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Analyzing the impact of COVID-19 on the performance of listed firms in Saudi market

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**Abstract**

The COVID-19 outbreak has hit enterprises all around the world, affecting virtually every business area and industry. Consequently, the purpose of this paper is to investigate how COVID-19 has affected the performance of listed companies in the Saudi market. The study uses financial data from 2009 to 2019 to examine the performance of the listed Saudi firms. The study gathers data from the years 2009 to 2019 to investigate the performance of the firms before the pandemic. The result of the study indicates that the COVID-19 pandemic had a detrimental effect on the enterprises’ performance. The analysis indicates that the COVID-19 pandemic significantly harmed the enterprises’ performance by reducing both their total investment and their overall income, respectively. The findings of the study remain unique and new with respect to the outbreak and performance of the firm.

1. Introduction

The COVID-19 outbreak has been a threat as well as a challenge for all developed and developing countries equally. The pandemic has slowed down the economic growth of the whole world. This new pandemic, which began in the early 2020s, has seriously affected most industries such as travel, healthcare, tourism, and other different sectors. Quarantine policies reduced the population mobility rate, which eventually undermined the economy (Shen et al., 2020). The COVID-19 pandemic caused a great recession across the world after the Great Depression, which creased the economy absolutely without leaving any mark. In a nutshell, the coronavirus outbreak has shattered the economies of the whole world, leaving no exception in Saudi Arabia. Almost all the fields, such as travel, sales, buying, business, retail, and so forth, were badly impacted in terms of the economy. According to Alflayyeh and Haseebullah Belhaj (2020), Saudi Arabia counted only 0.2% of cases when compared to other countries like the United States of America, Turkey,

On March 4th, 2020, the Saudi government declared that they would prevent pilgrims and tourists from entering the Kingdom to prevent the spread of the infection. Likewise, the Saudi Ministry suspended all sports activities and the sports fans attending the competitions (Orfali et al., 2021). Furthermore, the Kingdom restricted the movement of people from Italy, Iraq, the UAE, Bahrain, South Korea, and Kuwait, as the cases reported from these places were high. All international flights, restaurants, malls, and other recreational places were temporarily banned, excluding pharmacies, hospitals, and supermarkets. The Saudi government announced its public quarantine for 21 days from March 23rd, 2020, which will be observed from 7 pm to 6 am. These practices have harmed different businesses in all areas and territories (Shen et al., 2020). COVID- The pandemic has drastically dropped the global economy, with 2.20% entering into recession. The Gross Domestic Product (GDP) of Gulf countries that are predominantly oil-reliant has contracted by 6% this year, with a 5.75% loss in non-oil sectors (Shen et al., 2020).

The GDP of Saudi Arabia was cut down by 4.8% during the pandemic times and most countries had to suffer through phases of unemployment, bankruptcies, and many more (Shen et al., 2020). Earlier studies conducted stated that the pandemic has affected the stock market at the firm level (Parveen, 2020; Havrlant et al., 2020); the performance of the firms across different industries like oil, cement, and so on (Havrlant et al., 2020). The pandemic had a detrimental influence on company productivity and earnings, forcing the closure of several firms permanently (Alessa et al., 2021). Henceforth, it is extremely essential to analyze the performance of those firms that form the basis of the national or global economy, especially during pandemic times.

Several researchers found that the main reason for economic decline all these years is nothing but the inappropriate governance of the financial system (Albawal et al., 2020), which is a pure internal factor. However, during the pandemic times, the recession was caused by
external aspects resulting from continuous lockdown measures. There are currently limited approaches for analyzing the impact of crises on the economy, and industries, particularly the COVID-19 pandemic's effects. Therefore, this paper intends to evaluate the performance of firms listed on the Saudi Arabian stock market during the pandemic. The current study uses the financial data of the listed Saudi Arabian firms from the years 2009 to 2019 to analyze their performance in the year 2020.

The major contributions of this paper are:

- This paper widely discusses the impact of the coronavirus outbreak on the performance of Saudi firms, with a special focus on firm-level performance.
- This article evaluates the performance of Saudi-listed companies throughout the epidemic.
- The study identifies moderating variables such as investment, net income, etc. to examine the impact of the pandemic on firms' performance.
- The study explains and analyzes the pandemic's effects on firms along the dimensions, namely: highly impacted industry and highly impacted region.

Following is the rest of the paper's organization: the analysis of the related works is presented in Section 2. In Section 3, the methodology is discussed. In Section 4, the findings and discussion are presented. Finally, the article is concluded in Section 5.

2. Analysis of related works

2.1. Pandemic and performance of the firm

The coronavirus outbreak is widely acknowledged to be a worldwide health emergency. Seven million people were affected as of January 2020 by a global outbreak spread across the countries. As the rate of infection was discovered to be higher, the countries implemented a nationwide lockdown. COVID-19 spread is managed by simultaneously implementing Quarantine procedures. All kinds of movements were restricted. People were not allowed to go outside or visit restaurants, malls, or other crowded places. All types of recreational places, educational institutions, and crowded places were forced to shut down during the pandemic. Global travel restrictions slowed corporate production and mobility, resulting in a large drop in oil demand and decreasing oil prices. This leads to a considerable effect on consumer services and the productivity of the firms.

The study explains and analyzes the pandemic's effects on firms along the dimensions, namely: highly impacted industry and highly impacted region.

2.2. The impact of pandemic on different sectors and specific regions

2.2.1. The impact of pandemic on different sectors

According to Phan and Narayan (2020), a sector is nothing but the division of individual business units involved in contributing to the global economy. In the national economy, the contributions of each sector have an important part in their respective industry's development. The pandemic's impact on the stock market and the responses and reactions of the provinces to the pandemic were analyzed by previous studies (Narayan and Phan, 2020; Apergis and Apergis, 2020). It is observed that the main shortcoming of examining the COVID-19 pandemic impact on the performance of firms, industries, or sectors is that the results seem to be homogenous for all the sectors without any bias. However, certain studies came up with the view that sectors are different and hence their performance with respect to the stock market should be different as well. In other words, sectors are heterogeneous, not homogenous (Narayan and Sharma, 2011). Another study supports the argument that based on the supply-chain demand relationship, the sectors are mainly vulnerable to the pandemic of COVID-19 (Phan et al., 2015). Thus, the characteristics of an industry or sector depend on the supply-demand relationship.

Unfortunately, the pandemic has harmed various sectors like catering, retail, travel, tourism, transportation, the entertainment industry, the aviation industry, and so on (Anderson et al., 2020). It is found that the airline industry has faded away overnight, and the damage caused by the pandemic is huge and long-lasting. In Saudi Arabia, one of the most affected sectors during the pandemic was the airline sector. All international flights were suspended from March 15th when the news of the outbreak was announced (Caline, 2020). Flights to China, Asia, and other areas were cut down completely, which caused anxiety among the public as borders were closed down. It is estimated that almost a 7.2 billion loss was expected in the Saudi airline market during these tough times, which was 35 % less than in 2019. In addition, all the visas for foreign people were canceled as a result of the lockdown, and hence the airline industry has witnessed a continuous decline in the market since the lockdown. Likewise, the tourism industry was also hit hard during the pandemic. Recent research investigated the exposure of global tourism to each of the crises that happened in the past. It is claimed that
major events such as terrorist attacks, SARS outbreaks, MERS (Middle East Respiratory Syndrome), and others have no harmful effect on sector performance or the global economy.

2.2.2. The impact of pandemic on specific regions

The COVID-19 economic effect on a market is concentrated by a majority of recent studies (Gil-Alana and Monge, 2020). The study tried to examine the connection between oil prices and the COVID-19 pandemic, and its results were found to be persistently shocking. Global oil demand dropped in most countries in 2020 when compared to 2019. Because of the pandemic, recent research studies studied the stock market responses (Narayan, 2020). According to Sengupta and Sena (2020), the performance of firms seems to be greater in those regions that exhibit a faster growth rate than in regions with lower growth. As market responses (Narayan, 2020).

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The study adopts the following model to analyze the effect of a pandemic on firm performance;

\[
NROA_t = \alpha_0 + \alpha_1 \text{CNCA}_{it} + \alpha_2 \text{Perod}_{it} + \alpha_3 \text{REV}_{it} + \alpha_4 \text{FPC}_{it} + \alpha_5 \text{TR}_{it} + \alpha_6 \text{INDUSTRY}_{it} + \alpha_7 \text{YEAR}_{it} + \epsilon_{it}
\]

The following model has been used to understand the underlying mechanism of the impact:

\[
NROA_{it} = \alpha_0 + \alpha_1 \text{CNCA}_{it} + \alpha_2 \text{Perod}_{it} + \alpha_3 \text{REV}_{it} + \alpha_4 \text{FPC}_{it} + \alpha_5 \text{TR}_{it} + \alpha_6 \text{INDUSTRY}_{it} + \alpha_7 \text{YEAR}_{it} + \epsilon_{it}
\]

Furthermore, the further dimensions of the pandemic effect on the performance of firms are investigated by the study via adopting the following DID model:

\[
NROA_{it} = \alpha_0 + \alpha_1 \text{treated}_{it} + \alpha_2 \text{PERIODE}_{it} + \alpha_3 \text{PERIOD}_{it} + \alpha_4 \text{SIZE}_{it} + \alpha_5 \text{LEV}_{it} + \alpha_6 \text{GROWTH}_{it} + \alpha_7 \text{HF10}_{it} + \alpha_8 \text{FCF}_{it} + \alpha_9 \text{TR}_{it} + \alpha_{10} \text{INDUSTRY}_{it} + \alpha_{11} \text{YEAR}_{it} + \epsilon_{it}
\]

In the above models adopted, NROA denotes net income or net profit return rate that implies the status of the firm's performance; "Treated" denotes the COVID-19 effect degree dummy variable; Period represents a dummy variable for the point of an epidemic; CNCA represents the total investment growth rate, which acts as one of the moderating variables in examining the relationship between pandemic and firm performance; REV denotes the total revenue, which acts as another moderating variable in examining the relationship between pandemic and firm performance. The treated or pandemic impact dummy firms are chosen based on the most severely impacted sectors, industries, or groups. Tourism, catering, construction, retail, petroleum, entertainment and film, manufacturing industries, and transportation have been identified as highly impacted industries or sectors during the pandemic. The policies put into practice during the pandemic times have largely impacted the above-listed industries and firms due to a lack of social interaction, trading, and personal intensity. Some other industries and firms were low-impacted. The distinction between high-impact and low-impact areas was made based on the number of cases being reported. Thus, the high-impacted areas seemed to have 500 plus cases and the other areas were low-impacted areas. Dammam, Riyadh, Jeddah, Qatif, Tabuk, and Hofuf were some of the provinces that were identified as highly impacted areas. It is generally expected that the first quarter of COVID-19 infection will be the period that will be affected the most since the outbreak.

3. Methodology

The below-described hypothesis is proposed based on the above analysis:

H1. : Listed firms' performance is found to be negative during the pandemic.

H2. : The investment scale of the firm is negatively impacted due to COVID-19.

H3. : Sales revenue of the firm is negatively impacted due to COVID-19.

H4. : Because of COVID-19, the performance of serious-impact sectors or industries is harmfully influenced.

H5. : Because of COVID-19, the firms' performance is harmfully influenced especially in serious-impact regions.

3.1. Collection of data

Financial information from 2009 to 2019 is used in the study to examine the performance of the listed Saudi firms. The study gathers data from the years 2009 to 2019 to investigate the performance of the firms before the pandemic. By doing so, the 2020 epidemic effect in a firm will be appropriately measured, which is the primary objective of the research. A total of 157 listed firms' financial data was collected from the Saudi Stock Market. To make it more comparable, the exclusion criteria for the firms have been listed below: 1) Firms in financial distress were excluded; 2) Firms with normal operations were included in the data; 3) Firms with missing data were excluded; 4) Agriculture-related firms were excluded; 5) Banking and other financial-related firms were excluded. For the abovementioned reasons, the study dropped 68 firms. Therefore, the final sample of this study consists of 89 firms. To reduce the anomalies, the whole data was collected from the Saudi Stock Market.

3.2. The study models

The following model has been adopted to pre-figure the performance of the listed firms:

\[
NROA_t = 1 = \alpha_0 + \alpha_1 \text{SIZE}_{it} + \alpha_2 \text{LEV}_{it} + \alpha_3 \text{GROWTH}_{it} + \alpha_4 \text{HF10}_{it} + \alpha_5 \text{LIQ}_{it}
\]

\[
+ \alpha_i \text{INDUSTRY}_{it} + \alpha_j \text{YEAR}_{it} + \epsilon_{it}
\]

The study adopts the following model to analyze the effect of a pandemic on firm performance;

\[
NROA_{it} = \alpha_0 + \alpha_1 \text{CNCA}_{it} + \alpha_2 \text{Perod}_{it} + \alpha_3 \text{REV}_{it} + \alpha_4 \text{FPC}_{it} + \alpha_5 \text{TR}_{it}
\]

\[
+ \alpha_6 \text{INDUSTRY}_{it} + \alpha_7 \text{YEAR}_{it} + \epsilon_{it}
\]

The following model has been used to understand the underlying mechanism of the impact:

\[
NROA_{it} = \alpha_0 + \alpha_1 \text{treated}_{it} + \alpha_2 \text{PERIODE}_{it} + \alpha_3 \text{PERIOD}_{it} + \alpha_4 \text{SIZE}_{it} + \alpha_5 \text{LEV}_{it}
\]

\[
+ \alpha_6 \text{GROWTH}_{it} + \alpha_7 \text{HF10}_{it} + \alpha_8 \text{FCF}_{it} + \alpha_9 \text{TR}_{it} + \alpha_{10} \text{INDUSTRY}_{it} + \alpha_{11} \text{YEAR}_{it} + \epsilon_{it}
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In the above models adopted, NROA denotes net income or net profit return rate that implies the status of the firm's performance; "Treated" denotes the COVID-19 effect degree dummy variable; Period represents a dummy variable for the point of an epidemic; CNCA represents the total investment growth rate, which acts as one of the moderating variables in examining the relationship between pandemic and firm performance; REV denotes the total revenue, which acts as another moderating variable in examining the relationship between pandemic and firm performance. The treated or pandemic impact dummy firms are chosen based on the most severely impacted sectors, industries, or groups. Tourism, catering, construction, retail, petroleum, entertainment and film, manufacturing industries, and transportation have been identified as highly impacted industries or sectors during the pandemic. The policies put into practice during the pandemic times have largely impacted the above-listed industries and firms due to a lack of social interaction, trading, and personal intensity. Some other industries and firms were low-impacted. The distinction between high-impact and low-impact areas was made based on the number of cases being reported. Thus, the high-impacted areas seemed to have 500 plus cases and the other areas were low-impacted areas. Dammam, Riyadh, Jeddah, Qatif, Tabuk, and Hofuf were some of the provinces that were identified as highly impacted areas. It is generally expected that the first quarter of COVID-19 infection will be the period that will be affected the most since the outbreak.

4. Result and discussion

4.1. Predictive results

Model 1, employed in the study, is used to predict the performance of
COVID-19 pandemic’s impact on Saudi listed companies’ performance, the researcher will understand the effect of the comparing the firms’ predicted performance with the facts on their understanding the forecasting performance of a business or firm. By

Fig. 1. Description of the variables selected for the study.

| No | Study variable                  | Label | Measurement                                                                 |
|----|---------------------------------|-------|-----------------------------------------------------------------------------|
| 1  | Net profit return rate or net income | NROA  | Net profit margin on total assets – net profit / ending balance on total assets |
| 2  | Growth rate of total investment | CNCA  | Fixed asset growth rate – ending net fixed asset value for current period – beginning net fixed asset value for present time / initial net fixed asset value for the current period |
| 3  | Revenue                          | REV   | Total income earned in the current period                                   |
| 4  | Firm size                        | SIZE  | Firm size is calculated by the natural logarithm of total assets.            |
| 5  | Asset ratio                      | LEV   | Liabilities to assets ratio = total liabilities / total assets              |
| 6  | Revenue growth rate              | GROWTH| Operating income growth rate = current operating income – previous operating income / previous operating income |
| 7  | Free cash flow                   | FCF   | FCF = EBITDA + amortization and depreciation – working capital increase – capital expenditure |
| 8  | Herfindahl index                 | HF    | The stock held by the top ten shareholders is known as the Herfindahl Index (HF) 10. |
| 9  | Trade receivable turnover        | TR    | Trade receivable turnover = net sales / average net account receivables Average account receivable = beginning account receivable + ending account receivable / 2 |
| 10 | Epidemic point                   | PERIOD| The dummy variable of the “outbreak period” is 1, otherwise, it is 0.          |
| 11 | COVID-19 impact degree           | TREATED| If an organization is a part of a high-impact region or industry, the dummy variable “outbreak effect degree” is 1, otherwise 0. |
| 12 | Industry                        | INDUSTRY| Industry year fixed effect is just an interaction term between industry and dummy year variables. Used to control the fixed effect of the industry |
| 13 | Year                            | YEAR  | Used to control the fixed effect of a year                                  |

which functions as the fundamental component of the global economy (Granziera and Sekhposyan, 2019). Fig. 1 presents the performance of the listed firms and the predicted values found using model 1.

In Fig. 1, a horizontal axis represents the names of the industries that are affected due to the COVID-19 pandemic. Table 2 represents the names of the industries included in the research. From the figure, it is understood that all the industries, sectors, or firms mentioned are adversely affected by the pandemic with 0.005 actual performance, which is below the anticipated performance. The results of model 1 support hypothesis 1 and prove that the performance of the listed firms is found to be negative during the pandemic. The pandemic has adversely hit transportation and accommodation firms or industries. Travel and accommodation firms were almost shut down completely as the lockdown measures were strictly implemented across the country. They have almost lost its total revenue in the first quarter of 2020 due to the pandemic.

The industry code and division come from The National Classification of Economic Activities (International Standard Industrial Classification of All Economic Activities - (ISIC - Revision 4)).

4.2. Descriptive statistics analysis

In analyzing the data collected from 2009 to 2019, the main variables identified in the study are presented in Table 3 with their respective descriptive statistics. From Table 3, it is understood that the mean value of NROA is calculated as 0.009 and the median value as 0.007. These values imply that the profit of the firms is neither high nor within the reach of profit. Moreover, the mean value of CNCA is calculated as –0.0048, which implies that the listed firms cut down their investments on a large scale in the assets. The overall income of the listed firms is observed to be varyingly different with an SD of 1.5468 (standard deviation). The size of the firms was calculated using standard deviation, with 20.111 as the minimum value and 27.231 as the maximum value. 0.527 is calculated as the asset ratio, which seems to be reasonable. The mean operating income rate is calculated as-0.197 and the median operating rate is calculated as-0.219, which implies that there is a steep decline in the income of the operating listed firms in the Saudi market. 0.167 is the mean calculated for the shareholders of the listed firms, which implies that the equity is not that high and 0.123 is considered to be the standard deviation. FCF, or free cash flow, is calculated as –0.173, indicating that cash flow is tight in the listed firms. The turnover rate seems to be different for different enterprises in terms of operating assets. It is found that the receivable turnover rate has the
To examine the stability and reliability of the findings, the study ran two tests: unit root and parallel trend analysis. At the 1% level of significance, the unit root test was successfully passed by all the variables, indicating that the collected data was thought to be stable and unchanging. The parallel trend test results state that the listed firm's performance that falls under high-impacted and low-impacted areas seemed to be similar before the pandemic in 2020. Figs. 2 and 3 give the result of the parallel trend test that was carried out during the research.

4.4. Regression analysis test result

This study explored the effects of the coronavirus outbreak on the performance of Saudi listed companies. This research paper attempts to understand the mechanisms that are essential to the impact created by the pandemic. The paper identified the moderating variables as investment rate and revenue rate. The experimental results of the study are shown in Table 4. From the results, it is understood that Section A indicates the effect of COVID-19 on the performance of Saudi publicly traded companies. The period coefficient is calculated as -0.0045 with a significant level of 1%. This implies that the performance of the listed firms has had a negative impact during the pandemic times. Hence, hypothesis 1 is considered to be proven. Table 4 presents Sections B and C of the results of moderating variables, namely investment and revenue. A close examination of Section B states that the period regression coefficient is calculated as -0.0044 with a significant level of 1%. This indicates that the pandemic exhibited a highly adverse influence on the performance of Saudi firms. Likewise, the CNCA* period regression coefficient is calculated as 9.4104 with a significant level of 5%. From the above results, it is understood that higher investment in fixed assets will impact the performance of the firms in a negative way. According to Section C, the regression coefficient of the REV* period is calculated as 0.0009 with a significant level of 1%, which is in contrast to the period coefficient of 0.0031. This indicates that if the firm's income rises, the negative impact of the pandemic on its performance will reduce, thus supporting hypotheses 2, 3, and 4 respectively.

Furthermore, the firms have been grouped on the basis of the degree of COVID-19 impact with respect to the industries, sectors, and regions as well. This helped the researchers understand and analyze the pandemic’s impact on the efficiency of the Saudi company. In this study, the DID model estimated the effects of an epidemic on the performance of Saudi firms. The results of the DID model adopted in the study have been represented in Table 5. Section D and Section E of Table 5 represent the results of highly impacted industries, sectors or firms, and highly impacted regions, respectively. According to Section D, the variable treated* period coefficient is calculated as 0.0012 with a significant level of 1%. These results indicate that the coronavirus outbreak harmed the performance of the listed Saudi firms. Therefore, hypothesis 4 is considered to be proven statistically. Several industries, sectors, and firms like tourism, airlines, film, transportation and others are particularly service-oriented. These service-oriented firms or industries are highly influenced by means of social networking. On considering these factors, the highly-impacted industries dropped their revenues, thus decelerating the performance of highly affected industries. From the results, it is noted that the ban on international travel and the rolling out of entertainment resulted in lowered revenue. This affected the performance of the firms negatively.

According to Section E, the variable treated * Period coefficient is calculated as -0.0012 with a significant level at 5%. These results are taken into consideration based on the region. Thus, it is observed that the coronavirus outbreak has significantly affected the firm's performance which is situated in a serious-impact region. To control the spread of the COVID-19 infection, the Saudi government implemented

| Variables | N     | Mean (M) | Standard Deviation (SD) | Minimum | Maximum | Median |
|-----------|-------|----------|--------------------------|---------|---------|--------|
| CNCA      | 11,921| -0.0048  | 0.00696                  | -0.1448 | 0.4805  | -0.0158|
| NROA      | 11,921| 0.009    | 0.014                    | -0.025  | 0.057   | 0.007  |
| SIZE      | 11,921| 22.332   | 1.280                    | 20.111  | 27.231  | 22.589 |
| REV       | 11,921| 21.0624  | 1.5468                   | 16.320  | 24.5164 | 20.549 |
| GROWTH    | 11,921| -0.197   | 0.449                    | -0.971  | 1.368   | -0.219 |
| LEV       | 11,921| 0.227    | 0.207                    | 0.050   | 0.993   | 0.455  |
| FCF       | 11,921| -0.173   | 1.732                    | -9.347  | 6.487   | -0.037 |
| TR        | 11,921| 0.167    | 0.123                    | 0.060   | 0.651   | 0.134  |
| HF0       | 11,921| 0.008    | 0.024                    | 0.00005 | 0.190   | 0.001  |
pandemic on the firms along the dimensions, namely highly impacted region. Based on the analysis, the study findings indicate that COVID-19 pandemics negatively affected firm performance by lowering the total investment as well as the total revenue of each firm, respectively. Highly affected industries such as tourism, transportation, retail, catering, and entertainment. Furthermore, the study also suggests that the country should provide a helping hand to those industries or firms that are severely affected by the pandemic. The government should offer policies in support of the firms that are hardest hit so that they will be able to overcome the pandemic smoothly. The firms should come up with new strategies that will help them to reboot their business in post-COVID times. It is highly important to restore the operations of firms in the post-pandemic era.

5. Conclusion

This paper widely discusses the effects of the coronavirus outbreak on the performance of Saudi firms, with a special focus on firm-level performance. The study also explains and analyses the impact of the pandemic on the firms along the dimensions, namely highly impacted industry, and highly impacted region. Based on the analysis, the study findings indicate that COVID-19 pandemics negatively affected firm performance by lowering the total investment as well as the total revenue of each firm, respectively. Highly affected industries such as transportation, tourism, and catering were found to perform significantly lower in the first quarter of 2020. It was observed that the production, operation, and sales of the above-mentioned industries were negatively impacted due to the pandemic. While considering the regional dimension, it was found that the highly affected areas had significant negative effects on productivity, consumption, processes, and sales. The highly affected areas strictly followed the lockdown policies and measures, thus limiting the revenue return rate. Another significant factor that affected the performance of the firms during the pandemic is identified as financial constraints. During the SARS pandemic (2003), the transportation facilities were underdeveloped and hence slowed the spread of infection, unlike in COVID-19.

As part of COVID-19 preventive measures, the majority of countries across the world have adopted the quarantine measure, which helps them to curb the spread of infection effectively. Nevertheless, the operations, revenue, production, and so forth of the firms seemed to be limited and restricted, further leading to a significant decline in the performance of the listed firms in the Saudi market, especially during the early stages of the pandemic times. This new contagious infection dropped the revenue of the economy to a large extent, which did not last for a longer duration. This impact lasted only for a short period. The study also suggested that if the COVID-19 pandemic had been successfully controlled in the first quarter, then the global economy would have stayed positive for a longer time.

The negative impact of the COVID-19 pandemic seemed to be drastic on the global economy. The second quarter of 2020 might witness an increase in the performance of the firms as the market seems to be getting better. However, this pandemic has adversely affected key industries like tourism, transportation, retail, catering, and entertainment. Furthermore, the study also suggests that the country should provide a helping hand to those industries or firms that are severely affected by the pandemic. The government should offer policies in support of the firms that are hardest hit so that they will be able to overcome the pandemic smoothly. The firms should come up with new strategies that will help them to reboot their business in post-COVID times. It is highly important to restore the operations of firms in the post-pandemic era.

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Availability of data and material

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Code availability

Not applicable.

CRediT authorship contribution statement

Mohammed S Makni: Validation, Visualization, Roles/Writing - original draft.

Declaration of competing interest

The authors declare that they have no conflict of interest.

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