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Does Falling Oil Prices Impact Industrial Companies in the Gulf Cooperation Council Countries?*

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Abstract

This research aims to investigate the impact of falling oil prices at the beginning of 2020 on 82 industrial companies listed on the GCC stock markets. The research sample period is divided into two periods pre-COVID and during COVID covering the period starting 1st January 2020 to May 15, 2020. The research uses the Panel Least Square (PLS) method and Panel Generalized Method of Moments (GMM) with fixed and random effects in each country. The results of GMM models reveal a positive relationship between oil prices and the share prices of industrial companies in the Gulf countries, which confirms that the share prices of industrial companies in the Gulf Cooperation Council (GCC) countries have been negatively affected by the decline in oil prices with the beginning of 2020. The findings show that the highest impact of falling oil prices has been recorded in the industrial companies in the kingdom of Saudi Arabia. However, the falling of oil prices does not have a significant effect on industrial companies in the state of Qatar. The research results suggest that GCC economies have to move on the path of non-reliance on Oil and gas-driven economy.

Keywords: Oil Prices, COVID-19, GCC Countries, Industrial Companies, Stock Prices

JEL Classification Code: D53, E44, G15, N25, O16

1. Introduction

Oil is an important factor affecting world economies through its use as the main source of energy in the industrial sectors. Oil prices are affected by different factors, the most important of which are supply and demand, which makes oil prices change continuously and sometimes unexpectedly (Alqattan & Alhayky, 2016).

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In theory, the stock price is determined in the financial markets through a discount in the expected future cash flows generated by the stock. The cash flows generated by stocks are affected by economic factors, and oil price is one of the most important factors that affect stock prices in the financial markets (Echchabi & Azouzi, 2017). An increase in oil prices usually lowers the expected rate of economic growth and increases inflation expectations over shorter horizons. Decreasing economic growth prospects, in turn, lower companies' earnings expectations, resulting in a dampening effect on stock prices (Rahman, 2020). In this context, many studies have examined the effect of changes in oil prices on the cash flows of companies and stock returns. Jones and Kaul (1996), Huang et al. (1996), Sadorsky (1999), El-Sharif et al. (2005), Zarour (2006), Maghyereh and AL-Kandari (2007).

On other hand, oil prices affect the economies of developed and developing countries alike, and this effect is increasing, especially in exporting countries that depend on oil as the main source of financing their economies, such as the Gulf Cooperation Council (GCC) countries (Al Samman & Jamil, 2018). An increase in oil prices leads to additional income to the GCC countries which in turn, has a positive effect on economic growth and financial markets. Alternately,

low oil prices have a negative effect on economic growth and financial markets (Zarour, 2006; Teulon, 2014; Sultan & Haque, 2018; Rahman, 2020).

Several studies have investigated the impact of oil price changes on economies. They provide evidence for an inverse relationship between oil prices and aggregate economic activity (Gisser & Goodwin, 1986; Hickman et al., 1987; Burbidge & Harrison, 1984; Bruno & Sachs, 1982; Hojjat, 2014; Haque & Imran, 2020). Several economic explanations have been provided to explain why a negative relationship exists between oil price changes and economic activity. One of the most common interpretations of this negative relationship is the supply theory that shows how high oil prices affect negatively GDP growth and stimulates inflation (Gronwald, 2008; Cologni & Manera, 2008; Kilian, 2008; Lardic & Mignon, 2006, 2008; Lescaroux & Mignon, 2008).

Investigating the impact of changes in oil prices on stock prices is important for investors and decision-makers alike. This paper aims to measure the impact of oil prices fall in the early of 2020 on stock prices of industrial companies in GCC countries.

This study is organized into five sections for better comprehension. Section 1 provides the introduction to the research. Section 2 summarizes the literature review related to the impact of oil price movements on stocks with evidence from the developed and developing countries in addition to GCC countries. Section 3 explains the research methodology used in the study. Section 4 discuss the data analysis and the result obtained. Finally, Section 5 present the conclusion of the research and its usefulness for the future.

2. Literature Review

Many studies have discussed the impact of oil prices on the economy and financial markets. The negative impact of oil prices on the economy was concluded by Gisser and Goodwin (1986) and Hickman et al. (1987). The reaction of financial markets to oil price changes was investigated in developed stock markets by Jones and Kaul (1996). They concluded that oil prices affect stock markets through the corporations' cash flow. This relationship between oil price and the stock market has been confirmed in developed countries by many researchers (Huang et al., 1996; Sadorsky, 1999; El-Sharif et al., 2005).

On other hand, Basher and Sadorsky (2006) found a positive relationship between oil price changes and stock prices in emerging financial markets and revealed that the oil price is an important factor in pricing the stocks in emerging markets.

The impact of oil price changes was investigated in GCC countries too. Zarour (2006) investigated the reaction of GCC countries to oil price changes using data from

May 2001 to May 2005. He found that GCC stock markets respond faster to shocks in oil prices during the periods of rising oil prices. Many recent studies have found a link between oil price changes and stock prices. However, these studies mostly concentrate on developed economies and analyzed the impact of oil price shocks on stock returns at the aggregate stock market level. Mohanty et al. (2011) assessed the relationship between changes in crude oil prices and equity returns in GCC countries using country-level as well as industry-level stock return data. Their findings showed that at the country level, except for Kuwait, stock markets have significant positive exposures to oil price shocks. At the industry level, the responses of industry-specific returns to oil shocks are significantly positive for only 12 out of 20 industries. Their study also provided evidence that oil price changes have asymmetric effects on stock market returns at the country level as well as at the industry level.

Fayyad and Daly (2011) investigated the relationship between oil price and stock market returns for seven countries (Kuwait, Oman, UAE, Bahrain, Qatar, UK, and the USA) by applying the Vector Auto Regression (VAR) analysis. During this period oil prices had tripled creating a substantial cash surplus for the GCC countries while simultaneously creating increased deficit problems for the current accounts of the advanced economies of the UK and USA. Their empirical findings suggested the following: (1) the predictive power of oil for stock returns increased after a rise in oil prices and during the Global Financial Crises (GFC) periods. (2) the impulsive response of a shock to oil increased during the GFC period. (3) Qatar and the UAE in GCC countries and the UK in advanced countries showed more responsiveness to oil shocks than the other markets in the study.

Alhayki (2014) investigated the impact of oil price on the financial markets in the GCC countries. He found that the oil price does not have the same impact on the financial market in GCC countries. He reported that there is a negative impact of oil prices on the financial markets in Bahrain, the United Arab Emirates, and the Kingdom of Saudi Arabia, while Kuwait, Qatar, and Bahrain had a positive impact. Alqattan and Alhayky (2016) investigated the long and short-term impact of oil price movement on stock market prices in GCC countries. They reported that there is no long-term impact of oil price changes on stock market prices in all GCC countries except for Oman. On the other hand, there exists a short-run impact of oil price changes on stock market prices in all the seven GCC countries.

An efficient stock market is a sign of a resilient economy. It is also an indicator of investors' confidence in the macroeconomic fundamentals of the economy. The association of oil prices and health of the stock market for a predominantly oil-based economy also serves as an indicator of the attempted diversification going on in the economy

since the inception of the National Transformational Program 2020 Rahman (2020) attempted to investigate the relation of oil price changes with stock market prices of Tadawul for the period from 2000 to 2017 by using the Vector Auto Regression (VAR) methodology framework. The results showed a long-run association between crude oil price and stock prices of Tadawul, and no short-run association is found between them.

This research attempts to explore the impact of falling oil prices on the industrial sector companies' stocks due to the COVID-19 pandemic. Oil prices fell drastically in an unprecedented manner in early 2020. Therefore, this research attempts to enrich the literature by investigating the impact of oil price changes on the stock market prices in the short run. This research differentiates from the previous studies in terms of the time period of the study and focuses only on industrial sector companies. The objective is to understand the impact of sudden fall in oil prices on the industrial sector of heavily oil-reliant economies of the GCC. The insight will establish whether diversification into industrial and manufacturing is bearing the fruits to GCC economies in their pursuit to build resilient and sustainable economies for the future and whether they can withstand and cope with sudden catastrophic events natural or man-made like war and global pandemic. The result will throw insights for a better understanding of the impact and strategy to cope with them for the policymakers, government, and investors who are looking for long-term growth, stability, and prosperity of GCC economies.

3. Data and Research Methodology

3.1. Data

This study employs Panel Generalized Method of Moments GMM with fixed and random effect in each of the six GCC countries. The study uses daily data of stocks of 82 industrials companies in GCC countries listed on the stock markets in the six GCC countries covering January 1 and May 15, 2020. The stock data was sourced from the websites of stock markets of all six counties in the GCC.

3.2. Research Model

Based on the nature of obtained, research data which is a combination of cross-sectional as well as time-series, panel data analysis is the most appropriate tool to get reliable results and cope with multicollinearity among independent variables. Moreover, the panel data analysis help to reduce the bias and provide better analysis in comparison to time-series or cross-sectional data analysis variables (Greene, 2003).

The research model used is based on the random-effect model represented in equation (1)

$$PRICE_{i,t} = \alpha_0 + \beta_1 MV_{i,t} + \beta_2 OIL_{i,t} + (v_i + \varepsilon_{i,t}) \quad \dots(1)$$

Wherein the dependent variable *PRICE* captures the price of stock *i* at day *t*, $i=1, \dots$ and *N* represents the number of companies in each sector in each country (cross-sectional panel companies for the period $t, t=1, 2, 3 \dots T$ represents the number of periods.

The independent variables in this study are represented by the following used notations:

OIL measured by the logarithm of daily oil price

MV is measured by the logarithm of the total market value of the company and.

$\varepsilon_{i,t}$ is the residual as a whole where the residual is a combination of cross-section and time-series and

v_i represents the individual residual, which represents the random character of unit observation

4. Data Analysis and Results

4.1. Descriptive Analysis

Table 1 shows the descriptive analysis of the market values of industrial companies and the market prices of industrial companies shares in the GCC countries. The table also shows the descriptive analysis of oil prices for the entire period of study of 01/01/2020 to 15/05/2020.

The below table shows that the average price of industrial companies' shares during the study period. For Oman. the value of the mean of the share prices of industrial companies is 0.267724 and the median value is 0.15 with a maximum value of 0.7 and a minimum value of 0.07. The value of the standard deviation reached 0.193479. It is clear from the results that there is a big difference between the minimum and the maximum values, indicating the presence of high volatility of stock prices during the study period.

For Kuwait, the value of the mean of the share prices of industrial companies is 0.363805 and the median value is 0.34 with a maximum value of 1.37 and a minimum value of 0.03. The value of the standard deviation reached 0.286144. It is observed that there is a big difference between maximum and minimum values, indicating the presence of high volatility of stock prices during the study period.

For Bahrain, the value of the mean of the share prices of industrial companies is 0.276905 and the median value is 0.3 with a maximum value of 0.45 and a minimum value of 0.08. The value of the standard deviation reached 0.101431. Based on the previous descriptive information, we can notice that there is a high variation in the stock prices during the period of falling oil prices.

For Qatar, the value of the mean of the share prices of industrial companies is 1.938074 and the median value is 1.39 with a maximum value of 6.9 and a minimum value of 0.38. The value of the standard deviation reached 1.734969.

For Saudi Arabia, the value of the mean of the share prices of industrial companies is 33.8771 and the median value is 18.68 with a maximum value of 258.8 and a minimum value of 5.83. The value of the standard deviation reached 42.14321.

For the United Arab Emirates, the value of the mean of the share prices of industrial companies is 1.481977 and the median value is 1.1 with a maximum value of 4.6 and a minimum value of 0.23. The value of the standard deviation reached 1.089207.

The table also shows that the average price of OPEC basket price during the research period is 52.44177 with a median of 57.025. The highest price of OPEC oil is 70.87 while the lowest price of OPEC oil reached 16.85.

Through the previous analysis, it is evident that there are high variations in the stock prices of industrial companies in GCC countries during the period of oil price fluctuations. Furthermore, the largest fluctuation in prices has occurred in industrial companies in the Kingdom of Saudi Arabia with a standard deviation value of 42.14321 being the highest.

4.2. Analysis of the Empirical Results for Period Pre COVID-19

In this study, the pre COVID period is assumed to be the period 01/01/2020 to 15/03/2020. The period in question has been taken based on the fact that complete lockdown

was announced in all the GCC countries in and around 15/03/2020.

Table 2 shows the results of panel least square results with fixed and random effects for the period from the beginning of the decline in oil prices to the beginning of the lockdown of the economy as a result of the spread of the Coronavirus.

It can be seen from the results of Table 2 that there is a positive and significant relationship between the decline in oil prices and stock prices of industrial companies in all GCC countries except the United Arab Emirates. This result means that the fall in oil prices led to a decrease in the prices of industrial companies' shares. From the value of the regression coefficients, it can be said that the industrial companies in the Kingdom of Saudi Arabia are the most affected as a result of the decline in oil prices.

4.3. Analysis of the Empirical Results for Period During the Covid-19

Results of the analysis impact of the oil price fall on the stock price for the period 15/03/2020 to 15/05/2020 are shown in Table 2. Table 2 shows the results of panel least square results with fixed and random effects for the period, from the beginning of the complete lockdown of the economy as a result of the spread of the Coronavirus until the end of the complete lockdown of the economy. The economy was opened partially to allow businesses to start functioning.

Table 1: Descriptive Analysis for Research Variables in GCC countries

| | | Mean | Median | Maximum | Minimum | Std. Dev. | Skewness | Kurtosis | Jarque-Bera | Probability |
|----------------------|-------|----------|----------|----------|---------|-----------|----------|----------|-------------|-------------|
| Oman | PRICE | 0.267724 | 0.155 | 0.7 | 0.07 | 0.193479 | 0.748322 | 1.974393 | 134.4156 | 0.000 |
| | MV | 28859.71 | 12489.8 | 187309.2 | 1113.98 | 35289.42 | 1.842268 | 6.425009 | 1033.349 | 0.000 |
| Kuwait | PRICE | 0.363805 | 0.34 | 1.37 | 0.03 | 0.286144 | 1.469583 | 5.545566 | 864.2803 | 0.000 |
| | MV | 90951.22 | 72096.4 | 369027.9 | 2700 | 94339.79 | 1.333683 | 4.002422 | 464.1759 | 0.000 |
| Bahrain | PRICE | 0.276905 | 0.3 | 0.45 | 0.08 | 0.101431 | -0.78901 | 3.025354 | 61.02491 | 0.000 |
| | MV | 105041.4 | 12897.45 | 639000 | 5889.6 | 208329.5 | 1.846957 | 4.520292 | 390.929 | 0.000 |
| Qatar | PRICE | 1.938074 | 1.39 | 6.9 | 0.38 | 1.734969 | 1.563751 | 4.443665 | 387.6044 | 0.000 |
| | MV | 4905223 | 2125988 | 31533557 | 315400 | 7450595 | 2.264194 | 6.618891 | 1097.687 | 0.000 |
| Saudi Arabia | PRICE | 33.8771 | 18.68 | 258.8 | 5.83 | 42.14321 | 2.897585 | 11.69956 | 16062.15 | 0.000 |
| | MV | 1.89E+08 | 803448 | 7.03E+09 | 114300 | 1.06E+09 | 5.769657 | 34.47562 | 165208.9 | 0.000 |
| United Arab Emirates | PRICE | 1.481977 | 1.1 | 4.6 | 0.23 | 1.089207 | 0.916544 | 2.483508 | 118.4813 | 0.000 |
| | MV | 2103065 | 1376280 | 6715556 | 69000 | 1914270 | 1.059619 | 2.682916 | 149.9958 | 0.000 |
| | OIL | 52.44177 | 57.025 | 70.87 | 16.85 | 16.00944 | -0.90952 | 2.375153 | 118.3787 | 0.000 |

Table 2: Panel Least Square Method in Industrial Companies in GCC Countries for the Period 01/01/2020 to 15/03/2020

| | Variable | Cross-section random effects | | Cross-section fixed effects | |
|----------------------|--------------------|------------------------------|--------|-----------------------------|--------|
| | | Coefficient | Prob. | Coefficient | Prob. |
| Oman | LOGOIL | 0.023184 | 0.0000 | 0.022970 | 0.0000 |
| | LOGMV | 0.112968 | 0.0000 | 0.113961 | 0.0000 |
| | C | -0.889932 | 0.0000 | -0.898547 | 0.0000 |
| | Adjusted R-squared | 0.437513 | | 0.994948 | |
| Kuwait | LOGOIL | 0.056200 | 0.0000 | 0.056105 | 0.0000 |
| | LOGMV | 0.160552 | 0.0000 | 0.160964 | 0.0000 |
| | C | -1.569574 | 0.0000 | -1.573651 | 0.0000 |
| | Adjusted R-squared | 0.435091 | | 0.991340 | |
| Bahrain | LOGOIL | 0.000596 | 0.1806 | 0.000594 | 0.1818 |
| | LOGMV | 0.340370 | 0.0000 | 0.344167 | 0.0000 |
| | C | -3.115063 | 0.0000 | -3.152947 | 0.0000 |
| | Adjusted R-squared | 0.962983 | | 0.999823 | |
| Qatar | LOGOIL | 0.210946 | 0.0058 | 0.177421 | 0.0218 |
| | LOGMV | 1.454139 | 0.0000 | 1.520170 | 0.0000 |
| | C | -20.22168 | 0.0000 | -21.06156 | 0.0000 |
| | Adjusted R-squared | 0.619527 | | 0.993298 | |
| Saudi Arabia | LOGOIL | 9.239056 | 0.0000 | 8.816490 | 0.0000 |
| | LOGMV | 12.59714 | 0.0000 | 13.74477 | 0.0000 |
| | C | -182.1024 | 0.0000 | -196.9799 | 0.0000 |
| | Adjusted R-squared | 0.302544 | | 0.991059 | |
| United Arab Emirates | LOGOIL | -0.008556 | 0.7742 | -0.014018 | 0.6392 |
| | LOGMV | 1.209553 | 0.0000 | 1.228520 | 0.0000 |
| | C | -15.45604 | 0.0000 | -15.70224 | 0.0000 |
| | Adjusted R-squared | 0.636774 | | 0.992596 | |

It can be seen from the results presented in Table 3 that there is no statistically significant relationship between the decline in oil prices and the share prices of industrial companies in the GCC countries, except for the Kingdom of Saudi Arabia. The results indicate a positive and statistically significant correlation between the decline in oil prices and the decline in the share prices of industrial companies in the Kingdom of Saudi Arabia.

The lack of a statistically significant impact of the decline in oil prices on the share prices of industrial companies in the GCC countries is due to the financial support packages provided by the GCC countries in this period to the financial markets and the economy to mitigate the repercussions of the spread of the Coronavirus in their countries.

4.4. Analysis of the Impact of the Decline in Oil Prices on the Share Prices Of Industrial Companies for the Entire Sample From 01/01/2020 To 15/05/2020.

Table 4 displays the results of the estimation of Panel Generalized Method of Moments GMM for the impact of falling oil prices on industrial companies in GCC countries entire sample from 01/01/2020 to 15/05/2020. As per the results given in the table, the coefficients of the impact of falling oil prices on stock prices in industrial companies are positive and statistically significant at one percent level in Oman, Kuwait, Bahrain, Saudi Arabia, and the United Arab Emirates. However, the value of the coefficient in

industrial companies in Qatar is positive but not statistically significant. Statistically, it can be concluded that the share prices of industrial companies have been negatively affected by the drop in oil prices at the beginning of 2020. The highest value of the coefficient of falling oil prices has been recorded in industrial companies in Saudi Arabia with a value of 3.442509 followed by the United Arab Emirates and Kuwait with values of 0.029136 and 0.021431 respectively. The lowest value has been recorded in Bahrain with a value of 0.000430, followed by Oman with a value of 0.003968. This result explains the pessimistic view of investors in the GCC financial markets towards the drop in oil prices.

5. Conclusion

The decline in oil prices with the advent of the year 2020 is considered the most important factor that affected the financial

markets of the GCC countries, which rely on oil as the main source of their governments' revenue. As a result, a wave of pessimism swept among investors in the financial markets of the GCC countries. Therefore, this study explores the question – ‘Does falling oil prices due to COVID-19 impact industrial companies listed in stock markets of all GCC countries?’.

The research attempts to analyze the impact of the decline in oil prices on industrial companies' share prices for the period 01/01/2020 to 15/03/2020 before the spread of the Coronavirus and the complete economic lockdown termed as the pre-COVID period and during the complete lockdown of the economy for the period 16/03/2020 to 15/05/2020 as well as also for the entire research period. The research uses the Panel Least Square (PLS) method and Panel Generalized Method of Moments (GMM) with fixed and random effect on a sample consisting of 82 industrial companies listed on the Gulf financial markets for the period January 1 to May 15, 2020.

Table 3: Panel Least Square Method in Industrial Companies in GCC countries for the Period 15/03/2020 to 15/05/2020

| | Variable | Cross-section random effects | | Cross-section fixed effects | |
|----------------------|--------------------|------------------------------|--------|-----------------------------|--------|
| | | Coefficient | Prob. | Coefficient | Prob. |
| Oman | LOGOIL | -0.001248 | 0.0815 | -0.001267 | 0.0771 |
| | LOGMV | 0.165737 | 0.0000 | 0.167925 | 0.0000 |
| | C | -1.306211 | 0.0000 | -1.326766 | 0.0000 |
| | Adjusted R-squared | 0.608965 | | 0.998352 | |
| Kuwait | LOGOIL | 0.011487 | 0.0000 | 0.011498 | 0.0000 |
| | LOGMV | 0.245837 | 0.0000 | 0.253460 | 0.0000 |
| | C | -2.315508 | 0.0000 | -2.396284 | 0.0000 |
| | Adjusted R-squared | 0.522641 | | 0.993315 | |
| Bahrain | LOGOIL | -0.00000407 | 0.9877 | 0.00000149 | 0.9550 |
| | LOGMV | 0.354393 | 0.0000 | 0.354529 | 0.0000 |
| | C | -3.253813 | 0.0000 | -3.255171 | 0.0000 |
| | Adjusted R-squared | 0.999023 | | 0.999995 | |
| Qatar | LOGOIL | 0.013202 | 0.2774 | 0.011581 | 0.3412 |
| | LOGMV | 1.279768 | 0.0000 | 1.297632 | 0.0000 |
| | C | -16.95245 | 0.0000 | -17.20668 | 0.0000 |
| | Adjusted R-squared | 0.619055 | | 0.995937 | |
| Saudi Arabia | LOGOIL | 1.632424 | 0.0000 | 1.613533 | 0.0000 |
| | LOGMV | 12.02206 | 0.0000 | 13.07092 | 0.0000 |
| | C | -146.6706 | 0.0000 | -161.4811 | 0.0000 |
| | Adjusted R-squared | 0.150752 | | 0.990002 | |
| United Arab Emirates | LOGOIL | -0.001308 | 0.8475 | -0.001731 | 0.7992 |
| | LOGMV | 0.870218 | 0.0000 | 0.880879 | 0.0000 |
| | C | -10.76795 | 0.0000 | -10.91456 | 0.0000 |
| | Adjusted R-squared | 0.575175 | | 0.996318 | |

Table 4: Panel Generalized Method of Moments in Industrial Companies in GCC Countries for the Period 01/01/2020 to 15/05/2020

| | Variable | Cross-section random effects | | Cross-section fixed effects | |
|----------------------|--------------------|------------------------------|--------|-----------------------------|--------|
| | | Coefficient | Prob. | Coefficient | Prob. |
| Oman | LOGOIL | 0.003968 | 0.0055 | 0.003817 | 0.0077 |
| | LOGMV | 0.186594 | 0.0000 | 0.188318 | 0.0000 |
| | C | -1.518308 | 0.0000 | -1.534082 | 0.0000 |
| | Adjusted R-squared | 0.609520 | | 0.992876 | |
| Kuwait | LOGOIL | 0.021431 | 0.0000 | 0.021199 | 0.0000 |
| | LOGMV | 0.210289 | 0.0000 | 0.212074 | 0.0000 |
| | C | -1.971124 | 0.0000 | -1.989328 | 0.0000 |
| | Adjusted R-squared | 0.476531 | | 0.979739 | |
| Bahrain | LOGOIL | 0.000430 | 0.0055 | 0.000425 | 0.0061 |
| | LOGMV | 0.381265 | 0.0000 | 0.381857 | 0.0000 |
| | C | -3.522499 | 0.0000 | -3.528374 | 0.0000 |
| | Adjusted R-squared | 0.993000 | | 0.999800 | |
| Qatar | LOGOIL | 0.025232 | 0.2781 | 0.020947 | 0.3688 |
| | LOGMV | 1.603740 | 0.0000 | 1.622957 | 0.0000 |
| | C | -21.69842 | 0.0000 | -21.96375 | 0.0000 |
| | Adjusted R-squared | 0.58227 | | 0.986593 | |
| Saudi Arabia | LOGOIL | 3.442509 | 0.0000 | 3.345488 | 0.0000 |
| | LOGMV | 16.63789 | 0.0000 | 17.16691 | 0.0000 |
| | C | -217.9453 | 0.0000 | -225.1475 | 0.0000 |
| | Adjusted R-squared | 0.291659 | | 0.980315 | |
| United Arab Emirates | LOGOIL | 0.029136 | 0.0326 | 0.027948 | 0.0405 |
| | LOGMV | 0.980247 | 0.0000 | 0.986828 | 0.0000 |
| | C | -12.38626 | 0.0000 | -12.47398 | 0.0000 |
| | Adjusted R-squared | 0.611537 | | 0.985105 | |

The results of this research confirm the relationship between oil prices and the share prices of industrial companies in the GCC countries in the period of falling oil prices at the beginning of 2020. This result implies that the share prices of industrial companies in the GCC countries have been negatively affected by the decline in oil prices with the beginning of 2020, thereby still confirming that the non-reliance on oil-driven economies is still a distant dream for most countries, even though almost all such countries have come up with vision goal for the next 10 to 20 years, wherein the main focus is to transform their economies to non-oil reliant economies. The results of GMM models reveal that the industrial companies in the Kingdom of Saudi Arabia are the most impacted among industrial companies in GCC stock markets, confirming that the Saudi government has to

go along way in its pursuit for opening up of the economy and its diversification. On another hand, the falling oil prices do not have a significant effect on industrial companies in the state of Qatar, indicating that Qatar has moved on the path of non-reliance on oil- and gas-driven economy. In conclusion., this study confirms that industrial companies in the GCC countries are very sensitive to economic factors, especially oil prices even in the year 2020, as any change in oil prices immediately affects the share prices of these companies. The results of this study are consistent with Zarour (2006), Teulon (2014), Sultan and Haque (2018), and Rahman (2020) who proved the existence of a negative impact of the decline in oil prices on the financial markets.

This research, also examined the effects of government intervention and support during the COVID -19 times and

the results conclude that the share prices did not fall with the fall in oil prices during the lockdown, thereby indicating the sensitivity of the industrial companies of GCC and their heavy reliance on governmental support and intervention. As the world is bracing for clean energy usage and non-usage of fossil fuel as per Paris Agreement on climate change, the future of fossil fuel is not bright and the oil prices are expected to decline. The GCC economies have to work hard to keep global investors' confidence in their economic growth in the next two decades.

Despite the important results of this study, the results are limited to the industrial companies in the GCC countries. It would be interesting to investigate the effect of oil prices on the other sectors of the economies specifically the tertiary sector as GCC countries are investing huge amounts in developing the tourism sector and industrial free zones.

References

- Al Samman, H., & Jamil, S. A. (2018). The impact of foreign direct investment (FDI) on stock market development in GCC countries. *Pertanika Journal of Social Sciences & Humanities*, 26(3), 2085-2100. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3671037
- Alhayki, Z. (2014). The dynamic co-movements between oil and stock market returns in the case of GCC countries. *Journal of Applied Finance & Banking*, 4(3), 103-113. http://www.scienpress.com/Upload/JAFB%2fVol%204_3_6.pdf
- Alqattan, A. A., & Alhayky, A. (2016). Impact of oil prices on stock markets: Evidence from Gulf Cooperation Council (GCC) financial markets. *Amity Journal of Finance*, 1(1), 1-8. <https://amity.edu/UserFiles/admaa/140Paper%201.pdf>
- Basher, S. A., & Sadorsky, P. (2006). Oil price risk and emerging stock markets. *Global Finance Journal*, 17, 224–251. <https://doi.org/10.1016/j.gfj.2006.04.001>
- Bruno, M., & Sachs, J., (1982). Input price shocks and the slowdown in economic growth: The case of UK manufacturing. *Review of Economic Studies*, 51(159), 679–706. <https://doi.org/10.2307/2297185>
- Burbidge, J., & Harrison, A. (1984). Testing for the effects of oil-price rises using vector auto-regression. *International Economic Review*, 25, 459–484. <https://doi.org/10.2307/2526209>
- Cologni, A., & Manera, M. (2008). Oil prices, inflation, and interest rates in a structural co-integrated VAR model for the G-7 countries. *Energy Economics*, 30, 856–888. <https://doi.org/10.1016/j.eneco.2006.11.001>
- Echchabi, A., & Azouzi, D. (2017). Oil price fluctuations and stock market movements: An application in Oman. *Journal of Asian Finance, Economics, and Business*, 4(2), 19-86. <https://doi.org/10.13106/jafeb.2017.vol4.no2.19>
- El-Sharif, I., Brown, D., Burton, B., Nixon, B., & Russell, A. (2005). Evidence on the nature and extent of the relationship between oil prices and equity values in the UK. *Energy Economics*, 27, 819-830. <https://doi.org/10.1108/20421161311288839>
- Fayyad, A., & Daly, K. (2011). The impact of oil price shocks on stock market returns: Comparing GCC countries with the UK and USA. *Emerging Markets Review*, 12(1), 61-78. <https://doi.org/10.1016/j.ememar.2010.12.001>
- Gisser, M., & Goodwin, T. H. (1986). Crude oil and the macroeconomy: Tests of some popular notions. *Journal of Money, Credit and Banking*, 18, 95–103. <https://doi.org/10.2307/1992323>
- Greene, W. H. (2003). *Econometric analysis*. India: Pearson Education.
- Gronwald, M. (2008). Large oil shocks and the US economy: Infrequent incidents with large effects. *Energy Journal*, 29, 151–171. <https://www.jstor.org/stable/41323148>
- Haque, M. I., & Imran, M. (2020). Oil prices and terms of trade of Saudi Arabia: An empirical analysis. *Journal of Asian Finance, Economics, and Business*, 7(9), 201-208. <https://doi.org/10.13106/jafeb.2020.vol7.no9.201>
- Hickman, B. G., Huntington, H. G., & Sweeney, J. L. (1987). *Macroeconomic impacts of energy shocks: A summary of the key results*. Amsterdam: North-Holland Publishers. <https://doi.org/10.1016/B978-0-444-70247-0.50008-9>
- Hojjat, T. A. (2014). Economic impacts of energy development on the domestic economy. *Journal of Asian Finance, Economics, and Business*, 1(1), 41-45. <https://doi.org/10.13106/jafeb.2014.vol1.no1.41>
- Huang, R. D., Masulis, R. W., & Stoll, H. R. (1996). Energy shocks and financial markets. *Journal of Futures Markets*, 16, 1–27. <https://doi.org/10.1002/%28SICI%2910969934%28199602%2916%3A1<1%3A%3AAID-FUT1>3.0.CO%3B2-Q>
- Jones, C. M., & Kaul, G. (1996). Oil and the stock markets. *Journal of Finance*, 51(2), 463–491. <https://doi.org/10.2307/2329368>
- Kilian, L. (2008). Exogenous oil supply shocks: How big are they and how much do they matter for the US economy. *The Review of Economics and Statistics*, 90, 216–240. <https://doi.org/10.1162/rest.90.2.216>
- Lardic, S., & Mignon, V. (2008). Oil prices and economic activity: An asymmetric co-integration approach. *Energy Economics*, 30(3), 847–855. <https://doi.org/10.1016/j.eneco.2006.10.010>
- Lardic, S., Mignon, V. (2006). The impact of oil prices on GDP in European countries: An empirical investigation based on asymmetric co-integration. *Energy Policy*, 34(18), 3910–3915. <https://doi.org/10.1016/j.enpol.2005.09.019>
- Lescaroux, F., & Mignon, V. (2008). On the influence of oil prices on economic activity and other macroeconomic and financial variables. *OPEC Energy Review*, 32(4), 343–380. <https://doi.org/10.1111/j.1753-0237.2009.00157.x>
- Maghyereh, A., & AL-Kandari, A. (2007). Oil prices and stock markets in GCC countries: New evidence from the non-linear

- co-integration analysis. *Managerial Finance*, 33, 449–460. <https://doi.org/10.1108/03074350710753735>
- Mohanty, S. K., Nandha, M., Turkistani, A. Q., & Alaitani, M. Y. (2011). Oil price movements and stock market returns: Evidence from the Gulf Cooperation Council (GCC) countries. *Global Finance Journal*, 22, 42–55. <https://doi.org/10.1016/j.gfj.2011.05.004>
- Rahman, A. (2020). Long run association of stock prices and crude oil prices: Evidence from Saudi Arabia. *International Journal of Energy Economics and Policy*, 10(2), 124-131. <https://doi.org/10.32479/ijeep.8881>
- Sadorsky, P. (1999). Oil price shocks and stock market activity. *Energy Economics*, 2, 449–469. [https://doi.org/10.1016/S0140-9883\(99\)00020-1](https://doi.org/10.1016/S0140-9883(99)00020-1)
- Sultan, Z. S., & Haque, M. I., (2018). Oil exports and economic growth: An empirical evidence from Saudi Arabia. *International Journal of Energy Economics and Policy*, 8(5), 281-287. <https://repository.psau.edu.sa/jspui/retrieve/62e8c79a-5fb8-4b45-bd16-0ab72167f787/ijeep%20paper.pdf>
- Teulon, F. (2014). Dynamic spillover between the oil and stock markets of emerging oil-exporting countries. *The Journal of Applied Business Research*, 30(1), 51-58. <https://doi.org/10.19030/jabr.v30i1.8280>
- Zarour, B. A. (2006). Wild oil prices, but brave stock markets! The case of GCC stock markets. *Operational Research: An International Journal*, 6, 145–162. <https://doi.org/10.1007/BF02941229>