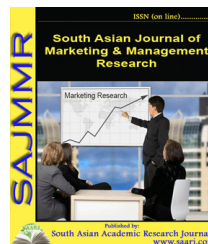




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TRENDS IN CRUDE OIL PRICE AND ITS ECONOMIC IMPACT

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ABSTRACT

Oil is vital strategic energy to ensure the growth of modern industry and economy, as well as a valuable fuel. Oil price fluctuation is often viewed as a barometer of the global economy, with any transition being a hot topic to be concerned about and debated broadly in political and economic circles of every region. With the exponential growth of the global economy, crude oil is becoming increasingly important in terms of national stabilization. During an emergency, though, oil prices fluctuate significantly. Growing global value and demand of Oil has resulted in a highly dynamic supply and price structure. The aim of this paper is to provide an overview of the crude oil market and the evolution of the oil price mechanism in the long and short term. This paper examined the fluctuations of international oil prices in a systemic manner. Crude oil prices therefore, fluctuate over time and cannot be traced to a particular market driver because it has spawned a massively complex market structure that is based on a variety of factors. The volatility of crude oil price fluctuations has a direct effect on economic stability. Futures market contracts, commodities market speculators, refining capacity, the valuation of the dollar, and the weather all contribute to the dynamic market environment.

KEYWORDS: Oil Price, Crude Oil, OPEC, Economy

INTRODUCTION

Crude oil is an important commodity for every economy, and as economies expand, so does the demand for crude oil, causing India to become increasingly reliant on crude oil imports. The price of crude oil is almost always lower than the import duty; it is the import duties that make it more expensive for the average person. Crude oil is not only the most traded commodity on the

planet, but it is also the most important source of energy for economic activity. Supply and demand, which are followed by regular oil-related incidents and rising speculation of crude oil financed goods, decide the long-term pattern of oil prices. Around the same time, oil price variations have become more pronounced, and oil market volatility has risen. Economic development will be harmed by the uncertainty caused by oil price fluctuations, which will increase production costs or cause investment behavior to change, resulting in a negative impact on economic activities. Crude oil is one of the most important commodities in the world economy, and it is used in industries ranging from transportation to power generation, either directly or in refined forms. Although physical crude oil deals are common and often carried out under long-term supply contracts, future markets account for the bulk of trade.

This suggests that crude oil derivatives may play a larger role in price discovery. Crude oil is a vital advantage in the global economy, and as such, its market dynamics and relations with other commodities are very important to most countries. In the literature, economic factors have been widely analyzed. At the beginning of the twenty-first century, the crude oil prices have undergone significant shifts. In the international markets, a number of new features have emerged. For example, OPEC's ability to influence oil prices has waned, global energy markets have become extremely volatile and risky, and Brent and WTI prices have diverged significantly since 2010. The need to investigate the dynamics of international crude oil prices has arisen as a result of these new market conditions. The movement of crude oil prices is influenced by a variety of factors. The mysterious behavior of the crude oil price movement is a result of the dynamic complicated interactions among these factors, whose characterization and prediction has remained one of the most interesting and intriguing research issues in the field of economic and financial analysis. This research examines the current state of crude oil prices in India, as well as their imports. This research attempted to determine how the rise in crude oil prices has impacted the Indian economy, as well as a comparative analysis of Brent crude oil prices over the last decade.

LITERATURE REVIEW:

The determinants of prices of crude oil are subjective in nature and are in a subject of debate. There are various points of view on the factors that influence crude oil prices. One viewpoint is that the behavior of oil markets is due to global forces of demand and supply, while another is that of oil traders, OPEC, and yet another is that of a surge in oil futures trade over the past decade. All three theories (Krichene, 2006; Dees et al., 2007) that use the equilibrium equation of demand and supply to explain the increase in oil prices include arguments on both sides. Analysts also consider the successful demand for oil by emerging economies, especially India and China. But Dees et al. (2008); Kaufmann & Ullam (2009) use the role of speculation and the power of OPEC. Studies also determine the role of speculation and its influence on the price of oil in the past (Einloth, 2009; Shu-ping, 2011). As shown by (Hamilton, 2008; Dees et al., 2008), the determinants of oil prices do not have to be distinct or different from one another, but can complement or go together. Moreover Hamilton (2008) discusses how fluctuations in oil prices are caused by major factors such as uncertainty about potential supplies whenever the rate of rise in demand is much greater than the rate of increase in crude oil production.

Above this Kim (2005) investigates the unequal and proportionate impact of macroeconomic factors on the rise in oil prices. His analysis study findings firmly established that price has a negative impact on macroeconomic variables. Additionally According to Lee et al. (1995), the unpredictable increase in oil prices is more detrimental to macroeconomic growth indices than

the recurring yet expected market fluctuation. The change in wholesale oil prices creates consumer ambiguity, causing stockholders and consumers to lose interest in their upcoming investment and depletion prospects (Edelstein & Killian, 2009; Raza, 2016). After 1973, the analysis show experiential indicator of approving resilient negative affiliation between oil price shock and market proclivity to extend has been consistently identified in collected works. According to Ahmad (2013), the significant frequencies of contact between oil price and economic growth operation have been identified in economic theory, specifically the typical supply-side effect, demand side effect, affluence propagation effect, actual equilibrium effect, inflation effect, segment adjustment effect, and unanticipated effect. On the other hand, researchers Möbert (2007); Brown & Yucel (2002) demonstrated that the supply side network better elucidates the inverse relationship between oil price and result as well as the optimistic relationship between oil price and inflation.

According to Hassan & Zaman (2012), there is a negative and significant relationship between oil prices and trade balance in the short and long term. Zhang & Wei (2010) show that there is a long-term symmetry between oil and gold prices and that crude oil prices shift linearly. Park & Ratti (2008) agreed that oil price volatility has a negative impact on oil wholesalers while having a favorable impact on oil exporting countries. Killian (2009) distinguished between various forms of oil shocks. While Hamilton (2009) clarified the oil shocks of (2007-2008), Kilian and Hicks (2013) demonstrated the impact of an economic boom in developing markets on the real price of oil. Others like Askari & Krichene (2010) measured the impact of monetary policy, the exchange rate, and gas prices on the oil market, Peersman & van Robays (2012) confirmed cross-country variations in reactions to oil price shocks. Similarly Ratti and Vespignani (2015) evaluated the impact of the oil supply industry on oil prices. The close relationship between oil price volatility and monetary policy, the market cycle, and real economic activity has recently received a lot of attention. For example, Kormilitsina (2011) develops a complex stochastic general equilibrium model for the oil market and describes the best monetary policy responses to an oil price shock. Moreover Taghizadeh-hesary & Yoshino (2014) create an oil demand and supply model that takes monetary policy into account. As a result, understanding the origins of oil price fluctuations is critical for policymakers, the private sector, and individuals. the impact of oil price shocks on actual economic activity under the assumption of perfect market competitiveness has been described by Finn (2000). According to Alekhina & Yoshino (2018), fluctuations in oil prices have a direct effect on the macroeconomic factors and monetary policy of an energy exporting country.

OBJECTIVES OF THE STUDY

- To study the impact of fluctuations in crude oil prices in trade deficit.
- To study the Impact of oil price fluctuation on Indian economy.
- To study the trend of crude oil price fluctuations in Indian economy (2011-2021).
- To examine the factor determinants (OPEC crude oil prices, crude oil imports in India, crude oil consumption in India) of crude oil price in India.

METHODOLOGY

The research analyzes variations in crude oil prices and their effect on the Indian economy using secondary data from different sources. This research focuses on the immediate effect of oil prices on the WPI and, as a result, the country's GDP. Quarterly data from 2011 to 2021 were used for

the analysis, which was accessed from the Reserve Bank of India website and the United States Information Administration database.

DISCUSSIONS

Crude Oil Price Trend

India, the world's third-largest oil producer after the United States and China, imports approximately 1575 million barrels of crude oil per year, and a dollar rise in oil prices will increase import bills by approximately \$ 1.6 billion (10,000 crores) a year. India depends on imports for more than 80% of its oil needs. Brent crude oil prices are flirting with \$70 per barrel and have risen by about 33% so far in 2021. Higher crude oil prices have an effect on a wide range of industries. High oil prices, for example, bode well for producers such as the Oil and Natural Gas Corporation (ONGC) and Oil India Limited (OIL).

The rise in crude oil prices would bring upward pressure on petrol and diesel prices across the worlds, which are already at all-time highs as a result of the recent surge in international crude prices as well as central and state levies. Crude oil is vital to global industrial development. Also in the most promising scenario for renewable energy growth, crude oil is expected to be the most important source of energy for decades to come; crude oil price volatility has a major impact on economic activity, stock exchange reporting patterns, bond markets, and national security. Around the same time, crude oil has clear political and financial implications. Crude oil prices will fluctuate due to certain significant impact activities, the currency exchange rate, and investor speculation. According to several surveys, the impact of oil prices often leads to economic stagnation and inflation. Oil price shocks have varying impacts on short-term and long-term economic growth. Oil price changes have a direct effect on the supply of fossil fuels such as natural gas in other fields of energy. If we can get a better understanding of the developments in oil price increases, we will be able to reduce the impact of crude oil prices on economic development, policymaking, bond markets, and national security.

Crude Oil and Indian Economy

The rise in crude oil prices is bad news for India's state finances, coming at a time when the economy is still struggling to rebound from the COVID-19 pandemic. According to a Reserve Bank of India (RBI) survey, any \$10 rise in oil prices results in an additional \$12.5 billion deficit, or approximately 43 basis points of India's GDP. As a result, any \$10 rise in oil price raises the CAD/GDP ratio by 43 basis points. Hence, when crude prices hit \$85/ barrel the deficit on account of oil balloons to 106.4 billion, which is 3.61 percent of India's GDP.

In Table 1, we show the deficit value due to oil under various oil price scenarios. In the worst-case situation, as crude oil prices reach USD 85/barrel (row 4 table 1), the oil deficit explodes to USD 106.4 billion, or 3.61 percent of India's GDP. Table 1 show that any USD 10/barrel rise in crude oil prices results in an extra USD 12.5 billion deficit, or approximately 43 basis points of India's GDP. As a result, any USD 10/barrel rise in crude price raises the CAD/GDP ratio by 43 basis points.

TABLE 1. IMPACT OF CRUDE OIL PRICES ON CAD

Price crude (USD/Barrel)	Trade Deficit Crude (% of GDP)	Trade Deficit crude (Billion USD)
55	-2.33	-68.9
65	-2.76	-81.4
75	-3.18	-93.9
85	-3.61	-106.4

Source: Reserve Bank of India

Given India's CAD's exposure to global crude prices, the next obvious issue is whether high GDP growth will mitigate the negative effect of an oil price shock. To put this to the test, we examine shifts in the CAD/GDP ratio in relation to (w.r.t.) nominal GDP growth and discover that a 100-bps rise in GDP growth rate will only shave off 2 bps in the CAD/GDP ratio.

The results in the table 2 shows that crude oil markets maintained high price levels in 2011, with the spot price of Brent averaging \$102.58 per barrel, the first time the global standard averaged more than \$100 per barrel, and that real crude oil prices in 2012 stayed high for the second year in a row. Price volatility in 2013 was at its lowest level since 2006, when many of the variables that had been causing oil price volatility were mitigated. Crude oil prices dropped sharply in the fourth quarter of 2014, as strong global supply outpaced demand, and averaged less than \$50 a barrel in 2015. In 2016, the average crude oil price fell to \$38.70, the lowest level in 13 years. Despite comparatively high US crude oil supply and output curtailments by members of the Organization of Petroleum Exporting Countries (OPEC), strong global demand helped crude oil price increases in 2017. Brent crude oil averaged \$57.94 a barrel in 2019, which was \$3.4/b more than the previous year's average. The first half of 2020 saw sharp falls in global petroleum demand and turbulent crude oil markets as a result of the COVID-19 pandemic; however, the second half of the year saw reasonably steady prices as demand started to rebound. Crude oil prices are forecast to average \$70/b in the current year 2021.

TABLE 2. CRUDE OIL PRICE SINCE LAST DECADE

Year	Average price P/B (quarterly) (\$)		Average price P/B (yearly) (\$)
2011	Q1	\$111.55	\$102.58
	Q2	\$127.97	
	Q3	\$118.97	
	Q4	\$122.26	
2012	Q1	\$124.80	\$101.09
	Q2	\$116.53	
	Q3	\$111.41	
	Q4	\$111.20	
2013	Q1	\$111.97	\$98.12
	Q2	\$110.59	
	Q3	\$116.41	
	Q4	\$104.60	
2014	Q1	\$105.32	\$89.63
	Q2	\$109.73	
	Q3	\$104.14	

	Q4	\$79.46	
2015	Q1	\$51.92	\$46.36
	Q2	\$62.35	
	Q3	\$50.50	
	Q4	\$41.96	
2016	Q1	\$31.99	\$38.70
	Q2	\$44.35	
	Q3	\$45.11	
	Q4	\$48.37	
2017	Q1	\$51.82	\$48.98
	Q2	\$49.90	
	Q3	\$50.94	
	Q4	\$58.70	
2018	Q1	\$61.63	\$61.34
	Q2	\$67.90	
	Q3	\$69.33	
	Q4	\$57.68	
2019	Q1	\$57.65	\$57.94
	Q2	\$64.93	
	Q3	\$58.94	
	Q4	\$56.81	
2020	Q1	\$44.61	\$37.24
	Q2	\$27.05	
	Q3	40.43	
	Q4	\$40.80	
2021	Q1	\$55.23(expected)	\$70
	Q2	\$58.74(expected)	
	Q3	\$52.89(expected)	
	Q4	\$51.91(expected)	

Source: US information Administration

Key Factors behind the Sharp Rise in Crude Oil Prices

(a) OPEC Supply Cuts :

Oil prices have risen as a result of supply cuts by the Association of Petroleum Exporting Countries (OPEC) and allied producers in the collective OPEC+.

(b) US Stimulus:

The rise in oil prices was also fueled by rising expectations of a stimulus package from the United States. President Joe Biden advocated for the first major political accomplishment of his presidency, appealing to a bipartisan coalition of elected authorities for assistance with his \$1.9 trillion budget. The stimulus is supposed to boost economic activity and assist millions of displaced people as part of the Coronavirus Relief Program.

(C) Strong Demand Outlook:

Demand for crude oil is expected to grow higher as global economies seem to rebound from the COVID-19 pandemic and industries around the world open up.

Analysis of Oil Price Fluctuations

According to the classic economic model of price determination in microeconomics, global oil prices are dictated by the powers of supply and demand. Demand for oil is strongly dependent on global macroeconomic conditions. So oil price expectations are the primary determinants of how firms in the market deploy their capital. Incentives are created by prices, which affect behaviour. This behavior ultimately feeds back into the supply and demand equation, which determines the price of oil. Oil price fluctuations are always drastic because both supply and demand for oil are not particularly open to price shifts. Furthermore, fluctuations in oil prices frequently have an effect on the rest of the economy. High oil prices indicate a boom for the oil sector and, in many cases, a bust for other sectors. Everyone who drives a conventional car now needs to spend extra for petrol, which means they have less discretionary money for other purchases. Higher petrol prices also have a greater effect on those with smaller incomes. But the high cost of oil also led to great improvements in efficiency, which decreased demand for energy on a per-person basis.

Demand:

Crude oil demand has been increasing, with varying degrees of increase in 1999, 2000, 2003-2007, and 2010. The primary cause of the increase in crude oil demand is the manufacturing sector of developing market economies, which primarily includes countries such as India, China, Latin America, and the Middle East. It is typical for economic development to travel in tandem. According to several recent reports, the rise in crude oil prices since 2003 is mostly due to increased demand for crude oil (Hamilton 2009; Hicks and Killian 2009; Wirl, 2008). Rising crude oil prices in 2010 and 2011 demonstrate that rapidly increasing demand in developing markets can be expected to remain a significant crude oil price determinant, indicating that the crude oil price is highly income elastic. Due to the difficulties in calculating the price elasticity of demand for crude oil, a popular framework has been using reduced-form demand models. The majority of studies notice strongly price inelastic demand in the short run and more elastic demand elasticity (though still less than unity) in the long run. Cooper, (2003), for example, has broad coverage for crude oil price elasticity forecasts in 23 countries (mostly in the OECD). Hamilton (2009) bases his study on inelastic short-run production (1970-1997). Fuel consumption surveys criticize the priori restrictions of demand functions for estimating short and long run elasticity for energy products including the short run price elasticity for gasoline demand (Cuddington & Dagher, 2015; Dahl & Sterner, 1991).

Supply:

Crude oil is a finite and non-renewable natural resource. In reality, the cost of an exhaustible resource rises over time. As a result of the rise in crude oil prices, production unexpectedly increased from 79.5 mb/d to 83.1 mb/d from 2003 to 2007, however, the supply of crude oil remained stagnant during the period (2005-2007), despite price increases provided as an opportunity to increase demand. The production of oil is mostly dependent on OPEC and Middle Eastern countries. Ramcharan (2002) measured supply price elasticity using Griffen's log-linear supply model (1985). Kaufmann, (2008) investigated whether crude oil prices were influenced in part by refining capacity, non-linearities in supply conditions, and preferences during price increases (2004-2006). Dees et al. (2007) described crude oil prices as a function of OPEC

ability, OECD crude oil supplies, OPEC quotas, and quota cheating, and their model performed well in sample (1986-2003), but under-predicted real oil prices out of sample. Forecasting OPEC and non-OPEC demand increases and real oil prices (Sharma et al.,2012; Ratti & Vespignani, 2015).

OPEC Power:

Oil rates plummeted in the spring of 2020 as a result of the COVID-19 pandemic and global recession. OPEC and its partners committed to historic supply cuts to keep markets stable, but they fell to 20-year lows. Saudi Arabia is the largest oil producer in OPEC countries, and it has an agreement with Mexico and Venezuela to control crude oil production. In October 1999, the price of crude oil had more than doubled to \$23.45 a barrel, up from \$11 in December 1998. In 2000, the Organization of Petroleum Exporting Countries (OPEC) established a price band of \$22 per barrel to \$28 per barrel, with the expectation that its members must change their supply to maintain the price within the range of the OPEC crude oil basket. This stance proves to be an ineffective move, as crude oil prices rapidly raise to more than \$35 per barrel in September 2008.

OPEC accounts for approximately 40% of global crude oil demand and approximately 55% of exports, as well as more than two-thirds of global crude oil reserves. Since the 1980s, OPEC's position has diminished due to the decline of OPEC's global market share, the advancement of efficient energy consumption technologies, and the emergence of an efficient spot market. Nonetheless, OPEC's market dominance was restored in 2003 as a result of surging crude oil demand. As oil is a critical source of energy, OPEC still tries to keep oil prices moderate. As a result, OPEC cuts crude oil production when crude oil prices are low and raises crude oil production when crude oil prices are high (Breitenfellner et al., 2009; Alyousef, 1998; Cooper, 2003; Kumar, 2014; Hidhayathulla & Rafee, 2014). The ramifications of OPEC's market influence the world market price of crude oil, and to what degree OPEC is the primary explanation for the world market price of crude oil. Despite OPEC's considerable control, there are other factors that will affect the price of crude oil through demand and supply restrictions dependent on empirical effects, the key factors that would impact crude oil in the long run and they are global demand, future supply, and the price of crude oil (highly uncertain to remain stable). OPEC is the dominant player in the world's crude oil market in a similar vein, Swadimath, Kumar & Joshi (2013); Gupta, & Goyal (2015); Griffin (1985) conducted research on the rise and effect of crude oil prices. Main objectives of their study were to decide what influences crude oil prices, and for this purpose he discovered that the factors that would affect crude oil prices are supply, inventory, demand, and speculation. The researchers mentioned that increases in crude oil prices are mostly caused by OPEC policies, conflicts, and fluctuations in the value of the US dollar, as crude oil is traded in US dollars. Many researchers have attempted to ascertain the variables that influence crude oil price volatility. There are two perspectives on the determinants of crude oil prices. One viewpoint is based on basic factors such as demand and supply, while the other is based on other factors such as pricing control, OPEC decision (sanction), and geopolitical uncertainty.

MAJOR FINDINGS

- Amid price swings caused by global economic cues, crude oil is one of India's most important imported commodities.
- As the price of crude oil rises, so does the trade imbalance caused by crude.

- The crude oil prices have an effect on industrial output growth, which in turn has an impact on the country's economic growth, owing to the country's high inflation rate.
- One of the causes is that the amount of crude oil imported is large due to high demand.
- Oil demand is heavily influenced by global macroeconomic factors.
- The rise in crude oil prices would place pressure on gasoline and diesel prices across the world.
- The direction of crude oil prices is influenced by a variety of factors.
- Crude oil is critical to global industrial productivity.
- Crude oil prices fluctuate due to changes in the dollar exchange rate and consumer speculation.
- Crude oil futures play a critical role in the market discovery process.
- The impact of oil prices often causes economic stagnation and inflation.
- Changes in crude oil prices have a major impact on economic development.

CONCLUSION:

As we all know, India is a net importer because our imports exceed our exports. As a result, India's growth will be heavily reliant on how much we pay for imports. The least we pay for imports, the more global prosperity we will achieve. India imports many essential commodities, including crude oil, edible oils, and gold. Crude oil prices are extremely unpredictable, which has contributed to some of the financial turmoil in the Indian economy. The crude oil market pattern report was carried out to investigate whether there are so many variations in crude oil prices. However, the global rally in Brent crude oil is just one cause in fuel prices reaching all-time highs. With auto fuel prices between 90 and 100 cents per gallon in several cities around the country, all eyes are turning back to the punishing central government and state taxes that account for a sizable portion of what customers spend at the fuel refill station.

Oil marketing firms in India, such as Indian Oil Corporation, are legally able to set their own petrol and diesel prices based on foreign prices. Since state and central taxes account for a large portion of the retailing costs, Indian consumers do not see the advantage of price regulation. This has been particularly evident in the last year, when the price of global oil has been topsy-turvy due to the COVID-19 pandemic. Even though the price of India's oil basket fell to \$19 in April 2020, auto fuel prices fell by an average of a little more than 6 in the case of both petrol and diesel. In reality, the government decided to lift the excise duty on petrol (13 per litre) and diesel (15 per litre) in two increments in March and May 2020 to shore up revenues in the aftermath of the lockdown. The research seeks to identify the factors that affect oil prices, either domestically or internationally. The study considers a quarterly data set for all the variables from (2011 to 2021) with a prime motive to estimate the effect of variables on oil prices.

IMPLICATIONS:

Crude oil markets have a huge effect on world economies, either directly or indirectly. However, a rise in crude oil prices raises the prices of nearly all consumable and non-consumable goods. Any increase in the price of crude oil has a negative effect on a country's GDP growth. The Indian economy is not immune to the effects of changes in crude oil prices. The demand for petroleum-related goods in India is rapidly growing, resulting in a rise in crude oil imports. In the event of an increase in crude oil costs, a shock or impulse is apparent, paving the way for the

strengthening of energy efficient mechanisms in order to minimize reliance on petroleum products.

REFERENCES:

1. Gupta, P., & Goyal, A. (2015). Impact of oil price fluctuations on Indian economy. *OPEC Energy Review*, 39(2): 141-161.
2. Alekhina, V., & Yoshino, N. (2018). Impact of world oil prices on an energy exporting economy including monetary policy (No. 828). ADBI Working paper.
3. Ahmad, F. (2013) the effect of oil prices on unemployment *Business and economic journal*, 4(1):43-57.
4. Askari, H., & Krichene, N. (2010). An oil demand and supply model incorporating monetary policy. *Energy*, 35(5): 2013-2021.
5. Breitenfellner, A., Cuaresma, J. C., & Keppel, C. (2009). Determinants of crude oil prices: supply, demand, cartel or speculation. *Monet Policy Econ Q*, 4(4): 111-36.
6. Sharma, A., Singh, G., Sharma, M., & Gupta, P. (2012). Impact of Crude oil Price on Indian economy. *International Journal of social sciences and interdisciplinary Research*, 1(4):44-95
7. Brown, S.P.A. & Yucel M. K. (2002). Energy prices and aggregate economic activity an interpretative survey, *The quarterly review of Economics and finance*, 42(2):193-208
8. Cooper, J. C. (2003). Price elasticity of demand for crude oil: estimates for 23 countries. *OPEC review*, 27(1): 1-8.
9. Cuddington, J. T. and Dagher, L. (2015). Estimating short and long run demand elasticities: A primer with energy sector applications, *Energy Journal*, 36(1):185-209.
10. Dees, et al., (2007) Modelling the world oil market, assessment of a quarterly Econometric Model. *Energy policy*, 35(1):178-191
11. Dahl, C. and T. Sterner (1991). Analyzing gasoline demand elasticities: A Survey, *Energy Economics*, 13(3): 203-210.
12. Edelstein, P. & Kilian L. (2009) How sensitive are consumer expenditures to retail energy prices? *Journal of monetary economics*, 56(6):766-779.
13. Griffin, J. M. (1985). OPEC behavior: a test of alternative hypotheses. *The American Economic Review*, 75(5): 954-963.
14. Hamilton, J.D. (2009). Understanding crude oil prices. *The energy journal*, 30(2): 179-206.
15. Hassan, S.K. & Zaman K. (2012). Effect of oil prices on trade balance: *Economic Modelling*, 29: 2125-2143.
16. Kumar, M. (2014). The impact of oil price shocks on Indian stock and foreign exchange markets. *ICRA Bulletin: Money & Finance*, 57-88.
17. Kaufmann, R.K. (2008) Oil prices, the role of Refinery utilization, Future market's and non-linearities, *Energy Economics*, 30:2609-2622.
18. Killian, L. (2009). Not all oil prices shocks are alike: Disentangling demand and supply shocks in the crude oil market, *American Economic Review*, Vol.99(3):1053-1069.

19. Kim, K. S. (2005). Impacts of foreign shocks on domestic macroeconomic fluctuations. Policy References, (05-06).
20. Kilian, L. and Hicks, B. (2013). Did unexpectedly strong Economic growth cause the oil price shock of 2003-2008? Journal of Forecasting, 32(5): 385-394.
21. Kormilitsina, A. (2011). Oil price shocks and the optimality of monetary policy. Review of Economic Dynamics, 14(1): 199-223.
22. Lee, K., Ni, S., & Ratti, R. A. (1995). Oil shocks and the macroeconomy: the role of price variability. The Energy Journal, 16(4).
23. Möbert, J. (2007). Crude oil price determinants (No. 186). Darmstadt discussion papers in economics, 32.
24. Peersman, G., & Van Robays, I. (2012). Cross-country differences in the effects of oil shocks. Energy Economics, 34(5): 1532-1547.
25. Park, J. & Ratti, R. A. (2008). Oil price shocks and stock markets in the US and 13 European countries. Energy Economics, 30: 2587-2608.
26. Ratti, R. A., & Vespignani, J. L. (2015). OPEC and non-OPEC oil production and the global economy. Energy Economics, 50: 364-378.
27. Hidayathulla, A., & Rafee, M. (2014). Relationship between crude oil price and rupee, dollar exchange rate: An analysis of preliminary evidence. IOSR Journal of Economics and Finance (IOSR-JEF), 3(2): 1-4.
28. Ramcharan, H. (2002). Oil production responses to price changes: an Empirical application of the competitive model to OPEC and Non-OPEC countries. Energy Economics, 24: 97-106.
29. Swadimath, U. C. Kumar, A. D. K. & Joshi, P. B. (2013). Rise and impact of crude oil price in India. International journal of marketing, financial services & management research, 2(1): 82-91.
30. Taghizadeh-Hesary & N. Yoshino. (2014). Monetary policy and oil price determination: An Empirical Analysis. OPEC Energy Review, 38(1): 1-20.
31. Zhang, Y. J., & Wei, Y. M. (2010). The crude oil market and the gold market: Evidence for cointegration, causality and price discovery. Resources Policy, 35(3): 168-177.