

The Impact of COVID-19 on Some Socio-Economic Sectors in the United Arab Emirates

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Abstract

The United Arab Emirates (UAE) is one of the largest oil producing rich country. The total population is about 10 million inhabitants in 2022. The number of confirmed cases of COVID-19 reached 879,973 while the death cases reached 2,301 as confirmed by the UAE National Emergency Crisis and Disasters Management Authority on the 28th of February, 2022. This paper aims at reflecting the impact of COVID-19 on multiple UAE governmental and non-governmental sectors such as the aviation sector, real estate market, tourism, and education. Challenges of the Etihad and Emirates Airlines revenues plunged which led to financial losses and a slew of employees laid off, the decreased profitability of the UAE's real estate market due to movement restrictions, curfew, and economic policies enacted which directly affected the growth and development. In addition, this paper addressed how the pandemic-prevention measures affected the tourism sector due to limited mobility and social isolation. Interviews were conducted to reveal the results of Covid-19 on the education sector and how schools and families have gained new and valuable technological abilities while many detrimental consequences have happened at various educational levels on the other hand. This study applied the topical approach with the use of analytical and cartographic techniques to reach the aims of the study to understand the issue of the impact of COVID-19 on some socio-economic sectors in the United Arab Emirates.

Keywords

COVID-19, Cases, Deaths, Transportation, Real State, Tourism, Education, Dubai, UAE

1. Introduction

The COVID-19 virus began to spread in Wuhan city resulting in a respiratory pandemic outbreak. Initially, scientists linked most of the infections to the sea-food and livestock markets epidemiologically. The virus was then transmitted from person to person through contaminated droplets (coughing or sneezing) or contaminated hands from someone who is infected with the virus. The COVID-19 pandemic has drastically impacted the world both economically and socially.

In the first quarter of 2020, the United Arab Emirates (UAE) was severely hit by the pandemic with the highest confirmed cases compared to the neighboring countries of the Arabian Gulf States, but the highest confirmed death cases were reported in Saudi Arabia. As a result of the fast spread of the virus, various critical sectors have been severely impacted by the pandemic.

This paper highlights the impact of COVID-19 on some socio-economic sectors as: the aviation, real estate, tourism, and educational sectors in the United Arab Emirates (UAE) due to the limitation of research that discusses the impact of this pandemic on these sectors. This paper will discuss both the number of confirmed and death cases reported by the UAE government at the beginning of the pandemic as a result of the precautionary measurements. A case study of a heavily populated region in Dubai with different nationalities is thoroughly studied, and comprehensive results are provided. Furthermore, the paper addresses some of the COVID-19 impacts on major economic sectors in the UAE, including transportation, real estate, tourism, and education. Global aviation has faced unprecedented hurdles as a result of COVID-19 in which many companies have been unable to carry travelers freely among countries and continents due to the travel ban measurements enacted to limit the spread of the virus. The effect on the booked departure flights decline is remarkably visible internationally and nationally. Furthermore, restriction of movement, curfew, and economic policies enacted by the government in response to the COVID-19 virus reduced the profitability of the UAE's real estate market. This is clearly demonstrated with the decline in the general prices of residential properties and the renting rates compared to the previous years. On the other hand, the worldwide travel restrictions and stay-at-home commands greatly disrupted the global economy, bringing tourism to a halt. In addition, the topical approach was used to present this paper to demonstrate how the pandemic affected the UAE's educational systems, students' performance, and attitudes through the interviews conducted with several parents.

2. COVID-19 Confirmed Cases and Deaths in the United Arab Emirates (UAE)

The current status of COVID-19 in the Arabian Gulf Countries Council (GCC) since the pandemic started on the 22nd of January, 2020 till the 28th of February, 2022 which has been illustrated in **Table 1** below. The highest number of confirmed cases was found in the UAE and the lowest was recorded in Qatar.

Table 1. The current status of COVID-19 in GCC countries (The last update was on 28/2/2022).

GCC Countries	Confirmed Cases	Deaths	Population (Million)
UNITED ARAB EMIRATES	879,973	2301	9.890
BAHRAIN	514,883	1454	1.701
KUWAIT	619,894	2538	4.270
OMAN	382,244	4244	5.106
QATAR	356,982	670	2.881
SAUDI ARABIA	745,027	8998	34.813

Source: The Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU). Population:

<https://www.worldometers.info/world-population/population-by-country/>.

However, Saudi Arabia scored the highest number of death cases.

Dubai is considered as a primary means of air transportation in the Middle East which explains the huge number of confirmed cases compared to the other GCC countries. Furthermore, Dubai is well-known for its great tourism attractions, with Expo 2020 being one of the most prominent. In addition, the UAE is considered to be a country that is hospitable to all nationalities around the world where the number of residents is high. When the UAE's death cases are compared to those of Saudi Arabia and Oman, we will notice that UAE with its highest number of confirmed cases is comparatively better than those of Oman and Saudi Arabia in terms of their greater number of death cases.

2.1. COVID-19 Dashboard: By the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

The COVID-19's tracking map was first shared publicly on January 22, 2020. It was developed to provide researchers, public health authorities, and the general public with a user-friendly tool to track the outbreak as it unfolds.

The dashboard has been built by Professor Lauren Gardner with her graduate student, Ensheng Dong (Gardner & Dong, 2020). It is maintained at the Center for Systems Science and Engineering at the Whiting School of Engineering, with technical support from ESRI and the Johns Hopkins University Applied Physics Laboratory as shown in **Figure 1**.

2.2. COVID-19 Time Series in UAE

The data of the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) has been downloaded and used to conduct the following analysis. The problem is that the data came in a cumulative format, so statistical measurements have been done using Excel software to get the data per day instead of cumulative data since the pandemic has started.

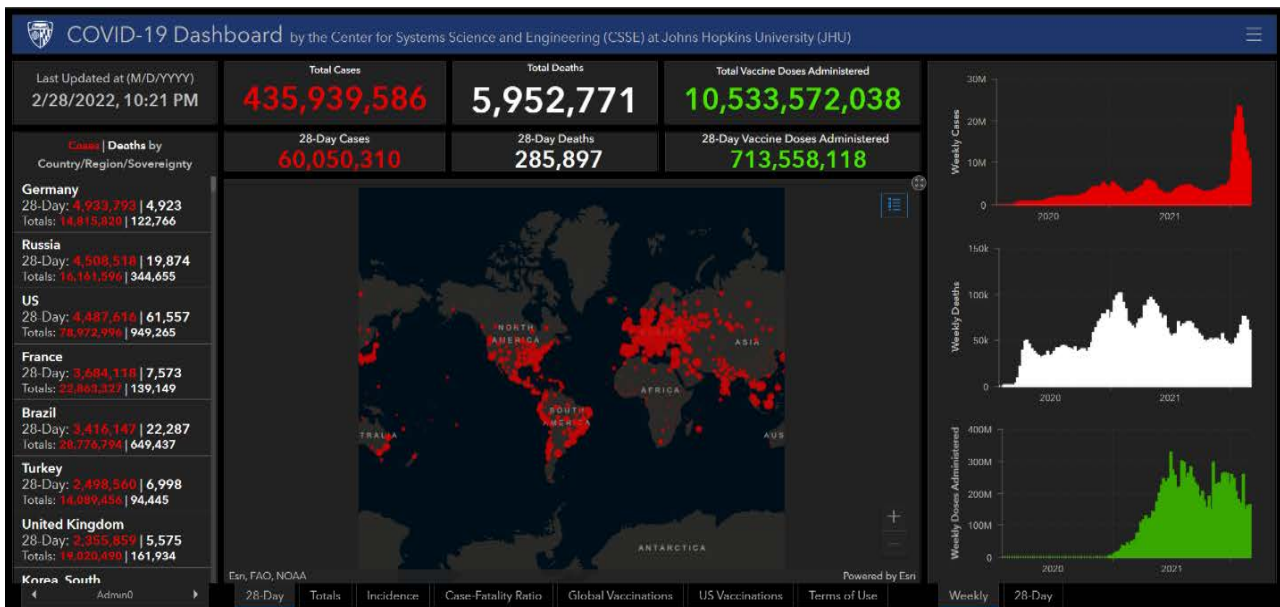


Figure 1. COVID-19 dashboard. Source: The Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) <https://www.arcgis.com/apps/dashboards/bda7594740fd40299423467b48e9ecf6>.

The data of the National Emergency Crisis and Disasters Management Authority is only provided online through figures, so we can't download and manipulate the data directly. However, the data was very useful in terms of verifying the results we got.

COVID-19 Diagnosed Cases and Deaths in the United Arab Emirates (UAE) 2020: The first corona case in UAE has been reported on the 29th of January, 2020 from a family consisting of 4 members who came from Wuhan city. The status was stable in February where the cases did not exceed 6 cases in total. In March, the cases reached more than 100 with death cases for the first time in the UAE. When March ended the COVID-19 has been announced as a pandemic and the whole world was on lockdown. Even with the lockdown, the cases kept increasing until they reached around 1000 cases in May 2020. After May, the cases were unsteady for a couple of months. In June, the highest reported cases were 659, while in July it increased to 716 whereas in August it decreased to 541. Due to the lifting of some precautionary restrictions, the return of some activities, like the opening of the airspace in the UAE, and the return of work in institutions under the group's system, the cases started to increase again in September when the highest number of cases reported was 1100. In October, the number of cases ranged between 932 and 1538. November witnessed a little decrease in cases, but this did not last at the end of December which reported a total of 1730 cases. On the other hand, the number of death cases was little compared to the other countries, especially with the superior health care taken by the UAE government for its citizens and residents.

COVID-19 Diagnosed Cases and Deaths in the United Arab Emirates (UAE) in 2021: In January and February 2021, the highest number of reported cases was 3,977. This amount declined to 1717 in March and to 1710 in April, while May

and June scored almost the same highest amount of 2236 and 2282 in sequence. Due to the continuous encouragement of the United Arab Emirates government to its citizens and residents to take the vaccinations, an obvious decline in the diagnosed cases has been witnessed through the period from July when the number of cases reached 1675 until it reached 58 cases in November. On the 6th of December, 2021, the reported cases reached 48. Unfortunately, due to the fast spread of omicron, the cases increased again reaching 2426 by December 31, 2021. However, the UAE maintained a reasonable number of death cases through 2021. The total number of deaths resulted by COVID-19 counted as 2303 cases, with annual death rate less than 1 per 10,000. This figure indicates that UAE is one of the lowest rates of the world.

COVID-19 Diagnosed Cases and Deaths in the United Arab Emirates (UAE) 2020: Due to the fast spread of omicron which is a mutation of SARS-CoV-2, the cases in January 2022 had reached around 3116. While in February, the cases kept decreasing until they reached 605 by the 28th of February, 2022. On the other side, the highest number of deaths was 5 per day which has been scored three times in January and four in February 2022 (**Figure 2**).

All death cases in UAE since the pandemic started in 2020 until now are represented in **Figure 3**. The death rates are really minimal compared to the confirmed cases. Overall, the UAE maintained a reasonable amount of death cases. The total amount of death cases was 2301 out of 879,973 diagnosed cases from Jun. 2020 to Feb. 2022. The amount ranged between 0 to 20 per day. The highest number of death cases has been reported as twenty on the 19th of February, 2021. We can notice that the deaths chart had two peaks. The first peak was from 22 April, 2020 to 22 May, 2020 when the whole Coronavirus concept was introduced and the process of dealing with it was new to everyone. The second peak was recorded between the 22nd of December, 2020 to the 22nd of March, 2021, which was the period where some precautionary restrictions had been lifted which resulted in higher confirmed cases and death cases.

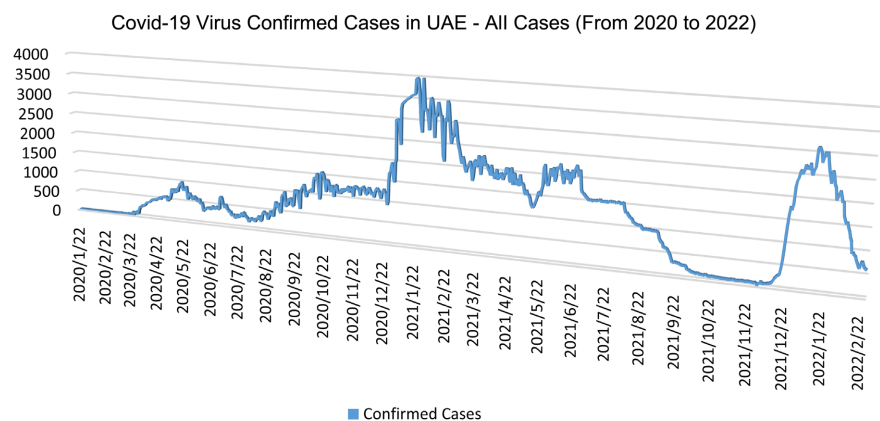


Figure 2. UAE COVID-19 diagnosed cases and deaths—all cases (from 2020 to 2022). Source: Done by researcher Marwa Al Suwaidi according to data of the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) <https://github.com/CSSEGISandData/COVID-19>.

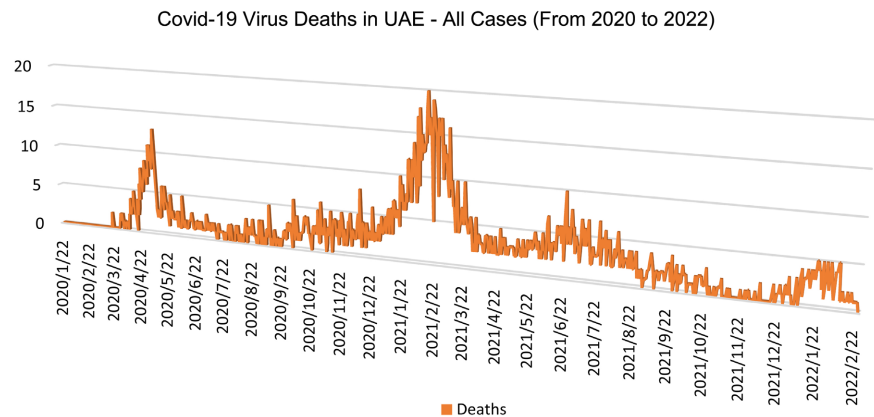


Figure 3. UAE COVID-19 deaths—all cases (from 2020 to 2022). Source: Done by researcher Marwa Al Suwaidi according to data of the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) <https://github.com/CSSEGISandData/COVID-19>.

3. The Impact of COVID-19 on Some Socio-Economic Sectors in the UAE

From the beginning of 2020 onwards, the COVID-19 pandemic has been shaping economic developments around the world in general. In the United Arab Emirates many socio-economic sectors have pulled through the crises as aviation, real estate, tourism industries, education and people life style

3.1. COVID-19 Impact on the Aviation Sector (Etihad Airways and Emirates Airlines)

Due to the travel ban measures enacted to limit the spread of the virus, many companies have been unable to carry travelers freely among countries and continents. Accordingly, transportation revenues in general and aviation specifically have plummeted posing a variety of issues in the short and long-term beginning with wage reductions and layoffs.

At the beginning of the pandemic, the public transportations among the seven Emirates have almost stopped except the exempted vehicles. After that, rules were made by the concerned authorities on how to use private and public transportations. Personal cars and taxis were allowed to move before sunrise to 8:00 p.m.; then the time was extended until 10:00 p.m. Furthermore, only three people wearing masks were permitted to go in a car. However, families were exempted from car passengers' limited number. Taxicabs were only allowed to carry one to two passengers at a time. Passengers were instructed to use the back seats. Three people including the driver were permitted to go in a Taxi.

People using public transportation such as Buses and Metro were instructed to follow the guidelines provided by the ruling classes. Some of these rules were to book tickets online in advance or to use bankcards with Wi-Fi payment. Avoiding cash payments was highly recommended. Moreover, keeping one-meter distance between passengers at all times and in all situations including transit and

waiting rooms. For the safety of the operators and passengers, seats near the driver were continually closed. Additionally, only individuals with a green pass were permitted to enter the stations and busses. All workers, drivers, and passengers were instructed to wear masks all the time.

After a few months of COVID-19, public transportations (Buses and Taxis) were allowed to resume their duties among the Seven Emirates. However, entering Abu Dhabi need green pass with negative nasal test. Due to the pandemic created by the Coronavirus, global airlines will require an additional \$70 - 80 billion (256.9 - 293.6 billion dirhams) in government assistance according to the president of the International Air Transport Association, the trade association of the world's airlines (Reuters, 2020).

UAE has five main commercial airlines companies. Emirates airlines are the UAE's largest airline and one of the country's two flag airlines. The airline is based in Garhoud, Dubai, and is part of the Emirates Group which is owned by the Dubai government's Investment Corporation. It is also the Middle East's largest airline.

The United Arab Emirates' second flag carrier is Etihad Airways, and it is the UAE's second-largest airline after Emirates airlines. Its headquarters are in Abu Dhabi's Khalifa City, near Abu Dhabi International Airport. Etihad Airways was founded in November 2003.

Air Arabia has two branches in the UAE. It is an Emirati low-cost carrier. The first branch is based at Sharjah International Airport. It was established 19 years ago in February 2003. Air Arabia Abu Dhabi is the second branch based in Abu Dhabi. It was launched in July 14, 2020.

Fly Dubai is a government-owned low-cost airline based in Dubai, with headquarters and flight operations at Dubai International Airport. From Dubai, the airline serves 95 destinations in the Middle East, Africa, Asia, and Europe. Get Going is the company's tagline.

Wizz Air Abu Dhabi is a low-cost airline established at the International Airport of Abu Dhabi. The airline is a joint venture with state-owned ADQ (formerly, Abu Dhabi Developmental Holding Company, ADDH), which owns 51 percent with Wizz Air Holdings owning the remaining 49 percent. Flights with two Airbus A321 neo planes began in November 2020. Over the next few years, the number of planes will be increased to 50. More information about the UAE commercial airlines can be found in **Table 2**.

The Corona's impact on the UAE aviation sector (Etihad Airways and Emirates Airlines) will be the focus of this chapter. Etihad Airways and Emirates Airlines are two of the world's most well-known Emirati firms that, like other companies around the world, have been adversely impacted.

Due to the closures connected to the Corona virus, which impacted the aviation sector hard, Emirates Airlines, the Middle East's largest airline, suffered a loss of \$5.5 billion (20.185 billion dirhams) for the first time in more than three decades. Revenues fell by 66 percent to \$8.4 billion (30.828 billion dirhams), while passenger traffic dropped by 88.3% (IATA, 2022).

Table 2. List of airlines of the United Arab Emirates.

Airline	Callsign	Commenced operations	Hub airport(s)	Notes
Air Arabia	ARABIA	2003	Sharjah International Airport Ras Al Khaimah International Airport	Largest low-cost airline in the Middle East
Air Arabia Abu Dhabi	ARABIA	2020	Abu Dhabi International Airport	First low-cost carrier from the region
Emirates	EMIRATES	1985	Dubai International Airport	Largest airline in the Middle East
Etihad Airways	ETIHAD	2003	Abu Dhabi International Airport	Second largest airline in UAE
Fly Dubai	SKY DUBAI	2008	Dubai International Airport, Al Maktoum International Airport	Low-cost carrier of Dubai
Wizz Air Abu Dhabi	WIZZ SKY	2019	Abu Dhabi International Airport	Low-cost carrier of Abu Dhabi

Source: Modification after: IATA (2022). Current airline members. Retrieved from <https://www.iata.org/en/about/members/airline-list/>.

Since the commencement of the Corona outbreak, the Dubai government has supplied Emirates Airlines with \$3.1 billion (11.377 billion dirhams) in financial assistance. Until it has fully recovered from the effects of Corona, it will receive full support (Travel Daily Media, 2021).

Considering the implications of the Coronavirus on the global travel sector, Etihad Airways reported a loss of more than 1.7 billion dollars (6.239 billion dirhams) in 2020 and 870 million dollars (3.193 billion dirhams) in 2019. The Abu Dhabi government would provide Etihad Airways with full support until it has fully recovered from the impact of Corona (BBC, 2020).

Thousands of employees in the two companies were laid off during the pandemic, as the number of laid-off from their jobs in Emirates Airlines was approximately 9000 employees in various fields. The two companies said that they will offer new jobs very soon, but gradually and according to the operational need for flights immediately after the beginning of the recovery from the crisis (ARAB NEWS, 2020). The stoppage of flights into and out of the UAE had a direct impact on tourism since the number of visitors fell by over 83% during the pandemic compared to before Corona.

Global aviation traffic has suffered massive financial losses, but there are high hopes for a full recovery and a return to pre-Corona levels. This is expected to

happen in the year 2024 (IATA, 2022).

The country's Civil Aviation Authority has devised strategies and objectives that it would seek to achieve at the highest levels in the future years in order to maintain its leadership position. These are the strategic objectives:

- The first goal is to create and enforce safety and security policies that adhere to international standards and best practices.
- The second goal is to keep improving safety standards and air navigation services.
- The third goal is to promote the UAE's civil aviation sector on an international level.
- The fourth goal is to enhance air transport links with countries throughout the world on a continuing basis.
- The fifth Goal is to ensure that all administrative services to the General Authority of Civil Aviation are provided in accordance with quality, efficiency, and transparency requirements.
- Establishing a culture of innovation in the institutional work environment is the sixth goal (General Civil Aviation Authority, 2022).

Emirates Airlines is confident that its recovery will continue during 2022. Overall, Emirates has seen a substantial recovery throughout 2021. While many airlines are just starting to bring their Airbus A380s back into service, Emirates has already gone one step further. Around half of the airline's fleet, as well as the whole Boeing 777 fleet of 133 planes, are currently flying again. As a result, the airline has been able to expand its network to 128 cities (Boon, 2021).

By 2022, Etihad Airways intends to recover 65 percent of business travel. Work-related travel is swiftly recovering, with demand having increased significantly since the beginning of the year, and it is likely to continue to rise in the near future. Etihad Airways is concentrating on smaller, more fuel-efficient planes. Nor has it taken a final decision regarding the return of all A380s to service at the present time, given the current conditions in the aviation sector. Etihad Airways was able to operate flights to 59 destinations around the world during this period, and the target is increasing the number of destinations through the coming short period (Al Bayan, 2022).

The International Air Transport Association (IATA) published research on the importance of the UAE's air transport sector, estimating that continuing attention on the sector will result in 620,000 extra job possibilities and \$80 billion (293.6 billion dirhams) in economic contributions by 2037.

The aviation sector contributes significantly to the UAE economy, as it is one of the country's most strategic assets, as the sector today supports nearly 800,000 jobs and pumping 47.4 billion dollars (173.9 billion dirhams) into the UAE economy, accounting for 13.3% of the country's gross domestic product (IATA, 2019). The UAE aviation market is predicted to grow by 170 percent in 2037, sustaining 1.4 million employment and contributing \$128 billion (470 billion dirhams) to the country's economy (IATA, 2019; Trade Arabia, 2020).

3.2. Impact of COVID-19 on Real Estate Market

United Arab Emirates is one of the countries that experienced the impacts of the pandemic in its real estate sector. Restriction of movement, curfew, and economic policies enacted by the government in response to COVID-19 reduced the profitability of the UAE's real estate market. There is a direct and indirect effect of COVID-19 in the Real estate market. UAE's real estate market has unique features compared to the surrounding country. According to Sherine L., one of the unique features of the market is that it is more of a temporary home for expats than residents. Sherine explains that expats who are the main customers in the country's real estate market believe that they will sooner or later leave their homes for their own countries. On the other hand, local residents buy homes as assets for future generations and not for trading and transferring items. Therefore, the ownership of most houses in the UAE is available as either leasehold or freehold in different emirates. The country's nature of real estate exposed it impacts of COVID-19 in various ways. First, the market noticed a general decline in prices of residential property during the pandemic. Sherine cited a report by Deloitte which reveals that the prices of residential property in Dubai fell by approximately 7% between the third quarter of 2018 and 2019. Rents and the average price of apartments per square feet also recorded significant declines falls during the COVID-19 pandemic. According to Sherine, the cost of renting apartments in Dubai fell by approximately 9% while the price of buying apartments per square foot fell by approximately 10%. Therefore, it was cheaper to buy and rent houses in the UAE during the COVID-19 pandemic (Sherine, 2020).

According to real estate and investment management firm JLL, the property market in the United Arab Emirates continues to be tenant-friendly in Q3 2020. The residential sector recorded an increase in construction activity with around 12,000 units handed over in Dubai and 600 units handed over in Abu Dhabi, JLL expects developers to continue offering a range of incentives and subsidies such as fee waivers, discounts, rent-to-own, as well as partnerships with banks to attract new investors and end-users looking to take advantage of the lower prices (IBID).

COVID-19 has also prompted the formulation and implementation of economic policies that impact the UAE's real estate market. During the pandemic, the UAE's government came up with rental assistance programs in various emirates. For example, in 2020, the government implemented a policy that halted all judicial evictions in Dubai. The policy aimed at cushioning residents and real estate customers who could not afford to pay on time. The policy also enabled debtors to postpone debt repayments during the COVID-19 pandemic period. Therefore, the economic policies reduce the profitability of the real estate market and scare investors from it.

The COVID-19 pandemic has also significantly impacted real estate project delivery in the UAE. The functioning of the UAE's real estate market depends

on the availability of workforce, raw materials for constructing houses, and ability to construct houses within specific timeframes. At the onset of the pandemic, the operation hours for stores where constructors purchased raw material were reduced, and importing other raw materials became impossible (Ghandour, 2020). Accessing the workforce also became a challenge since the curfew prevented workers from traveling over long distances for construction activities. The pandemic also makes it hard for contractors and inspectors to move from one construction site to another and interact with the construction teams (Ghandour, 2020). Therefore, COVID-19 slowed down the delivery of real estate projects and slightly increased the cost of construction in the process.

The impacts of Covid-19 on UAE's real estate economy resulted from the government's measures to contain the spread of the disease and enacted economic policies. Restriction of movement from UAE and Out reduced the number of people whose able to purchase already-built houses and prevented raw material to produce. Reduced working hours due to curfew affected the sourcing of raw materials, while government policies regulations reduced rents and the cost of houses per square foot. Therefore, as the pandemic continues, the government enacts more policies to shield the crucial market from further impacts.

3.3. Impact of COVID-19 on Tourism in UAE

Tourism is a significant contributor to economies and one of the most important businesses generating much-needed foreign cash. Unfortunately, The COVID-19 outbreak has produced quite a public health problem that resulted in catastrophic economic consequences in most nations, notably the United Arab Emirates. Unparalleled worldwide travel restrictions and stay-at-home commands greatly disrupted the global economy, bringing tourism to a halt.

The tourism industry has always contributed to a significant part of the UAE's economy. In 2019, tourism contributed 11.59 percent of the total GDP in the country (Al-Qasem et al., 2021). During the second quarter of 2019, up to 8.36 million intercontinental tourists visited UAE, contributing to a 3 percent growth in tourism volume compared to 2018. The government had thus anticipated that the country would attract about 20 million tourists in the succeeding year. Unfortunately, the rapid surge of coronavirus cases affected many parts of the world, including UAE. The government reduced issuing tourist visas and canceled reserved flights (Chmaytelli & Khalek, 2020). The unforeseen reforms introduced because of the COVID-19 epidemic finally resulted in a decline in tourism in the UAE.

The pandemic further affected all other sectors associated with the travel and tourism industry, including hotels, airlines, travel agencies and tourist attractions. The effect on the transport sector, especially airlines, is visible in the remarkable decline in booked departure flights. As a result of the health guidelines set by the government, more individuals avoided leaving their houses, especially traveling to other countries. That resulted in a global reduction in flight bookings from 3.23 million to 0.42 between January and July 2020 (Chmaytelli &

Khalek, 2020). The US, China, and India lead with the most declines in these numbers, recording 756 thousand, 363 thousand, and 112 thousand declines of flights, respectively, which is illustrated in **Table 3** below (Al-Qasem, 2021). Though negligible compared to these nations, UAE recorded a considerable decrease of 21 thousand departure flights within this period. The low number of booked flights forced UAE airlines to reduce operational requirements, especially the workforce. Many employees in the tourism sector lost their jobs.

The accommodation sector, represented by hotels and apartments, which is considered one of the most critical segments of the tourism industry, was also highly affected. Typically, the availability of lodging facilities in a region shows that it is a tourist destination because this is a primary requirement for tourists. Just as the fate of airlines in the United Arab Emirates amidst COVID-19, hotels experienced a tremendous slump. The number of tourists going into the country declined, thus directly affecting hotels because there are no individuals to offer their services. Various hotels in Dubai documented a sharp drop in average daily rates, revenue per available room, and occupancy for 2020 (Choufany, 2020). These declines could be attributed to government measures to contain the pandemic and the decline in air travel.

Figure 4 below shows the hotel occupancy rate in UAE between 2017 to 2020 according to the Ministry of Economy. We can see clearly that the hotel occupancy declined by almost 20% in 2020 due to the pandemic when compared to the year 2019, which reported an occupancy rate of 74% while the occupancy rate for the year 2020 was only 55%. However, despite the indicated drop in the hotel occupancy as depicted in **Figure 4**, the UAE recorded the world's second-highest hotel occupancy rate in 2020. Furthermore, the pandemic played a vital role in reviving the domestic tourism, which contributed Dh 41 billion to the national economy in 2020 as reported by Dr. Ahmad Al Falasi, Minister of State for Entrepreneurship and Small and Medium Enterprises (IBID.). On the other hand, the number of canceled flights was measured during COVID period to examine the impact of COVID on flights.

According to Air Travel Consumer Report: August 2021 Numbers of canceled flights have been increased by time while it reduces in May then suddenly it

Table 3. Global reduction in flight bookings, 2020.

Country	Flight Reduction (In thousands)	Percentage Worldwide (Approximately)
USA	756	27
China	363	13
India	112	4
South Korea	30	1.07
UAE	21	0.75

Source: Al-Qasem (2021). Impact of pandemic Coronavirus (COVID 19) on United Arab Emirates tourism industry.

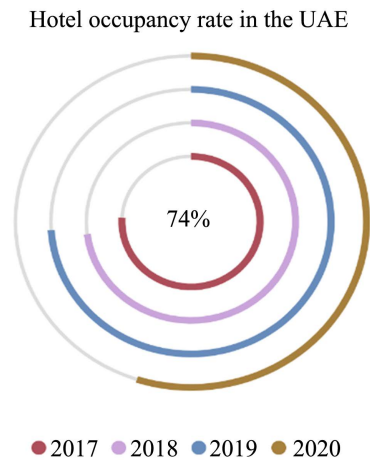


Figure 4. Hotels occupancy rate in United Arab Emirates 2017-2020 (UAE). Source: From Ministry of Economy et al., 2022.

increases. For example, the number of travelers reported by Emirates airline for the year 2020 was a slightly above six million passengers only, which is considered a sharp drop when compared to the previous year with a total number of passengers of about 56 million (Bureau of Transportation Statistics, 2021).

Dubai Tourism predicted fluctuations that indicated larger tourism in year 2019 while decreased sufficiently in April 2020, then it starts increasing, but it's still low as compared to previous years. The plot in Figure 5 contains two scales; the scale on the right side indicates US dollars spent on tourism, while the left side predicts percentage change. Furthermore, the plot shows the fluctuation of the Revenue Per Available Room (RevPAR) from Dec 2018 to the end of year 2020 (Emirates NBD Research, 2022). Thus, we can say that April 2020 is the period that is largely affected by COVID in the UAE in terms of tourism. Data on international visitor numbers to Dubai through April 2021 show about 73% decline in the total number of visitors compared with pre COVID-19 levels (January-April 2019).

3.4. The Impact of COVID-19 on the Education in UAE

The pandemic breakout resulted in a shift to online and distance learning, such interruption led to a lot of negative effects on students' performances. However, this paper will discuss the COVID-19 impact on education in the UAE from both the positive and negative sides. This chapter is written based on personal experience as a mother and interviews that have been conducted on neighbors, teachers, and work colleagues.

The UAE government followed many steps to control the spreading of the pandemic and issued new guidelines like suspending work from the workplace and working online instead, suspending prayers in the worship places, closing malls, and entertainment places. In addition, the distribution of the print publications was put to a stop and was shifted to soft copies. Moreover, the UAE government has decided like all the other governments around the world to

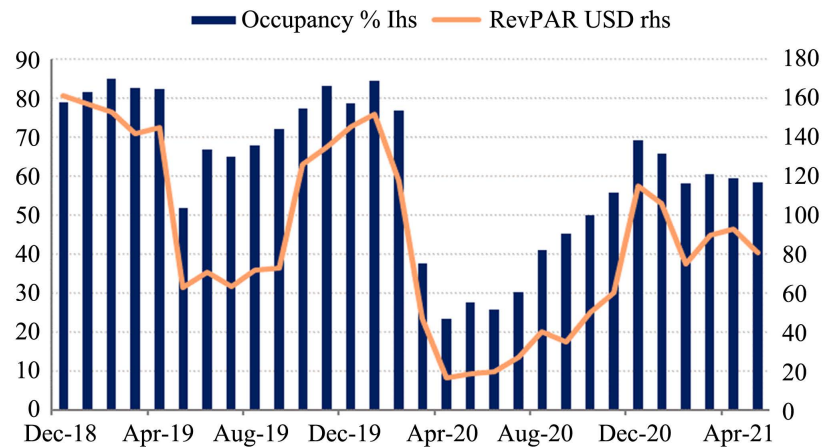


Figure 5. Dubai tourism indicator from Dec. 2018-April 2021. Source: Emirates NBD (2022).

temporarily close schools down and shift towards virtual education as an attempt to reduce the spreading of COVID-19 among students and the academic staff.

Educational entities in the UAE opened a new platform for teachers and students at home to work during the pandemic. It made students aware of new educational technologies used during emergencies time. Based on my personal experience as a mother of children in the grades (2), (7), and (8), I can say that both the parents and students tended to enjoy the experience at the beginning of the distance learning journey because it reduced the morning stress parents faced when getting their kids ready and dropped off at school while making sure to get back to their workplace on time. Parents also had the chance to see their children's weaknesses and strengths through their participation. They also get to know more about their children's teachers and classmates. In addition, the bullying rate has decreased immensely or may have completely disappeared during the distance learning period. Moreover, students were able to benefit from the extra time available which was previously spent on the transportation journey pre COVID-19 giving them better time management skills.

Nevertheless, many issues were raised in regard to the distant learning impacts and one of them is the "paradoxical situation where many administrators, teachers, parents, and students received little training to prepare them for distance learning" (Ridge & Erfurth, 2020). According to an interview with my neighbor in this regard, she mentioned that her daughter in grade (3) stayed unable to join her online classes for more than two weeks until the school instructed them after the failure of all other assistance was to change the device from laptop to tablet device. In my case as a mother of a child who was four years old when the pandemic first started, my daughter was very dependent on me, and this required me to stay alongside her at all times which had a great impact on my other commitments.

Another issue is the school fees dilemma. According to one site, "the issue of

fees has featured prominently across the popular print media and social media. Many parents expressed early on their expectations for significant fee reductions to be applied for the final term, and possibly for as long as distance learning remains in place; the main reasons cited being:

- 1) A feeling that full fees should not be charged where not all services provided on-site are now available to students,
- 2) A generally increased requirement for parental involvement in managing or delivering aspects of the curriculum as an inevitable part of the distance learning arrangements (Alain Sfeir et al., 2020).

With this in mind, my neighbor who has a child in grade (10) complained to me that she is forced to pay the same school fees though her son is not benefiting from extra school curriculum such as sports, gym, and art.

A big negative factor would be the impact of distance learning on the students' academic level. It was difficult for teachers to control the online educational process which resulted in cheating and misconduct on the part of students. Teachers were forced to adjust the assessment process and come up with alternative ones in order to cope with the new developments based on an interview I conducted with an Arabic teacher in the Emirates private school in Al Ain.

Moreover, many parents have witnessed a decline in their children's academic level according to three interviews with three parents whose children are in three educational levels. Their feedbacks were identical in regard to the disadvantages of the online educational system. They emphasized that their children have become reluctant in paying attention and attending their online lessons. Some would even sleep during classes or will indulge in playing electronic games on the same devices they are using to attend their lectures.

Recently, scholars noticed that the online students have scored a higher percentage in their exams results compared to their grades scored on campus suspecting that students may be cheating or receiving aid from their parents. High achievers are considered to be victims of the new online system because some students achieved great results by the means of cheating and not putting in any effort. Accordingly, the evaluation process itself should be deemed misleading due to its dependence on inaccurate data.

With the hybrid classes procedure, some online students received less or no attention from the teachers at all. In this context, teachers and administrators complained of more demanding workloads and stress during their workday which extends on their own time due to preparations and extra administrative work. A situation my seven-year-old daughter has encountered during the hybrid program was when 25 classmates of hers attended on-site learning which resulted in her receiving no or little attention during her online classes.

3.5. Impact of COVID-19 on Daily Lifestyle in United Arab Emirates

A significant change in consumer expenditure as a result of the pandemic, a change that is felt differently across the seven emirates according to gender, age, and income brackets. Overall, decreases in expenditure on vehicle fuel, restaurants,

hotels, and coffee shops were observed, along with increases in expenditure in on-line shopping and increases in expenditure on groceries. Electronic commerce has flourished and the COVID-19 virus was one of the main reasons. The quarantine times have encouraged most shop owners in the markets to display their goods on social media platforms, and to announce the promotions they make to encourage customers to make purchases via these platforms. This type of shopping was the only outlet for people, especially since many major stores, restaurants, and other service providers were either closed or unable to offer their services due to the restrictions. It was the perfect solution to avoid the period of stagnation (Almurshidi, Bridi, & Al Hosani, 2021).

Cinemas, in turn, were closed, causing great damage to the film industry. But at the same time, the demand for Netflix and OSN platforms increased during the period of home quarantine. After easing the restrictions imposed due to Corona, cinemas have opened with a small capacity, and this capacity is increasing or decreasing based on the developments and outbreaks of cases.

In terms of human interaction, most of the people of the country reduced the frequency they visited family members. For families who live in the same household, a majority reported an increase in family interaction, as denoted by increased participation in meal preparation by family members during the pandemic, compared to before the pandemic.

In compliance with the rational laws of our country, whose goal was the safety of its citizens and residents, especially the elderly among them, and due to the nature of the UAE society that is characterized by coherent family, video communication programs such as Zoom were adopted as a necessity in communicating with families and friends. During the Corona period, Abu Dhabi witnessed a complete closure for a period of time. In this difficult period, video communication programs have made it less easy. Everyone remembers the sound of the phone ringing at eight o'clock in the evening to alert UAE citizens and residents of the need to commit to staying at home, and to start the national sterilization program, which aims to increase citizens' awareness of the need to adhere to preventive measures to protect society from the risk of an epidemic spreading among its layers. For that exact reason, family nights stayed the same but this time through video communication programs.

Ironically the pandemic was not only seen as a negative impact for all, for those who were about to get married during the coronavirus era emphasis good impacts. The "virtual wedding" or "weddings with small parties" from a personal experience, the joy in it seems undiminished, and the societal commitment to precautionary health measures for Corona, reduce material expenses and building a family based on the stability pact according to the customs and values that are rooted in the UAE society, and the result is definitely satisfactory for all. Coronavirus changed many aspects of holding wedding parties, from renting wedding halls to the special banquet and meals that you witness, preparing and sending invitations to guests, and other things that cost a lot of money that a person may spend a lifetime in debt.

As soon as the world health organization declares Coronavirus as a global pandemic, the UAE government asked all the employees to work remotely in seeking to protect themselves from being exposed to positive cases and to minimize the spread, especially at that point when the whole world did not know how to face and deal with the pandemic. Luckily UAE was ready for that scenario, employees were able to conduct their work and interact with other employees using video communication programs like Microsoft Teams and Zoom. After that UAE began lifting some precautionary restrictions, which included the return of employees to their workplaces based on the principle of a group work system. The idea of this principle is as follows: employees are divided into groups, where group A works at the workplace for a week for example and group B is remotely working from home in the same week. In the next week, the situation will be the opposite and so on. So, if a positive corona case appears in group A, they all will be asked to work at home and need to quarantine themselves, and group B can return to the headquarters without being exposed to group A. Not forget to mention the green pass through Al Hosn App. which has been adopted not only for employees to enter work but also to enter many other places like malls, hospitals, governmental institutions, and so on. The setup to activate the green pass depends on the decisions of the UAE government on the developments of the new Coronavirus and the extent of corona cases.

4. Conclusion

This paper reveals some impacts of COVID-19 on some socio-economic sectors in the United Arab Emirates such as the health sector in regards to both the confirmed and death cases, aviation, real estate market, tourism, education and daily life style of peoples. Based on monthly status patterns, this paper points out that the increase and decrease in the number of COVID-19 cases in UAE were associated with precautionary measures restrictions and that UAE has maintained a reasonable amount of death cases. The study presents how the aviation sector was harmfully affected in UAE due to the travel ban measures and as a result, the economy and tourism were also dramatically affected. Moreover, the paper covers the impacts of COVID-19 on UAE's real estate economy. Due to the restriction of movement in and out UAE, the number of people capable of purchasing built houses reduced. On the other hand, the pandemic-prevention measures have affected the tourism sector. Many activities have been canceled which directly affects the growth and development of the UAE tourist sector. This paper also reveals the impact of the COVID-19 crisis on education in the UAE, where schools and families have had acquired new and valuable technical skills; however, many negative impacts have occurred as well on different educational levels.

All the suggestions revolved around the government must adopt response and recovery measures to help revive all the sectors to compensate the loss and support rapid Socio-Economic growth. As previously mentioned, this paper has covered the pandemic impacts of specific sectors in the UAE by using case stu-

dies and several interviews. The results obtained do not cover other countries and cannot be generalized and for those who are interested in this topic, a similar study can be conducted on other countries with a larger population to measure the level of the pandemic impact on similar sectors. We suggest the use of questionnaires to strengthen the quantitative methodology.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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