Effect of Oil Prices Fluctuation on Stock Indices-Comparative Study

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Abstract **– The study aims to examine the nature of the relationship and the effect of oil price fluctuations on stock indices in the financial markets of exporting and importing countries. For achieving that, the price of Brent crude oil was chosen as an index from the stock markets in Saudi Arabia, Russia and Iraq as oil-exporting countries. While the market index was chosen from the markets of New York, Shanghai and Nikkei as an oil importer. The study came out with a set of conclusions and recommendations. The most important is that the degree of response of stock indices to fluctuations in oil prices was greater in exporting countries than in importing countries.**

Keywords **– Oil Prices, price fluctuation, Stock Indexes.**

1. Introduction

Global oil markets and the transactions take place in them constitute 15-20% of the volume of global trade in recent years. The fluctuations in oil prices usually affect the overall economy, whether for exporting countries or oil importing countries.

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Financial markets are one of the most important components of the overall economy that are affected by oil prices. Studying the relationship and the effect between fluctuations in oil prices and the financial markets has become a basic topic for companies. Investors find out whether oil price fluctuations are among the main factors affecting stock indices and thus in their financing and investment decisions. In fact, there are many factors affecting the value of stock indices. The index represents a large group of stocks and thus all factors affecting the market value of companies' shares will be factors affecting the overall index's value, in addition to the effect of the general index of stocks or the market by economic, financial and political factors. These factors are fully reflected in the financial markets. In general, the factors affecting the stock indices are divided according to the literature of financial management into factors specific to companies and general factors. The special factors that affect the company's performance is divided into operational factors and financial factors that reflect the operational and financial risks of companies. They are called diversifiable or irregular risks, and include operating costs, financial costs, level of profits, number of shares, company reputation, dividends, book value per share, investor expectations and other factors, [11]. The cash flows generated from oil sales represent revenue to the oil-exporting countries. This revenue increases with the increase in oil prices which gives a strong impetus to the movement of the economy and the market in general. The foreign exchange flow to these countries increases, which leads to an increase in national income in them or an increase in the local currency exchange rates against foreign currencies. They are accompanied by high inflation rates as a result of an increase in the money supply in the exporting countries. The liquidity available in the market for investment generates inflationary pressures on all economic sectors. They generate surplus liquidity and increase the incomes of individuals. Increase in the demand for investment opportunities is reflected in the increased demand for stocks and various types of investments in the

markets [3]. Many oil-exporting countries have benefited from the rise in oil prices in establishing sovereign funds aimed at investing financial surpluses resulting from oil revenues. Of course, these funds invest their money in many economic sectors. The most prominent is the financial sectors. Stock markets are part of the financial sector, so the effect of high oil prices will be positive. On the financial markets, but in the case of low oil prices, the financial market indicators of these countries have declined significantly due to the effect of oil revenues [4]. This relationship is expected to be completely opposite in countries that import crude oil and its derivatives. Oil represents one of the most important production inputs. Since its extraction and through it the various refining operations until its consumption, it constitutes an integrated financial cycle. It contributes to achieving cash flows around the world as about 160 are extracted with a different substance from oil, directly or indirectly. These materials enter into various intermediate and final industries, amounting to up to 400 industrial or consumer products. This means that oil prices are reflected in production costs. Thus the costs of various products mean that the rise in oil prices represents a cost for companies that consume crude oil and its various derivatives that are included in many different products. Thus, production, transportation and other costs will increase with the increase in oil prices. This applies clearly to airlines and transport companies that made many increases in airline ticket prices during the period of high oil prices due to the increase in fuel prices. The effect of the increase in oil prices and its derivatives may be direct if the companies use oil and its derivatives in their production or service operations (fuel, raw materials, and semi-finished materials, etc.). It may be indirect through the influence of companies' work with the work of other companies that are directly affected by oil prices. The opposite is also expected to happen in the event of lower oil prices [2]. Although the high oil prices are a burden on the importing countries due to the high cost, the relationship may be positive due to the increase in money flows from the exporting countries to the importing countries by increasing the cash. It inflows received through labor transfers from the oil-exporting countries in addition to receiving the markets of these countries. For investors from exporting countries whose investments will increase when oil prices rise. Many investments can go from exporting countries to importing countries in search for new investment opportunities and to diversify investor portfolios. This poses a challenge to importing countries to improve the attractiveness of investments in them to attract those cash surpluses from the exporting countries. In addition, weak productive sectors dependent on oil consumption in importing countries will reduce the negative effect of the high cost. There may be other factors that make the relationship positive according to the country's economy. It notes that the economies of oil importing countries are affected by fluctuations in oil prices that vary from country to another [4].

2. Literature Review

The researchers [6] presented their study Return and volatility transmission between world oil prices and stock markets of the GCC countries: Economic Modeling. The results showed that the repercussions of the large volatility are shifting from the oil market to the stock markets. There is an effect of oil revenues on stock markets in the Gulf countries. The researcher concluded that oil fluctuations are sensitive to stock market fluctuations in only two countries, namely Kuwait and Saudi Arabia. When analyzing the correlation between changes in oil market returns, oil market returns are affected by stock market fluctuations in both the Kingdom of Saudi Arabia and the State of Kuwait, and it is shown in the study [5] that deals with the effect of fluctuations in oil revenues on macroeconomic indicators, the performance of stock markets and the performance of securities in the Gulf Cooperation Council states. The Effect of Oil Revenues Fluctuations on Macroeconomic Indicators and Financial Markets Performance of Arab-Gulf Countries are evident. The effect of oil market returns and macroeconomic index on the Saudi and Emirati financial market indicators for a period of twenty-five chapters from 2000 to 2006 was examined. The results of the study showed that oil market returns had a positive significant effect on the performance of the Gulf financial markets. The same is for the study [13]. The Effect of Oil Price Fluctuations on the Performance of Shares in the Saudi market, and the results of the study showed that there is a statistically significant relationship between fluctuations in oil prices and the Saudi stock market indices. The study of [9] explains the causal relationship between Stock Market Indices Volatility and Oil Prices Volatility: Empirical evidence from Iraqi Stock Exchange, the standard analysis revealed the effect of crude oil price fluctuations on the fluctuations of the Iraq Stock Exchange Index, while the latter did not show an effect on the crude oil market fluctuations. The study of [16] shows Crude Oil and Stock Markets: Stability, Instability, and Bubbles; by examining the long-term relationship between oil prices and stock markets, the results were statistically significant. They indicate the strong correlation between stock prices and oil prices between 1971 and 1980 and also between 1988 and

1998. This correlation was in the opposite direction, that is, in the event of an increase oil prices of stocks decrease. In the event of a decrease in oil prices, stock prices rise, because all the economies of the sample countries depend mainly on oil in all economic activities. Also, a study of [10] shows macro economy, stock market and oil prices: the question is whether meaningful relationships exist among their cyclical fluctuations, which was conducted in Greece, on monthly data for the period from 1/1996 to 6/2008. confirmed that oil prices negatively affect the stock markets, directly or indirectly. When its prices rise, the confidence of investors in the stock market is shaken, and stock prices fall, and this is a direct negative effect of the rise in oil prices. As for the indirect negative impact, it is the result of decreased production, which leads to high levels of inflation. It also affects real cash flows and economic activity in general, and this explains the transmission of shocks and fluctuations from the oil markets to the stock markets. In Turkey, a study of [15] shows the relationships between Oil Price and Stock Market: An empirical analysis from Istanbul Stock Exchange (ISE); examined long-term relationships and short-term dynamics between the ISE100, BIST50, BIST30 index of the Istanbul Stock Exchange, Brent crude prices using Cranger causality, the Johansson Gesellos methodology in joint integration, are based on daily data that extended during: 4/1/2000 - 4/1 / 2010. The results of the Johansson test showed that there is a joint complementary relationship between each of the financial market indicators and the oil price. The Cranger causal analysis settled on the existence of a causal relationship moving from the financial market indicators to the oil price, but the latter was not a cause of fluctuations in any of the three pointers. In oil-importing countries, a study of [19]. also investigates Crude oil price, exchange rate and emerging stock market: evidence from India. In the dynamic relationships between oil prices, the exchange rate and the Indian stock market during the period (1993-2013). They depend on the Johansson and Juselius methodology in detecting the long-term joint complementarity. The vector error correction approach VECM, depending on the variables of the Indian market index Crude oil prices and the exchange rate. The results of the Johansson model of joint integration and the VECM model indicated that there is a long-term relationship between crude oil prices and the Indian stock market. It cannot be said with sufficient confidence that the direction of the relationship in the long term is from the oil price to the Indian market index. The relationship between financial market fluctuations and oil price fluctuations was tested and the direction of the relationship and its causation determined in a study [8]. Measuring and analyzing the relationship between the volatility of US stock market indices and the volatility of oil prices; By testing the relationship between the main US market indices represented by the Dow Jones indices and the Standard & Poor's 500S & P index and the reference oil crudes (Brent, West Texas Intermediate, and Dubai / Oman crude) depending on the monthly data for the period 1990-1-12-2016. The study concludes that there is a negative and reciprocal correlation between fluctuations in global financial market indicators and fluctuations in crude oil prices. A study of [14] reveals oil price shocks and Stock markets in the U.S. and 13 European countries; sought to verify the relationship between oil prices and the extent of their effect on the financial markets in the United States and 13 European countries during the period 1/1986 - 12/2005. It is based on monthly data for stock price indices, short-term interest rates, consumer price index, industrial production, and oil prices (Brent prices) over that period of time. It has emerged that the increase in the price of oil is pushing short-term interest rates to rise in the United States and eight out of 13 European countries within a very short period, as the increase in oil price fluctuations leads to an increase in the short-term interest rate. The study of [12] shows the fluctuations in oil prices and their implications for financing development in the Arab countries during the period 1986-2008 on a group of Arab countries; estimated at 17 countries. They included oil-producing countries, non-oil-producing countries and non-oil countries in which the least squares method. What is known as the simple regression model was used. It indicated that the decline in stock prices led to an increase in the burden on consumption, despite the ease of dealing with its effects. Companies and banks are related to energy and have large exposures to the oil sector were suffering from the difficult conditions of refinancing as a result of prevailing expectations that the decline in oil prices would result in a decrease in their revenues and creditworthiness, as well as slowed down. Capital flows to the Gulf Cooperation Council, although largely consistent with general trends in other emerging markets. A study of [17] shoes the effect of oil prices on stock markets: Empirical evidence from selected major oil producers and consuming countries; Analyzing the effect of crude oil prices on stock prices in some major oil producing and consuming countries represented by (Mexico, Russia, Saudi Arabia, India, China and the United States). The results revealed a long-term relationship in one direction in Saudi Arabia, India, China and the United States. The results revealed that the Russian model has a long-term relationship with two vectors, and on the contrary, long-term integration is absent from Mexico's variables. As for

the relationship between oil price returns and stock market indices in the Middle East region, a study of [7]. indicated return and volatility transmission between world oil prices and stock markets of the GCC countries. Until the relationship of oil prices with the financial markets is characterized by instability. It does not remain constant, but rather in fluctuation and continuous change over time. The study, which was conducted on the basis of monthly data for the period (2000-2014), showed that there is no difference in the relationships between financial indicators in oil-exporting countries and oil-importing countries. It is not linked to oil prices only, but to the speculative factor in the markets. In the Middle East, a study [1]; it was mentioned that the conditional relationship and the widely dispersed fluctuations between oil price returns and stock market indices in the Middle East, based on monthly data between 2000 and 2015. The researcher divided the Middle East countries into two groups: oil importers and oil exporters, and the group of importing countries is (Turkey, Jordan, Lebanon and Egypt), while the exporting countries are (Saudi Arabia, UAE, Qatar, Bahrain, Kuwait and Oman), using the oil price index (West Texas Intermediate crude (W). The results of the study indicated that there is an important statistical significance between the shocks in oil prices and in stock prices in both importing and exporting countries by the same amount. A study of [4] explains relationship between Oil Prices and Stock Markets (Selected Middle East Countries; is about the relationship between oil prices and stock markets in oil-exporting countries (Saudi Arabia, the UAE, Kuwait, and Qatar) and oil-importing countries (Jordan and Palestine). It is based on daily closing data for price indices during the period 1/2/2005 to 1/31/2015. The study concluded that there is a relationship between oil prices and stock markets in oil-exporting countries in the short and long term. There is no relationship between oil prices and stock markets in oil-importing countries.

What distinguishes the current study from previous studies in studying the relationship and effect between fluctuations in oil prices and stock indices is the study sample and its duration. The study period witnessed large fluctuations in oil prices. Each of (Saudi Arabia, Russia, and Iraq) was chosen among the largest oil-exporting countries in the world and (the United States, China and Japan) among the largest oil importers in the world, to clarify the relationship and effect between fluctuations in oil prices and stock indices.

3. Methodology

The problem of the study is concentrated in answering the following questions: a) Is there a relationship and an effect between fluctuations in oil prices and stock indices? b) What is the nature and direction of the relationship between fluctuations in oil prices and stock indices, and what is their effect? C) Is this relationship and influences the same for all markets? d) Can the future oil price be used as an indicator for stock index prices in the stock market? e) Does the response to oil price fluctuations differ between stock indices in exporting countries and oil importing countries?

Hypotheses of the study are the following; The first main hypothesis: There is a significant correlation between fluctuations in oil prices and stock indices in the stock market. Two sub-hypotheses are branched out from this hypothesis. There is a positive moral correlation between fluctuations in oil prices and stock indices in the stock markets of oil-exporting countries (Saudi Arabia, Russia, and Iraq). There is a positive or negative moral correlation between fluctuations in oil prices and stock indices in the stock markets of oil-importing countries (the United States, China, and Japan). The second main hypothesis: There is a significant effect of fluctuations in oil prices on stock indices in stock markets, and two sub-hypotheses are branched from this hypothesis: There is a significant effect between fluctuations in oil prices and stock indices in the stock markets of the oil-exporting countries (Saudi Arabia, Russia, and Iraq). There is a significant effect between fluctuations in oil prices and stock indices in the stock markets of oil-importing countries (the United States, China, and Japan).

Study measures: Pearson Correlation Coefficient (R): It is a numerical measure that shows the relationship between two variables between zero. The correct one is positive when the relationship is positive and zero, and the negative integer when the relationship is negative. The Pearson Correlation Coefficient Model was used in this study to find the degree of relationship between the study variables. The Pearson correlation coefficient was used to find the degree of relationship between fluctuations in oil prices and stock indices. Coefficient of determination (R^2): it is a numerical scale between zero. The correct one reflects the success of the simple linear regression model in explaining the changes that occur in the dependent variable, and the closer its value to the correct one. This indicates the increasing validity of the linear relationship in representing the relationship between the variables used and use a simple regression model to measure it. The determination factor was adopted in the current study

to test the effect of oil price fluctuations on stock indices. (F) Test: to test the significance of the effect of the coefficient of the linear regression model at a significant degree (0.05). The (F) test was used in the current study to test the significant relationship and the effect of oil price fluctuations on stock indices.

4. Results

4.1. Oil prices

Table 1. Brent oil prices

No	Year	Month	Oil Price
1	2014	7	106.98
2		8	101.92
3		9	97.34
4		10	87.27
5		11	78.44
6		12	62.33
7	2015	1	48.07
8		2	57.93
9		3	55.79
10		4	59.39
11		5	64.56
12		6	62.34
13		7	55.87
14		8	46.99
15		9	47.24
16		10	48.12
17		11	44.42
18		12	37.72
19	2016	1	30.80
AV			62.82

The table is prepared by the researcher based on the OPEC website

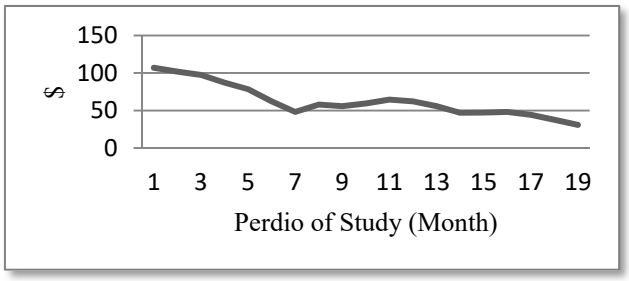

Figure 1. Brent oil prices

The significant decline in the price of oil is mainly due to the supply and demand of oil. Oil is one of the most important commodities traded in the world markets because supply and demand are one of the main factors affecting the price of any commodity under the stability of other factors. All other factors affect the price through affecting the price by the supply and demand or the price of oil. There are a set of economic and political factors that have affected supply and demand that have led to a surplus in supply and demand. All producers maintain the volume of production to ensure their market share in addition to the entry of shale oil into the market and a slowdown in the demand for oil in the Asian and European markets in addition to the United States. It is one of the most important markets consuming oil.

4.2. The Saudi Market Index

The Saudi market index witnessed a continuous downward trend during the period of the study. Although there are many factors affecting the stock indices, we note the emergence of the effect of oil prices in the Saudi market index as the fall in oil prices put pressure on the Saudi economy. It reflected the Saudi stock market and shows the continuous and significant decline in the value of the Saudi index. It shows the significant decline in the Saudi financial market due to the decline in oil revenues due to the decline in world oil prices. The drop in cash the resulting oil resulting from the oil-exporting countries, the largest of which is Saudi Arabia, leads to the decline of the economy of these countries. Oil is the main economic resource for these countries, which is reflected in the volume of income and domestic investment.

4.3. The Russian RTS Market Index

As is the case in the Saudi market, the Russian RTS index has witnessed a continuous and severe decline. Figure 3 shows the general downward trend in the value of the Russian RTS market index, which indicates a decline in investor confidence in the economy.

4.4. Iraq Stock Exchange Index

The index of the Iraq Stock Exchange is the other; its general trend was downward, as shown in Figure 4. We note that the significant decline of the index began in the seventh month of the year 2015. It coincided with the second decline in the price of oil and the decline in the market continued until the end of the study period. It was recorded in January for the year 2016. The lowest value of the Iraq Stock Exchange Index which amounted to 638.54 points. It was recorded with the lowest oil price during the study period.

4.5. New York Market Index

As shown in Figure 5, the general trend of the index was downward. The trend of the index was supposed to be upward, considering that the United States is one of the oil importing countries. In this case, the relationship of oil prices and financial

markets is opposite, i.e., when oil prices are low, they have to rise. The value of the market index is due to the low cost of energy. The reason for this is as it has been explained in the knowledge base of the relationship between oil prices and financial market indicators. The relationship between oil prices and the economies of importing countries may not always be difficult because of the advantage of low energy cost, but it may be direct due to factors. The other is when the effect of other factors is greater than the effect of lower cost. It makes the relationship positive, as is the case in the United States, although the United States is one of the largest importers of oil and benefits positively from the lower cost in the production, transportation and other sectors. It is also considered for the producing countries, especially in the field of shale oil in recent years. Therefore, the drop in oil prices also affects them negatively, as the decrease in the price of oil will harm some American oil companies and some workers in local oil production, especially shale oil. This will lead to an increase in domestic oil prices and thus higher costs in general or a halt in production, as in terms of employment. The discovery of shale oil technology has led to an increase in the number of jobs in the field of drilling, crane operators, truck drivers and diesel mechanics with bearing in mind. These workers support some other sectors such as hotels, restaurants, and car dealerships. For this reason, lower oil prices mean a decline in drilling rates and exploration work. The rise in drilling costs higher than the price of a barrel will not encourage the continuation of exploration. Therefore, this will have a negative effect on the operating companies in this field. Consequently, the effect on the financial markets and on the financial level as well, the companies that suffer from the decline in oil prices also affect negatively. Indirectly on the banking and investment sector, there are many companies that depend on the supply of oil shale.

4.6. Shanghai Index

Quite the opposite of the previous indicators, the Shanghai Market Index witnessed a continuous upward trend during the study period, as shown in Figure 6. This means that the direction of market movement was in contrast to the trend of oil prices, which was downward. China is one of the major oil importers and benefits positively from lower prices oil due to the low cost in the production, transportation and other sectors. This was clearly reflected in the performance of the market as the index recorded its highest value in the month of May 2015. The very large percentage increase in the value of the index indicates the limited investment opportunities in the market due to the decrease in the number of shares offered for actual circulation. This increase inflationary pressure that is generated by the advantage of lower costs as a result of the decline in global oil prices to unexpected levels.

4.7. The Nikkei Index

As is the case in the Chinese market, the Japanese market index has witnessed a continuous rise and as shown in Figure 7. It seems that the same factors that led to the rise of the Chinese market index are the same. They led to the rise of the Nikkei index due to the congruence of the conditions of the macroeconomic and financial market. Japan is preparing to become the major oil importing countries, and benefited from the low-cost advantage due to the low oil price.

4.8. Total Analysis of Stock Indices

If we collect the graphical figures of the six financial markets in one form and as in Figure 8, this will clear positive correlation between the markets of oil-exporting countries (Saudi Arabia, Russia, and Iraq). It will be shown to us as the relative positive correlation between the markets of the importing countries (China and Japan) except for the United States. It seems that it is still resisting the pressures of fluctuating oil prices. Although there is a positive link, but to a lesser extent, between the market of the United States and the market of exporting countries, and the United States is also one of the oil-producing countries. Therefore, the relationship of the oil price with the economy of these countries is direct as is the case in oil-exporting countries, for the reasons mentioned in the analysis of the New York Market Index as for the link between the markets of the oil-exporting countries and the United States on the one hand, and the oil importing countries (China and Japan) on the other hand. It appears that the link between them was inversed. In comparison with the general trend of oil prices during the same period, it can be said that there is a strong positive correlation between oil prices and the value of the indices of oil-exporting countries (Saudi Arabia, Russia, and Iraq) and a positive but less correlation between oil prices. The New York market index, on the other hand, has a negative correlation between Oil prices and indicators of oil importing countries (China and Japan).

Table 2. Values of financial market indices study sample (point)

No	Year	Month	Saudi Market Index	Russian Market Index RTS	Iraq Market Index	New York Market Index	Shanghai Index	Nikkei Index
1	2014	7	10214.73	1219.36	1006.03	10726.43	2201.56	15620.77
2		8	11112.12	1190.23	1010.70	11046.33	2217.20	15424.59
3		9	10854.79	1123.72	995.98	10702.93	2363.87	16173.52
4		10	10034.92	1019.44	1003.54	10845.00	2420.18	16413.76
5		11	8624.89	974.27	1001.83	10955.41	2682.83	17459.85
6		12	8333.30	790.71	998.21	10839.24	3234.68	17450.77
7	2015	1	8878.54	737.35	998.30	10537.22	3210.36	17674.39
8		2	9313.52	896.63	874.32	11062.79	3310.30	18797.94
9		3	8778.89	880.42	900.90	10899.18	3747.90	19206.99
10		4	9834.49	1029.31	870.03	11049.74	4441.66	19520.01
11		5	9688.69	968.81	967.37	11056.30	4611.74	20563.15
12		6	9086.89	939.93	1000.56	10805.20	4277.22	20235.73
13		7	9098.27	858.82	903.40	10882.28	3663.73	20585.24
14		8	7522.47	833.60	872.03	10176.50	3205.99	18890.48
15		9	7404.14	789.73	844.90	9799.89	3052.78	17388.15
16		10	7124.80	845.54	781.56	10460.96	3382.56	19083.10
17		11	7239.93	847.10	718.64	10409.58	3445.40	19747.47
18		12	6911.76	757.04	730.56	10143.42	3539.18	19033.71
19	2016	1	5996.57	745.30	638.54	9632.70	2737.60	17518.30
AV			8739.67	918.28	900.92	10633.22	3249.83	18252

The table prepared by the researcher relying on the websites of the financial markets research sample

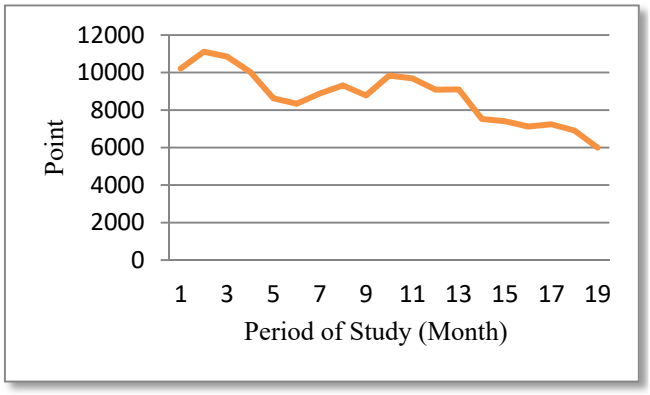

Figure 2. (Saudi Market Index)

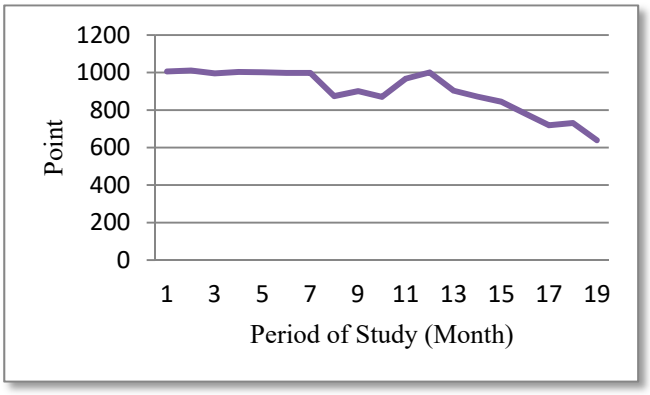

Figure 4. Iraq Market Index

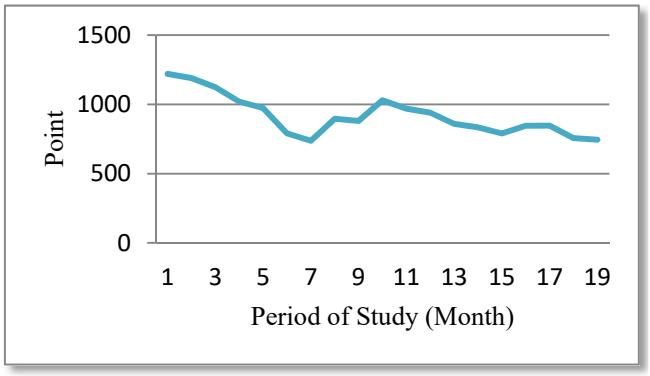

Figure 3. (Russian Market Index RTS)

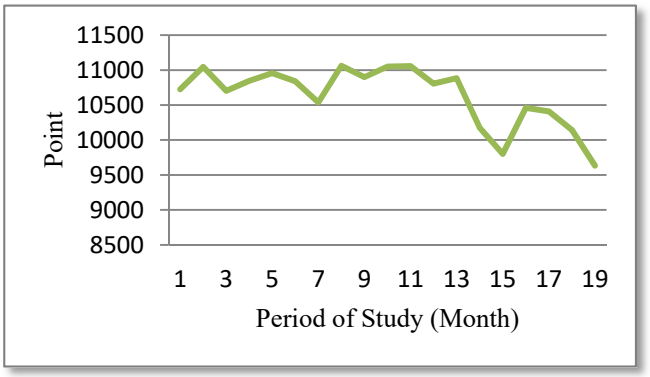

Figure 5. New York Market Index

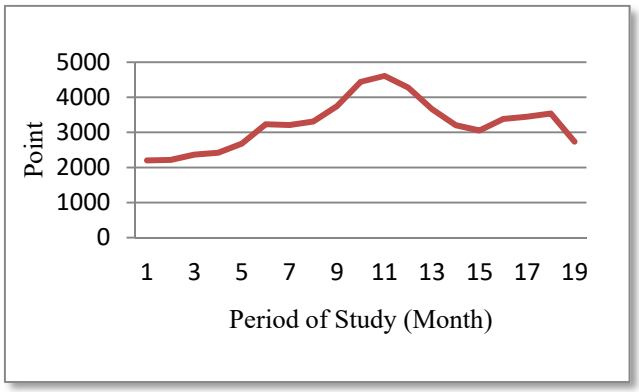

Figure 6. Shanghai Index

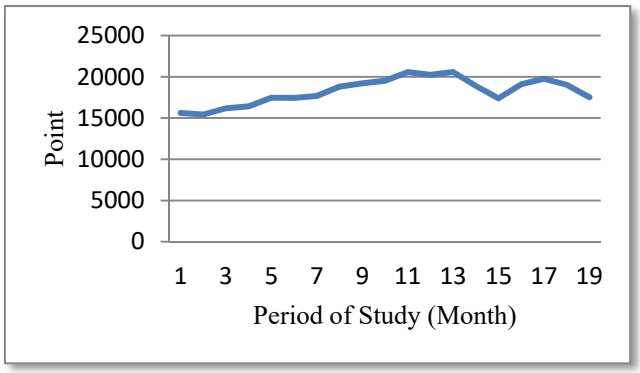

Figure 7. Nikkei Index

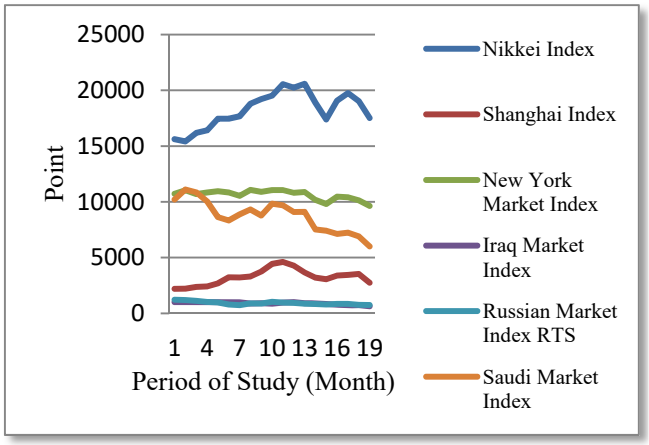

Figure 8. Market Indicators Sample Study

5. Hypothesis Testing

To test the first major hypothesis of the study related to the relationship between fluctuations in oil prices and stock indices in oil-exporting and importing countries, a simple correlation coefficient was used, Pearson, with a significant level of (0.05). The results of the statistical tests indicated that there is a strong positive significant correlation between oil price fluctuations and oil price indicators in oil-exporting countries (Saudi Arabia, Russia and Iraq). The value of the correlation coefficient reached (86%, 93% and 76%) respectively. This proves the correctness of the first sub-hypothesis of the first main hypothesis of the study. Put it differently, there is a positive moral correlation between fluctuations in oil prices and stock indices in the stock markets of oil-exporting countries (Saudi Arabia, Russia, and Iraq). On the other hand, the results of the statistical tests showed a moderate inverse significant correlation between fluctuations in oil prices and the indicators of oil importing countries (China and Japan) except for the United States. The value of the correlation coefficient reached (53% - and 64% -) respectively. The results of the statistical tests also showed a relationship a positive medium correlation between oil price fluctuations and the New York market index in the United States if the correlation coefficient reached 58%. This is due to the reasons mentioned in the analysis that the United States is also an oil-producing country. This proves the validity of the second sub-hypothesis of the first main hypothesis that there is a correlation relationship positive or negative sentiment between fluctuations in oil prices and stock indices on the stock markets of oil-importing countries. These results generally prove the validity of the first main hypothesis of the study that there is a significant correlation between oil price fluctuations and stock indices in the stock market. For the purpose of testing the second main hypothesis of the study related to the presence of a significant effect of fluctuations in oil prices on stock indices in both oil-exporting and oil-importing countries. A simple linear regression model was used for the purpose of testing the effect with a significant level of (0.05). The results of the statistical tests of the regression model indicate an effect of significant fluctuations in oil prices in stock indices in oil-exporting countries (Saudi Arabia, Russia, and Iraq). The determination coefficient reached R ^ 2 (74%, 86%, 58%), respectively, with a test value of (F) equal to (48.073, 103.642, 23.116). Respectively and at a significant level (sig = 0), which is less than 0.05. This means that 74% of the changes that occurred in the Saudi market index and 86% of the changes in the Russian market index RTS and 58% of the changes in the Iraq Stock Exchange index were because of the changes in the price of benchmark oil, Brent mixture. This proves the validity of the first sub-hypothesis of the second main hypothesis of the study that there is a significant effect between fluctuations in oil prices and stock indices in the stock markets of oil-exporting countries (Saudi Arabia, Russia, and Iraq). In oil-importing countries also, the results of statistical tests of the regression model indicate a significant effect of fluctuations in oil prices on the stock indices of oil-importing countries (the United States, China, and Japan). The determination factor reached R ^ 2 (35%, 27%, 41%). In a row, with a (F) test value equal to (8.961, 6.499, 11.810) respectively. At a significant level (sig) equal to (0.008, 0.021, 0.003), which is less than 0.05, this

means that 35% of the changes that occurred in the New York Market Index and 27% among the changes in the Shanghai index and 41% of the changes in the Nikkei index were due to changes in the benchmark oil prices, Brent mix. This proves the validity of the second sub-hypothesis of the first main hypothesis of the study that there is a significant effect between fluctuations in oil prices and stock indices in the stock markets of countries imported oil (the United States, China, and Japan). These results generally prove the validity of the first main hypothesis of the study that there is a significant effect of fluctuations in oil prices on stock indices in the stock market. These results indicate, as mentioned above, that the decline in oil prices has led to a decrease in the national income in the oil-exporting countries (Saudi Arabia, Russia, and Iraq). It led to a decrease in liquidity in the market and thus a decrease in the market value of stocks in general. It means a decrease in the index value. In fact, there is an underpricing assessment of some stocks. The prices of some shares do not reflect the financial accounts of the company, its level of performance and its profits. This case is achieved in cases of economic depression and reluctance to invest, and this case is opposite to the case of (over pricing) that occurs in cases of economic growth and demand for investment.

Table 3. The results of statistical tests between the study variables

No	Study variables	R	R^2	sig	F
1	Brent and Saudi Market Index	0.860 +	0.739	0.000	48.073
2	Brent and Russian Market Index RTS	0.927+	0.859	0.000	103.642
3	Berne and Iraq Market Index	0.759+	0.576	0.000	23.116
4	Brent and New York Market Index	0.588 +	0.345	0.008	8.961
5	Brent and Shanghai Index	0.526 -	0.277	0.021	6.499
6	Brent and Nikkei Index	0.640 -	0.410	0.003	11.810

The Table prepared by the researcher based on the statistical results of the Program SPSS.

6. Conclusions

1. The response to oil price fluctuations varies between stock indices in exporting countries and oil importing countries. Lower oil prices lead to a decrease in the value of stock market indices for oil-exporting countries. This means that the direction of the relationship between the two variables was direct, but in oil-importing countries there is the drop in oil prices. This led to a rise in stock market indicators in some countries, while it led to a decline in the index in others. This refers to the direction of the relationship may be direct and may be opposite between the two variables. This means that the economies of oil-importing countries are affected by fluctuations in oil prices, which vary from one country to another.

2. The reason for the decline in stock indices in some importing countries, namely the United States, is due to the existence of the oil companies sector. This is negatively affected by the decline in oil prices and had a greater effect on the market than other sectors that benefit from the advantage of low cost with lower oil prices, especially transportation and heavy industries.

3. The relationship and effect of oil price fluctuations on stock indices was greater in exporting countries than in oil importing countries. This is what the study results showed.

4. The Russian RTS market index was the most affected by the drop in oil prices among the exporting countries. The Japanese Nikkei index was the most affected by the decline in oil prices among the importing countries.

5. Global oil prices witnessed a significant decline that the market had not witnessed since the mortgage crisis in 2008. The political and economic conditions witnessed by the world had the most prominent effect on that.

6. Oil prices can be used as an indicator to identify financial market trends by investors to build stock investment strategies according to future oil prices.

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