

A COMPARATIVE STUDY OF STATE-WISE TAX REVENUE IN INDIA : PRE AND POST GST ERA

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Abstract

The introduction of the Goods and Services Tax (GST) in India on 1st July, 2017 marked a significant transformation in the country's indirect tax structure by replacing multiple state and central taxes with a unified tax regime. This reform aimed to enhance tax compliance, improve revenue efficiency, and establish a common national market. The present study examines a comparative analysis of tax revenues of selected Indian states during the pre-GST and post-GST periods to evaluate the fiscal impact of this structural reform. Secondary data collected from official government publications, state budget documents, and GST Council reports are used for empirical assessment. Statistical tools such as growth rate analysis, percentage change, and comparative ratio analysis are applied to measure revenue performance across different time periods.

The study aims to identify whether GST has strengthened revenue stability and enhanced fiscal capacity among selected states or created transitional revenue challenges. The findings are expected to reveal disparities in revenue outcomes due to differences in economic structure, industrial base, and administrative efficiency among states. By evaluating pre- and post-GST revenue trends, the study contributes to understanding the fiscal implications of tax reforms in a federal economy like India. The research provides policy-oriented insights for improving revenue mobilization strategies and strengthening cooperative federalism in the post-GST era. Overall, this comparative study highlights the structural changes in state taxation systems and assesses the long-term sustainability of GST as a major fiscal reform in India.

Keywords : GST, State Tax Revenue, Pre-GST Period, Post-GST Period, Indirect Tax Reform, State-wise Comparison, Fiscal Performance, India.

INTRODUCTION

Tax revenue plays a crucial role in the fiscal structure of a federal economy, as it forms the primary source of government income for financing public expenditure and developmental activities. In India, the taxation system has historically been characterized by a complex structure of central and state-level indirect taxes, including Value Added Tax (VAT), Central Sales Tax (CST), excise duties, service tax, and entry tax. This multiplicity of taxes often resulted in cascading effects, administrative inefficiencies, and barriers to the free flow of goods and services across state boundaries. Recognizing these challenges, the Government of India introduced the Goods and Services Tax (GST) on 1st July, 2017 as a comprehensive indirect tax reform. GST replaced several indirect taxes levied by both the Centre and the States and established a unified tax framework aimed at creating a common national market.

The implementation of GST represented a significant shift in fiscal federalism, as it redefined the revenue-raising powers of state governments. Under the GST regime, states subsumed their existing indirect taxes into State GST (SGST) and became part of a destination-based consumption tax system. This transition raised important questions regarding revenue adequacy, fiscal autonomy, and inter-state equity. While GST was designed to improve tax compliance, broaden the tax base, and enhance transparency, its actual impact on state tax revenues remains a matter of empirical investigation. The pre-GST period reflected diverse revenue performance among states due to differences in economic development, industrialization, and administrative capacity. In contrast, the post-GST period introduced uniform tax rates and a centralized compliance system, which may have influenced revenue patterns differently across states.

Furthermore, the introduction of the GST compensation mechanism for states during the initial five years aimed to protect them from potential revenue losses arising from the reform. However, variations in economic structure, consumption patterns, and tax administration efficiency could still result in differential revenue outcomes. Therefore, a comparative analysis of state-wise tax revenues before and after GST implementation becomes essential to assess the effectiveness of this reform. Such a study helps in understanding whether GST has strengthened fiscal stability or created transitional challenges for selected states. It also provides insights into revenue growth trends, structural shifts in tax composition, and changes in dependency on indirect taxes. By examining the pre- and post-GST eras, the present research seeks to evaluate the broader fiscal implications

of GST within the framework of cooperative federalism. Ultimately, this study contributes to the academic and policy discourse on tax reforms and state financial sustainability in India.

LITERATURE REVIEW :

The Goods and Services Tax (GST) has attracted significant attention from researchers, policymakers, and economists due to its far-reaching implications for India's fiscal structure. Over the years, numerous studies have examined the conceptual framework, expected benefits, implementation challenges, and revenue implications of GST. The pre-implementation literature largely focused on the need for tax harmonization and the potential economic advantages of a unified tax system. In contrast, post-implementation studies have analyzed the actual impact of GST on revenue performance, compliance behaviour, and fiscal federalism. Reviewing these studies provides a comprehensive understanding of both theoretical perspectives and empirical findings related to GST. The following section presents a systematic review of selected studies conducted before and after the implementation of GST in India.

Kelkar Task Force Report (2003) strongly recommended replacing India's fragmented indirect tax structure with a comprehensive Goods and Services Tax. The report identified cascading taxation and multiplicity of levies as major obstacles to efficiency. It emphasized that a unified tax system would improve revenue buoyancy and transparency. The study argued that GST would reduce compliance costs and enhance competitiveness. It also highlighted the importance of a robust IT infrastructure for effective implementation. The report concluded that GST would promote long-term economic growth and fiscal stability.

Empowered Committee of State Finance Ministers (2009) was The First Discussion Paper on GST outlined the proposed dual GST structure for India. It explained how GST would eliminate cascading effects through input tax credit. The paper stressed the importance of cooperative federalism in tax administration. It also discussed revenue neutrality and compensation mechanisms for states. The Committee believed GST would create a common national market. The document served as a foundational policy framework for later implementation.

Bagchi (2010) examined the fiscal implications of GST within India's federal structure. The study highlighted concerns regarding revenue sharing between the Centre and States. It stressed the need for institutional safeguards to protect state autonomy. The research pointed out potential transitional revenue losses. However, it acknowledged the long-term benefits of tax harmonization. The study concluded that political consensus was essential for successful GST adoption.

Rao (2010) analyzed inefficiencies in India's pre-GST indirect tax regime. The study noted that multiple tax rates and jurisdictions created administrative complexity. It argued that GST would enhance tax compliance and transparency. The research emphasized that harmonization could reduce inter-state trade barriers. It also suggested that GST would improve revenue productivity. The study recognized GST as a major structural reform in fiscal governance.

Rao (2017) evaluated GST as a landmark reform in India's fiscal federal system. The study observed that GST simplified indirect taxation and improved compliance mechanisms. It emphasized the importance of the GST Council in maintaining cooperative decision-making. The research noted initial implementation challenges. However, it argued that GST would enhance long-term revenue efficiency. The study concluded that GST marked a transformative shift in India's tax structure.

Purohit (2018) analyzed the early impact of GST on state revenues. The study found that revenue collections showed transitional fluctuations after implementation. It emphasized the role of technology-driven compliance systems. The research highlighted improvements in transparency and documentation. It also discussed the importance of compensation mechanisms for states. The study concluded that GST required continuous policy refinement.

Revenue Neutrality and GST Council Reports (2019) examined revenue trends during the initial years of GST. The findings suggested variations in revenue growth across states. The reports highlighted improvements in tax compliance through digital return filing. They also emphasized rate rationalization efforts. The documents observed that revenue stabilization improved over time. The reports concluded that structural adjustments were gradually strengthening the GST framework.

Ehtisham (2020) evaluated GST's impact on economic growth and revenue performance. It found that GST improved transparency and reduced tax evasion. The research noted that states experienced mixed revenue outcomes initially. However, long-term prospects were considered positive. The study emphasized policy coordination and administrative efficiency. It concluded that GST has the potential to enhance fiscal sustainability.

Many studies have discussed the advantages and structure of GST, but most of them are theoretical or descriptive. Very few studies have statistically tested the actual impact of GST on state tax revenues. There is also limited comparison of revenue performance before and after GST at the state level. Most research focuses on general trends rather than testing whether the changes are statistically significant. Therefore, there is a need for a study that uses proper statistical methods to clearly examine the impact of GST on the tax revenues of selected states.

NEED OF GST IN INDIA :

The introduction of the Goods and Services Tax (GST) was considered one of the most significant indirect tax reforms in India's fiscal history. It was implemented with the objective of restructuring the complex and fragmented tax system into a unified and transparent framework. The following points explain the major reasons that necessitated the implementation of GST in India:

1. Removal of Cascading Effect of Tax :

Before GST, multiple indirect taxes were imposed at different stages of production and distribution, leading to a "tax on tax" burden. GST introduced an input tax credit mechanism that eliminated cascading taxation and reduced the overall cost of goods and services.

2. Uniform Tax Structure Across India :

Different states followed different tax rates and rules under the earlier system. GST created a common national tax structure, ensuring uniformity in tax rates and procedures across all states.

3. Creation of a Common National Market :

The absence of tax uniformity earlier restricted the free movement of goods between states. GST removed inter-state tax barriers and facilitated seamless trade throughout India.

4. Simplification of the Indirect Tax System :

GST replaced multiple taxes such as excise duty, service tax, VAT, CST, octroi, and entry tax with a single consolidated tax system. This simplification reduced complexity and improved clarity in tax administration.

5. Improvement in Ease of Doing Business :

Under the previous regime, businesses had to comply with different state tax laws and filing procedures. GST introduced a unified online system that streamlined compliance and reduced procedural burdens.

6. Strengthening of Cooperative Federalism :

GST introduced a dual tax model (CGST and SGST) and established the GST Council to promote coordination between the Centre and the States in tax-related decisions.

7. Broadening of the Tax Base :

The digital compliance system and mandatory registration provisions under GST helped bring more businesses into the formal tax network, thereby widening the tax base.

8. Enhancement of Revenue Efficiency :

GST was expected to improve revenue collection through better monitoring, transparency, and reduced tax evasion.

9. Promotion of Transparency and Accountability :

The online return filing system and invoice matching mechanism under GST increased transparency and minimized the scope for corruption.

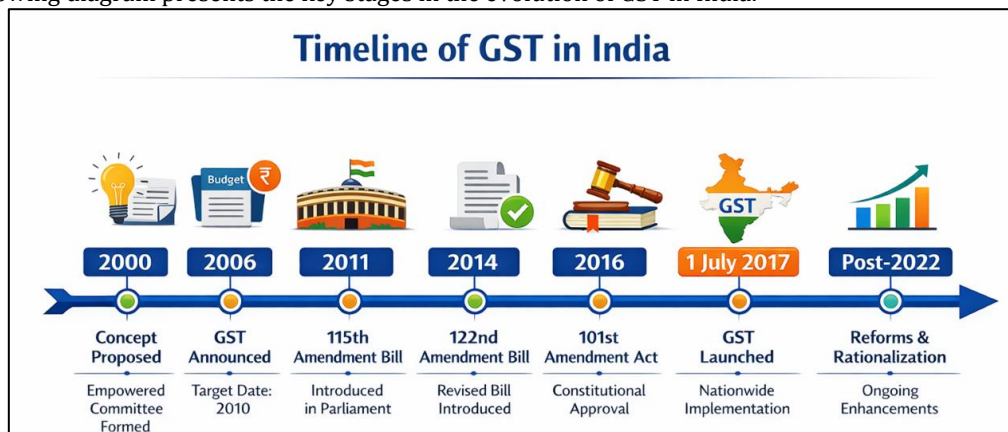
10. Support for Economic Growth :

By reducing tax distortions and improving efficiency, GST aimed to boost production, encourage investment, and contribute to long-term economic development in India.

Thus, the introduction of GST marked a structural transformation in India's indirect taxation framework by promoting uniformity, transparency, and administrative efficiency. It aimed to create a more integrated national market while strengthening fiscal coordination between the Centre and the States. Overall, GST represents a significant step toward modernizing India's tax system and enhancing long-term revenue sustainability.

TIMELINE OF GST IN INDIA :

The implementation of GST in India was the result of a gradual and well-structured reform process. It involved constitutional amendments, legislative measures, and continuous coordination between the Centre and the States. Each milestone reflects a significant step toward creating a unified and transparent indirect tax system. The following diagram presents the key stages in the evolution of GST in India.



MAJOR MILESTONES :

Conceptual Introduction (2000) : The idea of introducing GST in India was first proposed, and an Empowered Committee of State Finance Ministers was constituted to examine the framework for a unified indirect tax system.

Expert Recommendations (2003) : The Kelkar Task Force on indirect taxation recommended the implementation of a comprehensive Goods and Services Tax to replace the complex indirect tax regime.

Formal Announcement (2006) : The Union Budget formally announced the intention to introduce GST, initially proposing implementation from 1 April 2010.

First Discussion Paper (2009) : The Empowered Committee released a discussion paper outlining the proposed structure, dual model, and operational mechanism of GST.

Constitution (115th Amendment) Bill (2011) : The first Constitutional Amendment Bill related to GST was introduced in Parliament but did not pass at that time.

Constitution (122nd Amendment) Bill (2014) : A revised Constitutional Amendment Bill was introduced to provide a stronger legal foundation for GST implementation.

Constitution (101st Amendment) Act (2016) : Parliament passed the Constitution (101st Amendment) Act, granting concurrent taxation powers to the Centre and the States for levying GST. This amendment marked the constitutional transformation necessary for the reform.

Formation of the GST Council (2016) : The GST Council was established as a constitutional body responsible for recommending tax rates, exemptions, threshold limits, and administrative procedures under GST.

Enactment of GST Laws (March–April 2017) : The Central GST (CGST), Integrated GST (IGST), Union Territory GST (UTGST), and Compensation Acts were passed to operationalize the new tax regime.

Nationwide Implementation (1 July 2017) : GST was officially launched across India, replacing multiple indirect taxes and creating a unified national tax framework.

Compensation Period (2017–2022) : A compensation mechanism was implemented to safeguard states against potential revenue losses during the transition phase.

Ongoing Reforms (Post-2022) : Continuous rate rationalization, technological upgrades, compliance simplification, and policy refinements have strengthened the GST framework.

The timeline clearly demonstrates that GST was implemented through a carefully phased and constitutionally grounded process. It reflects a significant transformation in India's fiscal framework aimed at promoting uniformity, transparency, and cooperative federalism. Overall, GST stands as a milestone reform in the modernization of India's indirect taxation system.

OBJECTIVES OF THE STUDY :

1. To examine the trend and growth pattern of tax revenue collection in the selected states during the pre-GST period.
2. To analyze the revenue performance and structural changes in tax collections of the selected states during the post-GST period.
3. To compare the mean tax revenues of the selected states in the pre-GST and post-GST periods to identify variations in revenue performance.
4. To empirically test whether the mean difference in tax revenues between the pre-GST and post-GST periods is statistically significant by applying the paired t-test method.

SIGNIFICANCE OF THE STUDY :

GST has changed the indirect tax system in India, especially for state governments. Therefore, it is important to study how this reform has affected state tax revenues. The significance of this study is as follows:

1. It helps to know whether GST has increased or decreased the tax revenue of the selected states.
2. It compares revenue before and after GST to understand the actual impact of the reform.
3. It uses statistical analysis, which makes the results more reliable and scientific.
4. It helps to understand differences in revenue performance among the selected states.
5. It provides useful information for policymakers while making future tax decisions.
6. It adds value to research in the field of public finance and taxation.
7. It can serve as a base for future studies on GST and state revenue performance.

HYPOTHESIS OF THE STUDY :

In order to empirically examine the impact of the Goods and Services Tax (GST) on the tax revenues of the selected Indian states, the study formulates the following statistical hypotheses. Since the analysis involves comparing tax revenues of the same states across two different time periods : pre-GST and post-GST - a paired sample framework is adopted to assess the mean difference in revenue performance.

Null Hypothesis (H_0) :

There is no significant difference in the mean tax revenues of the selected Indian states between the pre-GST and post-GST periods.

Alternative Hypothesis (H₁) :

There is a significant difference in the mean tax revenues of the selected Indian states between the pre-GST and post-GST periods. **Data collection and Interpretation :**

The data used for the present study is collected from reliable secondary sources. It mainly includes information on state-wise tax revenue during the pre-GST and post-GST periods. The data is compiled from official publications such as the Reserve Bank of India reports and state budget documents. The following table presents the collected data in a systematic manner for the purpose of analysis and comparison.

(In crores)

State's Name	PRE GST					POST GST				
	2012-13	2013-14	2014-15	2015-16	2016-17	2018-19	2019-20	2020-21	2021-22	2022-23
Maharashtra	76519.86	80686.61	86715.26	96,114.37	109823.59	149192.732	150057.43	132479.62	183082.19	217534.39
Madhya Pradesh	28943.14	32635.91	34571.75	45709.29	51216.05	60588.6	61910.23	58385.85	76863.4	79101.03
Bihar	24688.77	27035.24	26722.28	36659.23	38794.19	50847.42	46738.91	45321.76	63549.2	65196.37
Punjab	18298.46	20594.28	21604.29	24374.44	26386.24	29644.56	26886.38	27513.37	34964.18	37966.03
Manipur	828.7	1053.73	1073.84	1943.43	2235.35	2810.6	2683.31	2887.82	3994.14	4029.38

(source : Publication of RBI & State's Budget documents) Interpretation :

1. Maharashtra

Maharashtra records the highest tax revenue among the selected states throughout the study period. In the pre-GST phase, the revenue increases steadily from ₹76,519.86 crore in 2012–13 to ₹1,09,823.59 crore in 2016–17, reflecting strong economic activity and a broad tax base. After the implementation of GST, the revenue rises further to ₹2,17,534.39 crore in 2022–23, although a temporary decline is observed in 2020–21 (₹1,32,479.62 crore) due to pandemic-related disruptions. Overall, the post-GST period shows a significant expansion in revenue compared to the pre-GST years.

2. Madhya Pradesh

Madhya Pradesh demonstrates consistent growth in tax revenue during both the pre-GST and post-GST periods. The revenue increases from ₹28,943.14 crore in 2012–13 to ₹51,216.05 crore in 2016–17, indicating a gradual strengthening of state finances. In the post-GST phase, the revenue further expands from ₹60,588.60 crore in 2018–19 to ₹79,101.03 crore in 2022–23. This upward trend highlights the positive impact of GST and improved tax administration on the state's revenue collection.

3. Bihar

Bihar also shows noticeable growth in tax revenue over the years, although the increase is moderate compared to larger states. The revenue rises from ₹24,688.77 crore in 2012–13 to ₹38,794.19 crore in 2016–17 during the pre-GST period. After GST implementation, the revenue improves significantly from ₹50,847.42 crore in 2018–19 to ₹65,196.37 crore in 2022–23. This growth suggests that GST has contributed to strengthening the tax base and enhancing revenue mobilization in the state.

4. Punjab

Punjab displays a gradual increase in tax revenue across the study period. During the pre-GST years, revenue rises from ₹18,298.46 crore in 2012–13 to ₹26,386.24 crore in 2016–17, showing steady but moderate growth. In the post-GST phase, revenue increases from ₹29,644.56 crore in 2018–19 to ₹37,966.03 crore in 2022–23, despite minor fluctuations in 2019–20 and 2020–21. The overall trend indicates that GST has helped maintain a stable growth pattern in the state's tax revenue.

5. Manipur

Manipur records the lowest tax revenue among the selected states due to its smaller economic size and limited tax base. In the pre-GST period, revenue grows from ₹828.70 crore in 2012–13 to ₹2,235.35 crore in 2016–17, showing gradual improvement. After GST implementation, revenue further increases from ₹2,810.60 crore in 2018–19 to ₹4,029.38 crore in 2022–23. Although the absolute values remain comparatively low, the continuous rise reflects gradual fiscal development in the state.

Hypothesis testing :

t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	36609.132	64569.15608
Variance	1082378760	3838266428
Observations	5	5
Pearson Correlation	0.99785712	

Hypothesized Mean Difference	0
df	4
t Stat	-2.140808358
P(T<=t) one-tail	0.04949894
t Critical one-tail	2.131846786
P(T<=t) two-tail	0.098997881
t Critical two-tail	2.776445105

RESULT OF HYPOTHESIS :

H_0 : Accepted , So there is no significant difference between Pre GST and Post GST average tax revenue of selected states in India.

RECOMMENDATIONS :

1. State governments should strengthen tax administration to improve efficiency in tax collection and reduce tax evasion. Proper monitoring and coordination between central and state authorities can help ensure better implementation of the GST system.
2. The digital infrastructure related to GST should be further improved to simplify tax compliance and reporting. Strong technological systems can enhance transparency and make the tax filing process easier for taxpayers.
3. Regular training and awareness programs should be conducted for tax officers and tax payers to increase understanding of GST provisions. This will help in improving voluntary compliance and accuracy in tax reporting.
4. Economically weaker states should receive special policy support to expand their economic activities and strengthen their tax base. Industrial development and investment promotion can contribute to higher tax revenue in such states.
5. The GST system should be reviewed periodically to address operational challenges and improve policy effectiveness. Continuous reforms can help maintain stability and support sustainable growth in state tax revenues.

LIMITATION OF THE STUDY :

1. The study is limited to only five selected states, namely Maharashtra, Madhya Pradesh, Bihar, Punjab, and Manipur. Therefore, the findings of the study may not fully represent the tax revenue performance of all states in India.
2. The study is based on secondary data collected from RBI publications and State Budget documents. Hence, the accuracy of the results depends on the reliability of these published sources.
3. The analysis considers only a specific time period of pre-GST and post-GST years, which may not capture long-term structural changes in the tax revenue system.
4. The study focuses mainly on comparative revenue trends and does not include other economic or policy factors that may influence state tax revenue.
5. Differences in economic development, population size, and industrial structure among the selected states may affect the comparability of tax revenue performance.

CONCLUSION :

The study concludes that the introduction of the Goods and Services Tax (GST) has brought a significant structural change in the indirect tax system of India. The unified tax framework has helped in improving transparency, simplifying the taxation process, and strengthening the overall tax administration across states. Although variations in revenue performance are observed among the selected states due to differences in economic structure and development level, the GST system has generally contributed to better co-ordination and stability in tax revenue collection. Therefore, the GST reform can be considered an important step toward creating a more efficient and integrated taxation system that supports the long-term growth of state revenues in India.

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