

Towards A General Framework to Deal with COVID-19 Impacts on Hotel Occupancy: An Applied Research on 5-Star Hotels in Alexandria

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ABSTRACT: *The rapid spread of the Covid-19 around the world has led to many negative effects on tourism and hospitality activities. This research paper tries to monitor the impact of COVID-19 spread on occupancy rates in 5-star hotel located in Alexandria at Egypt by investigating their managers' point of views. The research tracks the occupancy situation during the 1st quarter of the year 2020 in the studied hotels, identifies the general and defensive procedures taken by those hotels, evaluates the situation according to the gathered data and provides a framework to hotel premises to deal with the outbreak to decrease the negative impacts of COVID-19 to minimum. The research was accomplished by interviewing of general managers of 7 five-star hotels that exist in Alexandria. Statistical techniques of descriptive statistics in addition to Simple Linear Regression were used to achieve the research objectives. Results showed in spite of the suffering of the studied hotels from the negative effects of COVID-19 spreading on occupancy rates (P -value = 0.027), both of the general (P -value = 0.255) and defensive (p -value = 0.360) procedures that taken by those hotels don't properly sufficient to deal with the scale of the crisis. Accordingly, a set of recommendations is presented to form a general framework that could be applied in hotel sector to minimize COVID-19 negative impacts on occupancy rates.*

KEYWORDS: *COVID-19, hotel occupancy, international travel industry, international tourism industry and international hospitality industry.*

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I. INTRODUCTION

Health concerns are among the most important factors that affect the tourism and hospitality industry (Ghanem, 2012). Recent reports indicate that Covid-19 outbreaks have a harmful impact on all economic sectors including hospitality and tourism (Dinatri, 2020). The rapid spread of the Covid-19 around the world has led to many negative effects on tourism activities. Berlin's ITB was cancellation, the Louvre museum in Paris was closed and many airlines flights were suspended. Results of a recent survey by Global Business Travel Association that surveyed 401 companies showed that 65% of them have cancelled meetings or events as a result of the Covid-19. Experts describing Covid-19 as the worst crisis that facing travel industry since the September 11 terrorist attacks (Bloom, 2020). Investors and hotel owners, especially in the U.S., have no clear plans to face the impacts of the Covid-19 spreading (Diduch, 2020). In Europe, accommodation market is potential to be suffered for a long time because of the impact of COVID-19 as it affected both foreign and domestic tourism (Kett, 2020). To finalize the situation, all travel brands across all sectors from hospitality companies to airlines, cruises, event organizers and tour operators are suffered (Mahmoud, 2020).

II. METHODOLOGY

This paper tries to monitor the impact of COVID-19 spread on occupancy rates in 5-star hotel located in Alexandria at Egypt by investigating their managers' point of views. This research aims to:

- Track the occupancy situation during the 1st quarter of the year 2020 in the studied hotels.
- Identify the general and defensive procedures taken by these hotels to deal with the crisis.
- Evaluate the situation according to the gathered data.

- Provide a framework to hotel premises to deal with this outbreak to decrease its negative impacts to minimum.

The total number of 5-Star hotels in Alexandria is 10 hotels. The research was applied to only 7 of those as other hotels refused to support the study. Thus the response rate is 70%. The study was accomplished through interviewing of general managers of the chosen hotels to investigate their point of views toward the situation. The research questionnaire was developed to collect data from those managers. The collected data was analyzed by using PASW Statistics version 18. Statistical techniques of descriptive statistics in addition to Simple Linear Regression were used to achieve the research objectives. The research, in general, tries to find clarifications in regard of the main research questions which are:

- Are there any negative impacts of COVID-19 spreading on occupancy rates in 5-star hotel in Alexandria? If yes, what are these impacts during the 1st quarter of the year 2020?
- How far have 5-star hotels in Alexandria taken general and defensive procedures in response to this crisis?
- Are there any opportunities to reduce the negative impacts of the COVID-19 spreading on the performance of the studied hotels? If yes, how to use these opportunities to develop a framework that could be useful in minimizing the harmful impacts of the outbreak, especially in the studied hotels, and generally in other types of hotels?

Depending on literatures and going to the previous research questions, the hypotheses are developed as follows:

H₁: Spreading of COVID-19 impacts occupancy rates in 5-star hotels.

H₂: Spreading of COVID-19 impacts the general procedures that followed by 5-star hotels.

H₃: Spreading of COVID-19 impacts the defensive procedures that followed by 5-star hotels.

Accordingly, the research questionnaire is composed from 4 sections as follows:

- The first section investigates the source of occupancy in the chosen hotels.
- The second section investigates COVID-19 impacts on occupancy rates in the chosen hotels from their managers' point of views.
- The third section focused on general procedures that followed by the chosen hotels as results of the spread of COVID-19.
- The final one aimed at checking hotels' defensive procedures that taken by the chosen hotels to deal with spreading of COVID-19.

III. DISCUSSION

At the beginning, it may useful to introduce some facts related to COVID-19. According to NSW Government (2020) and World Health Organization, (2020), Coronaviruses are a large family of viruses. Some infect humans and others infect animals like bats and camels. It is a mild Human disease. COVID-19 is a new mutated form of coronaviruses that infect humans. It was first monitored in Wuhan at China to spread among large number of citizens. This virus is spread from infected person with COVID-19 to others who are in close contacts with through coughing or sneezing, or by contaminated hands, surfaces or objects. Its symptoms might appear within 5 to 6 days and could also extend to 14 days. Thus, person that contact with confirmed cases are asked to be isolated for the same period of time. Studies suggest that COVID-19 might stay on surfaces for a few hours or up to several days. This period of time vary according to the type of surface and environmental humidity and temperature. The common symptoms of COVID-19 are high body temperature, cough, runny nose, fever and difficult of breath. The infection life time varies from person to another. It could last for a few or several days. There are some cases of people that most in risk; people who recently returned from overseas, particularly from high risk zones like China, Italy, Korea or Iran; people who in close contact with infected cases; people over 65 years: people suffered from some chronic diseases such as lung disease, heart disease, kidney disease; people living in groups like students in boarding schools; and pregnant women.

Davin (2020) suggested some instructions to follow for COVID-19 prevention. 20-seconds hand washing with soap and water and using alcohol might be useful. Using tissue to cover nose and mouth while coughing and sneezing are essential. Staying at home if you have any flu symptoms and avoiding close contact with people with such symptoms are required. Touching others and shaking their hands should be avoided. Taking care when touching your nose, mouth and eyes are needed. Maintaining at least 1.5 meters distance from others and avoiding crowded places are in important.

There is no hospitality without travelling and transportation, especially in destinations that depend on international tourists. Flight cancellations became a commonplace (Tams, 2020). There are many evidences from various international destinations on the COVID-19 impacts on international airlines flights and travel industry. In China, business travels are cancelled and many individuals returned home to spend the holiday with their families (Yiu and Ren, 2020). Flights cancellations to and from China by various Airlines were done. American, United, Delta, Air France and British Airways have canceled all their flights to mainland China.

Engels (2020) indicated that in conjunction with the beginning of this crisis, as a result of more than 630 cases of death and more than 31,000 infections, mostly in mainland China, many airlines suspended some of their flights and reduced the number of others to some regions. For example, United Airlines in Hawaii plans to reduce domestic service by 10% and international service by 20% with the beginning of April 2020. This reduction related with international flights directed to Asian destinations and domestic flights between to Haneda, Kona and Honolulu. Cathay Pacific and United Airlines stopped their flights to China (Yiu and Ren, 2020). Korean Air and Asian Airlines are also examples of airline companies that decided to reduce their international services (Schaefer and Ladao, 2020). According to Barro (2020), travel companies are suffered from the case of uncertainty as they couldn't expect behaviors of travelers who might delaying their booking as they need assurances about their safe travelling. The situation was became more sophisticated, especially in case of travelling on airplanes, as the COVID-19 is spread by touching people and surfaces which could happened during the trip (Bloom, 2020). This uncertainty situation translated into a huge number of cancellation rates worldwide (Engels, 2020).

Depending on thousands of flights' cancellations as a result of COVID-19, Greenberg (2020) estimated that airline might lose \$30 billion or more during this season. Investigating arrival rates in 2 of largest airports in Thailand at February 2020 showed that Phuket international airport recorded 37.5% reduction compared to the same period at the previous year and Bangkok's Suvarnabhumi airport recorded 45.2% reductions in arrival rates (Barnett, 2020). Depending on data published by the IATA, Asia-Pacific airlines loses are calculated to \$27.80 billion as a result of the outbreak (Cheung, 2020).

Cancellation rates related to trips to Italy and Asia are unprecedented as there are a noticeable shifting by South American travelers from Italy and Asia to home closer destinations like Mexico, Costa Rica and the Caribbean (Virtuoso, 2020).

Chatury and Chaturvedi (2020) indicated that Indian High Commissions in South East Asian countries have restricted visas to travelers coming from China, Hong Kong, Taiwan, Macau, Thailand, Singapore and South Korea.

In the U.S., loses coming as a result of COVID-19 spreading couldn't be counted (Davin, 2020). Airlines restricted traveling to and from China. Thus, the travel industry is predicted to suffer by a multibillion-dollar (Wiley, (2020). Due to health scare, the potential loss due to fewer visits by mainlanders to U.S. in 2020 is about \$5.8 billion (Yiu and Ren, 2020).

In regards of cruise lines, the situation is the same (Bloom, 2020). At the beginning of outbreak, cruise ships restricted their trips to China (Wiley, 2020). After only few days, cruise lines have restricted all of their trips to the Asia-Pacific region and turned them to North American, European and South American destinations (Greenberg, 2020). Now, the situation was dramatically changed as many cruises are stopped totally.

Global Business Travel Association referred that more than 50% of trips have already canceled or at least postponed. Kaiser Family Foundation indicated that one in eight Americans has already changed his travelling plans as a result of the COVID-19 spreading (Zach, 2020). This huge number of cancellations would interrupt other industries like insurance industry that asked to cover revenue losses resulting from the crisis (Diduch, 2020).

In Egypt, the government decided to suspend all air flights to and from Egypt beginning on March 19, 2020 for a period of two weeks. This period is extended to 23 April. All Nile cruise trips were also suspended as a precautionary procedure to limit the spreading of COVID-19. These decisions were taken because many cases of infections were detected among a number of tourists after returning to their countries coming from Egypt (Moustafa, 2020).

Regardless the overall international economic losses that are out of prediction till now (Swonk, 2020), the international tourism industry are suffered harmfully. COVID-19 putting the international tourism industry in a major challenges (UNWTO, 2020). Tourism represented 11% of the total Chinese GDP. Bouey (2020) described tourism as the most affected sector. In 2018, about 163 million Chinese tourists travelled overseas. This number when compared to 2003; the year of SARS spread; only 20 million of Chinese tourists were travelled. The first indicators refereed that the negative impacts of COVID-19 on tourism will dramatically exceed the impacts of SARS (Hotel News Now, 2020).

Globally, the international tourist arrivals are also estimated to be declined by 1% to 3% during 2020. Prior to the spread of COVID-19, WTO estimated a positive growth in tourism by 3% to 4% for the year 2020. This estimation was decreased after the outbreak to be about 1% that translated into \$30 to \$50 billion losses. These negative records make the organization to work closely with the WHO since the beginning of the outbreak. The UNWTO also asked all governments, agencies and international organizations to give the priority to tourism industry in their plans of recovery (WTO, 2020). The number of canceled domestic trips all over the world in 2020 is calculated by 5 million trips (Tourism Economics, 2020).

As Chinese tourists have played a major role in demand for destinations around the world, the impacts of COVID-19 are disastrous to such a sector (Swonk, 2020). Because Chinese tourists represented as a major

source of income for many touristic markets, both the international and the domestic tourism are suffered hardly. During the period between January 23 and February 13, 2020, the government restricted movement through major touristic cities and airlines' flights, both domestic and international, were cancelled. The daily arrivals and departures of international and domestic Chinese flights were dropped dramatically. Both domestic and international flights from January 23 till February 13 were dropped from 15,000 to 2,004 a day (Mahmoud, 2020). The situation regarding international tourism industry became so difficult as Chinese travelers represented more than 10% of the overall international tourism (Cheung, 2020).

In 2018, Chinese travelers made more than 53 million overseas trips to other countries of Asia. Thailand is the first winner followed by Japan, South Korea and Hong Kong. On other hand, China received about 4.2 million tourists from South Korean alone which represented the most visitors to china followed by Japan or the U.S. at the same year. This situation, of course, was dramatically changed as a result of COVID-19 spread. Studies indicated that Chinese tourists spend more than any other visitors from other nations as they buy most luxury goods and jewelers to re-sale it back in China. Translating the situation into money, according to China Daily newspaper reports, Chinese tourists spent about \$128 billion during 149 million overseas trips during 2018. It means an expenditure of \$850 per tourist. Singapore data refereed that 3.4 million Chinese tourists from Mainland are spending about \$3.9 billion, with an average expenditure more than \$1000 per tourist. All these revenue are lost today. This statistics are some minor examples of the damage occurred as a result of the outbreak (Global Economics, 2020).

In Asia, Barnett (2020) referred that COVID-19 spread destroyed the season in Phuket which is the Thailand's most popular island destination. Depending on date illustrated by China's state-owned Assets Supervision and Administration Commission, the amount of travelers during New Year holiday were dropped by 50% to reach the lowest point within the last 20 years (Cheung, 2020). Macau, as the largest world's gambling destination for Chinese travelers also impacted during the Chinese Lunar New Year as the number of tourists coming from mainland China was dropped by 80% in comparison to the same period of the last year (Tran-Sutherland, 2020).

Overnight arrivals in Hong Kong have fallen more than 90% and Thailand arrivals are down by 70% (Tourism Economics, 2020). As Chinese tourists are represented the largest part of Australian tourism market, the negative impacts couldn't be calculated (Morgan, 2020).

In Europe, the situation got worse after the cancellation of ITB Berlin (Grang, 2020) that reflected on \$1 Billion losses a month (Skift, 2020). Regarding to the most impacted European touristic countries till now, Italy and Spain are on the top (Faus, 2020). The World Travel and Tourism Council indicated that airlines and cruise ships were the most impacted compared to other sectors of tourism like hotels (Faus, 2020). Tourism is represented as the 3rd largest economic sector in Europe as it generates 10.3 % of the total GDP and offers 27 million direct jobs that represented 11.7% of all European jobs. Depending on documented data, China is the 3rd growing source for international visitors to Europe (European Commission, 2020). Since the end of January 2020, most European carriers have suspended their flights to China till the end of March. On other hand, most of Chinese bookings in Europe resulting as the Chinese New Year were cancelled that represented in approximately 400,000 Chinese travelers and 2 million nights losses. These losses when added to other losses by key international sources of travelers like Japan, South Korea, USA and Canada that are also cancelled their trips, give accurate figure of the total losses (European Commission, 2020).

The situation in U.S. is also so bad. Many states advised their citizens to self-isolate for 14 days after coming from some destinations like China, Italy, Iran, South Korea and Japan. For example, The Florida Department of Health asked all who traveled to Egypt for a Nile cruise during February and March 2020 to isolate themselves for at least 14 days (The Florida Department of Health, 2020). During March 2020, there are dramatic cancellations in vacations, conferences and business trips across the U.S. (Swonk, 2020). Statistics of the US Travel Association indicated that 3 million Chinese tourists were entered U.S. during 2018. If the impacts of COVID-19 are such as SARS impacts, it is expected at least a 50% drop in numbers of visitors during the first three months after the outbreak is finished (Kelly et al., 2020). According to The World Travel and Tourism Council, about 850,000 travelers come to the U.S. from Europe monthly in normal situations generating about \$3.4 billion monthly. This amount of dollars contributes strongly in the U.S. economy. Thus, U.S. economy will suffer strongly as the majority of this income wouldn't come (Faus, 2020). According to Electronic Authorization for Travel Approval applications in U.S., requested visas from countries; primarily Europe, Japan, and South Korea; were dropped by 7% during February 2020 (Tourism Economics, 2020).

In Arab lands, Saudi Arabia; the biggest touristic region of religious tourism; prevented Muslims to perform Umrah pilgrimage in Mecca and prohibited them to visit the Prophet Mohammad's Mosque in Madina (Mahmoud, 2020) which happened for the 1st time in history.

The tourism industry, in general, contributes to the world's GDP and jobs by 10%. In relation to tourism labor market, The World Travel and Tourism Council have predicted that COVID-19 would cut 50 million jobs worldwide. The majority of them are in Asian travel and tourism market. The global tourism in the first quarter of the year 2020 saw a drop in jobs by 12% and 14% as a result of COVID-19 spread. The Council

indicated that the industry needs about 10 months to recover after the crisis is over. These losses, of course, could be increased if the epidemic lasts more and more (Faus, 2020).

The Covid-19 has already transformed into an economic and labor crises in hospitality market. It impacts production of hospitality services and goods that represented the supply side and investment and consumption related to such services and goods that represented the side of demand (ILO, 2020). Avoiding crowded cities; including bars, entertainment places, conferences, meetings and other hospitality places; is advised. Thus make hospitality premises to severely suffered (Han et al., 2020).

The COVID-19 outbreak impacts hotel industry at all levels. Occupancy rates are decreased, average daily rates are dropped, operating expenses are raised because of sanitary instructions, employees are suffered and owners are asked to afford their employment costs, required to follow all legal requirements by government authorities aimed at dealing with the outbreak and asked to retrieve their insurance policies to assure adequate cover of their losses during the outbreak (Hotel News Now, 2020). While all hotels worldwide are trying to decrease their costs at all levels, scares from COVID-19 reflecting in more hotels' expenditures on housekeeping where cleaning suppliers and detergents are majors (Nair, 2020). International hotel chains are responded variably to the outbreak. With the beginning of outbreak at the end of 2019, Hilton Company had closed 150 hotels with 33,000 rooms in China with expected losses of \$50 million a year if the outbreak lasts for only 6 months (Oliver, 2020; Wiley, 2020). Few weeks later, it also waived all cancellation fees for guests traveling to or from countries of China, Italy, South Korea and Saudi Arabia (Diduch, 2020). Wyndham Hotels and Resorts had closed 70% of its hotels in China that counted by 1,000 hotels representing in \$5 million losses during the 1st quarter of 2020 and about \$12 million to the full-year. It also had portended all their new openings during the 1st quarter of the year 2020. Hyatt had also closed 26 hotels in mainland China, Macau, Hong Kong and Taiwan with forecasted losses ranged from \$1 to \$2 million annually. Other international hospitality chains; like Radisson Hospitality, Marriott International, IHG group and Accor Hotels; have no clearance picture about their financial losses till now (Mahmoud, 2020).

The bad situation in Chinese hospitality industry needs no evidences. The China's biggest national holiday which is Chinese Lunar New Year was cancelled. During this feast, the Chinese food service sector loses about \$142 billion (Bouey, 2020). Hotel chains refunded payments to tourists who desire to cancel their trips to Wuhan and other Chinese parts. InterContinental Hotels Group and Hyatt allowed guests to cancel or at least change their stays at their Chinese hotels during the Lunar New Year holiday (Tran-Sutherland, 2020). Restaurants and major retailers like Starbucks across China were closed. Guests in Beijing, Shanghai and Guangzhou indicated that this situation is expected to last for at least another 4 months after the outbreak (Cheung, 2020). Hotelier Middle East Staff (2020) reported that at January 2020, Chinese hotel occupancy rates were dropped by 75%. While these rates were recorded 70% at January 14, day by day, they were dropped to reach 17% at January 26. Alastair Newport (2020) spotted the hotel occupancy rates during the Chinese New Year weekend. The drop in rates representing a 71% decrease when compared to the same period at the previous year.

For more clearance, during Lunar New Year holiday week in China, it is noticed that from all 10 Chinese hotel rooms, 8 rooms are empty. Occupancy levels during January 24-26 didn't exceed 22% at any Chinese hotel. In Hong Kong, it is forecasted that among all 10 hotel employees, 4 might lose their jobs (Yiu and Ren, 2020). In Macau, pubs, bars and casinos were restricted. However they were reopened in 20 February, they expected no recovery in demand during the near future (Str, 2020).

The situation isn't better in other Asian regions. In spite that Chinese aren't recorded as a big travelling partner in India, Indian High Commissions in South East Asian indicated the bad effects on hotel demand through the 1st quarter of 2020. The cancellation rates during February 2020 are unacceptable. This rates aren't expected to be raised for a long periods. The data indicated that the slump of COVID-19 impacts would exceed the 2003 SARS period. In New Delhi, hotel chains are vacant. Indian High Commissions in South East Asian countries are restricted visas to travelers from countries of China, Hong Kong, Taiwan, Macau, Thailand, Singapore and South Korea. The impacts of this decision on hotel demand in India are significant during the 1st quarter of 2020. Hotel bookings' cancellations in India during February 2020 are definitely high. Occupancy levels at all chains in India were dropped by at least 10-15% at February 2020. In Udaipur, hotel bookings' cancellations became permissible without any penalties (Chaturv and Chaturvedi, 2020).

In Thailand, where hotels are relying on Chinese tourism, the effect of COVID-19 is very noticeable from the beginning of the outbreak in all businesses related to the hospitality industry (Str, 2020). Regarding to leisure guests, many weddings that planned to stay in Thailand, Sri Lanka and other countries in the Far East were cancelled (Chaturv and Chaturvedi, 2020).

In Indonesia, while both occupancy and rates in Bali, as one of the most popular Chinese market, were impacted, Jakarta, as a most popular domestic market was also suffered (Str, 2020). Since the beginning of January 2020, both hotels and restaurants in Indonesia have suffered because of the negative impacts of COVID-19. According to the Indonesian Hotel and Restaurant Association, occupancy rates in the Riau Islands Province were decreased by 30 to 40% in comparison to the previous year. Hotel employees were requested to

stay at homes. This situation is estimates to be extended at least till April 2020. As Chinese tourists represented the major contribution of tourists in Bali, occupancy rates were dropped by 60-80% (Dinatri, 2020).

The situation is also so bad in Singapore. Hotel occupancy rates were dropped by 50% during the first 10 days of February 2020. In Sentosa destination at Singapore, hotels recorded occupancy rates below 30% during the same period (Lim, 2020). Hong Kong and Singapore, as popular destinations for leisure, shopping and business travelers, had recorded lower hotel occupancies rates. While Hong Kong recorded the lowest numbers not seen for allover a decade, Mainland China show the highest drop in average daily rates over the last few weeks (Str, 2020).

Globally, before the week of Chinese New Year (20-26 January), the occupancy levels were in their normal high rates. During the Chinese New Year and three weeks later, hotel performance was dropped dramatically in china, Cambodia, Thailand and Australia (Str, 2020). In Australia, the impacts on hospitality industry is harmful as bookings cancellations by Asian guests are recorded a huge volumes. All Chinese bookings and the majority of Asian bookings were cancelled, guests from all segments aren't desire to travel at all, most events are cancelled, sales of vacations were dropped and bars and restaurants were vacant. Many restaurants in Australia were closed at all. By analyzing of Australian industries, more than 40% of businesses in the accommodation and food services sector are affected deeply. The season in Western Australia, South Australia and Tasmania almost finished without gaining any profits (Morgan, 2020).

Before the global spread of Covid-19, the reduction in Chinese guests forced hotels to seek away to occupy their vacant rooms (Str, 2020). Now, as the virus spreads globally, there are no ways to fill these empty rooms. In Europe, drops in travel rates reflected in the same drops in occupancy rates. With the starting of COVID-19 spread, many European Countries were neglected the warnings. Bloom (2020) indicated that at beginning of the outbreak, the situation in Florence' restaurants and hotels in Capri were completely normal. The situation now is dramatically changed as all restaurants and hotels in Italy are closed totally. Accommodation sector in both Austria and Italy depends hardly on Chinese tourists. It means that those countries suffered badly as a result of COVID-19 spread in China (de Groot and Wijffelaars, 2020).

According to the National Association for Hotels in Germany, it is expected to afford financial compensations for hospitality businesses because of the cancellation volume resulting from cancellation of trade shows and other conferences (Hohenlohe, 2020). Across Europe, with beginning of the outbreak, it was observed about 15% drop in hotel bookings and about 20% drop in revenue for city-hotels. The situation was more difficult in regarding to resorts (Hotel Speak, 2020). By scanning the situation in 300 samples of hotels in London, it is noticed a relatively positive situation in the UK and the most of Europe during the month of February as a whole. When evaluating week-on-week results for the latter part of February and early of March 2020, the results trending to downward (Hotel Speak, 2020).

By monitoring of Website vs. OTA Bookings, all hotels are suffered from cancellations especially in regards to groups and corporate reservations (Kastner, 2020). During the 1st two months of the year, OTA's cancellations rates were around 22%. Then, they increased to be more than 55% across all three big OTA's in Germany. Website Cancellations at the same period were only increased from 5% to 13% (Kastner, 2020). By monitoring of booking volumes during the 1st week of March 2020, it is noticed that they tended to decreased. As there are many seasonal reasons for such decreasing, it is must to look at volumes at the same period at the previous year. The differences in volumes indicated that such a decrease is relating to COVID-19 Impacts.

By focusing on losses of the major hotel companies in Europe, the data indicated about 5% losses for Hyatt, 11% losses for Hilton and 16% losses for Accor. These percentages when translated into money, the numbers might be very scary. For example, the 11% losses of Hilton company means about \$25 million in the 1st quarter of the year 2020 and about \$50 million in the full-year. 160 hotels from total Hilton company 470 hotels are closed totally or partly. Reservations in 200 of Accor's 370 hotels in China are dropped by 90%. Marriott was also closed 25% of its hotels in China. It is a disastrous number, especially when knowing that 12% of Marriott's global gross revenue in 2019 was coming from Chinese branches (Mielke, 2020).

In U.S., cancellation of events impacted all larger cities that occupied with major international conventions. Group reservations depending on events held in U.S represents more than 24% of the total hotel room demand. This reflects in about 12 million room nights will be lost during 2020 alone. According to Electronic Authorization for Travel Approval Applications in U.S., requested visas from Europe, Japan and South Korea were dropped by 7% during February 2020 (Tourism Economics, 2020). Hoteliers in the U.S. are suffered deeply. Hotels in the West Coast and Alaska faced huge rates of individuals and groups' cancellations (Davin, 2020). The outbreak is getting worse. The biggest names in the Los Angeles hotel industry have been gathered at the annual Lodging Investment Summit in the U.S. to share opinions and reached no solutions (Pimentel and McDermid, 2020). Cruise ships and hotels in Hawaii were suffered badly. Hilton Hawaiian Village Waikiki Beach Resort are tried to face demand losses by cutting employee hours (Schaefer and Ladao, 2020).

In Arab lands, especially in Gulf, Hotel properties in both Dubai and Abu Dhabi are already started to squeeze their expenses. They reduced their costs by closing majority of floors to save utilities, freezing any new

hires and replacements, eliminating all non-fundamental purchases, dealing with Brazilian meat suppliers instead of the U.S. or Australian suppliers to decrease raw material costs and shutting down some parts of their hotels in purpose of energy and staff saving. While the majority of 5-star and luxury hotels in Gulf decreased their rates by half a night to attract guests, this procedure wasn't useful. The decision of Saudi Arabia to close Mecca and Medina has many side effects on U.A.E. hotels that host stopover groups of pilgrims from many Asian destinations. In Yas Island at Abu Dhabi, hotel occupancy rates were dropped by 60-70% that equal cumulative losses ranged between Dh250,000 to Dh300,000 during the 1st quarter of the year 2020 (Nair, 2020).

In Egypt, the situation still isn't clear. There are no documented data about COVID-19 impacts on hospitality industry. This complete absence of documented data in Egypt with the escalation of the global crisis made the study of this matter an imperative to determine the situation of the Egyptian hospitality industry in conjunction with the spread of the COVID-19 locally, regionally and globally.

IV. FINDINGS

The Major Sources of Occupancy and the Extent of Negative Impacts among the Sample: The results illustrated in table (1) revealed that the major sources of occupancy among research sample during such a period of the previous year are both guests from Gulf (57.1%) and Egyptian domestic guests (42.9%). These results indicated that neither international guests nor Chinese guests are represented as major sources of occupancy during the same period of the previous year. In spite these results, the research sample referred that negative impacts of COVID-19 on occupancy rates during the 1st quarter of the year 2020 were sever hard (57.1%) and hard (42.9%).

	Choices	N	%	Mean	Std. Deviation
Depending on historical data, the major source of our occupancy during such a period of the year is:	International guests.	0	0	3.43	0.535
	Chinese guests.	0	0		
	Guests from Gulf.	4	57.1		
	Egyptian domestic guests.	3	42.9		
During the 1 st quarter of the year 2020, the negative impacts of COVID-19 on our hotel occupancy rates are:	Unnoticeable.	0	0	4.57	0.535
	Weak.	0	0		
	Medium.	0	0		
	Hard.	3	42.9		
	Sever hard.	4	57.1		

Table 1: The major sources of occupancy and the extent of negative impacts among the sample

COVID-19 Impacts on Occupancy Rates among the Research Sample

Depending on data presented in table (2), all the sample are indicated that occupancy rates were dropped during the 1st quarter of the year in comparison to the same period at the previous year as a result of COVID-19 spread. According to historical data, Chinese guests are considered as a major source of occupancy around the year as indicated by 42.9% of the sample. As a result of COVID-19 spread, occupancy rates were suffered in all hotels under the research. Although these negative effects on occupancy rates among the research sample did not appear neither with the emergence of the virus in China nor with the global spread of the virus, those negative effects became more severe once the virus appeared in Egypt. The warnings from COVID-19 spread in China had no immediate negative impacts on occupancy rates among the sample. The actual negative impacts on occupancy rates (28.6%) are beginning to appear with the global warning from COVID-19 and became a real with the warnings related to the spread of COVID-19 in Egypt.

Sentences	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean	Std. Deviation
	F	%	F	%	F	%	F	%	F	%		
Because of COVID-19 spread, our occupancy rates were dropped during the 1 st quarter of the year in comparison to the same period at the previous year.	5	71.4	2	28.6	0	0	0	0	0	0	4.71	0.488
According to historical data, Chinese guests are considered as a major source of our occupancy around the year.	0	0	3	42.9	2	28.6	2	28.6	0	0	3.14	0.900
Our occupancy rates were suffered as a result of COVID-19 spread.	7	100	0	0	0	0	0	0	0	0	5	0
Our occupancy rates were suffered as soon as the COVID-19 spread in China.	0	0	0	0	0	0	3	42.9	4	57.1	1.43	0.535
Our occupancy rates were suffered as soon as the COVID-19 spread globally.	0	0	0	0	0	0	5	71.4	2	28.6	1.71	0.488
Our occupancy rates were suffered as soon as the COVID-19 spread in Egypt.	7	100	0	0	0	0	0	0	0	0	5	0
Warnings from the COVID-19 spread in China impacts our occupancy rates immediately.	0	0	0	0	0	0	4	57.1	3	42.9	1.57	0.535
Warnings from the COVID-19 spread globally impacts our occupancy rates immediately.	0	0	2	28.6	0	0	4	57.1	1	14.3	2.43	1.134
Warnings from the COVID-19 spread in Egypt impacts our occupancy rates immediately.	7	100	0	0	0	0	0	0	0	0	5	0

Table 2: COVID-19 impacts on occupancy rates among the Sample

COVID-19 Impacts on General Procedures among the Research Sample

According to data presented in table (3), while no hotels among the sample were closed their doors totally during any period of Covid-19 spread, the majority (57.1% strongly agree and 14.3% agree) were closed a number of floors during this period to save costs. To save costs, all hotels were tried to exploit any chance to save energy consumption and asked some of labor to stay at home to save their wages. They applied to cancel any reservation without discounting any cancellation fees. They cut a part of their marketing budget (42.9% strongly agree and 14.3% agree), reduced room rates (57.1% strongly agree and 14.3% agree) and promoted special offers to attract guests. They concentrated on precautions of both guests and employees and increased the frequency of disinfectant procedures, with focus on door handles, light switches and elevator buttons. In regards of their staff, they asked some employees to work from homes (42.9% strongly agree and 14.3% agree) and educated staff their on the procedures related to COVID-19 prevention. Housekeeping staff are requested to follow special considerations related to COVID-19 prevention and extra care of public spaces are done frequently. Despite all of those above procedures, the majority of hotels (57.1%) didn't hold any meetings through video conferences.

Sentences	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean	Std. Deviation	
	F	%	F	%	F	%	F	%	F	%			
COVID-19 impacts on General procedures that followed by 5-Star Hotels.	Our hotel was closed its doors totally for a period of time during Covid-19 spread.	0	0	0	0	0	0	0	0	7	100	1	0
	Some floors in our hotel were closed during the crises.	4	57.1	1	14.3	0	0	0	0	2	28.6	3.71	1.890
	We try to exploit any chance to save energy consumption in purpose of saving costs.	7	100	0	0	0	0	0	0	0	0	5	0
	We asked some of our labor to stay at home to save their wages.	7	100	0	0	0	0	0	0	0	0	5	0
	We apply to cancel any reservation without any penalties.	5	71.4	2	28.6	0	0	0	0	0	0	4.71	0.488
	We reduced our room rates to attract guests during the crisis.	4	57.1	1	14.3	0	0	1	14.3	1	14.3	3.86	1.676
	We promoted some special offers to attract guests during the crisis.	7	100	0	0	0	0	0	0	0	0	5	0
	We concentrate on precautious of both guests and employees.	5	71.4	2	28.6	0	0	0	0	0	0	4.71	0.488
	We cut a part of our marketing budget.	3	42.9	1	14.3	0	0	1	14.3	2	28.6	3.29	1.89
	We increased the frequency of disinfectant procedures, with focus on door handles, light switches, elevator buttons, etc...	7	100	0	0	0	0	0	0	0	0	5	0
	We asked some employees to work from homes.	3	42.9	1	14.3	0	0	2	28.6	1	14.3	3.43	1.718
	Housekeeping staff are requested to follow extra special considerations in regarding to the care from COVID-19.	7	100	0	0	0	0	0	0	0	0	5	0
	Extra care of public spaces are done frequently.	5	71.4	2	28.6	0	0	0	0	0	0	4.71	0.488
	We educated our staff on the procedures related to COVID-19 prevention.	7	100	0	0	0	0	0	0	0	0	5	0
Now, our meetings are held through video conferences.	3	42.9	0	0	0	0	4	57.1	0	0	3.29	1.604	

Table 3: COVID-19 impacts on general procedures that followed by the sample

COVID-19 Impacts on Defensive Procedures among the Research Sample

With reference to data illustrated in table (4), only 28.6% of studied hotels had been exploited this period in advertising their services to be ready when the crisis has ended. All hotels among the sample hadn't been exploited this period neither in training their key employees nor in renovating some parts of their hotels. However sanitary and health practices have been intensified during the crises among all studied hotels, only 28.6% were exploited this period in planning for the next season to gain profits that compensate their losses. The majority of them (42.9% strongly agree and 14.3% agree) had been motivated guests to delay their reservation to other dates instead of cancellation and raised their concentration on domestic guests (28.6%

strongly agree and 42.9% agree).

Sentences		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean	Std. Deviation
		F	%	F	%	F	%	F	%	F	%		
COVID-19 Impacts on Defensive Procedures in 5-Star Hotels.	We have been exploited this period in advertising our services to be ready when the crisis has ended.	2	28.6	0	0	0	0	2	28.6	3	42.9	2.43	1.813
	Our sanitary and health practices have been intensified during the crises.	7	100	0	0	0	0	0	0	0	0	5	0
	We have been exploited this period in training our key employees.	0	0	0	0	0	0	4	57.1	3	42.9	1.57	0.535
	We have been exploited this period in renovating some parts of our hotel.	0	0	0	0	0	0	5	71.4	2	28.6	1.71	0.488
	We have been exploited this period in planning for the season to compensate our losses.	0	0	2	28.6	0	0	3	42.9	2	28.6	2.29	1.254
	We try to motivate our guests to delay their reservation to other dates instead of cancellation.	3	42.9	1	14.3	0	0	3	42.9	0	0	3.57	1.512
	Our concentration on domestic guests was raised.	2	28.6	3	42.9	0	0	2	28.6	0	0	3.71	1.254

Table 4: COVID-19 impacts on defensive procedures among the Sample

DATA ANALYSIS

Data analysis is summarized in the test of research hypotheses that could be illustrated in the followings:

H₁: Spreading of COVID-19 impacts occupancy rates in 5-star hotels: Depending on Simple Linear Regression Analysis, the data illustrated in table (5) showed a statistically significant impact (P-value = 0.027) of the independent variable (Spreading of COVID-19) on the dependent variable (Occupancy rates). It means that spreading of Covid-19 affects the occupancy rates in studied hotels. By calculating Regression Coefficient ($\beta = -0.194$), the result indicates that Covid-19 spread by one unit will negatively affect the occupancy rates in hotels by 0.194 units. According to this significant impact, the research accepts the 1st hypothesis.

Independent variable	R Coefficient of correlation	R ² The coefficient of determination	F	Sig.	β Regression Coefficient	
					Variable	Coefficient
Impacts OF COVID-19 spread	0.810	0.656	9.545	0.000	Constant	4.222
				0.027	occupancy rates in 5-star hotels	-0.194

Table (5): Simple Linear Regression Analysis of data related to the 1st hypothesis

H₂: Spreading of COVID-19 impacts general procedures that followed by 5-star hotels: According to Table (6), the results of Simple Linear Regression Analysis showed no statistical significant impact (P-value = 0.255) of the independent variable (Spreading of COVID-19) on the dependent variable (General procedures that followed in the studied hotels). It means that spreading of Covid-19 doesn't affect the general procedures that followed by the studied hotels. According to this insignificant impact, the research rejects the 2nd hypothesis.

Independent variable	R Coefficient of correlation	R ² The coefficient of determination	F	Sig.	β Regression Coefficient	
					Variable	Coefficient
Impacts OF COVID-19 spread	0.498	0.248	1.651	0.001	Constant	5.044
				0.255	general procedures followed by 5-star hotels	-0.189

Table (6): Simple Linear Regression Analysis of data related to the 2nd hypothesis

H₃: Spreading of COVID-19 impacts defensive procedures that followed by 5-star hotels: According to data illustrated in table (7), there is no statistical significant impact (p-value = 0.360) of the independent variable (Spreading of COVID-19) on the dependent variable (defensive procedures that followed by the studied hotels). It means that spreading of Covid-19 doesn't affect the defensive procedures that followed by the studied hotels. According to this insignificant impact, the research rejects the 3rd hypothesis.

Statement	R Coefficient of correlation	R ² The coefficient of determination	F	Sig.	β Regression Coefficient	
					Variable	Coefficient
Impacts OF COVID-19 spread	0.411	0.169	15.565	0.375	Constant	1.429
				0.360	defensive procedures followed by 5-star hotels	0.321

Table (7): Simple Linear Regression Analysis of data related to the 3rd hypothesis

V. CONCLUSION

The research was applied to only 7 of the 5-Star hotels in Alexandria. In spite the response rate is 70% attributed to the total size of the study population, the size of the research sample is too small. The research also excludes other types of hotels rather than 5-stars. Thus, results could be used as valuable indicators but couldn't be generalized.

In spite of the suffering of the studied hotels from the negative effects of COVID-19 spreading on occupancy rates (P-value = 0.027), both of the general (P-value = 0.255) and defensive (p-value = 0.360) procedures that taken by these hotels don't properly sufficient to deal with the scale of the crisis. Accordingly, a set of recommendations is required to be followed by these hotels to mitigate the negative effects of the crisis. Those recommendations can be concluded in the followings:

- Hotel operators should work together in periods of outbreaks. This could be achieved by forming a permanent regional congress of hotel operators to manage crises. This regional congress should held meetings whenever needed.
- Hotel must give their guests all the facts every day, focusing on that customer safety always comes first.
- Hotels should remove any cancellation fees and encourage guest to suspend their reservations for other future periods rather than cancelling those reservations.
- The concerned state bodies must act immediately to enforce compulsory insurance systems for all hotels and their employees against the risks of stopping in order to protect the hotel sector from destruction.
- Hotels must adopt strict preventive and healthy systems not only in time of crisis but also throughout the year. It should become a style of business and method of performance.
- Crises always happen suddenly, so hotels must always be ready to confront. This can be accomplished by developing a hot team to deal with crises. As crises happen suddenly, they end suddenly. So hotels must be fully prepared to work through recovery plans to take advantage of profitable opportunities once the activity returns in a manner that leads to a speedy recovery and compensate the bulk of the losses. Simply, hotels should exploit this pause as an opportunity to plan well to be ready as soon as the activity returns again.
- Hotels should try severely to transfer this threat into an opportunity. It is a good chance to concentrate on advertising in purpose of marketing hotel's services by focusing on domestic market, targeting new segments, developing the hotel's digital marketing campaigns, spreading advertising videos to be act as daily virtual tours in the hotel and communicate with regular guests to maintain their loyalty. It is also a valuable opportunity to invest in their key employees by training and developing them through online training programs. There are several useful tactics could be done. Renovating hotel's system or at least a part of, adopting new technologies and renovating some basic areas in the hotel are only simple examples of how hotels could exploit this hard period.
- Hotels shouldn't reduce the room rates or the prices of any other services. This action wouldn't attract any guests during current period as they don't come to the hotel because of their financial conditions but

to save their lives. So, the matter is much stronger. Any price reductions at any values wouldn't bring any additional guests.

-Hotels should try to use some of their capabilities to obtain a return that will secure a part of their fixed costs incurred during this period. For example, hotels could provide home delivery service to nearby areas at reasonable prices by developing an appropriate and relatively affordable food menu that provides the hotel with profit margins and gain customer preferences.

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