

Privatizing a Profit-making National Oil Company in India: Exploring the Rationale and the Challenges

Deepak Sharma (*Corresponding Author*)

Doctoral Candidate, Department of Humanities and Social Sciences, Indian Institute of Technology Bombay, Powai, Mumbai – 400076. Email: deepak_sharma@iitb.ac.in

Haripriya Gundimeda

Professor, Department of Humanities and Social Sciences, Indian Institute of Technology Bombay, Powai, Mumbai – 400076. Email: haripriya.gundimeda@iitb.ac.in

Abstract

The Indian government's intent to privatise Bharat Petroleum Corporation Limited (BPCL), a major downstream national oil company (NOC) in India has led to public debates on the rationale behind privatising a profitable NOC. The proponents of privatisation argue that operational efficiencies and competition in the marketing segment of the petroleum industry will increase post-privatisation. The critics, however, argue that privatisation will only fulfil the fiscal target in the short term as the government has not adequately planned for net losses in the medium term. This paper analyzes the rationale, benefits, and challenges of BPCL privatisation through a case study. Our analysis indicates that post-privatisation, the joint dominance of NOCs in the marketing segment will reduce, and the privatised BPCL can emerge as an 'effective' competitor to Indian Oil Corporation Limited (IOCL) and Hindustan Petroleum Corporation Limited (HPCL). The government's main challenges are fulfilling the social obligation void created after BPCL privatisation and creating competitive markets post-privatisation through independent regulation.

Keywords: Privatisation, National Oil Companies, Common Ownership, Effective Competition

1. Introduction

India has created and maintained a unique structure of fragmented national oil companies (NOC)¹ that collectively dominate every functional segment² of its domestic petroleum industry. In 2019, the Indian government announced its intention to completely privatise Bharat Petroleum Corporation Limited (BPCL), a major downstream NOC. The government's announcement has led to an intense public debate on the rationale behind privatising a profitable NOC. The proponents of privatisation argue that privatisation will help in reducing NOCs collective dominance, increase competition and generate efficiency improvements (Pengonda, 2019; Press Trust of India, 2019a; Ranganathan & Shenoy, 2020). The critics, however, argue that the primary contention behind privatisation is to fulfil the fiscal target, and the intended benefits of competition will not be realised (Ram Mohan & Chandrasekhar, 2019; Sastry, 2019). The privatisation of a profit-making public sector company in India is a contentious issue. The public sector occupies a vital role in sectors like coal, banking, petroleum, and electricity. Apart from generating a reasonable rate of return, the public sector fulfils various social objectives such as providing products at subsidised prices, developing backward regions, supplying products to rural and remotely connected areas, and ensuring employment to weaker sections of the society.

The NOCs play a critical role in the global oil and gas industry as they control vast reserves and influence global oil prices by varying the supply of oil and gas (Tordo et al., 2011). However, numerous quantitative studies have found that private oil companies have better financial and operational performance than NOCs (Al-Mana et al., 2020; Al-Obaidan & Scully, 1992; Hartley & Medlock, III, 2013; Ohene-Asare et al., 2017; Wolf,

¹ Oil and Natural Gas Corporation (ONGC) and Oil India Limited (OIL) in exploration and production, Indian Oil Corporation Limited (IOCL), Hindustan Petroleum Corporation Limited (HPCL) and Bharat Petroleum Corporation Limited (BPCL) in refining and marketing and Gas Authority of India Limited (GAIL) in gas transportation.

² In the year 2019, the NOCs had a domestic market share of 80% in oil and gas production, 65% in the refining capacity and 77% in petroleum product sales.

2009). Privatisation and partial privatisation (Wolf & Pollitt, 2008), degree of vertical integration (Barrera-Rey, 1995; Hartley & Medlock, III, 2013), removal of fossil fuel subsidies (Hartley & Medlock, III, 2013), and internationalisation (Al-Obaidan & Scully, 1995; Ohene-Asare et al., 2017) improve the efficiencies of NOCs. A study by Bereznoy (2019) showed that vertically integrated NOCs like Saudi Aramco, Petronas, and Statoil, with their increasing international competitiveness, have improved their operational efficiency and rank among the top-performing oil and gas companies globally. Few studies that have conducted cross-country qualitative case studies on NOCs conclude that the goals and interests of the government, quality of state institutions, and its controlling mechanisms, and the nature of available resources influence the strategy and performance of NOCs (Marcel, 2006; Tordo et al., 2011; Victor et al., 2011). These studies conclude that in the absence of 'easy' oil, the government can improve the performance of its NOC through privatisation or introducing competition by lowering the entry barriers.

The complete privatisation of NOCs in a developing country is a rare event. Among developing countries, only Argentina and Bolivia have completely privatised their NOCs, and the recent renationalization of these NOCs demonstrates the privatisation challenge in developing countries (Mahdavi, 2021). Historically, most countries except the United States created NOCs to reduce their dependence on foreign oil companies and ensure inexpensive and reliable crude oil supply (Grayson, 1981). Due to the nationalisation wave in the Gulf and developing countries, NOCs peaked during the 1970s (Mahdavi, 2014). The wave of neoliberal reforms of the 1980s led to the privatisation of NOCs in developed countries, but NOCs continue to exist in most developing countries (Victor et al., 2011). Many developing countries have corporatised, stock-listed and partially privatised their NOCs, but total privatisation of NOCs is rarely undertaken due to the inherent difficulties in fulfilling preconditions of privatisation (Stevens, 1997, 2016).

Empirical studies have shown that the performance of private firms is better than public sector firms (Vining & Boardman, 1992). However, studies have shown that ownership per se does not impact performance (Martin & Parker, 1995), and it is inter-firm competition and a well-functioning market that improves the performance of public sector firms (D. W. Caves & Christensen, 1980; Kay & Thompson, 1986). The failure of complete privatisation of state-owned enterprises (SOE) in many transition and developing countries have led to the growing importance of sequencing reforms while designing privatisation plans (Parker & Kirkpatrick, 2005; Tan, 2011; Wallsten, 2002; Y. Zhang et al., 2005). A well-functioning competitive market and independent regulation are some preconditions that can ensure that privatisation benefits are equitable and efficiency-enhancing (Estrin & Pelletier, 2018). However, introducing competition in markets dominated by SOEs and providing independent regulation through competitive neutrality, especially in India, is equally challenging (Armstrong & Sappington, 2006; Bhattacharjea, 2019; Mahalingam & Sharma, 2017). It can be argued that, in a market dominated by multiple NOCs and fringe private companies, privatisation of one of the major NOCs could introduce competition and break the collective dominance of NOCs in the marketing segment of the Indian petroleum industry.

In this paper, we examine the market structure in the marketing segment³ of the Indian petroleum industry and present a balanced analysis behind the rationale and the ideal conditions for privatising BPCL, the benefits of BPCL privatisation, and the challenges of BPCL privatisation. The rest of the paper is organised as follows. Section 2 discusses the historical background of restructuring the Indian NOCs. Section 3 analyses the market structure in the marketing segment of the Indian petroleum industry by applying the concept of concentration, market share stability, entry barriers, effective

³ Since there is more competition in the refining segment due to the presence of large private companies, we specifically concentrate on the market structure in the marketing segment of the Indian petroleum industry.

competition, and common ownership. Section 4 specifies the conditions favouring BPCL privatisation. Section 5 analyses the benefits, and Section 6 analyses the challenges of privatising BPCL. Section 7 concludes the study.

2. History of Restructuring the Indian National oil companies

The Indian government has been restructuring the Indian NOCs for the last 30 years by merging the fragmented NOCs in different functional segments (**Table 1**). In the 1990s, the government corporatised and listed the NOCs on the stock exchange and began disinvesting minority stocks in each NOC. The Nitish Sengupta Committee recommended merging stand-alone refining and marketing companies with integrated refining and marketing companies to improve their competitiveness (India Infoline, 2002). Between 2000 and 2009, the independent refining and marketing companies (Kochi refineries limited, Chennai petroleum corporation limited, Bongaigaon refinery Limited, Numaligarh refinery limited, and IBP) merged the integrated refining and marketing companies (IOCL and BPCL). In 2003 the Supreme Court halted the government's strategic sale of BPCL and HPCL due to a lack of parliament approval by the government (Venkatesan, 2003).

The Krishnamurthy Committee in 2005 studied the potential for synergies among NOCs and discouraged the mergers between NOCs. The Committee recommended promoting competition and suggested NOCs concentrate on their core competency (Ministry of Petroleum and Natural Gas, 2005). Between 2005 and 2010, the NOCs started holding cross-shareholdings among each other. Due to the lack of a vertically integrated Indian NOC, the government announced its intention in 2017 to merge NOCs to achieve economies of scale and compete with international majors (Ministry of Finance, 2018). In 2018, the government sold its 51% stake in HPCL to ONGC, and HPCL became a subsidiary of ONGC (Press Trust of India, 2018). In 2019, the government announced the sale of its 53% stake in BPCL (Ministry of Finance, 2019), and unlike selling its stake in one NOC to another NOC, the government intends to sell its stake in BPCL to

a private company (Press Trust of India, 2019b). Thus, the privatisation of BPCL signals a significant break from the past restructuring efforts by the government.

Table 1: History of Restructuring Indian National oil companies

| Type of Company | Pre 1972 | 1972 – 2009 | 2009-2017 | 2018 - |
|--------------------------|-------------------------|--------------------------|-----------|-------------------|
| Vertically integrated | | | | ONGC ^h |
| Exploration & Production | ONGC (1956) | ONGC | ONGC | |
| | | OIL (1981) ^c | OIL | |
| Stand-alone Refining | CRL (1963) ^a | CRL | | |
| | MRL (1965) ^b | MRL | | |
| | | BRPL (1974) ^d | | |
| Refining & Marketing | IOCL (1964) | IOCL | IOCL | IOCL |
| | | BPCL (1976) ^e | BPCL | BPCL |
| | | HPCL (1974) ^f | HPCL | |
| Standalone Marketing | | IBP (1972) ^g | | |
| Gas Utility | | GAIL (1984) ⁱ | GAIL | GAIL |

^a Cochin Refineries Limited (now called Kochi Refineries Limited) was a refinery joint venture that became a subsidiary of BPCL in 2004 and merged with BPCL in 2009.

^b Madras Refineries Limited (now called Chennai Petroleum Corporation Limited) was a refinery joint venture that became a group company of IOCL in 2004. ^c Oil was a joint venture exploration and production company that became a NOC in 1981. ^d Bongaigaon Refinery Limited became a subsidiary of IOCL in 2001 and merged with IOCL in 2009 ^e BPCL was formed through nationalization of Burmah Shell in 1976 ^f HPCL was formed through nationalization of Esso and Caltex in 1974 ^g IBP was formed through nationalization of Indo Burma Petroleum in 1970 and became a subsidiary of IOCL in 2002. ^h HPCL became a subsidiary of ONGC in 2018.

Note: Figures in parentheses indicate the year of formation of the NOCs

Source: Author's compilation based on historical documents

3. Market Structure characteristics in the marketing segment of the Indian Petroleum Industry

The three NOCs – Indian Oil Corporation Limited (IOCL), Hindustan Petroleum Corporation Limited (HPCL), and BPCL - are the leading firms in the marketing

segment of the Indian petroleum industry and participate in all product segments. In contrast, private companies are fringe firms and participate in specific product segments. The rationale of multiple NOCs in the marketing segment could have two possibilities. On the one hand, multiple NOCs can act as competitors in the market and avoid a single firm monopoly. Still, could multiple NOCs under a common principal (government) have an incentive to compete? We address this issue by analysing the market structure and competition in the marketing segment of the petroleum industry.

3.1. High Concentration of NOCs

The concentration of firms in an industry determines its market power (Motta, 2004). We compute the Hirschman- Herfindahl Index (HHI)⁴ of the three NOCs – IOCL, BPCL, and HPCL in the marketing segment from 1993 to 2019 to determine their market power. The liberalisation of private imports in 1993, the entry of private refining companies in 1996, and the abolition of the administered pricing mechanism in 2002 led to the decline in the NOCs HHI below the threshold of high concentration in 2004. However, **Figure 1** reveals that the NOC HHI rose above 2500 after 2006 due to the governments' reregulation of product prices and administering subsidies amidst increasing international crude oil prices. These steps led to the exit of private companies from the retail marketing of petrol and diesel, and the NOC HHI remained above the threshold till petrol and diesel prices were deregulated by the year 2014. The decline in NOC HHI has stagnated since 2016 and is still close to the high concentration threshold.

⁴ HHI is computed as the sum of the squares of market shares of firms in an industry. The range of HHI varies between 1 for perfectly competitive markets to 10000 for a perfect monopoly. HHI values below 1500 are classified as competitive markets, between 1500 and 2500 as moderately concentrated markets and above 2500 as highly concentrated markets.

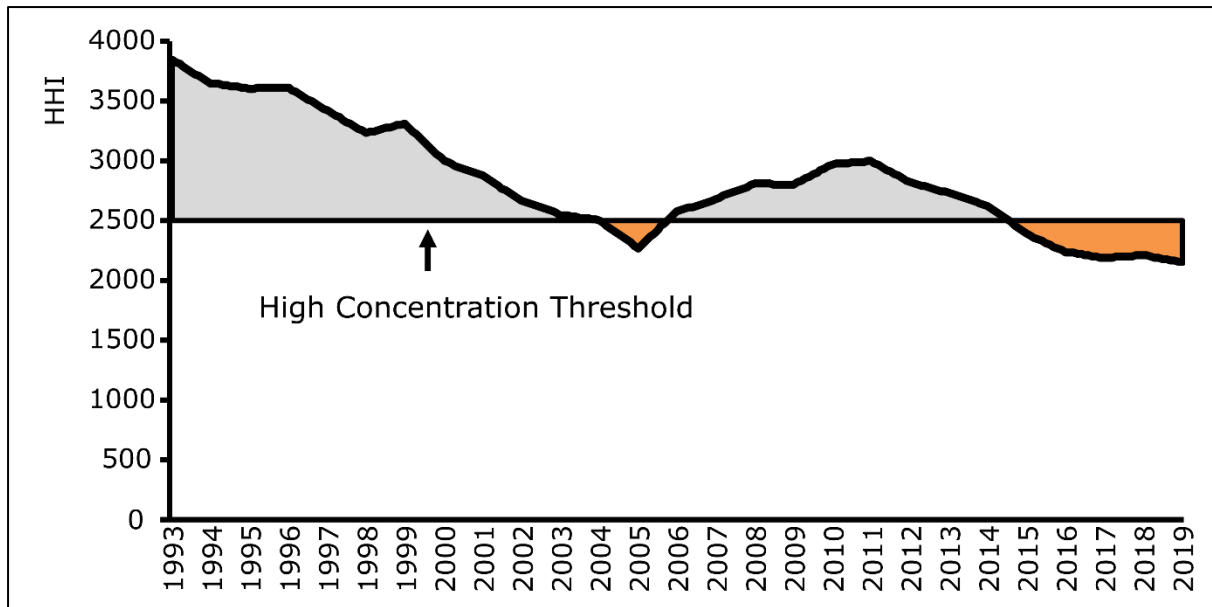


Figure 1: Hirschman-Herfindahl Index (HHI) of NOCs in Marketing segment of the Indian Petroleum industry from 1993-2019

Source: Author's calculation based on market share data of NOCs from the Ministry of Petroleum and Natural Gas Annual Statistical Report

3.2. Market Share Stability

Market share stability among rival firms provides evidence of a lack of competition in the market and is a facilitating factor for collusion (R. E. Caves & Porter, 1978). If we consider the three NOCs as rival firms, then there should be significant market share volatility observed in the NOCs. **Figure 2** depicts the market shares of the three NOCs and the share of private companies (including imports) from 1993 to 2019. We observe that the two NOCs (HPCL and BPCL) market shares have remained virtually constant in the marketing segment for the past 26 years. BPCL and HPCL are the second and third-largest players in the marketing segment and are the closest competitors to the most significant player IOCL. However, the variation in market share of IOCL is due to domestic private companies like Reliance Industries Limited (RIL), Essar, Shell, and import competition. Thus, we observe that BPCL and HPCL do not provide any competitive constraint to IOCL's market share in the last 20 years.

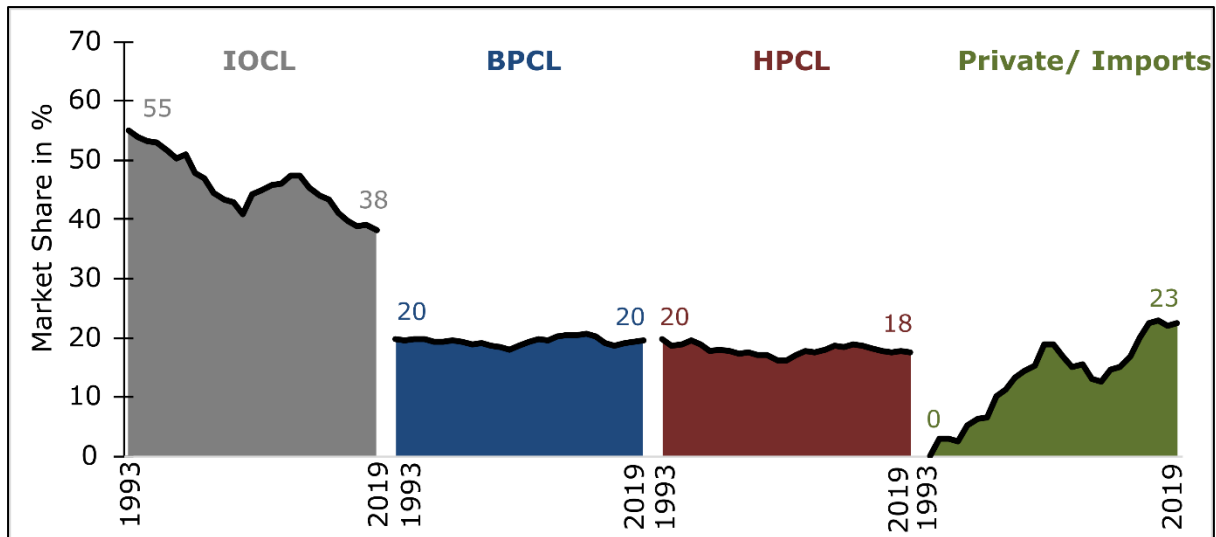


Figure 2: Market Share of Companies in the Marketing Segment of the Indian Oil and Gas Industry from 1993-2019

Source: Author's calculation based on market share data from the Ministry of Petroleum and Natural Gas Annual Statistical Report

3.3. Entry Barriers

The contestable market theory posits that a concentrated market structure is not problematic per se if firms' free entry and exit are possible in a given market (Baumol, 1982). Free entry by a firm is difficult if there are high fixed sunk costs to enter the industry (Motta, 2004). The petroleum industry is capital-intensive, and a new entrant must invest significant capital in entering any segment. If the product prices are market-determined and there are no significant import tariffs in procuring raw materials, the private firm enters and invests in infrastructure. For example, India's automotive lubricant product segment has the market participation of more than 40 firms and is an example of a competitive market structure. Five petroleum products, i.e., Petrol, Diesel, Aviation turbine fuel (ATF), and Liquefied Petroleum Gas (LPG), have a 70% share in India's petroleum product consumption. The infrastructure needed for a firm to enter the marketing segment of the five products consists of terminal and retail stations for petrol and diesel, aviation service facility (ASF) for ATF, and LPG distributor infrastructure for LPG.

The mean and standard deviation of each NOCs and their collective share in infrastructure for the four products from the year 2006 to 2019 are depicted in **Figure 3**.

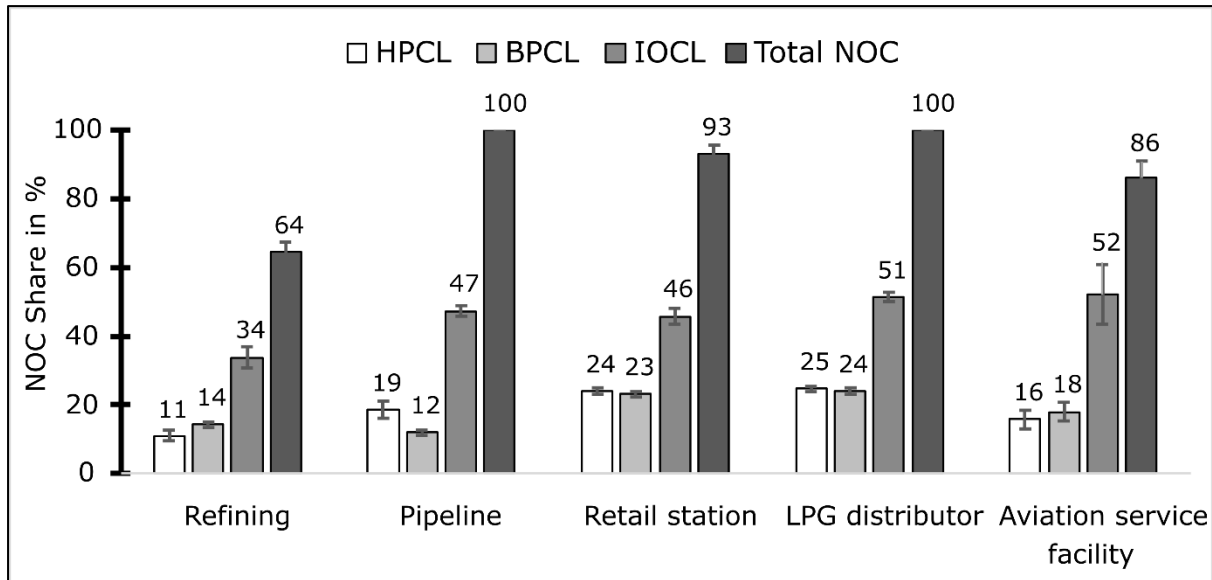


Figure 3: Mean and Standard Deviation of Market Share of HPCL, BPCL, and IOCL in Petroleum Product Marketing Infrastructure from 2006-2019

Source: Author’s calculation based on data from HPCL, BPCL, and IOCL Annual Report

The three NOCs have an average share of 64% in refining capacity, 100% in product pipelines, 93% in retail station, 100% share in LPG distributorship, and 86% in ASF. The standard deviation of NOCs in infrastructure is maximum in ATF. It progressively decreases in retail outlets, LPG, and kerosene, which indicates how the NOCs collectively add infrastructure in a planned way, and the competition among NOCs in adding infrastructure is non-existent in retail stations and LPG distributorship. Thus, the NOCs together have established high entry barriers for private firms.

3.4. Ineffective Competition

Effective competition exists when numerous competitors in an industry are reasonably well-matched such that no firm can capture lasting control and get entrenched in dominance (Shepherd, 1998). The primary conditions for the effective competition are at least five comparable competitors, no single firm dominance, and easy entry into the market (Shepherd & Shepherd, 2004). A firm with more than 40% market share in a market is generally assumed to have a single firm dominance. In the marketing segment of the Indian petroleum industry, although there are more than five competitors, they are not well matched and not present in all the product segments. IOCL is the most significant player having 40% of the market share, followed by BPCL and HPCL at 19% and 18%, respectively. RIL, Essar, and Shell are present in the transportation fuel and ATF product segment but have less than 10 % of the market share for the past 15 years. In the absence of competition by BPCL and HPCL, IOCL maintains single firm dominance. Effective competition in the marketing segment can be achieved by creating a well-matched competitor to NOCs with significant participation in every product segment and no historical infrastructure disadvantage.

3.5. Common ownership

Cross ownership and other links among competitors help facilitate collusion in the market (Motta, 2004). Recent studies have concluded that minority shareholdings in rival firms by a common owner can produce a considerable anti-competitive impact (Azar et al., 2018). The single-entity theory for state-owned enterprises (SOE) posits that the State has an incentive to co-ordinate multiple SOE's commercial and strategic conduct through de jure control. Thus, multiple SOEs operating in the same sector cannot be considered separate entities for competition assessment⁵ (A. H. Zhang, 2012).

⁵ Recently, European Commission while assessing Chinese SOEs involved in acquisition activity in Europe considered multiple SOE in the same sector as single-entity.

The government has a majority holding in ONGC, IOCL, OIL, BPCL, and GAIL. Through its wholly owned insurance company Life Insurance Corporation of India (LIC), the government has minority shareholdings in every NOC and leading private companies such as RIL, Castrol, and Vedanta. Minority holdings also exist between the NOCs, which facilitate financial integration. For example, BPCL and HPCL have a minority stake in OIL, and ONGC and IOCL have minority crossholdings. **Figure 4** shows that the government holdings in NOCs have decreased from around 75% in 2001 to approximately 55% in 2019.

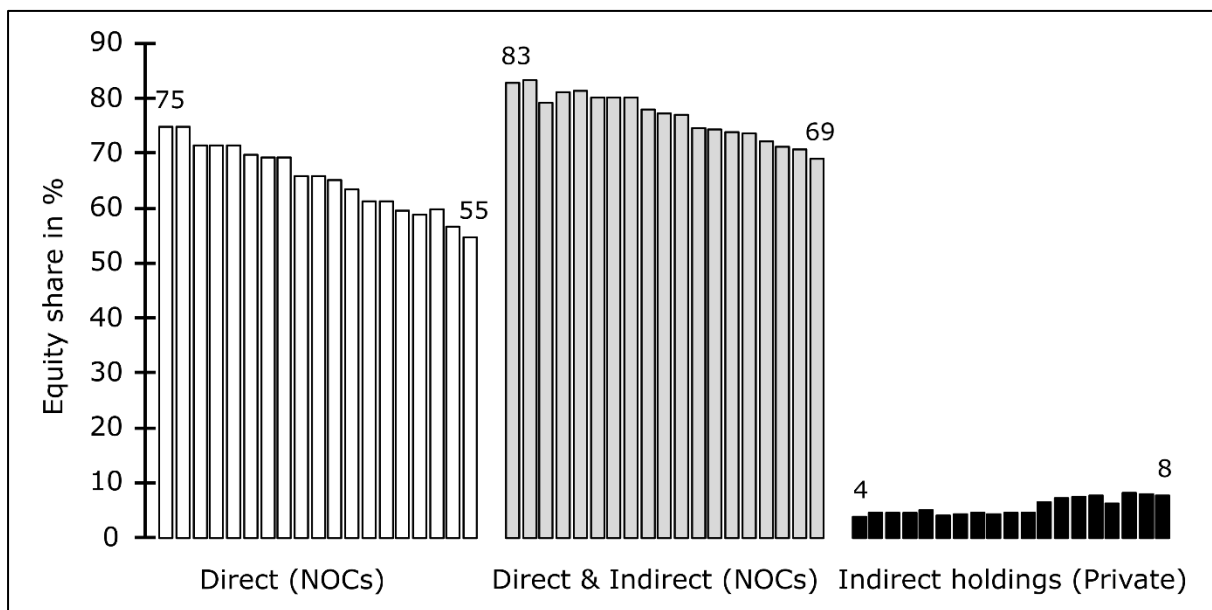


Figure 4: Government of India direct and indirect holdings in NOC and leading private oil companies, 2001-2019

Note: The six NOCs considered for analysis are ONGC, IOCL, BPCL, HPCL, OIL, and GAIL, while the private companies considered are RIL, Castrol India, and Vedanta Resources Limited. Indirect holdings are by Life Insurance Corporation of India (a wholly owned financial institution of the Government of India). For NOCs, indirect holdings also include crossholdings among NOCs.

Source: Author's calculation based on data from the Annual Report of Companies

However, through LIC and crossholdings between NOC, the government ensures that it still held about 69% of the shareholdings in the NOCs in 2019. The government continues to exercise control over NOCs by simultaneously increasing the stake of LIC in NOCs and the crossholdings between NOCs. LIC has also expanded its minority shareholdings in major private oil companies like RIL, Castrol, and Vedanta (previously Cairn India) from 4% in 2001 to around 8% in 2019.

Despite the steady disinvestment of minority stakes in NOCs, the maze of government majority holdings, LIC minority holdings, and cross-shareholdings give the government significant control over NOCs. The common ownership by the government ensures that NOCs are highly co-ordinated and can be considered as single entity.

4. Conditions favouring BPCL Privatisation

4.1. Continuing Price reforms lead to less burden on NOCs

Government intervention in the pricing of petroleum products through subsidies from 2005 to 2013 had put enormous pressure on NOCs. The NOCs had to suffer significant under-recoveries⁶ on sensitive products and yet expand their infrastructure in these products (**Panel (a) of Figure 5**). Price deregulation of Petrol and Diesel since 2010 and 2014, respectively, and direct benefit transfer of LPG subsidies to households through central government budget ensures that the historical burden of administering and compensating subsidies will not increasingly fall upon the NOCs (**Panel (b) of Figure 5**). Thus, the NOCs are no longer responsible for administering and compensating for under-recoveries and subsidies on any product in the medium term.

⁶ Under-recovery is incurred due to the difference between the subsidized price at which the companies sell certain products and the price which they should have received for meeting their cost of production.

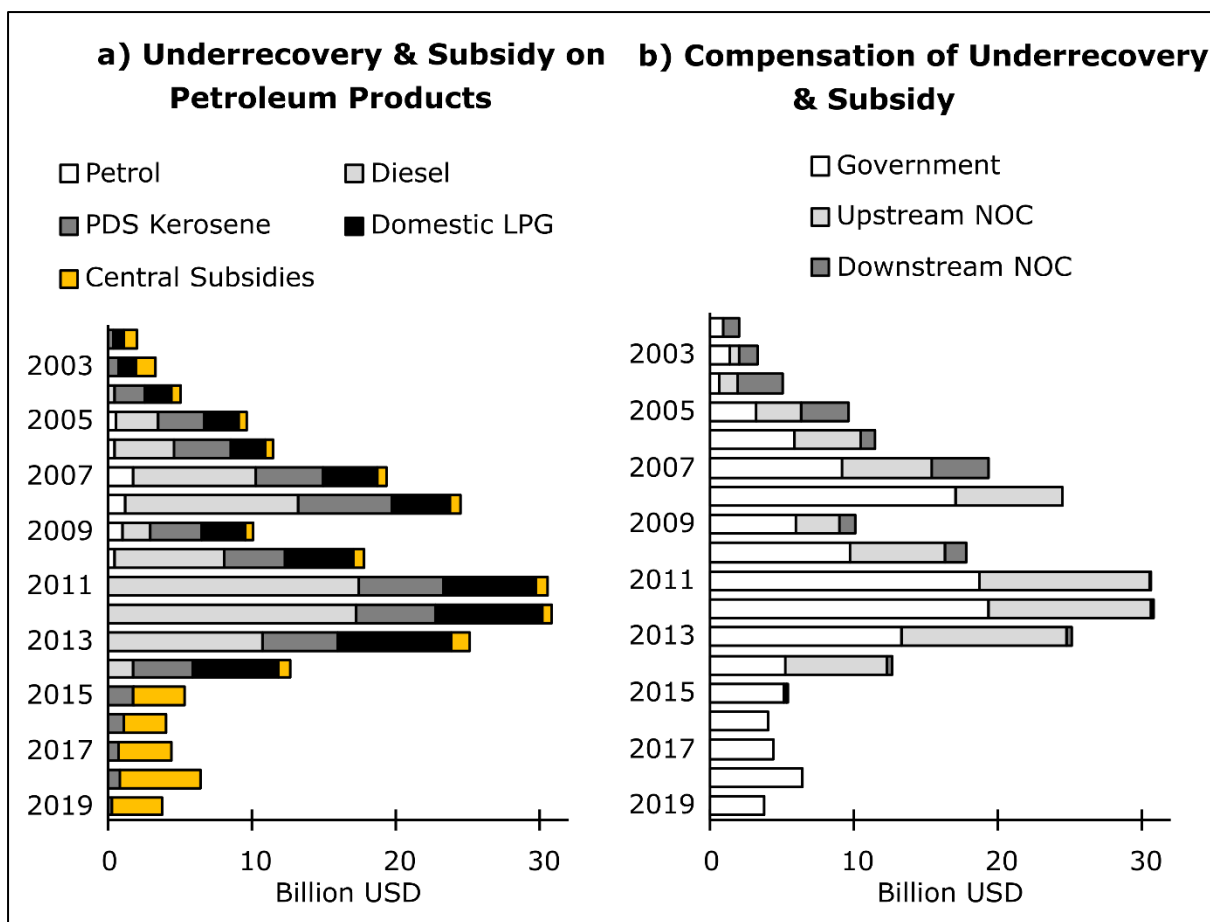


Figure 5: a) Under-recoveries of NOCs in specific products and Central budget subsidies on products by the Government b) Compensation of Underrecovery and Subsidy by Government, Upstream NOC, and Downstream NOC

Source: Author's depiction based on data from Ministry of Petroleum and Natural Gas Annual Statistical Publication (various issues)

4.2. Declining Employees in BPCL

One of the objectives of setting up public sector undertakings (PSU) in India was to generate employment and fulfil the social objective of implementing reservations for weaker sections of the society. As the pressure to perform grew on PSUs, the employment generation in the capital-intensive petroleum industry has shown a decline. The decline in the number of BPCL employees since 2008, as shown in Figure 6, suggests that the immediate threat of mass retrenchment after privatisation is doubtful. If we compare BPCL with global private refining and marketing peers, we observe that BPCL is not a

bloated organisation. For example, Phillips 66 had 14,600 employees, Marathon Petroleum had 43,800 employees, Valero Energy had 10,015 employees, SK innovation had 6284 employees, and Idemitsu Kosan had 8955 employees in 2018. Thus, the acquiring company will have limited scope to increase the performance of BPCL by retrenching employees and will avoid a major cause of discord during and after privatisation.

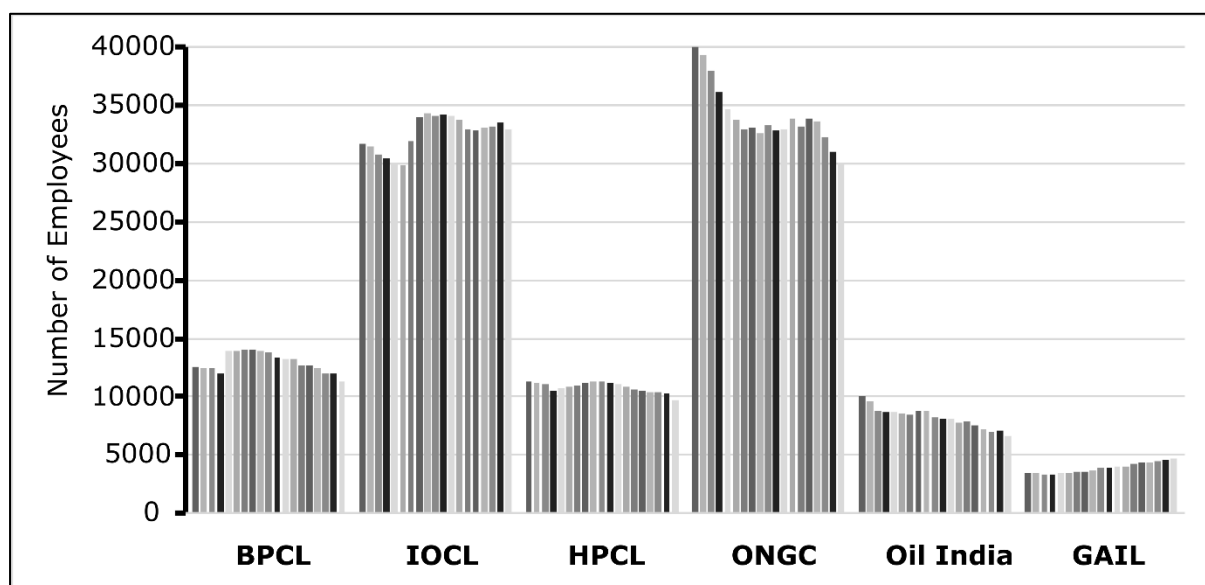


Figure 6: Total number of permanent employees in NOCs from 2001-2019

Source: Author's calculation based on data from Annual Reports (various issues)

4.3. Contribution of BPCL Dividend to Government

The contribution by BPCL to Central and State exchequer is in the form of excise and value-added tax for domestic product sales, customs duties for product imports, corporate taxes, and dividends arising out of the government's stake in BPCL. The privatisation of BPCL will only impact the dividend income received by the government while the rest of the taxes and duties will continue to be paid by the privatised BPCL. Dividends from NOCs contribute approximately 4% of the total contribution by the petroleum sector to the central and State exchequer. BPCL paid a dividend (including

dividend distribution tax) of Rs. 2177 crore to the Central government in the year 2017-18, which is less than 0.5% of the petroleum sector's contribution to the central and State exchequer. The loss in dividend income by BPCL can be offset by the corporate taxes received from the privatised BPCL through improved earnings.

5. Benefits of BPCL privatisation

This section discusses some of the factors that make BPCL among the best performing downstream NOC. The acquiring company can leverage some of these factors to generate overall benefit to BPCL and the Indian economy.

5.1. Better Financial and Operational Performance

We compare the financial performance of IOCL, HPCL, and BPCL for 14 years on two parameters – profits and return on invested capital. The results presented in **Table 2** show that BPCL, on average, has outperformed HPCL by generating higher profits and has outperformed both IOCL and HPCL in generating a higher return on investments.

We now compare the operational performance of the three NOCs in marketing petroleum products for the period 2005-2019. The operational parameters considered are Petrol (MS) and Diesel (HSD) sales per retail station, ATF sales per ASF, and LPG sales per distributor. **Figure 7** shows that BPCL outperforms IOCL and HPCL in operational parameters during the period. It is pertinent to note that BPCL and HPCL own a similar number of retail outlets, ASF, and LPG distributors, yet BPCL outperforms HPCL.

Table 2: Comparison of IOCL, BPCL, and HPCL profits and return on invested capital from 2005-2019

| | Profits (in Million Dollars) | | Return on Invested capital (%) | |
|------------|------------------------------|--------------------|--------------------------------|--------------------|
| | Mean | Standard Deviation | Mean | Standard Deviation |
| IOCL | 1657 | 873 | 8.2 | 3.9 |
| BPCL | 633 | 442 | 8.7 | 4.6 |
| HPCL | 476 | 403 | 7.8 | 6.4 |
| Peer group | 847 | 1237 | 8 | 7 |

Note: The peer group consists of companies classified as refining and marketing in the Platts Top 250 Energy Rankings

Source: Author’s calculation based on data of refining and marketing companies from Platts Top 250 energy company rankings database

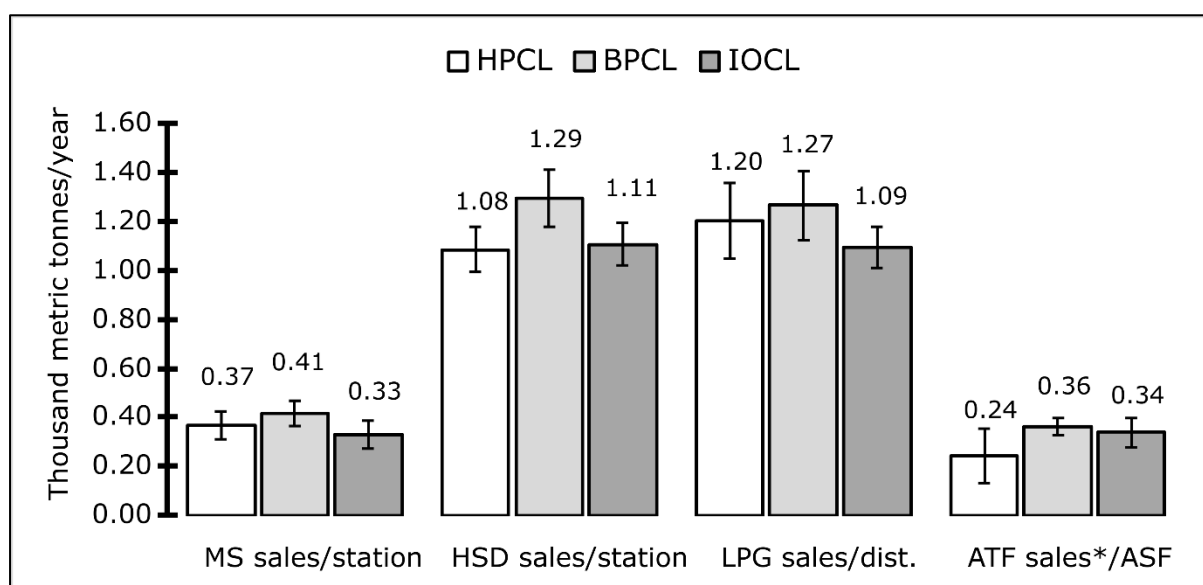


Figure 7: Mean and Standard Deviation of the ratio of product sales to the number of infrastructure facilities by HPCL, BPCL, and IOCL from 2005-2019

*ATF sales are in '00 Thousand metric tonnes/year

Source: Author’s calculation based on data from Annual Reports of IOCL, BPCL, and HPCL and Right to Information Reply

5.2. Potential for Product Export

India imports more than 80% of its crude oil requirements and 17% of its petroleum product requirements and therefore incurs substantial foreign exchange outgo on imports. The performance of downstream NOCs in product exports has been weak due to the domestic focus of NOCs and the social obligation of supplying subsidised fuels to the consumers. Private companies like RIL and Essar export around 80% of India's total petroleum product exports, while BPCL exports 3% (1.88 million tonnes) of the entire product exports. A private entity has the advantage of altering the product slate of its refinery according to the demands of various products. For example, private refineries in India increased pet coke production due to rising domestic demand in 2014. The private refineries do not produce kerosene and bitumen due to low demand and value. BPCL has two coastal refineries, which makes it ideal for exporting petroleum products. The privatised BPCL can leverage such opportunities and generate a valuable inflow of foreign exchange to partially offset the outflow in foreign exchange due to increased crude oil imports.

6. Challenges

This section enlists the short and medium-term challenges that the government will face during and after BPCL privatisation. The short-term challenge lies in the process and plan of the government to privatise BPCL, while the medium-term challenge refers to the government's ability to plan in addressing the social obligation void after BPCL privatisation and the regulatory challenge of creating and maintaining competitive markets.

6.1. Undervaluation of BPCL Assets

The short-term challenge during BPCL privatisation is the undervaluation of BPCL assets, and the resulting shortfall in privatisation proceeds to the central exchequer (Pandey, 2019). We evaluate this challenge by comparing the expectation from BPCL

privatisation with similar deals that have taken place in the last two years, i.e., ONGC-HPCL and Essar- Rosneft. ONGC acquired the government's stake of 52% in HPCL for Rs. 36915 crores (Press Trust of India, 2018), while Rosneft- Trafigura acquired 98.26% of Essar's stake Rs. 83000 crore (ET Bureau, 2017). Essar Oil Limited, despite having fewer refining and marketing assets than HPCL, and BPCL received a more significant amount due to the quality of its refinery that is comparatively new, complex, and export oriented. The Essar-Rosneft deal also included a 1010 MW power plant and 58 million tonne port. Based on the assets of BPCL, HPCL, and Essar as shown in **Table 3**, the market expectation of receiving privatisation proceeds in the range of Rs 55000 crore to Rs 74000 crore (Nevin, 2019; Pandey, 2019) seems appropriate considering BPCL's superior financial and operational performance compared to HPCL. If the government receives less than the range specified, then it can be argued that the government did not receive the best value from BPCL privatisation.

6.2. The divergence between the Government's Stated Intent and Reality

Based on the historical account of the Indian government in governing the petroleum industry, we have some doubts on whether increasing the competition is the main contention behind privatising BPCL. The reregulation of petroleum product pricing after deregulation, government adhoc intervention in pricing petrol and diesel during central and State elections in 2018 after introducing market-determined daily price revision (Das, 2019), and creating HPCL as a subsidiary of ONGC instead of an operationally integrated NOC are examples of government's divergence from its stated intent. India did not have an operationally integrated NOC till 2017, and the stake sales of HPCL to ONGC signalled the government's intent to create a vertically integrated NOC. However, HPCL continues to be a subsidiary of ONGC and maintains its separate identity. The efficiency improvements expected out of operational integration of ONGC and HPCL have not commenced in the last two years.

Table 3: Comparison of Assets and stake sale proceeds of HPCL, Essar and BPCL (speculated)

| Infrastructure | HPCL | BPCL | ESSAR |
|--------------------------------|-------|---------------|------------------------------|
| Refining Capacity (MMT) | 24 | 30.5 | 20 |
| Nelson Complexity Index | 8.9 | 7.6 | 11.8 |
| Market Sales (MMT) | 35.9 | 39.5 | 21.4 |
| Retail Station (No) | 14412 | 13983 | 4692 |
| Product Terminals | 83 | 78 | — |
| LPG Bottling Capacity (TMT) | 4047 | 3933 | — |
| Aviation Fuel Station (No) | 42 | 52 | — |
| SKO/LDO Agencies | 1638 | 1001 | — |
| Other Assets | — | — | Vadinar Port, Power Plant |
| Stake Sale (%) | 51.11 | 53.29 | 98.26 |
| Acquiring Company | ONGC | ? | Rosneft- Trafigura |
| Deal Value (Rs, Crore) | 36915 | 55000 — 74000 | 83000 |

(Expected)

Note: Numaligarh Refinery Limited (NRL) will be separated from BPCL before privatisation, and hence NRL has not been considered for computing BPCL statistics.

Source: Author's compilation based on data from Annual Reports of BPCL, HPCL, and Essar Oil and Newspaper Reports

Hence, the government's intent to increase competition will not be realised only by privatising BPCL since IOCL and HPCL will still hold around 60% of the market share in the marketing segment. Through its regulatory institutions, the government has to ensure that the privatised BPCL does not collude with NOCs due to their shared history, and the market is still attractive for new players to enter the industry.

6.3. Planning for Social Obligation void due to BPCL privatisation

There are certain social obligations that the NOCs are mandated to fulfil, such as supplying and subsidising fuels in rural and challenging locations. The foremost challenge that the government will face after privatising BPCL is the social obligation of providing subsidised kerosene and household LPG. The government introduced Pradhan Mantri Ujjwala Yojana (PMUY) to supply LPG cylinders to below poverty line (BPL) households and increase the penetration of LPG to replace kerosene for cooking in rural areas. **Figure 8** shows that the rate of growth in LPG consumption has increased after 2014.

BPCL holds a share of 25% and 23% in LPG distributorship and bottling capacity, respectively, and services around seven crores LPG consumers. It is unlikely that the government will place a condition on the privatised BPCL to fulfil social objectives that BPCL previously undertook. Therefore, the government needs to plan for the void in supplying BPCL's quota of LPG and Kerosene to consumers.

Another challenge is opening rural retail outlets, an obligation on both the NOCs and private firms. The NOCs were mandated to open around 10 % of the retail stations in the rural areas. IOCL, BPCL, and HPCL currently have 8208, 2431, and 3645 rural outlets, respectively, out of 66817 retail outlets. BPCL has the lowest share of rural retail outlets among the NOCs, and with the condition of opening at least 5% rural outlets, the future shortfall in rural outlets by BPCL will need to be compensated by IOCL, and HPCL.

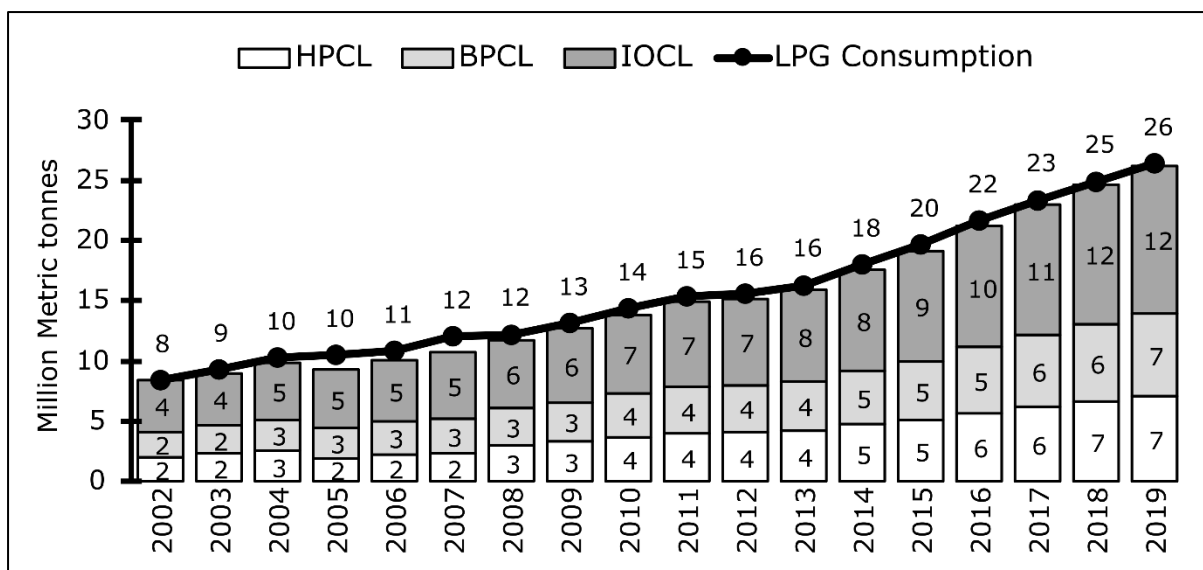


Figure 8: LPG Consumption and Sales of NOCs from 2002-2019

Source: Author’s depiction based on data from the Ministry of Petroleum and Natural Gas (2018)

6.4. Bidding by Efficient international oil companies and independent regulation

Due to net-zero targets undertaken by international oil companies, it is difficult for India to attract the most efficient international companies to bid for BPCL. The initial bid for BPCL has been received by Vedanta Limited that does not have prior experience in the downstream segment, and two other foreign conglomerates that do not rank among the top-performing companies in the downstream segment (Press Trust of India, 2020).

Independent regulation will be necessary as the marketing segment would still have a high concentration after privatisation. The regulators will have to ensure that the privatised BPCL emerges as a competitor to the incumbent NOCs and more firms are invited to participate in the marketing segment of the petroleum industry.

7. Conclusion

The study attempts to address the rationale, benefits, and challenges of BPCL privatisation. We conclude that restructuring of the Indian NOCs has been long overdue as the competition, especially in the marketing segment of the industry, has not increased substantially despite the abolition of the administered pricing mechanism and the entry of private players in 2002. The structural links among NOCs through government holdings, holdings among NOCs, and LIC minority holdings in NOCs and private companies ensure that multiple NOCs operate as a single entity and jointly dominate the marketing segment. Market share stability exhibited by BPCL and HPCL - the second and third largest players in the marketing segment – in the last 20 years strengthens the joint dominance of NOCs. The market share stability ensures that IOCL continues to be the dominant player in the marketing segment. Due to their infrastructure disadvantage and pricing policies of the government, the private companies are unable to challenge the joint dominance of the three NOCs. The completion of pricing reforms beginning with the deregulation of petrol and diesel prices and direct benefit transfer of LPG subsidies ensures that the entry barrier of government involvement in petroleum product pricing has reduced considerably. The marketing segment of the Indian petroleum industry needs an active competitor to the dominant firm IOCL and the financially integrated ONGC-HPCL. The privatised BPCL will not suffer the infrastructural disadvantage of a new firm and the shackles of public sector governance and obligations. Thus, the privatised BPCL can induce much-needed competition and value addition in the marketing segment.

Few factors indicate that BPCL privatisation can prove beneficial for the acquiring company and the overall economy. BPCL has consistently delivered better operational and financial performance as compared to IOCL and HPCL. The presence of BPCL's two coastal refineries – Mumbai and Kochi - can be leveraged by the private company

for product exports and thereby earn valuable foreign exchange that can partially offset the burgeoning costs of crude oil imports.

There are specific challenges that the government will bear during BPCL privatisation in the short and medium term. In the short term, the government has to ensure that it receives the appropriate amount by selling its stake in BPCL. We argue that the government's expectation of receiving around 55,000 Rs crore to 70,000 Rs crore is a reasonable range considering the previous HPCL and Essar deals. The government needs to be vigilant that the privatisation of BPCL is done with the right intention to introduce competition in the sector and not only fulfil the fiscal target. The ONGC-HPCL deal is an example of how the government's intention and reality diverged. The transfer of the government's stake in HPCL to ONGC only helped the government fulfil its disinvestment target for that particular year. Still, it did not create an operational vertically integrated NOC till today. If the government intends only to fulfil the fiscal target, it will not adequately plan for the medium-term challenges. The government will face the main challenge of slowing the growth of LPG penetration in the rural economy. BPCL supplies approximately 20% of the Kerosene and LPG needs of the country. The government cannot force the privatised entity to fulfil the social obligation of BPCL, and hence IOCL and HPCL will have to fill the void of BPCL. The other challenge would be ensuring that independent regulators act in creating and maintaining competitive markets. We conclude that regardless of the rationale behind privatising BPCL, the change in ownership will increase competition in the marketing segment with immediate effect. However, how the government plans to fulfil the social obligation void created after BPCL's departure from the public sector fold will reveal the real costs of privatisation.

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