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"Rising prices of petrol and diesel in India since 2014: An Analytical Study"

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ABSTRACT
With the rapid growth in economy, India has been third largest importer of crude oil in the world surpassing china in mid-2020 and fulfils over 84% of its oil requirement through import. This paper attempts to study the causes for rising prices of petrol and diesel and its effect on Indian economy. Rising prices of crude oil put severe pressure on the economy, the cause being; demand and supply equation; OPEC policy; hefty taxation levied by government on petroleum products and exchange rate of rupee against dollar. It has been found that the rising prices of fuel have several implications in term of pushing up manufacturing cost; high inflation rate; low GDP growth, increase in current account deficit (CAD) & fiscal imbalance, effect on industries and rise in transportation cost and essential commodities. It has been concluded that international crude oil prices has nothing to do with retail prices of petrol and diesel but the real culprit is taxation policy of both central and state government.

INTRODUCTION
The recent rise in petrol and diesel prices in India has drawn everyone attention towards the role of international crude oil price and the government policy of taxation on petroleum products. India crude oil import has increased around 19.8% from year 2014 to 2020. This increase in import of crude oil has significant impact on the economy in terms of pushing up the cost of production, high inflation, increase in current account deficit (CAD), low GDP growth and fiscal imbalance. The higher prices of petrol and diesel in India during year 2011 to 2014 could be attributed to European debt crisis and increasing tension in Iran. In spite of high fluctuations in crude oil prices breaching $100/barrel mark and

soaring to a high of $147/barrel, the government of that time managed to control the prices of petrol and diesel by increasing subsidy. After the daily revision got introduced in fuel from 16 June 2017, the petrol and diesel price have gone up all time high. The problem of rising oil prices is not due to deregulation of petrol and diesel price but instead the government's imposition of hefty tax on petroleum products. It has been thought that bringing petroleum under the ambit of GST is the only solution for rational pricing. This paper analyses the causes of rising prices of petrol and diesel in India and its implications on economy.

METHODOLOGY

This study is analytical in nature and restricts itself to analysing the data available on government websites from 2014 onwards, previous research conducted in the form of articles, research papers etc.in the related area.

LITERATURE REVIEW

(K. Soundarapandiyan, 2017), indicate that there is inter correlation between CPI and crude oil price and vice versa i.e. whenever the CPI increases there is decrease in crude oil price. There is significant difference between crude oil price and GDP and no significant difference between CPI and GDP.

(Nguyen Thi Ngoc Trang, 2017), uses vector auto regression model and realized that a rise in oil prices would lead to higher inflation and budget deficit in Vietnam while its impact on the gross domestic product growth and unemployment are unclear.

(Ghosh T. , 2016), investigates the dynamic relationship between movements in oil prices and exchange rates with macroeconomic variables like price, output, interest rate and money by using structural vector auto regression (SVAR) approach. The result shows three important policy implications: first, the world price of oil has a great potential to impact India's output. Second, targeting depreciation of Indian rupee to expand output may not be an effective policy tool for the RBI. Third, variation in rupee's value can have medium to long term impact on world price of oil that the world should care about.

(Akansha Sanjay Jain, 2015), reveals that future oil prices are difficult to predict, they are generally expected to rise. Given our increasing dependence on oil imports affects the Indian economy, by the increase in the price of crude oil the inflation increases, government have to spend too much on subsidy, our exports become weaker, investment decreases and GDP is also affected.

(Sivarajan, 2018), concluded that the rise in fuel price is directly linked to the International Crude Oil Price. Thus the rise in Fuel Prices that the country has been witnessing is attributable to a number of factors. While Government too can play a role in cutting down the price, it is inappropriate to blame the Government alone for this hike. Thus we can conclude that Government has a role to play in the Fuel prices in the country, but that alone is not the only determinant of the Fuel Price.

(Debjit, 2021), found that pump prices are so high in India that some of the gasoline and diesel exported to neighboring countries is being smuggled back through porous land borders. While the increase in pump rates is the result of a sharp recovery in the prices of global crude oil, taxes have remained stubbornly high, making up closer to 60% of what consumers pay in India. Prime Minister Narendra Modi and his oil minister Dharmendra Pradhan have been fending off criticism by shifting the blame for high prices on previous governments and production cuts by some oil exporting nations.

(Chakraborthy, 2021), analysed that **s**ales of gasoline in India, used by millions for personal transport, faltered as high pump prices and a still rising infection count weighed on demand. Gasoline sales last month fell 2% from a year earlier, according to people familiar with preliminary data from the country's three biggest retailers. Record pump prices are also adding to lower sales as people turn judicious spenders amid job losses and salary cuts as the pandemic and strict restrictions ravaged the Indian economy. The sale of diesel -- the country's most-used fuel and a proxy for economic health -- dropped 8.6% in February from a year earlier, according to the people. Liquefied petroleum gas was the only fuel that saw a year-on-year rise, with use of the cooking fuel surging 7.6% from the same month in 2020.

(N R Bhanumurthy, 2012), found that the international oil price shock does have significant adverse impact on growth and other macroeconomic variables. But at the same time, if the domestic fuel policy shift from partial pass-through to full pass-through, then the adverse impact would be much sharper in the period of shock although there could be some reduction in the revenue deficit due to decline in fuel subsidy. This study argues that if the reduction in revenue deficit is substituted with increase in capital expenditure, then the adverse impact on growth could be minimal in the medium to long term. However, it would be interesting to see the impact of shifting from partial pass-through regime to full-pass through regime when there no oil price shock.

(Aparna, 2013), concluded that any sudden change in the price of oil has the ability to impact industrial growth adversely. It also causes a very high spurt in the WPI. Altogether, change in oil price, WPI increase and declining IIP affect the economy negatively and even if the impulse or shock is short term, it has a long lasting impact on the economy.

CAUSES FOR RISE IN PETROL AND DIESEL PRICES

Some of the factors pushing up prices of petrol and diesel in India are discussed below:

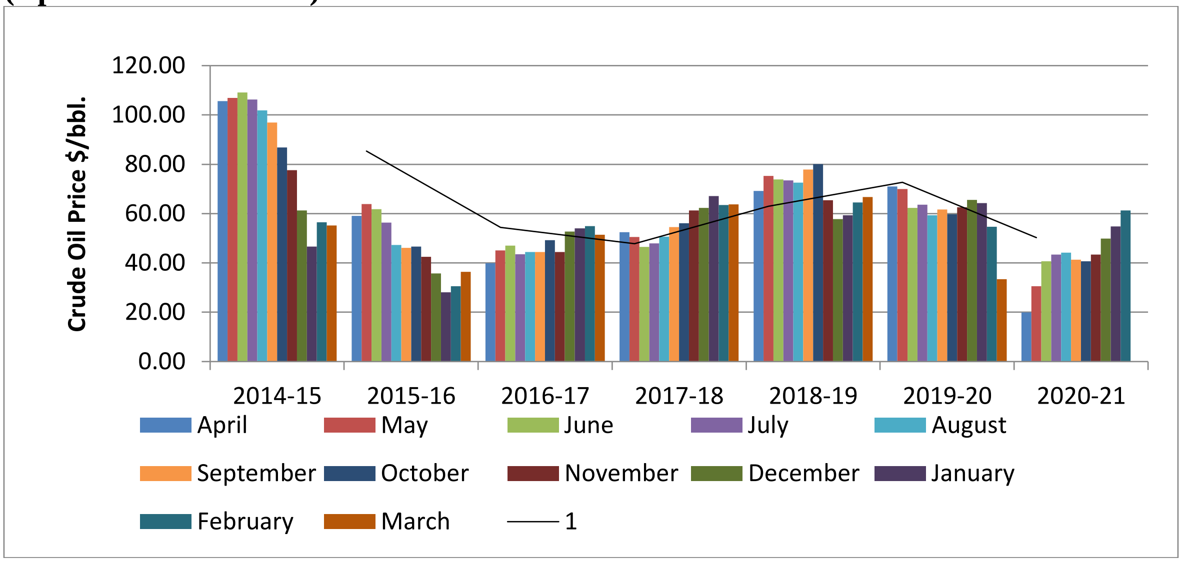
1. Demand and supply equation

The factors that determines the demand for crude oil is the GDP growth and consumer spending. In last 20 years, one of the reasons for the sharp upsurge in the demand for oil has been the gradual rise in demand for oil from India and China. Thus, oil prices tend to go down when the global demand patterns change and growth shows signs of faltering. Today, Saudi Arabia, Russia and the US produce nearly 35mn bpd and account for close to 40% of the global output. With Russia and the US not being part of the OPEC, the contribution of OPEC is less than 33% of the global output. The factor impacting the supply in the last few years has been the production of shale oil in the US and Canada. It has resulted in increased supply and disrupted the demand/supply equation and brought prices lower.

Figure-1 shows average monthly crude oil price Indian basket ($/bbl) (April 2014

- Feb 2021). Crude oil price has been constantly decreased from 105.56 $/bbl to 28.08 $/bbl from April 2014 to Jan. 2016 and gradually increased to a high of 80 $/bbl on Oct. 2018. During Covid-19 the demand for crude oil has gone down globally with a price of 19.9 $/bbl in April 2020.

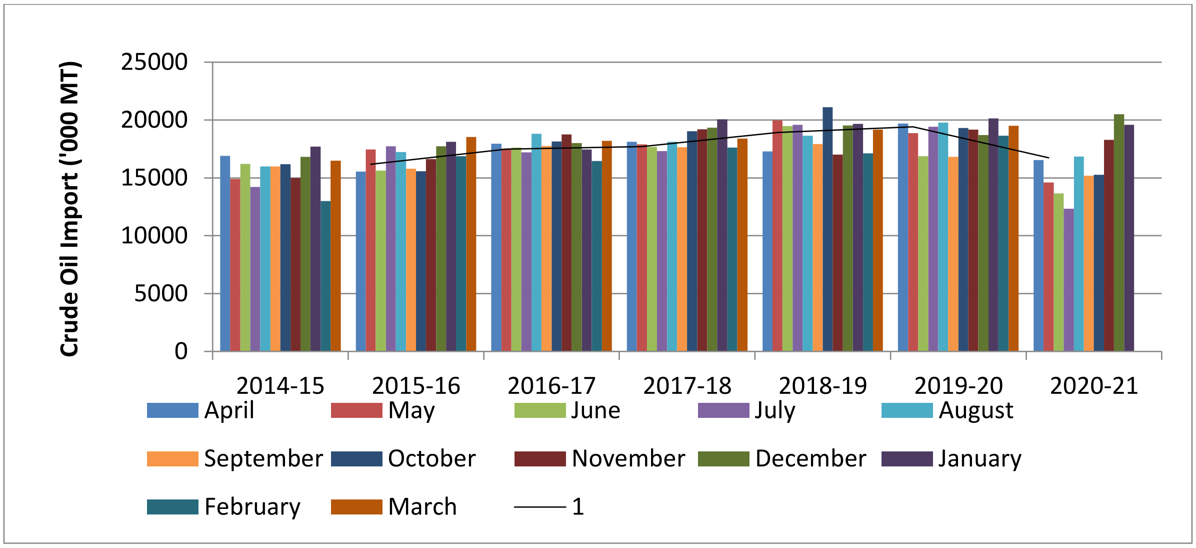
Figure-1: Average Monthly Crude Oil Price Indian Basket ($/bbl) (April 2014 - Feb 2021)



Source: Petroleum Planning and Analysis Cell (PPAC)

Figure-2 shows the monthly crude oil import (‘000 MT) in India (April 2014 - Jan 2021). The import of crude oil in India has been increasing since 2014 irrespective of fluctuations in crude oil prices except during Covid-19 lockdown the demand was affected globally. In Indian context, it can be said that the demand for crude oil is attributed to growth of economy and therefore consumer spending. Studies envisaged that, in 2020-21, the consumption of petroleum products in India is expected to remain low in the range of 2-3 per cent.

Figure-2: Monthly Crude Oil Import (‘000 MT) in India (April 2014 - Jan 2021)



Source: Petroleum Planning and Analysis Cell (PPAC)

2. OPEC policy

OPEC, being an organization of 15 nations is accounted for an estimated 42.6% of global oil production and 71.8% of the world's proven oil reserves by the end of 2017. Oil price was less volatile in 2017, presented rising signs primarily owing to production cuts of around 1.8 barrels per day by both OPEC and some Non-OPEC producers. Factors that has influenced price of crude oil in 2017 include decision on production cut by OPEC, shutdown of the 400,000 barrel/day Forties line within the North Sea, and faster deteriorating production in Venezuela. As a result of hurricanes, in the United States, 13 per cent of US refinery capacity was shutdown. OPEC merely takes advantage of market conditions and follows the dictates of the market. For instance, even after adopting the production quota system in 1982, OPEC was not able to prevent prices from falling in the 1980s. Moreover, OPEC was neither able to stop the 2014 oil price crash nor able to control oil prices in 2008 when prices soared to $147 a barrel. This raises the question of whether OPEC was ever able to push the price of oil up by curbing its production or whether OPEC simply took advantage of high prices caused by political situations and conflicts between some member countries.

3. Hefty taxation levied by government on petroleum products

The increase in petrol and diesel prices since the implementation of daily revision of fuel price on June 16, 2017 is taking a toll on consumers. Earlier, the prices were fixed on 1st and 16th of every month based on average international price in the preceding forthright and the exchange rate of currency. The steady increase in prices of petrol and diesel had gone unnoticed till the prices touched Rs.100 in some places of India. According to experts, the problem of rising oil prices is not due the deregulation of petrol and diesel prices but instead the government's imposition of hefty tax on fuel in the past few years. Reports suggest that the fuel prices in India is more than any other Southeast Asian countries.

Table-1 shows that, as on 1st March 2021, in Delhi, the excise duty levied on petrol and diesel was Rs. 32.9 and Rs. 31.8 which is more than double levied during 2014. Similarly, the Value-added Tax levied by state government is Rs.

21.4 on petrol and Rs. 11.94 on diesel. Analysts reveals that, the increase in taxes on petroleum products by the central and state governments is to control fiscal deficit, run welfare schemes and create infrastructure facilities.

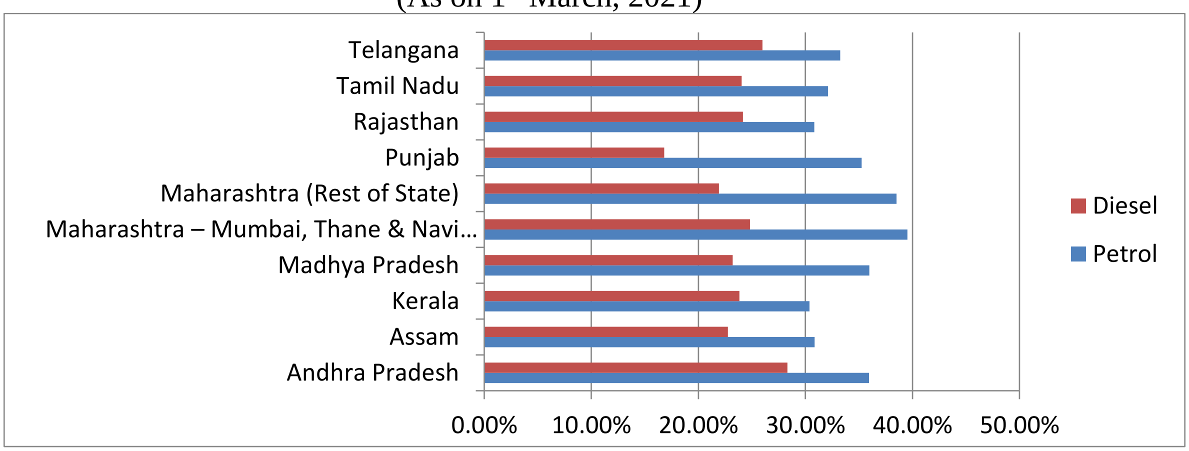
Table-1: Retail Selling Price of Petrol and Diesel (Rs/Litre) in Delhi (As on 1st March, 2021)

Sr. No.	Elements	Unit	Petrol (Rs.)	Diesel (Rs.)
1	C & F (Cost & Freight) Price (Moving average basis)	$/bbl	98.54	90.32
2	Average Exchange rate	Rs/$	73.31	73.31
3	Price Charged to Dealers (Excluding Excise Duty and VAT)	Rs/Ltr	33.54	35.22
4	Add: Excise Duty	Rs/Ltr	32.9	31.8
5	Add: Dealer Commission (Average)	Rs/Ltr	3.69	2.51
6	Add: VAT (including VAT on Dealer Commission)	Rs/Ltr	21.04	11.94
7	Retail Selling Price at Delhi (Rounded)	Rs/Ltr	91.17	81.47

Source: IOCL

Figure-3 shows that, as on 1st March, 2021, Maharashtra charges higher Sales Tax/VAT of 39.5% on petrol and Kerala charges lowest Sales Tax/VAT of 30.38% on petrol. Similarly, Andhra Pradesh charges higher Sales Tax/VAT of 28.31% on diesel and Punjab charges lowest Sales Tax/VAT of 16.82% on diesel.

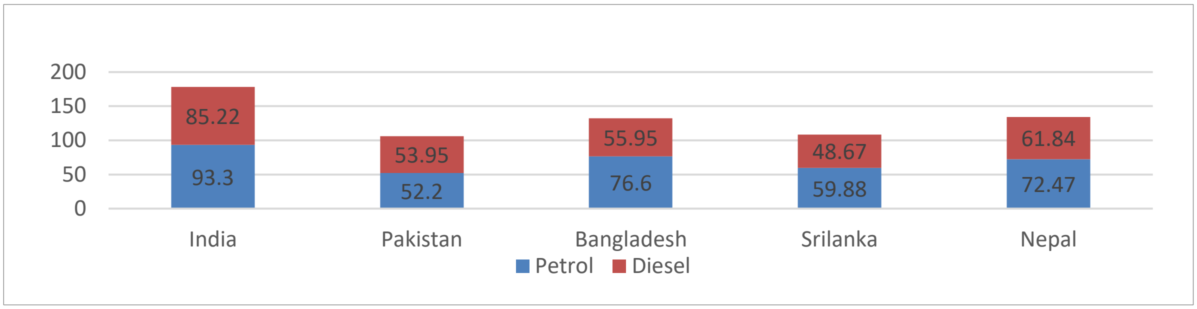
Figure-3: States that charges higher Sales Tax/VAT (In %) on Petrol and Diesel (As on 1st March, 2021)



Source: PPAC

Figure-4 shows that, as on 1st March 2021, retail selling price of petrol and diesel is highest in India as compared to Pakistan and Srilanka. So, it can be interpreted that India's tax collection on petrol and diesel is more compared to neighbouring countries.

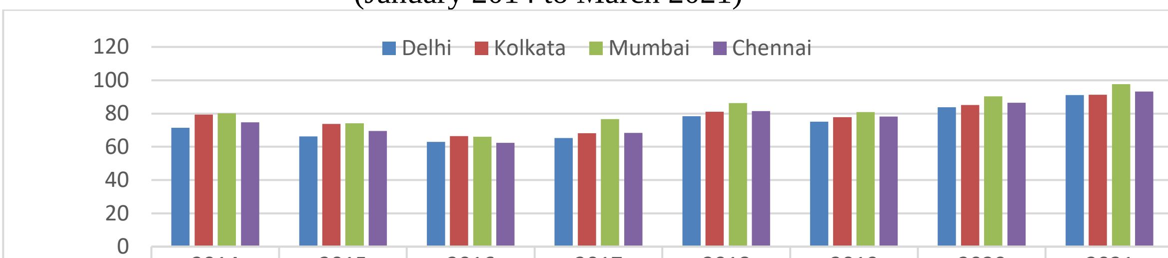
Figure-4: Retail Selling Price of Petrol and Diesel in Neighbouring Countries (Effective 1st March, 2021)



Source: PPAC

Figure-5 and figure-6 shows that, from Jan 2014 to March 2021, average retail selling price of petrol and diesel is highest in Mumbai and lowest in Delhi. This substantiate the fact that Maharashtra levy hefty tax on petrol and diesel.

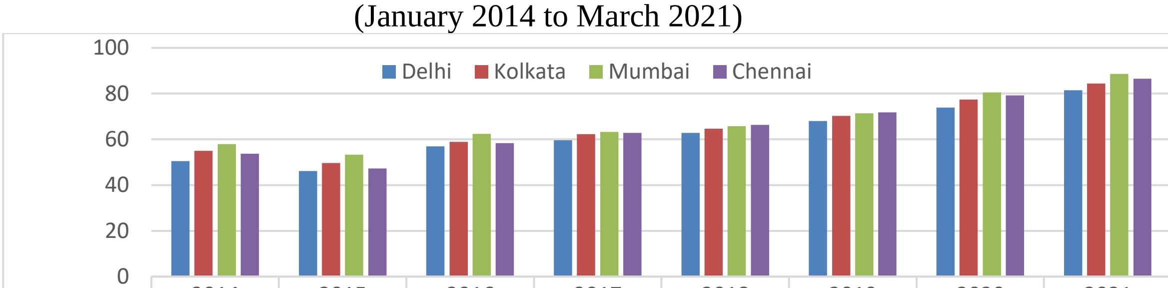
Figure-5: Petrol Prices (Rs. per litre) in Major Metro Cities in India (January 2014 to March 2021)



	2014	2015	2016	2017	2018	2019	2020	2021
Delhi	71.51	66.29	63.02	65.32	78.43	75.12	83.71	91.17
Kolkata	79.36	73.76	66.44	68.21	81.06	77.79	85.19	91.35
Mumbai	80.11	74.12	66.12	76.55	86.24	80.79	90.34	97.57
Chennai	74.71	69.45	62.47	68.26	81.43	78.12	86.51	93.11

Source: IOCL

Figure-6: Diesel Prices (Rs. per litre) in Major Metro Cities in India (January 2014 to March 2021)



	2014	2015	2016	2017	2018	2019	2020	2021
Delhi	50.51	46.09	56.88	59.64	62.86	67.96	73.87	81.47
Kolkata	55	49.7	58.92	62.3	64.61	70.31	77.44	84.35
Mumbai	57.91	53.28	62.4	63.27	65.76	71.31	80.51	88.6
Chennai	53.78	47.28	58.28	62.83	66.35	71.86	79.21	86.45

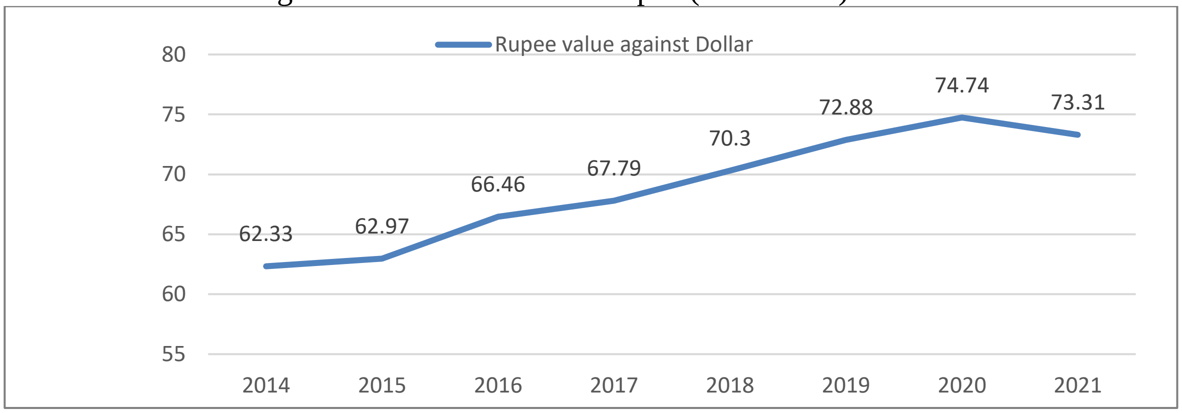
Source: IOCL

4. Exchange Rate of Rupee against Dollar

The USD is settlement currency of the international crude oil market. Each upward movement of USD has significant effect on the fuel prices of the oil importing countries. In the past few years, the appreciation of dollar against rupee has also pushed up prices of petrol and diesel in India. In turn, the rising fuel prices are putting additional pressure on India's falling rupee.

Figure-7 indicates that US dollar is appreciated against rupee from 62.33 in 2014 to 74.74 in 2020 and then gradually fallen to 73.31. Since energy sector is a significant contributor to U.S. GDP, it is benefited from the decline in international crude oil prices.

Figure-7: US dollar/Indian Rupee (2014-2021)



Source: Investing.com

IMPLICATIONS OF RISING FUEL PRICES

Rising prices of petrol and diesel has severe effect on the following:

1. Pushing up manufacturing cost

Higher fuel prices has a cascading effect on the manufacturing cost across various sectors due to increase in raw material price. This is resulting in rising prices of commodities for the end consumer. This phenomena is called as cost-push factor. Packaging materials are derivatives of petroleum products which significantly affects the bottom line of business due to price hike.

2. High inflation rate

High inflation leads RBI to increase interest rates. This will impact the people who have taken loans and looking for availing loan. With a weightage of 2.4% in headline CPI, the adverse impact of rising fuel prices on inflation depends on the extent to which the rising prices are passed on to the consumers. Rate-sensitive stocks are in a bad position with the inflation and interest rates likely to go up.

3. Low GDP growth, increase in Current Account Deficit and fiscal imbalance

Every $10 per barrel hike in crude oil price can take down GDP growth by roughly 0.3 to 0.4 percentage point and worsen the Current Account Deficit by around $10 Billion dollars. As crude oil prices goes up, the imports goes up which exert pressure on balance of payments, deficit increases and rupee deteriorate. One could conclude from the fact that higher crude oil prices has adverse effect on fiscal and CAD which have a cascading effect on the monetary policy, consumption and investment in the economy.

4. Effect on industries

The increase in fuel prices impacts directly to those industries which are using oil as an input such as wax, paints, tires, fertilizers, and footwear's, construction, cements, etc. The major industries affected due to upsurge in crude oil are aviation industry, lubricants industry, paint industry, rubber industry and plastic industry.

5. Rise in transportation cost and essential commodities

Record increase in petrol and diesel price means that the transportation cost goes up across the country. In turn, it pushed up the price of essential commodities and food items. High fuel prices over a prolonged period could reduce the disposable incomes of the households and force them to reallocate resources.

CONCLUSION

After the analysis of the facts on causes and effects of higher petrol and diesel prices in India, it has been concluded that international crude oil prices has nothing to do with retail prices of petrol and diesel but the real culprit is taxation policy of both central and state government. Higher fuel prices are taking a toll on consumer's pocket by reducing their savings and expenditure on other stuffs. The supply side factor also plays a significant role in rising fuel prices especially OPEC policy of production cut. If the rise in fuel prices is attributed to demand side factors then higher crude oil imports could be offset by higher oil and non-oil exports.

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