PalArch's Journal of Archaeology of Egypt / Egyptology

THE INFLUENCE OF OIL PRICES ON STOCK MARKET DURING FINANCIAL CRISIS: CASE STUDY OF SAUDI ARABIA AND RUSSIA

Bayan Jaha[1], *Abdelghani Echchabi*[2]

[1]College of Business, Effat University, Qasr Khuzam St., Kilo. 2, Old Mecca Road. P.O.BOX 34689, Jeddah 21478, Saudi Arabia. byjaha@effatuniversity.edu.sa

[2]College of Business, Effat University, Qasr Khuzam St., Kilo. 2, Old Mecca Road. P.O.BOX 34689, Jeddah 21478, Saudi Arabia. aechchabi@effatuniversity.edu.sa

Bayan Jaha, Abdelghani Echchabi. The Influence of Oil Prices on Stock Market During Financial Crisis: Case Study of Saudi Arabia And Russia-- Palarch's Journal Of Archaeology Of Egypt/Egyptology 18(13), 992-1000. ISSN 1567-214x

Keywords: Oil Prices, Consumer, Russia, Saudi Arabia, Stock Market

ABSTRACT

Many studies argued about the impact of oil prices in financial markets. This research aims to investigate the correlation between oil price shocks and stock market behavior using market index data for Saudi Arabia and Russia. These two countries are the world biggest exporters of oil. This study analyzed daily, period ranges from January 2nd, 1995 to May 6th, 2015. The findings revealed that there is a positive relationship between Saudi and Russian stock market and oil prices. Where, financial crisis and Arab uprising negatively influenced stock market. These findings are relevant to portfolio managers, investors, and policy maker to make strategic plans by predicting the future movement of stock markets through the change in oil prices.

INTRODUCTION

Since the stocks are whole of expected future money streams and these incomes influenced by macroeconomic occasions, so it will likewise be affected by oil costs this could be considered as an immediate effect [1]. Likewise, oil costs varieties could in a roundabout way influence securities exchanges through an effect on the financing cost used to markdown the future money streams [2]. This relationship is clarified by the way that rising oil costs are frequently observed as inflationary by approach producers and national banks react to inflationary weights by raising loan fees which influences the markdown rate utilized in the stock evaluating equation [3]

Numerous examinations researched the effect of oil costs on financial enacts and affirmed that oil value changes have critical effect on monetary action. As indicated by Dogrul [4] Oil has essential significance on developing economies and their monetary development. Essentially the connection between mechanical creation development and oil request is high. As such the primary wellspring of expanding interest for oil is nations with snappy monetary development. This expansion sought after ought to be counterbalanced by increment in oil supply or it will result in higher oil costs; raising the expenses of non-oil delivering nations. Furthermore, high oil costs infer inflationary weights which could be controlled by raising loan fees by national bank [5]. As an outcome of high financing costs stock costs will fall since now bonds will be more appealing than stocks. Hence the effect of high oil costs on securities exchange is by all accounts hurtful [6].

Thai-Ha [7] analyzed the bidirectional connection between financial development and oil costs. In the initial segment the creator talked about how the financial development impact oil costs and he commented that the expansion in world monetary development will result in an expansion in oil costs which will pursue with increment in stock returns. At that point, in the second part he talked about the contrary connection which outlines the negative effect on the economy caused by oil spikes. He likewise made reference to that the ascending in oil costs will decrease request on oil and also it adversely influences the monetary development. In any case, the expansion in oil costs in trading nations could be considered as a positive sign while negative for bringing in nations.

The significance of oil fares to Russia's monetary advancement involves much talk. Russia economy is viewed as an oil reliance economy [8]. The separation of the Soviet Union was gone before by an unexpected fall in ostensible unrefined costs in mid-1986, from a normal of USD 33 in the main portion of the 1980s to drifting around USD 16 USD in the second half. In later occasions, the financial blast of Putin's administration with normal yearly GDP development more than 7 percent [8]. One ought to be mindful so as to expect comparable impacts of oil value instability today as those accomplished by the Soviet Union. For the Soviet economy hard money oil pay was the primary cure against foundational imperfections that were making the communist economy progressively infeasible [9].

Hasan Ahmed AL-TALLY [10] in his examination he separated the Saudi financial experience from 1971-2009 in to four fundamental stages. The principal arrange was from1971 to 1979 in this period any adjustment in development of oil cost was compared by a similar change in development of the aggregate GDP on the grounds that the primary wellspring of the economy in this period was the oil part. The second stage was from 1980 to 1989. This period saw the oil blast in 1973 that brought about a gigantic decay experienced around then. The third stage was from 1990 to1999.In this period the economy of Saudi Arabia and the oil costs was contrarily influenced because of the Gulf war and political clash. The fourth stage was the revisions organize, which had seen extraordinary privatization.

Kilian [11] expressed that rising raw petroleum cost is related with a blasting economy reflected in more grounded business execution, which results in an expansion in oil request. Such cases frequently happen when the economy recoups from retreat. As the worldwide interest grabs, it prompts the ascent of essential material costs. To take care of the rising demand, manufacturing plants should get steam and need more assets – like work and fuel for vitality.
As per Kalyanaraman, [12], in view of Bai-Perron test and Sequential F-measurement they demonstrated the nearness of one basic break in the oil information and furthermore one basic break TASI information. He additionally made reference to that the model which recommends cointegration among oil and stock costs is the level move show while different models don't propose the presence of this cointegration. Interestingly Almohaimeed, Harrathi, [13], discovered that oil value unpredictability negatively affected securities exchange returns in Saudi Arabia. As indicated by Jadwa [14], albeit Saudi Arabia economy is oil-based economy, the share trading system does not have a cozy association with worldwide oil advertise. The oil business is ruled by state possessed organization Saudi Aramco and none of the organizations recorded on the Saudi securities exchange have an immediate access to the oil business.

Onour [15] in his examination explored the effect of monetary emergency on oil creating Gulf Cooperation Council (GCC) nations securities exchanges. He discovered that GCC nations had been influenced by money related emergency yet in various degrees dependent on the transparency of the nation capital market to remote speculations and its affectability to unrefined petroleum showcase stuns which declined the introduction of GCC capital markets to outer stuns. Neaime [16] analyzed the effect of the ongoing money related emergency in the MENA area his outcome was that most nations in the locale were influenced by the emergency because of their connection with created nations aside from Tunisia and Saudi Arabia which were less influenced by the emergency. He additionally proposes that Saudi Arabia and Tunisia had built up adequate components of remote trade saves and solid financial position. In addition, Tunisia and Morocco are very connected with French securities exchange while; Saudi Arabia showcase is feebly corresponded with all created value markets.

This paper aims to investigate the impact of oil prices fluctuations and financial crisis on the stock market in the case of Saudi Arabia and Russia. Also, determines the correlation between oil price shocks and stock market behavior using market index data for Saudi Arabia and Russia, since these two countries are the world biggest exporters of oil.

METHODOLOGY

In this study uses both methods qualitative and quantitative. Qualitative method involves looking in-depth at non-numerical data for more understanding of specific background context of a research. While, quantitative method uses statistical analysis to determine the results. This study uses OLS method as a quantitative method in the research. Using OLS it's easy to find the best-fitting regression line and only one best-fitting line.

The least squares method was used because it is much easier to work with mathematically.

Qualitative Method

This part of the investigation incorporates the previse considers that endeavored to research and look at the presence of the connection between oil costs and securities exchange, and the impact of money related emergency and political occasion on them. Likewise thinks about that demonstrated that there is a connection between oil costs and financial development to expand on it the relationship between oil costs and securities exchange.

Quantitative Method

Utilizing the Ordinary Least squares strategy; this paper contemplates the relationship between oil costs and securities exchange. It utilizes everyday information of world unrefined petroleum costs, Saudi securities exchange record, and Russia securities exchange file from the period 02/01/1995 to 06/05/2015 which included 7430 perception. The information was information was possessed from Bloomberg. OLS relapse is focal and meekest system and normally known as figure technique moreover. it is a measurable method which endeavors to discover the capacity which most nearly approximates the information (a "best fit"). In this manner, when all is said in done terms, it is a way to deal with fitting model to the watched information. This model is indicated by a condition with "free" parameters. In specialized terms, the Least Squares strategy is utilized to fit a straight line through an arrangement of information focuses, so the entirety of the squared vertical separations (called residuals) from the real information focuses is limited". So, this study utilizing this model to locate the best attack of the straight line through oil costs and securities exchanges. Giving the share trading system as needy variable where oil costs, money related emergency and Arab uprising autonomous factors. The explanation for choosing the information from the period second of January 1995 to 6th of May 2015 is to incorporate the information of periods that saw the budgetary emergency which is from 29th of July 2007 and till 30th of June 2009 and Arab uprising which began at eighteenth of December 2010 and proceeded until today.

RESULT AND DISCUSSION

Table1 reports the enlightening insights of the day by day Saudi and Russian stock return arrangement and global oil costs changes. The example means for stock return arrangement and oil costs every day changes are 5506.125, 549.8422, and 53.27533 separately. In perspective of the most extreme and least estimations of both arrangement it very well may be noticed that variances in stock returns in Saudi Arabia and Russia have been more noteworthy than of oil costs over the time of concentrate in more subtle elements Russian securities exchange has the biggest change extend. The estimation of standard deviation is (3783.189) for Saudi securities exchange returns, (373.6554) for Russian market returns and, (31.93882) at oil costs. This estimation of standard deviation in the two markets thinks about high and could be a proof of high unpredictability and hazardous nature of oil market and securities exchange. The nearness of positive kurtosis shows a higher

likelihood of getting positive returns (or substantial value development) for speculators in Saudi and Russian securities exchange. Saudi securities exchange Jarque-Bera of (1166.805), and (535.3965) for Russia, and (626.7123) at oil costs.

Table 1: Descriptive data

Element	Saudi Stock	Russia Stock	Oil Price
Mean	5506.125	549.8422	53.27533
Median	5782.315	489.3150	46.5800
Maximum	20634.86	1641.520	145.2900
Std Dev	3783.189	373.6554	31.93882
Skewness	0.903923	0.620701	0.450119
Kurtosis	3.707560	2.566026	1.898209
Jarque- Bera	1166.805	535.3965	626.7123
probability	0.00	0.00	0.00
sum	40910509	4085328	395835.7
sum Sq. Dev	1.06E+11	1.04E+09	7578237
Observation	7430	7430	7430

Table 2 represents the findings of the relationship of stock market to different variables. According to Table 2, Saudi stock market is the dependent variable and oil prices, financial crisis and Arab uprising are the independent variables. For more details, this study going to take each variable and explain its relationship with Saudi stock market. First and most important variable is oil prices. As Table and Table 2 show oil prices coefficient of (1.182012) which indicates the existence of positive relation between oil prices and Saudi stock market. This study suggests that this positive relation between oil and stock market refers to the nature of the Saudi oil dependence economy. From an economic view when oil prices increase Saudi Arabia as an exporting country will increase its expenditure resulting in a n increase in national income, firms profits, and at the end stock value as in Kalyanaraman [12] study where they mentioned that increase in oil prices of exporting countries will increase the country income and thus the country investments drive up the expected cash flow on their stock. In contrast with the study that have been done by Jadwa [14], which stated that stock market is diversified and not all sectors has exposer to oil prices. Hence not all sectors stock value will be affected with oil prices.

On the other hand, decrease in oil prices will negatively affect the Saudi Stock market due to Moving to financial crisis and Arab uprising. Their negative relation to stock market by their coefficients which are (-0.254033) for financial crisis and (-0.369608) for Arab uprising. This could be due to the significant deterioration that happened in global stock markets, in addition to the sharp decline in prices of primary commodities, including oil. In consequence the Saudi market has a close link to the oil price so the fall of oil prices will be followed by decrease in stock markets. Also, due to the crisis and Arab uprising investors will lose their confidence and become more cautious to stock market. In other words, oil prices affect stock prices in Saudi

Arabia similarly political and economic shocks that influence Saudi Arabia can have an impact on oil prices.

Table 2: The relationship of Saudi stock market to the three variables

Variable	Coefficient	Std Error	-Statistic	rob
C	3.993454	0.029235	36.5974	.0000
OP	1.182012	0.008329	41.9119	.0000
FC	-0.254033	0.015668	16.21344	.0000
AU	-0.369608	0.013058	28.30602	.0000
R-squared	0.800292	Mean dependent var	.347362	
Adjusted R-squared	0.800211	S.D. dependent var	.765512 S.E.	
regression	0.342166	Akaike info criterion	.693498	
Sum squared resid	869.4195	Schwarz criterion	.697220	
Log likelihood	-2572.347	Hannan-Quinn criter.	.694777	
F-statistic	9919.434	Durbin-Watson stat	.005746	
Prob(F-statistic)	0.000000			

From analyzing the results in Table 3, Russian stock market has significant positive relation with oil prices. With a coefficient of (1.311564) and it is similarly to Saudi Arabia finding oil prices are positively connected with stock market. That could be due to the sensitivity of Russian economy to oil prices and as a result stock market would also inherit this sensitivity to oil prices. In addition, Russia is one of the largest oil exporting countries in the world and as mentioned before in the literature according to Kalyanaraman [12], oil exporting countries stock markets has a positive relationship with oil prices due to the increase of the country income and expenditure on investment resulting in higher stock value. Getting back to the point and comparing the R-square of Saudi Arabia stock market which is (0.800292) and Russia of (0.789931) to different variables. It is notable that Russia has weaker correlation with the selected variables compared to the Saudi Arabian market.

Table 3: The relationship of Russian stock market to the three variables

Variable	Coefficient	Std Error	-Statistic	rob
C	1.170192	0.033761	4.66065	.0000
OP	1.311564	0.009619	36.3554	.0000
FC	-0.113939	0.018094	6.297150	.0000
AU	-0.455592	0.015079	30.21335	.0000
R-squared	0.789931	Mean dependent var	.007392	
Adjusted R-squared	0.789846	S.D. dependent var	.861952 S.E.	

Variable	Coefficient	Std Error	-Statistic	rob
regression	0.395140	Akaike info criterion	.981386	
Sum squared resid	1159.464	Schwarz criterion	.985108	
Log likelihood	-3641.849	Hannan-Quinn criter.	.982665	
F-statistic	9308.114	Durbin-Watson stat	.006945	
Prob(F-statistic)	0.000000			

CONCLUSION

This research paper investigated the relationship of stock market to oil prices, financial crisis and Arab Uprising in the Case of Saudi Arabia and Russia; providing data from 2 January 1995 to 6 of May 2015. Comparing the effect of oil prices on the two biggest oil exporting counties stock market is the aim. The finding showed the both countries stock markets has a positive relation with oil prices with different degrees for instant R-square for Saudi Arabia was greater than the R-square for Russia. Which means that the relation of oil prices and stock market for Russia is stronger than it is for Saudi Arabia. This may be due to the regulation and policies of each country. For example, in the past years Saudi Arabia was to some degree strict to foreign investments but its working on slowly change these policies and regulations. Moving to Financial crisis as the rest of the world countries Russia and Saudi Arabia stock markets has the same negative relation to financial crisis but for different reasons. Saudi Arabia was more affected by financial crisis from Russia this could be due to the pegged currency of Saudi Arabia to Us dollar. So, any fall in US dollar fill affect Saudi Arabia currency as a consequence its markets. So, when global financial crisis stated from US it hammily affected their economy and markets.

ACKNOWLEDGMENTS

The authors would like to thank the College of Business, Effat University for its unconditional support.

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	& nation			
	Assoc. Prof., Dr. Abdelghani Echchabi, Effat University, Saudi Arabia	aechchabi@effatuniversity.edu.sa		
	Student, Bayan Jaha, Effat University, Saudi Arabia	byjaha@effatuniversity.edu.sa		