



Impact of Goods and Services Tax (GST) on the Indian Mechanical Manufacturing Sector: Challenges, Opportunities and Future Prospects

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Abstract :

The Goods and Services Tax (GST), implemented in India on 1 July 2017, replaced multiple indirect taxes with a unified taxation system to simplify tax administration and improve industrial competitiveness [6], [7]. This review paper analyses the impact of GST on the Indian mechanical manufacturing sector, including automobile manufacturing, machine tool manufacturing, foundry and casting, heat treatment, metrology, welding equipment, and industrial machinery. The study is based on secondary data collected from published research papers, government reports, and official publications [1]–[10]. The findings indicate that GST has reduced cascading taxation through the Input Tax Credit (ITC) mechanism, improved logistics and supply chain management, and enhanced business transparency [1], [2]. However, delayed ITC refunds, compliance complexity, and frequent policy changes remain major challenges [3], [4]. Overall, GST has contributed positively to the growth and competitiveness of India's mechanical manufacturing sector.

Keywords : Goods and Service Tax(GST), Mechanical Manufacturing, Automobile Industry, Machine Tools, Foundry Industry, Heat Treatment, Metrology, Input Tax Credit(ITC), Supply Chain Management, Industrial Development.

Fig. 1: Structure of GST In India



1. INTRODUCTION:

The mechanical manufacturing sector plays an important role in India's industrial development by producing machinery, automotive components, machine tools, industrial equipment, and precision products [5], [10]. Before GST, manufacturers were required to comply with several indirect taxes such as Excise Duty, VAT, CST, and Entry Tax, resulting in higher production costs and complex tax procedures [2].

The introduction of GST established a unified tax structure that simplified taxation and enabled manufacturers to claim Input Tax Credit (ITC) on eligible purchases [6], [7]. This reform improved interstate movement of goods, reduced logistics delays, and enhanced supply chain efficiency [1]. Digital tax administration also increased transparency and simplified compliance [7].

Despite these benefits, manufacturers continue to face challenges such as delayed ITC refunds, product classification disputes, and compliance burdens, particularly among MSMEs [3], [4]. The mechanical manufacturing sectors considered in this study are illustrated in Fig. 2.

2. LITERATURE REVIEW:

Several researchers have evaluated the impact of GST on manufacturing industries. Devarajappa [1] reported that GST simplified indirect taxation and improved industrial competitiveness. Mahender [2] observed improvements in interstate trade and tax transparency. Anitha and Madhumitha [3] highlighted better logistics and inventory management while identifying compliance issues. Balamurugan and Sharma [4] concluded that GST provides long-term benefits despite initial implementation challenges.

Government publications from the GST Council, CBIC, Ministry of Finance, RBI, and Ministry of Heavy Industries also indicate improvements in logistics, transparency, and industrial productivity after GST implementation [6]–[10]. However, research specifically addressing the mechanical manufacturing sector remains limited, motivating the present review.

Fig. 2: Benefits of GST for Mechanical Manufacturing Sector



Fig. 3: Supply Chain Improvement After GST



3. RESEARCH OBJECTIVES:

The objectives of this study are:

To analyse the impact of GST on the Indian mechanical manufacturing sector.

To evaluate the effect of GST on production cost, logistics, and supply chain management.

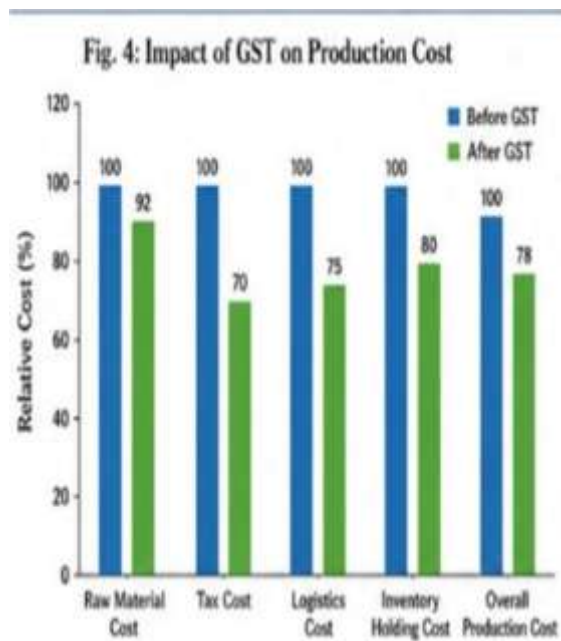
To identify the major benefits and challenges after GST implementation.

To suggest measures for improving GST implementation in manufacturing industries.



4. RESEARCH METHODOLOGY:

The study adopts a descriptive review methodology based on secondary data collected from peer-reviewed journals, GST Council reports, CBIC publications, Ministry of Finance reports, RBI reports, and Ministry of Heavy Industries reports [1]–[10]. The research methodology consists of literature review, sector-wise analysis, comparative assessment, and interpretation of findings.



5 . IMPACT OF GST ON THE MECHANICAL MANUFACTURING SECTOR :

GST has positively influenced mechanical manufacturing by reducing cascading taxes, improving logistics, and simplifying interstate trade [1], [6].

Automobile Manufacturing: Improved logistics and ITC benefits have reduced operational costs, although delayed refunds affect cash flow [2], [6].

Machine Tool Manufacturing: Simplified taxation and easier interstate sales have enhanced efficiency, while product classification remains a concern [4].

Foundry and Casting: Lower tax burden and improved movement of materials have increased competitiveness, especially for organized industries [3].

Heat Treatment: GST has improved transparency in

taxation of industrial services and consumables, although energy costs remain a challenge [8].

Metrology Equipment: Uniform taxation has simplified nationwide distribution of precision measuring equipment [1].

Welding Equipment: Digital GST compliance and ITC have supported efficient procurement and sales [2].

Table 1. Comparison of Mechanical Manufacturing Sector Before and After GST

Paramete r	Before GST	After GST
Tax Structure	Multiple indirect taxes	Unified GST System
Input Tax Credit	Limited	Available through ITC
Interstate Trade	Complex documentation	Simplified movement

Logistics	Higher transportation time	Faster delivery
Inventory	Multiple warehouses	Optimized warehousing
Compliance	State-wise tax system	Digital GST compliance



Fig. 5: Challenges Faced by Mechanical Manufacturing Sector After GST



6 . RESULTS AND DISCUSSION:

The review indicates that GST has significantly improved taxation efficiency, logistics, inventory management, and supply chain integration within the mechanical manufacturing sector [1], [2], [6]. Digital tax administration has enhanced transparency and reduced procedural complexity [7].

However, delayed ITC refunds, compliance burden, and frequent policy amendments continue to affect manufacturing industries, particularly MSMEs [3], [4]. Despite these issues, the long-term benefits of GST outweigh the implementation challenges, contributing to improved industrial competitiveness and business efficiency [8].

Fig. 6: Mechanical Manufacturing Sectors Covered in the Study



Positive Impact	Challenges
Reduced cascading taxes	Delayed ITC refunds
Improved logistics	Frequent GST amendments
Better supply chain	Product classification issues
Digital compliance	Compliance burden for MSMEs
Improved transparency	GST portal technical issues
Better industrial competitiveness	Working capital constraints

Table 2. Positive Impact and Challenges of GST

7 . CONCLUSION :

GST has transformed India's indirect taxation system and positively influenced the mechanical manufacturing sector by simplifying taxation, improving logistics, and strengthening supply chain management [1], [6]. Mechanical manufacturing industries have benefited from Input Tax Credit, digital tax administration, and improved interstate trade [2], [3]. Although challenges related to refund delays and compliance remain, continued policy reforms and simplified procedures can further strengthen India's manufacturing ecosystem and support sustainable industrial growth [8], [10]. GST has transformed India's indirect taxation system and positively influenced the mechanical manufacturing sector by simplifying taxation, improving logistics, and strengthening supply chain management [1], [6]. Mechanical manufacturing industries have benefited from Input Tax Credit, digital tax administration, and improved interstate trade [2], [3]. Although challenges related to refund delays and compliance remain, continued policy reforms and simplified procedures can further strengthen India's manufacturing ecosystem and support sustainable industrial growth [8], [10].



8 . REFERENCES :

- [1] S. N. Devarajappa, “Impact of GST on the Manufacturing Sector in India,” *ShodhKosh: Journal of Visual and Performing Arts*, vol. 5, no. 7, pp. 1483–1488, 2024.
- [2] P. Mahender, “GST Effect on Manufacturing Industry – India,” *International Journal of Managerial Studies and Research*, vol. 5, no. 1, pp. 28–30, 2017.
- [3] V. Anitha and B. Madhumitha, “Impact of GST in the Manufacturing Sectors,” *International Journal of Research in Human Resource Management*, vol. 6, no. 2, pp. 399–403, 2024.
- [4] R. Balamurugan and A. Sharma, “Evaluating the Influence of GST on the Manufacturing Sector: A Detailed Cost–Benefit Analysis,” *ResearchGate Preprint*, 2024.
- [5] S. Singh, A. Raj, and S. K. Sharma, “Manufacturing Sectors in India: Outlook and Challenges,” *Procedia Engineering*, vol. 174, pp. 90–104, 2017.
- [6] GST Council, *Annual Report 2023–24*, Government of India.
- [7] Central Board of Indirect Taxes and Customs (CBIC), *The Central Goods and Services Tax Act, 2017 (as amended)*, Government of India.
- [8] Ministry of Finance, Government of India, *Economic Survey 2024–25, Vol. I*.
- [9] Reserve Bank of India, *Annual Report 2024–25*.
- [10] Ministry of Heavy Industries, Government of India, *Annual Report 2024–25*.