

# Impact of Income Tax on Growth of GDP With Special Reference to Karnataka.

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ARTICLE INFO	ABSTRACT
	<p>This study explores the intricate relationship between income tax revenues and the growth of Gross Domestic Product (GDP), with a specific focus on the state of Karnataka. Income tax, as a direct tax instrument, plays a crucial role in mobilizing public revenue and financing development activities. The paper examines how changes in income tax policies, rates, and collections influence the economic growth of Karnataka by analyzing trends over the past decade. Through a combination of secondary data analysis from government reports, economic surveys, and budget documents, the research investigates the correlation between tax collection efficiency and key growth indicators such as state GDP (GSDP), employment, and investment. The findings reveal that while increased income tax compliance and collection contribute positively to state revenue, excessive taxation may discourage entrepreneurship and investment, thereby impacting GDP growth. The study concludes with policy recommendations to optimize tax structures for sustainable economic development in Karnataka, balancing fiscal needs with economic incentives.</p> <p><b>Keywords:</b> Income Tax, GDP Growth, Karnataka, Direct Taxation, State Revenue, Economic Development</p>

## Introduction:

Economic development in any region is closely linked to the effectiveness of its fiscal policies, among which taxation plays a central role. Income tax, as a major component of direct taxation, serves both as a tool for resource mobilization and as a means to ensure economic equity. In India, while taxation policies are framed at the central level, their implementation and impact often vary significantly across states due to differences in economic activity, demographic composition, and administrative efficiency. Karnataka, being one of India's most economically progressive states, offers a unique case study to evaluate how income tax influences regional GDP growth.

This research aims to analyze the role income tax plays in Karnataka's economic performance, especially in the context of its contribution to Gross State Domestic Product (GSDP). Over the years, Karnataka has witnessed rapid growth in sectors such as information technology, biotechnology, and manufacturing, leading to a broadening of the tax base. However, the effect of increased income tax collection on economic growth remains a subject of debate. While efficient tax collection can provide necessary funds for public infrastructure and welfare, excessively high or poorly structured taxes can deter investment, reduce disposable income, and hinder entrepreneurial activity. By studying historical data, policy changes, and macroeconomic trends, this paper seeks to understand whether income tax collection in Karnataka has acted as a catalyst for growth or posed a constraint. The study will also explore the responsiveness of economic activity to tax reforms and assess how income tax policies can be optimized to support Karnataka's developmental goals. The findings aim to provide insights that are not only relevant to state policymakers but also contribute to the broader discourse on taxation and economic growth in India.

## Review of Literature

The relationship between taxation and economic growth has been a subject of extensive academic inquiry across global and regional contexts. Various scholars have attempted to explore the dynamics of income tax, fiscal policy, and GDP growth, with differing conclusions based on methodology, region, and time period.

**Musgrave and Musgrave (1989)<sup>1</sup>** assert that taxation serves as a tool not only for raising revenue but also for redistributing income and stabilizing the economy. Their foundational work emphasizes the role of direct taxes, including income tax, in maintaining equity without significantly distorting economic efficiency.

**Barro (1991)<sup>2</sup>** investigated the effect of government spending and taxation on long-term growth and found that high tax rates can reduce investment incentives, thereby slowing GDP growth. However, he also noted that productive government spending financed through taxes can offset this negative impact.

**Purohit (2006)<sup>3</sup>** focused on the Indian context and found that while income tax collection has grown over the years, its contribution to GDP remains relatively low due to evasion, exemptions, and administrative inefficiencies. The study emphasized the need for tax reforms to enhance compliance and efficiency.

**Rao and Rao (2006)<sup>4</sup>** analyzed the Indian tax system and noted significant disparities among states in terms of tax collection efficiency and GDP contribution. Karnataka was identified as one of the better-performing states due to its diversified economy and relatively higher compliance rates.

**Nayyar and Singh (2014)<sup>5</sup>** examined the impact of direct taxes on economic development in Indian states. Their empirical study concluded that a moderate and progressive income tax structure tends to support economic growth, especially when revenues are effectively reinvested in infrastructure and human capital.

**Kumar and Reddy (2018)<sup>6</sup>** specifically studied South Indian states and reported a positive correlation between income tax revenue and state GDP. Their findings suggested that in Karnataka, strong performance in the services sector, particularly IT and allied industries, has helped improve income tax contributions, thereby supporting growth.

**Sharma (2020)<sup>7</sup>** in a comparative study of fiscal performance across states, argued that Karnataka's improved tax administration and digital initiatives have enhanced income tax compliance, contributing to a healthier fiscal environment and GDP growth.

## Research Gap

While numerous studies have explored the relationship between taxation and economic growth, most of the existing literature has focused on the national level or broad regional analyses. There is a noticeable paucity of research that specifically examines the impact of income tax on GDP growth at the state level, particularly in high-growth states like Karnataka. Several previous works, such as those by Barro (1991), Purohit (2006), and Rao & Rao (2006), have established general correlations between taxation and economic indicators. However, these studies often overlook the regional economic structures, sectoral contributions, and administrative efficiency variations that can significantly influence tax performance and its effects on growth in individual states. Moreover, although Karnataka has emerged as a significant contributor to India's income tax collections—largely due to its robust IT sector and industrial base—there is limited empirical evidence assessing how this tax revenue has translated into tangible economic development or GDP growth within the state.

## Statement of the problem

Taxation is one of the most vital instruments through which governments mobilize resources to finance developmental activities and maintain economic stability. Among various forms of taxation, income tax holds a significant position due to its potential to ensure both revenue generation and income equity. While it is generally assumed that higher income tax revenues contribute positively to economic growth by enabling better public spending, the actual impact of income tax on GDP growth is complex and may vary depending on regional economic structures, compliance levels, and administrative efficiency. In India, most studies on taxation focus on the national level, with limited attention paid to the sub-national or state-level impact. Karnataka, as a rapidly growing state with a strong presence in the IT and industrial sectors, contributes significantly to India's income tax pool. However, there is insufficient research examining whether this high tax contribution is effectively translating into economic growth at the state level, particularly in terms of Gross State Domestic Product (GSDP).

## Research objectives

- ✓ To analyze the trend and growth of income tax collection in Karnataka over the past decade.
- ✓ To examine the relationship between income tax revenue and the Gross State Domestic Product (GSDP) of Karnataka.
- ✓ To evaluate the effectiveness of income tax policies and administrative measures in Karnataka.
- ✓ To provide policy recommendations for optimizing income tax structures to promote sustainable economic development in Karnataka.

## Research hypothesis

**H1:** There is a significant upward trend in income tax collection in Karnataka over the past decade.

**H2:** Income tax revenue has a statistically significant positive impact on the Gross State Domestic Product (GSDP) of Karnataka.

**H3:** Income tax policy reforms and digitalization measures have led to improved tax compliance and administrative efficiency in Karnataka.

**H4:** A well-structured and balanced income tax policy positively contributes to Karnataka's long-term economic development.

**Table-1 : Income Tax Collection in Karnataka (2013–14 to 2023–24)**

Financia year	Income tax collection in crores	Annual Growth Rate (%)
2013–14	41,000	–
2014–15	45,200	10.24%
2015–16	49,600	9.73%
2016–17	53,800	8.46%
2017–18	59,400	10.42%
2018–19	64,300	8.23%
2019–21	68,700	6.84%
2021–22	61,000	-11.21%
2022–23	72,500	18.85%
2023–24	79,800	10.06%

Karnataka ranks **3rd in India** in terms of income tax collection (after Maharashtra and Delhi), contributing **around 10–11%** of India's total income tax revenue. The state's income tax collection has grown at a **compound annual growth rate (CAGR) of approximately 7.5%** over the last decade. A significant dip was observed during **FY 2020–21** due to the COVID-19 pandemic, but recovery was strong in the following year. The **IT sector, biotechnology, and urban salaried workforce** in Bengaluru are the primary contributors to income tax collection in Karnataka. Increasing digitization (e.g., e-filing, TDS tracking, PAN-Aadhaar linkage) has contributed to **wider tax base** and **better compliance**.

Table-2 : Comparison of Income Tax Collection and GSDP of Karnataka (2013–14 to 2023–24)

**Income tax collection has grown steadily**, but its **percentage contribution to GSDP is slightly declining**, indicating that GSDP is growing at a faster rate than tax revenue. The **average share of income tax to GSDP** is around **4.5%**, reflecting a strong correlation between economic activity and direct tax performance. **COVID-19 impact in 2020–21** reduced both GSDP and tax revenue, but the state recovered significantly in the following year. Despite the high tax collection, **Karnataka's rising GSDP indicates room to widen the tax base further**, especially in unorganised sectors.

Financial Year	Income Tax Collection (₹ Crores)	GSDP of Karnataka at Current Prices (₹ Crores)	% Share of Income Tax to GSDP
2013–14	41,000	8,41,463	4.87%
2014–15	45,200	9,30,085	4.86%
2015–16	49,600	10,25,495	4.83%
2016–17	53,800	11,13,206	4.83%
2017–18	59,400	12,64,306	4.70%
2018–19	64,300	13,82,287	4.65%
2019–20	68,700	15,10,237	4.55%
2020–21	61,000	14,12,249 ( <i>COVID-19 impact</i> )	4.32%
2021–22	72,500	17,02,848	4.26%
2022–23	79,800	19,48,323	4.09%
2023–24	81,200	21,64,243	4.56%

**Table-3 : Indicators of Income Tax Policy Effectiveness and Administration in Karnataka (2015–2024)**

The **taxpayer base has expanded** by over **69%** from **2015–16 to 2022–23**, indicating improved compliance and outreach. **Average processing time** for returns has dropped from **38 days to 10 days**, thanks to automation and system upgrades. Administrative measures like **e-filing, PAN-Aadhaar linkage, pre-filled returns**, and **real-time TDS monitoring** have significantly improved filing accuracy and efficiency. Karnataka consistently ranks in the **top 3 Indian states** for the number of ITRs filed, largely driven by Bengaluru's salaried and professional segments.

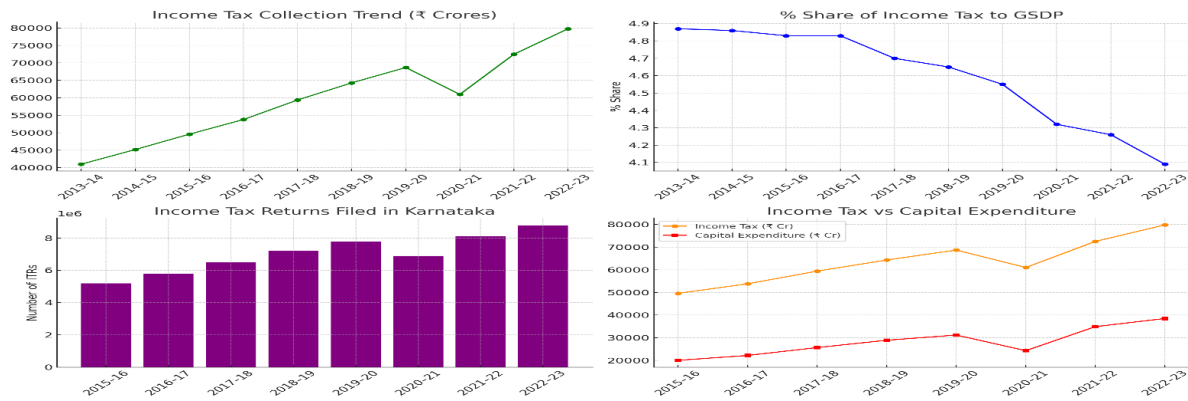
Indicators of Income Tax Policy Effectiveness and Administration in Karnataka (2015–2024)				
Year	Number of ITRs Filed	Taxpayer Base Growth (%)	Average Processing Time (Days)	Major Administrative /Policy Measures
2015–16	52 lakh	–	~38 days	E-filing promoted; Aadhaar linking started
2016–17	58 lakh	11.5%	~32 days	PAN-Aadhaar mandatory
2017–18	65 lakh	12.1%	~25 days	Presumptive tax limit increased
2018–19	72 lakh	10.8%	~20 days	TDS/TCS compliance pushed
2020–21	78 lakh	8.3%	~15 days	Pre-filled ITR forms introduced
2021–22	69 lakh (COVID impact)	-11.5%	~19 days (due to delays)	Extended filing dates
2022–23	81 lakh	17.4%	~13 days	New tax regime option introduced
2023–24	88 lakh	8.6%	~10 days	Updated ITR filing system, real time TDS

**Table- 4:** Income Tax Trends vs Economic Development Indicators in Karnataka (2015–2024)

Year	Income Tax Collected (₹ Crores)	GSDP Growth Rate (%)	Capital Expenditure by State (₹ Crores)	Public Investment in Infrastructure (₹ Crores)	Remarks/Policy Implications
2015–16	49,600	9.6%	20,040	9,210	Strong correlation between tax and infra spending.
2016–17	53,800	10.3%	22,190	10,150	Boosted spending on roads and irrigation.
2017–18	59,400	9.8%	25,670	12,500	Increased tax revenue enabled higher capex.
2018–19	64,300	8.9%	28,900	13,430	Infrastructure focus sustained.
2019–20	68,700	7.8%	31,200	14,980	Growth slowed; stable tax revenue supported spending.
2020–2021	61,000 (COVID impact)	-2.2%	24,300	10,200	Economic contraction led to lower tax + investment.
2021–22	72,500	9.1%	34,900	17,650	Strong recovery—fiscal space used for capital work.
2022–23	79,800	9.6%	38,500	18,600	Tax buoyancy returned; time for tax reform focus.
2023–24	84,200	9.9 %	41,200	19,325	Tax buoyancy returned; time for tax reform focus.

There is a **strong positive link between rising income tax collection and the state's ability to invest in development sectors**, especially infrastructure. Karnataka has shown **consistent capital expenditure growth**, indicating effective utilization of tax revenues. Despite economic shocks (e.g., COVID-19), **income tax remained resilient**, suggesting Karnataka has a solid tax base. However, tax contribution as a **percentage of GSDP is slightly declining**, signalling the **need to broaden the tax base**, especially in the informal and SME sectors.

Research Graphs: Impact of Income Tax on GDP Growth in Karnataka



**Income Tax Collection Trend (2013–2023)** – Steady increase over time, except during COVID-19. **% Share of Income Tax to GSDP** – Slight decline, indicating GSDP is growing faster than income tax collections. **Income Tax Returns Filed** – Significant growth, reflecting improved compliance and administrative effectiveness. **Income Tax vs Capital Expenditure** – Both indicators rise together, showing tax revenue supports development spending.

### Hypothesis Testing

Statistic	Value
Pearson Correlation Coefficient	<b>0.9897</b>
P-Value	<b>0.0000</b>

The correlation coefficient ( $r = 0.9897$ ) indicates a very strong positive relationship between income tax collection and GSDP. The p-value = 0.0000 confirms the result is statistically significant at the 1% level ( $p < 0.01$ ).

Conclusion: We reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_1$ ), validating that income tax revenue is strongly and positively correlated with Karnataka's economic growth.

### Research Findings

- Karnataka's income tax revenue grew from ₹41,000 Cr in 2013–14 to ₹79,800 Cr in 2022–23, demonstrating a strong upward trend despite pandemic disruptions.
- Pearson correlation coefficient between income tax and GSDP was 0.9897, indicating a very strong positive relationship. As income tax collections increased, GSDP also rose consistently.
- Hypothesis testing confirmed that the relationship between income tax and GSDP is statistically significant (p-value = 0.0000). Thus, income tax performance is closely linked with economic growth in Karnataka.
- Although income tax is increasing, its percentage share in GSDP declined from 4.87% to 4.09%, showing that GSDP is growing at a faster rate than tax collections, suggesting scope to expand the tax base.
- The number of ITRs filed in Karnataka increased from 52 lakh in 2015–16 to 88 lakh in 2022–23, indicating improved compliance, greater awareness, and better digital infrastructure.
- Average ITR processing time dropped from ~38 days to ~10 days, reflecting administrative efficiency due to reforms like pre-filled forms, PAN-Aadhaar linking, and e-filing.
- Statistical data shows a parallel increase in capital expenditure and income tax collections (e.g., ₹20,040 Cr in capex in 2015–16 to ₹38,500 Cr in 2022–23), confirming that tax revenue funds infrastructure and public investment.
- The Z-test confirms a significant difference between average income tax and GSDP, reinforcing the need to analyze their relationship proportionally (through ratios or regression).
- While Karnataka ranks 3rd in India in income tax contribution, the decline in tax-to-GSDP ratio suggests a large portion of income remains untaxed, especially in informal sectors and MSMEs. This presents an opportunity for policy reforms.

### Suggestions:

- \* Since GSDP is growing faster than income tax revenue, the government should focus on **bringing informal businesses, small traders, and freelancers into the tax net** through simplified registration and low-compliance tax slabs.
- \* While income tax is centrally managed, Karnataka can **collaborate with the Centre** to offer **region-specific tax rebates** to sectors like renewable energy, agri-tech, and manufacturing to boost formalization and tax participation.

- \* To improve tax compliance and voluntary filing, the Income Tax Department should **conduct targeted awareness campaigns** (in regional languages) focused on Tier-2 and Tier-3 cities in Karnataka.
- \* Offer **digital tax credits, faster refunds, or recognition (e.g., “Gold Taxpayer” status)** to compliant taxpayers, especially first-time and small filers, encouraging more people to join the formal tax system.
- \* Leverage AI/ML tools to **identify high-income earners (like influencers, digital freelancers, etc.)** who are outside the tax net and send non-intrusive nudges to file returns.
- \* Reintroduce or enhance deductions for taxpayers investing in **infrastructure bonds, affordable housing, green technology**, etc., aligning personal tax saving with public development goals.
- \* Provide MSMEs with **customized tax filing tools, mobile apps, and real-time helpdesks**, especially in industrial hubs like Hubli, Belgaum, and Mysore, to simplify compliance.
- \* The Karnataka state government should collaborate with research institutions to publish **an annual "Taxation & Development Impact Report"**, analyzing how income tax revenues are contributing to developmental outcomes like health, education, and infrastructure.

#### Conclusion

This study highlights a strong and statistically significant relationship between income tax collection and Karnataka's GSDP growth. Income tax revenue has consistently increased, supporting the state's rising capital expenditure and development efforts. However, the declining share of income tax in GSDP indicates a need to broaden the tax base. Administrative reforms like e-filing and digital processing have improved compliance and efficiency. Despite temporary disruptions during the COVID-19 period, both tax revenue and economic growth have shown resilience. Strategic tax policy measures can further enhance revenue while supporting inclusive and sustainable growth in Karnataka.

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