

COST TREND for Indian Public Enterprises

Abstract

Public sector enterprises (PSEs) have been one of the most important drivers of economic growth in a number of countries, including India. While many countries have gradually moved away from the PSE model of development, PSEs accounted for roughly 25% of Fortune Global 500 companies in 2019. The poor performance of Public Sector Enterprises (PSEs) in the 1980s prompted a more comprehensive approach to economic development in order to address the apparent flaws in India's overall development technique, as well as PSEs particularly. This research seeks to break down the exhibition of Central Public Sector Enterprises (CPSE) against the setting of advancement measures offered in the 1990s and thereafter in this unique condition. The study assesses the period 1980-81 to 2008-09 based on a few selected markers. The findings suggest that the PSEs' performance in the post-advancement system was superior than the pre-change period in every single marker.

1. Introduction

PSEs, also known as state-owned enterprises (SOEs), have been one of the most important drivers of economic development in a number of countries (Kwiatkowski and Augustynowicz, 2015). Across the board, these activities account for roughly 20% of speculation, 5% of work, and up to 40% of domestic results (International Finance Corporation, 2018). According to the Fortune Global 500 organization rankings, roughly 25% of global enterprises were claimed, controlled, or linked to nations in 2019.¹ When compared to developed countries, non-industrial countries have a higher presence of PSEs among their top companies.² With developments in the 1980s and the creation of international trade laws under the World Trade Organization (WTO) in the 1990s, many countries, particularly developed countries, have moved away from the PSE model of development to encourage private enterprise and competition (Nguyen, 2016). A similar shift in administration has occurred, from direct control to arrangements that give organizations more autonomy. The disintegration of the former Soviet Union, the monetary crisis in a number of Southeast Asian countries, and the strain on government coffers as a result of PSE disasters have all spurred the privatization of a number of PSEs.³ Despite a push toward privatization, PSEs continue to play an important role in (a) financial development by ensuring the implementation of government plans and arrangements, and (b) expanding a country's geo-vital reach by securing significant resources through designated speculations. They are now commonly found in critical fields such as energy, minerals, foundation, and various utilities. They aid in ensuring energy security, public safety (such as security), providing public labour and products at reduced rates to specific groups in the country, and assisting states in achieving sustainable development goals (SDGs) [World Bank, 2014; Organization for Economic Co-operation and Development (OECD), 2018; Greene, 2014; Barnes, 2019].

Because of specialization, broadening scope, global marketing, and increased competition, it's critical to keep an eye on prices while also lowering them as much as possible. To compete in the global market, it's critical to maintain shipping costs low and predictable, as well as to look for innovative ways to cut expenses and close off unexpected opportunities. Only those firms who are constantly seeking to improve their competency and adequacy, as well as adding value through cost reduction and item improvement, will be able to survive in today's fast-paced environment.

1.1. COST TRENDS IN PUBLIC ENTERPRISES IN INDIA

SAIL, BALCO, and HZL were chosen as the three public ventures for this evaluation. Each of the public companies involved in the manufacture of eleven metal has been chosen. SAIL generates iron, BALCD distributes aluminium, and HZL distributes zinc. Apart from the essential gear, these ventures provide a variety of different items.

For the distributed budget summaries of each of the three public enterprises active in the metals sector, the nuances associated with the cost of creating specific things have been forgotten, and just the total expenses incurred on each of the items produced by the undertakings have been shown.

2. Review of Literature

This section looks into previous research' discussions about the most important thing that needed to be addressed. Ravinder and Rupinder's (2007) study examines the pre- and post-disinvestment financial and operational performance of 15 Indian PSEs that completed partial disinvestment between 1991 and 2002. The specific proof supports the good benefits of privatization on the performance of PSEs. After disinvestment, these privatized units have essentially enhanced their production, transactions, functional efficacy, profit per offer, and dividend payments. Nagaraj (2006) focused on the public sector's long-term performance based on a set of viewpoints related to financial totals, mostly using National Accounts Statistics (NAS). Despite the fact that the public area share in homegrown ventures had reduced to nearly half, he inferred that the public area share constantly climbed to the homegrown result. This improvement in presentation has occurred as a result of an increase in actual efficacy in the power age, a decrease in the public sector business, and an increase in PSE productivity. Mishra and Lakshmi (2006) used essential and auxiliary level data to break down the exhibition of PSEs during the period of monetary progression. He discovered that the PSEs performed well during periods of economic growth. In the post-progression era, PSE productivity and inner asset activation were improved. For the period 1991 to 2002, Jain and Yadav (2005) used auxiliary data from 137 PSEs and essential data from 41 PSEs to break down the monetary administration of the PSEs in terms of benefit. The results demonstrated that the sample PSEs were able to generate a good rate of return on their invested capital. The government's advancement plan actions may have resulted in increased profitability for PSEs. According to Baijal (2002), a full rebuilding of the financial modern strategy is essential to provide a better level of speculation with greater efficiency and utility. As a result, the reform has been attempted with the purpose of increasing efficiency, activating domestic and foreign assets, and instilling a necessary level of seriousness in the economy. The cause behind the disinvestment of PSEs was explained by Rath (2001). The evaluation concludes that the

changing global climate and unsatisfactory PSE execution have prompted the government to take new steps and open doors to limit the job of public area exercises. Rather than investing resources in firms, exchange, and business, the government built social and economic infrastructure to support private-sector activities. Ghuman (1999) broke down the achievement of PSE modifications from 1991 to 1998 and found that the first stage was limited in terms of disinvestment and the cancellation of PSEs' restricting infrastructure status. With the establishment of the Disinvestment Commission, the speed of disinvestment has increased. Administrative ministries, representatives, and vested parties have all been key impediments in the manner of change. Das (1997) dissected the public area banks' general effectiveness, specialised dispensing, and size. He discovered a reduction in total efficiency between 1990 and 1996. This occurred as a result of a loss in specialised efficiency, both unadulterated and on a large scale. The collapse in specialised efficiency was mostly due to four nationalized banks, according to the assessment.

RAW MATERIALS

SAIL's usual unprocessed material share was 33.58 percent, with a 6.89 percent variation from 30.29 percent in 1988-89 to 37.18 percent in 1982-83. The extents, on the whole, were a mixed bag. When compared to 1981-82, the extent increased dramatically from 33.26 percent to 37.18 percent in 1982-83. One of the grounds for this increase was the continual decline in the nature of cooking coal. This information was discovered by chance by the organization's executives in Annual Reports. The breadth of unrefined components was further harmed by input restrictions and blackouts. "Input needs continued to influence the establishment of coordinated plants this year as well," the organization's leaders stated in their annual report and records for 1982-83. The amount of speculation has nearly halved. This increase in the exhibition is attributed to an increase in actual productivity in the power age, a decrease in the public sector business, and an increase in the benefit of PSEs. Mishra and Lakshmi (2006) used necessary and optional level information to break down the presentation of PSEs in the context of financial advancement. He discovered that the PSEs performed well during periods of economic growth. In the post-progression phase, PSE productivity and internal asset activation were improved. For the period 1991 to 2002, Jain and Yadav (2005) examined the monetary management of PSEs in terms of productivity, using auxiliary data from 137 PSEs and essential data from 41 PSEs. The findings revealed that the example PSEs have achieved an acceptable rate of return on invested capital. The government's advancement plan actions may have resulted in increased profitability for PSEs. According to Baijal (2002), a complete rebuilding of the financial modern approach is essential to ensure a higher level of venture with higher efficiency and efficiency. In this approach, the transformation has been attempted with the purpose of increasing efficiency, assembling domestic and foreign assets, and producing a necessary degree of seriousness in the economy. The cause behind the disinvestment of PSEs was explained by Rath (2001). The evaluation concludes that the changing global climate and inefficient PSE performance have created new opportunities for the government to reduce the role of public area exercises. Rather than investing resources in firms, exchange, and business, the government built social and economic infrastructure to support private-sector activities. Ghuman (1999) found that there was limited progress in the first stage of PSE adjustments, which involved disinvestment and the cancellation of the syndicated status of PSEs, from 1991 to 1998. With the establishment of the Disinvestment Commission, the speed of disinvestment has increased. Administrative ministries, labour, and vested parties have all been key limitations in the technique

of change. Das (1997) looked at the general productivity, distribution, and size of public-sector banks. He discovered a reduction in total efficiency between 1990 and 1996. This occurred as a result of a loss in specialized efficiency, both unadulterated and on a large scale. The collapse in specialized efficiency was mostly due to four nationalized banks, according to the assessment.

"The deficit in saleable steel creation caused by steel plants due to power shortages amounted to 430 thousand tonnes, or 8.3 percent of absolute saleable steel yield for the year," the chiefs continued, explaining the cause of the production tragedy. At 239 thousand tonnes, the Rourkela Steel Plant was solely responsible for 56 percent of the tragedy. On this occasion, the Bokaro Steel Plant also lost 100 thousand tonnes of result, accounting for 23% of SAIL's total production loss.\|

Coal's high debris concentration was also a significant factor, since it contributed to a higher proportion of unprocessed components. According to the organization's chiefs, "the usual debris content stayed" at 2 to 3 percent above the predetermined threshold of 20.5 percent, despite a high frequency of daily changes.

In 1983-84, the natural substance share fell to 34.71 percent, a considerable decrease from the previous year." It was 37.18 percent in 1982-83. In 1984-85, the offer increased somewhat compared to 1983-84, reaching 35.88 percent. From 1985-85 to 1988-89, the rate dropped insignificantly to 34.20 percent. The quality of cooking coal has improved, resulting in a reduction in the amount available. In terms of techno-financial statistics, that's what the company's executives noted "The organization, including the Burn pure Works, saw significant technological and financial advancements over the year.

The general coke utilization rate in impact heaters was reduced by 4% in 1985-85, resulting in a decrease in coking coal use. In comparison to 1984-85, the particular use of electricity per tone of saleable steel increased by over 5% in 1985-86. In 1985-86, SAIL mills increased their overall energy use per tone of raw steel by 6%. Impact creation has generally progressed throughout the years 1984-85. The use of crude assets has decreased in general.

Despite an increase of 11% and 12% in the production of hot metal and rough steel, respectively, the acquisition of natural substance has remained at the same level as in 1984-85.

Nonetheless, the amount of natural material was large in 1985-86 due to various assembly issues. "The hot metal result at the SAIL Plants was entirely harmed due to: The 38-day-long unlawful strike at BSL's impact heater division during April-May, 1985," the organization's top executives wrote in their annual report for 1985-86.

- Broker's four impact heaters, rather than the plant's five, remained operational until December 22, 1985.
- DSP is employing three shoot heaters instead of four because to a delay in the appointment of impact heater No. 1, which had been down since January 6, 1984 and was blown in on September 17, 1985. Unrefined components fell to 32.52 percent in 1986-87, 30.83 percent in 1987-88, and 30.29 percent in 1988-89. This can be deduced from the organization's use of more advanced innovation.

It's been suggested that the cooking coal utilized is of exceptional quality. The government should go to great lengths to ensure that iron and steel companies have enough power. The organization should continue to conduct research in order to improve production execution.

In BALCO, the amount of unrefined components was nearly constant. The average rate was 21.35 percent, with a 0.94 percent variation. The most extreme extent was 21.90 percent in 1987-88, but it dropped to 20.96 percent in 1988-89, the lowest for the exploration period. "Despite the considerable impediment of a shortage of and conflicting power supply, your organization made significant efforts to further develop utilization and operating bounds, particularly during the useful year 1982-83," the firm's leaders stated.

The rate increased to 21.58 percent in 1883-1884, up from 20.84 percent in 1982-83. Nonetheless, the extent was 21.54 percent in 1984-85 and 21.55 percent in 1985-86, respectively. It dropped to 20.52 percent in 1886-1887, but then soared to 21.90 percent in 1987-88. It fell to 20.96 percent in 1988-89. It is urged that the organization continue its efforts to improve utility.

Consumption of Various Raw Materials per Tone of**Aluminum produced**

(1981-82 and 1982-83)

S.No.	Item	Unit	Consumption		
			Norm	1982-83	1981-82
<u>Alumina Plant</u>					
1.	Fauxite	Tonnes	2.50	2.52	2.52
2.	Caustic Soda	kg.	98.00	112.10	114.00
3.	Furnace Oil	Lit.	133.00	132.00	133.00
<u>Smelter plant</u>					
1.	Power (DC)	Kwh.	16020.00	16826.00	17768.00
2.	Anode Paste	Kg.	565.00	582.00	622.00
3.	Cryolite	Kg.	42.00	42.00	48.00
4.	Aluminium Alumia	Kg.	40.00	41.00	45.00
5.	Calcined Alumina	Tonnes	1925.00	1962.00	1962.00
6.	Current Efficiency	%	85.00	80.00	77.75
7.	Production/Cell/Day	Kg.	683.00	610.00	56.00

The amount of natural substances in Hindustan Zinc Limited fluctuated during the evaluation period, from 1981-82 to 1988-89. The usual rate was 32.37 percent. The percentage was 38.66 percent in 1981-82, but it jumped to 39.62 percent in 1982-83, the highest for the study period. Between 1983-84 and 1985-86, the rate fell steadily, reaching 34.68 percent, 30.99 percent, and 29.01 percent, respectively. Because of technological advancements, the amount of unprocessed stuff has decreased "The Company understands the value of innovation in increasing production and, as a result, is devoting more time to refreshing something very similar," the organization's director said.

The improvement in the significant, influential location supply also aided the decrease in the amount of unrefined components. It is recommended that the organization continue to strive towards efficiency. The rate climbed to 33.54 percent in 1986-87, but then dropped to 28.33 percent in 1987-88 and 24.15 percent in 1988-89. The company should aim to maintain its efforts to reduce the amount of unrefined product on the market.

An examination of the extent of unrefined components in the three public area metal organizations revealed that BALCO had the lowest coefficient of reach in the extent of this cost, followed by HZL, and SAIL. Material decreased in each of the three organizations, but the pace of reduction was slower in SAIL and BALCO, while it was faster in HZL. As a result, SAIL and BALCO are urged to pursue innovative strategies to increase production while reducing the amount of raw components used.

Table 3.1**Percentage of Raw Materials Consumed to Total****Cost of Production 1981-82 to 1988-89
(Per cent)**

Year	SAIL	BALCO	HZL
1981-82	33.26	21.80	38.66
1982-83	37.18	20.99	39.62
1983-84	34.71	21.59	34.68
1984-85	35.88	21.54	30.99
1985-86	34.20	21.55	29.01
1986-87	32.52	20.52	33.54
1987-88	30.83	21.90	28.33
1988-89	30.29	20.96	24.15
Average	33.58	21.35	32.37
Range	6.89	1.38	15.47
Coefficient of Range	0.10	0.03	0.24

Excise Duty

During the review period from 1981-82 to 1988-89, the scope of extract obligation in SAIL decreased except in 1984-85 and 1988-89. It outlined a 3.30 percent strategy. The highest rate was 9.37 percent in 1981-82, while the lowest was 6.67 percent in 1987-88. The usual extent was 7.01 percent for the duration of the study.

BALCO's extract obligation share was around 14.10 percent except in 1988-89. It was 15.16 percent and 17.43 percent, respectively. The rate ranged from 5.76 percent to 17.43%, with the highest rate of 17.43% in 1988-89 and the lowest of 11.67 percent in 1986-87.

The extract obligation has been steadily increasing as a result of HZL. In 1981-82, 0.20 percent, 0.21 percent, 0.33 percent, 0.24 percent in 1983-84, and finally 0.39 percent in 1985-86, with 0.03 percent from 1986-87 through 1988-89. The standard offer was 0.18 percent. During the review period, it set a scope of 0.36 percent.

HZL has the highest extract obligation scope coefficient, followed by SAIL and BALCO. By and far, BALCO offered the best level of extract duty. It turns out that aluminium is the most problematic in terms of extract duty. As a result, it is required that the government work to lessen the weight of the extract duty on aluminium. It will assist aluminium companies in developing new products and closing sales.

Table 3.2
Percentage of Excise Duty to Total Cost of Production
From 1981-82 to 1988-89

Year	SAIL	BALCO	HZL
1	2	3	4
1981-82	9.37	13.66	0.20
1982-83	7.80	13.95	0.21
1983-84	7.24	13.12	0.24
1984-85	6.67	15.16	0.33
1985-86	5.25	13.31	0.39
1986-87	6.20	11.67	0.03

1987-88	6.07	14.52	0.03
1988-89	6.52	17.43	0.03
Average	7.01	14.10	0.18
Range	3.30	5.76	0.36
Coefficient of Range	0.21	0.19	0.85

Source : Annual Report and Accounts of Respective Companies from 1981-82 to 1988-89.

Conclusion

This article has examined a few selected aspects of public sector execution in the latter half of the twentieth century, in comparison to public financial totals, mostly using the NAS. The public sector's share of the homegrown outcome increased steadily from around 9% in 1960-61 to around 25% by the mid-1980s, and has been relatively constant since then. However, after the mid-1980s, the region's share of local business fell by half, from roughly 12.5 percent to 6.4 percent of GDP, implying a significant increase in overall efficiency. The result is consistent with a decline in the typical capital-yield proportion in the public sector, which is also true for some one-digit sectors of the economy. The drop in the capital-yield proportion isn't due to a modification in the speculation arrangement for work escalating areas; nevertheless, it has changed for capital-concentrated foundation, which is contrary to the standard. There is undeniably an increase in the utility of open spaces, which has been sustained for nearly two decades.

References

1. Barnes, M.M. (2019). State-Owned Entities as Key Actors in the Promotion and Implementation of the 2030 Agenda for Sustainable Development: Examples of Good Practices. MDPI, Basel, Switzerland. Available at <https://www.mdpi.com/2075-471X/8/2/10/pdf> (last accessed October 31, 2019)
2. Bella, G. D., Dynnikova, O., and Slavov, S. (2019). The Russian State's Size and its Footprint: Have they Increased? IMF Working Paper, WP/19/53. Available at <https://www.imf.org/en/Publications/WP/Issues/2019/03/09/The-Russian-States-Size-andits-Footprint-Have-They-Increased-46662> (last accessed March 4, 2020)
3. Benassi, M., and Landoni, M. (2017). State Owned Enterprises as Knowledge Explorer Agents. Departmental Working Papers 2017-13, Department of Economics, Management and Quantitative Methods at Università degli Studi di Milano. Available at <https://ideas.repec.org/p/mil/wpdepa/2017-13.html> (last

- accessed March 4, 2020) Buge, M., Egeland, M., Kowalski, P., and Sztajerowska, M. (2013). State-owned Enterprises in the Global Economy: Reason for concern? CEPR Policy Portal. Available at <https://voxeu.org/article/state-owned-enterprises-global-economy-reason-concern> (last accessed March 4, 2020)
4. Chauhan, S. and Giri, I. (2016). Manufacturing Sector in India Before and After the Liberalisation of 1991. Available at <https://www.projectguru.in/publications/manufacturing-sector-indialiberalisation/> (last accessed October 31, 2019)
 5. Cheng-Han, T., Puchniak, D.W., and Varottil, U. (2015). State-Owned Enterprises in Singapore: Historical Insights into a Potential Model for Reform. Columbia Journal of Asian Law, 28 (2). Available at <https://journals.library.columbia.edu/index.php/cjal/article/view/3347> (last accessed March 4, 2020)
 6. Chiang, T.W. (2018). Chinese State-Owned Enterprises and WTO's Anti-Subsidy Regime. Georgetown Journal of International Law. Available at <https://www.law.georgetown.edu/international-law-journal/wp-content/uploads/sites/21/2018/08/GJIL180027.pdf> (last accessed March 4, 2020)
 7. Eljelly, A. (2011). Ownership and Firm Performance: The Experience of Saudi Arabia's Emerging Economy. International Business and Economics Research Journal. Available at https://www.researchgate.net/publication/297743699_Ownership_And_Firm_Performance_The_Experience_Of_Saudi_Arabias_Emerging_Economy (last accessed October 31, 2019)
 8. Greene, J. (2014). State-Owned Enterprises: Justifications, Risks and Reform. Fiscal Analysis and Forecasting Workshop, Bangkok, Thailand. Available at <https://www.imf.org/external/region/tlm/rr/pdf/aug5.pdf> (last accessed October 31, 2019)
 9. Guluzade, A. (2019). Explained the Role of China's State-Owned Companies. World Economic Forum. Available at <https://www.weforum.org/agenda/2019/05/why-chinas-state-owned-companies-still-have-a-key-role-to-play/> (last accessed October 31, 2019) 41
 10. Gupta, K., and Arora, R. (2014). Study of the Corporate Social Responsibility in the Central Public Sector Enterprises of India. Post Graduate Research Centre for Governance System, Gujarat Technological University, Ahmedabad. Available at https://www.academia.edu/6138096/Corporate_Social_Responsibility_in_Public_Sector_Enterprises_in_India (last accessed October 31, 2019)
 11. Hambrock, J., and Hauptmann-Socrates, S. (1999). Industrialisation in India. Trinity College Dublin. Available at https://www.tcd.ie/Economics/assets/pdf/SER/1999/Hambrock_Hauptman.pdf (last accessed October 31, 2019)

12. Haywood, K. (2016). The Treatment of State Enterprises in the WTO and Plurilateral Trade Agreements. Emerging Issues Briefing Note (3), The Commonwealth Secretariat. Available at <https://thecommonwealth.org/sites/default/files/inline/StateOwned%20EnterprisesTPP1008.pdf> (last accessed March 4, 2020)
13. International Centre for Trade and Sustainable Development (ICTSD). (2014). WTO Panel Grants China Victory in US Dispute over State-Owned Enterprises. WTO Dispute Settlement, Bridges, Volume 18, No. 26. Available at <http://www.ictsd.org/bridgesnews/bridges/news/wto-panel-grants-china-victory-in-us-dispute-over-state-ownedenterprises> (last accessed March 4, 2020)
14. International Finance Corporation. (2018). State-Owned Enterprises, Corporate Governance. World Bank Group. Available at https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+cg/topics/state-owned+enterprises (last accessed October 31, 2019)
15. Kaushik, A. (2018). Assessment of Current Methods of Disinvestment in India. International Journal of Business and Management Invention (IJBMI), 7 (3), pp. 1-8. Available at [https://www.ijbmi.org/papers/Vol\(7\)3/Version-1/A0703010108.pdf](https://www.ijbmi.org/papers/Vol(7)3/Version-1/A0703010108.pdf) (last accessed April 16, 2020)
16. Kim, K. (2018). Matchmaking: Establishment of State-owned Holding Companies in Indonesia. Asia and the Pacific Policy Studies, Wiley Online Library. Available at <https://onlinelibrary.wiley.com/doi/pdf/10.1002/app5.238> (last accessed March 4, 2020)
17. Koser, K. (2014). The Four Main Barriers to Talent Mobility in Africa. World Economic Forum. Available at <https://www.weforum.org/agenda/2014/06/africa-talent-mobility-barriers/> (last accessed October 31, 2019)
18. Kowalski, P., Büge, M., Sztajerowska, M., and Egeland, M. (2013). State-Owned Enterprises: Trade Effects and Policy Implications. OECD Trade Policy Paper, No. 147, OECD Publishing. Available at https://www.oecd-ilibrary.org/trade/state-ownedenterprises_5k4869ckqk7l-en (last accessed October 31, 2019)
19. Kwiatkowski, G., and Augustynowicz, P. (2015). State-Owned Enterprises in the Global Economy – Analysis Based on Fortune Global 500 List. Available at https://www.researchgate.net/publication/323733942_State-Owned_Enterprises_In_The_Global_Economy_-_Analysis_Based_On_Fortune_Global_500_List/citation/download (last accessed March 4, 2020) 42
20. Luo, X., and Xu, X. (2018). Infrastructure, Value Chains and Economic Upgrades. Policy Research Working Paper No 8547, World Bank. Available at <http://documents.worldbank.org/curated/en/698191534165164781/pdf/WPS8547.pdf> (last accessed October 31, 2019)