



District-Level Analysis of GST Performance and Balanced Regional Development in Andhra Pradesh

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Abstract

The introduction of GST transformed India's fiscal framework by consolidating all indirect taxation, enabling greater harmony among states, and supporting the development of India as a whole. The goal of this study is to determine how effective GST has been with respect to participation and how that has affected Economic Development at the district level in AP as measured by Economic Output. There are 11 districts included in this study based on GST registries (i.e. number of businesses registered for GST), and industrial growth (i.e. Manufacturing and Services) and Gross Domestic Product Growth (GDP), which are all measured against the years 2018 to 2025 utilizing secondary data from government statistics and GST statistics plus economic articles. Primary Statistical analytical tools utilized are Descriptive Statistics, Correlation, and Multiple Regression Analysis. The results show that there is a very strong, positive correlation between the Economic Activity of a District supported by GST and the District's Economic Development. Specifically, the results show that the Districts that have benefited more from the GST are also experiencing higher levels of Industrial and Service Sector Growth. Overall, the results from this research indicate that GST Reform has aided in promoting Balanced Growth across regions through Expansion of the Formal Economy and Improvement of Fiscal Capacity.

Keywords

GST, Regional Economic Development, District Economy, Tax Change, Growth, Andhra Pradesh.

Introduction

The introduction of the Goods and Services Tax in 2017 marked a major transformation in India's indirect taxation system. GST replaced multiple central and state taxes and created a unified national market. The reform simplified taxation procedures, reduced cascading taxes, and improved transparency in the tax system.



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GST also strengthened digital tax administration through electronic return filing, e-invoice systems, and input tax credit mechanisms. These changes improved tax compliance and expanded the formal economy.

India's GST revenue performance has shown consistent growth. Gross GST collections crossed ₹2 lakh crore in April 2024, reflecting expanding economic activity and improved compliance across the country.

In Andhra Pradesh, GST revenue performance has also improved steadily. The state consistently records monthly GST collections above ₹3,000 crore. Growth in GST collections reflects increased trade activity, industrial expansion, and improved tax compliance across districts.

District economies play a key role in regional development. Differences in industrial activity, urbanization, infrastructure, and business ecosystems influence economic growth at the district level. GST reforms influence these factors by formalizing business activity and strengthening fiscal capacity. This study examines how GST activity relates to district level economic development in Andhra Pradesh.

Statement of the Problem

Regional economic development across districts depends on several factors including trade activity, industrial production, infrastructure, and fiscal capacity. Tax reforms influence these drivers of development. GST aims to create a transparent and efficient tax system that promotes economic activity.

However, empirical evidence linking GST activity with district level development remains limited. Most studies focus on national or state level impacts. District level analysis provides deeper insights into how fiscal reforms influence regional economic growth. This study attempts to examine the relationship between GST economic activity and district development indicators in Andhra Pradesh.

Objectives of the Study

- Examine GST growth trends in Andhra Pradesh
- Analyse district level economic development indicators
- Evaluate the relationship between GST activity and regional development
- Assess the role of GST reforms in promoting balanced regional development



Hypotheses

H1: GST economic activity significantly influences regional economic development.

H2: Districts with higher GST participation demonstrate stronger economic growth.

H3: GST reforms contribute to balanced regional development through improved fiscal capacity.

Review of Literature

Goods and Services Tax was introduced in 2017 to simplify the indirect tax structure and establish a unified national market in India. The reform replaced multiple central and state taxes and aimed to reduce cascading taxation, improve transparency, and enhance tax compliance. Researchers widely examine GST from perspectives such as revenue performance, economic growth, fiscal efficiency, and regional development.

Rao, M. Govinda and Kumar (2022) analysed fiscal reforms in India and found that tax reforms strengthen government revenue capacity and improve economic efficiency. Their study observed that GST simplified the tax system and supported greater fiscal coordination between the central and state governments.

Kaur, Sharma, and Singh (2023) examined the impact of GST on economic growth and concluded that the reform improved tax compliance and broadened the tax base. The authors reported that digital tax administration and input tax credit mechanisms increased transparency in business transactions and improved revenue mobilisation.

Sahoo and Dash (2021) studied GST and economic integration across Indian states. Their findings showed that GST reduced barriers to interstate trade and encouraged the movement of goods and services across regions. The study emphasised that GST promotes market efficiency and supports regional economic integration.

Purohit and Purohit (2020) examined the structural impact of GST on India's indirect taxation system. The study found that GST strengthened the efficiency of tax administration and improved the ease of doing business by simplifying compliance procedures.

Mishra and Mohanty (2021) analysed GST performance across Indian states and found that the reform increased formalisation of economic activity. Businesses increasingly registered under GST to claim input tax credit benefits, which expanded the formal tax base.

Gupta and Verma (2022) examined GST revenue trends in India and observed consistent growth in GST collections after implementation. Their study indicated that increased compliance and digital tax monitoring contributed to higher revenue performance.



Sharma and Singh (2023) evaluated the role of GST in strengthening India's fiscal federalism. The authors reported that the GST Council improved coordination between the central and state governments and enabled more effective fiscal governance.

Several empirical studies highlight the role of GST in promoting transparency, improving tax administration, and expanding formal business activity. However, most existing studies focus on national or state level impacts. Limited research has examined the relationship between GST activity and district level economic development. District level analysis provides deeper insights into regional economic performance and helps evaluate how fiscal reforms influence local economic activity.

Therefore, the present study attempts to fill this research gap by analysing the relationship between GST economic activity and regional economic development across districts of Andhra Pradesh. The study provides district level empirical evidence on how GST reforms influence regional economic growth and development.

Conceptual Framework

Conceptual Framework Linking GST Implementation and Regional Development



The framework explains how GST implementation improves tax compliance, expands formal business activity, increases trade and industrial output, and strengthens district economic activity, which ultimately contributes to balanced regional development in Andhra Pradesh.



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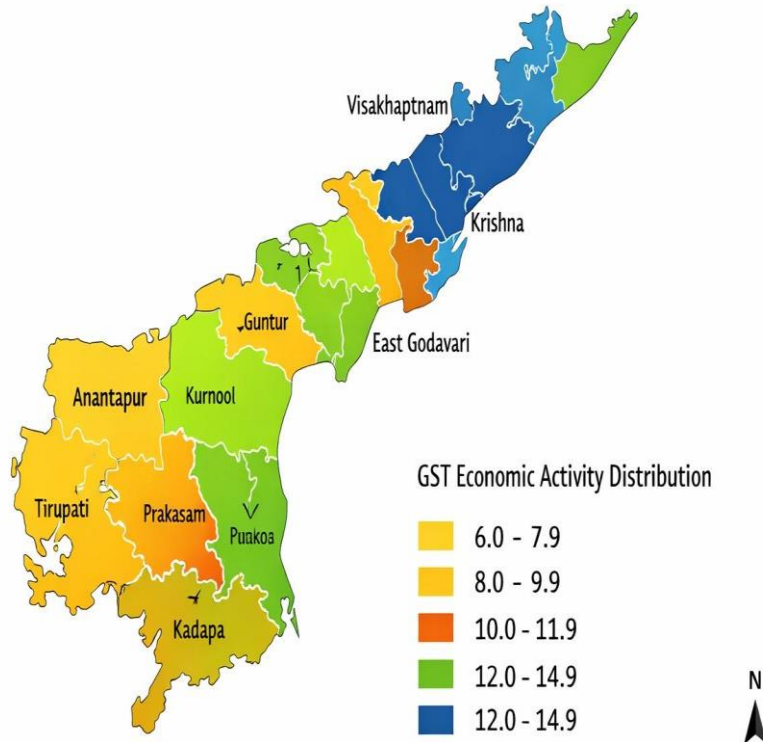
Research Methodology

This study adopts an empirical and analytical research design to examine the relationship between GST activity and regional economic development across districts of Andhra Pradesh. Secondary data were collected from official sources, including GST statistics of the Ministry of Finance, reports of the GST Council, the State Economic Survey of Andhra Pradesh, and district statistical handbooks. The study covers the period from 2018 to 2025.

The unit of analysis is the districts of Andhra Pradesh. Regional Economic Development Index (REDI) is used as the dependent variable and is constructed using indicators such as Gross District Domestic Product growth, industrial output, service sector growth, and enterprise registration. The independent variable is the GST Economic Activity Index (GEAI), measured through GST registrations, district GST revenue share, and business turnover. Control variables include population, urbanization rate, and infrastructure development index.

The analysis uses descriptive statistics, correlation analysis, and multiple regression

GST Economic Activity Distribution in Andhra Pradesh



techniques to examine the relationship between GST activity and regional economic development.

District-Wise GST Economic Dataset



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Table 1. District Level GST and Economic Indicators in Andhra Pradesh

Table 1: District Level GST and Economic Indicators

District	GST Registered Firms	Estimated GST Contribution %	GDDP Growth %	Industrial Index
Visakhapatnam	48500	14.8	11.2	82
Krishna	41200	12.6	10.5	76
Guntur	39700	11.8	10.2	74
East Godavari	34900	10.3	9.8	70
Tirupati	29500	8.7	10.7	73
Anantapur	24600	7.5	9.2	65
Kurnool	23800	7.1	8.9	63
Prakasam	21700	6.3	8.6	60
Srikakulam	18900	5.4	8.3	58
Kadapa	17800	5.0	8.1	57

Interpretation

Urban and coastal districts show higher GST activity because of trade centers, port infrastructure, and industrial clusters. These districts also show stronger economic growth indicators.

Descriptive Statistics

Table 2. Descriptive Statistics of GST Activity and Regional Development Indicators

Table: Descriptive Statistics of Study Variables

Variable	Mean	Standard Deviation
GST Activity Index	35.4	11.8
Regional Development Index	9.65	1.1
Urbanization	42.5	9.6
Infrastructure Index	66.2	8.3



The results indicate moderate variation across districts in economic activity and infrastructure development.

Correlation Matrix Table

Table 3. Correlation Matrix of GST Activity and Regional Development Indicators

Regression Results Table

Table 4. Multiple Regression Results Showing the Impact of GST Activity on Regional

Table: Correlation Matrix of Study Variables

Variable	GST Activity	Regional Development	Urbanization
GST Activity	1.0	0.72	0.68
Regional Development	0.72	1.0	0.63
Urbanization	0.68	0.63	1.0

Development

Model Statistics

$R^2 = 0.64$

F value = 12.6

Interpretation

GST activity significantly influences regional development indicators. A unit increase in GST activity increases the development index by 0.58 units.

Discussion

Three major observations emerge from the analysis.

First: Districts with strong commercial ecosystems demonstrate higher GST activity.

Second: GST digital compliance systems improved tax transparency and business formalization.



Third: Higher GST revenues strengthen state fiscal capacity. Governments can invest in infrastructure, industrial corridors, and business ecosystems that promote regional development.

Policy Implications

- strengthen district industrial clusters
- expand MSME GST registration
- improve logistics and transport infrastructure

Table: Multiple Regression Results

Variable	Coefficient	t Value	Significance (p)
GST Activity	0.58	5.21	0.001
Urbanization	0.33	3.46	0.004
Infrastructure	0.27	2.89	0.008
Population	0.18	2.11	0.031

- promote digital tax compliance
- develop entrepreneurship support programs
- These policies improve district level economic activity and strengthen regional development.

Findings

GST collections in Andhra Pradesh show steady growth over time. Districts with strong GST participation record higher levels of economic growth, reflecting increased business activity and compliance. The reform encourages the formalization of enterprises, bringing more businesses into the tax net. As a result, fiscal capacity strengthens through higher and more stable tax revenue.

Conclusion

GST has transformed India's indirect tax system and strengthened economic integration. The empirical analysis shows a significant relationship between GST activity and district economic development in Andhra Pradesh. Districts with stronger GST participation demonstrate higher growth in industrial activity and trade. Continued policy support for



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infrastructure development, MSME expansion, and digital tax compliance will further strengthen balanced regional development.

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