of the cruise ship industry, the countries that reported the worst cases of COVID-19, such as the USA, China, Italy, Spain, Germany, France and Britain, had the biggest share of the source markets. This situation put the cruise ship industry in a precarious position when it came to recovery. COVID-19 continued to be pervasive, with even the largest containment efforts in the history and vigilant responses of most countries around the world having only limited success in eliminating the pandemic (Khalilzadeh, 2020).

Compared to terrorism, political and environmental hazards, it takes relatively more time for tourism activities to recover from the shock of health crises (Gossling et al., 2020). It has also been observed that drops in tourist numbers due to health crises usually take more-or-less the same time to recover across the world. Based on studies done by Khalilzadeh (2020), the time period for destinations to recover from health crises after they have been

contained ranges between 12 and 34 months. This means that, on average, it usually takes up to 22 months for tourism to recover from health crises. This is slightly shorter than recovery from natural hazards and political turmoil, but to some extent longer than terrorism and manmade environmental catastrophes such as oil spills (Ibid.). The standard deviation of health crisis recovery is, however, much smaller than that of recovery from natural hazards and political turmoil. This, as observed by Khalilzadeh (2020), means that the average recovery time is more-or-less the same for most health crises that occur across the world. The speed of recovery is related to properties of the destination and health disaster. The destination properties can include the destination's level of development, crisis management system, and levels of sustainability, training and preparedness. Relevant health disaster properties are things like disease properties, reaction to disease, depth of virus infection, rate of hospitalisation, transmissibility, death rate, target population, virus resilience, virus incubation period, and virus treatment and the availability of vaccines. Considering past experiences, it seems that, from the entire system perspective, tourism will make significant recoveries within a year or two of the end of the COVID-19 pandemic. Previous experiences show that the system rebounds strongly a short while after a crisis is over (Khalilzadeh, 2020).

In the near future (short term), a predicted significant change in the state of the tourism system due to the COVID-19 pandemic is the domestication of the industry. Renaud (2020) argues that over-globalisation has made most tourism systems vulnerable to various disasters. Hence, hopes for a return to pre-COVID-19 tourist mobility in the short term are questionable, especially since the pandemic has yet to be stabilised on a global scale and travel red lists have been created by other countries. Extreme mobility characterises the cruise ship industry, which operates by transporting tourists through a series of destinations. Therefore, the COVID-19 pandemic put a sudden end to the mobility on which the industry relies. During the early days of the COVID-19 pandemic, ports of call and destination ports began to refuse stopover vessels that were still at sea when the virus was beginning to spread rapidly (Nhamo et al., 2020). Furthermore, most countries closed their borders to non-essential transit movement. As a result, the cruise ship industry ceased operations pending the stabilisation of the pandemic. The question is, therefore, the extent to which this disruption in mobility will affect the efficient operation of the cruise ship industry when it resumes operations and whether the industry is resilient enough to deal with the crisis.

Most tourism experts do not anticipate that the tourism industry will recover to pre-COVID levels before 2023. The UNWTO (2021) attributed this slow recovery to the imposition of travel restrictions, low levels of vaccination in some destination countries, the emergence of new variants, slow containment of the virus, limited income due to depressed economies, and low traveller confidence. The cruise ship industry has weathered many storms in the past – from serious accidents to disease outbreaks and even piracy. However, the COVID-19 pandemic that began in 2020 has been the most impactful. After close to two years of COVID-19-induced downturn, there is the need to start addressing the recovery and reformation process for the cruise ship industry in the context of continued restrictions to international and domestic travel, as well as the “new normal”, which requires new hygiene standards and social distancing.

3. Material and research methods

The paper mainly draws from event study methodology and secondary survey data obtained from the cruise review site, Cruise Critic, and from CLIA Qualtrics Surveys. Event study methodology has its origins in finance, particularly the analysis of stocks and foreign exchange (Hayward, 2018). An event study examines the impact of an event on the financial performance of a company or stock market. In the context of this paper, event study was used to examine how the return on investment on cruise ship share prices responded to the different stages in the outbreak of the COVID-19 pandemic, as well as its second and third waves of infections. The return on investment using the share value of cruise ship companies was deemed an objective measure of the impact and recovery of the industry to the impacts of the pandemic. The recovery was also shown through the changes in the share prices of cruise ship companies on stock exchanges.

Further, to gauge the likelihood of recovery of the industry, the paper used data obtained from a cruiser sentiment survey run online from a cruise review site, the Cruise Critic. The site is one of the world leaders in terms of providing information that assists cruisers to research and plan their voyages and also connect with cruisers. The site is used by over six million people per month (Cruise Critic, 2021). The survey was done to get insights into what visitors of the site thought about COVID-19 and their willingness to undertake cruise ship voyages in the future. The survey was done between April 2020 and November July 2020 and had over 35,000 respondents worldwide but mostly from major source markets of the cruise ship industry. These countries are USA, China, UK, Germany, Canada, Australia, Italy, Spain, France and Brazil. Although the main aim of the survey was to assist cruisers in making important decisions about their future voyages, the data is robust enough to give insights into potential recovery pathways of the industry from the COVID-19-induced downturn and also for academic writing addressing recovery. The survey was open to any visitor to the site, but mainly targeted at cruisers whose voyages had been cancelled or disrupted due to the COVID-19 pandemic. Preliminary results from CLIA Qualtrics

Survey from eight major source countries of the cruise ship were also used. The survey had 500 respondents from each country (CLIA, 2020). The Cruise Lines International Association (CLIA) is the representative body of most global cruise ship companies, and their data informs industry management practices; hence, their data is to a large extent suitable for academic purposes related to the industry. The results of these surveys were used in the study to project the scenarios for recovery for the industry.

The research also used relevant quantitative and qualitative secondary data from authoritative sources to address the objective of the paper. Secondary data techniques rely heavily on relevant existing data. Secondary data used in the study were derived from government sources, regulatory bodies, industry representative bodies, private companies, news media and other scholarly sources addressing the research questions. Descriptive statistics, especially frequencies, were used to summarise the derived quantitative data, with the presentation being in the form of graphs. Qualitative data were analysed through thematic content analysis and presented through the use of descriptions. Table 3 summarises the data collection and analysis methods used in the study.

Howitt (1998) and McMaster and Sheppard (2004) argue that scale is one of human geography's

fundamental concepts, which according to Howitt (1998) has facets of size, level and relation. The paper resonates with the latter conception, which is based upon the premise that scale should be expressed relationally rather than hierarchically.

Spatial economic analysis would be incomplete without firms. In the milieu of human geography, Taylor and Asheim (2001) categorise perspectives on the firm into two sets: the rationalist and the socio-economic. The paper is aligned with the socio-economic view (see Taylor & Asheim, 2001), which is based upon the premise that (unlike in the rationalist view) the function of the firm is not simply to maximise profits while minimising costs, but to provide a framework within which the very calculus of output-cost relationships is played out. Importantly, it is not only individual firms that matter, but the system of firms (Taylor & Asheim, 2001; Taylor, 1996).

The activities of firms are expected to create particular patterns in space. The geographical pattern includes points, lines and areas; it is understood through the measures of point pattern, nearest neighbour analysis and quadrant sampling (Coffey, 1981). Given the relational view of space, proximity, firm and scale, the paper takes a position that the driving forces of airport-centric developments do not create patterns that are necessarily observable in geographical space.

Table 3. Summary of data collection and analysis

Data collection method	Content	Analysis and presentation
Secondary	Reports from cruise company representative organisations, private companies, Government agencies; published academic work; online news articles	Keyword search on major online platforms; downloaded data synthesized and thematised according to research objectives. Narratives then produced from the identified themes
Event studies	Cruise ship company stock market responses to various COVID-19-induced events and announcements such as lockdowns, travel restrictions and no-sail orders	Descriptive statistics and graphs
Online survey	Public perceptions on cruise ships such as willingness to cruise again, main considerations when booking future cruises, preferred destination and onboard safety measures preferred.	Descriptive statistics, narratives and graphs

4. Results

4.1. Recovery on the stock market

In the year 2020 there was a drastic reduction in the income of cruise ship companies, as depicted in Fig. 2. This was mainly due to the cessation of operations due to the COVID-19 pandemic and related restrictive measures. Income for Carnival Corporation, the biggest cruise company in the world, dropped from over USD 20 billion to just over USD 5 billion. The drastic drop in revenue for most cruise ship companies was accompanied by massive drops in stock prices.

Figure 3 shows the market performance of the top three cruise corporations that together hold more than 80% of the world market in the cruise ship industry. It emerges that return on investment in the stock of these three companies dropped significantly during the early days of the COVID-19 pandemic. The stock value of Royal Caribbean, Carnival Corporation and Norwegian Cruise Line plunged on average by over 80% in just 60 days. This was from their highest peaks in January 2020 to their lowest levels by 18 March 2020. This sharp fall in stock price threatened the survival of these companies, given that they had to suspend operations at the peak of the COVID-19 pandemic (Nhamo et al., 2020). Stock markets were therefore

left as one of the key vehicles through which cruise companies could obtain liquidity to allow them to mitigate the impact of the pandemic on their activities. With this drop in return on investment, most predicted an imminent collapse of these cruise corporations. The possibility of collapse was also heightened by the fact that the companies were denied bailout packages given to other struggling companies by the United States government, as they were not incorporated in the country (O'Connell, 2020).

The return on investment on major cruise company shares started slowly to improve from around -83% to between -39% and -64% in the month of April 2021. From a share investor point of view, the recovery of the cruise ship industry has therefore been very slow and painful. This was mainly because the companies were still not operating for over a year after COVID-19 had been declared a global pandemic, yet they continued to burn cash through maintenance of their assets and wages for employees. The second, third and fourth waves of COVID-19 infections in some parts of the world, including Western Europe, China, India and the USA, continued to dampen the recovery of these companies' stock values. However, despite the slow pace of recovery in 2020 and 2021, the industry still has an optimistic outlook. This is based on the industry's financial resilience, since none of the major players had collapsed over a year into

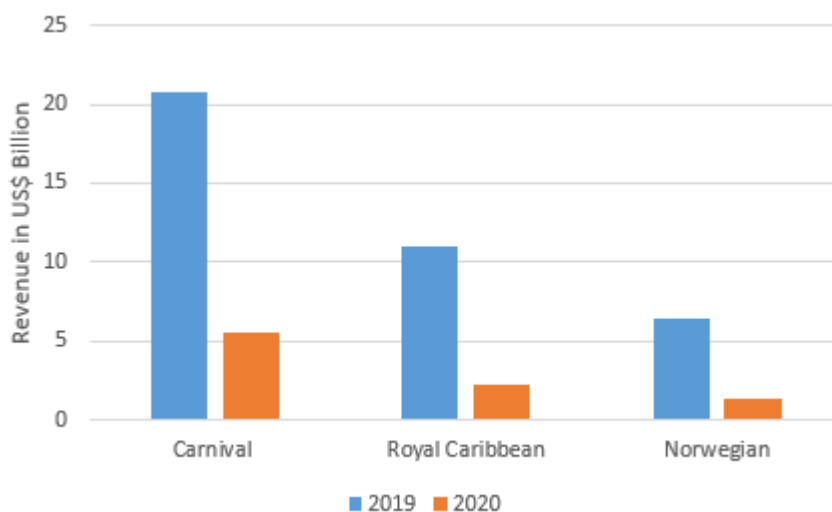


Fig. 2. Cruise company revenue 2019 and 2020

Source: Statista (2020)



Fig. 3. Percentage change in share price from highest price
Source: Y-charts

the COVID-19 crisis. Despite the decline in stock prices and lack of bailout packages, investors also continued to show confidence in the companies, as demonstrated by the continued influx of liquidity into these companies (Smith, 2020). This proves that even in times of acute crisis, investors were still there to support the industry's survival and recovery (Renaud, 2020). The industry was therefore likely to survive and make it out the other side of the COVID-19 pandemic.

4.2. Cruisers' perceptions of pandemic handling and future cruises

Figure 4 shows the options taken by cruisers after their voyages were cancelled either by the cruise lines or by the clients themselves. The travellers were asked by cruise companies to either take full refunds or future cruise credits to be used when the industry resumes operations. Close to 77% of those who took part in the Cruise Critic survey took future cruise credits instead of full refunds. These represent the views of people who use the cruise critic website when planning cruises and rating their previous cruise experiences. Globally, the site is visited by an average of over six million people

every month (Cruise Critic, 2021). This implies that most respondents were still planning to sail when conditions eventually allowed them to do so. The substantial inclination towards future credits could be due to several reasons, one of the most important being the offer of at least 125% of the value of the cancelled cruise by cruise companies, with some even making sweetened offers like on-board credit. This is also proof that the cruise line industry has some clients who are eager to cruise again, as and when conditions permit. It also gives confidence in the future of the industry, as these loyal clients can sustain the industry during the early days of the restart of operations after the pandemic is brought under control. Those most confident in the future of the industry and who have expressed willingness to return are avid cruisers who have taken more than five cruises in their lifetime. This means that previous experience is a significant driver of intention to cruise.

Figure 5 shows the time period within which those who made future cruise bookings will be willing to cruise. The bulk of the respondents chose time periods between 4 and 6 months (42%) and 7 and 12 months (31%) after June 2020. This means that most people still felt not particularly safe or confident to be cruising before the pandemic

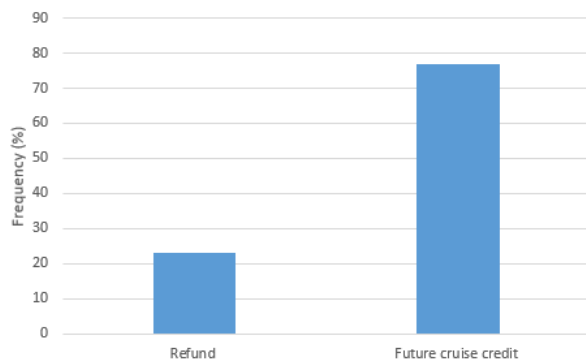


Fig. 4. Options taken by cruisers after cruise cancellation-
Source: Authors, data from Cruise Critic (2020)

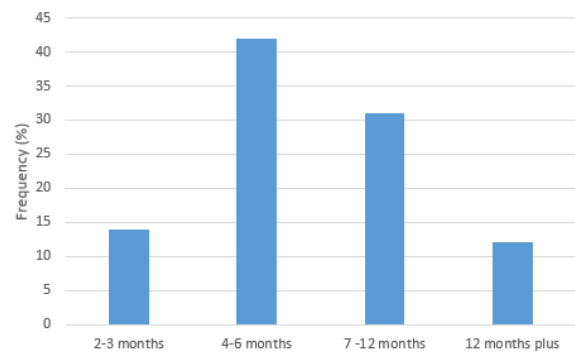


Fig. 5. Time period till future booking done between April 2020 and November July 2020
Source: Authors, data from Cruise Critic (2020)

was really under control. Hence, the respondents preferred to do so towards the end of 2020 or in 2021, with some 2021 cruises already fully booked. More cruisers seem to feel more confident to book a cruise in future because they needed to see travel restrictions and warnings being lifted from both their departure ports and port-of-call destinations. They also needed to see signs of COVID-19 cases declining and widespread availability of COVID-19 vaccines. The scenarios for cruise ship recovery to pre-COVID-19 levels therefore hinge largely on the satisfaction of the above conditions. A survey done by CLIA (2021) showed that 74% of frequent cruisers were more likely to return to cruising within a few years and close to two thirds of these were eager to cruise within a year. About 58% of international holidaymakers who had never cruised also showed a desire to cruise a few years after the COVID-19 pandemic. Khalilzadeh (2020) observes the average time for a destination to recover from a disease outbreak to be about 22 months. This implies that the rate of recovery of the cruise ship industry could be faster than what has been noted before, provided the industry invests in improved public health and safety protocols.

Figure 6 shows the top five considerations of that respondents who took part in the Cruise Critic survey would consider when booking a future cruise. It is important to highlight that these considerations were only came secondary to after the threat of COVID-19 having been reduced by the due to availability of vaccines and other screening measures. Only after the control of COVID-19 would these considerations guide the cruise companies to inform the recovery process. Most cruisers (62%)

highlighted they would consider the price of the cruise before booking. This means that the recovery of the industry may be further slowed down if cruise companies decide to balance the need for clients by reducing prices against with the need for quick recovery. The destination of the cruise is also key in the decision to book a cruise, hence the need for a diversified range of destinations to attract more clients. This can only be possible when global travel restrictions imposed to control the spread of the coronavirus have been relaxed. A follow-up survey done in February 2021 when vaccines were now available showed that 81% of the participants would prefer cruising if vaccination was mandatory for all cruisers. Only 5% said it would deter them, with an additional 14% not sure. Vaccination of cruise line passengers therefore becomes the single most important factor determining the decision to cruise and by default impacts on the recovery of the industry.

Figure 7 shows the preferred destinations of the respondents when they book for future cruises. The Caribbean is the most preferred destination, with 47% of the respondents choosing it. Europe, especially the Mediterranean, comes second on the list, with 25% of the cruisers selecting it as a destination of choice. This means that the availability of these destinations for cruise lines will likely determine the speed with which the sector will recover from the COVID-19 downturn. If, for example, the popular Caribbean destinations remain closed to the industry, it is hard to imagine how the industry can make the much-desired quick recovery. The Caribbean is an ideal cruising destination because it is mostly a tight chain of

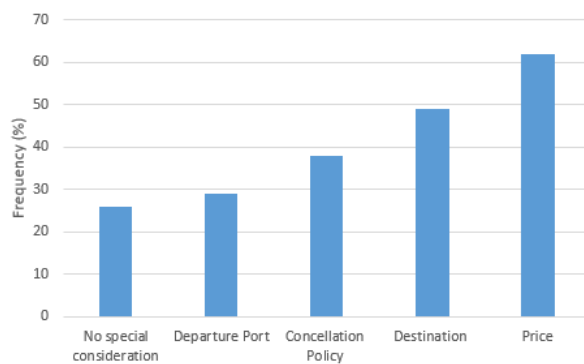


Fig. 6. Consideration when booking a future cruise after COVID-19 is put under control
Source: Authors, data from Cruise Critic (2020)

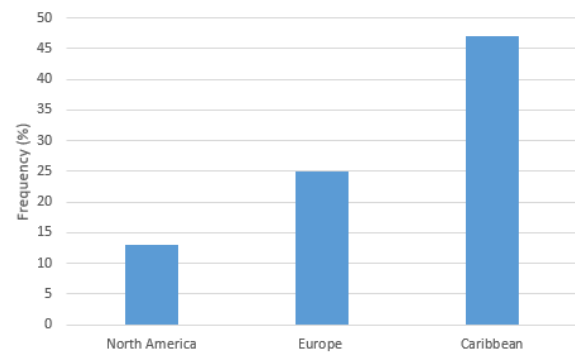


Fig. 7. Destination preferred by cruisers
Source: Authors, data from Cruise Critic (2020)

islands in close proximity, implying short cruising distances between ports of call, and its climate is subtropical with limited temperature fluctuations all year round (Rodrigue and Notteboom, 2013). The Caribbean also has a good mix of landscapes, ranging from rain forests to semi-arid conditions, as well as the presence of coral and volcanic islands. The area has a rich cultural heritage given its history of European colonialism, and African, Hispanic, English, French and Dutch influences, which gives it a diversified cultural landscape (Ibid.). The cruise industry is therefore able to offer its customers a variety of cultural experiences in close proximity. Finally, the adjacency of the Caribbean to the USA offers a large market of potential tourists able to afford cruise packages without having to travel far to start a cruise.

The cancellation policy of a cruise ship company has been recognised by 38% of the respondents as being a key consideration when choosing to book a cruise during this uncertain period. While there have been some people who expressed frustration over the delay in issuance of refunds and future credits, most respondents have rated the cancellation process positively (Saunders, 2020) as shown in Fig. 8. On a scale of 1 to 5, with 5 being very satisfied, the cruisers indicated that the cancellation process was generally handled well to the satisfaction of most cruisers. An estimated 31% rated the cancellations with a perfect 5 out of 5, and 23% gave it a 4 out of 5. This applies to situations where the cancellation was initiated by either the client or the cruise line.

Knowing that one can book a cruise with the provision to cancel if one becomes hesitant due to COVID-19 fears can give people the confidence

to book, and hence is good for the outlook of the industry. Before the COVID-19 pandemic, cruise line cancellations were very inflexible, with any changes after payment incurring some form of financial penalty. This inflexibility was to a greater part unique to the cruise industry. Hence, the pandemic brought about the much-needed change to the industry's cancellation conditions. Although the conditions vary from line to line, many are allowing passengers to voluntarily cancel their cruise with as little as 24 or 48 hours' notice.

There was a slight improvement in the number of tourists who took part in cruises in the year 2021 compared to 2020, which was the peak of the pandemic (Fig. 9). Close to 14 million people had undertaken cruises in 2021 by November, compared to just over seven million in the whole of 2020. This constituted a big improvement in the fortunes of cruise ship companies although still well below the more than 27 million people who cruised in 2019. The improved figures for 2021 reflect a shift in policy in the USA, which is the main source market for cruise ship travellers. The policy shifted from no-sail orders to conditional sailing orders for cruise ships in October 2020. Conditional sailing orders allowed cruise ship voyages to be undertaken under strict prescribed conditions. Further recovery in passenger numbers is anticipated as from January 2022, when the conditional sailing order will be replaced by industry-wide voluntary programmes aimed at detecting, mitigating and controlling the spread of COVID-19 on cruise ships.

Although in 2021 most cruise ship companies made losses due to COVID-19-induced measures, most remained optimistic to return to profitability in

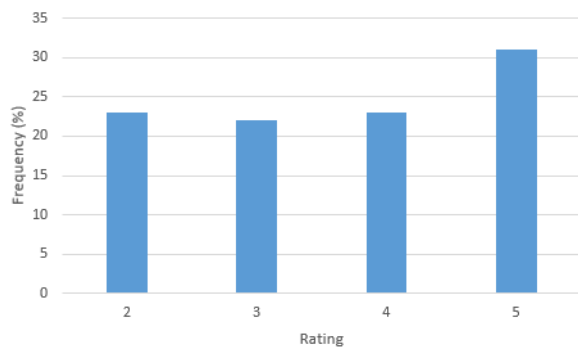


Fig. 8. Rating of cancellation processes
Source: Authors, data from Cruise Critic (2020)

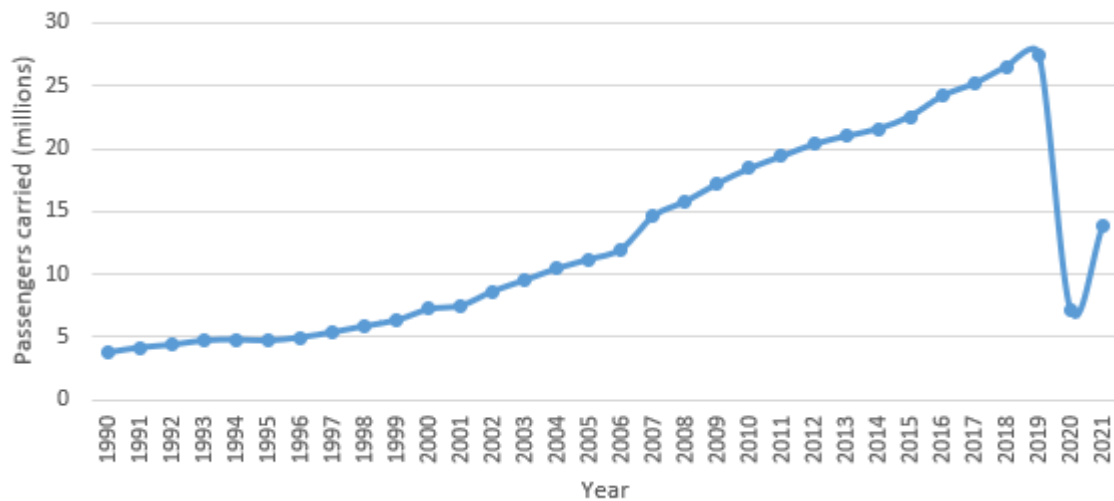


Fig. 9 Recovery of passengers carried
Source: Authors, Data from Cruise market watch (2021)

2022. For example, Saunders (2021) highlight that, although the Royal Caribbean Group made a USD 1.4 billion loss in the last quarter of 2021, it was mainly due to the company accelerating its restart plans. By October 2021, the company had carried over 500,000 people (about 44% of its capacity) and over a million passengers had been booked for the remaining months of 2021. The 2022 bookings for the company were also observed to be within pre-pandemic range, signifying high possibility for strong recovery.

4.3. Reformation pathways of board health and safety measures

A survey carried out by CLIA (2021) on areas of concern in which cruisers would like cruise lines to improve in the light of the pandemic, 81% of participants were worried about sanitation and

ventilation on board, while 76% were concerned with issues of testing, screening and exposure reduction. A further 60% were concerned with response, contingency planning and execution. Both the cruise ship industry and its individual companies have engaged health-and-safety experts to try and develop operating protocols to support a quick and safe return to service. MSC Cruises, for example, set up a cross-functional taskforce comprised of in-house experts in the areas of medical services, public health, sanitation, bio-security hotel services, and IT and ship engineering

(Bond, 2020). The company further hired medical consultants to advise it and its clients on best practices to prevent the spread of COVID-19 on their cruise ships. This work is being complemented by the formation by MSC of the Blue-Ribbon COVID Expert Group for consultations on protocol planning. This is an independent group that will review policy initiatives, technical innovations and operational measures related to COVID-19. Their efforts led to the issuance of the EU COVID-19 Healthy Gateways guide for restarting cruise operations. This provides a strategy for reducing COVID-19 risks among cruise ship passengers and crew. It also covers the entire process, beginning at the time of passenger booking and extending until passengers and crew have returned to their homes. Further, a gradual approach to restarting operations is recommended, including short itineraries from three to seven days, along with limited ports of call (Kalosh, 2020). These measures enhanced health

and safety measures to uphold the safety of guests, crew and communities that they visit. This also helps to reassure all the stakeholders that the industry is now ready to resume operations in a manner that does not spread COVID-19 and gives a good impression of preparedness. To further boost the state of medical preparedness, cruise lines such as the Genting Cruise Lines, which was one of the first companies to restart cruising in July 2020 in Taiwan, received certification in Infection Prevention for the Maritime Industry. This certification is granted by global healthcare and classification body, Det Norske Veritas-Germanischer Lloyd (DNV GL). The certification, which is a first for the maritime industry, is based on proven hospital standards and measures against infection risk that are tailor-made for cruise ships by experts from various fields, including the maritime industry (TTG, 2020). The image of the industry is also being boosted by recent CLIA information initiatives. In Australia and New Zealand, they debuted an initiative called the “Ask Joel Q&A Series” (Yue, 2020). This initiative seeks to address burning questions that the public has concerning the industry, hence reducing misinformation concerning the industry.

CLIA members will adopt robust procedures supported by scientific findings in an endeavour to limit the transmission of the coronavirus amongst crew members, passengers and port-of-call destinations. These include testing of all passengers and crew before boarding, wearing of masks at all times, practising social distancing, improving ventilation systems, improved communication, pre-organised logistics for response to emergencies on board, as well as strict protocols when leaving and

returning to the ship, including denial of boarding for violators (CLIA, 2021). On 30 October 2020, the United States Centers for Disease Control and Prevention (CDC) produced the Conditional Sailing Order (CSO) for the cruise ship industry. This is a set of technical guidelines for health-and-safety protocols to reduce the spread of COVID-19 on cruise ships. Figure 10 shows the phases that cruise lines had to go through to resume service under the CSO of the USA CDC.

The emphasis was initially on offering cruises of no more than seven days, with this condition being relaxed as cruise lines succeeded in limiting infections on board. Since its implementation, the CSO has successfully prevented the overwhelming onboard spread of COVID-19. For example, Royal Caribbean cruise lines have carried more than 500,000 travellers under CSO conditions and have experienced only 150 COVID-19 cases (Kalosh, 2021). This success in preventing COVID-19 on board explains why the CDC intends to make the CSO standards voluntary by the end of January 2020. The CDC’s confidence in the cruise lines’ capacity to prevent and manage COVID-19 on their ships can further boost the confidence that the market has in the industry, which can increase its pace of recovery. These measures have further buttressed the resilience that this industry has shown in the face of COVID-19.

In terms of when normal cruise services can resume globally, a study by Sachs et al. (2020) shows that the recovery of the industry is set to begin in 2021, but that it will be slow. This projection is based on four expectations, which are the roll-out and widespread availability of COVID-19

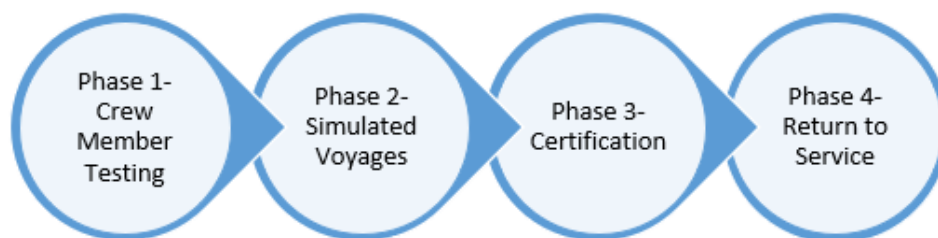


Fig. 10. CDC Framework for conditional sailing in the USA
Source: Authors own elaboration

vaccines, removal or relaxation of travel restrictions, implementation of additional health measures for cruise passengers to access the ships, and the existence of loyal customers (Ibid.). However, there are still significant uncertainties and blind spots on the horizon, including new waves and variants of COVID-19 infections, the inability to travel to key regions because of biosafety related restrictions, and the significant decline in financial capability of clients, given the weakening of the global economy due to COVID-19-induced lockdowns (Renaud, 2020). Despite reasonable loyalty of avid and repeat cruisers, it would be difficult to predict their reaction to the negative media reports of infections on board (Ibid). As observed by Nikiforuk (2020), this may present a lasting marketing challenge in a context where the industry needs to attract new customers to ensure growth, and also where the majority of passengers are relatively elderly and often have fragile health.

The move towards enhanced health care measures during cruises will likely result in some form of change in the cruise ship experience compared to the past. For example, the self-service buffet will likely be replaced with room service or crew- manned serving stations in order to limit interaction of people. Strict reservation and screening systems could be implemented to access entertainment venues, bars, and even dining rooms, as cruise lines comply with strict venue capacities. Embarkation times will also need to be staggered to permit greater social distancing. The COVID-19 pandemic will likely accelerate the cruise ships' industry towards higher hygiene standards, including automated digital cleaning and sterilisation systems. Smaller cruise ships with fewer numbers of passengers are likely to be preferred by the market in place of the bigger vessels in the early days of the post COVID-19 period. However, the level of exclusivity comes with higher prices, so hence there will still be some demand for the the bigger vessels that are more affordable, bigger vessels (Gilchrist, 2020).

However, as the outbreak of COVID-19 was slowly contained globally, more destinations started opening up to cruise ships with relaxed conditions, albeit to different destinations and ports of call having different conditions for the visitors. Almost

all the world's cruise ship markets have now opened up for the industry to restart. The warming of destinations to cruise ships was in sharp contrast to the unforgettable sight of the Diamond Princess cruise liner, where 2,666 passengers and 1,045 crew members were prevented from disembarking from the ship for 27 days due to an outbreak of COVID-19 on board. The fact that, less than a year from such traumatic scenes, people were already willing to cruise shows how the industry is resilient to the pandemic and likely to rebound.

Some cruise companies are disposing of their assets, including ships, in order to raise liquidity and reduce the cost of operations. This is in anticipation of reduced demand when cruises resume and to improve efficiency in operations given the need for improved public health procedures and the need to reassure both travellers and host ports of call that the industry is indeed ready to operate even when COVID-19 is still a global problem. In particular, the Carnival Corporation aims to dispose of 13 of its cruise ships and to defer some new ship deliveries (Saunders, 2020).

In addition to the reform of health- and- safety practices on cruise ships, some, like Chin (2020) , advocate for the recovery of the industry to be informed by sustainability principles. This includes reducing the carbon footprint of the industry in the light of climate change and minimising their impacts on the environment of the visited ports of destination. During the COVID-19 induced downturn, the major cruise companies pledged to improve on their carbon dioxide emissions. This saw the industry investing close to \$23.5 billion dollars in developing pioneering clean maritime propulsion technology, pollutant filters and more efficient cruise liners. These new ships being delivered in the post COVID-19 era use cleaner fuels like liquified natural gas (LNG), which reduces their carbon footprint. LNG has almost no sulphur emission and reduces the emission of greenhouse gases by almost 20% (CLIA, 2021). However, given the huge losses that the industry has incurred during the COVID-19 pandemic, some, like Schlagwein (2021), argue that this trend towards sustainability would be difficult to maintain but concede that the subject of sustainability transitions and climate will continue to gaining relevancy. The cruise ship industry therefore has no option but to increase

its investment in environmental sustainability despite the difficult situation imposed on it by the COVID-19 pandemic if it is to be seen in a good light and to attract environmentally conscious clients.

5. Discussion

There is uncertainty related to destinations' continued hospitality and willingness to receive cruise ships. This is given the fact that, with confirmed or suspected outbreaks on board, many cruise ships struggled to find somewhere to dock in the early days of the COVID-19 pandemic (Nhamo et al., 2020). With global mobility being one of the irreversible fundamental conditions for the viability of the cruise ship industry, any restrictions on their movements represents a threat to their recovery. Renaud (2020) highlights that, not so long ago, destinations were rolling out the red carpet to attract the cruise companies to their ports. However, with the emergence and spread of COVID-19 and its variants, and as the cruise lines struggle to get back in business, there is a possibility that access to certain destinations could be refused. For example, between September 2021 and November 2021, the Bahamas (a popular cruise ship destination) put in place emergency measures banning unvaccinated cruise ship tourists from entering the country (Faust, 2021). The ban required cruise ships stopping at any port in the country to produce a manifest of all passengers and their vaccination status. Such bans, which are necessitated by the spread of new COVID-19 variants, may in the future limit the recovery of the industry.

However, as the outbreak of COVID-19 was slowly contained globally, more destinations started opening up to cruise ships with relaxed conditions, albeit to different destinations and ports of call having different conditions for the visitors. Almost all the world's cruise ship markets have now opened up for the industry to restart. The warming of destinations to cruise ships was in sharp contrast to the unforgettable sight of the Diamond Princess cruise liner, where 2,666 passengers and 1,045 crew members were prevented from disembarking from the ship for 27 days due to an outbreak of COVID-19 on board. The fact that, less than a year

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6. Conclusions

The cruise ship industry is one of the biggest casualties of the COVID-19 pandemic. Not only did the industry lose potential revenue due to the cessation of operations, it also incurred considerable reputational damage due to the pandemic. Despite steep declines in their share prices – which affected their ability to raise funds – and being denied bailout packages, the industry has shown great financial resilience and continued to court investor confidence. The industry still has large amounts of liquidity being poured into it and therefore looks certain to survive the COVID-19 downturn. The returns on investment in cruise line stocks have improved slightly from the rock bottom they reached during the peak of the pandemic but are still in the negative. The fact that all the major cruise markets have allowed cruising to resume, and most destinations are welcoming them is likely to put more confidence in the market, which is likely to quicken the pace of recovery. However, different waves of the COVID-19 outbreaks and different variants have dampened the recovery of these shares and threaten to do so in future even in the face of new COVID-19 vaccines.

The cruise ship industry has been proven to be resilient to the COVID-19 pandemic by the positive future ratings that the industry continues to get from potential cruisers. Most participants of surveys used in the study desire to cruise in the future despite the negative publicity the industry got during the early days of the pandemic. The resilience of the industry is also shown by the slight increase in passengers in 2021 compared to 2020. Passenger numbers are anticipated to reach pre-pandemic levels by the end of 2022. Enforcing mandatory vaccination of passengers and crew is likely to make people feel safe to cruise again.

The recovery of the industry is slowly starting to take shape in late 2021 and is likely to accelerate in 2022. This recovery will be led by the industry's local customers, who have shown great faith in the sector by making future bookings despite uncertainties. The industry has adopted various strategies to improve public health and safety on board and to protect the health and safety of customers, crew and visited communities. These strategies include

getting accreditation for medical and infection risk reduction, EU COVID-19 Healthy Gateways' guidance for restarting cruises, and the creation of COVID-19 taskforces to enhance health-and-safety protocols on cruise ships. Gradually resuming operations is recommended and supported also by the USA CDC CSO, which also encouraged starting with shorter voyages of fewer than seven days and gradually increasing as measures put in place to control COVID-19 on board prove to be effective. However, the recovery of the industry, promising as it may seem, is filled with many uncertainties and remains conditional on access to preferred destinations, the removal of travel restrictions, the presence of local clients, significant reductions in global infections, and the availability of a cure or vaccines for COVID-19.

Although the industry has survived the worst, it is further recommended that cruise lines continue to identify solutions and survival mechanisms during this COVID-19 downturn, as survival is still a priority until full-capacity operations resume. Cleaning and sanitising needs should be emphasised and auspiciously promoted during voyages, with cleaning protocols needing to be changed and personal protective equipment (PPE) mandatory for both crew and cruisers. The requirements of new health-and-safety procedures and protocols mean that cruise lines must partially refurbish and retrofit their cabins, reception, gathering areas and air circulation systems. The industry also needs to produce an acceptable emergency response plan should similar situations to what happened in the early days of COVID-19 occur in the future. There is also a need for the industry to continuously evaluate and continue to engage with leading experts and public health authorities to make suitable adjustments as situations evolve and new innovations are made. The cruise industry has huge potential to recover from the COVID-19-induced collapse and provide opportunities to contribute to the economic development of places and countries visited.

Sources of funding

Funding provided by the University of South Africa.

Conflict of interest

The authors have no conflict of interest to declare.

Acknowledgements

The authors acknowledge the constructive comments of the editorial team and three anonymous reviewers. Financial support of the National Research Foundation (NRF) towards this paper is acknowledged. Opinions and conclusions arrived at are those of the authors, and are not necessarily to be attributed to the NRF.

References

- Alexander, D.E.** (2012). The 'Titanic Syndrome': Risk and crisis management on the Costa Concordia. *Journal of Homeland Security and Emergency Management*, 9(1): 1547-5375.
- Bond, M.** (2020). MSC Cruises engages expert external support to develop new health protocol, eyes Med to resume cruising. *Seatrade Cruise News*. Available at: www.seatrade-cruise.com/news/msc-cruises-engages-expert-external-support-develop-new-health-protocol-eyes-med-resume. (Accessed 15 December 2020).
- Bulin, D. & Tenie, I.P.** (2020). Preliminary Assessment of the COVID-19 Pandemic Impact on the Tourism Industry. *Global Economic Observer*, 8(1): 41-46.
- Button, K.** (2016). *The Economics and Political Economy of Transportation Security*. Cheltenham, UK: Edward Elgar Publishing.
- Chin, C.B.N.** (2020). The real problem of the cruise industry. *The Washington Post*. Available at: www.washingtonpost.com/opinions/2020/05/13/real-problem-with-cruise-industry/?arc404=true. (Accessed 12 December 2020).
- CLIA** (2020). PNWER Tourism Task Force. Available at: http://www.pnwer.org/uploads/2/3/2/9/23295822/task_force_briefing_from_cruise_industry-clia_presentation_slides.pdf. (Accessed 10 July 2021).
- Cruise Critic** (2021). The Ultimate Online Cruise Resource. Available at: <https://www.cruisecritic.co.uk/about-us/?stay=1&posfrom=1>. (Accessed 26 October 2021).
- Cruise Lines International Association (CLIA).** (2019). Cruise trends & Industry Outlook. Available at: <https://cruising.org/news-and-research/research/2018/december/2019-state-of-the-industry>. (Accessed 10 February 2021).
- Cruise Lines International Association (CLIA).** (2021). 2021 state of the cruise industry outlook. Available at: https://cruising.org/-/media/research-updates/research/2021-state-of-the-cruise-industry_optimized.ashx. (Accessed 30 October 2021).
- Dahl, E.** (2019). Large-scale helicopter rescue of cruise passengers and freighter crew off the coast of Norway in stormy weather. *International Maritime Health*, 70(2): 79-81.
- Faust, C.G.** (2021). Bahamas Requires COVID-19 Vaccine For All Eligible Passengers, Causing Cruise Lines To Change Rules. *Cruise Critic*. Available at: <https://www.cruisecritic.co.uk/news/6404/>. (Accessed 30 October 2021).
- Gilchrist, K.** (2020). More robots, fewer buffet lines: you will cruise again, but it will look different. *CNBC*. Available at: www.cnb.com/amp/2020/04/21/how-coronavirus-covid-19-will-change-cruise-ship-travel.html. (Accessed 20 October 2021).
- Gössling, S. Scott, D. & Hall, M.C.** (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of Sustainable Tourism*, 29(1) 1-20. DOI: <https://doi.org/10.1080/09669582.2020.1758708>.
- Hayward, R.** (2018). Foreign Exchange Speculation: An Event Study. *International Journal of Financial Studies*, 6(1): 22. DOI: <https://doi.org/10.3390/ijfs6010022>.
- Kalosh, A.** (2021). With more than 500,000 passengers carried, Royal Caribbean Group has experienced just 150 COVID-19 cases on its ships. Available at: <https://www.seatrade-cruise.com/environmental-health/royal-caribbean-occupancy-rises-and-after-half-million-cruisers-just-150-covid>. (Accessed 25 October 2021).
- Kalosh, A.** (2020). EU Healthy Gateways issues COVID-19 guidance for restarting cruise operations. *Seatrade Cruise News*. Available at: www.seatrade-cruise.com/news/eu-healthy-gateway-issues-covid-19-guidance-for-restarting-cruise-operations. (Accessed 30 October 2021).
- Khalilzadeh, J.** (2020). The future of the global tourism system post COVID-19. *ECU School of Hospitality Leadership*. Available at: www.business.ecu.edu/wp-content/pv-uploads/sites/152/2020/THE-

- FUTURE-OF-THE-GLOBAL-TOURISM-SYSTEM-POST-COVID-19Final.pdf. (Accessed 20 December 2020).
- Lawrey, K.** (2020). Cruise industry warns sailing shutdown will cost UK economy at least £888 million. The telegraph. Available at: <https://www.telegraph.co.uk/travel/cruises/articles/industry-warning-cruise-shutdown-job-losses/>. (Accessed 30 October 2021).
- Lau, Y.-Y. & Yip, T.L.** (2020). The Asia cruise tourism industry: Current trend and future outlook. *The Asian Journal of Shipping and Logistics*, 36(4):202-213. DOI: <https://doi.org/10.1016/j.ajsl.2020.03.003>.
- Liu-Lastres, B. Schroeder, A. & Pennington-Gray, L.** (2018). Cruise Line Customers' Responses to Risk and Crisis Communication Messages: An Application of the Risk Perception Attitude Framework. *Journal of Travel Research*, 58(5): 849-865.
- Nhamo, G. Dube, K. & Chikodzi, D.** (2020a). Counting the Cost of COVID-19 on the Global Tourism Industry. Springer International Publishing. Available at: <https://doi.org/10.1007/978-3-030-56231-1>.
- Nhamo, G. Dube, K. & Chikodzi, D.** (2020). Counting the Cost of COVID-19 on Global Cruise Ship Industry. In Counting the cost of COVID-19 on the global tourism industry, 135-158, Springer, Cham. https://doi.org/10.1007/978-3-030-56231-1_6.
- Nikiforuk, A.** (2020). COVID-19 brought to you by globalization. The Tye. Available at: <https://thetye.ca/Analysis/2020/03/13/COVID-19-Brought-By-Globalization/>. (Accessed 23 October 2020).
- Notteboom, T., Pallis, T. & Rodrigue, J.P.** (2021). Disruptions and resilience in global container shipping and ports: the COVID-19 pandemic versus the 2008–2009 financial crisis. *Maritime Economics & Logistics*, 23(2): 179-210.
- O'Connell, J.** (2020). Cruise line companies cut out of the \$500 billion federal bailout, industry group says. *The Washington Post*. Available at: <https://www.washingtonpost.com/business/2020/03/26/cruise-line-bailout/>. (Accessed 30 October 2021).
- Peručić, D.** (2019). Analysis of the world cruise industry. *DIEM* (1): 83-99.
- Renaud, L.** (2020). Reconsidering global mobility – distancing from mass cruise tourism in the aftermath of COVID-19. *Tourism Geographies*, 22: 679-689. DOI: <https://doi.org/10.1080/14616688.2020.1762116>.
- Rodrigue, J.P. & Notteboom, T.** (2013). The geography of cruises: Itineraries, not destinations. *Applied Geography*, 38: 31–42.
- Sachs, G. Morgan, J. P. & Securities, B.** (2020). Common stock - Prospectus supplement Rule 424(b) (5). Carnival Corporation. Available at: <https://www.sec.gov/Archives/edgar/data/815097/000119312520092049/d897344d424b5.htm>. (Accessed 23 December 2020).
- Saunders, A.** (2020). Carnival Corporation to dispose of 13 cruise ships, eyes restart in Italy. Cruise Critic. Available at: www.cruisecritic.com/news/5452/?et_cid=3344321&et rid=272483176&et_referrer=newsletterPopup. (Accessed 23 December 2020).
- Saunders, A.** (2021). Royal Caribbean Group Reports \$1.4 Billion Loss, But Optimism Remains for Cruise in 2022. Available at: <https://www.cruisecritic.co.uk/news/6558/>. (Accessed 30 October 2021).
- Schlagwein, F.** (2021). Cruise industry tries to rebuild after coronavirus shutdowns. DW. Available at: <https://www.dw.com/en/cruise-industry-tries-to-rebuild-after-coronavirus-shutdowns/a-56177397>. (Accessed 30 October 2021).
- Smith, R.** (2020). Why cruise ship-backed bonds drew \$17bn of demand. Financial Time. Available at: <https://www.ft.com/content/d85cf0bc-1c6b-4680-bee3-b32eb9c598f9>. (Accessed 21 December 2021).
- Statista** (2020). Cruise Industry in Troubled Waters. Retrieved from: <https://www.statista.com/chart/22530/cruise-line-revenue-amid-the-covid-19-pandemic/>. (Accessed 23 October 2020).
- TTG.** (2020) Explorer Dream gets infection prevention certificate. TTG Asia. Available at: www.ttgasia.com/2020/07/07/explorer-dream-gets-infection-prevention-certificate/. (Accessed 30 October 2021).
- UNWTO** (2020). Impact assessment of the covid-19 outbreak on international tourism. Available on-line at: <https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism>. (Accessed 21 December 2020).
- UNWTO** (2021). Tourist Numbers Down 83% But Confidence Slowly Rising. Available at: <https://www.unwto.org/news/tourist-numbers-down-83-but-confidence-slowly-rising>. (Accessed 30 October 2021).
- Yue, K.** (2020). Charting a course for recovery. TTG Asia. Available at: www.ttgasia.com/2020/06/30/charting-a-course-for-recovery/ (Accessed 23 December 2020).

