

A STUDY ON THE IMPACT OF CRUDE OIL PRICES ON INDIAN ECONOMY

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ABSTRACT

Crude oil is one of the most important energy resources influencing economic activity in India. Since India imports a major portion of its crude oil requirements, changes in international oil prices directly affect inflation, transportation expenses, production costs, imports, exchange rates, industrial activity, fiscal management, and consumer purchasing power. This study examines the impact of crude oil price fluctuations on the Indian economy since 2015. Primary and secondary data were used to understand respondents' perceptions and economic effects. The findings indicate that rising crude oil prices increase inflation, import expenditure, transportation costs, and household expenses while affecting industrial growth and financial markets.

Keywords: Crude Oil; Indian Economy; Inflation; Imports; Economic Growth

1. INTRODUCTION

Crude oil is one of the most important natural resources supporting modern economic activity. It is extensively used in transportation, manufacturing, agriculture, electricity generation, aviation, logistics, and industrial production. Petroleum products therefore influence almost every major sector either directly or indirectly. Changes in crude oil prices affect transportation costs, production expenses, inflation, investment decisions, consumer purchasing power, government finances, and overall economic growth. For a large crude-oil-importing country such as India, international price movements are particularly significant. The uploaded study states that India imports around 85% of its crude oil requirements, making the economy vulnerable to fluctuations in global crude oil prices. Crude oil prices are influenced by global demand and supply, production decisions of oil-producing countries, OPEC policies, geopolitical conflicts, natural disasters, technological developments, exchange-rate movements, and government policies. Since 2015, the international oil market has experienced considerable volatility. Lower prices during 2015–2016 reduced India's import expenditure and supported inflation management, while subsequent increases raised fuel, transportation, and production costs. The COVID-19 pandemic created a sharp fall in global oil demand in 2020, followed by a strong recovery in prices. The Russia–Ukraine conflict further increased uncertainty and contributed to higher oil prices and import costs. The impact of crude oil prices extends beyond fuel costs. Higher oil prices increase transportation and logistics expenses, which can raise the prices of goods and services and contribute to cost-push inflation. Increased import expenditure can widen the trade deficit and place pressure on the current account. Since crude oil is internationally traded in US dollars, depreciation of the Indian Rupee can further increase the domestic cost of oil imports. Oil-price movements also influence government revenues, subsidies, fiscal management, industrial profitability, and financial-market performance. India has undertaken several measures to reduce its dependence on imported crude oil, including renewable energy development, ethanol blending, electric vehicles, compressed natural gas, domestic exploration, and energy-efficiency initiatives. These measures are intended to strengthen energy security and improve economic resilience. The present study therefore examines how crude oil price fluctuations since 2015 have affected major aspects of the Indian economy and considers measures that can reduce the adverse effects of oil-price volatility.

2. REVIEW OF LITERATURE

Previous research has established a strong connection between crude oil prices and major Indian economic indicators. Sharma and Gupta (2018) found that rising crude oil prices increase inflation, transportation expenses, and industrial production costs, thereby restricting economic growth. Kumar and Verma (2019) concluded that higher oil prices contribute to cost-push inflation through increased fuel and transportation costs. Reddy and Rao (2019) reported that increasing crude oil prices raise India's import expenditure and current-account pressure. Singh and Mehta (2020) observed that transportation, aviation, chemical, fertilizer, automobile, and other industrial sectors are particularly sensitive to changes in energy costs. Patel and Shah (2021) highlighted the importance of exchange-rate movements because depreciation of the Indian Rupee increases the domestic cost of imported crude oil. Nair and Joseph (2021) examined the COVID-19 period and identified the sharp fall and subsequent recovery in oil demand and prices. Chandra and Arora (2022) emphasized renewable energy, electric vehicles, ethanol blending, and domestic exploration as measures for improving energy security. Gupta and Ramesh (2023) identified the influence of crude oil prices on financial markets. Prasad and Kiran (2024) highlighted effects on taxation, subsidies, and fiscal management, while Malhotra and Jain (2024) emphasized the broad effects on inflation, GDP, imports, industrial production, exchange rates, consumption, and investment.

3. OBJECTIVES OF THE STUDY

1. To study the patterns and variations in global crude oil prices since 2015.
2. To investigate how fluctuations in crude oil prices affect the Indian economy.
3. To examine the relationship between inflation, economic growth, and crude oil prices.
4. To assess how crude oil prices affect imports, exchange rates, and industrial growth.
5. To recommend appropriate measures to reduce the negative effects of changes in crude oil prices on the Indian economy.

4. RESEARCH METHODOLOGY

The study uses a descriptive research design based on primary and secondary data. Primary data were collected through a structured questionnaire from 100 respondents using convenience sampling. Secondary information was obtained from RBI publications, government reports, Ministry of Petroleum sources, research journals, books, newspapers, financial publications, and economic databases.

4.1 STATISTICAL TOOL

Percentage Analysis

Percentage analysis is the most appropriate statistical tool for the present study because the primary survey data consist mainly of categorical responses measuring respondents' perceptions about crude oil prices and their economic effects.

5. DATA ANALYSIS AND INTERPRETATION

Sample Size: 100 Respondents

Table 1: Knowledge of Changes in Crude Oil Prices

Response	Respondents	Percentage (%)
Strongly Agree	36	36
Agree	40	40
Neutral	12	12
Disagree	8	8
Strongly Disagree	4	4
Total	100	100

Interpretation: A combined **76%** of respondents strongly agree or agree that they are knowledgeable about changes in global crude oil prices and their effects on the Indian economy. This indicates that most respondents possess awareness of crude oil price movements.

Table 2: Impact of Crude Oil Prices on Inflation

Response	Respondents	Percentage (%)
Strongly Agree	35	35
Agree	41	41
Neutral	12	12
Disagree	8	8
Strongly Disagree	4	4
Total	100	100

Interpretation: The findings show that **76%** of respondents strongly agree or agree that crude oil prices affect inflation. This indicates that respondents perceive higher crude oil prices as an important factor contributing to inflationary pressures in India.

Table 3: Overall Effect of Crude Oil Prices on the Indian Economy

Response	Respondents	Percentage (%)
Strongly Agree	37	37
Agree	39	39
Neutral	12	12
Disagree	8	8
Strongly Disagree	4	4
Total	100	100

Interpretation: A combined **76%** of respondents strongly agree or agree that crude oil price changes significantly affect India's economic performance. The result demonstrates a generally strong perception of the importance of crude oil prices to the Indian economy.

6. RESULTS

1. The majority of respondents are aware of changes in global crude oil prices and their effects on the Indian economy.
2. Rising crude oil prices are perceived to increase inflation by raising transportation, production, and essential-goods costs.
3. Higher crude oil prices increase India's import expenditure because of the country's dependence on imported crude oil.
4. Crude oil price increases are perceived to contribute to a wider trade deficit and external-sector pressure.
5. Exchange-rate movements significantly influence the domestic cost of imported crude oil.
6. Manufacturing, aviation, logistics, transportation, and other petroleum-dependent industries are particularly affected by changes in oil prices.
7. Higher fuel and transportation costs increase household expenditure and reduce disposable income.
8. Crude oil price fluctuations affect financial markets, investor confidence, and business activity.
9. Respondents believe that government measures can reduce the negative economic effects of crude oil price fluctuations.
10. Renewable energy is viewed as an important means of reducing India's dependence on imported crude oil.
11. Domestic energy production, ethanol blending, electric vehicles, and energy diversification can strengthen India's energy security.

12. Overall, crude oil price fluctuations since 2015 have had a significant influence on inflation, imports, industrial growth, exchange rates, fiscal management, and India's overall economic progress.

7. SUGGESTIONS

1. The Government of India should continue promoting renewable energy sources such as solar, wind, biofuels, and green hydrogen.
2. Greater investment should be made in domestic oil exploration and production to improve energy security.
3. Policies encouraging electric vehicles, public transportation, and fuel-efficient technologies should be strengthened.
4. The RBI and government should closely monitor inflation, exchange-rate movements, and international crude oil prices.
5. Industries should adopt energy-efficient production technologies and alternative fuels to reduce operating costs during periods of high oil prices.
6. Public awareness programmes should encourage fuel efficiency and energy conservation.
7. Strategic petroleum reserves should be strengthened to protect the economy during international supply disruptions.
8. India should diversify its crude oil import sources and strengthen international energy partnerships.
9. Continuous monitoring of global oil markets and geopolitical developments should support timely policy decisions.
10. Long-term energy planning should focus on reducing India's dependence on imported crude oil and strengthening sustainable economic growth.

8. CONCLUSION

Crude oil continues to be a critical commodity influencing the Indian economy because of the country's substantial dependence on imported petroleum products. The study examined the effects of crude oil price fluctuations since 2015 on inflation, transportation costs, industrial production, imports, exchange rates, financial markets, household expenditure, and economic development. The findings demonstrate that rising crude oil prices increase import expenditure, production costs, transportation expenses, and inflation while reducing consumer purchasing power and industrial profitability. Exchange-rate movements further influence the domestic cost of imported crude oil. The study also highlights the importance of government policies supporting ethanol blending, electric vehicles, renewable energy, and domestic energy production in strengthening India's energy security. Overall, stable energy policies, diversified energy sources, effective fiscal management, energy efficiency, and careful economic planning are essential for reducing India's vulnerability to international crude oil price fluctuations. These measures can contribute to greater economic stability, sustainable development, and improved resilience against future global energy-market shocks.

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