Assessing the recovery rate of inbound tourist arrivals amid COVID-19: Evidence from the Maldives

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Abstract: The present study examines the impact of COVID-19 on Maldivian tourism, highlighting the loss of tourists and tourism earnings for the period 2020Q1 to 2021Q2 and analyses the recovery rate of inbound tourists' arrivals post border re-opening (i.e., 2020Q3 – 2021Q2). Seasonal Autoregressive Integrated Moving Average (SARIMA) model was employed to generate monthly forecasts for 2020 and 2021. The results indicate an estimated loss of 1.9 million tourists between 2020Q1 and 2021Q2. A massive drop in tourist arrivals caused an estimated loss of USD 3.5 billion in tourism earnings by June 2021. Results further indicate that with an average monthly recovery rate of 3%, inbound arrivals have recovered 34% of forecasted levels and 40% of 2019 levels by June 2021. The measures implemented by the government of Maldives played a vital role in the recovery of inbound tourism. However, the rebound of tourists has not reached the desired levels except for the arrivals from Russia. Therefore, additional strategies must be implemented for the quick revival of the Maldivian tourism industry. This study expands and enriches tourism management knowledge in the face of a massive crisis highlighting important managerial and policy implications for reviving the tourism industry of the Maldives.

Keywords: Maldives, COVID-19, SARIMA, recovery rate, inbound tourist arrivals, tourism earnings.

1. Introduction

The global tourism industry is the fastest growing and single largest industry in the world. The industry, far ahead of other key sectors such as health, technology and financial services (Tourism Review News, 2019), has become one of the major players in global commerce and represents at the same time one of the main income sources for many developing countries (UNWTO, 2019). Travel and Tourism's direct and indirect, induced impact accounted for \$8.9 trillion contributions to the world's GDP (10.3% of global GDP), 330 million jobs (1 in 10 jobs around the world), USD 1.7 trillion visitor exports (6.8% of total exports and 28.3% of global services exports) and USD 948 billion capital investments (4.3% of total investments) in 2019 (WTTC, 2019). International tourist arrivals worldwide are expected to increase by 3.3% a year and reach 1.8 billion tourists by 2030 (UNWTO, 2017). While this growth is projected to continue, COVID-19 dramatically transformed the face of tourism at the end of 2019.

The COVID-19 pandemic is a humanitarian crisis that had devastating effects on the economy of countries all around the world and many aspects of society. It is the first health pandemic that had a massive impact, particularly on the global tourism industry. Many countries closed their borders and restricted the mobility of their residents to contain and reduce the spread of the virus. By April 2020, 72% out of 217 destinations worldwide locked their borders completely (UNWTO, 2020). This resulted in a drastic social and economic crisis putting 100 to 120 million jobs in the tourism sector at risk (UNWTO, 2020). Many travel agencies, tour operators and tourist attractions ceased operation, and closed their doors. Tourists changed their travel plans and even reduced travel due to concerns about perceived risks of the pandemic (Page et al., 2012; Wilks & Page, 2003). This was the case in 2020, as the total number of tourist arrivals globally fell by 72% between January and October compared to the same period in 2019 with an estimated loss of US\$ 935 billion in export revenues from international tourism, which is ten times more than the loss caused under the global economic crisis in 2009 (UNWTO, 2020). Asia and the Pacific's region suffered the largest declines in international

arrivals, and it is expected to take 2.5 to 4 years for international arrivals to return to the level of 2019 (UNWTO, 2020).

The impact of COVID-19 is particularly huge in countries where tourism is an essential part of the economy. The Maldives, with no exception, is one of the hardest-hit countries due to its reliance on tourism revenues. The previous studies have examined the nature and impact of the current pandemic on a wide array of hospitality and tourism segments. Some studies have attempted to estimate the tourism recovery in light of COVID-19 (Fotiadis et al., 2021; Zhang et al., 2021) and estimate the economic impact of COVID-19 (Farzanegan et al., 2020; Yang et al., 2020). The results of these studies indicate that despite the massive pressure and loss to the tourism industry, the sector started recovering in many tourism destinations due to collective and enormous efforts made by the industry stakeholders. The recovery pattern appears to be different in tourism destinations across the world, and recovery has not reached the pre-pandemic or desired level as of June 2021. The uncertainties related to the current crisis and tourism recovery will have several implications on the industry. However, the tourism recovery in small island tourism destinations has not received much attention from the researchers, although it is vital to understand the destination wise speed of tourism recovery for better decision making and allocation of tourism-related resources. Therefore, this study attempts to fill this research gap as it is imperative for tourism sustainability in small island tourism destinations. Knowing the speed of recovery and factors affecting the recovery will help to mitigate any possible risks in such destinations. To our knowledge, no study attempted to assess the impact of COVID-19 on inbound tourist arrivals and the recovery rate in the Maldivian context or a tourist destination that follows similar tourism concepts as the Maldives. The main tourism concept in the Maldives is unique with one island, one resort which provides natural social distancing different from the typical tourism concepts in other tourism destinations in the world. This study examines the impact of COVID-19 on Maldivian inbound tourism, highlighting the loss of tourists and tourism earnings, and analyses the recovery rate of inbound tourist arrivals from source markets post border re-opening (i.e., one year period). The Maldives appears to be an ideal destination to travel to during a pandemic. Thus, the findings of this study are expected to provide a unique contribution to the existing and established literature. The result of this study is also expected to provide some practical insights to destinations geographically similar to the Maldives as well as small tropical island nations which are highly dependent on tourism as the main source of foreign exchange earnings. The policy response to the recovery of tourism in small island tourism destinations has not been extensively discussed in the extant literature and ongoing debate. Therefore, this study addresses this important industry priority by highlighting the evolvement and effectiveness of health and safety measures in place in the studied destination.

2. Literature Review

2.1 Maldivian tourism

The Maldives is the paradise on earth and is famous for its clear waters, white sandy beaches and luxury resorts. Tourism in the tiny island nation has thrived since its inception in 1972 with two resorts with 280 beds. Tourist arrivals to the country recorded a heavy growth in the past few years, and the supply of tourist accommodation has also increased at a very steady rate. The country received 1.7 million tourists in 2019 for the first time generating annual tourist revenues of US\$3.2 billion (MOT, 2019). The tourism industry encompassed 1,036 lodging facilities with a total bed capacity of 53,854 by the end of June 2021 (MOT, 2020). The major ten tourist source markets (i.e., China, India, Italy, Germany, United Kingdom, Russia, France, United States, Japan and Australia) in 2019 contributed 66% of total inbound tourism (MOT, 2020). The tourism sector contributed 24.5% to GDP and 34.4% to the total government revenue in 2018 (MOT, 2019). It is the single largest driver of economic growth and the biggest employment generator providing jobs to more than one-fifth of the 205,570 employed residents in the country (ADB, 2020). The country is highly reliant on tourism, and the economy thrives on the multiplier effects of the tourism sector. However, the Maldives remains extremely vulnerable to pandemics and fluctuations in source markets.

2.2 The impact of COVID-19 on Maldivian tourism

The first case of COVID-19 in the Maldives was reported on 7th March 2020. The Maldivian government immediately initiated precautionary measures against the outbreak. This resulted in a temporary suspension of on-arrival visas for all passengers arriving at the Maldives and closing off its borders from 27th March to 14th July 2020. The Maldivian tourism sector was subsequently brought to a standstill after undergoing robust growth in 2019. Thousands of workers (16%) in the sector were laid off, while 84% of workers were put on no-pay with reduced pay (ADB, 2019). Arrival numbers sharply fell to historic lows, and all tourism-related businesses were severely affected.

2.3 Policy response for reviving the Maldivian tourism industry

Maldivian government developed special policies to strategically tackle the crisis due to extreme pressure on the economy. It commenced easing the restrictions and opening up the economy in phases after establishing rigorous measures to ensure a worry-free holiday and the safety of tourists. The government granted permission to reopen tourist resorts on 15th July 2020 and guesthouses/hotels on 15th October 2020. The Maldives is naturally self-isolated and home to the biggest global hospitality brands which strictly follows their own safety protocols. However, a COVID-19 safe tourism guideline was set with a certification program highlighting the safety and hygiene standards for all tourists and related stakeholder facilities to reassure travellers that the island nation remains one of the safest tourist destinations to travel during these unprecedented times. In addition, a guideline on public health interactions to prevent COVID-19 transmission in the tourism sector was also strictly implemented. Specifically, thermal screening, dedicated testing centres, travel advisories, and designated isolation and quarantine centres were established. Medical professionals at tourist establishments were trained to deal with the pandemic, and social distancing measures were strictly enforced. Active surveillance for COVID-19 is conducted at ports of entry and tourist facilities. A help desk at the airport has been established to assist travellers, and arrangements are made for tourists who require a pre-departure PCR test result.

During the initial phase, the entire holiday of the tourists was required to be booked in a single tourist establishment except for transit purposes. Movement of tourists to another tourist establishment or split booking during their holiday was not allowed unless with special permission obtained strictly before arrival. It was made mandatory for all tourists, except for infants aged less than 1-year old, to present a negative Polymerase Chain Reaction (PCR) test conducted 72 hours before their arrival. However, they are not subject to any quarantine measures. Tourists are required to complete an online health declaration form. They are also required to have a confirmed booking from a certified tourist facility before arrival as a pre-requisite for the on-arrival 30-day free visa. The locals were not allowed to stay as guests or use any tourist facilities. By October 2020, the validity of the PCR test was extended to 96 hours before departure from the first port of embarkation en route to the Maldives. In December 2020 split-stays and movement between inter-tourist facilities were allowed through submission of declaration forms. By April 2021, travellers who have completed COVID-19 vaccination two weeks before travel were exempted from the pre-arrival negative PCR requirement. However, additional measures were implemented in the same month with the new strain of COVID-19 in India. The issuance of tourist visas for travellers originating from south Asian countries was subsequently suspended in May 2021. During the same month, it was made mandatory for all tourists, including those who have completed the COVID-19 vaccine, to present a negative PCR test result conducted 96 hours before their departure to the Maldives. Check-ins of inbound tourists from India to guest houses and hotels in inhabited islands were temporary put on halt, and Indian tourists were required to undertake a PCR test within a maximum of 72 hours prior to departure from the Maldives. The visa suspension on South Asian travellers was lifted on 15th July 2021.

These measures were enhanced and strictly enforced to keep the tourist COVID-19 cases at bay. The results so far look promising as the percentage of tourist cases remained at 0.27% of tourist arrivals between January and May 2021 (TTM, 2021). The government is also making efforts to make Maldives the first fully vaccinated (80% completed) tourism sector globally (MOT, 2021). All these efforts were well recognised by the World Trade and Travel Council and industry stakeholders. The Maldives received the safe travel stamp in September 2020, and Velena International Airport, the main gateway to the Maldives, received Airport health accreditation by Airport Council International in August 2020.

3. Methodology

The impact of COVID-19 on inbound tourist arrivals was analysed in two aspects using the data extracted from the website of the Ministry of Tourism and the National Bureau of Statistics of the Maldives. Firstly, the actual arrivals from 2020Q1 to 2021Q2 was compared to the forecasted arrivals of the corresponding period. Seasonal Autoregressive Integrated Moving Average (SARIMA) model was employed to generate forecasts for the ideal scenario under the assumption that no COVID-19 was present. Numerous methodologies have been employed for forecasting in tourism ranging from econometric, autoregressive, artificial intelligence and linear models (Syriopoulos, 1995; Papatheodorou, 1999; Shen et al., 2011; Gounopoulos et al., 2012; Teixeira & Fernandes, 2012; Gunter & Önder, 2016; Hassani et al., 2017; Assaf et al., 2019). Goh and Law (2002) investigated the inbound tourism demand for Hong Kong using the SARIMA technique. Their study shows that the SARIMA model performance outperforms the other well-known time series models. They applied SARIMA technique to predict the inbound tourism demand for Hong Kong, considering

the bird flu epidemic in Hong Kong, the Asian economic crisis and the reversion of Hong Kong to China sovereignty and the SAR administration. A thorough review of tourism demand modelling and forecasting via various methodologies can be found in Song, Qiu and Park (2019). In selecting an appropriate model to generate baseline forecast for international visitor arrivals, the `auto.arima()` function in R was used. Secondly, the actual arrivals from 2020Q1 to 2021Q2 was compared to the actual arrivals of the corresponding period of 2019 (pre-pandemic period). Furthermore, the loss of tourism earnings was estimated considering the loss in the number of tourists and per capita expenditure of inbound tourists.

4. Result and Discussion

Table 1 below shows the percentage change in arrivals before and during border closure and post border re-opening. The results indicate that all tourist generating markets were hit badly by the pandemic. Thus arrival numbers drastically fell to historic lows in 2020Q3, particularly in July 2020. There were no arrivals recorded during the period of border closure. Hence arrivals from all source markets remained at zero in 2020Q2. The peak of the impact post border re-opening was observed in 2020Q3 at -95.70% and -95.14% compared to the forecasted and 2019 levels, respectively. The impact continually decreased in 2020Q4 and 2021Q1, but the impact increased again in 2021Q2. The lowest impact post border re-opening was observed in 2021Q1 at -48.88% of the forecasted levels and -38.18% of 2019 levels. The significant decline reflected the falls in arrivals from major source markets, especially China, which was previously the largest single source market for the Maldives. China was the first country that had reported a case of COVID-19 and was among those countries that adopted tighter measures, including a travel ban to curb the spread of the virus. China was the leading market for the Maldives before the pandemic, with a monthly average of 23,669 tourists. The number of Chinese arrivals declined to 16 in July 2020, the steepest drop ever recorded in history. India is the second-largest source of tourists to the Maldives before the pandemic, had a monthly average of 13,836 tourists. The number of Indian tourist arrivals dropped to merely 31 in July 2020, the lowest ever recorded. Italy was listed as the third major source of tourist arrivals before the pandemic, with an average of 11,362 tourists per month. The lowest number of arrivals recorded from Italy post border reopening was in July 2020, with 44 tourists. The arrivals from other major source markets including, Germany, United Kingdom, Russia, France, United States, Japan and Australia, fell sharply and remained under 300 tourists in July 2020. The lowest drop in arrivals observed from the top ten source markets was from Japan, with merely 6 in July 2020.

Table 1: % Change in Inbound Tourist Arrivals from Source Markets (2020Q1 – 2021Q2)

Source Markets	2020 Quarter 1					2020 Quarter 2					2020 Quarter 3					2020 Quarter 4				
	Forecasted Arrivals	Arrivals in 2019	Arrivals in 2020	% Change against forecast	% Change against 2019	Forecasted Arrivals	Arrivals in 2019	Arrivals in 2020	% Change against forecast	% Change against 2019	Forecasted Arrivals	Arrivals in 2019	Arrivals in 2020	% Change against forecast	% Change against 2019	Forecasted Arrivals	Arrivals in 2019	Arrivals in 2020	% Change against forecast	% Change against 2019
1. China	71,830	76,568	33,889	-53	-56%	58,979	63,697	0	-100%	-100%	85,366	90,084	83	-99.90	-99.91	48,962	53,680	273	-99.44	-99.49
2. India	48,254	36,053	34,862	-28	-3%	53,284	46,087	0	-100%	-100%	44,601	33,367	400	-99.10	-98.80	62,884	50,523	27,643	-56.04	-45.29
3. Italy	29,878	52,848	44,612	49	-16%	19,771	22,528	0	-100%	-100%	18,434	21,999	629	-96.59	-97.14	28,138	38,968	1,449	-94.85	-96.28
4. Germany	37,399	37,279	28,228	-25	-24%	30,810	31,958	0	-100%	-100%	25,850	24,490	801	-96.90	-96.73	39,970	37,834	7,395	-81.50	-80.45
5. United Kingdom	38,420	36,116	32,818	-15	-9%	30,780	28,676	0	-100%	-100%	28,272	26,173	1,596	-94.35	-93.90	37,333	35,234	18,302	-50.98	-48.06
6. Russia	29,901	26,284	28,949	-3	10%	19,317	16,665	0	-100%	-100%	17,821	15,357	2,540	-85.75	-83.46	27,491	25,063	29,899	8.76	19.30
7. France	28,207	26,692	21,784	-23	-18%	12,306	10,691	0	-100%	-100%	8,973	7,339	638	-92.89	-91.31	16,654	15,016	5,608	-66.33	-62.65
8. United States	18,793	16,339	11,414	-39	-30%	13,414	11,345	0	-100%	-100%	13,342	11,329	1,798	-86.52	-84.13	17,465	15,461	6,547	-62.51	-57.65
9. Japan	11,476	11,163	8,302	-28	-26%	11,774	11,461	0	-100%	-100%	11,056	10,743	36	-99.67	-99.66	11,197	10,884	141	-98.74	-98.70
10. Australia	10,570	9,615	6,117	-42	-36%	12,091	10,469	0	-100%	-100%	12,135	9,982	127	-98.95	-98.73	11,707	9,862	976	-91.66	-90.10
All Markets	533,509	482,978	382,760	-28	-21%	430,142	379,611	0	-100%	-100%	439,632	389,101	18,918	-95.70	-95.14	501,728	451,197	153,686	-69.37	-65.94

Source Markets	2021 Quarter 1					2021 Quarter 2				
	Forecasted Arrivals	Arrivals in 2019	Arrivals in 2021	% Change against forecast	% Change against 2019	Forecasted Arrivals	Arrivals in 2019	Arrivals in 2021	% Change against forecast	% Change against 2019
1. China	67,132	76,568	362	-99.46	-99.53	54,261	63,697	392	-99.28	-99.38
2. India	63,281	36,053	69,730	10.19	93.41	71,512	46,087	19,945	-72.11	-56.72
3. Italy	32,953	52,848	1,766	-94.64	-96.66	22,846	22,528	2,016	-91.18	-91.05
4. Germany	39,759	37,279	14,664	-63.12	-60.66	33,823	31,958	13,174	-61.05	-58.78
5. United Kingdom	40,519	36,116	7,934	-80.42	-78.03	32,879	28,676	5,697	-82.67	-80.13
6. Russia	32,321	26,284	63,523	96.54	141.68	21,736	16,665	61,128	181.23	266.80
7. France	29,845	26,692	7,181	-75.94	-73.10	13,945	10,691	3,773	-72.94	-64.71
8. United States	20,796	16,339	8,038	-61.35	-50.80	15,417	11,345	11,502	-25.39	1.38
9. Japan	11,789	11,163	160	-98.64	-98.57	12,087	11,461	138	-98.86	-98.80
10. Australia	12,128	9,615	969	-92.01	-89.92	13,313	10,469	881	-93.38	-91.58
All Markets	584,041	482,978	298,570	-48.88	-38.18	480,674	379,611	211,979	-55.90	-44.16

4.1 Loss of tourists and tourism income

The COVID-19 pandemic had led to severe losses in the Maldivian tourism sector. The difference between the

forecasted arrivals for the period January 2020 to June 2021 and actual arrivals of the corresponding period was considered the loss of tourists. The decline in 2020 and 2021 represents 1,903,814 (64.11%) fewer tourist arrivals than the forecasted arrivals of the corresponding period (see table 2). This led to a drastic shortfall of \$3.5 billion in tourism earnings compared to the forecasted earnings of \$5.5 billion, which is directly attributable to the pandemic. The results (see table 3) from this study indicate that the impact has gradually decreased, although the emergence of COVID-19 caused a significant financial loss to the Maldivian tourism industry. The arrival pattern of tourists is an important factor that affects the revenue earned from the tourism industry. Due to strict restrictions on travel in some key source markets, low virus containment and low traveller confidence, the overall impact of the virus remains considerably high.

Table 2: Estimated Loss of Inbound Tourists from Source Markets (January 2020 – June 2021)

Source Markets	Russia	United Kingdom	France	Germany	Italy	China	Japan	India	United States	Australia	All Markets
Jan-20	1,431	-288	-679	0	9,737	7,513	-422	-3,382	-320	-915	4,951
Feb-20	1,187	488	-452	448	11,360	-28,065	-9	-486	-1,558	-830	-35,641
Mar-20	-3,570	-5,802	-5,292	-9,618	-6,362	-17,408	-2,742	-9,524	-5,500	-2,708	-120,060
Apr-20	-7,403	-13,580	-7,778	-14,009	-7,520	-17,131	-6,493	-15,805	-5,127	-5,041	-179,958
May-20	-6,274	-9,356	-2,547	-9,960	-6,430	-19,437	-2,308	-19,448	-4,076	-3,640	-119,866
Jun-20	-5,640	-7,845	-1,981	-6,841	-5,821	-22,410	-2,972	-18,031	-4,211	-3,411	-130,319
Jul-20	-6,123	-8,914	-2,728	-8,254	-6,327	-30,980	-2,900	-15,198	-4,481	-4,325	-147,236
Aug-20	-5,572	-9,812	-3,417	-7,301	-5,687	-31,150	-4,711	-14,241	-3,509	-3,353	-148,554
Sep-20	-3,586	-7,951	-2,190	-9,494	-5,790	-23,152	-3,408	-14,762	-3,553	-4,329	-124,925
Oct-20	-2,671	-10,241	-3,393	-13,349	-8,743	-20,312	-3,434	-16,715	-3,297	-4,263	-137,257
Nov-20	-399	-10,545	-4,258	-11,657	-8,929	-13,966	-3,187	-12,614	-3,751	-3,608	-119,006
Dec-20	5,478	1,754	-3,395	-7,569	-9,017	-14,410	-4,434	-5,912	-3,870	-2,860	-91,780
Jan-21	9,066	-9,218	-4,452	-7,256	-11,474	-22,537	-3,290	-2,124	-4,079	-3,799	-93,137
Feb-21	10,414	-12,955	-10,133	-8,005	-8,666	-28,032	-4,122	3,477	-4,532	-3,122	-105,389
Mar-21	11,721	-10,411	-8,079	-9,835	-10,466	-16,202	-4,218	5,096	-4,147	-4,238	-86,946
Apr-21	14,720	-11,356	-6,645	-11,199	-7,610	-15,417	-6,536	-4,590	-2,030	-5,070	-105,602
May-21	12,392	-7,864	-1,801	-4,516	-6,799	-17,716	-2,348	-22,966	-850	-3,753	-72,097
Jun-21	12,280	-7,961	-1,725	-4,934	-6,421	-20,737	-3,066	-24,011	-1,036	-3,609	-90,997
Total	37,452	-141,855	-70,946	-143,348	-100,968	-351,553	-60,601	-191,235	-59,929	-62,875	-1,903,814

Table 3: Estimated Loss of Tourism Earnings in USD (2020Q1 – 2021Q2)

Source Markets	Total	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2
Russia	37,452	-952	-19,317	-15,281	2,408	31,202	39,392
Russia	69,735,380	-1,772,060	-35,968,472	-28,453,658	4,484,370	58,097,739	73,347,461
United Kingdom	-264,134,474	-10,431,140	-57,312,665	-49,670,308	-35,435,046	-60,672,806	-50,612,508
France	-132,101,407	-11,958,786	-22,914,008	-15,520,308	-20,567,535	-42,200,705	-18,940,065
Germany	-266,914,792	-17,076,061	-57,367,518	-46,640,704	-60,655,361	-46,727,234	-38,447,913
Italy	-188,002,284	27,434,408	-36,813,548	-33,152,500	-49,694,979	-56,990,402	-38,785,263
China	-654,590,829	-70,683,754	-109,819,270	-158,797,318	-90,659,290	-124,326,429	-100,304,767
Japan	-112,839,982	-5,909,869	-21,923,069	-20,519,121	-20,586,153	-21,652,965	-22,248,805
India	-356,080,333	-24,935,923	-99,214,491	-82,301,703	-65,618,649	12,008,373	-96,017,940
United States	-111,586,867	-13,739,696	-24,977,218	-21,494,302	-20,329,986	-23,755,657	-7,290,007
Australia	-117,072,462	-8,292,268	-22,514,358	-22,358,201	-19,980,612	-20,778,427	-23,148,596
Tourists Lost from Major Ten Markets	-1,145,858	-73,773	-262,527	-257,201	-203,568	-175,617	-173,173
Loss of Tourism Earnings from Major Ten Markets	-2,133,588,050	-137,365,149	-488,824,619	-478,908,124	-379,043,242	-326,998,513	-322,448,403
Tourists Lost from all Markets	-1,903,814	-150,749	-430,142	-420,714	-348,042	-285,471	-268,695
Loss of Tourism Earnings from all Markets	-3,544,900,923	-280,695,383	-800,925,149	-783,370,213	-648,054,949	-531,546,071	-500,309,159
Per Capita Expenditure of Tourists	1,862						

4.2 Recovery rate of tourist arrivals post border re-opening

The inbound arrivals began to recover following the re-opening of the borders in mid-July. The first South Asian air bubble established between Maldives and India in August 2020 had significantly contributed to the recovery. The Maldives received 172,604 tourists from July to December 2020 and 510,549 tourists from January to June 2021, with a total of 683,153 inbound tourists as of June 2021. Figure 1 shows the flow of inbound tourist arrivals to the Maldives from key source markets between 2015Q1 and 2021Q2 and forecasted arrivals for 2020 and 2021.

Figure 1: Flow of Inbound Tourist Arrivals (2015Q1 – 2021Q2) and Forecasted Arrivals (2020Q1 - 2021Q4)

The recovery rate of arrivals was determined considering the baseline forecasts (i.e., 2020Q1 – 2021Q2) and the actual arrivals of pre and post-pandemic (i.e., 2019Q1-2021Q2). The findings (see table 4) suggest that with an average monthly recovery rate of 3%, inbound arrivals reached 34% of forecasted levels and 40% of 2019 levels by June 2021. The peak of the recovery post-re-opening was observed in March 2021, and the lowest recovery was observed in July 2020. Russia is the single largest contributor to the growth in arrivals post-re-opening, shows a monthly recovery rate of 13-16%. Growth in Russian arrivals surged considerably and outperformed the expectations between 2020Q4 and 2021Q2. Similarly, Indian arrivals surpassed the predictions in 2021Q1, although the results indicate an inconsistent recovery pattern. The recovery of the UK, France, Germany, India and the USA remains between 2-6%. In contrast, Italy, China, Japan and Australia remains considerably low (< 1%) largely due to the emergence of new variants of the virus and their border restrictions. Despite some setbacks, the current recovery rate in inbound tourist arrivals is expected to reach the pre-pandemic and forecasted levels in 2.5 and 2.9 years, respectively.

Table 4: Estimated Recovery Rate in % (July 2020 – June 2021)

Source Markets	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Average Monthly Recovery Rate	Total Recovered	Expected Recovery Period (Years)	
Russia	0.01	0.07	0.37	0.69	0.96	1.56	1.76	2.12	2.06	2.79	2.75	2.90	0.13	1.58	0.63	Estimated Recovery Rate Against Forecast
United Kingdom	0.03	0.07	0.07	0.15	0.17	1.14	0.21	0.14	0.24	0.20	0.22	0.07	0.02	0.24	4.15	
France	0.02	0.08	0.11	0.24	0.11	0.54	0.46	0.14	0.18	0.20	0.42	0.32	0.02	0.25	4.04	
Germany	0.02	0.04	0.04	0.07	0.15	0.37	0.32	0.33	0.43	0.33	0.53	0.35	0.02	0.26	3.87	
Italy	0.01	0.08	0.01	0.02	0.03	0.10	0.05	0.09	0.08	0.11	0.09	0.06	0.01	0.06	-	
China	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.00	-	
Japan	0.00	0.00	0.00	0.01	0.01	0.02	0.01	0.01	0.02	0.01	0.03	0.00	0.00	0.01	-	
India	0.00	0.01	0.02	0.08	0.38	0.76	0.90	1.16	1.25	0.79	0.11	0.01	0.04	0.49	2.06	
United States	0.04	0.16	0.21	0.31	0.36	0.44	0.32	0.33	0.48	0.65	0.82	0.79	0.03	0.42	2.40	
Australia	0.00	0.01	0.01	0.04	0.05	0.18	0.07	0.08	0.09	0.07	0.09	0.03	0.00	0.06	-	
All countries	0.01	0.05	0.07	0.14	0.23	0.51	0.50	0.48	0.56	0.46	0.47	0.38	0.03	0.34	2.94	
Russia	0.01	0.08	0.43	0.76	1.05	1.70	2.17	2.69	2.46	3.54	3.61	3.91	0.16	1.88	0.53	Estimated Recovery Rate Against 2019 Inbound Arrivals
United Kingdom	0.03	0.07	0.08	0.16	0.18	1.20	0.25	0.15	0.27	0.23	0.25	0.08	0.02	0.27	3.76	
France	0.03	0.09	0.15	0.28	0.12	0.58	0.52	0.15	0.20	0.23	0.64	0.56	0.02	0.29	3.47	
Germany	0.02	0.04	0.04	0.07	0.16	0.38	0.35	0.36	0.45	0.31	0.66	0.40	0.02	0.27	3.65	
Italy	0.01	0.04	0.01	0.02	0.02	0.05	0.03	0.05	0.05	0.06	0.19	0.11	0.00	0.05	-	
China	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	-	
Japan	0.00	0.00	0.00	0.01	0.01	0.02	0.01	0.01	0.02	0.01	0.03	0.00	0.00	0.01	-	
India	0.00	0.01	0.02	0.09	0.53	0.89	1.64	1.98	2.17	1.32	0.16	0.02	0.06	0.71	1.41	
United States	0.05	0.19	0.24	0.36	0.40	0.48	0.44	0.42	0.58	0.85	1.15	1.09	0.04	0.51	1.95	
Australia	0.00	0.02	0.02	0.04	0.06	0.21	0.09	0.11	0.11	0.09	0.11	0.05	0.01	0.07	-	
All countries	0.01	0.05	0.07	0.14	0.23	0.51	0.61	0.57	0.67	0.56	0.63	0.49	0.03	0.40	2.49	

5. Conclusion

This paper presented the impact of the COVID-19 pandemic on the arrivals of tourists to the Maldives, and the recovery rate of inbound tourist arrivals post border re-opening. The findings exhibit a significant drop in tourist arrivals from source markets and devastating effects on tourism earnings. Although Maldives was the biggest tourism success story of 2020 (CNN, 2020) and the world's leading destination, the recovery of inbound tourist arrivals has not reached the desired levels as of June 2021. This holds notably significant managerial and policy implications since the speed of recovery is dependent on successful formulation and implementation of effective policies that must be aimed at quickly adjusting to the new normal. Therefore, the study suggests additional strategies must be implemented for the quick revival of the industry and to reach its new target of 1.3 million tourists by the end of 2021.

5.1 Theoretical contributions

The present study contributes to the literature in several aspects. Firstly, this study demonstrates the speed of recovery in small island tourist destinations is much quicker due to natural social distancing. However, it is to be noted that the safety measures implemented by the government and specific properties played a huge role in the recovery. Secondly, the study shows that COVID-19 has a huge policy impact and government intervention in the tourism industry, unlike previous crises. In the case of Maldives, the measures implemented by the government and additional measures employed by tourist establishments appear to be effective in ensuring the safety of tourists. Benchmarking good and best practices may help other small island nations in their tourism recovery efforts. Thirdly, it shows that methodologically SARIMA model can perform seasonal effects in predicting inbound tourist arrivals to the Maldives. Finally, since there is limited research available on the impact of COVID-19 on inbound tourist arrivals of small island nations, this is one of the first attempts to examine the recovery rate of inbound tourist arrivals to the Maldives.

5.2 Managerial implications

This paper enriches tourism management knowledge in the face of a huge crisis highlighting important managerial and policy implications for reviving the tourism industry of the Maldives. Firstly, this study estimated the loss of tourists and tourism earnings from the tourism industry about the COVID-19 pandemic. Many sectors of the economy and the vast majority of the population is highly dependent on the tourism industry for employment and as a source of earnings. The negative effects are not particular to the tourism industry but certainly extends to other industries that are directly or indirectly related to the industry. Thus, any change in the industry considerably affects the industry and related stakeholders. This indicates the adverse effects of relying on one industry thus, suggests concerned authorities explore alternative revenue sources to stabilise the economy of the country. Secondly, the findings of the study bring further insights to the decision-makers to make appropriate and timely decisions. The Maldives should establish safe travel

zones and build good external relations with major tourist generating markets, especially with China and Europe. Thirdly, it is crucial to launch effective marketing campaigns with a clear marketing strategy in less affected source markets to boost the tourism demand. Finally, it is also important to establish and enhance air connectivity with potential markets and promote the Maldives as a safe haven. Specifically, it should focus on effectively sharing information about the health and safety measures in place to potential tourists. The tourism model in the Maldives may continue to provide an edge over other destinations worldwide due to ingrained social distancing and health safeguards. Maldives border miles program, the world's first nationwide loyalty program for tourists launched in September 2020 (MBM, 2020) and its plan to initiate vaccine tourism or 3V, which stands for "Visit, Vaccinate and Vacation" (Forbes, 2020) for travellers may also work in its favour.

5.3 Limitations and future research directions

Our findings have certain limitations thus, the shortcomings of this study are worth mentioning. Firstly, the mutations in the virus and emergence of new strains is proved to be high in many parts of the world. Hence the new developments are highly likely to affect the plans of potential travellers. The recent developments in the virus have resulted in much stricter controls and lockdown in many countries, leading to temporary closures of international borders. The negative effects may result in a significant delay in the recovery of inbound tourist arrivals. Secondly, the ongoing preventive measures in the Maldives is likely to influence the accuracy of our predictions. The rollout of vaccines against the virus has successfully started in many tourist generating markets. The success rate of the vaccine may lead to fewer restrictions in international travel and may also influence the accuracy of the findings. Thirdly, the study is limited to a specific country that may be extended further by considering cross-country data. Finally, the modelling technique used in this study is limited to Seasonal Autoregressive Integrated Moving Average (SARIMA); thus other forecasting methods can be applied in future studies.

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