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IMPACT OF PETROLEUM PRODUCT PRICING ON THE GOVERNMENT: EVIDENCE FROM INDIA

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Abstract:
Depending on various factors of the economy, different pricing mechanisms have been developed at different point of time. These mechanisms have affected all the stakeholders of this industry starting from the upstream oil companies involved in extraction of the crude oil to the consumers of the major petroleum products. The objective of this chapter is to make a comprehensive analysis of how did the different petroleum pricing implemented during post Administered Pricing Mechanism (APM) period affect Government of India.

Keywords: Pricing mechanisms, Administered Pricing Mechanism, Government, petroleum products

I. Introduction:

The major components of Petroleum industry are exploration, production, refinement, marketing and distribution. This industry has been contributing a lot to many other industries particularly, manufacturing industry of the country. It had played a vital role in changing the Indian economy from an agrarian economy to an industrial economy. The developments and economic condition in this industry is a matter of interest for the country. Rapid globalization and fast changing economic environment brought enormous opportunities for the oil companies in India to prosper and spread out their operations globally. The increasing demand for crude oil in swiftly developing regions such as India and China put stress on prices (**Hussain 2016**). The supply-demand situation for oil in India is highly sensitive to international developments, as considerable proportion of India's oil consumption is met by imported crude oil and finished products. Therefore, any fluctuation in the international prices of oil or any policy shift by the oil exporting nations is likely to have a substantial impact on India's economy. Many decisions pertaining to Indian petroleum industry has been taken by Government from time to time to make it more profitable for all its stakeholders. Like this industry in India, pricing of major petroleum products (PDS Kerosene, domestic LPG, Petrol & Diesel) also gone through various stages starting from its evolution to current mechanisms of petroleum products. The domestic pricing system of petroleum products assumes great significance for India because of its import dependence. In India, the pricing mechanism of four sensitive petroleum products such as Petrol, Diesel, PDS Kerosene and domestic LPG plays a vital role as general people are the users of these products. Petrol and Diesel are the two major transportation fuels whereas people use PDS Kerosene and domestic LPG as cooking fuels. Therefore, any change in the pricing mechanism of these products affects the people of the country directly or indirectly. The pricing mechanism of petroleum products not only affects the Indian consumers, but also all the stakeholders of the industry including government. It has been observed that, among the world's top 30 crude oil producing countries, India secured 24th position and regarding consumption of crude oil and petroleum products, India's position is third from top of the list **(Ready Reckoner Report 2017)**.

This paper basically is an attempt to critically analyze the changes taken place in the pricing system of sensitive and major petroleum products in India during post Administered Pricing Mechanism (APM) period and its impact on the Government of the country.

2. REVIEW OF LITERATURE:

Chatterjee (2010) in his research thesis revealed that the Indian oil companies were hindered and handicapped during implementation of APM and did not show any development as compared to global oil companies. The upstream companies like ONGC and Oil India could make higher profit in post APM period than APM period. The downstream refineries and marketing companies also started to improve its financial performance initially in the period of deregulation and could expand their business more rapidly as compared to APM period. As a whole the study found that the growth during APM period was slow and organic.

Clarke (2010) recommended in his paper on 'India's Downstream Petroleum Sector' that Government of India should consider two different price ceiling for two different petroleum products markets. One market for petrol & Diesel and other for

LPG & Kerosene. Petrol and Diesel are basically used for transport purposes. Therefore, major part of its consumption is by middle class families who have private vehicles. So, it had been recommended to keep considerably high price ceiling for Petrol and Diesel and as LPG and Kerosene is used by poor population, the price ceiling for these products should be relatively low.

Muthukumar (2008) edited a book by taking all the case studies on Oil Industry and mentioned there that the period from 1948 to 1972 was termed as 'Golden age of oil' as the consumption of world oil had been increasing rapidly. In this period, consumption of oil in North America was tripled than earlier while in other places it grew 11 times. This rapid consumption of oil all over world made it clear that 'Oil' is very much important in people's lives. It changes the way of life and work in developed countries. As a consequence, oil industry started to affect the economies of many countries due to its commercial importance.

Kumar (1997) mentioned that successive oil shocks have affected India much more than any other country in the world due to India's heavy dependence on imported oil. However, this oil shocks highlighted the importance of exploration and production of oil as well as energy conservation. Government took long time in understanding the oil industry policies and manipulative strategies of the international companies. Government could not use the pricing mechanism as a tool for ensuring efficient use of this scarce natural resource which led to considerable misuse of products particularly Kerosene and Diesel.

Das (2013) analysed the financial performance of Indian petroleum industry' and found that Tax is one of the big obstacles for the oil companies. Tax affects the overall profitability of the companies at different level and recommended the companies to make strategic tax planning so that tax burden can be minimized hence leads to maximisation of company's profit.

Baig *et al.* (2007) suggested in their paper on 'Domestic petroleum product prices and subsidies: Recent developments and reform strategies' a pragmatic approach to deal with petroleum product pricing. This approach should include liberalization of setting the domestic petroleum product prices or automatic adjustment formula in line with increase or decrease in international product prices. Additionally, implementing transparent pricing framework and publicizing the costs and beneficiaries of present pricing system is the key ingredients in such an approach

3. OBJECTIVE:

To study the impact of pricing mechanisms of Petroleum products followed after dismantling Administered Pricing Mechanism on the Government of India.

4. RESEARCH METHODOLOGY

4.1 Data Collection

The data for the study have been collected from the secondary sources. The secondary data were collected mainly from PPAC website (Petroleum Planning and Analysis Cell) which is attached to the Ministry of Petroleum and Natural Gas to get accurate figures or information published in monthly and quarterly basis in respect to the petroleum products and their pricing mechanism. The data were also collected from the published reports of Government, research papers, articles, Journals, newspapers, company's official websites and also from the reports of the Expert Groups formed by Government of India to advise on Pricing Methodology of petroleum products. All the sources are documented and referred in the work.

4.2 Period of the Study

The present study is mainly intended to examine the impact of the pattern of petroleum product pricing on the Government during post administered pricing period. Post administered pricing mechanism starts from the year 2002. A period of eleven years commencing from the financial year 2007-08 to 2017-18 is chosen for the study. Moreover, in this time period, significant developments have been taken place in the petroleum industry of India. Considering the objectives of the study, this period has been segmented to analyze the different aspects of petroleum product pricing.

4.3 Technique of Analysis of Data

To achieve the objective of the study, analytical research method has been applied where the researcher has used the data collected from different sources and analyzed the same through simple statistical tools so that a critical evaluation of the material can be made. The tools used in this study are average, percentage etc.

4.4 Selection of Products

For the purpose of this study, four sensitive petroleum products are selected. These are domestic LPG (14.2 Kg), PDS (Public Distribution System) Kerosene, Motor Spirit or Petrol and High Speed Diesel (HSD).

4.5 Research Questions

i. How did petroleum product pricing affect the government of India after dismantling Administered Pricing Mechanism?
ii. Which pricing methodology was beneficial or favourable for the Government?

5. ANALYSIS & DISCUSSION

Government plays a vital role in the development of Petroleum Industry in the country. Government earns a major portion of its revenue from this industry in the name of tax. The pricing methodology of petroleum products in India does not affect only the OMCs and consumers, but it also has an impact on the Government's fiscal budget. Government is for the people so, it desires to enforce such a methodology for pricing which is affordable for the general people of the country. It compels the Oil Marketing Companies (OMCs) to sell the products at a price favourable to the consumers. Whatever the pricing methodology is for the petroleum products, Government always wants to safeguard the consumers from volatility in international oil prices through its subsidy schemes. Since more than a decade, Government has been providing subsidy on four sensitive petroleum products viz. Petrol, Diesel, PDS Kerosene and Domestic LPG. Gradually Government's subsidy amount had been reduced on the products and at present only two products are subsidized i.e. PDS Kerosene and Domestic LPG. Government abolished the subsidy regime on Petrol and Diesel in the year 2010 and 2014 respectively.

APM was dismantled in the year 2002, but directly or indirectly these four petroleum products namely domestic LPG, PDS Kerosene, Petrol and Diesel had been regulated by the Government since 2005. However, Government stopped controlling Petrol and Diesel price by discontinuing the subsidy on these products in 2010 and 2014 respectively. The price of domestic LPG and PDS Kerosene is determined in India through *Import Parity Pricing (IPP)* mechanism since then. *Trade Parity Pricing* (*TPP*) was implemented from 2005 on Petrol and Diesel till 2010 and 2014 respectively which is the weighted average of *Import Parity* and *Export Parity Pricing (EPP)* in the ratio of 80:20. The impact of pricing mechanisms of four sensitive petroleum products experienced by the Government has been discussed below:

5.1 High Amount of Under Recoveries incurred by OMCs Mopped up Huge Amount as Compensation from Government's Treasury.

As per Government's instruction, during implementation of *IPP* and *TPP* methods of pricing, OMCs had to sale their products below their desired price. The desired price of OMCs for the products determined under these mechanisms were quiet high and not affordable for the common people. This led to incurrence of under recovery by the OMCs. Under recovery is the difference between the desired price of the products determined by OMCs and the price, OMCs allowed to sale the products in the market. *For example*, on 15th November, 2017 the desired price of one Litre Kerosene determined by OMCs under *IPP* method was Rs.29.37 (total cost of OMCs) at Mumbai. But, as per Government's instruction, the offering price of OMCs' to dealers was Rs. 19.05. The difference between the total cost of OMCs and the price charged to dealers by OMCs i.e. Rs. 10 (Rs.29.37 – Rs.19.05) was the under recovery amount paid by Government from its fund as compensation to OMCs **(Ready Reckoner Report 2017).** In this way, OMCs have been incurring under recovery from the sale of the major petroleum products in India. As a consequence, Government required to compensate these OMCs for selling the products below their cost. Increase in consumption of these products year after year boosted the amount of under recovery incurred by OMCs and so the compensation amount. This situation had put stress on Government finances. The under recoveries incurred by OMCs are given below from 2007-08:

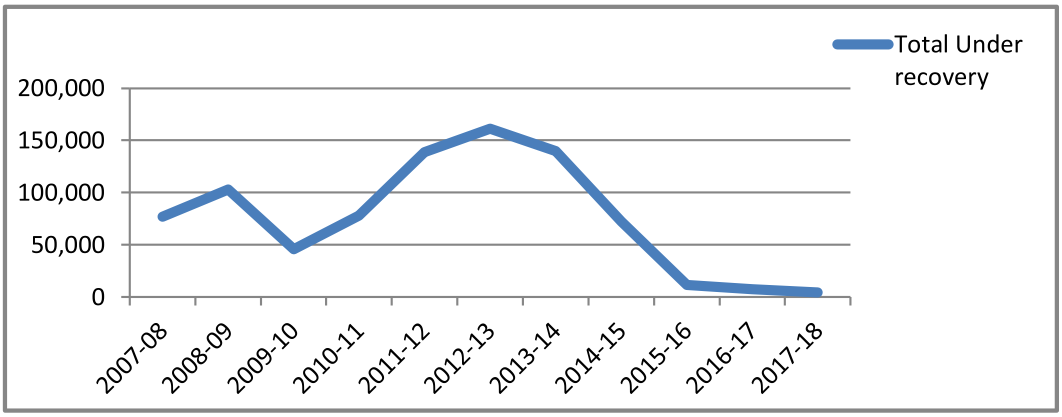
Table 1 Product wise Under-recoveries (compensation) incurred by OMCs

(Rs. Crore)

Particulars	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Petrol	7,332	5,181	5,151	2,227	-	-	-	-	-	-	-
Diesel	35,166	52,286	9,279	34,706	81,192	92,061	62,837	10,935	-	-	-
PDS Kerosene	19,102	28,225	17,364	19,484	27,352	29,410	30,574	24,799	11,496	7,595	4,672
Domestic LPG	15,523	17,600	14,257	21,772	29,997	39,558	46,458	36,580	18	-	-
Total Under-recoveries	77,123	1,03,292	46,051	78,190	1,38,541	1,61,029	1,39,869	72,314	11,515	7,595	4,672

Source:www.ppac.gov.in

Figure 1
Product wise Under-recoveries incurred by OMCs



In the year 2010-11, Government stopped providing subsidy on Petrol and replaced *TPP* with market determined system of pricing. As a result, under recovery amount on Petrol had been decreased from this year than the previous year 2009-10 and it became nil from 2011-12 on this particular product. But, under recovery on Diesel continued to grow in line with domestic consumption and in the same way, incurrence of under recovery on Diesel had been stopped from the year 2015-16 as Government deregulated this price in the year 2014. But, under recovery on PDS Kerosene and domestic LPG continued to grow and it boosted the total amount of under recovery incurred by OMCs. This situation affected the Government budget severely because such high amount of under recoveries was mopping up a huge amount from Government's treasure every year in the name of compensation to OMCs. To deal with this problem of mounting under recovery, Government introduced a mechanism called Burden Sharing Mechanism (BSM) **(Report of the Committee on Pricing and Taxation of Petroleum Products 2006)**.Under this mechanism, it was decided to share the burden of under recovery incurred by OMCs among all the stakeholders of the industry in the following way:

- Government by issuing oil bonds/cash assistance to OMCs.
- Upstream oil companies by providing cash discounts to OMCs.
- OMCs by bearing a little portion of under recovery.
- Consumers by bearing minimum price increase.

It means consumers were also a part of the under recovery absorption system since then. But, the general criteria to allocate the under recoveries was, upstream companies would shoulder one third burden of total under recoveries and the balance under recovery would be absorbed by government and a little portion by OMCs. The details of burden sharing of under recoveries since 2002-03 by the stakeholders except consumers are given below:

Table 2 Share of Stakeholders under Burden Sharing Mechanism of Under-recovery
(Rs. Crore)

Year	Total Under-recoveries	Government		Upstream Oil Companies		OMCs	
		Amount	%	Amount	%	Amount	%
2002-03	5,430	-	-	-	-	5430	100%
2003-04	9,274	-	-	3,123	34%	6,151	66%
2004-05	20,146	-	-	5,947	30%	14199	70%
2005-06	40,000	11,500	29%	14,000	35%	14,500	36%
2006-07	49,387	24,121	49%	20,507	41%	4759	10
2007-08	77,123	35,290	46%	25,708	33%	16,125	21%
2008-09	1,03,292	71,292	69%	32,000	31%	--	--
2009-10	46,051	26,000	57%	14,430	31%	5,621	12%
2010-11	78,190	41,000	52%	30,297	39%	6,893	9%
2011-12	1,38,541	83,500	60%	55,000	39%	41	1%
2012-13	1,61,029	1,00,000	62%	60,000	37%	1,029	1%
2013-14	1,39,869	70,772	51%	67,021	48%	2,076	1%
2014-15	72,314	27,308	38%	42,822	59%	2,184	3%
2015-16	11,515	10,245	89%	1,251	10%	18	1%
2016-17	7,595	7,595	100%	Nil	Nil	Nil	Nil

2017-18	4,672	4,672	100%	Nil	Nil	Nil	Nil

Source: www.ppac.gov.in

From the above table, it can be observed that in this Burden Sharing Mechanism, Government's share was the highest among the parties involved in this mechanism. Without a shadow of doubt, the growing burden of under recoveries, which reached an all time high of Rs. 1,61,029 Crore in 2012-13 had severely affected Government's fiscal budget because, Government had spent a high amount from its revenue on paying the under recovery as compensation to public sector OMCs. From the year 2016-17, as the under recovery amount had been drastically reduced, Government alone has been providing the assistance to these companies without taking the help of upstream companies.

5.2 Mass issuance of Oil Bonds affected Government's Budget

Issuance of Special Oil Bonds was another option adopted by the government for compensating the public sector OMCs for their under recovery which had been continued till 2008-09. These Oil Bonds were issued in place of cash compensation to be given to OMCs. After that, Government had been providing cash assistance to them. Although OMCs' preference was tradable bonds, Government issued both tradable and non tradable bonds to OMCs. OMCs sold tradable bonds in the bond market whereas non tradable bonds were used as collateral by them to raise fund. These bonds had the maturity period of 5-7 years which begun to reach maturity from the year 2010 **(International Energy Agency 2009).**[5] This measure taken by Government was not fruitful to deal with the under recoveries because, Government had to face some consequences. Keeping aside the significant consequences due to mass issuance of Oil Bonds on Central Government's Fiscal Budget, this solution was not acceptable for long for the financial problem of the OMCs. The key reasons for this are:

a) **Flooded bond markets**: Excess issuance of bonds by the Central Government in different sectors like oil, farm and fertilizer etc. created significant bond market flood in India. It reduced the interest rates which led to fall bond prices in the market.
b) **Non- SLR (Statutory Liquidity Ratio) status**: At that time, oil bonds were not counted as verifiable liquid assets for the Indian banks to maintain requisite commercial SLRs. Therefore, banks and other financial institutions did not show much interest to buy these fixed yield oil bonds which compelled the OMCs to discount bond values.

Central Government issued a total of Rs. 1,44,186 Crore to the public sector oil companies' viz. IOCL, BPCL and HPCL as oil bonds upto 2009-10. Such a huge amount of oil bonds was impossible to liquidate at one go. To reform this situation, policy maker had taken some adhoc steps where OMCs could liquidate these bonds. To clear up this huge supply of oil bonds, Central government made an arrangement with Reserve Bank of India where Government asked the RBI to make bond-for-forex swaps at prevailing market rates through which OMCs could generate foreign exchange (forex) liquidity necessary to purchase imported inputs.

This situation affected the oil bonds value. Therefore, falling oil bonds value and inability of OMCs' to use these assets forced Central Government to issue further rounds of debt issuance which again put pressure on government's finance. The total value of pending oil bonds by the end of 2017-18 was Rs. 1,30,923 Crore. Along with this, Government was also paying interest on special bonds to oil companies which have been substantially increasing due to multiple issuances of these Oil Bonds.

5.3 Rationalisation of Taxes and Duties affected Government's Revenue

In addition to large scale bond issuance, Central Government also worked on reducing taxes and duties on petroleum products to reduce the final price of these products with the motive to reduce under recovery amount incurred by OMCs. To deal with the alarming situation of mass under recovery, taxes and duties had been rationalized in the following ways:

- During 2004-08, Central Government brought down excise duty on Petrol from 26% ad valorem and Rs. 7.50 per liter to a flat rate of Rs. 13.35 per litre by June 2008.
- Excise duty on Diesel had been reduced from Rs. 4.60 per litre to Rs. 2 per litre.
- Excise on LPG and Kerosene had been cut down to nil by mid 2008 from 8% and 16% respectively.
- Customs duty also had been reduced on imported Petrol and Diesel from 20% ad valorem to 2.5%.
- Elimination of custom duty on crude oil in June 2008 **(International Energy Agency 2009).**[6].

The above decisions taken by Government to rationalise tax had negative impact on the Government's revenue because, such decisions reduced a huge amount of Government's revenue. The then Minister, Petroleum and Natural Gas, Govt. of India during that period told in a press conference that removal of custom duty on crude oil incurred a loss of Rs. 26,000 Crore to Government for a whole year. Reduction of excise duty on Diesel from Rs. 4.60 per litre to Rs. 2 per litre had incurred a revenue loss of Rs. 23,000 Crore to Government for a financial year. Further he said that any additional reduction in these duties would have unfavorably reduced the revenue amount which had been earmarked by Government for Central Road Fund and Education Cess.

While Central Government was reducing tax to deal with the petroleum pricing issues, State Government was reluctant to cut the state Sales Tax on these products as they considered it as an inelastic source of revenue. The evidence of this fact can be established from the following table.

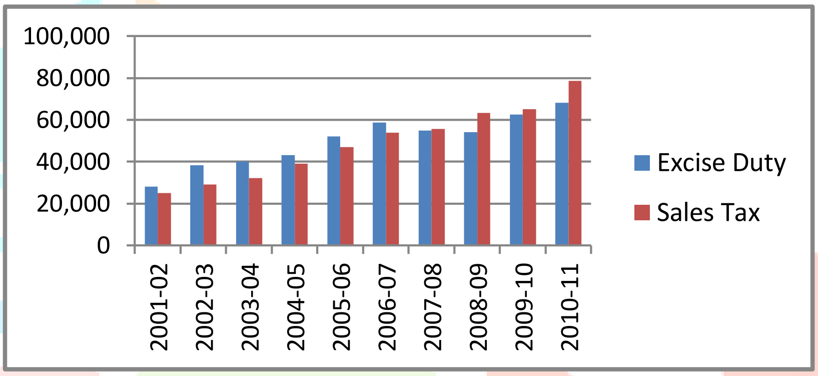
Table 3 Contribution by Petroleum Sector to Central and State Exchequer

(Rs. Crore)

Year	Excise Duty	Sales Tax
2001-02	28,013	24,884
2002-03	38,177	29,166
2003-04	40,130	32,080
2004-05	43,041	38,918
2005-06	52,064	46,880
2006-07	58,821	53,949
2007-08	54,769	55,677
2008-09	54,117	63,349
2009-10	62,480	64,999
2010-11	68,040	78,689

Source: Ready Reckoner Reports

Figure 2
Contribution by Petroleum Sector to Central and State Exchequer



From the above table, it can be seen that due to tax cut in 2008, the excise duty collected by Central Government had declined marginally during 2007-08 and 2008-09, while sales tax revenue of the state government shown continuous and strong growth. It means Central government alone was losing the revenue from this sector due to its heavy tax cut.

Thus, the issue of petroleum pricing could not be solved through reducing tax rates on petroleum products. Rather, Central Government was taking risks, as crucial source of revenue had been declined which could be spent on some developmental programs of Government. Moreover, cutting tax rates also affected the funding ability of the Government to support subsidy regime and once cutting tax rate makes it difficult to raise tax on petroleum products again.

5.4 Unreasonable Burden from Kerosene Pricing on Government

Government has been taking the burden of under recovery on domestic LPG and PDS Kerosene till now. As mentioned earlier, in case of LPG, *IPP* mechanism is followed which is acceptable as, India's LPG production is very less hence India is importing a large amount of LPG to meet the domestic demand. But in case of Kerosene, from the year 2012-13 India's production has been increasing than its consumption. As a consequence India's Kerosene import has been reduced to nil from the year 2016-17 as shown below-

Table: 4 Demand-Supply and Export-Import scenario of PDS Kerosene in India

Year	Demand-Supply scenario (MMT)		Export-Import scenario (000'MT)	
	Production	Consumption	Export	Import
2010-11	7.8	8.9	33	1381
2011-12	8.0	8.2	34	564
2012-13	8.0	7.5	23	0
2013-14	7.4	7.2	15	0
2014-15	7.6	7.1	15	30
2015-16	7.5	6.8	10	41
2016-17	6.0	5.4	15	0
2017-18	4.3	3.8	17	0
2018-19	4.1	3.5	19	0

Source: www.ppac.gov.in

As shown in the above table, in the year 2010-11 and 2011-12, India's Kerosene production was less than its domestic consumption. To meet the domestic demand, India had to import Kerosene hence, *IPP* system of setting its price was reasonable at that time. Time to time Government has been taking many steps such as increase in domestic LPG & PNG connections, increase in electricity coverage, restricting PDS Kerosene quota etc. which reduced the consumption of PDS Kerosene in the country. As a consequence, currently total eight states of India viz. Haryana, Punjab, Andhra Pradesh, Delhi, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry have become Kerosene free **(Garg *et al.* 2017).**[9] This led to decrease in the consumption of Kerosene from 2012-13. And now, India is becoming self dependent for Kerosene and its import dependency became nil. In these circumstances, some reforms in pricing system were needed as India became self dependent for kerosene. But, OMCs have been charging *IPP* based price on this product and incurring under recovery. This is again another burden, Government of India has been taking unreasonably. Even though Government did not make any changes in the pricing of this product, some charges claimed by the OMCs within the *IPP* mechanism which are notional in nature, could have been waived off. This would have decreased the amount of under recovery on Kerosene to a great extent.

Thus, Government of India suffered a lot during post APM period due to incurrence of high amount of under recoveries by OMCs year after year. Large scale Oil Bond issuance reduced India's credit rating hence affected Government finances. Mounting il bonds for several years increased interest payments on debt by Government which consumed a good portion of General Government's revenue. Based on the recommendations of the expert committee on Petroleum pricing, Government has been taking many steps from time to time to lessen the under recovery or subsidy burden. And after many years of effort given by Government, under recovery has been reduced to nil in case of Petrol & Diesel and little in case of domestic LPG & PDS Kerosene.

6. Findings

Research Questions 1: *How did petroleum product pricing affect the government of India after dismantling Administered Pricing Mechanism?*

Answer: It has been observed that during the period of Trade Parity mechanism for Petrol and Diesel i.e. from 2005-06 to 2014-15, government suffered a lot. As according to this mechanism, 80% of the price charged by the OMCs was based on import parity which is the reason of hike in prices as a result, under recovery showed steady growth. To protect the consumers from the over priced products, government compelled the OMCs to sale their products below their cost for which OMCs had been claiming a huge amount as compensation from the government. For compensating the OMCs, a few rounds of oil bonds worth Rs. 1,42,203 Crore had been issued by the government to the oil companies from beyond their budget i.e. off budget oil bond issuance. Due to this, government's fiscal budget had been severely impacted during 2005 to 2014.

Research Questions 2: *Which pricing methodology was beneficial or favourable for the Government?*

Answer: Looking back at the history of pricing mechanism and the analysis made in this study, it was found that out of all the pricing mechanisms implemented in India so far, market determined pricing system has been proved to be efficient, practical and beneficial for government in today's world. In this case, the price of two petroleum products viz. domestic LPG and PDS Kerosene cannot be considered as due to low production in the country, these products are imported to meet the domestic demand hence the pricing is based on import parity. But in case of Petrol and Diesel, market determined pricing system is best out of all, as during the implementation of this mechanism, under recovery incurred by OMCs has been drastically reduced. It has been reduced almost 97% from 2012-13 to 2017-18 for which government could save a huge amount for its developmental activities.

7. Suggestions

Government has been taking many steps from time to time to develop the petroleum industry from diverse fronts. In the earlier years, government was unfamiliar with all the complexities related to petroleum product pricing and it took a long time to understand it and formulate some strategies to deal with it. No suggestion can be drawn or recommended for the consequences of implementing different pricing mechanisms in earlier days but, its impact on the stakeholders of the industry cannot be overlooked. Analysis of all the mechanisms followed in the past days which has been made in this research work for four sensitive petroleum products (Petrol, Diesel, domestic LPG and PDS Kerosene) would help the Government to take the decisions in future pertaining to oil pricing in India.

8. Conclusions

This study was an attempt to evaluate the pricing policy of government implemented on four sensitive petroleum products namely Petrol, Diesel, domestic LPG and PDS Kerosene where every aspect of pricing mechanism has been analysed. From the history, it could be understood that whenever government felt the necessity of reforming the petroleum pricing methodology, government worked on it. As a result it has made many changes in the methodologies from time to time for which subsidy and compensation amount paid by government to the parties concerned viz. consumers and oil marketing companies, has been reduced radically. It can be considered as a huge save for government of India in terms of money which could be used in some developmental activities of the country or for the betterment of the petroleum industry in India in the future ahead.

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