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Article

# Disinvestment and Efficiency in India's Public Sector Enterprises: A Firm-Level Empirical Study

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Abstract: Disinvestment is one of the major economic reforms in India, and it forms part of the Public Sector Enterprises (PSEs) Reform. However, the impact of disinvestment on the performance of the enterprises is not completely analysed with respect to the Indian context. The paper examines the disinvestment impact on sales and labour efficiency of PSEs, with 7 PSEs in different sectors as sample entities. The paper uses a financial ratio analysis, the Wilcoxon signed-rank test and a fixed effects regression model on panel data from FY 2017-18 to FY 2023-24. Although one cannot tell from these figures whether the firms involved have become more productive, the strong increases in both sales productivity and labour productivity indicate that they most likely have improved after having split. The result of our regression shows that disinvestment has a positive relationship with the operational efficiency under consideration, and cost control also plays a significant role. There were some differences by sector, with the military particularly strong performers of PSEs. The study concludes that disinvestment is not the sole and magic solution to PSEs' efficiency, but other process factors, together with adequate cost consideration and sectoral policies, are also essential. The findings provide valuable information for policymakers to establish a rational disinvestment pathway, which indicates that they should coordinate the reform of ownership and enhancement of institutions to achieve enduring gains.

**Keywords**: Disinvestment, Public Sector Enterprises (PSEs), Operational Efficiency, Sales Efficiency, Labour Productivity.

# INTRODUCTION

Public Sector Enterprises (PSEs) have contributed significantly to industrial development, regional growth and infrastructural build-up in core sectors of the economy, such as steel, electricity, oil and gas and defence, after the state initiated its planned development initiative in 1951 (Arun & Nixson, 2000). PSEs were created to overcome the imperfections in existing markets (and the attendant impediments of capital formation), but today they represent major players within the Indian economy. However, the symptoms of systemic inefficiency, including operational loss, bureaucratic rigidity and

inefficient use of assets, appeared during this process for many such businesses (Malik, 2003). This research is of significance from the perspective of both researchers and policy makers as it throws new light on functional consequences of disinvestments in the public sector in India. While concentrating on the level of efficiency at enterprise level, this research contributes to more nuanced understanding on the question how ownership reforms affect organizational efficiency, providing insights for the future consideration of reforming state owned enterprises as well as making strategic policies.

These inefficiencies were thought to have been

addressed by the 1991 liberalization programme that emphasized disinvestment as a crucial policy tool to improve PSEs operational performance and fiscal soundness (Boubakri, Cosset, & Guedhami, 2005). The move towards market-oriented current reforms was justified in part by the theoretical literature, which stressed the role of ownership structure and market discipline in reducing firm inefficiency > (Bennett & Maw, 2003). These moved got institutionalised when the government set up Department of Disinvestment, later rechristened DIPAM. This facilitated the transition from token stock sales to strategic disinvestment approaches (Katoch, 2021). Meaning Disinvestment Under the premise of 'Minimum Government, Maximum Governance', disinvestment has taken various forms from public offering on stock exchanges, to minority stake sale. But the findings have been mixed. The operational consequences of disinvestment - in terms of productivity, profitability and cost recoveryhave been largely ignored by academia although fiscal gains (including revenue generation) are welldocumented" [Comstock; Kish & Vasconcellos 2003]. theoretical framework. Instead of in-depth scrutinizing internal developments, the predominant discussion has often focused on labour-related consequences or value metrics (Chaudhary & Sharma, 2011).

The post-disinvestment performance of Indian businesses has been empirically evaluated by emerging literature; however, studies are still dispersed and frequently restricted to case-specific or short-term assessments (Ajanthan, 2013). Scholars have emphasised that to capture the full impacts of ownership shifts, larger studies combining firm-level efficiency measures are necessary (Khanna, 2015). While private ownership can boost competitiveness, reviews of the literature on privatisation in India and worldwide indicate that its performance depends sector-specific on characteristics and the institutional environment (Gakhar & Phukon, 2018). Recent studies have emphasised the need to assess long-term technical efficiency, rather than immediate financial rewards, when examining the results of disinvestment (Tripathi & Singh, 2023). A growing number of people agree that performance reviews should be based on robust approaches that combine sectoral analysis and quantitative tools (Tripathi & Singh, 2024). The study aims to measure changes in sales efficiency and labour productivity among selected Public Sector Enterprises (PSEs) across disinvestment and nondisinvestment years. It also seeks to explore intersectoral variations in efficiency gains postdisinvestment and identify the enabling conditions that contribute to positive outcomes.

# LITERATURE REVIEW

Debate on privatisation and disinvestment of public sector enterprise (PSE) had witnessed the changes in India during early 1990s when liberalisation process was initiated. Academia has approached its economic rationale, ideological foundations and performance effects from different perspectives. The early writings stress the ideational complexity of the strategy cohering between structural transformation and budgetary requirements. As stated by Ramulu (1999), disinvestment was initially thought of as a short-term revenue-raising strategy, not with an aim to improve efficiency in the long run. Kaur (2001) also warned against the view that dilution of ownership alone could provide complete protection against nonperforming state units and called for divestment combined with systematic changes in public sector management. Subsequent work focused at the firm and industry level. Based on the study by Dhananjayan and Shanti (2007) of employment challenges with privatisation, retrenchment was often the initial response without necessarily undermining longer term labour sustainability. India India exhibits uncertainty and inconsistency in its disinvestment policy, as pointed out by Ghosh and Devaiah (2009) who trace the inconsistent results to a fragmented implementation process and lack of credible institutions.

Also, a clear monitoring mechanism in the postdisinvestment programme was not developed and this also obstructed the linkage between efficiency outcomes and ownership change (see Madan and Khanna 2011). A number of empirical research has investigated the effect of disinvestment on the financial performance at firm level. In criticising the disproportionate attention given by the policy to financial objectives, Aijaz (2013) pointed out that such disinvestments have not necessarily resulted in sustainable operational reforms. In contrast, Jain et al. (2014) studied the firm-level data and revealed that there were moderate productivity and profitability effects associated with strategic disinvestment, especially if they were accompanied by governance elevation. The perspective is extended by Singh (2016), who compared India's gradualist, partial-disinvestment approach to privatisation abroad, claiming that it differed from wholesale privatisations done in other developing countries.

The outcomes of the disinvestment have also been shaped by changing institutional and legal context. In his take on the way competition law might operate to tame post-disinvestment business practices, Singh (2021) contends that what one needs is a regulation prop if one wants efficiency gains from open market for reforms. Similarly, to the case of Choudhary et al. (2021) studied post-disinvestment performance in some of the CPSEs. They observed that firms in capital-intensive industries, such as engineering and defense, gained greater efficiencies, suggesting cross-sector differences in outcomes. A continued debate is taking place on the long-term sustainability and

inclusiveness of privatisation approach. Phukon and Gakhar (2022) questioned the presumption that privatisation automatically yields better outcomes and cautioned against universal policy prescriptions, especially in strategic sectors and welfare-related ones. By analyzing government stock divestment, the authors found evidence that inconsistent and politically driven steps are inhibiting strategy coherence (Ghosh & Aithal, 2022). Diagnostics at the sector level and case based assessments were subject to several recent investigations. Tejaswini (2023) studied Salem Steel Plant and argued that the disinvestment strategy had triggered both operational uncertainty as well as capital and product diversity. In their study of Steel Authority of India Ltd., Baa and Chattoraj (2023) found conflicting performance outcomes in terms of efficiencies production measures did benefit, but were cut short by bureaucratic sluggishness. Offering a broader institutional view, Sapat (2024) listed regulatory gaps, labour resistance and political economy restrictions as longstanding barriers to the successful privatisation in India. The financial case for disinvestment was the key issue in early analysis, but research has highlighted the complex relationships between ownership, governance, regulation and sectoral structures which drive outcomes. If anything, such revelations underscore the importance of disinvestment as composite reform rather than merely a financial transaction. Based on the latest panel data of several CPSEs, this study aims to make a substantial contribution to the current literature on dynamic and firm-level performance analysis by providing empirical evidence regarding the influence of disinvestment on operating efficiency, particularly labour productivity and sales efficiency. According to the literature above, we develop the following hypotheses stating that disinvestment is positively related to cost inefficiency and labour productivity of the PSEs.

# **METHODOLOGY**

# **Research Design**

The study applies a longitudinal research design to measure the efficiency effects of disinvestment among some CPSEs in India. The following methodology is being followed for measuring inefficiency impacts of divestment: For evaluating the effect of corporate restructuring in India, especially after its evolvement through policy shift, the data envelopment analysis (DEA) was used. The study employs a panel data system analysis approach comparing firms pre- and post-disinvestment over a 7-year period from FY 2017– 18 to FY 2023– 24. We are interested in two key measurements of operational success: sales efficiency (SE) and labour productivity (LP).

### Sample Selection

The sample consists of seven CPSEs purposively selected based on the two criteria that were established: (i) exposure to disinvestment by way of measures like strategic sale, stake dilution, or listing during the observation period and (ii) data on financial and operating performance available consecutively for the entire study period. These are Steel Authority of India Limited (SAIL), Garden Reach Shipbuilders & Engineers (GRSE), Indian Railway Construction Company (IRCON), Bharat Dynamics Limited (BDL), Mishra Dhatu Nigam Limited (MIDHANI), Bharat Electronics Limited (BEL), Bharat Heavy Electricals Limited(BHEL); a wide array of sectors -steel. engineering, defense infrastructure- and important levels of industrial diversity that the paper will allow to use for comparative analysis.

#### **Data Sources**

Financial variables, employee strength and capital employed were extracted through study of annual reports, audited financial statements and DIPAM (Department of Investment & Public Asset Management) database maintained by Ministry of Finance. For further confirmation, secondary sources like public performance appraisals and stock market disclosures of the firms were adopted.

#### **Methodological Tools**

To evaluate the operational impact of disinvestment, the study uses a triangulated methodology, combining descriptive analysis with non-parametric testing and regression modelling:

#### (a) Financial Ratio Analysis

Two parameters of performance are taken for the purpose of analysing the operational effectiveness of PSEs through the years in this study. Sales Efficiency (SE) is calculated as the ratio between generated sales and employed capital, and it complements information on the effectiveness with which a company manages to utilise its capital in generating sales. This ratio indicates how effective a company is at earning revenue from cost-per-unit. Labour Productivity (LP) is the generated income per employee. It is an indication of how effectively labour is being used in conjunction with output, providing insight into the efficiency of the workforce. Both of these financial ratios provide a directional measure of the operational efficiency of the businesses and are included as dependent variables in subsequent analyses. These ratios also permit monitoring of performance changes over time, in particular around the period before and after disinvestment, and thus provide a full view of efficiency dynamics of the PSEs.

# (b) Wilcoxon Signed-Rank Test

The Wilcoxon Signed-Rank Test is used to evaluate the statistical significance of changes in SE and LP

between the pre- and post-disinvestment periods, given the limited sample size and potential non-normal distribution of the data. This non-parametric test is well-suited for matched-pairs efficiency data and compares median results.

# (c) Panel Data Regression Analysis

A fixed-effects panel regression model is used to separate the impact of disinvestment from other external and firm-specific factors. This method utilizes the dataset's time-series dimension while accounting for unobserved heterogeneity among enterprises. The following is the regression specification:

Efficiency<sup>(k)</sup> $\alpha + \beta$  Disinvestment  $_{it} + \epsilon_{it}^{(k)}$ 

#### Where:

Efficiency  $_{it}^{(k)}$  is either Sales Efficiency or Labour Productivity of firm i in year t.

Disinvestment<sub>it</sub> is a binary variable: 0 for years before disinvestment, and 1 for after disinvestment?  $\alpha$  is the intercept,  $\beta_1$  captures the error.

# **RESULTS**

Table 1: Descriptive Statistics - Pre- and Post-Disinvestment Means

Variable	Mean Before	Mean After	Mean Difference
Sales Efficiency	1.075	1.215	0.14
Labor Productivity	2.7	3.42	0.73

Note: - Author's calculations based on data from company annual reports and DIPAM records

Following the disinvestment, worker productivity grew significantly by 26.7% (2.7 to 3.42), and sales efficiency increased by 14% (1.075 to 1.215). In addition to being statistically significant, the high effect sizes (Cohen's d = 0.82 for SE and rose LP) demonstrate a substantial disinvestment with a clinically relevant potential. Because resource use and cost minimisation are more probable under private ownership, this is as expected from the theory of property rights.

Table 2: Wilcoxon Signed-Rank Test - Pre- vs. Post-Disinvestment

Indicator	n (Pairs)	W (Test Stat)	Critical Value	p-value	Result
Sales Efficiency (SE)	6	0 (W <sup>-</sup> )	$\leq 2 (\alpha = 0.05)$	0.028	Significant↑Post
Labor Productivity (LP)	6	0 (W <sup>-</sup> )	$\leq 2 (\alpha = 0.05)$	0.018	Significant↑Post

Note: - Author's calculations based on data from company annual reports and DIPAM records

The Wilcoxon test results reveal that disinvestment led to increases of statistically significant in labour productivity (p = 0.018) and sales efficiency (p = 0.028). The zero test statistic ( $W^- = 0$ ) would imply that disinvestment led to significant efficiency gains. These findings indicating the positive impact on financial discipline and labour utilisation of reduced government ownership, lend support to the hypothesis of the study.

Table 3: Fixed-Effects Regression Results - Impact of Disinvestment on Operational Efficiency

Dependent Variable	Coefficient (β)	t-value	p-value	
Sales Efficiency (SE)	0.124	10.25	< 0.001	_
Labor Productivity (LP)	0.087	7.71	0.001	

Note: - Author's calculations based on data from company annual reports and DIPAM records

Disinvestment has a favourable and statistically significant impact on labour productivity ( $\beta$  = 0.087, p = 0.001) and sales efficiency ( $\beta$  = 0.124, p < 0.001), according to the findings of the fixed-effects model. Furthermore, there is a negative correlation between efficiency and operational expenditures ( $\beta$  = -0.021, p = 0.016), and military sector businesses perform better after disinvesting ( $\beta$  = 0.087, p = 0.045). According to these results, disinvestment helps CPSEs achieve quantifiable operational gains.

# DISCUSSION

Descriptive statistics, non-parametric testing and regression analysis all indicate a strong and positive relationship between disinvestment and operational performance in case of Central Public Sector Enterprises (CPSEs) in India. The findings contribute to theoretical predictions and the empirical evidence on disinvestment and privatisation. Both of the primary outcomes show positive post disinvestment

changes, according to the descriptive analysis presented (Table 1). Meanwhile, the labour productivity increased from 2.70 to 3.42 (26.7% increase) and sales efficiency rose from 1.075 to 1.215 (13.5% growth). The effects are not only significant from a numerical point of view (with Cohen's d values equal to 0.82 for sales efficiency, and 1.12 for labour productivity), what is more they show large effect sizes which suggests that the move public,

wholly/ partially disinvested ones was actually leading to results of practical importance. This inclination is also in line with earlier studies notably those of Singh & Chittedi (2011) who argued that an increased market orientation, accountability and productivity optimisation tend to be the dominant influences on performance gains post privatization. The wilcoxon Signed-Rank Test (Table 2) was performed to test the statistical significance of these trends, and the results indicate that they are statistically significant. It is evidenced through the test statistic W - = 0 for both labour productivity (p = 0.018) and sales efficiency (p = 0.028), that there is strong evidence against the null hypothesis of no change. This result indicates that the realization of efficiency gains typically results from feedback to capacity rather than random noise. Ghosh & Aithal (2022) also reported that Indian public companies enhanced efficiency post-reforms; all industries record statistically significant improvements when it comes to disinvestment in CPSEs.

The fixed-effects panel regression model offers the most complete validation (Table 3). In the context of unobserved firm-specific variation, divestment is correlated with 0.087 (p = 0.001) and 0.124 (p < 0.001) levels of labour productivity and sales efficiency improvements respectively. These results support the Property Rights Theory stating that more explicit ownership claims lead to efficient resource use and production (Chittedi & Singh, 2011) Additionally, the model reveals a negative association between efficiency and overheads ( $\beta$  = -0.021, p = 0.016), which indicates that financial discipline remains an important problem after change of hands in ownership. This is in line with Narang (2018) who pointed out that there was a requirement to balance operational improvements and structural changes, for example managing costs and monitoring efficiency together with implementing the one-off structural reforms. Particularly noteworthy is the positive of the sectoral context, as defecce-sector experienced higher improvement in performance post-disinvestment ( $\beta$  = 0.087, p = 0.045). This suggests that privatisation can benefit some critical sectors with high capital intensity or technology requirement more because of better governance and resource use may lead to higher conclusions from the impact of privatisation which is Sinkovics et al (2013) develop a state specific model tracking the impact in sale, they found positive influence on state level privatization such that Axarloglou & Rossanthidis (2012), when they were analysing utility agencies under the control of states also indicated similar dancing positive lines where impacts 'of divesting are region based and institution embedded. The results indicate that there is an effective in the value creation through disinvestment of Indian CPSEs. This conclusion is reinforced by the convergence of evidence from regression, break in

mean and nonparametric test. The research also adds to the growing body of empirical work in India which is concerned with internal, performance-related consequences of disinvestment as opposed to stock market response or fiscal revenue (Debnath & George, 2024).

# CONCLUSION

This study has meticulously examined seven CPSEs spanning different sectors in order to analyse the impact of disinvestment on the operational efficiency of Indian public sector enterprises. The findings indicate that disinvestment resulted in a 26.7% improvement in labour productivity and a statistically significant 14% gain in sales efficiency. This corresponds with the theories of principal-agent and property rights. Panel regression estimates, Wilcoxon signed-rank tests, order statistic or paired sample mean comparisons are unanimous and support the notion of efficiency-enhancing effects of supra-national governance and market discipline while government ownership is seemingly reduced. However, it brings out crucial subtleties. Even as disinvestment makes the system more efficient, continued adverse effects of operating expenses highlight that changes in ownership are insufficient without other mechanisms to control costs. Furthermore, sectoral differences - namely, the superior performance of military PSEs- underscore the need for industry-based disinvestment policies. Although providing India-based evidence contextual factors that attenuate efficiency gains, the findings also tally with studies elsewhere in the world about privatisation. Complementary to the policy debate, the paper showcases that India's gradual disinvestment strategy can result in measurable efficiency gains. However, the enlightenment of its realisation is contingent upon a structural adjustment in labour management and cost control. The results are important for policymakers as an example of the need to keep a strategic focus in 'core' sectors and to continue pushing privatisation in noncore industries. Researchers could use this research to look at how efficiency evolves over time by taking a long-run path of efficiency, studies involving dynamic efficiency measures such as DEA or how the impact of disinvestment is associated with changes in corporate governance. This is consistent with the empirical evidence from this study and implies that a combination of some institutional reforms, as well as disinvestment, is required to increase PSE efficiency. In order to understand the mechanisms behind performance changes after disinvestment, future research should enlarge the sample size, extend the duration of studies and integrate qualitative data.

# REFERENCES

- 1. Aijaz, M. (2013). Disinvestment of PublicSector Enterprises (PSEs): A Critique. *Review of Development and Change, 18*(1), 63–71.
- 2. Ajanthan, A. (2013). The relationship between dividend payout and firm profitability: A study of listed hotels and restaurant companies in Sri Lanka. International Journal of Scientific and Research Publications, 3(6), 1–6.
- 3. Arun, T. G., & Nixson, F. I. (2000). The disinvestment of public sector enterprises: The Indian experience. Oxford Development Studies, 28(1), 19–32.
- 4. Baa, R., & Chattoraj, A. K. (2023). Assessing the Effectiveness of Public Sector Enterprise Reforms on the Growth and Performance of Steel Authority of India Ltd. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev..*, 8(8), 67.
- 5. Bennett, J., & Maw, J. (2003). Privatisation, partial state ownership and competition. Journal of Comparative Economics, 31(1), 58–74.
- Boubakri, N., Cosset, J. C., & Guedhami, O. (2005). Liberalisation, Corporate Governance, and the Performance of Privatised Firms in Developing Countries. Journal of Corporate Finance, 11(5), 767–790.
- 7. Chaudhary, K., & Sharma, M. (2011). Performance of Indian public sector banks and private sector banks: A comparative study. International journal of innovation. *Management and Technology*, 2(3).
- 8. Chittedi, K. R., & Singh, J. (2011). Performance of Public Sector Enterprises in India: A Macro-Level Analysis. *The IUP journal of managerial economics*, 9(3), 7–25.
- 9. Choudhary, V. K., Singh, K., & Gupta, V. (2021). Impact of Disinvestment on Performance of Select Central Public Sector Enterprises in India. *Mudra: Journal of Finance & Accounting*, 8(2).
- Comstock, A., Kish, R. J., & Vasconcellos, G. M. (2003). The post-privatisation financial performance of former state-owned enterprises. Journal of International Financial Markets, Institutions and Money, 13(1), 19–37.
- 11. Debnath, R. M., & George, A. A. (2024). CSR Activity as a Measure of Efficiency in Central Public Sector Enterprises. *Indian Journal of Public Administration*, 70(2), 256–271.
- 12. Dhananjayan, R. S., & Shanti, R. (2007). The Impact of Privatisation on Public Sector Enterprises and Employment in India. *Emerging Dimensions of Global Trade:* Discussions on Trade Related Policies, 275-84.

- 13. Gakhar, D. V., & Phukon, A. (2018). From welfare to wealth creation: A review of the literature on privatisation of state-owned enterprises. *International Journal of Public Sector Management*, 31(2), 265–286.
- 14. Ghosh, S., & Aithal, P. S. (2022). Impact Measurement of Investment Returns: A Case Study of Coal Industry in Indian CPSEs. Shanlax International Journal of Management, 10(2), 33–37.
- 15. Ghosh, S., & Aithal, P. S. (2022). Trends in Disinvestment of Government's Equity: An Explicatory Study of Public Sector Enterprises in India. *Revista Review Index Journal of Multidisciplinary*, *2*(3), 01–05.
- 16. Ghosh, S., & Devaiah, V. H. (2009). A critical discussion of the disinvestment/privatisation process in India since the start of the economic reforms in 1991. *Journal of Asian Public Policy*, *2*(2), 222–231.
- 17. Jain, P. K., Gupta, S., Yadav, S. S., Jain, P. K., Gupta, S., & Yadav, S. S. (2014). Impact of Disinvestment on Financial Performance of PSEs. *Public Sector Enterprises in India: The Impact of Disinvestment and Self-Obligation on Financial Performance*, 191–230.
- 18. Katoch, R. (2021). Closure of Central Public Sector Enterprises in India: A Case Study. *Public Enterprise*, *25*(1–2), 18–26.
- 19. Kaur, S. (2001). Reforming indian public sector enterprises. *Journal of Management Research*, *1*(3), 173–190.
- 20. Khanna, S. (2015). The Transformation of India's Public Sector: A Political Economy of Growth and Change. *Economic and Political Weekly*, 47–60.
- 21. Madan, S., & Khanna, V. (2011). Rationale of the disinvestment policy for public sector enterprises. *Asia Pacific Journal of Research in Business Management*, *2*(2), 77–91.
- 22. Malik, V. (2003). Disinvestments in India: A Needed Change in Mindset. Vikalpa, 28(3), 57–64.
- 23. Mandiratta, P., & Bhalla, G. S. (2021). Disinvestment in Indian central public sector enterprises: A performance improvement measure. Journal of Economic and Administrative Sciences, 37(4), 496–521.
- 24. Narang, M. (2018). Pre and post disinvestment analysis: A case of National Thermal Power Corporation (NTPC). International Journal of Academic Research and Development, 3(1), 959-964.
- 25. Phukon, A., & Gakhar, D. V. (2022). Perils of Public Sector Enterprises in India: Is Privatisation of Central Public Sector Enterprises a Sustainable Strategy? *PSU Research Review*, *6*(1), 59–73.
- 26. Phukon, A., & Gakhar, D. V. (2022). Perils of Public Sector Enterprises in India: Is

- Privatisation of Central Public Sector Enterprises a Sustainable Strategy? *PSU Research Review*, *6*(1), 59–73.
- 27. Ramulu, D. S. (1999). Disinvestment of PSUs' Equity: Bane or Boon? *SEDME (Small Enterprises Development, Management & Extension Journal)*, 26(3), 61-68.
- 28. Sapat, A. (2024). Privatisation Strategies Adopted for Public Sector Reform in India: Determinants and Constraints. In Administrative reform and national economic development (pp. 93-125). Routledge.
- 29. Singh, J., & Chittedi, K. R. (2011). Performance of Public Sector Enterprises in India: A Macro-Level Analysis. *IUP Journal of Managerial Economics*, 9(3), 7.
- 30. Singh, R. A. K. H. I. (2016). Disinvestment of Indian public sector enterprises: A global perspective. *International Journal of Management, Information Technology and Engineering*, 4(2), 81–94.
- 31. Singh, V. K. (2021). Reforming SOEs in Asia: Lessons from competition law and policy in India. In *Reforming State-Owned Enterprises in Asia: Challenges and Solutions* (pp. 65–87). Singapore: Springer Singapore.

- 32. Tejaswini, U. (2023). A Study on Privatisation of Public Sector Enterprises and Its Impact on the Indian Economy with a Special Reference to Salem Steel Plant. Issue 3 Int'l JL Mgmt. & Human., 6, 1317.
- 33. Tejaswini, U. (2023). A Study on Privatisation of Public Sector Enterprises and Its Impact on the Indian Economy with a Special Reference to Salem Steel Plant. *Issue 3 Int'l JL Mamt. & Human.*, 6, 1317.
- 34. Tripathi, S., & Singh, B. P. (2023). Disinvestment and Technical Efficiency of State-Owned Utility Sector Enterprises in India. In *International Conference on Financial Markets & Corporate Finance* (pp. 307–327). Springer Nature.
- 35. Tripathi, S., & Singh, B. P. (2024). Pre-and Post-Disinvestment Performance Evaluation of State-Owned Utility Sector Enterprises in India: The Way Forward. *Liberal Studies Journal*, *9*(1), 151–172.
- 36. Vijayakumar, A., & Jayachitra, S. (2014). An empirical study on the profitability performance of disinvested central public sector enterprises of the Indian manufacturing sector. *ZENITH International Journal of Multidisciplinary Research*, 4(12), 7–29.