



A Snapshot of Socio-Economic Impact of COVID-19 on the Sultanate of Oman: Measures and Coping Strategies

Venkat Ram Raj Thumiki  and Hesham Magd

Abstract

COVID-19 is an economic shock that has been causing disruption at a drastic level and faster pace than a normal crisis, leaving less time for social and organizational systems to respond. This crisis has negatively impacted the socio-economic factors of the world by infecting millions of people, causing hundreds of thousands of deaths, closure of businesses and job losses. Sultanate of Oman, one of the key economies in the Middle East is not an exception and has been facing socio-economic problems due to the COVID-19 pandemic. This paper attempts to evaluate the socio-economic impact of COVID-19 on Oman's economy, along with the coping strategies and measures taken by the Government to mitigate the risk arising out of this crisis. Extensive research of published data in newspapers, World Bank reports, and other secondary sources has been collected and reviewed in articulating this paper. COVID-19 impacted Oman's social life—deaths, state budget—cuts, market consumption—decreased purchases, employment—job loss, tourism—cancellation of Salalah Tourism Festival 2020, logistics—reduced port operations, aviation—reduced revenues, real estate—decline in property deals, etc. However, the Government of Oman through its professional approach, has undertaken measures and coping strategies such as, lockdown to control the spread of virus, Bayan digital platform to support logistics sector, tax reliefs, financial package and continuation of developmental projects to fuel the economic activity in Oman. Thus, through the retroactive decisions made by the Government, Omani economy has proved itself as the best performing market during the ongoing COVID-19 crisis.

Keywords

COVID-19 · Dual-crisis · Economic shocks · Socio-economic factors · Mitigation · Coping strategies

1 Introduction

Crises is not uncommon; they occur from time to time in countries across the world. The world has been facing crises of time immemorial. Each time—there is a crisis—organizational mechanisms and systems emerge as stronger than before as people learn how to deal with difficult situations during and after the crisis (Mitroff et al. 1987; Augustine 1995). According to Hart et al. (Hart et al. 1993) different types of crises include; natural crises caused by cyclones such as Emma in 2018, that disrupted the retail sector across the United Kingdom (Woods 2018), technology crises such as Y2K in 2000 which posed a great threat to the banking sector (Li et al. 1999; Appelbaum et al. 2012) and economic crises caused by the real estate fallout in 2007 (Aziz 2012) and falling oil prices in 2014 that effected almost all sectors of the global economy (Omoregie 2015). Similarly, the current health crisis a.k.a. COVID-19—that started at the end of December 2019 in Wuhan city and quickly spread across the world— is known as 'shock' (Carlsson-Szlezak et al. 2020). The difference between crisis and shock is that, while a crisis causes gradual disruption, shock is much faster and gives very little or no time to create safety systems (Roubini 2020).

COVID-19 shock has impacted the socio-economic factors of human life. Across the world, more than 435,000 people have died. Whilst there are more than 7.9 million registered cases as of 15th June 2020. Several service sectors (including, travel, tourism, education, and entertainment) that play a supporting role in many economies have been disrupted due to movement restrictions imposed by

V. R. R. Thumiki (✉) · H. Magd
Faculty of Business and Economics, Modern College of Business
and Science (MCBS), Muscat, Sultanate of Oman
e-mail: venkat@mcbs.edu.om

H. Magd
e-mail: hesham.magd@mcbs.edu.om

governments. The manufacturing sector suffered major losses due to the halting of work and even resulted in closure for several factories and workshops. Millions of daily wage earners lost their jobs, not only in poorer countries but also in developed economies such as the USA and England. The Middle East is not an exception and has been facing socio-economic problems due to the COVID-19 pandemic. The Middle East is the home to nearly 4% of the global population and contributes nearly 8% of global sea trade, 37% of the world's oil and 18% of global gas production. The Middle East and central Asian countries contributed nearly \$4 trillion to the global GDP in 2019 (International Monetary Fund 2019). The Sultanate of Oman, one of the key economies in this part of the world, has been suffering from COVID-19 with its first 2 cases detected on 20th February 2020 leading to a steep rise in the number of positive cases going up to 13,000 by the end of May 2020. This paper attempts to evaluate the current situation with reference to the socio-economic impact of COVID-19 on the economy of the Sultanate of Oman.

2 Impact of COVID 19

2.1 Public Health

Though huge repositories are available with constantly updating COVID-19 data, researchers on this paper have compiled specific data to make it convenient for readers to take a stock of the situation as it is related to GCC as well as Oman, as of 15th June 2020. The data was collected on 17th June 2020 from the European Centre for Disease Prevention and Control-ECDC (Centre and for Disease Prevention and Control 2020), a highly reliable source for global health data. This pandemic has been rapidly spreading with an average of 1.43 million positive cases and

78,775 deaths per month from January 2020 to 15th June 2020 giving little time for the governing mechanisms to react. The below section presents the exponential spread of COVID-19 cases and deaths across the GCC countries (Figs. 1 and 2) from the 31st December 2019 to 15th June 2020 and will further narrow down to the situation in Oman (Figs. 3 and 4).

It can be seen in Figs. 1 and 2 that Saudi Arabia—the largest state in the GCC in terms of population—has recorded a greater number of COVID-19 cases and deaths as of 15th June 2020. Though the death rate in GCC countries (Bahrain: 0.24, Kuwait: 0.82, Oman: 0.45, Qatar: 0.1, Saudi Arabia 0.77 and UAE: 0.68) is lower than the global average of 3.4%, it has still become a serious concern for the respective governments. Figures 3 and 4 clearly present the situation in Oman that has been struggling with the increased number of cases as well as deaths. Particularly, a steep rise from 1st June 2020 onwards has become a major concern for the government. The number of cases and deaths doubled from 31st May to 15th June 2020. According to the Ministry of Health, the main reasons for increasing cases are due to family gatherings (Covid-19: Family gatherings main cause of increasing cases in Oman 2020).

2.2 Oman Economy

COVID-19 began with the oil crisis is going on, hence, it can be called a crisis-in-crisis or dual crisis. As an impact of the oil crisis, the Government of Oman has already been informed of the downward trend in GDP by 1.6% in first quarter of the year (Mendoza 2019), real estate by 13.9% in the first five months (Decline in real estate deals in Oman 2019), automobile by 12.5% in total annual sales (Oman 2020) and other sectors of the economy. Thus, when the COVID-19

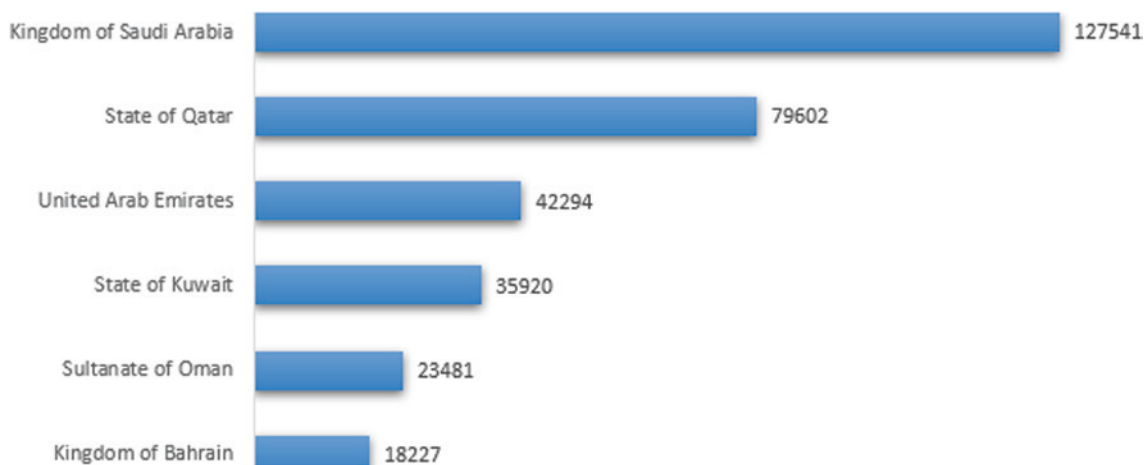


Fig. 1 GCC country-wise distribution of COVID-19 cases as of 15 June 2020 (Source Compiled by the authors)

Fig. 2 GCC country-wise distribution of COVID-19 deaths as of 15 June 2020 (Source Compiled by the authors)

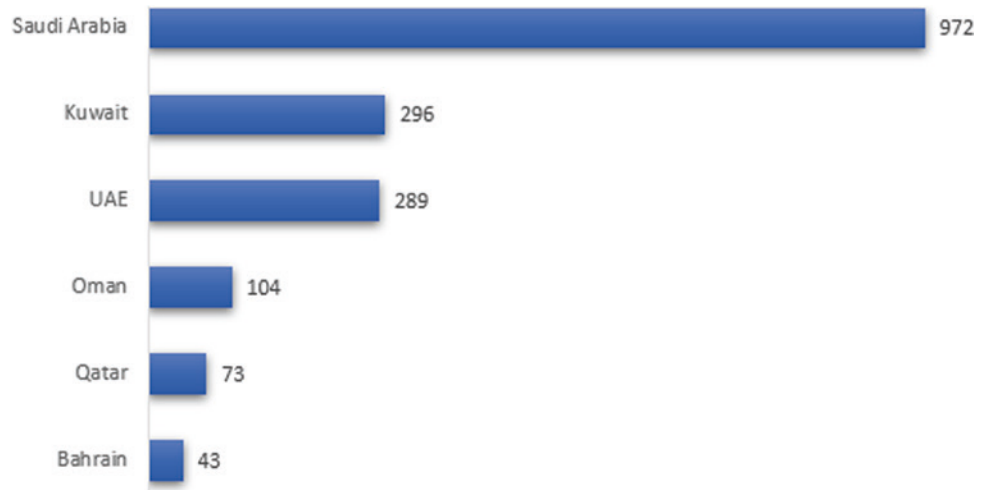


Fig. 3 COVID-19 cases in Oman as of 15 June 2020 (Source Compiled by the authors)

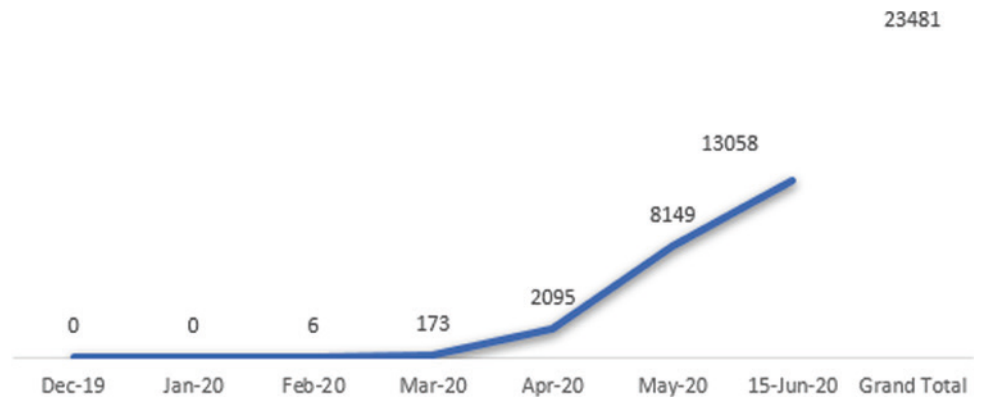
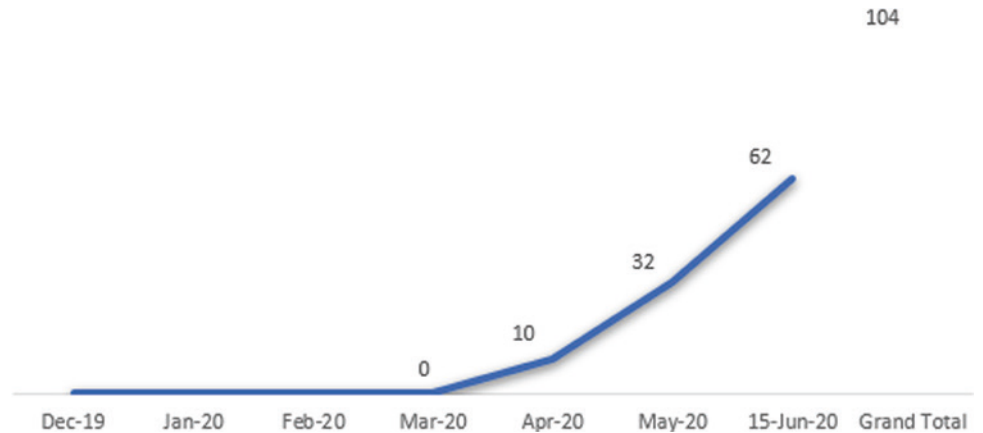


Fig. 4 COVID-19 deaths in Oman as of 15 June 2020 (Source Compiled by the authors)



crisis began, it was an extension of the current crisis for policy makers rather than a new crisis. The difference was that it was beyond a crisis, it was a ‘shock’ that left very little time to respond.

Though COVID-19 impacted several aspects of the country, its major impact was on the state budget which was cut by 10% (Oman government orders more budget cuts

2020). This is notable because most of the major projects in Oman are driven by Government spending which influences employment and other macroeconomic variables in the country. For example, the Government of Oman awarded approximately OMR 250 million worth of contracts in the 2019 financial year (Coronavirus: tens of thousands of foreign workers lose their jobs in Oman 2020). Thus, the

Omani economy that survives on government spending to a large extent has suffered due to cuts in government budget caused by COVID-19.

Further, in terms of sectoral dependence, Oman's economy continues to rely on petroleum as it is a sector which contributes 87% of Oman's budget revenues, 51% to its GDP and 60% of the country's total exports (Oman GDP Annual Growth Rate (n.d)). It seems that Oman's economic diversification into manufacturing, tourism, and other non-oil sectors (The National Program for Enhancing Economic Diversification (Tanfeedh) (n.d.)) aimed at avoiding dependence on the petroleum sector and Government spending helped the Omani economy absorb the shocks from this dual crisis to certain extent. As World Bank clearly mentioned, despite reduced economic growth in MENA in 2020, Oman's economy provides a positive outlook (Economic and Update: How Transparency Can Help the Middle East and North Africa, 2020). Various reports also clearly indicate that Oman is the best performing market during the current COVID-19 crisis (Ubhar Capital Report 2020).

COVID-19 made a clear impact on the national budget of the Sultanate of Oman. The budget released on 1st January 2020 indicated a total government spending of OMR 13.2 billion (USD 34.3 billion) which is 2% higher compared to OMR 12.9 billion spent in 2019 (Oman budget 2020). However, the government changed its decision due to the current situation and adjusted its spending. As part of the new measures to cut expenditure in the Sultanate, the Ministry of Finance has decided to reduce the 2020 budget by OMR 500 million (Oman State Budget 2020), which is approximately a 10% cut to the budgets of ministries and government units (Oman government orders more budget cuts 2020).

While the global GDP has recorded a declining trend in the last few years due to the oil crisis, COVID-19 has further pulled the curve down and brought the global GDP growth rate annual percentage change to negative figures (International Monetary Fund 2020).

It's evident from the data presented in Table 1 that the economy of Oman bounced back in 2018 and achieved a greater growth rate than the global and GCC average. This

development is due to diversification during 2018 into manufacturing, logistics & supply chain, travel & tourism, agriculture & fisheries and mining. The economic diversification strategy was supported by well-articulated programs such as, the set-up of the National Center for Employment and National Youth program aiming to empower youth through knowledge sharing for the purpose of developing workable skills and to create job opportunities. The program also aimed to create awareness among key stakeholders in society about the diversification and Vision 2040 through a well-planned, 'All of Oman' campaign, and to further the solid implementation of activities mentioned in the Social Action Strategy 2016–2025 (Review and of The Sultanate of Oman, 2019).

Due to this planned economic diversification, the Sultanate could make considerable improvements which can be evidently seen in the share of oil revenues decreasing from 66.7% of the GDP in 2000, to 40.8% in 2017 (*ibid*). 2019 witnessed a smaller growth rate than the global and GCC average due to the oil crisis and even before the current COVID-19 crisis began. Thus, from the gloomy picture presented in Table 1 regarding a declining GDP growth rate, it cannot be concluded that the decline in GDP is solely due to the ongoing COVID-19 pandemic but has been around even before the health crisis began.

According to the World Economic Outlook of International Monetary Fund (International Monetary Fund 2020), inflation in Oman was 0.1% in 2019 and is forecast to increase to 1.0% in 2020 and further to 3.4% in 2021. While these projections were made before COVID-19, the pandemic has added to the current situation and further increased the inflation rate. Hence, it cannot be concluded that the rise in inflation is exclusively due to COVID 19.

Household consumption expenditure which refers to all household expenses made by people—including, food, rent, clothing, energy, transportation, durables such as home appliances and cars, health, leisure, etc. —is impacted due to COVID-19. While food is bought for the purpose of survival, people's spending on product categories such as automobiles and electronics recorded a steep fall due to the COVID-19 crisis. The market was optimistic about the

Table 1 Global, GCC and Omani GDP in US\$ in the last three years

Region	2017		2018		2019		2020 as of 7th June	
	GDP in US\$	GDP growth rate	GDP in US\$	GDP growth rate	GDP in US\$	GDP growth rate	GDP in US\$ (approx.)	GDP growth rate
Global	80.963 Trillion	0.5	85.931 Trillion	0.8	87.263 Trillion	2.98	38.421 Trillion	−3.0
GCC	1.464 Trillion	0.2	1.645 Trillion	1.95	1.67 Trillion	2.1	1.669 Trillion	–
Oman	70.78 Billion	−0.9	79.29 Billion	2.1	79.5 Billion	1.1	74 Billion	−2.84

Source Compiled by the authors from various sources

future of automobile sales in 2020 (Oman automobile sales in top gear 2019) and now experts have started showing concern due to the Coronavirus situation (Oman's automobile sector concerned over Coronavirus impact on industry 2020) as China is one of the major suppliers of spare parts. According to an automotive market study by FitchSolutions (Oman Autos Report (n.d.)), sales of commercial vehicles is going to be affected more than the sales of passenger vehicles. Thus, it can be understood that COVID-19 has negatively impacted public expenditure and consumption.

According to the National Centre for Statistics and Information (NCSI), 53,332 expatriates worked in the government sector until the end of March 2020, with the total number of foreign workers in the country standing at 1,321,753 workers (53,332 expats employed in Oman's government sector 2020). COVID-19 has directly impacted the employment and labor market with nearly 27,000 workers losing their jobs (Coronavirus: tens of thousands of foreign workers lose their jobs in Oman 2020).

2.2.1 Impact on Sectoral Performance

Unlike some of its regional counterparts, Oman is a multi-faceted economy with dependence on agriculture and fisheries along with oil production. Proactive measures of the Ministry of Agriculture and Fisheries in the form of adopting new projects (Ministry of Agriculture and Fisheries adopts new project 2020) increased fish farming from 33 tons in 2016 to 192 tons at the end of 2019. Thus, Oman stood as one of the largest fish producers in the Gulf region with capture of 580,000 fish in 2019. Despite its strength, COVID-19 is expected to disrupt this market (Macro poverty Outlook Oman 2020) in the form of lack of buyers due to closure of the retail market.

COVID-19 has less impact on cement manufacturing in Oman as the Omani cement manufacturers braced up to encounter this difficult situation. Omani cement manufacturers are self-sufficient in raw materials. As global supply chains are affected, the movement of raw materials within the country have not been disrupted due to COVID-19 (Ubhar Capital Report 2020). The Omani cement manufacturers used innovative low-cost and eco-friendly strategies to fight the difficult situation. One such instance comes from converting expired tires into fuel that can be used in cement production operations, as part of sustainable waste management (Expired tyres to drive cement production 2020). Medical equipment manufacturers in Oman started using 3D-printing technology to manufacture personal protective equipment a.k.a. PPEs (Omani companies use 3D printing to make COVID-19 protective gear 2020).

Like many other nations across the world, the tourism sector in Oman has been suffering severely as movement is restricted due to COVID-19. This pandemic has negatively impacted Oman's tourism as Salalah Tourism Festival

and Kharif season in Salalah which are expected to attract around 8 million tourists has been cancelled due to COVID-19. The impact can be understood by looking at the 2019 data published by the National Centre for Statistics and Information–NCSI (Festival and concludes with 723, 720 visitors, 2019). According to NCSI, a total of 723,720 tourists visited the Salalah Tourism Festival (STF-2019) up to the end of August 2019, out of which 71.3% are Omanis and 17% are GCC nationals. It is evident from this data that even domestic and regional tourism has suffered due to COVID-19. While there was a decrease in terms of the number of visitors compared to 2018, the income generated from STF-2019 was OMR 78 million, an increase from OMR 76.9 Million in 2018 (More than 750, 000 visited Oman's Salalah Tourism Festival in 2019). This potential income is lost due to the cancellation of STF-2020 (Salalah Tourism Festival 2020).

MICE tourism (meetings, incentives, Conferences and exhibitions) has been given a boost by the development of a world-class convention center, the Oman Convention and Exhibition Centre (OCEC) opened in 2016 (Sultanate first choice for MICE tourism 2018). Since then OCEC has been contributing to the sprawling tourism sector by attracting the MICE potential participants long with the conventional tourism segments. Yet, this sector has also suffered the negative effects of COVID-19. OCEC which was expected to host an average of 30 events per year, has cancelled all activities and events planned between March and July 2020 until further notice.

Oman's Ministry of Tourism has identified cruise tourism as one of the top contributors to the national tourism sector by attracting global tourists (Castelier 2020). This is important because, events such as the Salalah Tourism Festival have been attracting local and regional tourists. Thus, due to special focus, Oman has grown as a cruise hub in the Middle East with a significant rise in the number of cruise ships visiting different ports during the 2018–2019 tourism season (Nair 2019a). According to the Ministry of Tourism, 283,488 cruise ship tourists visited Oman in 2019 which is around a 44% increase compared to 2018 (Bridge 2020). A total of 284 cruise ships were scheduled to visit different ports during the 2019–2020 tourism season which has now been affected by COVID-19 (Cruise tourists to Oman up 4.6pc in 2019 2020). This sector is badly affected as most of the visitors come from China, Italy and Iran. The number of visitors from these three countries reached 125,000, a four-fold increase between 2011 and 2018 (Castelier 2020).

The hospitality industry is greatly impacted by COVID-19 as the occupancy rates and subsequent revenue has been falling drastically. Hotels in Oman received 1.77 million guests in 2019 and garnered an attractive revenue of OMR 229.5 million (Omani hotel revenue takes \$122m hit 2020),

most of it is lost in 2020 due to lockdown measures and the cancelling of major events across the country. Hotels ranging from 3 to 5 stars have recorded only OMR 54.2 million by the end of March 2020, which is around 25% less in revenue compared to the same period in 2019 (Oman hotel revenues fall 25% in months ahead of Covid-19 pandemic 2020).

Oman's higher education sector is mildly affected by COVID-19 as all higher educational institutions have transitioned to function online. The Government Communication Centre has decided to suspend the National Program for Postgraduate Studies for a year considering the ongoing global COVID-19 pandemic (National Program for Postgraduate Studies suspended in Oman 2020). Schools in Oman have reduced fees as a show of support to the parents, which has totaled to approximately OMR 1.1 million (Indian schools give relief worth over OMR1 million to students, families 2020) which could affect their future operations (Asif 2020).

The logistics sector in Oman becoming the transportation and logistics hub of the region. The logistics sector has contributed an attractive amount of OMR 1091 million in 2019 which is 3.73% of the GDP (Logistics GDP (n.d.)). Such an attractive sector has been affected by COVID-19 due to restrictions on the movement of people and goods. Despite the negative effects of COVID-19, the performance of Omani ports has been positive with around 2500 vessels visiting Omani ports in the first quarter of 2020 (Results and in Handling, Cargo, Export, 2020). It is only local trade and not international trade as Omani maritime trade is moderately impacted by COVID-19 (Prabhu 2020a).

COVID-19 has severely affected the aviation sector. According to an estimate, in Oman, the flight disruptions could result in a 2 million loss in passenger volume (Covid-19 impact: 16, 000 flights cancelled, 347, 000 jobs at stake in GCC aviation industry 2020). Airports in Oman have been major contributors to government exchequer in the form of non-tax revenues. Revenues from airports to the Oman Government were OMR 68.8 Million in 2018 (Nair 2019b). The number of flights landing and departing from the three major airports in Oman, viz., Muscat, Salalah and Sohar reached 104,830 up to the end of November of 2019 - serving 16.21 million passengers (million passengers use Oman airports 2020). The aviation sector has grown three times between 2010 and 2019. Hence, it has become imperative to pursue the recovery plan to resume flights in the Sultanate (COVID-19: Ministry prepares recovery plan for resuming flight services in Oman 2020).

Even before COVID-19, the oil crisis had impacted the real estate sector due to which property deals sharply fell by over 10% by the end of September 2019 (Oman eyes key real estate areas amid low rents and occupancy rates (n.d.)). Despite this, the situation took a turn for the better from the

beginning of 2020. Wherein, the first two months of total value of property transactions increased by 24% compared to the same period in 2019 (Oman sees real estate deals hit \$1.63bn in first two months of 2020 2020). Then, the introduction of COVID-19 worsened the situation as property deals and real estate transactions have been affected due to the restriction on the movement of people. The real estate sector also suffered in terms of rent collection, as the tenants were unable to pay due to jobs being affected by COVID-19 (Kutty 2020).

3 Coping Strategies and Measures

The government and private sectors have been undertaking coping strategies to combat the ongoing COVID-19 crisis. Hence, relief measures are being undertaken by the Government of Oman to mitigate not only the effect of COVID-19 but also the spillover effect of its coping strategies. Number of relief measures such as relaxation of regulatory compliance for certain businesses and requesting landlords to reduce or postpone rent (MOSD urges landlords to exempt nurseries from rent 2020), are being utilized. The following section attempts to present the coping strategies and relief measures undertaken by the Government and business sector(s) to mitigate the risk of COVID-19 on the economy of the Sultanate of Oman.

The Government of Oman has been actively pursuing stringent measures for controlling the spread of active cases as well as deaths. Starting from the first implementation of lockdown from 10th April 2020 in the Muscat Governorate (Muscat lockdown from Friday, schools suspended until further notice 2020) until the recent lockdown in the Duqm and Dhofar regions including various tourist areas such as Jabal Shams, Jabal Akhdar and Masirah islands (Lockdown begins in Dhofar, tourist destinations 2020). The Government of Oman has been trying its best to control the spread of the deadly virus. In addition, the Government has been opening multiple COVID-19 testing centers across the country (Fourth COVID-19 testing centre opens in Seeb 2020) with world-class testing facilities. The Ministry of Tourism has urged hotel owners to contribute a few of their rooms towards the institutional quarantine as part of their contribution to this national cause (Hotel owners urged to provide free rooms for COVID-19 measures 2020). Oman has always been at the forefront of research and development and has been utilizing global and national data to identify patterns that could be helpful in finding solutions to control the spread of the virus (Oman identifies three local strains of COVID-19 2020). Furthermore, the Ministry of Health developed a health app, known as Tarassud Plus that could help people identify the COVID-19 patients around them (Kothaneth 2020) and this usage of a tracing system

not only helps to control the spread of COVID-19 but also assists in generating useful data that could help with decision making (New Covid-19 tracking system launched 2020).

As part of positioning Oman as an attractive logistics hub in the region, and transform Oman into the central gateway to India, Africa and Middle East, the Government has been focusing on improving and upgrading the ports despite COVID-19. Its efforts not to bring the industry stand-still are evidence of its commitment to make Oman a preferred logistics partner for global traders. For example, the Transportation Ministry brought into effect new rules for ship repairing (Transport ministry clarifies rules for ship repairs in Oman 2020) and adopts the best global practices in shipping sector operations through a single shop window, Bayan (Transport ministry adopts best global practices in shipping sector operations 2020).

The digital platform, Bayan, has drastically reduced the clearance time to complete export documentation procedures from 47 to 7 h (The logistics of performance. How Oman is supporting businesses and driving global trade (2020) Logistics Middle East. 2020). Similarly, several actions have been taken by public and private parties to support the logistics sector during the current COVID-19 crisis. Such measures include the physical closure of One Stop Shop at Sohar Port and continuation of the business electronically in order to avoid physical contact (Dealing with Covid-19 situation 2020). One of the leading logistics companies, Hutchison Ports Sohar announced a 20% discount on all containers discharged at Sohar port after 20th March 2020 as part of its support to encourage port activities. In addition to the private sector, the Government holding company, Oman Aviation Group has responded by reducing the air cargo handling prices for medicines and food from 26 baizas per kilogram to 15 baizas per kilogram (Newsflash–Dealing with Covid-19 situation 2020).

The Central Bank of Oman (CBO), the custodian of the Omani banking sector announced a liquidity incentive package of nearly OMR 8 billion to keep the economic activities moving in the country during the ongoing dual crisis. In addition, CBO announced tax relief measures such as allowing a deferred filing of tax returns and the payment of tax up to 3 months from the due date, tax deductions for all donations related to the COVID-19 pandemic, exemption of tourist and municipality tax of 4% to restaurants and 5% to commercial establishments until 31 August 2020 (Hariharan 2020). In addition, it has decided to support the tourism sector by postponing the collection of various charges from tourism establishments until the first quarter of the next financial year, 2021, to mitigate the impact of COVID-19 crisis (Al Sherbini 2020). Furthermore, the government has decided to allow the affected private sector firms to defer electricity and water bills for three months

(Policy responses to COVID-19 2020). Most importantly, the Omani government's acceptance and approval of development projects to the tune of OMR 300 million is certainly expected to support the national economy during the current dual crisis (HM gives Royal Directive to execute projects worth RO300mn 2020).

The government's focus on encouraging youth to be job creators instead of job seekers leads to a conducive entrepreneurial ecosystem in the Sultanate of Oman. The Government of Oman announced several measures to support entrepreneurship in the country. Some of the measures implemented include, loan payments postponed, exemption of rent of small factories (Hariharan 2020) etc., The government has liberalized the import of medical products by reducing tariffs on medical products designated for the Oman Ministry of Health in order to combat COVID-19. At the same time, the export of masks and hand sanitizers is prohibited to avoid any shortages during a period of crisis (COVID-19 Temporary Trade Measures (n.d.)).

The adaptation of digitally innovative technology by the Ministry of Agriculture and Fisheries has supported Omani fish markets allowing them to flourish during difficult times. When the fish market in Oman encountered supply chain problems due to COVID-19, the technology initiative of the Ministry of Agriculture and Fisheries, Behar, an integrated online platform helped Omani fishermen to compete globally and escape the negative impact of COVID-19 (From bustling Omani fish markets to online auctions 2020). The Telecommunications Regulatory Authority (TRA) of Oman permitted use of Voice Over Internet (VoIP) platforms, Skype, Google Meet and Zoom during the current crisis which enabled organizations and institutions to conduct official meetings seamlessly (Coronavirus: Skype for Business, two other apps legal to use in Oman 2020).

Petroleum Development Oman (PDO), the leading oil and gas production company in Oman supported the education sector by supplying equipment and 3D printers to technical colleges aiming at building skills related to 4.0 industrial revolution (Oman and to provide 3D printers to technical and vocational colleges, 2020). In addition to voluntary measures, the Government has been taking up mitigation efforts in the cement industry by introducing anti-dumping measures that are expected to work as a neutralizer of the COVID-19 effect (Prabhu 2020b). The Government has decided to focus more on gas (LNG) production to mitigate the effects of the dual crisis (Oman's Economic Update 2020) and recover from the financial losses occurred during the current year. The Government of Oman has been trying to reduce the expenses by 43% in the aviation sector, anticipating a revival within four years (Nair 2020).

Table 2 below provides a snapshot of key socio-economic variables of Oman impacted by COVID-19. The

Table 2 Impact of COVID-19 on economy of Oman and coping strategies by the government of Oman

Variable	Description of the impact	Coping strategies and measures for mitigating the risk
Spread of COVID-19 cases and deaths	<ul style="list-style-type: none"> • Cases increased from 8149 on 31st May to 13,058 on 15th June i.e., the cases doubled in 15 days 	<ul style="list-style-type: none"> • Lockdown starting in Muscat governorate on April 10 till end of May • New lockdown in in Duqm and Dhofar regions including various tourist areas, Jabal Shams, Jabal Akhdar and Masirah islands • Opening COVID-19 testing centers and quarantine centers • Inclusive approach by urging hotels to contribute to the institutional quarantine facilities in the country • R & D utilizing the global as well as national data to identify patterns • Tarassud plus health app and health tracking system
Macroeconomic variables	<ul style="list-style-type: none"> • Oman state budget: cut by OMR 500 million • GDP: negative growth of -2.84 is forecast • Inflation: from 0.1 in 2019 to 1.0 in 2020 and further to 3.4 in 2021 • Consumption & expenditure: automobile spare parts market will suffer as China is the major supplier • Commercial vehicles' sales are going to be affected more than passenger vehicles • Employment: nearly 27,000 workers losing their jobs 	<ul style="list-style-type: none"> • OMR 8 million liquidity incentive package • Approval of development projects to the tune of OMR 300 million • Allowing a deferred filing of tax returns and payment of tax up to 3 months from the due date • Tax deductions for all donations related to the COVID-19 pandemic • Exemption of tourist and municipality tax of 4% to restaurants and 5% to commercial establishments until 31 August 2020 • Allow the affected private sector firms to differ electricity and water bills for three months • Postpone loan instalments and fees payable by SMEs to Al Raffid fund to six months • Exemption of rent to small factories in the industrial cities for three months from April to June 2020 • Liberalized the import of medical products by reducing tariff on medical products designed for the Oman ministry of health • Prohibited the export of masks and hand sanitizers
Agriculture and fisheries	<ul style="list-style-type: none"> • Lack of buyers due to closure of retail market 	<ul style="list-style-type: none"> • Behar, an integrated online platform helped Omani fishermen to compete globally and thus escape the negative impact of COVID-19
Manufacturing	<ul style="list-style-type: none"> • Moderate impact on cement manufacturing due to self-sustainability in raw materials • Moderate impact on medical equipment manufacturing due to using innovative 3D printing technology 	<ul style="list-style-type: none"> • Introduction of anti-dumping measures in the cement industry • Focus more on gas (LNG) production
Tourism and hospitality	<ul style="list-style-type: none"> • Salalah tourism festival (STF) 2020: lost around estimated 8 million tourists • MICE tourism: Oman convention and exhibition centre-OCEC cancelled all events planned during March and July 2020 • Cruise tourism: 284 cruise ships were scheduled to visit Omani ports during 2019–2020 tourism season • Hotel revenues fell by 25% 	<ul style="list-style-type: none"> • Postponing collection of various charges from tourism establishments to the first quarter of financial year, 2021

(continued)

Table 2 (continued)

Variable	Description of the impact	Coping strategies and measures for mitigating the risk
Education	<ul style="list-style-type: none"> Moderate impact as the industry moved on to online mode OMR 1.1 million tuition fee was reduced by Indian schools which could impact their operations and other decisions 	<ul style="list-style-type: none"> Petroleum development Oman (PDO) the leading oil and gas production company in Oman supported the education sector by supplying equipment and 3D printers to technical colleges aiming at building skills related to 4.0 industrial revolution
Transportation and logistics	<ul style="list-style-type: none"> Moderate impact as Salalah port could receive 20% less volume of cargo 	<ul style="list-style-type: none"> Closure of one stop shop at Sohar Port and continue the business electronically in order to avoid physical contacts Digital platform, Bayan, has drastically reduced the clearance time to complete export documentation procedures from 47 to 7 h Hutchison Ports Sohar announced 20% discount on all containers discharged at Sohar port after 20th March 2020 Oman aviation group reduced the air cargo handling prices for medicines and food from 26 baizas per kilogram to 15 baizas per kilogram
Aviation	<ul style="list-style-type: none"> 2 million loss in passenger volumes 	<ul style="list-style-type: none"> Reduce expenses by 43% in aviation sector and anticipating the revival within four years
Real estate	<ul style="list-style-type: none"> Low rental recovery from tenants 	<ul style="list-style-type: none"> Owners called on to reduce or postpone rent

Source Compiled by the authors

The hardest hit sectors may not see restart until 2021

Preliminary views of hardest hit sectors based on delayed recovery scenario - subject to change

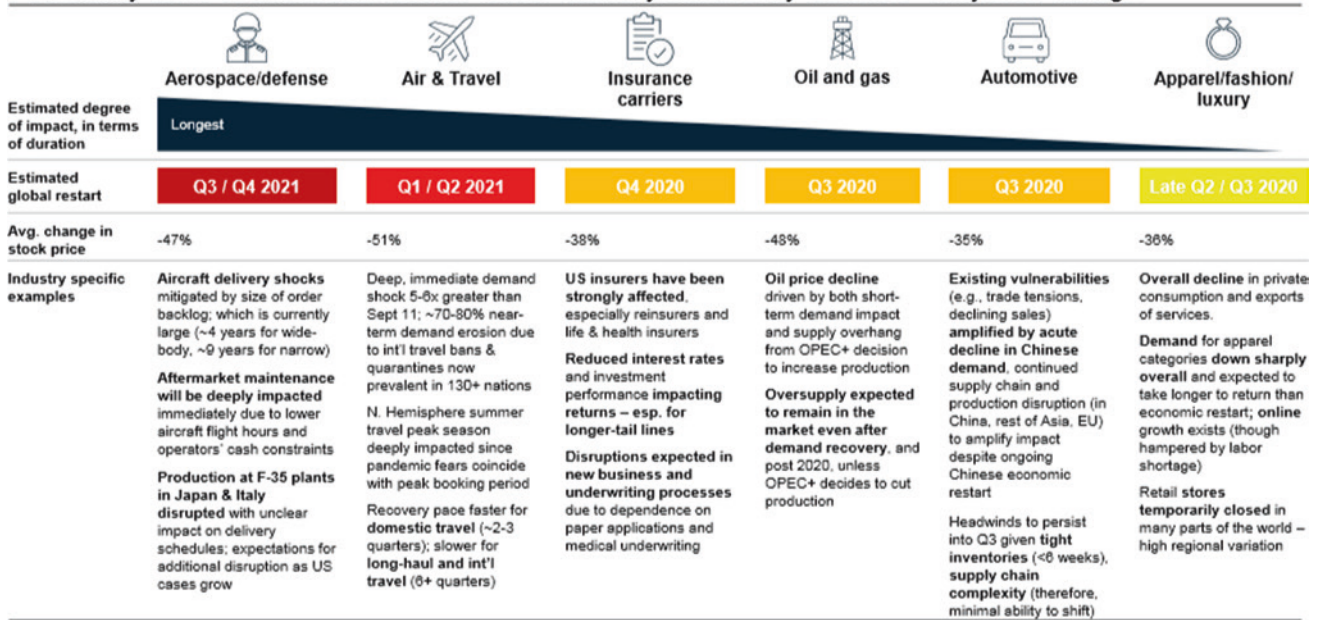


Fig. 5 Impact of COVID-19 on aerospace/defense and air & travel. Source (Surico and Galcotti 2020)

chart explains each of the affected variables, their description along with related measures and coping strategies undertaken by the Government of Oman for mitigating the risks arising out of COVID-19 crisis.

These sections have highlighted the strategies and measures taken in Oman to reduce the risk and the impact of COVID-19. Therefore, it is important to recognize the sectors that will be hit much longer for the policy makers to consider strategies to avoid economic recession. Figure 5 illustrates the fact that Aerospace/defense and Air & travel will be the hardest hit sectors, which may take longer to recover from the COVID-19 pandemic and as a result governmental support will be needed to ensure economic sustainability within these sectors.

4 Conclusion

These coping strategies could help businesses and regulatory authorities to normalize the situation but may also have side effects. For example, the Government's decision to cut the budget could have a spillover effect on other sectors of the economy as it is the major economic booster for the economic cycle in this country. Several measures taken by the Government of Oman even before the strike of COVID-19 helped the regulations to either neutralize or moderate the effect of the crisis on various sectors. The government's strategies to safeguard citizens' interests during the dual

crisis is laudable. Innovative approaches such as Behar and Bayan have successfully resulted in boosting the two main non-oil sectors in the country, viz. fisheries and logistics respectively. The government's approval of OMR 300 million in projects reflects the thrust on developmental activities as the government is aware its spending can fuel the economy. Thus, a mature and professional approach by the Government has enabled the Omani economy to mitigate the associated risks and withstand the most severe effects of COVID-19.

References

- 2 million passengers use Oman airports (2020) Oman Observer. <https://www.omanobserver.om/16-21-million-passengers-use-oman-airports-till-nov-2019/>
- 53,332 expats employed in Oman's government sector (2020) Zawya, Times of Oman. https://www.zawya.com/mena/en/economy/story/53332_expats_employed_in_Omans_government_sector-SNG_173414058/
- Al Sherbini R (2020) COVID-19: Oman to levy 4% fee on hotel clients. Gulf News. World Gulf. <https://gulfnews.com/world/gulf/oman/covid-19-oman-to-levy-4-fee-on-hotel-clients-1.71989632>
- Appelbaum S, Keller S, Alvarez H, Bédard C (2012) Organizational crisis: lessons from Lehman brothers and Paulson & company. Int J Commer Manag 22(4):286–305. <https://doi.org/10.1108/10569211211284494>
- Asif M (2020) Schools cut fees to help reduce COVID-19 impact on families. Times of Oman. <https://timesofoman.com/article/3014281/oman/education/schools-cut-fees-to-help-reduce-covid-19-impact-on-families>

- Augustine NR (1995) Managing the crisis you tried to prevent. *Harv Bus Rev* 73(6):147–158. <https://hbr.org/1995/11/managing-the-crisis-you-tried-to-prevent>
- Aziz B (2012) Financial crisis 2007–2009. How real estate bubble and transparency and accountability issues generated and worsen the crisis. *Estudios Fronterizos, nueva época* 13(26):201–221. <http://www.scielo.org.mx/pdf/estfro/v13n26/v13n26a8.pdf>
- Bridge S (2020) How Oman is growing its cruise tourism sector. *Arabian Business, Industries*. <https://www.arabianbusiness.com/travel-hospitality/439195-how-oman-is-growing-its-cruise-tourism-sector>
- Carlsson-Szlezak P, Reeves M, Swartz P (2020) Understanding the economic shock of coronavirus. *Harv Bus Rev*. <https://hbr.org/2020/03/understanding-the-economic-shock-of-coronavirus>
- Castelier S (2020) Coronavirus: Oman's tourism sector takes a hit. *The New Arab*. <https://english.alaraby.co.uk/english/indepth/2020/3/12/coronavirus-omans-tourism-sector-takes-a-hit>
- Coronavirus: Skype for Business, two other apps legal to use in Oman (2020) *Times of Oman*. <https://timesofoman.com/article/2924018/business/technology/coronavirus-skype-for-business-two-other-apps-legal-to-use-in-oman>
- Coronavirus: tens of thousands of foreign workers lose their jobs in Oman (2020) *The National*. <https://www.thenational.ae/world/gcc/coronavirus-tens-of-thousands-of-foreign-workers-lose-their-jobs-in-oman-1.1025061>
- Covid-19 impact: 16,000 flights cancelled, 347,000 jobs at stake in GCC aviation industry (2020) *The Arabian Stories*. <https://www.thearabianstories.com/2020/03/20/covid-19-impact-16000-flights-cancelled-347000-jobs-at-stake-in-gcc-aviation-industry/>
- COVID-19 Temporary Trade Measures (n.d.) ITC Market Access Map. <https://www.macmap.org/covid19>. Accessed 16th June 2020
- Covid-19: family gatherings main cause of increasing cases in Oman (2020) *Times of Oman*. <https://timesofoman.com/article/3015984/oman/covid-19-family-gatherings-main-cause-of-increasing-cases-in-oman>
- COVID-19: Ministry prepares recovery plan for resuming flight services in Oman (2020) *Times of Oman*. <https://timesofoman.com/article/3015723/oman/covid-19-ministry-prepares-recovery-plan-for-resuming-flight-services-in-oman>
- Cruise tourists to Oman up 4.6pc in 2019 (2020) *Trade Arabia*. [http://www.tradearabia.com/news/TTN_363635.html#:~:text=The%20Ministry%20said%20a%20total,Salalah%20\(47%20cruise%20ships\)](http://www.tradearabia.com/news/TTN_363635.html#:~:text=The%20Ministry%20said%20a%20total,Salalah%20(47%20cruise%20ships))
- Dealing with Covid-19 situation (2020) *Oman Logistics Center*. https://asyad.om/docs/default-source/default-document-library/tf_newsflash_20200325.pdf?sfvrsn=1fda979f_0
- Decline in real estate deals in Oman (2019) *Times of Oman*. <https://timesofoman.com/article/1553137/oman/decline-in-real-estate-deals>
- European Centre for Disease Prevention and Control (2020) <https://www.ecdc.europa.eu/en/publications-data>
- Expired tyres to drive cement production (2020) *Muscat Daily*. <https://muscatdaily.com/Oman/386091/Forbes-list:-Nine-from-Oman-in-top-100>
- First Voluntary National Review of The Sultanate of Oman 2019 (2019) *United nations high-level political forum on sustainable development*. <https://www.scp.gov.om/PDF/2030Report.pdf>
- Fourth COVID-19 testing centre opens in Seeb (2020) *Oman Observer*. <https://timesofoman.com/article/3016025/oman/fourth-covid-19-testing-centre-opens-in-seeb>
- From bustling Omani fish markets to online auctions (2020) *Food and agriculture organization of the United Nations*. <http://www.fao.org/fao-stories/article/en/c/1278611/>
- Hariharan A (2020) Oman government measures to address COVID-19. *KPMG Insights*. <https://home.kpmg/om/en/home/insights/2020/04/Oman%20Government%20measures%20to%20address%20COVID-19.html>
- Hart P, Rosenthal U, Kouzmin A (1993) *Crisis decision making: the centralization thesis revisited*. *Adm & Soc* 25(1):12–45. <https://doi.org/10.1177/009539979302500102>
- HM gives Royal Directive to execute projects worth RO300mn (2020) *Muscat Daily*. <https://muscatdaily.com/Oman/386944/HM-gives-Royal-Directive-to-execute-projects-worth-RO300mn>
- Hotel owners urged to provide free rooms for COVID-19 measures (2020) *Oman Observer*. <https://www.omanobserver.om/hotel-owners-urged-to-provide-free-rooms-for-covid-19-measures/>
- Indian schools give relief worth over OMR1 million to students, families (2020) *Times of Oman*. <https://timesofoman.com/article/3015927/oman/indian-schools-give-relief-worth-over-omr1-million-to-students-families>
- International Monetary Fund (2019) *World economic outlook, global manufacturing downturn, rising trade barriers*. Washington, DC. www.imf.org/~media/Files/Publications/WEO/2019/October/English/text.aspx
- International Monetary Fund (2020) *World economic outlook: The Great Lockdown*. <https://www.imf.org/~media/Files/Publications/WEO/2020/April/English/Ch1.aspx?la=en>
- Kothaneth L (2020) MoH develops app that alerts about Covid positive people around you. *Times of Oman*. <https://www.omanobserver.om/moh-develops-app-that-alerts-about-covid-positive-people-around-you/>
- Kutty S (2020) Tenants struggle to pay rent. *Oman Observer*. <https://www.omanobserver.om/tenants-struggle-to-pay-rent/>
- Li F, William H, Bogle M (1999) The 'Millennium Bug': its origin, potential impact and possible solutions. *Int J Inf Manage* 19(1):3–15. [https://doi.org/10.1016/S0268-4012\(98\)00043-7](https://doi.org/10.1016/S0268-4012(98)00043-7)
- Lockdown begins in Dhofar, tourist destinations (2020) *Oman Observer*. <https://www.omanobserver.om/lockdown-begins-in-dhofar-tourist-destinations/>
- Logistics GDP (n.d.) *Oman logistics the MEA hub*. https://logistics.om/industry_statistic/logistics-gdp/
- Macro poverty Outlook Oman (2020) *World Bank*. <http://pubdocs.worldbank.org/en/124071554825491319/mpo-omn.pdf>
- MENA Economic Update (2020) How transparency can help the middle east and North Africa. *The World Bank*. <https://www.worldbank.org/en/region/mena/publication/mena-economic-update-april-2020-how-transparency-can-help-the-middle-east-and-north-africa>
- Mendoza J (2019) Oman's GDP contracts 1.6pc in Q1 2019, weighed down by slump in oil prices: CBO. *Oman Observer*. <https://www.omanobserver.om/omans-gdp-contracts-1-6pc-in-q1-2019-weighed-down-by-slump-in-oil-prices-cbo/>
- Ministry of Agriculture and Fisheries adopts new project (2020) *Times of Oman*. <https://timesofoman.com/article/3014420/oman/government/ministry-of-agriculture-and-fisheries-adopts-new-project>
- Mitroff II, Shrivastava P, Udwadia FE (1987) Effective crisis management. *Acad Manag Exec* 1(3):283–292. <https://doi.org/10.5465/AME.1987.4275639>
- More than 750,000 visited Oman's Salalah Tourism Festival in 2019 (2020) *Zawya, Times of Oman*. https://www.zawya.com/mena/en/life/story/More_than_750000_visited_Omans_Salalah_Tourism_Festival_in_2019-SNG_165797497/
- MOSD urges landlords to exempt nurseries from rent (2020) *Oman Observer*. <https://www.omanobserver.om/mosd-urges-landlords-to-exempt-nurseries-from-rent/>
- Muscat lockdown from Friday, schools suspended until further notice (2020) *Oman Observer*. <https://www.omanobserver.om/muscat-supreme-committee/>
- Nair V (2019) Oman to be developed as 'cruise' hub in Middle East. *Oman Observer*. <https://www.omanobserver.om/cruise-hub-in-middle-east/>
- Nair V (2019) Water, airports top in non-tax revenues. *Oman Observer*. <https://www.omanobserver.om/water-airports-top-in-non-tax-revenues/>

- Nair V (2020) Oman may open airports soon: supreme committee. *Oman Observer*. <https://www.omanobserver.om/oman-may-open-airports-soon-supreme-committee/>
- National Program for Postgraduate Studies suspended in Oman (2020) *Times of Oman*. <https://timesofoman.com/article/3015016/oman/education/national-program-for-postgraduate-studies-suspended-in-oman>
- New Covid-19 tracking system launched (2020) *Oman Observer*. <https://www.omanobserver.om/new-covid-19-tracking-system-launched/>
- Newsflash—Dealing with Covid-19 situation (2020) *Oman logistics the MEA Hud*. <https://logistics.om/news/newsflash-dealing-with-covid-19-situation/>
- Oman (2020) Despite postponing VAT introduction, the market signed the 6th annual fall in a row (2020) *Focus2move*. <https://www.focus2move.com/oman-auto-market/>
- Oman automobile sales in top gear (2019) *Times of Oman*. <https://timesofoman.com/article/2473380/oman/oman-automobile-sales-in-top-gear>
- Oman Autos Report (n.d.) *FitchSolutions*. <https://store.fitchsolutions.com/oman-autos-report>
- Oman budget 2020 (n.d.) *KPMG Insights*. Retrieved from <https://assets.kpmg/content/dam/kpmg/om/pdf/oman-budget-2020.pdf>
- Oman eyes key real estate areas amid low rents and occupancy rates (n.d.) *Oxford Business Group*. <https://oxfordbusinessgroup.com/overview/pockets-opportunity-environment-low-rents-and-occupancy-rates-identifying-areas-hold-promise-key>
- Oman GDP Annual Growth Rate (n.d.) *Trading economics*. <https://tradingeconomics.com/oman/gdp-growth-annual>
- Oman government orders more budget cuts (2020) *Times of Oman*. Retrieved from <https://timesofoman.com/article/3014863/oman/government/oman-government-orders-more-budget-cuts>
- Oman hotel revenues fall 25% in months ahead of Covid-19 pandemic (2020) *Arabian business*. <https://www.arabianbusiness.com/travel-hospitality/447837-oman-hotel-revenues-fall-25-in-months-ahead-of-covid-19-pandemic>
- Oman identifies three local strains of COVID-19 (2020) *Times of Oman*. <https://timesofoman.com/article/3015726/oman/health/omani-researchers-analyse-covid-19-gene-sequencing>
- Oman sees real estate deals hit \$1.63bn in first two months of 2020 (2020) *ifp info*. <http://www.ifpinfo.com/oman-sees-real-estate-deals-hit-1-63bn-in-first-two-months-of-2020/>
- Oman State Budget 2020 slashed by RO 500 million (2020) *Oman Observer*. <https://www.omanobserver.om/oman-state-budget-2020-slashed-by-ro500-million/>
- Oman's automobile sector concerned over Coronavirus impact on industry (2020) *The Arabian stories*. <https://www.thearabianstories.com/2020/02/23/omans-automobile-sector-concerned-over-coronavirus-impact-on-industry/>
- Oman's Economic Update—April 2020 (2020) *The World Bank*. <https://www.worldbank.org/en/country/gcc/publication/oman-economic-update-april-2020>
- Omani companies use 3D printing to make COVID-19 protective gear (2020) *Times of Oman*. <https://timesofoman.com/article/3015661/oman/omani-companies-use-3d-printing-to-make-covid-19-protective-gear>
- Omani hotel revenue takes \$122m hit (2020) *Hotelier Middle East*. <https://www.hoteliermiddleeast.com/business/117694-omani-hotel-revenue-takes-122m-hit>
- Omani Ports Post Positive Results in Handling, Cargo, Export (2020) *Oman News Agency*. http://omannews.gov.om/description_bkp/ArtMID/867/ArticleID/13234/Omani-Ports-Post-Positive-Results-in-Handling-Cargo-Export
- Omorgie U (2015) The oil price crash of 2014: implications for a multi-billion dollar LNG project. *Nat Resour* 6:577–582. <https://doi.org/10.4236/nr.2015.612055>
- Petroleum Development Oman to provide 3D printers to technical and vocational colleges (2020) *Times of Oman*. https://timesofoman.com/article/3015891/oman/education/petroleum-development-oman-to-provide-3d-printers-to-technical-and-vocational-colleges?utm_campaign=layout&utm_source=article_page&utm_medium=layout_related_articles
- Policy responses to COVID-19 (2020) *Policy tracker*, International monetary fund. <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#O>. Accessed 12 June 2020
- Prabhu C (2020) Oman's cement industry welcomes anti-dumping measures. *Oman Observer*. <https://www.omanobserver.om/omans-cement-industry-welcomes-anti-dumping-measures/>
- Prabhu C (2020) COVID-19 impacts: Salalah port foresees 20% decline in local trade volumes. *Oman Observer*. <https://www.omanobserver.om/covid-19-impacts-salalah-port-foresees-20-decline-in-local-trade-volumes/>
- The National Program for Enhancing Economic Diversification (Tanfeedh) (n.d.) *Omanuna*. https://omanportal.gov.om/wps/portal/index/interact/tanfeedh!/ut/p/a/1/hc9Nb4JAEAbgX8OVmV0IQW9TPwENpWsV92LQrCsJaA38ve1xk-sTrXn7J8-bzICEHGRTXEtD2N10RfWbZbBLMxaweYpJuM4mSF8kMmKcI_o92PYAXwzhu_4G5J2IOPkQkc8xnQqGEUXz0YhWnH0HD-DhDDEdRmTktStk3noaDxaBNx77D_DPDTFIXZn9_Z8tNXsv1CBbdVStat2ftl-frd1fhg462HWdq43RlXlPpnbwWeVklhbyvxKEauBc51h1pvQhnQDZBSIIQ!!/dl5/d5/L0IKQSEvUUr3TS80RUkhL2Vu/
- Roubini N (2020) Coronavirus pandemic has delivered the fastest, deepest economic shock in history. *The Guardian*. <https://www.theguardian.com/business/2020/mar/25/coronavirus-pandemic-has-delivered-the-fastest-deepest-economic-shock-in-history>
- Salalah Tourism Festival 2020 cancelled (2020) *Zawya*, *Times of Oman*. https://www.zawya.com/mena/en/life/story/Salalah_Tourism_Festival_2020_cancelled-SNG_172753407/
- Salalah Tourism Festival concludes with 723,720 visitors (2019) *Oman Observer*. Retrieved from <https://www.omanobserver.om/salalah-tourism-festival-concludes-with-723720-visitors/#:~:text=Salalah%3A%20A%20total%20of%20723%2C720,with%205.3%20per%20cent%20decrease>
- Sultanate first choice for MICE tourism (2018) *Oman observer*. <https://www.omanobserver.om/sultanate-first-choice-for-mice-tourism/>
- Surico P, Galcotti A (2020) The economics of a pandemic: the case of COVID-19, *London Business Scholl, Lecture Series*. <https://icsb.org/theeconomicsofapandemic/>
- The logistics of performance. How Oman is supporting businesses and driving global trade (2020) *Logistics Middle East*. https://www.logisticsmiddleeast.com/34910-the-logistics-of-performance?utm_source=Jarvis&utm_medium=logisticsmiddleeast.com&utm_campaign=recommended
- Transport ministry adopts best global practices in shipping sector operations (2020) *Times of Oman*. <https://timesofoman.com/article/3015502/oman/transport/ministry-adopts-best-global-practices-in-shipping-sector-operations>
- Transport ministry clarifies rules for ship repairs in Oman (2020) *Times of Oman*. <https://timesofoman.com/article/3015888/oman/government/transport-ministry-clarifies-rules-for-ship-repairs-in-oman>
- Uthar Capital Report (2020) *Coronavirus impact on global, GCC & Oman market*. *Uthar Capital*. <https://www.u-capital.net/pdf/Coronavirus%20Impact%20-%20March%202020.pdf>
- Woods B (2018) Snow to melt high street sales as retailers brace for more pain. *World News Edition, Independent.ie*, 1st March. <https://www.independent.ie/world-news/snow-to-melt-high-street-sales-as-retailers-brace-for-more-pain-36658839.html>