International Journal of Academic Research and Development (IJAR&D)
ISSN : 2395-1737 (Print), Volume 11, No. 1, Page No 10-20
DOI : https://doi.org/10.70381/23941737.v1.n1.i21.2025.2
Bharti Publications, New Delhi, India

Comparative analyses of Pre-GST and Post-GST trends in Tax Revenues, Workforce Management and Administrative Efficiency in Himachal Pradesh

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Abstract

This research aims to analyze the impact of GST on tax revenue, administrative costs, and workforce efficiency, addressing existing gaps in understanding expenditure fluctuations and staffing challenges to provide insights for optimizing tax administration, enhancing efficiency, and improving policy effectiveness. This research employs a quantitative approach, analysing tax revenue, administrative expenses, and staffing data from 2017-18 to 2023-24. Data is collected from official reports and statistical records. Trend analysis and percentage calculations are used to examine pre- and post-GST impacts, workforce efficiency, and expenditure patterns, providing insights into tax administration effectiveness and policy implications. The research reveals significant fluctuations in tax collection expenses, staffing levels, and vacancy rates from 2010-11 to 2023-24. While administrative costs varied, vacancy rates consistently increased, peaking at 44.61% in 2023-24, highlighting recruitment inefficiencies. The post-GST period showed rising collection expenses, suggesting increased enforcement efforts. Despite technological advancements, staffing shortages hinder operational efficiency. The findings emphasize the need for strategic workforce planning, streamlined recruitment, and cost optimization to enhance tax administration effectiveness and revenue collection sustainability in the evolving fiscal landscape. This research provides valuable insights into the dynamics of tax collection expenses, staffing challenges, and efficiency post-GST, highlighting critical gaps in workforce management and offering strategies for optimizing tax administration and operational performance.

Keywords: *State Taxation Statutes, GST Impact, Tax Revenue, Expenses on collection, Workforce Efficiency.*

1. Introduction

One of the most important components of any system of management by any kind of government is taxation because it brings money for the state. Thus, a tax policy is deemed sound if it serves the purpose of stabilization to the state. India had adopted a formal tax system since Maurya's period to Mughal's and from British period to independent India. The states also adopted taxation laws as per the needs, requirements and the resources contained in the states list of articles, {Article – 246 (ii)} enshrinedin the 7th schedule of constitution. Himachal Pradesh too adopted and enacted various taxation laws accordingly before the introduction of GST. However, whole India adopted and enacted GST on 1st July 2017 as one of the biggest reform in indirect taxation.

It subsumed many State & Central Taxation laws into one unified system of One Nation One Tax. It is a comprehensive tax levied by the Centre and the State government on manufacture, sales and consumption on Goods and Services both. It is featured with minimal physical interface resulting in compliance cost reduction and tax evasion reduction as well. States have lost autonomy in the new GST tax enactment and have focused recently on administrative efficiency of the tax collection agency.

2. Review of Literature

The implementation of the Goods and Services Tax (GST) in India brought a fundamental transformation to the country's taxation system by replacing multiple indirect taxes with a unified structure[1]. Himachal Pradesh, a developing state with a diverse economic base, relies on tax revenue to sustain public infrastructure, welfare programs, and developmental initiatives[2]. By examining tax revenue trends before and after GST, this study aims to assess the effectiveness of the new tax regime in enhancing revenue collection efficiency. The findings will offer valuable insights for both state and central government authorities, aiding in the refinement of taxation policies, addressing potential gaps, and optimizing revenue generation. Furthermore, a stable and predictable tax revenue structure is crucial for economic and fiscal planning, enabling policymakers to make informed budgetary decisions. While numerous studies have explored GST's impact at the national level, there is limited research focusing on its state-level implications, particularly in Himachal Pradesh. This study will fill that knowledge gap by providing empirical evidence on GST's influence on state tax revenues. Additionally, businesses and investors stand to benefit from this analysis, as understanding tax revenue trends can help assess economic growth, compliance improvements, and the overall business climate in the state[3]. Ultimately, this research will serve as a crucial resource for policymakers, economists, and industry stakeholders in evaluating GST's impact on Himachal Pradesh's financial landscape and shaping future taxation policies.

The analysis and comparison of pre-GST and post-GST tax revenue growth in this study are based on the research conducted by Shukla et al., who examined the impact of GST on tax revenue growth due to digitalization from 2013 to 2022[4]. Their study, which is analytical in nature and relies solely on secondary data, highlights the significant role of digital transformation in shaping the Indian tax system. The research assessed the impact of digitalization through three key mechanisms: electronic filing of GST forms and returns, e-way bills for goods movement, and e-invoicing. Using a paired T-test, the study concluded that GST represents a more transparent and efficient tax regime, contributing to a broader tax base and enhanced revenue generation. Over time, improvements in digital infrastructure and the adoption of advanced IT systems have led to increased efficiency and transparency[5]. Additionally, the continuous rise in tax collection has been largely attributed to stringent oversight of fraudulent billing, deep data analytics integrating information from multiple sources, and improved tax administration[6], [7]. These developments suggest that GST, supported by digital advancements, has strengthened revenue collection mechanisms and positioned itself as a sustainable and effective taxation system in India[8].

Taxation plays a crucial role in the fiscal structure of India, with Goods and Services Tax (GST) being one of the most significant reforms in indirect taxation. Studies have shown that GST aimed to replace a complex tax system with a unified one, improving efficiency and revenue collection. In the context of Himachal Pradesh, a small hill state with limited industrialization, tax revenue growth pre- and post-GST presents an interesting case for analysis[9].Before the implementation of GST, Himachal Pradesh relied on a Value Added Tax (VAT) system, excise duties, and entry taxes for revenue generation. Studies by Garg et al. highlight that VAT in Himachal Pradesh was a primary source of indirect tax revenue, yet it suffered from inefficiencies, cascading effects, and tax evasion[10].With the implementation of GST in 2017, the tax structure in Himachal Pradesh changed significantly. As per the analysis by Joseph et al., GST streamlined taxation by eliminating multiple levies and improving compliance through digital invoicing and e-way bills. The impact on state revenue has been mixed, with some initial revenue losses but a gradual increase due to a broadened tax base[11].Several studies, including those by Aman, suggest that the GST era has led to increased revenue collection at the state level due to reduced tax evasion and a more structured tax framework. However, in the initial years, many states, including Himachal Pradesh, faced revenue shortfalls due to the abolition of entry taxes and VAT[12].To counter initial revenue losses, the GST Compensation Act assured states a 14% annual growth in tax revenue. However, as the compensation period ended, questions arose about Himachal Pradesh's long-term financial stability and dependency on central grants[13].Challenges such as technological adoption, compliance burden on small businesses, and reliance on tourism and agriculture-based economies have affected the efficiency of GST implementation in Himachal Pradesh. These structural limitations have impacted revenue growth compared to industrial states[14]. Empirical studies by Singh and Kaur (2022) indicate that while GST has led to better compliance and improved tax buoyancy, the rate of revenue growth in Himachal Pradesh remains volatile compared to the pre-GST period. The analysis suggests that factors like reduced fiscal autonomy and centralization of tax administration play a role[15].

This research introduces an innovative approach by addressing the existing gap in understanding the impact of GST on tax administration, particularly focusing on expenditure fluctuations and staffing challenges. While existing studies have explored the overall effects of GST on tax revenue, few have thoroughly examined its implications on administrative costs and workforce efficiency over an extended period. The novelty of this study lies in its detailed analysis of pre- and post-GST trends in tax collection expenses, staffing levels, and vacancy rates from 2010-11 to 2023-24. By employing quantitative methods and analysing official data, the research provides fresh insights into the dynamics of tax administration, highlighting the growing challenges of recruitment inefficiencies and rising collection expenses, while suggesting actionable strategies for optimizing workforce management and cost efficiency in the post-GST era.

3. Objective of the Study

The study evaluates the human resource management, its expenses on collection of tax revenues and their impact on administrative efficiency comparatively in pre-GST and post-GST period.

4. Research process

4.1 Research Methodology

This study employs a quantitative research approach to analyze trends in two stages i) Tax collection and expenses incurred with percentages and ii)Vacancy rates against sanctioned strength from 2010-11 to 2016-17 (pre-GST) and 2017-18 to 2023-24 (post-GST) period. The research follows a longitudinal descriptive analysis, examining fluctuations in both cost of revenues collection accruals and staffing levels, recruitment efficiency, and workforce management practices over time. By identifying patterns in vacancy rates, this study aims to provide insights into the underlying causes of staffing shortages and their implications for institutional effectiveness[16]. The study relies on secondary data obtained from annual administrative reports of ST&E department and staffing records. The dataset includes information on revenue accruals, expenses incurred on collection and sanctioned strength, posted positions, and vacancy percentages, allowing for a comprehensive assessment of trends and variations over the years. The data was systematically extracted, verified for accuracy, and organized into a structured format to facilitate statistical analysis[17] Descriptive statistical methods were applied to analyze vacancy rates and their fluctuations over the study period. The percentage of vacancies against sanctioned strength was calculated for each year to identify trends in workforce shortages. Comparative analysis was conducted to assess variations in staffing gaps, highlighting potential factors influencing recruitment and retention. Furthermore, graphical representations, such as line graphs, were utilized to illustrate changes in vacancy rates, making trends more interpretable[19]. To ensure the reliability of the findings, data sources were cross-verified against multiple records from organizational reports. The use of official staffing data enhances the validity of the study, as it reflects actual workforce allocations and vacancies. Moreover, the research employs standardized methods for calculating vacancy rates, ensuring consistency in analysis and interpretation[20].

4.2 Research Limitation

While the study provides valuable insights into staffing trends, it is limited by its reliance on secondary data, which may not capture qualitative aspects such as reasons for attrition, employee satisfaction, or policy changes affecting recruitment. Additionally, external factors such as budget constraints, policy reforms, or economic conditions influencing hiring decisions were not directly examined. Future research could incorporate qualitative methods, such as interviews or surveys, to gain deeper insights into workforce challenges. By employing a structured quantitative approach, this study aims to provide a clear and objective assessment of vacancy trends, contributing to informed decision-making in workforce planning and policy formulation.

5. Components of Revenue Receipts

The State Taxes & Excise department of Himachal Pradesh is the principal tax collection agency which has been assigned the role of ensuring tax collections from various tax enactments administered by it. Tax laws viz. Value Added Tax implemented since 2005, Passenger and Goods Tax Act administered since 1955, Certain Goods Carried by Road Tax Act 1999 and HP Excise Act 2011 and their accruals in consolidated form constitute the total tax collections of this department as state tax revenues. GST implemented since 1st July 2017 has subsumed the Value Added Tax and Post-GST implementation the component of Value Added Tax collection is replaced by pan-India Goods and Services Tax 2017.

Revenue receipts represent the actual financial accruals received by the state during a given fiscal year, encompassing a broad spectrum of income sources that contribute to the state's fiscal stability[19].

5.1 Pre-GST State Taxes & Excise Revenues (Pre-GST Period 2010-11 to 2016-17)

Table-1

Pre-GST Trends of Tax Revenues, Expenses and Human resource of (ST&E) for the year 2010-11 to 2016-17.

Sr. No.	Financial Years	ST&E Accruals (in INR) (Cr.)	Expenses on Collection (in INR) (Cr.)	Percentage of Expenses against Collections	Sanctioned Strength (in No.)	Posted Position (in No.)	Vacancy (in No.)	Vacancy % against Sanctioned Strength
1	2010-11	3040.29	31.68	1.04	1071	814	257	24.00
2	2011-12	3573.47	31.62	0.87	1071	819	252	23.53
3	2012-13	3971.33	48.75	1.00	1071	826	245	22.88
4	2013-14	4524.23	61.60	2.00	1084	834	250	23.06
5	2014-15	5179.76	43.01	1.00	1119	851	268	23.95
6	2015-16	5617.68	40.58	0.89	1120	859	261	23.30
7	2016-17	6171.00	52.60	1.12	1228	933	295	24.02
Grand Total		**32077.76**	**309.84**	-	-	-	-	-
Average		**4582.54**	**44.26**	**1.13**	**1109.14**	**848.00**	**261.14**	**23.53**

Source:- Annual administrative reports of ST&E for the year 2010-11 to 2016-17.

5.1 (a) Results and Discussion

State tax (ST) and excise tax accruals form a vital component of government revenue, offering insights into economic trends, policy shifts, and tax compliance levels. Between 2010-11 and 2016-17, accruals demonstrated a consistent upward trend, rising from ₹3,040.29 crore to ₹6,171.00 crore, reflecting an overall increase of 103%. This steady growth suggests the influence of multiple factors, including economic expansion, inflationary trends, adjustments in tax structures, and improvements in compliance enforcement. However, while the long-term trajectory remains positive, year-on-year variations indicate fluctuations in the growth rate. Notably, the most substantial increase occurred between 2013-14 and 2014-15, with an increment of ₹655.53 crore, potentially signaling policy-driven enhancements or stricter enforcement measures. A similar pattern was observed in the subsequent fiscal year, reinforcing the resilience of tax collection mechanisms. The expansion of the taxable base, driven by industrial growth and rising consumer demand, likely contributed to this sustained revenue increase. Nevertheless, while these figures highlight fiscal strength, it is crucial to examine whether the rise in tax collections corresponds to genuine economic progress or merely reflects adjustments in tax policies. A deeper analysis is required to distinguish between growth fuelled by economic expansion and that resulting from increased taxation on existing economic activities.

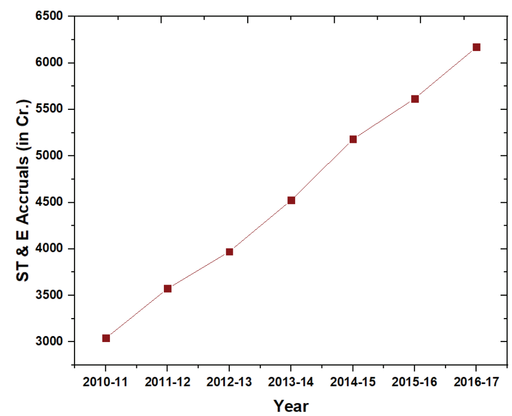

Figure 1. State tax (ST) & Excise tax Accruals from 2010-2017.

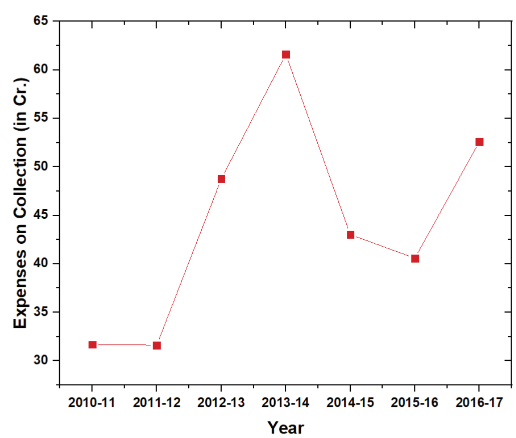

Figure 2. Expenses on collection from 2010-2017.

The cost of tax collection serves as a key indicator of the efficiency of revenue administration, reflecting the effectiveness of enforcement measures and compliance strategies. Between 2010-11 and 2016-17, the expenses on collection exhibited noticeable fluctuations, highlighting the evolving nature of tax administration costs. The expenditure remained relatively stable in the initial years, with a slight decline from ₹31.68 crore in 2010-11 to ₹31.62 crore in 2011-12. However, a sharp increase followed, reaching ₹48.75 crore in 2012-13 and peaking at ₹61.60 crore in 2013-14. This significant rise may have resulted from policy changes, increased enforcement activities, or technological investments aimed at strengthening compliance. Subsequently, the expenses declined to ₹43.01 crore in 2014-15 and further to ₹40.58 crore in 2015-16, suggesting enhanced efficiency through automation and process optimization. The upward shift to ₹52.60 crore in 2016-17 indicates a renewed focus on enforcement, potentially driven by administrative reforms or increased operational demands. These variations underscore the complex balance between ensuring effective tax collection and maintaining cost efficiency. While strategic investments in tax administration are essential for improving compliance, managing collection expenses prudently is crucial to sustaining fiscal responsibility and optimizing resource allocation.

The ratio of expenses incurred in tax collection relative to total revenue serves as a key indicator of the efficiency and sustainability of revenue administration. From 2010-11 to 2016-17, this percentage exhibited noticeable fluctuations, reflecting shifts in enforcement strategies, policy adjustments, and operational efficiencies. The ratio initially stood at 1.04% in 2010-11, declining to 0.87% in 2011-12, signaling improved cost efficiency, likely due to streamlined administrative measures. However, a subsequent rise to 1.00% in 2012-13 suggested increased enforcement efforts or administrative investments. The most significant spike occurred in 2013-14, where the ratio surged to 2.00%, indicating heightened tax collection costs, possibly driven by extensive compliance initiatives or policy-driven enforcement measures. This peak was followed by a substantial decline to 1.00% in 2014-15 and further to 0.89% in 2015-16, reflecting improvements in collection efficiency, potentially due to automation and process optimization. However, the ratio climbed again to 1.12% in 2016-17, implying renewed administrative expenditures, likely aimed at reinforcing tax enforcement frameworks. These fluctuations underscore the evolving nature of tax administration costs and the need for a balanced approach that ensures both effective revenue collection and fiscal prudence. While periodic investments in enforcement and administrative enhancements are necessary, maintaining an optimal expense-to-collection ratio is crucial to maximizing revenue efficiency and sustaining long-term economic stability.

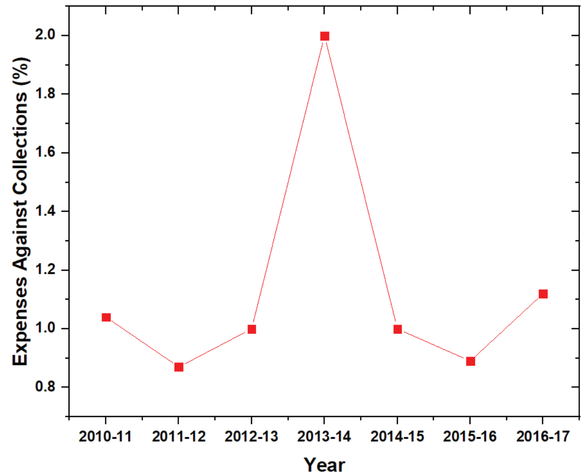

Figure 3. Percentage of expenses against collections from 2010-2017.

5.1(b) Workforce to Support Revenue Collection

Efficient tax administration relies heavily on maintaining an adequate workforce to support revenue collection and enforcement activities. Analysing the sanctioned strength, posted positions, and vacancies from 2010-11 to 2016-17 reveals a steady increase in approved positions, yet a persistent gap in actual staffing. Over this period, sanctioned posts grew from 1,071 to 1,228, while the number of employees in active positions increased from 814 to 933. However, the rise in posted positions did not fully bridge the gap, leading to sustained vacancies that pose administrative challenges. Although there were fluctuations in vacancy levels, the overall trend suggests ongoing difficulties in recruitment and retention. The number of unfilled positions, which stood at 257 in 2010-11, initially declined to 245 by 2012-13, reflecting minor improvements in hiring efforts. However, vacancies increased again, reaching 268 in 2014-15, following an expansion in sanctioned strength. By 2016-17, the shortfall peaked at 295, highlighting the inefficiencies in workforce management despite the approved increase in personnel. The persistence of vacancies suggests potential obstacles such as lengthy recruitment processes, high attrition rates, or structural inefficiencies in hiring mechanisms. While expanding the sanctioned workforce indicates recognition of administrative needs, failing to fill these positions can hamper operational efficiency, delay tax enforcement efforts, and reduce overall revenue collection effectiveness. To address these challenges, targeted recruitment drives, streamlined hiring procedures, and retention-focused policies must be implemented to ensure a well-equipped workforce capable of sustaining a robust tax administration system.

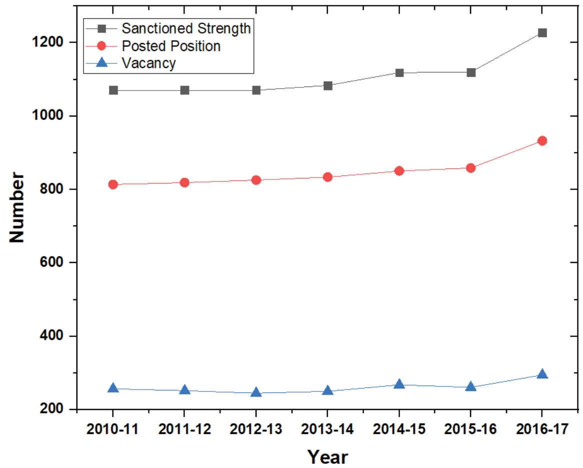

Figure 4. Number of Sanctioned Strengths, Posted Position, and Vacancy from 2010-2017.

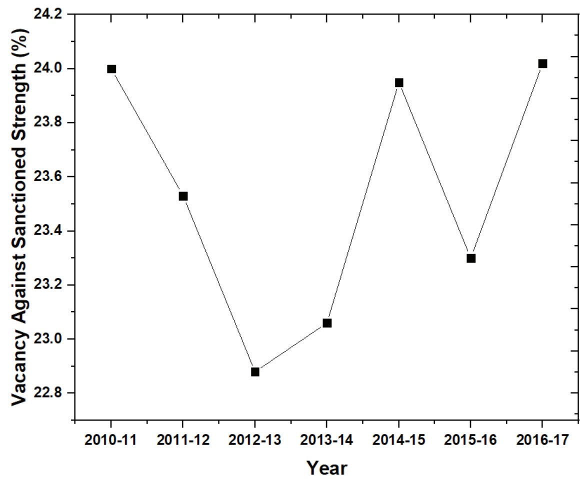

Figure 5. Vacancy Sgainst Sanctioned Strength from 2010-2017.

The vacancy percentage against the sanctioned strength is a crucial metric for evaluating workforce adequacy in tax administration, offering insights into recruitment efficiency and staffing challenges. From 2010-11 to 2016-17, fluctuations in this percentage reflect the varying pace of recruitment and the gap between sanctioned positions and actual staffing. In 2010-11, the vacancy percentage was 24.00%, indicating a significant shortfall in staffing levels. This figure saw a gradual improvement, reaching 22.88% in 2012-13, suggesting some progress in recruitment or reduced attrition. However, from 2013-14 onwards, the percentage began to rise again, peaking at 24.02% in 2016-17, highlighting that despite new positions being sanctioned, the recruitment process was unable to keep up with the increasing administrative demands. This recurring fluctuation points to underlying challenges in workforce planning, such as delays in recruitment, budgetary constraints, or inefficiencies in the hiring process. Maintaining a vacancy percentage consistently above 20% emphasizes the need for a more responsive and efficient recruitment strategy to ensure that the tax administration is adequately staffed to handle the growing complexity of revenue collection and enforcement. Streamlining hiring procedures and implementing retention strategies would be vital to closing this gap and improving operational effectiveness.

6. Post-GST RevenuesState Taxes & Excise (Post-GST Period 2017-18 to 2023-24)

Table-2

Post-GST Trends of Tax Revenues, Expenses and Human resource of (ST&E) for the year 2017-18 to 2023-24.								
Sr. No.	Financial Years	ST&E Accruals (in INR) (Cr.)	Expenses on Collection (in INR) (Cr.)	Percentage of Expenses against Collections	Sanctioned Strength (in No.)	Posted Position (in No.)	Vacancy (in No.)	Vacancy % against Sanctioned Strength
1	2017-18	6133.96	84.46	1.37	1335	976	359	26.89
2	2018-19	6421.55	67.47	1.00	1335	932	403	30.19
3	2019-20	6796.02	96.94	1.40	1335	946	389	29.14
4	2020-21	7044.24	83.43	1.10	1335	951	384	28.76
5	2021-22	8494.77	103.06	1.20	1335	924	411	30.79

6	2022-23	9273.94	131.62	1.40	1334	873	461	34.56
7	2023-24	10187.5	114.49	1.10	1437	796	641	44.61
Grand Total		**54351.98**	**681.47**	**-**	**-**	**-**	**-**	**-**
Average		**7764.57**	**97.35**	**1.22**	**1349.43**	**914.00**	**435.43**	**32.13**

Source:- Annual administrative reports of ST&E for the year 2017-18 to 2023-24.

6.1 (a) Results and Discussions

The steady rise in state tax (ST) and excise tax accruals from 2017-18 to 2023-24 reflects a robust fiscal performance, underpinned by evolving economic conditions, policy initiatives, and enforcement strategies. Over this period, revenue collections exhibited a consistent upward trend, growing from ₹6,133.96 crore in 2017-18 to ₹10,187.5 crore in 2023-24, marking an approximate 66% increase. This sustained expansion in the revenue base suggests improvements in tax compliance, broadening of economic activities, and potential adjustments in tax policies. The initial years of the analysis, from 2017-18 to 2020-21, experienced moderate growth, with revenues increasing gradually to ₹7,044.24 crore. However, a sharp acceleration occurred from 2021-22 onwards, with a significant jump to ₹8,494.77 crore, followed by continued gains in subsequent years, indicating a possible post-pandemic economic rebound, heightened enforcement mechanisms, or structural tax reforms. The persistent rise in accruals underscores the increasing contribution of excise and state taxes to overall fiscal revenue, yet it necessitates further examination to determine whether the growth is primarily a result of economic expansion or policy-driven measures. Ensuring the long-term sustainability of this revenue growth requires a balanced approach that fosters economic development while maintaining an efficient and equitable tax system.

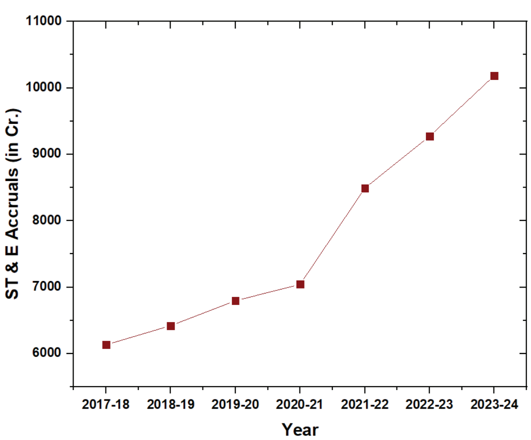

Figure 6. State tax (ST) & Excise tax Accruals from 2017-2024.

The analysis of tax collection expenses from 2017-18 to 2023-24 reveals notable fluctuations, reflecting the evolving priorities in enforcement strategies, administrative efficiency, and policy-driven financial allocations. The expenditure on tax collection commenced at ₹84.46 crore in 2017-18, followed by a significant reduction to ₹67.47 crore in 2018-19, suggesting improved cost management or enhanced operational efficiency. However, this downward trend was short-lived, as expenses surged to ₹96.94 crore in 2019-20, indicating increased investments in enforcement mechanisms, structural reforms, or technological enhancements aimed at strengthening tax compliance. Subsequent years witnessed a dynamic pattern, with collection expenses dropping to ₹83.43 crore in 2020-21 before escalating to ₹103.06 crore in 2021-22. This upward movement persisted, peaking at ₹131.62 crore in 2022-23, potentially driven by intensified enforcement efforts, digitalization initiatives, or administrative restructuring. The marginal decline to ₹114.49 crore in 2023-24 suggests a recalibration of spending, possibly reflecting gains in efficiency or strategic cost control while maintaining robust enforcement measures. These variations underscore the intricate balance between maintaining effective tax enforcement and ensuring cost efficiency in revenue administration. While higher expenditures may contribute to improved compliance and a broader tax base, sustained fiscal prudence necessitates an approach that maximizes efficiency without imposing undue financial strain. Strategic investments in automation, data analytics, and streamlined administrative processes can help optimize tax collection costs, ensuring sustainable and effective revenue management over time.

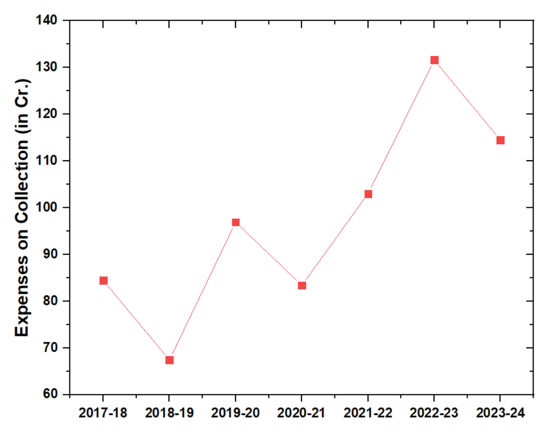

Figure 7. Expenses on collection from 2017-2024.

The percentage of expenses against tax collections from 2017-18 to 2023-24 reflects the evolving efficiency of tax administration and the effectiveness of fiscal resource allocation. Over this period, the ratio fluctuated, highlighting shifts in operational strategies, enforcement mechanisms, and cost-control measures. In 2017-18, the expense-to-collection ratio was 1.37%, suggesting a moderate administrative cost relative to revenue generation. A significant improvement was observed in 2018-19, with the ratio declining to 1.00%, indicating enhanced efficiency and possibly better cost management. However, this trend was short-lived, as the ratio surged to 1.40% in 2019-20, likely due to increased enforcement activities or structural reforms requiring higher investment. Subsequent years exhibited continued variations, with the ratio dropping to 1.10% in 2020-21, rising to 1.20% in 2021-22, and peaking again at 1.40% in 2022-23, reflecting periods of intensified revenue collection efforts, regulatory changes, or technological advancements in tax administration. By 2023-24, the percentage declined again to 1.10%, suggesting improved cost control despite sustained enforcement measures. These fluctuations emphasize the importance of maintaining a balance between revenue mobilization and cost efficiency in tax collection. While strategic investments in enforcement and digital infrastructure can enhance compliance, a consistent focus on streamlining administrative costs and leveraging automation remains essential for sustainable and cost-effective tax administration.

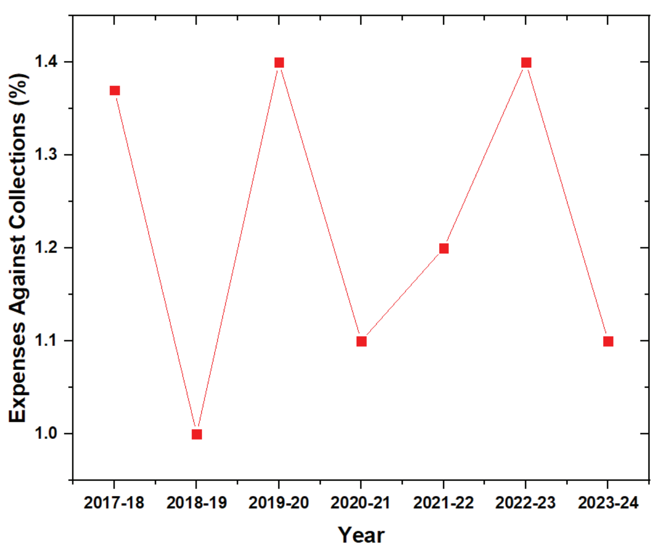

Figure 8. Percentage of Expenses against Collections from 2017-2024.

6.1(b) Workforce to Support Revenue Collection

The examination of sanctioned strength, posted positions, and vacancies from 2017-18 to 2023-24 underscores a growing staffing crisis that could significantly affect institutional efficiency and service delivery. While the sanctioned strength remained constant at 1,335 for most of the period, the number of posted personnel showed a fluctuating yet declining trend, leading to a widening gap between approved and actual workforce levels. In 2017-18, 976 personnel were in position, leaving 359 vacancies, but by 2021-22, this shortfall had risen to 411, indicating persistent challenges in recruitment and retention. The situation further deteriorated in 2022-23 when posted positions dropped to 873, resulting in 461 vacancies. A more concerning development occurred in 2023-24, as the sanctioned strength increased to 1,437, yet only 796 employees were in place, pushing vacancies to a record high of 641.

This escalating vacancy trend suggests systemic issues, potentially linked to inefficient recruitment processes, budgetary constraints, or difficulties in workforce retention. The growing disparity between sanctioned and filled positions may lead to an excessive workload for existing employees, reduced organizational effectiveness, and compromised service quality. To mitigate these concerns, a well-structured workforce management strategy is essential, incorporating expedited recruitment drives, improved employee retention policies, and data-driven workforce planning. Strengthening human resource capacity through timely hiring and effective talent management will be critical to ensuring a stable and competent workforce capable of meeting institutional objectives.

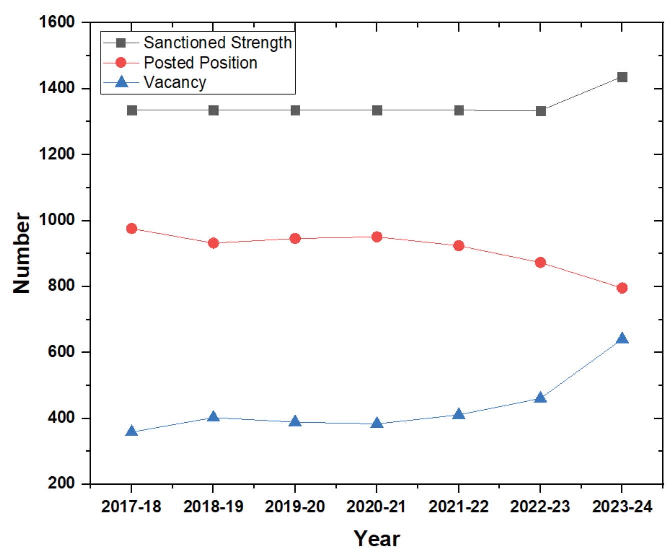

Figure 9. Number of sanctioned strengths, posted position, and vacancy from 2017-2024.

The analysis of vacancy rates against sanctioned strength from 2017-18 to 2023-24 reveals a troubling and consistent increase in unfilled positions, which underscores ongoing challenges in recruitment and workforce management. Starting at 26.89% in 2017-18, the vacancy rate already highlighted a significant gap between the authorized and occupied positions. This figure rose further to 30.19% in 2018-19, signaling deepening issues in both recruitment and retention efforts. Although there was a slight improvement in 2019-20 and 2020-21, with vacancy rates dipping to 29.14% and 28.76%, these changes were minimal and did not reflect a long-term solution to the staffing shortfall. In subsequent years, the situation worsened, with the vacancy rate climbing to 30.79% in 2021-22 and then to 34.56% in 2022-23, indicating an alarming trend of insufficient workforce replenishment. The most notable increase occurred in 2023-24, when the vacancy rate peaked at 44.61%, the highest recorded in the period under review. This surge, alongside a rise in the sanctioned strength, suggests that staffing expansion has not been matched by a commensurate effort in hiring, potentially exacerbating existing operational inefficiencies. These rising vacancy rates present serious concerns for the organization's ability to meet operational demands, potentially resulting in overburdened staff, reduced productivity, and operational disruptions. To mitigate these risks, a strategic approach focusing on accelerating recruitment processes, enhancing employee retention, and aligning workforce planning with organizational objectives is crucial. Without such interventions, the growing gap between sanctioned and actual staffing will continue to undermine institutional effectiveness and may threaten long-term operational stability.

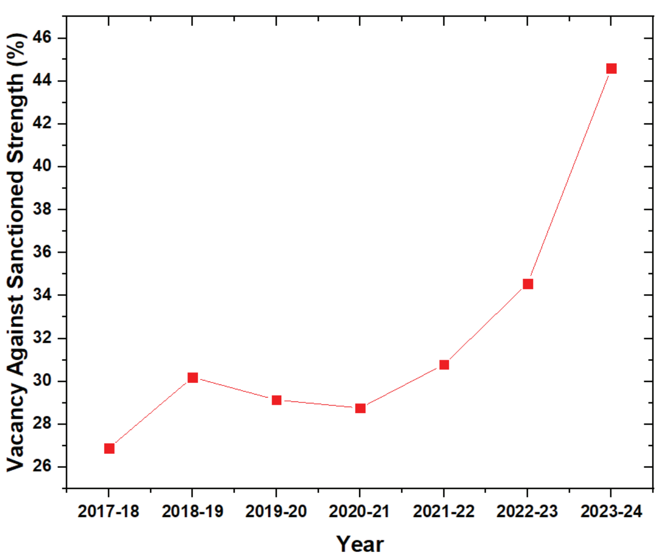

Figure 10. Vacancy against sanctioned strength from 2017-2024.

7. Findings and Discussions

The analysis of pre- and post-GST revenue trends highlights significant shifts in tax collection efficiency and administrative costs. Before the implementation of the Goods and Services Tax (GST), tax collection processes were fragmented across multiple indirect tax regimes, leading to inefficiencies in enforcement and revenue mobilization. The study observed fluctuations in expenses on tax collection, indicating varying degrees of operational efficiency in different years. In the initial years following GST implementation, collection expenses exhibited an increasing trend, suggesting investments in digital infrastructure, compliance mechanisms, and enforcement strategies to stabilize the new tax regime. However, in recent years, the data indicates a gradual decline in collection expenses as operational efficiencies improved. The percentage of expenses against tax collections showed a similar trend, with an initial rise post-GST, followed by gradual stabilization. This suggests that while administrative costs increased initially, they were eventually offset by enhanced compliance, streamlined tax filing mechanisms, and improved revenue mobilization. Furthermore, staffing levels exhibited significant vacancies throughout the period, with vacancy rates against sanctioned strength showing a rising trend. The increasing workforce shortage may have impacted tax administration efficiency, posing challenges in enforcement and service delivery.

The transition to GST was expected to enhance tax compliance, broaden the tax base, and improve revenue generation. The initial rise in tax collection expenses and vacancy rates indicates the structural adjustments required to implement the new tax system effectively. Increased administrative spending during the initial phase suggests investments in technological infrastructure, such as GSTN (Goods and Services Tax Network), digital invoicing, and compliance monitoring tools. However, the gradual decline in collection expenses in recent years suggests that these investments have yielded operational efficiencies, reducing the cost of tax administration over time. The increasing vacancy rates in tax administration raise concerns about workforce capacity in managing tax enforcement and compliance. Despite advancements in automation and digital taxation systems, a well-equipped workforce remains essential for monitoring compliance, addressing tax evasion, and ensuring smooth tax administration. The significant rise in vacancy rates in 2023-24, reaching 44.61%, suggests that while the tax system may be technologically robust, human resource shortages could hinder effective implementation. Addressing these gaps through streamlined recruitment processes, enhanced retention strategies, and workforce planning will be critical for sustaining long-term efficiency in tax collection. Overall, the findings highlight the complex relationship between tax administration costs, revenue generation, and workforce efficiency in the post-GST era. While technological advancements have improved operational efficiency, persistent staffing shortages may pose challenges for enforcement and service delivery. Policymakers should focus on balancing technological investments with adequate human resource allocation to ensure a robust and cost-effective tax administration system.

8. Conclusions

The analysis of tax revenue trends before and after the implementation of GST reveals significant shifts in tax collection efficiency, administrative expenses, and workforce management. The transition to GST aimed to streamline the taxation system, enhance compliance, and optimize revenue generation. However, the findings indicate that while GST implementation initially led to higher administrative costs, these expenses gradually stabilized as technological advancements improved operational efficiency. The percentage of expenses against tax collections fluctuated over the years, reflecting the ongoing adjustments in enforcement measures and policy refinements. Despite the improvements in tax administration, persistent staffing shortages remain a critical challenge, with vacancy rates increasing significantly, particularly in the post-GST period.

The findings underscore the importance of balancing technological investments with adequate human resource allocation to ensure the long-term effectiveness of the tax administration system. While automation and digital tax infrastructure have played a crucial role in enhancing compliance and reducing operational costs, the growing gap between sanctioned and posted positions highlights the need for strategic workforce planning. Failure to address staffing shortages could hinder enforcement efforts, impact taxpayer services, and reduce the overall efficiency of the tax administration framework.

Moving forward, policymakers should focus on strengthening recruitment mechanisms, improving employee retention strategies, and leveraging data-driven decision-making to enhance revenue collection efficiency. Additionally, optimizing administrative costs without compromising enforcement effectiveness will be crucial for sustaining fiscal discipline and ensuring long-term revenue growth. A well-structured approach that integrates automation, streamlined processes, and a skilled workforce will be essential in maintaining a cost-effective and resilient tax administration system in the post-GST era.

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