EVALUATION OF FINANCES OF KARNATAKA STATE

Final Report

Submitted by

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EXECUTIVE SUMMARY

The main objective of this study on the evaluation of Karnataka state finances is to provide a comprehensive picture of various dimensions of finances – revenue, expenditure, fiscal performance and liabilities, finances of local bodies, finances of public sector enterprises, power sector and fiscal health, public debt and subsidies. The study mainly depends on the available secondary data collected for the last 5 to 10 years.

Revenue receipts

Karnataka stands out as a buoyant state in terms of its own revenue resources, ranking third among 19 major states in per capita own tax generation. The predominant contributor to the state's own tax revenue is the state GST, which also represents a significant share of the central GST pool, indicating that Karnataka may have reached a tax plateau. Despite being a top-performing state in terms of per capita tax revenue and per capita income, Karnataka ranks 17th in total tax effort (measured by tax-to-GSDP ratio) and 8th in own tax effort during 2022-23. This disparity can be attributed to factors such as the introduction of GST, the economic impact of COVID-19, and the challenges of being a service-dominated economy, with which the state is struggling to generate proportional tax revenues from the service sector despite its substantial contribution to GSDP.

Karnataka government has initiated several measures to enhance nontax revenue. However, these efforts are yet to translate into significant results. Non-ferrous mining and metallurgical industries serve as the main source of nontax revenue; however, enhancing revenue in mining is not becoming possible due to short accounting of minerals extracted on account of illegal mining, which needs strict monitoring.

Though Karnataka is one of the rich states, the performance of districts belonging to the Kalyana Karnataka region is comparable with some of the very poor backward Indian states. Regional imbalance is also very high in Karnataka. Considering the above factors, further improvement in the own taxes is possible only through the development of poorer northern Karnataka districts by increasing the spending capability of the people, especially the poor.

Expenditure patterns

The analysis of Karnataka's expenditure patterns from 2019-20 to 2023-24 reveals an "inverted U-shaped" trend in capital and revenue expenditures. This indicates there is initial growth in expenditure, reaches a maximum point and followed by a decline. Significant growth was noted in capital expenditure, interest payments, and pensions, highlighting a focus on infrastructure and economic development. However, a reduction in grants-in-aid suggests a shift in fiscal strategy. It is found in this study that technical inefficiencies, leading to an output loss of 1.58% to 1.60% and underutilisation of capital expenditure relative to revenue expenditure (average allocative inefficiency was 26.77%). To improve efficiency, we recommend prioritising high-impact capital projects, enhancing monitoring and evaluation, managing interest payments through debt restructuring, and implementing pension reforms. Additionally, optimising grants-in-aid allocation, investing in capacity building, maintaining a balanced fiscal strategy, and encouraging public-private partnerships are suggested to maximise output from public spending and ensure sustainable economic growth.

Fiscal Performance and Liabilities

The Karnataka Fiscal Responsibility Act, 2002 predates the Union Government's Fiscal Responsibility and Budget Management Act, 2003 and specifies the targets regarding three fiscal indicators—the revenue deficit, fiscal deficit, and fiscal liabilities—in terms of percentage of GDP. The state was able to meet this target revenue surplus up to 2019-20. However, the state witnessed a revenue deficit of 1.19% in 2020-21, which might have happened due to the pandemic and the economic crisis caused by it. The fiscal deficit as a percentage of GSDP has been within the targeted level of 3% between 2011 and 2016, with a moderate fall in the rate in 2015-16 to 1.83%. The only time it went above stipulated levels was again during the pandemic years, when it was marginally above 3% to 4.12% and 3.36% in the years 2020-21 and 2021-2022, respectively. Moreover, the debt-to-GSDP ratio below 25% was maintained up to the end of 2020, slightly exceeding this range to 25.59% in 2020-21. The focus should therefore be on reducing the fiscal deficit further, as without this, it would be difficult to reduce the debt-to-GSDP ratio in a sustainable manner.

Transfers to Local Bodies

Due to the poor own resource base, Urban Local Bodies (ULBs) in Karnataka depend on transfers from the state government. A majority of SFC grants to the ULBs are tied. With cities increasingly becoming the engines of economic growth, and given they generate substantial tax revenues for the central government too, they should be supported. However, central grants to the state's ULBs have been dwindling with some years better than others, and with more and less urbanised states surpassing Karnataka's share. So, the state's ULBs are dependent solely at the mercy of state government grants. However, it should be noted that that most states including Karnataka, have not been able to honour the setting up of six SFCs as per the mandate of the central finance commission. When the SFC is not set up, devolution to local bodies also suffers. We suggest that the states' urbanisation rate be made a criterion based on which devolution is made to ULBs.

As far as transfers to rural local bodies are concerned, it is concluded that the number of panchayats has been increasing over time. Karnataka is in the forefront when it comes to initiation of decentralisation reforms. Rural Development and Panchayat Raj department (RDPR) has taken up a major initiative on digitalisation of information and operations so that service delivery is improved. The reforms also aimed at survey of all the properties and determined property rates as per digital technology resulted in a steep increase in the number of properties assessed, current demand and tax collection. The state also introduced reforms aimed at improving governance, access to public libraries for children, child care support, planning and so on.

Allocation to PRIs over the years shows that education and welfare of SCs, STs and OBCs have been prioritised. It is however noticed that the share of allocation to rural employment, water supply and housing declined. There are also exclusive funds allocated under Jal Jivan Mission for water supply works, which are with the line department and not with the PRIs. The total funds released to PRIs from GoI (devolution and grants-in-aid) have been varying over a period of time. In recent years, FC grants to PRIs have declined, and for most years, there has been a shortfall of 0.5% to 57.5% between recommended grants and actual releases. The services offered by PRIs are discussed in this chapter and gaps in the same have been identified. Funds to PRIs are essential to address the gaps in the service delivery.

In recent years, the occurrence of disasters has become frequent. ***However, there are no exclusive funds for disaster management in Grama Panchayats, the government that is closest to the people. It is, therefore, recommended to provide carryover funds to local government, which can be used immediately during a disaster for providing immediate relief.*** It is recommended to revisit the horizontal devolution criteria to ensure fair resource distribution by addressing issues of wealthier states unfairly compensating poorer states, penalising states that have controlled population growth and not adequately rewarding tax efforts.

Public Sector Enterprises

Public sector enterprises in Karnataka have fallen into financial woes over the recent decade. Notably, profits among the profitable units have been stagnating, and loss-making units have been seeing alarming growth in their losses, which places a burden on the state exchequer to continue to support these ventures. Considering their turnover, it remains only a small percentage of the total economic output of the state and has continued declining over the years. There is also a growing trend towards requiring larger grants from state finances to continue operations, which are outflows that do not form a part of the state's revenue-generating assets. Employment, too, has remained largely unchanged over the past ten years, indicating that these units are ill-equipped to address the growing challenge of unemployment that plagues the state today. The contribution of non-tax revenue is also not substantial. State public sector enterprises have not performed as well as central public sector enterprises.

However, many state PSEs were not created with profit a motive, and that several of them were started for the welfare of societies or public utilities and to advance other social-oriented goals. Assessing public enterprises purely on the basis of profit therefore does not provide a comprehensive picture of their value. Without enterprise-level data on various financial indicators, it is however difficult to pass judgement on the performance of state PSEs.

Power Sector Reforms and Fiscal Health of Karnataka

The power sector in Karnataka has seen modest growth in installed capacity, particularly in renewable energy sources like wind and solar, from 2019-20 to 2023-24. However,

electricity generation has fluctuated, and financial instability within ESCOMs remains a concern, exacerbated by reduced state subsidies. Despite infrastructure improvements, transmission and distribution losses have increased. The fiscal health of Karnataka reflects resilience, with efforts to reduce fiscal and revenue deficits in the post-pandemic period. The state's fiscal discipline is notable, with a lower fiscal deficit compared to other southern states. However, rising liabilities and a persistent revenue deficit highlight ongoing fiscal pressures. To address these issues, the recommendations include enhancing renewable energy integration, implementing financial restructuring for ESCOMs, and improving transmission and distribution efficiency. These measures aim to stabilise electricity generation, ensure financial stability, and reduce inefficiencies, thereby supporting Karnataka's long-term fiscal sustainability and economic development goals.

Public Debt

The state government's debt is made up of internal debt of the government, loans taken from the Government of India, public accounts, and off-budget borrowings. The proportion of internal debt and public accounts has continuously increased up to 2022-23, contributing to the increase in the debt-to-GSDP ratio, as internal debt is a major component of the total fiscal liabilities of the state. The amount of outstanding guarantees extended by the Government of Karnataka has increased over the years; however, these are much below the limit prescribed in the Act. The impact of COVID-19 is clearly visible in the decline in the revenue receipts of the state, witnessing a significant jump in the percentage of the outstanding amount guaranteed during 2022-23 to 24.5% due to a shortfall in the revenue of the state in 2020-21. The government's focus should be on reducing the fiscal liabilities to encourage fiscal discipline sustainably. This will also have a positive effect on the debt to GSDP ratio.

Subsidies

Subsidies, which form a major part of non-committed expenditure, are categorised as explicit subsidies. These have been increasing over time, with energy subsidies leading, followed by food, supplies, and agriculture. Implicit subsidies, provided as financial assistance for various state schemes, were previously given to 20 schemes, but now only 12 schemes receive them. Most implicit subsidies are spent on agriculture, housing, education, and women and child development. It is crucial to address inefficiencies in targeting to ensure subsidies reach the intended beneficiaries.

We have reviewed relevant subsidy programs of the state that form a major part of the state's expenditure on explicit subsidies. Considering the three sectoral subsidies that account for a major part of the state's bill on this account, we find energy and food subsidies have been effective in targeting the poorer sections of the population. However, we are not able to conclude this definitively in the case of subsidies to agriculture, even though the IP sets subsidy, while classified as an energy subsidy, could be considered an agricultural subsidy too. Despite large amount of expenditure on the five guarantee programs implemented by Karnataka government, we find the state's revenue deficit in 2025-26 is estimated at Rs. 19,262 crore (0.63% of GSDP) and the fiscal deficit at Rs. 90,428 crore (2.95% of GSDP), which could be the case because of the consumption effects of the programs, and the GST based on the estimated consumption. However, we are unable to comment on this further as we do not have information on what the consumption would have been without the programs.

Outcome evaluation of 14th and 15th Finance Commission Recommendations

The centrally sponsored schemes were reduced from 147 to 66 schemes. These 66 schemes were classified as 28 umbrella schemes, comprising six core of the core schemes, 20 core schemes and 2 optional schemes. There has been a reduction in the transfer of central grants to Karnataka. Similarly, finance grants have also declined in the recent past. The share of expenditure by the centre has been varying. Learning from the experience of the Government of India, the state government also tried to streamline the schemes. Since nearly half of the schemes account for less than 1% of the total budget allocation, rationalisation of schemes is needed to avoid the thin spread of resources.

We find that the Government of Karnataka has initiated a large number of programs covering urban development, urban infrastructure and innovation that is much necessary for economic growth. These schemes have progressed well, as evident here from their allocations and expenditures. However, the problem seems to be that physical progress in these developmental programs fall short of targets, which lead to cost over runs. Therefore, the state needs greater human resources, with technology and training support for furthering its development objectives.

Sustainable debt roadmap

Karnataka has demonstrated commendable fiscal leadership through early adoption of the KFRA (2002) and consistent adherence to FRBM targets. However, the state now faces mounting fiscal pressures from rising committed expenditures, reduced central transfers, implementation of welfare schemes (5 guarantees) and 7th Pay Commission recommendations and growing outstanding public debt. Our analysis reveals a critical divergence in debt projections. Based on trend estimates our findings suggest that Karnataka is most likely to breach the prescribed limit of total liabilities to GSDP ratio (25.2%) during 2026-27 to 2030-31. The Medium-Term Fiscal Plan report (2024) of Karnataka, nonetheless, is expected to maintain it within prescribed limit with optimistic growth projections of economy, revenue mobilisation and rationalisation of expenditures.

The COVID pandemic caused a significant debt and debt servicing burden on the state revenue. It likely is grow at 16.19 % each year during 2025-26 to 2030-31 due to high maturity of public outstanding debt in the corresponding period. Debt profile of the state has so far been favourable in maintaining debt stability. Approximately 90% of the state's debt consists of long-and medium-term maturities. Higher burden of subsidies and committed transfers for welfare programme, increasing burden of loans of public power undertakings, and revenue shortfalls pose fiscal risks to the state finances. However, minimal, could negatively affect debt sustainability. Any shortfall in the revenue receipts of the state will have serious implication on its public debt. However, the higher rate of growth rate provide flexibility to the state to borrow and improve debt servicing capacity.

While Karnataka's robust economic trajectory provides debt servicing flexibility, maintaining fiscal sustainability will require strict adherence to MTFP's growth and revenue assumptions; contingency planning for revenue shortfalls; continued prudent debt management; and balanced approach to welfare spending. The state's institutional framework positions it well to navigate these challenges, but sustained fiscal discipline remains imperative to avoid breaching debt sustainability thresholds.

1. EVALUATION OF FINANCES OF KARNATAKA STATE

D Rajasekhar, Meenakshi Rajeev, Kala S Sridhar, B P Vani, Indrajit Bairagya, Thomas Felix, R. Manjula and Khalil Shaha

Introduction

As per Article 280 of the Indian Constitution, the 16th Finance Commission was constituted by an order issued by the President of India in December 2023. The Commission has commenced its work since then. It decided to interact with multiple stakeholders and research organizations in every Indian state for the widest possible consultations. In line with this approach, studies on the evaluation of finances of different states are assigned to reputed research institutes in each state. Accordingly, the Institute for Social and Economic Change (ISEC) has been requested by the 16th Finance Commission (FC) to undertake a study on the finances of Karnataka.

The Institute has accepted the offer of the 16th FC to undertake the proposed study. Subsequently, an MoU was signed, and the work was started on 3 June 2024.

Terms of Reference

The following terms of reference (ToRs) are assigned to ISEC.

i) Estimation of revenue capacities of the state and measures to improve the tax-GSDP ratio during the last five years. Suggestions for enhancing the revenue productivity of the tax system in the state.

ii) Analysis of the state's own non-tax revenues and suggestions to enhance revenues from user charges and profits from departmental enterprises and dividends from non-departmental commercial enterprises.

iii) Expenditure pattern and trends separately for revenue and capital, and major components of expenditure thereunder. Measures to enhance allocative and technical efficiency in expenditure during the last 5 years. Suggestions for improving efficiency in public spending.

iv) Analysis of deficits – fiscal and revenue

v) Level of debt to GSDP ratio and the use of debt (i.e., whether it has been used for capital expenditure or otherwise). Composition of the state's debt in terms of market borrowing, off-budget borrowings, central government debt (including those from bilateral/multilateral lending agencies routed through the central government), liabilities in public account (small savings, provident fund, etc.) and borrowings from agencies such as NABARD, LIC, etc.

vi) Implementation of the FRBM Act and commitment towards targets. Analysis of MTFP of various departments and aggregate.

vii) Analysis of the state's transfers to urban and rural local bodies in the state. Major decentralization initiatives.

viii) Impact of state public enterprises finances on the state's financial health and measures taken to improve their performance and/or alternatives of closure, disinvestment, etc.

ix) Impact of power sector reforms on states' fiscal health. If reforms have not been implemented, the likely outcome on the states' fiscal health.

x) Analysis of contingent liabilities of the state.

xi) Subsidies given by the states (other than central subsidies), their costs and benefits, targeting and evaluation.

xii) Outcome evaluation of state finances in the context of recommendations of the 14th and 15th FCs, in particular.

(a) Analysis of the flow of resources from the centre to states through various schemes, the expenditure of states in those schemes, resources of states channelled towards these schemes and the overall impact on development spending of the states.

(b) States' own schemes for different development objectives

xiii) Determination of a sustainable debt roadmap for 2026-31, taking into account tax/ non-tax trend forecasts.

Methodology

After three rounds of discussion among the team members, it was felt that there is a need to merge one or more ToRs and analyse the same in a chapter. The team members have come up with 11 chapters, as seen in Chart 1. ToRs dealt in each chapter are also shown in Chart 1.

The period covered for this study on the evaluation of state finances is 5 to 10 years. As far as the data for analysing each ToR are concerned, this study primarily depended on the secondary data provided by the state government, Reserve Bank of India and so on. Where required, the study team has gotten in touch with departments concerned to obtain additional information. Mostly, the descriptive analysis was carried out in the study, and wherever it was required, advanced techniques such as stochastic frontier analysis, regression, growth rates, etc., were used to analyse the data.

Organization of the Report

This report is presented in 11 chapters (Chart 1). In the first chapter, an introduction to the study is provided with a discussion on the context, ToRs and methodology followed to develop the chapter. In the second chapter, the structure of revenue receipts is provided. This chapter covers an analysis on tax and non-tax revenue, role of GST, tax capacity and tax efforts of the state. In Chapter 3, the trends and patterns of revenue and capital expenditure are discussed. This chapter also deals with comparative analysis of revenue and capital expenditure, measures to enhance allocative and technical efficiency and finally suggestions for improving efficiency in public spending.

In Chapter 4, there is a discussion on the Fiscal Responsibility and Budget Management Act, 2003 and the Karnataka Fiscal Responsibility Act, 2002. This chapter also discusses compliance with the mandates of the FRBM Act and KFRA. After discussing debt to GSDP ratios and the composition of debt over the years, MTFP at the aggregate level as well as of various departments is discussed.

In Chapter 5, transfers to local bodies in Karnataka are discussed. In the first part of the chapter, transfers to urban local bodies are discussed. In this part, an analysis of the Central

Finance Commission (CFC) and State Finance Commission (SFC) grants is covered. In the second part, transfers to rural local bodies are covered. After documenting major decentralization initiatives in the state and characteristics of Panchayati Raj Institutions (PRIs), a discussion on resource allocation to PRIs and devolution of funds through CFC is taken up. There is also a discussion on gaps in service delivery.

Chart 1.1: Chapter scheme

Chapter Number	Chapter title and ToRs dealt in the chapter	Name of the contributing faculty
1	Introduction	D Rajasekhar
2	Revenue Receipts (*ToRsi and ii*)	B P Vani
3	Expenditure patterns and Trends in Karnataka (*ToR iii*)	Thomas Felix
4	Fiscal Performance and Liabilities of Karnataka (*ToRs iv, v and vi*)	Indrajit Bairagya
5	Analysis of transfers to Local Bodies (*ToR vii*)	Kala Sridhar & R Manjula
6	State Public Sector Enterprises in Karnataka: An overview of the financial position (*ToR viii*)	Meenakshi Rajeev and Pranav Nagendran
7	Power sector reforms and fiscal health of Karnataka (*ToR ix*)	Thomas Felix
8	Analysis of Public Debt (*ToR x*)	Indrajit Bairagya & Khalil Shaha
9	Subsidies in Karnataka state: An analysis of costs, benefits, targeting and evaluation (*ToR xi*)	Kala Sridhar & R Manjula
10	Outcome evaluation of 14th and 15th Finance Commission recommendation(*ToRs xii a & b*)	Kala Sridhar & R Manjula
11	Sustainable Debt roadmap (*ToR xiii*)	Khalil Shaha

Chapter 6 analyses the performance of state public sector enterprises in Karnataka. After providing a brief review of literature and historical account of public sector enterprises in the state, performance and financial health of these enterprises for the period 2012 to 2022 is discussed. Financial implications of performance public sector enterprises and issues of hidden costs are also discussed.

Power sector reforms are discussed in Chapter 7. After providing historical context and power sector reforms in the state, a comparative analysis between pre-reform and post-reform fiscal health is taken up in this chapter. In Chapter 8, the issue of public debt is taken up for discussion. In this chapter, the issues of fiscal liabilities, composition of debt and contingent liabilities are analysed.

In Chapter 9, an analysis of costs, benefits, targeting and evaluation of subsidies in Karnataka state is taken up. The chapter also provides a description of the subsidies and subsidy components of programs of the GoK along with beneficiaries, and an analysis of the various subsidy schemes, their expenditure and targets.

In Chapter 10, outcome evaluation of 14th and 15th State Finance recommendation is provided. In Chapter 11, determinants of Sustainable Public Debt/ Fiscal Sustainability are taken up for a discussion.

2. REVENUE RECEIPTS

2.1: Introduction

To sustain economic growth and development, governments require sufficient receipts. Revenues are important at national or subnational level to achieve growth, address the issues of poverty, support climate action and in general achieve sustainable development goals. These achievements are possible if governments raise sufficient revenues. Taxes form an important part of the revenue. Thus, taxation not only contributes to the economy, but it also acts as a key social contact between citizens and the economy. According to the World Bank, the desirable share of tax revenue to gross domestic product should be above 15% to ensure economic growth and alleviate poverty. As of 22 July 2024, India's tax to GDP ratio was 11.6%. However, India's overall tax, including state taxes, to GDP is around 18%, which is much above the stipulated norm. This chapter addresses the structure and trends in revenue generation, highlights the role of GST in revenue generation and examines the taxable capacity of the state. It also provides suggestions for improvement in the taxable capacity for Karnataka.

2.2: Structure of Receipts in Karnataka

Table 2.1 presents total revenue receipts and the relative share of its various components in total revenue receipts for the years 2018-19 to 2022-23. The main components of total revenue receipts are tax revenues, nontax revenues and capital receipts.

Tax revenues consist of own tax revenues and transfer of taxes from the central government. Own tax revenue forms the major component in the total receipts. During 2022-23, more than half i.e., 52.4% constituted their own tax in total receipts. During the COVID pandemic, this share, i.e., the share of own tax in total receipts was reduced to just 40.2%, and subsequently, the share increased considerably. Within the own tax, the main source is from state GST. State GST constitutes 41% of its own tax revenue during 2022-23. The next important source of own revenue is state excise. State excise is the second major source of revenue to the state, and it constitutes nearly 22% of its total tax revenue. The next three types of taxes that contribute around 15%, 12% and 6% are taxes on sales, trade etc.., stamps & registration fees and taxes on vehicles, respectively. All the remaining taxes are minor taxes, and all put together constitute only 3.7% of the own tax.

Transfers from the central taxes constituted nearly 12.6% of the total receipts during 2022-23. During 2018-19, transfer of central taxes constituted 17.3% and during the COVID year only 9% of the total receipts was transferred from central taxes. Central GST, corporate taxes and income tax constitute nearly 85% of the total transfer from central taxes.

The share of nontax revenue in total receipts was only 5.1% during 2022-23. This share was as low as just 3.3% during 2018-19 and marginally increased over the period and stands at 5.1%. More than 60% of nontax revenue is from economic services and the rest like interests and dividends, general services and social services contribute marginally to the total nontax revenue.

Grants to the state come through many channels, i.e. (a) Centrally sponsored schemes, (b) Finance commission grant and (c) Other transfers/grants to the state with legislature. Nearly 13.5% of the receipts were obtained from grants during 2022-23. This share ranged between 10.8% to 13.5%. Centrally sponsored schemes form the single main component of the grant, constituting nearly 40% of the total grant.

Another important component of receipts is capital receipts which consist of borrowing. This includes internal loans, which constitute the main component of capital receipts. Nearly 90% is from internal loans. The second important loan is from central government which was very high during the COVID period and has declined drastically in the latest year. During the COVID year i.e., 2020-21 out of the total receipts, revenue receipts are only 65% and loans are around 35%. Due to its low tax collection, the state borrowed heavily from internal sources and from the central government. During subsequent years, borrowing has come down drastically.

Table 2.1: Share in total receipts (revenue+capital) (in%)

		2018-19	2019-20	2020-21	2021-22	2022-23
I	**Tax Revenues**					
I.1	**Own Tax Revenue**					
	State Goods and Service Tax	20.3	18.6	15.6	18.1	22.4
	State Excise	9.6	9.5	9.7	9.5	10.9
	Taxes on Sales, Trade, etc.	6.8	7.3	6.6	7.0	7.0
	Stamps & Registration Fees	5.2	5.0	4.4	5.1	6.5
	Taxes on Vehicles	3.2	3.0	2.3	2.5	3.9
	All Other Taxes (*)	1.7	1.8	1.6	1.5	1.8
	Total Own Tax Revenue	**46.8**	**45.3**	**40.2**	**43.7**	**52.4**
I.ii	**Transfer from Central Taxes**	**17.3**	**13.7**	**9.0**	**12.0**	**12.6**
II	**Nontax Revenue**					
II.i	**Own Nontax Revenue**					
	Interest Receipt, Dividends and Profits	0.6	0.4	0.4	0.6	0.7
	General Services	0.5	0.5	0.5	0.6	0.9
	Social Services	0.3	0.4	0.3	0.4	0.3
	Economic Services	1.9	2.0	2.0	2.7	3.3
	Total Nontax Revenue	**3.3**	**3.4**	**3.3**	**4.3**	**5.1**
	Total Tax Revenues	**67.4**	**62.3**	**52.4**	**60.0**	**70.1**
II.ii	**Grants**					
	Centrally Sponsored Schemes	5.0	5.4	4.1	4.6	4.2
	Finance Commission Grants	1.6	2.1	2.3	2.3	1.3
	Other Transfers/Grants to State with Legislature	5.7	7.8	6.1	4.0	7.9
	Total Grants	**12.3**	**15.2**	**12.5**	**10.8**	**13.5**
I + II	**Total Revenue Receipts**	**79.7**	**77.6**	**64.9**	**70.8**	**83.6**
III	**Capital Receipts**					
	Internal Loans	19.6	22.0	29.1	21.9	14.3
	Loans and Advances from Central Government	0.7	0.3	5.8	7.3	1.9
	Loans and Advances by State Government (Recoveries)	0.0	0.1	0.1	0.0	0.2
	Miscellaneous Capital Receipts	0.0	0.0	0.0	0.0	0.0
	Total Capital Receipts	**20.3**	**22.4**	**35.1**	**29.2**	**16.4**
I + II +III	**Total Receipts (Revenue + Capital)**	100.0	100.0	100.0	100.0	100.0

Source: Authors' calculation based on the statistics from CAG reports

Table 2.2 presents the aggregate picture of the receipts of Karnataka. The total receipt rose from Rs. 2.1 lakh crore to Rs. 2.7 lakh crore. The annual average growth is around 7.4% over 2018-19 to 2022-23. Own tax revenue increased from Rs. 0.97 lakh crore to Rs. 1.43 lakh crore with an average growth rate of 11% over five years. The COVID year showed a negative growth of 5.2%, and in the subsequent years, grew at 24.4% and 19%, respectively, in current prices. Transfers of taxes from central government fluctuated over the period without any trend pattern. Own nontax revenue increased at an average rate of 20.9% over the five years. Grants witnessed a fall during the COVID year and the subsequent year. Further, it rose at the rate of 23% between 2021-22 and 2022-23. Borrowing was very high during 2020-21 and 2021-22 and fell drastically in the later period.

Table 2.2: Aggregate Picture of Receipts in Karnataka

Actuals in Rs. crore	2018-19	2019-20	2020-21	2021-22	2022-23
Own Tax Revenue	96830	102363	97053	120740	143702
Transfer from Central Taxes	35895	30919	21694	33283	34596
Own Nontax Revenue	6773	7681	7894	11777	13914
Total Tax Revenues	139498	140963	126641	165800	192212
Grants	25481	34480	30076	29962	36868
Total Revenue Receipts	164979	175443	156717	195762	229080
Capital Receipts	41940	50707	84843	80774	45030
Total Receipts (Revenue + Capital)	206919	226150	241560	276536	274110
Shares (in %)					
Own Tax Revenue	46.8	45.3	40.2	43.7	52.4
Transfer from Central Taxes	17.3	13.7	9.0	12.0	12.6
Own Nontax Revenue	3.3	3.4	3.3	4.3	5.1
Total Tax Revenues	67.4	62.3	52.4	60.0	70.1
Grants	12.3	15.2	12.5	10.8	13.5
Total Revenue Receipts	79.7	77.6	64.9	70.8	83.6
Capital Receipts	20.3	22.4	35.1	29.2	16.4
Total Receipts (Revenue + Capital)	100.0	100.0	100.0	100.0	100.0
Growth Rates (in %)					
	2018-19 to 2019-20	2019-20 to 2020-21	2020-21 to 2021-22	2021-22 to 2022-23	Average
Own Tax Revenue	5.7	-5.2	24.4	19.0	11.0
Transfer from Central Taxes	-13.9	-29.8	53.4	3.9	3.4
Own Nontax Revenue	13.4	2.8	49.2	18.1	20.9
Total Tax Revenues	1.1	-10.2	30.9	15.9	9.4
Grants	35.3	-12.8	-0.4	23.0	11.3
Total Revenue Receipts	6.3	-10.7	24.9	17.0	9.4
Capital Receipts	20.9	67.3	-4.8	-44.3	9.8
Total Receipts(Revenue + capital)	9.3	6.8	14.5	-0.9	7.4

Source: Authors' calculation based on the statistics from CAG reports

2.3: Share of Revenue Resources in GSDP

There are several reasons for changes in taxes. It is also difficult to separate the effects of tax changes from the implications of these underlying variables because the factors that lead to tax changes are frequently linked to other economic trends. With an expanding economy, a well-designed tax system will inevitably generate higher revenues. Table 2.3 presents the per capita tax and tax to GDP ratio for the period 2011-12 to 2023-24. During the period of analysis, per capita state's own tax revenue increased till 2014-15 but witnessed a fall during 2015-16 and 2016-17 though the economy grew at 11.1% and 13.3%, respectively during those years. Introduction of GST impacted tax collection during 2017-18 and collection stabilised during 2018-19 and 2019-20; COVID impacted the revenue in the subsequent year and a gradual increase is noticed in the subsequent years in both state's own tax and tax revenue. During 2023-24, per capita total revenue declined by about 5% and this is mainly attributed to the decline in the grants-in-aid and contributions by more than 50% i.e., grant-in-aid and contribution declined from Rs. 36,868 crore from 2022-23 to Rs. 15528 crore during 2023-24. On similar lines, the state's own tax to GSDP ratio declined from 7.7 to 6.4 from 2011-12 to 2023-24. Decline during 2015-16 and 2016-17 is mainly due to proportionately higher growth in GSDP compared to tax collection; in 2017-18, introduction of GST led to lower tax collection, leading to further decline. Further, due to impact of the COVID pandemic, a gradual increase is seen in the subsequent years. Thus, the COVID pandemic, implementation of GST, and increased growth of GSDP are the visible causes of the apparent changes in per capita tax collection and tax to GDP ratio.

Table 2.3: Per capita Tax and Tax to GSDP Ratio

	Tax to GSDP ratio			Per Capita Tax Revenue (in Rs. at 2011-12 prices)		
	State's Own Tax Revenue	Total Tax Revenue	Total Revenue	State's Own Tax Revenue	Total Tax Revenue	Total Revenue
2011-12	7.7	9.5	11.5	7559	9361	11354
2012-13	7.7	9.5	11.2	8151	10069	11854
2013-14	7.7	9.4	11.0	8572	10462	12260
2014-15	7.7	9.3	11.4	8948	10816	13277
2015-16	7.2	9.5	11.4	8578	11301	13491
2016-17	6.9	9.3	11.0	8225	11077	13208
2017-18	6.5	8.9	11.0	7959	10860	13428
2018-19	6.5	9.0	11.2	8246	11303	14050
2019-20	6.3	8.2	10.9	8150	10612	13969
2020-21	5.9	7.2	9.6	7851	9607	12678
2021-22	6.1	7.7	9.8	8734	11142	14161
2022-23	6.2	7.7	9.9	9346	11596	14899
2023-24	6.4	8.0	9.1	9972	12484	14231

Source: Authors' calculations using CGS data

Further, when comparing per capita revenue across states (see Table 2.4), Karnataka stands third in terms of both state-owned tax and total tax collection, while the state ranks fourth in terms of per capita total revenue. However, in terms of the ratio of total taxes to gross state product (GSDP) and total revenue to GSDP, Karnataka is third from the bottom. Haryana and Gujarat are the two states that lie beneath Karnataka. While Bihar is placed last out of 19 major states in terms of per capita total revenue and per capita tax, it ranks first in terms of the ratio of taxes to gross domestic product. States such as Madhya Pradesh, Uttar Pradesh, Chhattisgarh, Jharkhand, Assam, and Bihar received more than twice as much through union taxes and duties as they did in their own taxes. The primary causes of these differences in the rankings of per capita tax/revenue and tax/revenue to GSDP ratio are the high proportion of transfers from unions as their share of taxes and charges and the low base with respect to state domestic product, which make it challenging to use the tax to GSDP ratio as a measure of taxable capacity. In-depth information would be included in the following paragraphs.

Table 2.4: Per capita Tax and Tax to GSDP Ratio across States during 2022-23.

	Per capita Tax (in Rs.)			Tax to GDP ratio		
	Own tax	Total tax	Total Revenue	Own tax	Total tax	Total Revenue
Andhra Pradesh	14700(9)	21892(9)	29723(9)	5.99(13)	8.91(13)	12.10(14)
Assam	6888(17)	15236(16)	25228(13)	5.12(19)	11.32(7)	18.74(5)
Bihar	3494(19)	11074(19)	13706(19)	5.90(14)	18.69(1)	23.14(1)
Chhattisgarh	11027(11)	21800(10)	31254(8)	7.13(4)	14.10(3)	20.21(2)
Gujarat	17542(7)	22185(8)	28027(12)	5.66(16)	7.16(19)	9.05(19)
Haryana	20947(4)	24399(6)	29674(10)	6.40(7)	7.45(18)	9.06(18)
Jharkhand	6398(18)	14397(18)	20440(16)	6.02(12)	13.54(4)	19.23(4)
Karnataka	21284(3)	26409(3)	33930(4)	6.33(8)	7.85(17)	10.09(17)
Kerala	20150(5)	25263(4)	37161(3)	7.03(5)	8.81(14)	12.97(10)
Madhya Pradesh	8428(15)	17081(14)	23678(15)	5.83(15)	11.81(5)	16.37(7)
Maharashtra	22026(2)	26789(2)	32202(6)	7.61(3)	9.26(11)	11.13(15)
Orissa	10086(13)	19400(11)	32599(5)	6.13(11)	11.79(6)	19.81(3)
Punjab	13783(10)	19383(12)	28587(11)	6.20(10)	8.72(15)	12.86(11)
Rajasthan	10829(12)	17924(13)	24173(14)	6.43(6)	10.65(8)	14.36(9)

Tamil Nadu	19569(6)	24615(5)	31753(7)	6.28(9)	7.89(16)	10.18(16)
Telangana	28145(1)	33321(1)	41935(2)	8.15(1)	9.65(10)	12.15(13)
Uttar Pradesh	7417(16)	14650(17)	17778(18)	7.71(2)	15.23(2)	18.48(6)
Uttaranchal	14760(8)	23922(7)	42360(1)	5.63(17)	9.12(12)	16.16(8)
West Bengal	8455(14)	15679(15)	19775(17)	5.46(18)	10.12(9)	12.77(12)

Source: Authors' calculation using CGS and data from CSO.

2.4: Impact of GST on Tax revenues

Goods and Services Tax (GST) was introduced in India on 1 July 2017. According to the GST council, 'GST is a unified tax system that replaced multiple indirect taxes levied by both the central and state governments. Under GST, both the central and state governments share the authority to levy and collect taxes on goods and services. This has led to greater harmonisation and uniformity in the tax structure across states, promoting economic integration'. India has successfully completed 7 years on 17 July 2024. GST follows a dual structure, comprising the central GST (CGST) levied by the central government and the state GST (SGST) levied by the state governments. In the case of interstate transactions, integrated GST (IGST) is applicable, which is collected by the central government and apportioned to the respective state. Import of goods or services would be treated as interstate supplies and would be subject to IGST in addition to the applicable customs duties.

State GST forms an important component of states own tax revenue. The share of SGST in own tax revenue is around 41 to 43% since its introduction except during 2020-21 where the share went down by about 2%age points. In real prices, in the initial years of introduction of GST, there was a decline in the state GST collection; but subsequently, after the COVID pandemic, state GST collection witnessed a growth rate of around 16%. However, with respect to central GST transfer, though small decline is seen during COVID years, the curve is flatter (Figure 2.1).

Tax buoyancy of SGST over 2018-19 to 2023-24 is 1.11, implying its responsiveness to economy. Though SGST and CGST are tax buoyant, it is important to understand its impact on the tax revenue and total revenue of the state.

Figure 2.1: Trend in SGST and CGST (2011-12 prices)

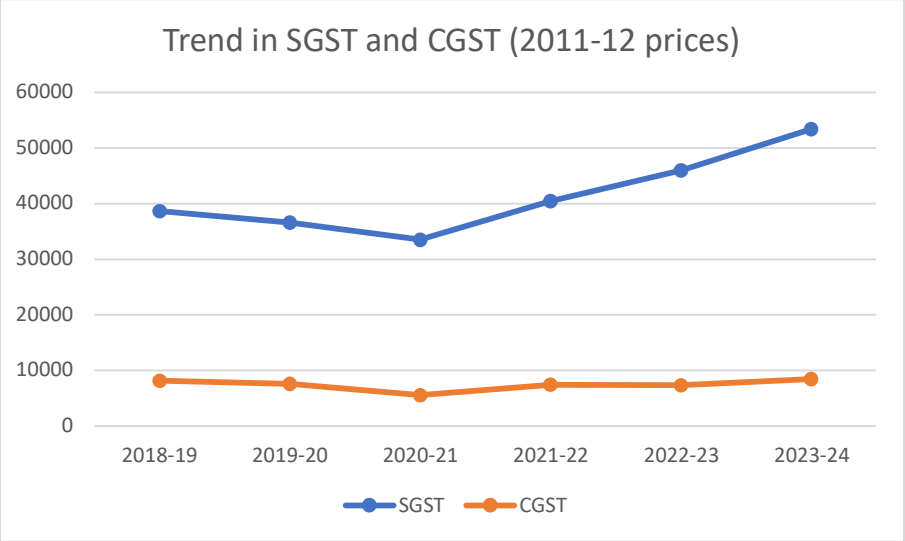


Figure 2.2 presents details of own tax and total tax revenue over a decade in real (2011-12) prices. As can be seen from the graph, own tax revenue curve looks flatter without much variation, whereas total tax revenue curve indicates a fall during the COVID period. Graph does not indicate any clear impact of GST on tax revenues. To ascertain the statistical significance of GST on the own tax and total tax revenue, the following regression equation is estimated which accounts for trend, intercept dummy, slope dummy and COVID year.

$$ROWNTAX_t = \alpha + \beta_1 t + \beta_2 GST_{dummy} + \beta_3(t \times GST_{dummy}) + \beta_4 COVID + \varepsilon_t$$

$$RTOTTAX_t = \alpha + \beta_1 t + \beta_2 GST_{dummy} + \beta_3(t \times GST_{dummy}) + \beta_4 COVID + \varepsilon_t$$

Though GST was introduced in July 2017, GST_{dummy} takes the value of 1 from 2018-19, since almost till December 2017, GST collection was negligible. Index variable COVID takes the value of zero for all the years and 1 only for 2020-21. Durbin Watson statistics did not indicate presence of auto correlation.

Figure 2.2: Trends in Real Own Tax and Total Tax Revenue

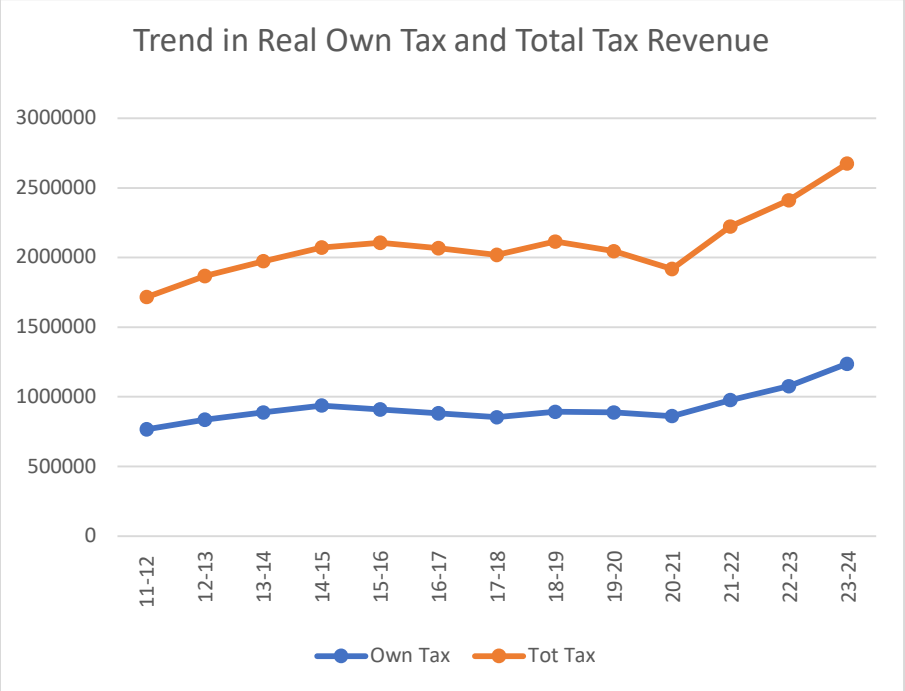


Table 2.5: Regression results

	Own Tax		Total Tax	
	Coefficient	t-stat	Coefficient	t-stat
Time	-1.7E-05	-0.1	3.8E-03	4.0
GST_Dummy	-6.3E-03	-1.5	-1.6E-02	-1.2
Time * GST_Dummy	8.1E-04	4.0	7.7E-04	0.5
COVID	-9.2E-04	-1.3	-2.0E-02	-3.6
Constant	6.3E-03	11.4	9.5E-02	22.6
R^2	0.875		0.899	
DW	1.74		2.27	

Source: Authors' calculations

As can be seen from Table 2.5, slope dummy co-efficient is positive and significant with respect to own tax revenue, implying a positive increase in growth after the introduction of GST,even when accounting for the COVID year. The overall trend is not significant. The impact of COVID is also not felt with respect to own tax revenue. Though SGST showed a significant fall during the COVID period, impact is not felt much in the own tax revenue since excise duty has compensated for the shortfall in this period. With respect to the total tax, the impact of COVID is negative and significant and GST dummy has not made any significant impact on the total tax revenue.

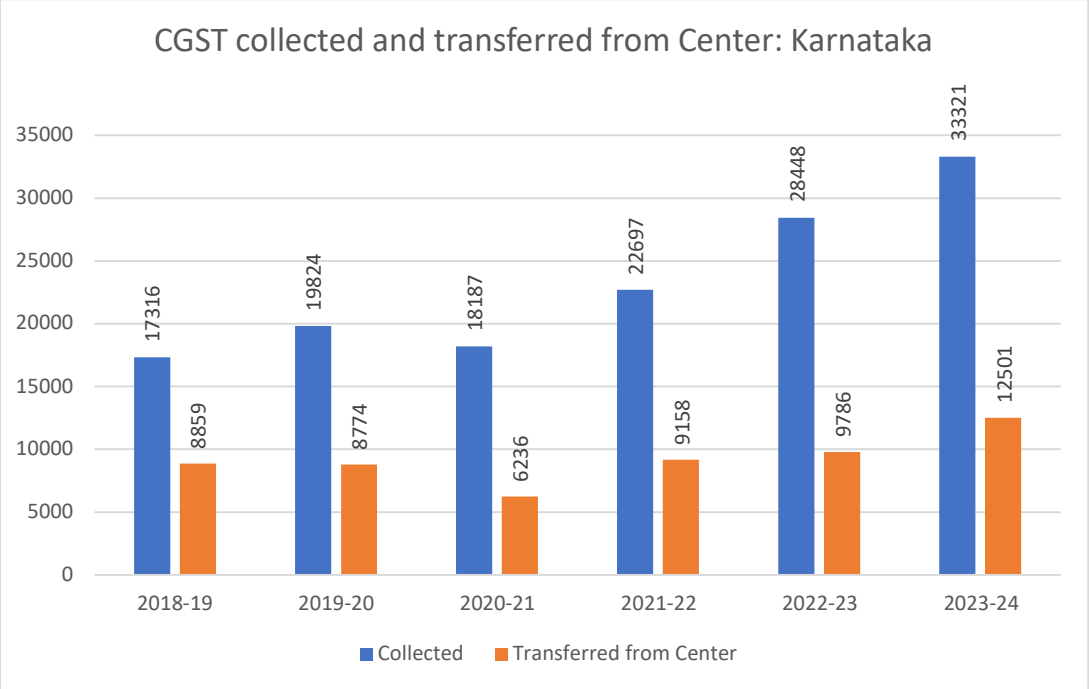
Where does Karnataka stand in terms of GST collection? Table 2.6 shows that Karnataka stands third in terms of per capita total GST collection. Wide variation is seen with respect to the per capita total GST collection, which ranged from as low as Rs. 1313 in Bihar to Rs. 28834 in Haryana during 2022-23. A similar pattern is seen for the other years as well. In terms of total collection, Karnataka stands second and Maharashtra stands first. Karnataka generates Rs. 1.23 lakh crore of GST, which clearly indicates the importance of the state in terms of its contribution to the country. Karnataka collects Rs. 28,448 crore towards central GST but only Rs. 9786 crore is transferred back to the state, which is only 1/3 of what is collected. In the initial year, i.e., during 2018-19, close to half of what was collected was transferred to the state as part of the state's share of union taxes and duties.However, over the years, the share declined and during 2022-23, only 1/3 was received, and subsequently, a marginal increase, about 3%, is noticed during 2023-24(see figure 2.3).

Table 2.6: State-wise GST collection for 2022-23

(Figures in Rs. crores of)

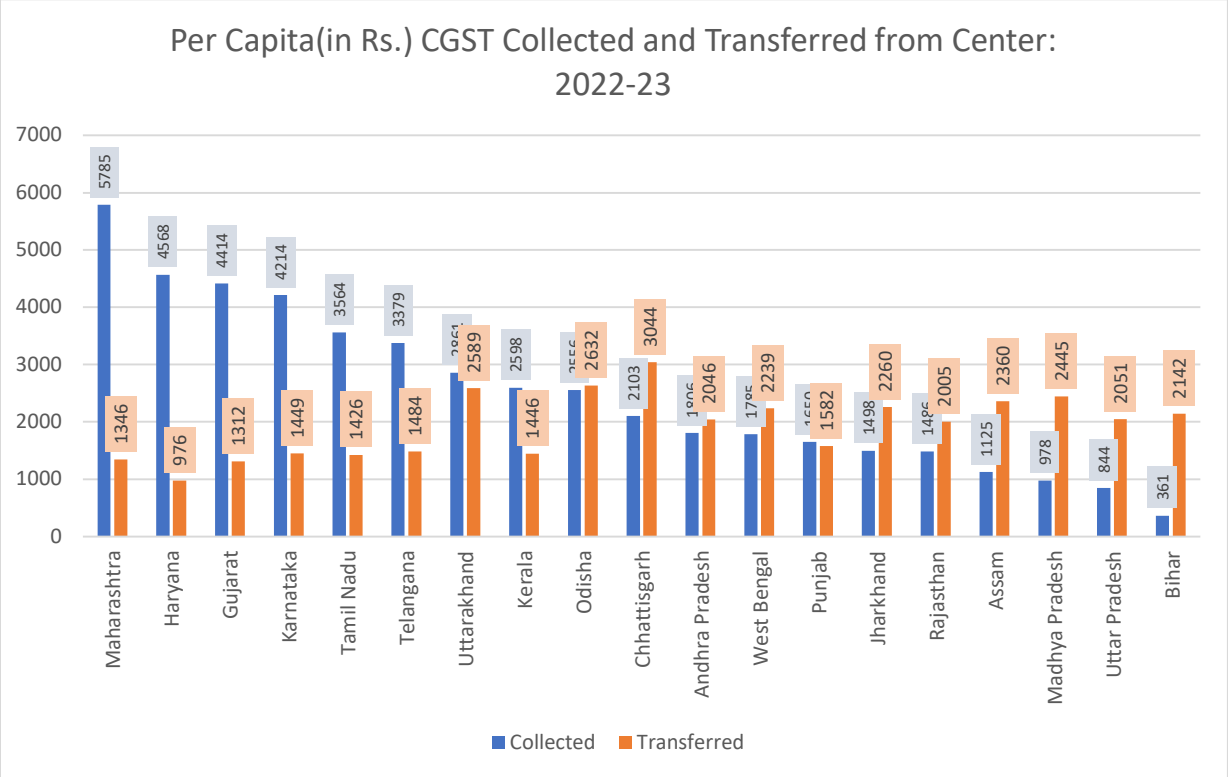
Financial Year 2022-23	CGST	SGST	IGST	CESS	TOTAL	Population in '000	Per capita total collection	Rank
Andhra Pradesh	9585	12542	14312	3794	40232	53079	7580	12
Assam	4001	5180	3901	628	13710	35573	3854	17
Bihar	4553	7543	2446	2005	16548	125991	1313	19
Chhattisgarh	6318	7489	11121	7041	31968	30037	10643	9
Gujarat	31405	37802	38348	6667	114221	71149	16054	4
Haryana	13730	18143	48765	6031	86668	30058	28834	1
Jharkhand	5880	7813	12554	5772	32019	39259	8156	10
Karnataka	28448	35429	45602	13342	122822	67515	18192	3
Kerala	9279	12311	5707	75	27371	35716	7664	11
Madhya Pradesh	8428	10937	9862	7006	36232	86149	4206	16
Maharashtra	72880	85532	92027	19907	270346	125979	21460	2
Odisha	11799	14211	14558	8874	49442	46156	10712	8
Punjab	5058	7660	7891	340	20949	30649	6835	13
Rajasthan	11984	15636	16337	1501	45458	80662	5636	15
Tamil Nadu	27361	36353	32612	8051	104377	76765	13597	7
Telangana	12842	16877	15632	6481	51831	37999	13640	6
Uttar Pradesh	19809	27366	26559	14236	87970	234692	3748	18
Uttarakhand	3315	4787	8619	124	16845	11587	14538	5
West Bengal	17655	21514	14639	4251	58060	98884	5871	14

Figure 2.3: Trend in Total CGST Collected and Transferred from the Centre: Karnataka



Note: Figures in Rs. crore.

Figure 2.4: Per capita CGST Collected and Transferred from the Centre: 2022-23



Although Karnataka collects extensively (ranks third in terms of both per capita and total collection) all the four components of GST viz., SGST, CGST, ICST and CESS, impact of the collection on tax revenue is not statistically established. Reasons could be that (i) SGST contributes only 41 to 43% in the total own tax collection; (ii) though it is 7 years since its introduction, COVID has hampered its performance; (iii) GST is still undergoing several reforms and (iv) as per experts, GST was anyway expected to be revenue neutral in the initial years; over time, higher compliance from self-policing may result in significant productivity. Thus, may be too early to understand the impact on revenue.

2.5: Taxable capacity and Tax Effort

This section deals with the concept and empirical estimation of states' taxable capacity and tax effort. The findings may provide a starting point for tax policy discussion and design. In literature, tax collection as a ratio of gross domestic products is used to assess the level of tax collection effort both at the national and sub-national levels. Measurement and interpretation of this ratio is simple and straightforward, which acts as a basic index to compare across states. This index is, however, meaningful for homogenous economies. For homogenous economies, one does not expect much variation in the gross domestic product; hence, tax effort/tax capacity is directly related to the tax collected. When economies are not uniform, it would be meaningful to club the economies into groups based on income and can be compared across groups.

As explained in the previous section, in the Indian context, total tax at the state level is sum of own taxes and share of taxes received from the centre. The major components of the taxes received from the centre are central GST, corporation tax and income tax. With respect to CGST, Karnataka receives only 1/3 of what is collected (see figure 2.3), and it is on similar lines for the other two taxes i.e., the state receives much lower than what is collected though the actual share is not known. Thus, the numerator of tax to GDP ratio of total taxes does not speak about the taxable capacity of the state. Some of the low-income states, not only get higher share from the centre than their capacity of collection, most of the time double than what is collected, their GSDP is also low, leading to high tax to GSDP ratio. Figure 2.5 presents two types of graphs for total tax revenue and own tax revenue: (i) relation between per capita GSDP and tax GDP ratio and (ii) variation in the tax to GSDP ratio for different groups of economies viz., low income, middle income and high-income

economies. In literature, generally, a positive relation is observed between per capita income and tax revenues. High income economies usually go with high tax revenue and low income economies with low tax revenue. However, in the case of India across the states, the relationship is opposite for total tax revenue and not so significant relation with respect to own tax revenue.

For the high-income states, the total tax-GDP ratio was 8.21 and went up to 10.24 in the case of middle-income states and further to 13.05 with respect to low income states. Further, it is also seen that variation is high among low-income states and low among high income states. On the contrary, with respect to own tax revenue, low income states had relatively low tax to GSDP ratio (6.07) compared to middle income states(6.35) and high income states(6.74) though the difference is marginal. General assumptions that apply at country level i.e., 'the demand for public goods and services may rise faster in higher income countries, where urbanisation tends to rise at a faster speed compared to the one in lower income countries; and it is usually easier to collect taxes in urban areas with higher concentration of the formal sector (Bird 2007)' does not hold at subnational level for a country with federal structure like India.

Figure 2.5: Relation between Tax revenue and per capita income: 2022-23

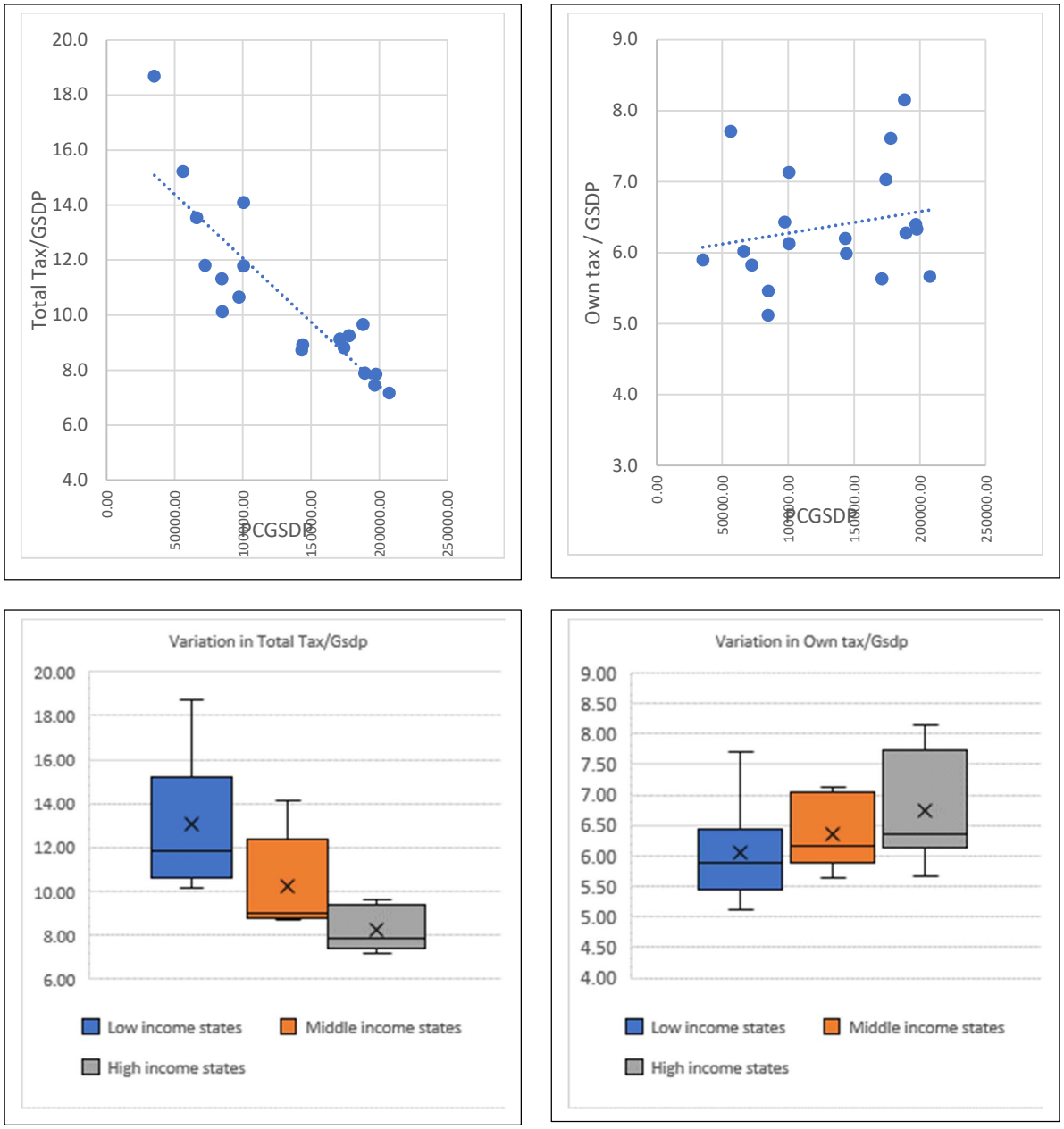


Table 2.7 presents Karnataka's total and own tax effort, per capita tax revenues and per capita income for the two years, 2018-19 and 2022-23. During 2018-19, both in terms of per capita tax revenue and per capita income, Karnataka is one among the top ranked states and the same pattern holds even for 2022-23. In terms of per capita income during 2018-19, Karnataka stands in fourth position, and during 2022-23, it moved to second position. Even in terms of tax revenues, both own and total tax, the state stands in thesecond or third position. However, when it comes to total tax effort measured as tax to GSDP ratio, the

state stands in the 13th position during 2018-19 and went down to the 17th position during 2022-23. With respect to own tax effort, Karnataka was in 6th place during 2018-19 and went down to 8th place during 2022-23. States like Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, Orissa, Rajasthan, etc., which are generally low performing states in terms of per capita income and per capita revenue generations, are found among the top few ranks when it comes to tax-effort. This raises the question if tax to GDP ratio can be treated as good measure of tax effort. Though the ratio with respect to own tax revenue effort is relatively better, it still has problems with some states.

Table 2.7: Tax effort, Per capita Tax and Per capita income:

		2018-19					2022-23				
Sl. No.	STATES	Total Tax_effort	Own Tax_effort	Per capita Tax Revenue (in Rs.)	Per capita Own Tax Revenue(in Rs.)	PCGSDP(in Rs.)	Tax_effort	Own Tax_effort	Per capita Tax Revenue (in Rs.)	Per capita Own Tax Revenue(in Rs.)	PCGSDP(in Rs.)
1	Andhra Pradesh	10.3(10)	6.6(4)	17430(8)	11138(8)	122049(10)	8.9(13)	6.0(12)	21892(9)	14699(9)	144065(9)
2	Assam	13.3(4)	5.1(17)	12051(16)	4665(17)	67680(15)	11.3(7)	5.1(19)	15235(16)	6888(17)	84558(15)
3	Bihar	19.5(1)	5.6(14)	8673(19)	2475(19)	32108(19)	18.7(1)	5.9(14)	11074(19)	3493(19)	35118(19)
4	Chhattisgarh	13.7(3)	6.6(4)	15714(9)	7501(11)	84799(12)	14.1(3)	7.1(4)	21799(10)	11027(11)	100582(12)
5	Gujarat	6.9(19)	5.4(15)	15336(10)	11858(7)	177141(2)	7.2(19)	5.7(16)	22184(8)	17541(7)	207399(1)
6	Haryana	7.3(18)	6.1(11)	17835(7)	14939(3)	188965(1)	7.5(18)	6.4(6)	24399(6)	20946(4)	196782(3)
7	Jharkhand	12.6(7)	4.8(19)	10398(18)	3967(18)	61666(17)	13.5(4)	6.0(12)	14397(18)	6398(18)	66175(17)
8	Karnataka	9(13)	6.5(6)	20239(2)	14765(4)	165462(4)	7.9(17)	6.3(8)	26408(3)	21284(3)	197741(2)
9	Kerala	8.8(14)	6.4(8)	19881(3)	14449(5)	159878(7)	8.8(14)	7.0(5)	25262(4)	20150(5)	174213(7)
10	Madhya Pradesh	13.1(6)	6.1(11)	13255(13)	6223(14)	66450(16)	11.8(5)	5.8(15)	17081(14)	8428(15)	72305(16)
11	Maharashtra	9.1(12)	7.4(3)	18861(4)	15404(2)	160866(6)	9.3(11)	7.6(3)	26789(2)	22026(2)	177902(6)
12	Orissa	13.2(5)	6.1(11)	14639(12)	6758(13)	86208(11)	11.8(6)	6.1(11)	19400(11)	10086(13)	100652(11)
13	Punjab	8.5(16)	6.2(10)	14644(11)	10610(10)	129660(9)	8.7(15)	6.2(10)	19383(12)	13782(10)	143247(10)
14	Rajasthan	10.9(8)	6.3(9)	12913(14)	7467(12)	83712(13)	10.6(8)	6.4(6)	17923(13)	10828(12)	97276(13)
15	Tamil Nadu	8.4(17)	6.5(6)	18024(6)	13969(6)	159457(8)	7.9(16)	6.3(8)	24614(5)	19569(6)	189320(4)
16	Telangana	9.7(11)	7.5(2)	22439(1)	17435(1)	164020(5)	9.7(10)	8.2(1)	33321(1)	28145(1)	188204(5)
17	Uttar Pradesh	16.2(2)	7.6(1)	11481(17)	5368(16)	48941(18)	15.2(2)	7.7(2)	14650(17)	7416(16)	56159(18)
18	Uttarakhand	8.8(15)	5.3(16)	18216(5)	10992(9)	167823(3)	9.1(12)	5.6(17)	23922(7)	14759(8)	171175(8)
19	West Bengal	10.6(9)	5.1(17)	12054(15)	5770(15)	76450(14)	10.1(9)	5.5(18)	15679(15)	8455(14)	84928(14)

Source: Authors' computation based on the data obtained from CAG reports and CSO.

Although actual tax collection to GDP ratio as a measure of tax effort has several issues regarding low base, etc., still it is commonly used to compare over time for a given economy and/or between economies with similar economic structure and income levels (Musgrave 1987).

Taxable capacity is the potential tax an economy can generate given its economic, social, administrative, demographic and other characteristics. There are four approaches that are widely used in literature to estimate the tax capacity: (i) income approach (ii) representative

tax system (RTS), (iii) regression approach, and a more recent approach (iv) the stochastic frontier approach. The advantages and disadvantages of all the methods are explained in several papers and hence are not dealt here.

Stochastic frontier analysis (SFA) is shown to be the most flexible approach to measure tax capacity and efficiency. SFA allows one to model both tax capacity and efficiency simultaneously. Several researchers have applied it to compare across countries and in India across states. An important cross-country analysis is byFenochietto and Pessino (2010, 2013), who estimated tax capacity initially with 96 countries using the data from 1991 to 2006, and then extended the sample to 113 countries over a period of 22 years i.e., from 1991 to 2012 by distinguishing the countries either into OECD and non-OECD or resource dependent countries. The important finding of their study is that corruption shifts mean inefficiency and inflation contributesto the decay in inefficiency.

Martinez Vazquez, and Vulovic (2013) explored the economic rationale behind tax effort, comparing traditional regression and SFA approaches across 94 countries from 1970 to 2009. They concluded that a country's level of public expenditure, age dependency, agriculture and construction share in GDP value-added, globalisation and quality of governance provide additional insights into quantifying tax effort (in terms of share of the frontier) effectively along with per capita GDP.

Cyan, Martinez-Vazquez and Vulovic's (2013) study used both traditional methods and SFA approach in estimating tax effort based on 94 countries for the period 1970 to 2009. Their study showed that econometric model did not play an important role in understanding the determinants. However, the study argued that SFA model is better since analysing inefficiencies is important and alsothe model helps in explaining the determinants of inefficiencies.

Langford and Ohlenburg (2015) examined the tax capacity and effort of 85 non-resource-rich countries during a 27-year period (from 1984 to 2010). The study results suggest that the level of tax revenues collected by low and lower-middle income countries is on average between 50% and 60% of their potential, compared to upper-middle and high-income countries, where the effort is closer to 70% on average.

Martínez, Arzoz and Arregui (2022) analysed 28 countries over the period 2004-14 to estimate technical efficiency using data envelop analysis (DEA) technique. Their results show that degree of fiscal decentralization has a positive and significant impact on the technical efficiency of tax collection. It also reveals that role of tax structure choices and the ratio of indirect to direct taxes, are significant factors that affect tax collection efficiency.

In the Indian context, studies have also explored the tax capacity across states using SFA approach though majority of the studies applied either Regression or RTS approach. Jha et al.(1999) were the first to measure tax efficiency across 15 major Indian states from 1980-81 to 1992-93 with a narrow coverage of variables. Garg et al.(2014) measured tax capacity and tax effort of 14 major states from 1992-93 to 2010-11. Their study indicated large variation in tax effort across states and they were more efficient over time. It also indicated that 'enactment of Fiscal Responsibility and Budget Management Act seems to have improved the tax efficiency, which has been further strengthened by the better law and order inside states'. Karnik and Raju (2015) analysed the tax effort of 17 Indian states using SFA model for the period 2000-01 to 2010-11. They studied more disaggregated taxes viz., stamp duty and registration fees, state sales tax, state excise duty, and motor vehicle tax and total own tax revenue. Their study points out the large budgetary room that states potentially enjoy for the purpose of raising revenues from existing taxes. Mukherjee (2017) looks into comprehensive VAT, instead of own tax revenue or sales tax as other researchers have focused, for estimation of capacity and efficiency of VAT across all general category states for the period 2001-14. Their study finds that VAT collection can be improved by strengthening the tax administration. Rao and Azharuddin (2024) analyse tax efficiency in revenue mobilisation for all the Indian states using the data from 2011-12 to 2022-23. Their study uses both fixed effect model and SFA to understand the indicators to address efficiency in tax collection. They argue that tax revenue collection of states could depend not only on the level of GSDP of the state, but also on a number of other structural parameters and propose an alternative method for forecasting tax revenues.

Given the advantage of SFA approach to understand taxable capacity, in the current study, a modest effort is made to understand the tax capacity of major states using data from 2018-19 to 2022-23 as per the guidelines of the Finance Commission.

SFA developed by Battese and Coelli (1995) differs in terms of estimation of error term compared to the regression model. The disadvantage of the regression approach is that the error term fully represents the inefficiency, which is overcome by SFA.

The stochastic tax frontier for the panel dataset is defined as

$$Y_{it} = \beta X_{it} + v_{it} - u_{it}$$

where Y_{it} is the own tax to GSDP ratio for i-th state and t-thtime period. i varies from 1 to 19 states and t from 2018-19 to 2022-23. X_{it} is the vector of either direct input variables or variables, which could influence potential tax capacity. β is the vector of parameters. The error term u_{it} is the inefficiency term, which is non-negative and interpreted as lack of tax effort. v_{it} is the statistical noise, which follows normal distribution with mean μ and variance σ^2 .u_{it} and v_{it} are statistically independent. Technical efficiency is the ratio of actual to potential output (Kumbhaker& Knox Lovell, 2000): in this study, tax effort is the ratio of actual tax revenue to estimated tax capacity and is expected to be between zero and one.

Variables and data:

The dependent variable considered here is own tax revenue expressed as a ratio to GSDP in ln form.Data is collected from RBI state finances and National Accounts Statistics. Explanatory variables used to capture the variation in tax effort are per capita GSDP in real prices in log form demographic variables like dependency ratio, literacy rate, and labour force participation rate. To capture the impact of transfers from the central government on the tax effort by the states, ratio of grants to revenue, ratio of CGST transferred to collected, ratio of central taxes transferred to revenue were also considered. As components of the GSDP also play a role in tax collection, combinations of share of agriculture, share of mining, share of manufacturing, share of services in GSDP, share of mining in agriculture, share of manufacturing in agriculture and share of services in agriculture were tried. After several combinations of variables, the results of the final SFA model chosen is presented in table 2.8.

Table 2.8: SFA regression results

	Coefficient	Std error	Z statistics	p-value
Ln PCGSDP	-0.1777	0.0714	-2.49	0.013
Sh ser to ag	0.0003	0.00014	2.07	0.039
LFPR	0.0043	0.0024	1.78	0.075
sh of central trans to rev	-0.5869	0.1513	-3.88	0.000
COVID	-0.033	0.0139	-2.37	0.018
Constant	3.9941	0.7875	5.08	0.000
Gamma	0.7499	0.1084		0.000
Sigma_u2	0.0076	0.004		0.000
Sigma_v2	0.0025	0.0004		0.000

Results of the stochastic frontier analysis indicate that per capita real GSDP has a negative impact on the own tax revenue, which is contrary to many studies and raises the question of whether tax to GSDP ratio is really a good measure to capture tax effort. As explained earlier, states like Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh, etc. with low per capita own tax revenue and low GSDP tend to have high tax to GSDP ratio. Structural variable like share of services to agriculture has a positive impact on tax collection. COVID index variable has a negative impact on the own tax revenue collection. Demographic variable LFPR showed a positive impact, indicating that states with higher labour force contribute to tax collection. Share of central transfers to revenue had a negative impact on the own tax collection as expected. Gamma being 0.75, indicates that nearly 75% of variation in own tax to GSDP is due to inefficiency.

Figure 2.6 presents the efficiency estimates across states for 2018-19 and 2022-23. Wide variation in the efficiency estimates is seen across states. Efficiency ranged from 0.69 to 0.97 during 2018-19 and 0.73 to 0.97 during 2022-23. All the states witnessed an increase in efficiency over the period. Karnataka stands in 13th position in terms of efficiency in spite of it being second or third rank in terms of per capita collection and per capita income.

Figure 2.6: Efficiency estimates across States

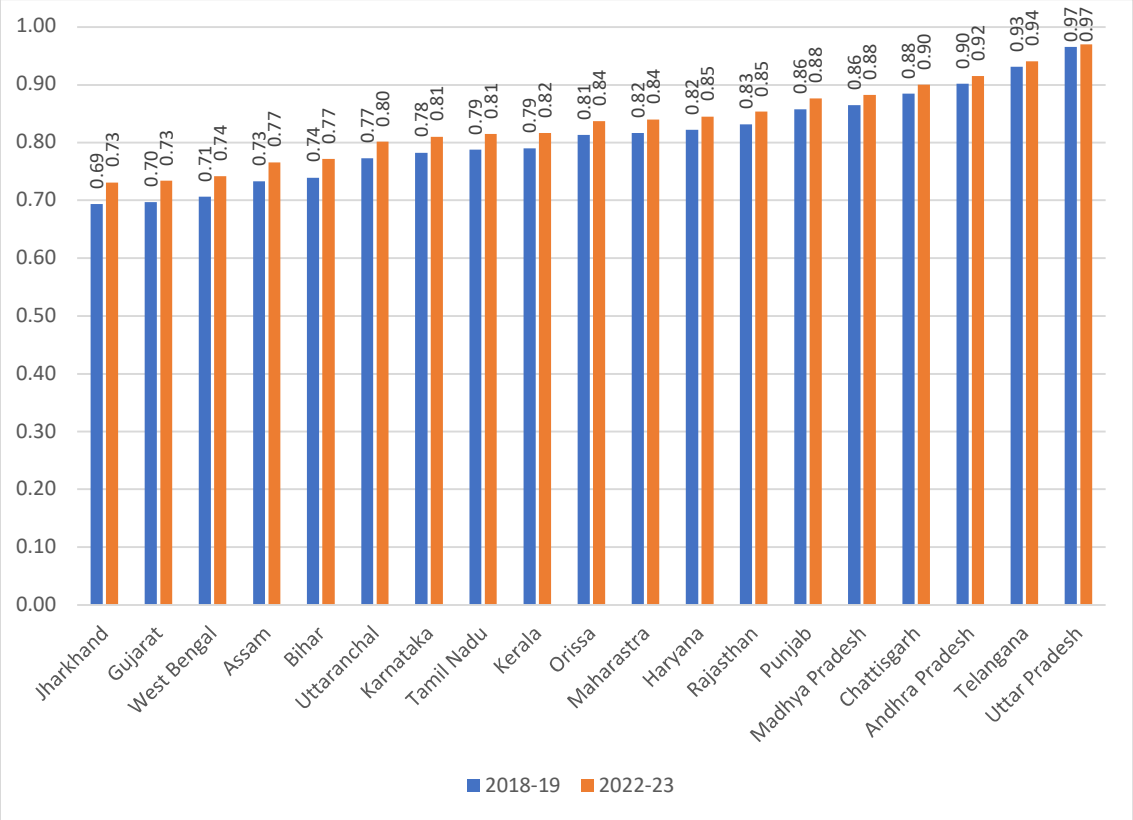
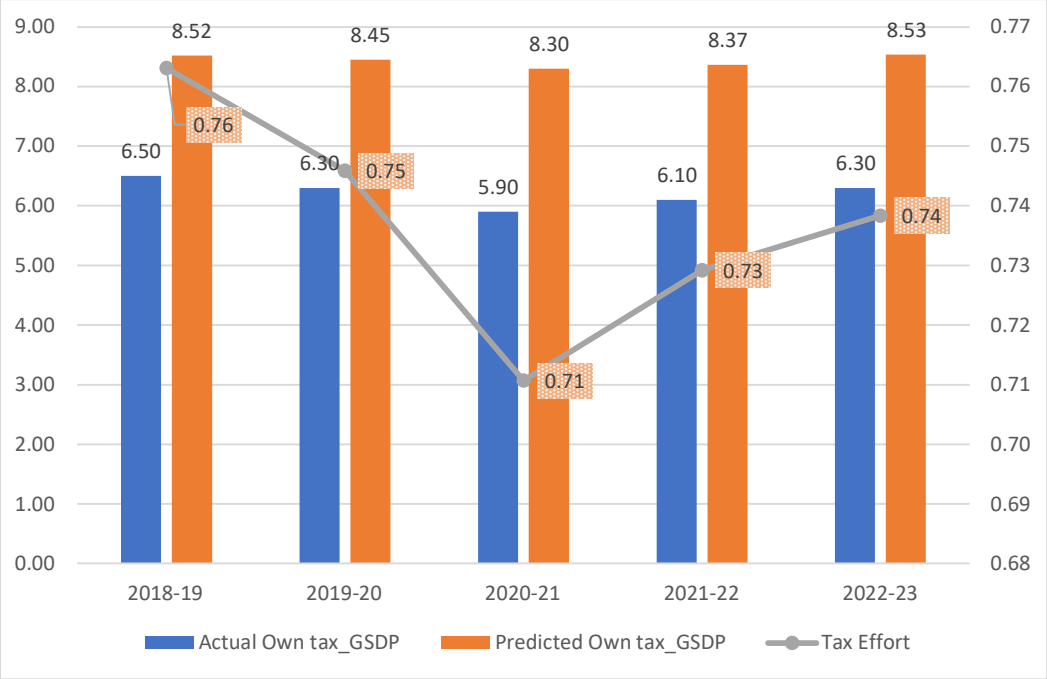


Figure 2.7 presents the actual tax to GDP ratio and the taxable capacity for Karnataka. The gap between the actual collection and the taxable capacity remains more or less same though one can see a marginal decline in the difference. Though the estimates based on the model show that there is great scope for the state to improve tax collection, in real sense, it is difficult to identify the tax component that can enhance the tax collection effort. This is mainly because with respect to the important components of own tax, the state is already in the top position i.e., with respect to GST, one of the major components of the total own tax collection, the state stands quite high both in terms of per capita and total volume. Even with respect to second major important tax component, excise collections are quite high. Thus, it is difficult to accept the results obtained from the model and suggest any further improvement in taxable capacity.

Figure 2.7: Actual own tax to GSDP ratio and Taxable Capacity for Karnataka.



Based on attained tax effort measured as ratio of predicted to actual tax to GSDP ratio and actual tax collection to GSDP ratio, states are classified into low and high categories. With respect to own tax collection to GSDP ratio, states are classified as low if the ratio is less than the median value of the tax GSDP ratio in the state sample and high otherwise. The same classification criteria is used even with respect to the attained tax effort ratio(Table 2.9).

Table 2.9: Classification of the States

		TAX EFFORT: Actual Tax collection to GSDP ratio	
		LOW	HIGH
Attained Tax Effort: Ratio of Actual to the Predicted tax GSDP ratio	LOW	Assam Bihar Gujarat Jharkhand Madhya Pradesh Uttaranchal West Bengal	Karnataka Kerala Tamil Nadu
	HIGH	Haryana Orissa Punjab	Andhra Pradesh Chhattisgarh Maharashtra Rajasthan Telangana Uttar Pradesh

Group 1: Low collection and low effort states are Assam, Bihar, Gujarat, Jharkhand, Madhya Pradesh, Uttaranchal and West Bengal. Except for Gujarat and Uttaranchal, all other states belonging to this group are low in terms of per capita tax collection and also low-income states with high incidence of poverty. Further, they are also heavily dependent on support from the central government. Development of these states is important, and the central government should take steps to enhance their income base.

Group 2: High collection and high effort states are Andhra Pradesh, Chhattisgarh, Maharashtra, Rajasthan, Telangana and Uttara Pradesh. Here,states like Chhattisgarh, Rajasthan and Uttar Pradesh are wrongly classified into this category, mainly because of the definition of taxable capacity as tax to GDP ratio. They fall into the high collection category since both their numerator and denominator are low, leading to high ratio. All these three states have the characteristics of low collection and low effort group category.

Group 3: Low collection and high effort states are Haryana, Punjab and Orissa. All the three states have different characteristics in this group. Haryana has high per capita income and high per capita tax collection, and since the ratio is low, it has fallen into this category. Punjab being agriculture-dominant,its taxable capacity is low. Orissa has similar characteristics of Group 1 and wrongly falls into this category.

Group 4: High collection, low effort states are Karnataka, Kerala and Tamil Nadu. These states are high in terms of per capita tax collection and per capita income. Since these states already have high collection, scope for further improvement may be very low. Both Karnataka and Tamil Nadu, being service sector dominant, they need to consider restructuring their tax mix.

It is clear from the above arguments that classification of the states into the four categories based on tax collection, measured as tax to GSDP ratio and attained tax effort as the ratio of actual to predicted, is not appropriate when one juxtaposes these numbers with per capita tax collected and per capita income. Though majority of the studies use either regression method or stochastic frontier approach to understand the taxable capacity, in the current context, the approach is not suitable, mainly because of the points discussed earlier. This could be due to GST introduction, COVID impact and possibly service sector dominated

states are not able to earn enough taxes through service sector compared to their contribution to GSDP.

To account for this, we propose the following simple approach to estimate taxable effort through two alternative scenarios.

1. According to the World Bank, the desirable share of tax revenue to gross domestic product should be above 15% to ensure economic growth and alleviate poverty. For 2022-23, per capita 15% of GSDP at All-India level is Rs.25401.82.
2. Desirable tax to be collected for each state is per capita desirable tax as obtained above and multiplied by the respective state's population.
3. Ratio of the desirable tax to the actual tax is a rough estimate of tax effort. This can be treated as the first scenario (Table 2.10).
4. In the second scenario, these estimates can be accounted for the poverty estimates of the respective states. Central Govt supports the States through grants and portion of central taxes. While sharing the central taxes and grants with the states, level of poverty plays an important role. Thus, alternatively, one can consider the desirable tax to be collected by the state as product of per capita desirable tax multiplied by non-poor population. Ratio of desirable to actual is an alternative estimate for the tax effort. Table 2.11 presents the results of the tax effort by these two alternative methods.

Table 2.10: Tax Effort based on first scenario for 2022-23

	Population of 2022-23 in '000	Tax to be collected in Rs. crore	Actual tax collected in Rs. crore	Tax effort - I
ANDHRAPRADESH	53,079	134830	116203	0.8618
ASSAM	35,573	90362	54198	0.5998
BIHAR	1,25,991	320040	139528	0.4360
CHATTISGARH	30,037	76299	65481	0.8582
GUJARAT	71,149	180731	157843	0.8734
HARYANA	30,058	76353	73339	0.9605
JHARKHAND	39,259	99725	56522	0.5668
KARNATAKA	67,515	171500	178298	1.0396
KERALA	35,716	90725	90229	0.9945
MADHYA PRADESH	86,149	218834	147153	0.6724
MAHARASHTRA	1,25,979	320010	337487	1.0546
ORISSA	46,156	117245	89543	0.7637
PUNJAB	30,649	77854	59407	0.7631

	Population of 2022-23 in '000	Tax to be collected in Rs. crore	Actual tax collected in Rs. crore	Tax effort - I
RAJASTHAN	80,662	204896	144577	0.7056
TAMILNADU	76,765	194997	188954	0.9690
TELANGANA	37,999	96524	126617	1.3118
UTTAR PRADESH	2,34,692	596160	343832	0.5767
UTTARKHAND	11,587	29433	27719	0.9418
WEST BENGAL	98,884	251183	155043	0.6173

Table 2.11: Tax Effort based on Second approach for 2022-23

	Population of 2022-23 in '000	MPI for 2022-23	Number of non-poor population in '000	Tax to be collected in Rs. crore	Actual tax collected in Rs. crore	Tax effort - II
ANDHRAPRADESH	53,079	0.0606	49862	126660	116203	0.9174
ASSAM	35,573	0.1935	28690	72877	54198	0.7437
BIHAR	1,25,991	0.3376	83456	211995	139528	0.6582
CHATTISGARH	30,037	0.1637	25120	63809	65481	1.0262
GUJARAT	71,149	0.1161	62889	159748	157843	0.9881
HARYANA	30,058	0.0707	27933	70955	73339	1.0336
JHARKHAND	39,259	0.2881	27948	70994	56522	0.7961
KARNATAKA	67,515	0.0758	62397	158501	178298	1.1249
KERALA	35,716	0.0055	35520	90226	90229	1.0000
MADHYA PRADESH	86,149	0.2063	68376	173689	147153	0.8472
MAHARASHTRA	1,25,979	0.0781	116140	295017	337487	1.1440
ORISSA	46,156	0.1568	38919	98861	89543	0.9057
PUNJAB	30,649	0.0475	29193	74156	59407	0.8011
RAJASTHAN	80,662	0.1531	68313	173527	144577	0.8332
TAMILNADU	76,765	0.0220	75076	190707	188954	0.9908
TELANGANA	37,999	0.0588	35765	90849	126617	1.3937
UTTAR PRADESH	2,34,692	0.2293	180877	459461	343832	0.7483
UTTARKHAND	11,587	0.0967	10467	26587	27719	1.0426
WEST BENGAL	98,884	0.1189	87127	221318	155043	0.7005

From both the Tables 2.10 and 2.11, one can see that Karnataka collects more tax than the desirable tax. As per the first approach, the other two states that generate more taxes than the desirable level are Telangana and Maharashtra. The bottom three states that generates less than 60% of what is desirable are Bihar, Assam and Uttara Pradesh.

With respect to the second approach, Chhattisgarh, Haryana, Karnataka, Kerala, Maharashtra, Telangana and Uttarakhand collect more tax than the desirable tax.

2.6: Own Nontax Revenue in Karnataka

Own nontax receipts include interest receipts, dividends and profits of departmental and non- departmental enterprises, charges earned for various general, social and economic services provided by the government. Total own nontax revenue contributes only 3 to 5% of the total receipts of the State. On an average, 17.3% of the own nontax revenue comes from interests, dividends and profits. Receipts from General services, social services and economic services contribute 14.8%, 10.0% and 57.9% respectively.

In general, Karnataka is not performing greatly with respect to own nontax revenue it generates. Though there is a marginal increase in the nontax receipts over the period in absolute numbers, total own nontax revenue to GSDP ratio gradually declined from 2011-12 to 2020-21(see Table 2.12). Last two years i.e., during 2021-22 and 2022-23 showed an improvement in the own nontax revenue to GSDP ratio. This improvement comes mainly from the improvement in economic services component.

Table 2.12: Ratio of own nontax revenue to GSDP in %

	Interests Dividends and Profits	General Services	Social Services	Economic Services	Total Nontax Revenue
2011-12	0.08	0.10	0.06	0.43	0.67
2012-13	0.12	0.07	0.06	0.32	0.57
2013-14	0.09	0.07	0.06	0.27	0.49
2014-15	0.10	0.07	0.06	0.28	0.51
2015-16	0.13	0.08	0.05	0.25	0.51
2016-17	0.11	0.06	0.04	0.27	0.48
2017-18	0.09	0.07	0.05	0.27	0.49
2018-19	0.08	0.07	0.05	0.26	0.46
2019-20	0.06	0.07	0.06	0.28	0.48
2020-21	0.06	0.08	0.05	0.29	0.48
2021-22	0.08	0.09	0.05	0.37	0.60
2022-23	0.08	0.10	0.04	0.39	0.61

Nontax revenue as percent of respective functional heads of expenditure reveal in general a decline from 2011-12 to 2020-21. Share of revenue to expenditure with respect to Economic services, which constitute nearly 60% of nontax revenue, remained constant around 8.5% for nearly a decade and showed an improvement by 3%age point during 2021-

22 and 2022-23. Though several measures are taken by the Karnataka Government to improve the nontax revenue, effort does not reflect in the numbers and increasing the nontax revenue still continues to be a major issue for the Government.

Table 2.13: Nontax revenue as a percentage of respective expenditure

	General Services	Social Services	Economic Services
2011-12	3.86	1.52	13.45
2012-13	2.50	1.26	10.35
2013-14	2.45	1.51	8.20
2014-15	2.19	1.35	8.63
2015-16	2.74	1.19	7.68
2016-17	2.33	0.89	8.16
2017-18	2.64	1.24	8.36
2018-19	2.47	1.03	8.01
2019-20	2.35	1.48	8.74
2020-21	2.38	1.30	8.91
2021-22	2.73	1.24	12.28
2022-23	3.25	1.04	15.64

The disaggregated picture of nontax revenue clearly indicates a changing structure over the last five years (see table 2.14). Revenues from economic services forms the major source of nontax revenue and this proportion increased from 57.1% in 2018-19 to 64.2%% in 2022-23. Within the economic services, the main contribution is from the non-ferrous mining and metallurgical industries, which continuously increased except for 2022-23. The other two sectors within economic services, which contribute relatively higher percentage to nontax revenue are forest & wildlife and power. The contribution of remaining services is very low, and the Karnataka government should adopt steps with respect to these services to increase the user charges and/or service charges. Share of social and community services declined from about 10.2% in 2018-19 to 6.1% during 2022-23. This is mainly because of decrease in the share of medical and public health, which can be partly due to the COVID impact. Education sector also contributes relatively higher share among the social services. To increase the revenue from these sectors, effort should be made by the government to provide quality services as these sectors are dominated by private players. Efforts are also needed to increase shares of other sectors under social services. Share of general services has remained more or less constant and the police and other administrative services are the main contributors to this sector.

Interest receipts accounted for only 16.4% in 2018-19 and the share went down to 9.9% during 2022-23. Dividends and profits share was less than 1% of total nontax revenue till 2020-21 and last two periods showed a good increase, and the share rose up to 3%. In terms of magnitude, revenue increased from Rs. 38.3 crore in 2018-19 to Rs. 428.51 crore in 2022-23, an eleven-fold increase. This indicates that the money invested by the government in departmental enterprises and non-departmental commercial enterprises started generating profits and identification of these enterprises, and further strengthening would help increase non-tax revenue.

Revenue from non-ferrous mining and metallurgical industries being the main source of nontax revenue, which showed a continuous substantial increase from 2013-14 to 2021-22. The increase was from a mere Rs. 1474.5 crore in 2013-14 to Rs. 6308.3 crore during 2021-22. However, due to less receipts under license fee, a slight fall of about Rs. 362.5 crore was witnessed during 2022-23 (see Figure 2.8). The Karnataka government should take care to maintain the growth in royalty under from non-ferrous mining and metallurgical industries as this contributes close to 50% of the nontax revenue.

A report on the States' Best Practices in Mining published by the Ministry of Mines in January 2025 states that "Karnataka plays a significant role in India's mining industry, particularly known for its rich deposits of iron ore, gold, and other minerals. The state is a key player in the mining sector, contributing substantially to India's mineral production. The major mineral reserves in Karnataka include iron ore, limestone, dolomite, and gold, with the state's iron ore production being particularly notable in regions like Bellary, Chitradurga, and Tumkur. Despite the state's rich mineral resources, Karnataka faces challenges related to **illegal mining**, environmental degradation, and balancing economic growth with sustainability. However, recent reforms, such as increasing the transparency of mineral auctions and improving enforcement of mining laws, have been steps towards mitigating these challenges". The following best practices were adopted by the state for further strengthening the sector and for better resource mobilisation.

1. Integrated lease management system (ILMS)
2. One state one GPS (OSOG)
3. Modern check post and interstate border checks
4. Integrated centralised DMF web portal

5. Drone survey of quarries
6. Sand Policy, 2020

In spite of these practices, an audit of the Department of Mines and Geology for the period up to 2021-22 noted loss of revenue on account of short accounting of minerals extracted due to illegal mining. Underassessment of accounting of mineral production and non-levy of statutory dues has also added to the loss. Strict monitoring is needed in this regard by the Department of Mines and Geology.

Figure 2.8: Trend in Nontax from Non-Ferrous Mining and Metallurgical Industries

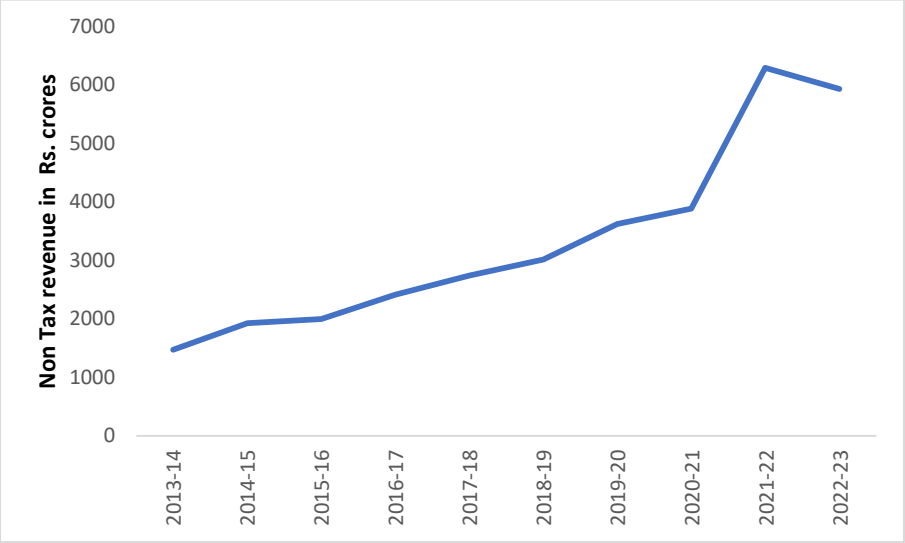


Table 2.14: Structure of own nontax revenues in Karnataka:

	Actuals (in Rs. Lakh)					Share in Total Nontax Revenue				
B. NONTAX REVENUE	2018-19	2019-20	2020-21	2021-22	2022-23	2018-19	2019-20	2020-21	2021-22	2022-23
(b) Interest Receipts, dividends & Profits										
Interest Receipts	111204	89494	91960	131498	137686	16.4	11.7	11.6	11.2	9.9
Dividends and Profits	3830	5364	8070	34978	42851	0.6	0.7	1.0	3.0	3.1
Total (b)	**115034**	**94857**	**100030**	**166476**	**180537**	**17.0**	**12.3**	**12.7**	**14.1**	**13.0**
(c) Other Nontax Revenue										
(i) General Services										
Public Service Commission	808	1544	1148	133	466	0.1	0.2	0.1	0.0	0.0
Police	24135	30814	36724	50032	57866	3.6	4.0	4.7	4.2	4.2
Jails	409	360	387	409	805	0.1	0.0	0.0	0.0	0.1
Stationery and Printing	2945	1658	1533	1919	1583	0.4	0.2	0.2	0.2	0.1
Public Works	3423	3367	3733	4188	3810	0.5	0.4	0.5	0.4	0.3
Other Administrative services	25292	30477	38781	41698	115589	3.7	4.0	4.9	3.5	8.3
Contributions & Recoveries towards pension and other retirement benefits	7074	10604	6587	7655	8752	1.0	1.4	0.8	0.6	0.6
Miscellaneous General services	41100	35698	42014	64811	44683	6.1	4.6	5.3	5.5	3.2
Total (c)(i)	**105185**	**114523**	**130906**	**170845**	**233553**	**15.5**	**14.9**	**16.6**	**14.5**	**16.8**
(ii) Social & Community services										
Education, Sports, Art & culture	19971	18329	17450	28720	17777	2.9	2.4	2.2	2.4	1.3
Medical and Public Health	33036	59944	41859	52212	43061	4.9	7.8	5.3	4.4	3.1
Family Welfare	7	204	316	291	46	0.0	0.0	0.0	0.0	0.0
Water Supply and Sanitation	177	246	539	701	569	0.0	0.0	0.1	0.1	0.0
Housing	7292	8455	8548	8249	8551	1.1	1.1	1.1	0.7	0.6
Urban Development	765	2658	1033	1257	4916	0.1	0.3	0.1	0.1	0.4
Information and Publicity	204	120	194	240	267	0.0	0.0	0.0	0.0	0.0
Labour and Employment	6310	6642	5798	6038	7396	0.9	0.9	0.7	0.5	0.5
Social Security and Welfare	672	368	298	960	1534	0.1	0.0	0.0	0.1	0.1

	Actuals (in Rs. Lakh)					Share in Total Nontax Revenue				
B. NONTAX REVENUE	2018-19	2019-20	2020-21	2021-22	2022-23	2018-19	2019-20	2020-21	2021-22	2022-23
Other Social Services	1683	1460	4345	593	495	0.2	0.2	0.6	0.1	0.0
Total (c)(ii)	**70117**	**98426**	**80380**	**99262**	**84612**	**10.4**	**12.8**	**10.2**	**8.4**	**6.1**
(iii) Economic Services										
Crop Husbandry	1467	716	838	20118	5500	0.2	0.1	0.1	1.7	0.4
Animal Husbandry	1241	962	737	737	1177	0.2	0.1	0.1	0.1	0.1
Fisheries	1898	1985	1921	2246	3158	0.3	0.3	0.2	0.2	0.2
Forestry & Wildlife	30906	26663	27590	28169	32489	4.6	3.5	3.5	2.4	2.3
Plantations	...	...	0	0	0					
Food Storage and Ware housing	800	688	554	1468	182075	0.1	0.1	0.1	0.1	13.1
Co-Operation	4279	4159	4330	5032	6056	0.6	0.5	0.5	0.4	0.4
Other Agricultural programme	10	5	1	3	1	0.0	0.0	0.0	0.0	0.0
Land Reforms	221	14	26	422	12951	0.0	0.0	0.0	0.0	0.9
Other Rural Development programmes	849	925	4672	886	741	0.1	0.1	0.6	0.1	0.1
Hill Areas	...	...	...	...	...					
Major Irrigation	0	...	27	507	1632	0.0	...	0.0	0.0	0.1
Medium Irrigation	1708	1276	2163	1584	1651	0.3	0.2	0.3	0.1	0.1
Minor Irrigation	5725	141	151	140	79	0.8	0.0	0.0	0.0	0.0
Power	4806	27982	23664	26207	24405	0.7	3.6	3.0	2.2	1.8
New and Renewable Energy	2	10	14	5	5	0.0	0.0	0.0	0.0	0.0
Village and Small Industries	4152	3813	2733	5325	7810	0.6	0.5	0.3	0.5	0.6
Industries	84	57	182	229	356	0.0	0.0	0.0	0.0	0.0
Non-Ferrous Mining and Metallurgical industries	302658	362903	389345	630831	594577	44.7	47.2	49.3	53.6	42.7
Ports and Light Houses	566	540	1560	630	1167	0.1	0.1	0.2	0.1	0.1
Shipping	1571	1599	1473	1589	2100	0.2	0.2	0.2	0.1	0.2
Civil Aviation	125	1481	1532	1205	4843	0.0	0.2	0.2	0.1	0.3

	Actuals (in Rs. Lakh)					Share in Total Nontax Revenue				
B. NONTAX REVENUE	2018-19	2019-20	2020-21	2021-22	2022-23	2018-19	2019-20	2020-21	2021-22	2022-23
Roads and Bridges	10515	7118	5004	6056	2497	1.6	0.9	0.6	0.5	0.2
Road Transport	0	0	0	...	3	0.0	0.0	0.0	...	0.0
Inland Water Transport	217	195	120	110	173	0.0	0.0	0.0	0.0	0.0
Other Scientific Research	...	...	...	...	...					
Tourism	110	55	41	893	212	0.0	0.0	0.0	0.1	0.0
Civil Supplies	41	30	24	24	36	0.0	0.0	0.0	0.0	0.0
Other General Economic services	13001	17025	9368	6706	7017	1.9	2.2	1.2	0.6	0.5
Total (c)(iii)	**386951**	**460340**	**478068**	**741121**	**892714**	**57.1**	**59.9**	**60.6**	**62.9**	**64.2**
Total (c)	562253	673289	689354	1011228	1210878	83.0	87.7	87.3	85.9	87.0
Grand Total B (b+c)	677287	768147	789384	1177704	1391415	100.0	100.0	100.0	100.0	100.0

Source: Authors' compilation from CAG reports.

2.7: Summary

The analysis of Karnataka's revenue composition, including own tax, nontax revenue, grants, GST, and other sources, reveals notable trends from 2018-19 to 2022-23. Karnataka stands out as a buoyant state in terms of own revenue resources, ranking third among 19 major states in per capita own tax generation. The predominant contributor to the state's own tax revenue is the state GST, which also represents a significant share of the central GST pool, indicating that Karnataka may have reached a tax plateau.

Despite being a top-performing state in terms of per capita tax revenue and per capita income, Karnataka ranks 17th in total tax effort (measured by tax-to-GSDP ratio) and 8th in own tax effort during 2022-23. This disparity can be attributed to factors such as the introduction of GST, the economic impact of COVID-19, and the challenges of being a service-dominated economy, which struggles to generate proportional tax revenues from the service sector despite its substantial contribution to GSDP.

While the Karnataka government has initiated several measures to enhance nontax revenue, these efforts have yet to translate into significant results. Increasing nontax revenue remains a critical challenge for the state, necessitating continued focus and innovative strategies to address this gap. Non-ferrous mining and metallurgical industries serve as the main source of nontax revenue; however, enhancing revenue in mining is not been possible due to short accounting of minerals extracted on account of illegal mining, which needs strict monitoring.

As of 2022-23, Karnataka was the second richest state in terms of per capita income and this has become possible only because growth in the service sector and major contribution to this sector is through the IT capital city Bangalore. Though it is one of the rich states, in terms incidence of poverty and other development indicators, Karnataka is lowest among the southern states and performance of districts belonging to Kalyana Karnataka region is comparable with some of the very poor backward states like Bihar, Madhya Pradesh, Orissa, etc. Regional imbalance is also very high in Karnataka. In light of the above factors, further improvement in the own taxes is possible only through the development of poorer northern Karnataka districts by increasing the spending capability of the people, especially the poor.

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Appendix Tables

Table A2.1: Structure of Receipts

						in Rs. Crore
		2018-19	2019-20	2020-21	2021-22	2022-23
I	**Tax Revenues**					
I.1	**Own Tax Revenue**					
	State Goods and Service Tax	41,956	42,147	37,711	49,929	61,403
	State Excise	19,944	21,584	23,332	26,378	29,920
	Taxes on Sales, Trade, etc.	14,003	16,424	16,028	19,274	19,082
	Stamps & Registration Fees	10,775	11,308	10,576	14,020	17,726
	Taxes on Vehicles	6,568	6,763	5,607	6,915	10,611
	All Other Taxes (*)	3,584	4,137	3,799	4,224	4,960
	Total Own Tax Revenue	**96830**	**102363**	**97053**	**120740**	**143702**
I.ii	**Transfer from Central Taxes**	**35895**	**30919**	**21694**	**33,283**	**34596**
II	**Nontax Revenue**					
II.i	**Own Nontax Revenue**					
	Interest Receipt, Dividends and profits	1,150	949	1000	1,665	1,805
	General Services	1052	1145	1309	1,708	2,336
	Social Services	701	984	804	993	846
	Economic Services	3870	4603	4781	7,411	8,927
	Total Nontax Revenue	**6,773**	**7,681**	**7,894**	**11,777**	**13,914**
	Total Tax Revenues	**139498**	**140963**	**126641**	**165800**	**192212**
II.ii	**Grants**					
	Centrally Sponsored Schemes	10393	12213.55	9851.89	12659.36	11628.1
	Finance commission Grants	3374	4672.91	5557	6239.03	3495.25
	Other transfers/Grants to State with Legislature	11714	17,593	14,667	11,064	21,744
	Total Grants	**25,481**	**34,480**	**30,076**	**29962**	**36,868**
I + II	**Total Revenue Receipts**	**1,64,979**	**1,75,443**	**1,56,717**	**1,95,762**	**2,29,080**
III	**Capital Receipts**					
	Internal Loans	40,470	49,784	70,414	60,462	39,283
	Loans and Advances from central Government	1,444	675	14,114	20,179	5,266
	Loans and Advances by State Government (Recoveries)	31.23	202.44	269.87	126.7	478.3
	Miscellaneous Capital Receipts	-5.51	45.07	45.23	6.08	2.21
	Total Capital Receipts	**41,940**	**50,707**	**84,843**	**80,774**	**45,030**
I + II +III	**Total Receipts(Revenue + capital)**	**2,06,919**	**2,26,150**	**2,41,560**	**2,76,536**	**2,74,110**

Table A2.2: Per Capita Total GST Collection (in Rs.)

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Average GST collection	Rank
ANDHRA PRADESH	4862	5175	4967	6184	7580	8317	6181	12
ASSAM	2633	3020	2875	3407	3854	4345	3356	17
BIHAR	906	1048	951	1090	1313	1410	1120	19
CHATTISGARH	8028	8346	8325	9959	10643	11479	9463	8
GUJARAT	10872	11526	10712	13822	16054	17382	13395	5
HARYANA	19378	20603	18725	22947	28834	33830	24053	1
JHARKHAND	6432	6058	5355	7186	8156	8738	6987	10
KARNATAKA	12010	12618	11356	14298	18192	21382	14976	3
KERALA	4663	5459	4899	6259	7664	8555	6250	11
MADHYA PRADESH	3141	3420	3213	3672	4206	4838	3748	16
MAHARASHTRA	13995	15138	13335	17439	21460	25215	17764	2
ORISSA	6007	6565	6552	9666	10712	11787	8548	9
PUNJAB	4697	5078	4601	6044	6835	7801	5843	13
RAJASTHAN	3998	4216	4032	4823	5636	6154	4810	15
TAMIL NADU	9340	9806	9064	11170	13597	15758	11456	7
TELANGANA	9815	10662	9667	11921	13640	15700	11901	6
UTTAR PRADESH	2741	2880	2600	3180	3748	4289	3240	18
UTTARKHAND	13663	13125	10875	11928	14538	16428	13426	4
WEST BENGAL	4116	4461	4056	4868	5871	6301	4945	14

Table A2.3: State-wise CGST collected and transferred from Centre

	CGST Collected (in Rs. Crore)					CGST Transferred from Centre (in Rs. Crore)					Ratio of Transferred to Collected CGST				
	18-19	19-20	20-21	21-22	22-23	18-19	19-20	20-21	21-22	22-23	18-19	19-20	20-21	21-22	22-23
Andhra Pradesh	6232	6534	6328	7844	9585	8092	8014	7224	10453	10859	1.30	1.23	1.14	1.33	1.13
Assam	2489	3050	2986	3641	4001	6223	6164	5498	7895	8394	2.50	2.02	1.84	2.17	2.10
Bihar	2596	3255	3208	3793	4553	19617	17993	17789	25442	26989	7.56	5.53	5.54	6.71	5.93
Chhattisgarh	4007	4446	4650	5847	6318	5789	5734	6069	8629	9142	1.44	1.29	1.31	1.48	1.45
Gujarat	19576	21500	20217	26934	31405	5797	5741	6031	8815	9333	0.30	0.27	0.30	0.33	0.30
Haryana	8520	9560	8795	11269	13730	2038	2018	1907	2763	2933	0.24	0.21	0.22	0.25	0.21
Jharkhand	3677	4006	3736	5041	5880	5900	5844	5863	8367	8874	1.60	1.46	1.57	1.66	1.51
Karnataka	17316	19824	18187	22697	28448	8859	8774	6236	9158	9786	0.51	0.44	0.34	0.40	0.34
Kerala	5208	6081	5728	7100	9279	4699	4654	3326	4833	5165	0.90	0.77	0.58	0.68	0.56
Madhya Pradesh	5719	6413	6309	7280	8428	14188	14052	13947	19855	21064	2.48	2.19	2.21	2.73	2.50
Maharashtra	45351	50683	44847	59243	72880	10378	10278	10894	16017	16951	0.23	0.20	0.24	0.27	0.23
Odisha	5294	6534	6556	10827	11799	8725	8642	8160	11434	12150	1.65	1.32	1.24	1.06	1.03
Punjab	3223	3674	3490	4587	5058	2964	2936	3179	4580	4849	0.92	0.80	0.91	1.00	0.96
Rajasthan	7979	8946	8318	10231	11984	10329	10229	10602	15261	16170	1.29	1.14	1.27	1.49	1.35
Tamil Nadu	17277	19185	17712	22015	27361	8165	7489	7407	10308	10945	0.47	0.39	0.42	0.47	0.40
Telangana	8081	9406	8822	10930	12842	4581	4537	3715	5573	5640	0.57	0.48	0.42	0.51	0.44
Uttar Pradesh	12846	14258	13506	16876	19809	36451	33434	31611	45919	48136	2.84	2.34	2.34	2.72	2.43
Uttarakhand	2101	2519	2263	2578	3315	1977	1959	1953	2830	3000	0.94	0.78	0.86	1.10	0.90
West Bengal	11270	12613	11784	14501	17655	14865	13635	13282	19025	22143	1.32	1.08	1.13	1.31	1.25

3. EXPENDITURE PATTERNS AND TRENDS IN KARNATAKA

Abstract

This chapter examines the expenditure patterns and trends in Karnataka's public finances, focusing on revenue and capital expenditures over the last five years (2019-20 to 2023-24). The objective was to analyse the expenditure components and propose measures to enhance allocative and technical efficiency in public spending. A quadratic regression model was employed to estimate the expenditure patterns for both revenue and capital expenditures. The analysis revealed that capital expenditure, general sector's expenditure and revenue expenditure, and social sector's capital expenditure followed an "inverted U-shaped" trend, where expenditures initially increased, reached a peak, and then declined. This pattern indicates that these components experienced growth but eventually saw a reduction in spending, reflecting a possible saturation point in budget allocations or changing fiscal priorities. The trend analysis of public expenditure components over the period highlighted robust growth, particularly in capital expenditure, interest payments, and pensions. The general and economic sectors showed significant growth in capital spending, emphasising the state's focus on infrastructure and economic development. Additionally, revenue expenditure grew considerably in areas such as salaries, wages, and pensions, reflecting increased commitments to public sector employees. However, a reduction in grants-in-aid suggests a shift in fiscal strategy or decreased reliance on external contributions. The study also identified inefficiencies in public spending. The technical inefficiency was found to result in an output loss of approximately 1.58% to 1.60% from the maximum potential output. Moreover, capital expenditure was underutilised relative to revenue expenditure, indicating allocative inefficiency. Also, it is to be noted that share of GSDP to expenditure showed a positive relationship with technical inefficiency and negative relationship with allocative inefficiency. To improve efficiency, the study recommends increasing expenditure on interest payments, pensions, and other capital account expenditures, which could help achieve better technical and allocative efficiency in public spending.

3.1 Introduction

Public expenditure plays a pivotal role in shaping the economic and social landscape of any region, and Karnataka, a state in southern India, is no exception. The state's expenditure patterns are reflective of its broader developmental goals, encompassing investments in both physical and social infrastructure. These expenditures not only address regional disparities but also aim to enhance the efficiency of public services. The technical and allocative efficiency of Karnataka's public expenditure, particularly in rural areas, has significant implications for the state's overall economic performance. The relationship between regional backwardness and public spending on rural infrastructure in Karnataka has been extensively studied. According to Siddaram (2014), the state government has historically focused on

reducing regional disparities by channelling funds into the development of rural areas. This approach is crucial, as it directly impacts the physical and social infrastructure in these regions, thereby contributing to the overall socio-economic development of the state. The study highlights that regions with higher levels of backwardness tend to receive more public expenditure, which is aimed at addressing the existing developmental gaps. In addition to addressing regional disparities, Karnataka has also adopted a program performance budgeting (PPB) approach to enhance the quality of its public expenditure. Karnam (2018) discusses the challenges and benefits associated with this approach, noting that it allows for better allocation of resources by linking budgetary allocations to specific performance outcomes. This method is designed to improve the technical efficiency of public expenditure, ensuring that funds are utilised in a manner that maximises their impact. However, the implementation of PPB in Karnataka has faced several challenges, including the need for improved data systems and greater coordination among various government departments. The trends and patterns of public expenditure in Karnataka have also been analysed by Shankaranand and Biradar (2015), who provide a comprehensive overview of the state's expenditure dynamics. Likewise, many researchers analysed the public expenditure on education, infrastructure, etc., (Mulagund, 2016; Khan 2013; Yadav and Singh, 2020). Their research indicates that while there has been a consistent increase in public spending over the years, the allocation of these funds has not always been optimal. This has led to concerns about the allocative efficiency of public expenditure, particularly in sectors such as education and healthcare. The study emphasises the need for a more strategic allocation of resources to ensure that public spending translates into tangible developmental outcomes. Agriculture, being a critical sector in Karnataka's economy, has also been the focus of public expenditure. Jadhav and Bharadi (2024) explore the impact of government spending on agricultural development in the state. Their findings suggest that while there has been significant investment in agriculture, the outcomes have been mixed, with some areas showing substantial improvement and others lagging. This uneven impact raises questions about the technical and allocative efficiency of expenditure in the agricultural sector, highlighting the need for a more targeted approach to spending. Public expenditure efficiency is a crucial determinant of a state's economic performance. Mohanty and Bhanumurthy (2018)assess the efficiency of public spending across Indian states, including Karnataka, and find significant variations in efficiency levels. Their research underscores the importance of not just the

quantum of public expenditure, but also how effectively it is utilised. In Karnataka, there is a clear need for improving both technical and allocative efficiency to ensure that public spending leads to desired outcomes in terms of economic growth and social development. Karnataka's public expenditure on human development has also been a subject of empirical analysis. Gopalakrishna and Rao (2012) provide insights into the state's spending patterns on sectors such as education, healthcare, and social welfare. Their study reveals that while there has been a steady increase in spending, the impact on human development indicators has been uneven. This suggests that there is room for improving the allocative efficiency of public expenditure to better address the needs of the population. In conclusion, the pattern of public expenditure in Karnataka, and its technical and allocative efficiency, are critical to the state's development trajectory. While there have been significant investments in various sectors, the efficiency of these expenditures remains a key challenge. As Karnataka continues to strive for balanced regional development and improved public service delivery, a focus on enhancing the efficiency of public expenditure will be crucial in achieving these goals.

With this background the present study aims to comprehensively analyse the expenditure patterns and trends for both revenue and capital expenditures, including their major components, over the past five years. Additionally, to identify measures that enhance allocative-and-technical efficiency in public spending, with the aim of improving overall efficiency in public expenditure management.

3.2.Methodology

The descriptive method as well as models are used to analyse the expenditure patten of revenue and capital and major components of expenditure and different regression (exponential, linear, logarithmic, polynomial, etc.). Based on the model fit/coefficient of determination (R^2), a suitable model was selected and interpreted to know the expenditure pattern. These models are discussed in detail in Annexure 3.1.

3.3.Results and Discussion

3.3.1. Expenditure of revenue and capital expenditure of Karnataka

Over the past five years, Karnataka's total expenditure has steadily increased (Figure 3.1&Annexure 3.2), from ₹202,821 crore in 2019-20 to ₹285,859 crore in 2023-24.

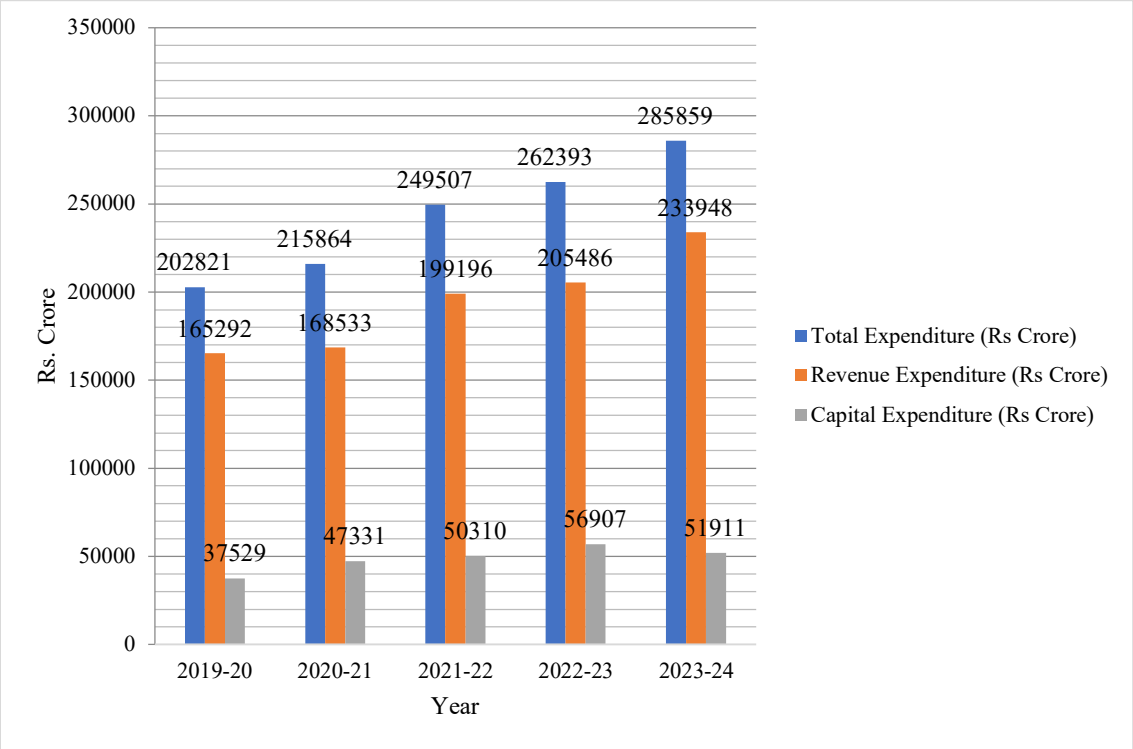

Figure 3.1: Expenditure of revenue and capital expenditure of Karnataka

The figure was computed by the author, with the data sourced from the Comptroller and Auditor General (CAG) of India (www.cag.nic.in).

The average total expenditure during this period was ₹243,289 crore. Revenue expenditure consistently constituted the majority share, averaging 80% of the total expenditure, while capital expenditure accounted for the remaining 20%. Notably, there was a slight fluctuation in these proportions, with revenue expenditure ranging from 78% to 82% and capital expenditure from 18% to 22%.

3.3.1.1.Expenditure of Revenue Expenditure components

The revenue expenditure in Karnataka also showed a rising trend (Figure 3.2&Annexure 3.3), increasing from ₹165,292 crore in 2019-20 to ₹233,948 crore in 2023-

24. The average revenue expenditure during this period was ₹194,491 crore. A significant portion of the revenue expenditure was allocated to interest payments, which grew from ₹16,035 crore to ₹27,651 crore over the same period, averaging 11% to 12% of the total revenue expenditure. The share of expenditure on salaries/wages and pensions was consistently around 10% each, while the majority, approximately 74%, was spent on other revenue account items.

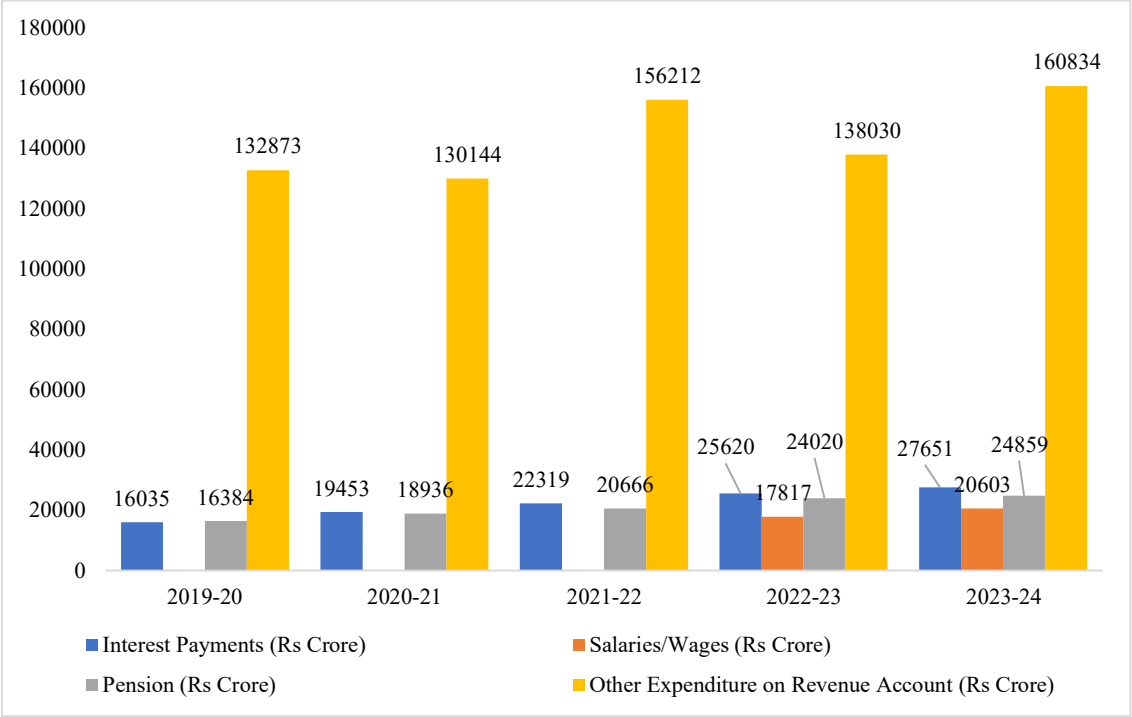

Figure 3.2: Expenditure of Revenue Expenditure

The figure was computed by the author, with the data sourced from the Comptroller and Auditor General (CAG) of India (www.cag.nic.in).

3.3.1.2.Expenditure of capital expenditure components

Capital expenditure varied between ₹37,529 crore and ₹56,907 crore (Annexure 3.4), with an average of ₹48,798 crore over the five years. This component of the expenditure did not include salaries or wages, focusing entirely on other capital account expenditures.

3.3.1.3.Sector-wise Public Expenditure:

The sectoral distribution of public expenditure highlights a balanced allocation among the general, social, and economic sectors (Figure 3.3&Annexure 3.5). The general sector's share of total expenditure increased slightly from 22% to 26%, with the revenue component dominating at about 98% of the sector's expenditure. The social sector maintained a stable share of approximately 36%, with a majority of its expenditure allocated to revenue purposes (about 87% to 89%). The economic sector saw its share fluctuate between 35% and 42%, with a significant portion allocated to capital expenditure, particularly during 2020-21 and 2022-23.

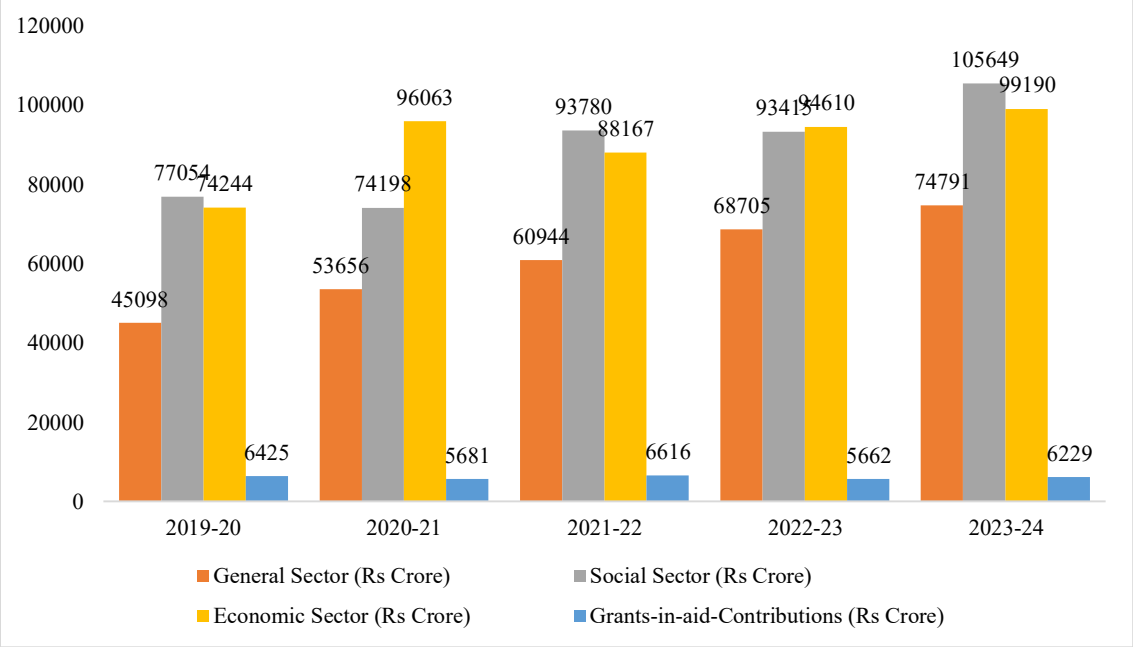

Figure 3.3: Expenditure of capital expenditure

The figure was computed by the author, with the data sourced from the Comptroller and Auditor General (CAG) of India (www.cag.nic.in).

This data reflects Karnataka's focus on revenue expenditure to maintain ongoing services and commitments, with a steady investment in capital expenditure to support infrastructure and development projects across various sectors.

3.3.1.3.1. Karnataka's Sector-wise Public Expenditure Patterns (2019-20 to 2023-24)

3.3.1.3.2. General Sector:

The general sector in Karnataka has seen a consistent increase in public expenditure over the last five years (Figure 3.4&Annexure 3.6), growing from ₹45,098 crore in 2019-20 to ₹74,791 crore in 2023-24. This sector's spending has been heavily skewed towards revenue expenditure, consistently accounting for 96% to 98% of total expenditure in the sector, while capital expenditure has remained minimal, ranging from 2% to 4%. This indicates that the general sector primarily focuses on ongoing operational costs such as administrative expenses and maintenance, rather than infrastructure development.

3.3.1.3.3. Social Sector:

The social sector, covering areas such as education, health, and social welfare, has also shown a marked increase in spending, from ₹77,054 crore in 2019-20 to ₹105,649 crore in 2023-24. Revenue expenditure dominates this sector as well, constituting 83% to 89% of the total social sector expenditure (Figure 3.4&Annexure 3.7). Capital expenditure has been relatively small, though it slightly increased in 2020-21 and 2021-22, indicating some investment in social infrastructure like schools, hospitals, and welfare facilities. However, the sector remains predominantly focused on funding current programs and services.

3.3.1.3.4. Economic Sector:

The economic sector, which includes areas like agriculture, industry, infrastructure, and economic services, has experienced significant fluctuations in its expenditure pattern. Total spending increased from ₹74,244 crore in 2019-20 to ₹99,190 crore in 2023-24. Unlike the general and social sectors, the economic sector shows a more balanced distribution between revenue and capital expenditure. In 2020-21, nearly half (49%) of the sector’s expenditure was directed towards capital projects, reflecting substantial investment in infrastructure and economic development (Figure 3.4&Annexure 3.8). Over the years, the share of capital expenditure has varied, but it remains significant, averaging around 36% to 49% of the total expenditure, which highlights the sector's focus on growth and development projects that can stimulate the economy.

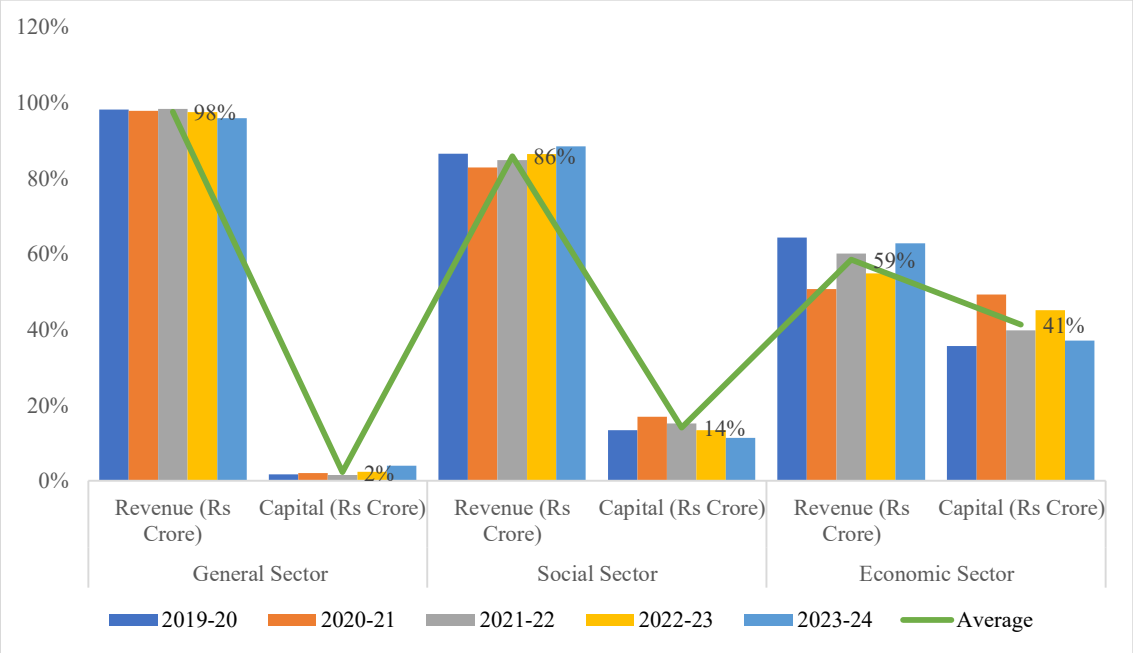

Figure 3.4: Karnataka's Sector-wise Public Expenditure Patterns (2019-20 to 2023-24)

The figure was computed by the author, with the data sourced from the Comptroller and Auditor General (CAG) of India (www.cag.nic.in).

Karnataka's public expenditure pattern reveals a clear prioritisation of revenue expenditure across all sectors, particularly in the general and social sectors, which focus heavily on maintaining existing programs and services. The economic sector stands out with a stronger emphasis on capital expenditure, reflecting the state's investment in long-term economic growth through infrastructure and development projects.

3.3.2. Expenditure Pattern of Public Expenditure Components (2019-20 to 2023-24)

The analysis uses a quadratic regression model ($y = a + bx + cx^2$) to interpret the expenditure patterns of different components of public expenditure over the past five years, from 2019-20 to 2023-24. The model results suggest that the expenditure patterns for various sectors follow an “inverted U-shaped” trend. Out of the major components, capital expenditure, general sector’s expenditure, general sector’s revenue expenditure and social sector’s capital expenditure are significant.

3.3.2.1.Capital Expenditure:

The model for capital expenditure is given by the equation ($y = 24306.6 + 14967.43x - 1855.571x^2$). This indicates that capital expenditure initially increases but eventually starts to decline, forming an inverted U-shape. This pattern suggests that after a period of growth in capital expenditure, likely due to increased investments in infrastructure and development projects, the spending peaks and then decreases, possibly reflecting a completion of major projects or a shift in budgetary priorities.

3.3.2.2.General Sector:

The equation for the general sector expenditure is ($y = 36072.8 + 9359.643x - 319.3571x^2$). This also follows an inverted U-shape, indicating that expenditure in the general sector initially rises but eventually declines. This trend might reflect a phase of expansion, followed by stabilisation or reduction in spending, possibly due to efficiency measures or budget reallocations.

3.3.2.2.1. General Sector - Revenue Expenditure:

The revenue expenditure within the general sector is modelled by the equation ($y = 34630.6 + 10094.4x - 524x^2$). This component, too, follows an inverted U-shaped pattern, implying that after an initial period of increased spending, possibly due to expanding services or administrative costs, there is a tapering off. This could indicate that the sector reached a point where further increases in revenue expenditure was either unsustainable or unnecessary.

3.3.2.3.Social Sector - Capital Expenditure:

The equation for capital expenditure pattern was provided in Table 3.1. The expenditure pattern of the social sector is ($y = 6894.2 + 4131.429x - 630.5714x^2$). This inverted U-shaped pattern suggests that there was an initial focus on increasing capital investments in the social sector such as building schools, hospitals, or other social infrastructure. However, after reaching a certain level, this expenditure started to decrease, possibly due to completed projects or a shift towards maintenance and operational costs rather than new capital investments.

Table 3.1: Expenditure Pattern of Public Expenditure Components (2019-20 to 2023-24)

S.No.	Particulars	Model ($y = a + bx + cx^2$)	Pattern
1	Total Expenditure	179551.8+21222.36^{NS}+6.357143^{NS}	
1.1	Revenue Expenditure	155246+6254.071^{NS}+1862.071^{NS}	
	Interest Payments	12226.4+3942.329*-167.0714^{NS}	
	Salaries/Wages	12864.11+0^{NS}+309.5556^{NS}	
	Pension	13461.8+2975.686^{NS}-128.7143^{NS}	
	Other Expenditure on Revenue Account	127884.2+3459.657^{NS}+486.8571^{NS}	
1.2	Capital Expenditure	24306.6+14967.43*-1855.571*	Inverted U shaped
1.3	General Sector (GS)	36072.8+9359.643*-319.3571*	Inverted U shaped
	GS_Revenue	34630.6+10094.4*-524*	Inverted U shaped
	GS_Capital	1443.4-735.2857^{NS}+204.7143^{NS}	
1.4	Social Sector (SS)	71013.6+3255.129^{NS}+730.9286^{NS}	
	SS_Revenue	64118.8-875.7714^{NS}+1361.429^{NS}	
	SS_Capital	6894.2+4131.429*-630.5714*	Inverted U shaped
1.5	Economic Sector (ES)	65853.6+13474.9^{NS}-1438.5^{NS}	
	ES_Revenue	49885.4-2609.514^{NS}+972.2857^{NS}	
	ES_Capital	15968.2+16084.29^{NS}-2410.714^{NS}	
1.6	Grants-in-aid-Contributions	6612.4-355.2429^{NS}+52.35714^{NS}	

*Note: * indicates 1% significance, ** indicates 10% significance and NS indicates not significant.*
The table was calculated by the author.

The quadratic regression models indicate that the expenditure patterns for capital expenditure, general sector (overall and revenue), and social sector capital expenditure in Karnataka follow an inverted U-shaped trend over the last five years. This suggests an initial phase of increased investment or spending, followed by a peak and subsequent decline. This pattern could reflect various factors, such as the completion of significant projects, shifting priorities, or a strategic reallocation of resources after a period of heightened investment.

3.3.3. Trend of Public Expenditure Components (2019-20 to 2023-24)

The data presents the growth of various public expenditure components in Karnataka over the past five years, highlighting the percentage increase from the initial value (V_i) in 2019-20 to the final value (V_f) in 2023-24. The trend is analysed using a non-linear function to better capture the dynamics of the expenditure growth across different sectors as presented in Table 3.2.

3.3.3.1.Total Expenditure:

Total expenditure in Karnataka increased by 9.74%, from ₹179,551.8 crore in 2019-20 to ₹285,822.5 crore in 2023-24. This significant growth reflects the overall expansion in the state's fiscal activities, driven by both revenue and capital expenditures.

3.3.3.1.1. Revenue Expenditure:

Revenue expenditure rose by 8.47%, from ₹155,246 crore to ₹233,068.1 crore. Within this category:

1. Interest Payments: Saw a sharp increase of 17.82%, from ₹12,226.4 crore to ₹27,761.26 crore, indicating rising debt servicing costs.
2. Salaries/Wages: Increased by 9.88%, reflecting the growing government payroll, which expanded from ₹12,864.11 crore to ₹20,603 crore.
3. Pension: Grew by 13.29%, from ₹13,461.8 crore to ₹25,122.37 crore, which could be due to an aging workforce and expanded pension liabilities.
4. Other Expenditure on Revenue Account: Increased by 4.23%, showing a more moderate rise from ₹127,884.2 crore to ₹157,353.9 crore.

3.3.3.1.2. Capital Expenditure:

Capital expenditure more than doubled, with a 16.76% increase, growing from ₹24,306.6 crore to ₹52,754.48 crore. This indicates significant investments in infrastructure and

development projects over the five years.Despite the overall positive growth in Karnataka's capital expenditure from 2019-20 to 2023-24, the expenditure pattern formed an inverted U-shaped curve. This is because capital expenditure peaked at ₹56,907 crore in 2022-23 but then significantly declined to ₹51,911 crore in 2023-24.

3.3.3.1.3. General Sector:

The general sector saw an increase of 15.73% in total expenditure, rising from ₹36,072.8 crore to ₹74,887.09 crore. Although there was a positive growth rate, the annual rate of change in expenditure is decreasing.

1. General Sector Revenue: Increased by 15.77%, indicating that operational and administrative costs in this sector have more than doubled. Although there was a growth rate, we found that the annual rate of change in general sector's revenue expenditure rate of change from 2019-20 was 18.56% but it was only 7.10% during 2023-24.
2. General Sector Capital: Increased by 14.86%, reflecting balanced growth in infrastructure and capital investments in the general sector.

3.3.3.1.4. Social Sector:

Expenditure in the social sector increased by 8.25% from ₹71,013.6 crore to ₹105,562.5 crore.

1. Social Sector Revenue: Grew by 7.90%, suggesting a steady rise in spending on services and programs.
2. Social Sector Capital: Increased by 11.32%, reflecting focused investments in social infrastructure such as schools and hospitals. Despite the overall positive growth in Karnataka's social sector's capital expenditure from 2019-20 to 2023-24, the expenditure pattern formed an inverted U-shaped curve. This is because capital expenditure peaked at ₹14207 crore in 2021-22 but then significantly declined to ₹12,080 crore in 2023-24.

3.3.3.1.5. Economic Sector:

The economic sector saw an 8.11% increase in total expenditure, rising from ₹65,853.6 crore to ₹97,265.6 crore.

1. Economic Sector Revenue: Increased by 4.15%, indicating a relatively modest rise in ongoing costs.
2. Economic Sector Capital: Grew significantly by 17.73%, from ₹15,968.2 crore to ₹36,121.8 crore, highlighting strong investments in economic infrastructure and development projects.

3.3.3.1.6. Grants-in-aid-Contributions:

Interestingly, this category saw a decrease of 1.46%, from ₹6,612.4 crore to ₹6,145.114 crore, indicating reduced grants or aid over the five-year period.

Table 3.2: Trend of Public Expenditure Components (2019-20 to 2023-24)

		V_i	V_f	CAGR
1	Total Expenditure	179551.8	285822.5	9.74%
1.1	Revenue Expenditure	155246	233068.1	8.47%
	Interest Payments	12226.4	27761.26	17.82%
	Salaries/Wages	12864.11	20603	9.88%
	Pension	13461.8	25122.37	13.29%
	Other Expenditure on Revenue Account	127884.2	157353.9	4.23%
1.2	Capital Expenditure	24306.6	52754.48	16.76%
1.3	General Sector	36072.8	74887.09	15.73%
	General Sector _Revenue	34630.6	72002.6	15.77%
	General Sector _Capital	1443.4	2884.829	14.85%
1.4	Social Sector	71013.6	105562.5	8.25%
	Social Sector _Revenue	64118.8	93775.67	7.90%
	Social Sector _Capital	6894.2	11787.06	11.32%
1.5	Economic Sector	65853.6	97265.6	8.11%
	Economic Sector _Revenue	49885.4	61144.97	4.15%
	Economic Sector _Capital	15968.2	36121.8	17.73%
1.6	Grants-in-aid-Contributions	6612.4	6145.114	-1.46%

Note: The table was calculated by the author.

The trend analysis shows robust growth across most public expenditure components, with particularly strong increases in capital expenditure, interest payments, and pensions. The general and economic sectors experienced notable growth, especially in capital spending, which underscores Karnataka's focus on infrastructure and economic

development. Revenue expenditure also grew significantly, particularly in areas related to salaries, wages, and pensions, reflecting increased commitments to public sector employees and retirees. However, the reduction in grants-in-aid suggests a shift in fiscal strategy or reduced dependence on external contributions.

3.3.4. Measures to enhance allocative and technical efficiency of revenue and capital expenditure of Karnataka.

3.3.4.1. Estimates of Karnataka's public expenditure

The estimates of Karnataka's public expenditure, as indicated by the coefficients in the regression analysis, suggest a significant relationship between various types of expenditures and the overall public spending (Table 3.3). Specifically, the coefficient for revenue expenditure is 12.222, which is highly significant at the 1% level, implying that a 1% increase in revenue expenditure is associated with an approximately 12.2% increase in public expenditure. Similarly, the coefficient for capital expenditure is 2.889, also significant at the 1% level, indicating that a 1% increase in capital expenditure is linked to a 2.9% rise in public expenditure. The linear term has a negative coefficient of -177.219, significant at the 1% level, suggesting a substantial negative impact on public expenditure.

Table 3.3. Estimates of Karnataka's public expenditure

Lny	Coefficient	Std. err.	Z	P>z	[95% conf.interval]	
ln_revenue expenditure	12.222*	3.004	4.070	0.000	6.335	18.109
ln_capital expenditure	2.889*	0.881	3.280	0.001	1.163	4.616
Linear	-177.219*	42.711	-4.150	0.000	-260.931	-93.506
Usigmas	-7.824^{NS}	689.485	-0.010	0.991	-1359.190	1343.542
Vsigmas	1.447**	0.671	2.160	0.031	0.132	2.763

*Note: * indicates 1% significance, ** indicates 5% significance and NS indicates not significant. The table was calculated by the author.*

3.3.4.2. Technical and allocative inefficiency of Karnataka's public expenditure in last five years (2019-20 to 2023-24)

The results show that output from public expenditure produce around 1.58% to 1.60% less than their maximum potential output due to the technical inefficiency (Table 3.4).

Since the mean values of $\hat{\xi}_{ce}$is positive (0.262) this means that the exp ($\hat{\xi}_{ce}$) is >1 i.e., (1.307), and that $\frac{\text{Capital Expenditure}}{\text{Revenue Expenditure}}$ is on average higher than the cost minimising ratios. The result shows that the capital expenditure is underutilised relative to revenue expenditure.

Table 3.4. Technical and allocative inefficiency of Karnataka's public expenditure

Variable	Obs	Mean	Std. dev.	Min	Max
Technical efficiency	5	98.42%	0.01%	98.42%	98.44%
Technical inefficiency	5	1.60%	0.01%	1.58%	1.60%
Allocative inefficiency	5	26.77%	54.36%	-39.09%	92.18%

Note: The table was calculated by the author.

3.3.4.3. Measures to enhance allocative and technical public expenditure of Karnataka.

Correlation-Measures to enhance allocative and technical public expenditure of Karnataka.

The correlation analysis of measures aimed at enhancing the allocative and technical efficiency of public expenditure in Karnataka reveals varying relationships between different expenditure components and inefficiency metrics (Table 3.5). The technical inefficiency measure has a positive but relatively weak correlation with allocative inefficiency (0.249), suggesting some degree of association between the two inefficiencies.

When examining specific expenditure categories:

1. Interest payments show a slight negative correlation with technical inefficiency (-0.094) and a more substantial negative correlation with allocative inefficiency (-0.351). This indicates that higher interest payments are mildly associated with lower technical inefficiency and more strongly with lower allocative inefficiency.
2. Salaries/Wages exhibit a weak positive correlation with technical inefficiency (0.045) but a strong negative correlation with allocative inefficiency (-0.703), implying that increased spending on salaries and wages might slightly increase technical inefficiency but significantly reduce allocative inefficiency.

3. Pension expenditure has a moderate negative correlation with both technical inefficiency (-0.143) and allocative inefficiency (-0.432), indicating that higher pension payments are associated with reductions in both types of inefficiency.
4. Other expenditure on revenue account shows a moderate positive correlation with both technical inefficiency (0.436) and allocative inefficiency (0.322), suggesting that increased spending in this area is linked to higher inefficiency.
5. Other expenditure on capital account has a strong negative correlation with both technical inefficiency (-0.540) and allocative inefficiency (-0.359), indicating that higher capital expenditures are associated with significant reductions in both inefficiency measures.

Table 3.5.Correlation coefficients-Measures to enhance allocative and technical public expenditure of Karnataka.

Particulars	Technical inefficiency	Allocative inefficiency
Technical inefficiency	1	
Allocative inefficiency	0.249	1
Interest Payments (Rs. Crore)	-0.094	-0.351
Salaries/Wages (Rs. Crore)	0.045	-0.703
Pension (Rs. Crore)	-0.143	-0.432
Other Expenditure on Revenue Account (Rs. Crore)	0.436	0.322
Other Expenditure on Capital Account (Rs. Crore)	-0.540	-0.359
GSDP to Expenditure Ratio	0.310	-0.114

Note: The table was calculated by the author.

Overall, the analysis suggests that different types of public expenditures in Karnataka have varying impacts on technical and allocative inefficiencies, with capital account expenditures particularly effective in reducing inefficiency.

3.4.Conclusion

3.4.1. Expenditure pattern of revenue and capital expenditure in the last five years (2019-20 to 2023-24)

Based on the model fit, quadratic regression model was used to estimate the expenditure pattern of revenue and capital expenditure in the last five years (2019-20 to 2023-24). Out of major components under public expenditure, capital expenditure, general sector's

expenditure, general sector's revenue expenditure and social sector's capital expenditure are significant in both the linear and quadratic terms. Also the quadratic term is less than zero, meaning that, the expenditure patterns for the above mentioned four components follow an "inverted U-shaped" trend (initially the expenditure increases, reaches a maximum point, and then decreases).

3.4.2. Trend of Public Expenditure Components (2019-20 to 2023-24)

The trend analysis shows robust growth across most public expenditure components, with particularly strong increases in capital expenditure, interest payments, and pensions. The general and economic sectors experienced notable growth, especially in capital spending, which underscores Karnataka's focus on infrastructure and economic development. Revenue expenditure also grew significantly, particularly in areas related to salaries, wages, and pensions, reflecting increased commitments to public sector employees and retirees. However, the reduction in grants-in-aid suggests a shift in fiscal strategy or reduced dependence on external contributions.

3.4.3. Measures to enhance allocative and technical efficiency of revenue and capital expenditure of Karnataka.

The results show that, output from public expenditure produces around 1.58% to 1.60% less than their maximum potential output due to the technical inefficiency. With regard to allocative inefficiency, the result shows that the capital expenditure is underutilised relative to revenue expenditure. To enhance the technical and allocative efficiency of public expenditure, the expenditure on interest payments, pension and other expenditure on capital account should be increased.

3.5.References

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Annexure 3.1: Methodology adopted

3.2.1. Expenditure pattern of revenue and capital and major components of Expenditure

To determine the pattern of the graph, we need to look at the coefficient of the (x^2) term, which is (c in the equation $y = ax^2 + bx + c$):

- If (c > 0), the parabola opens upwards, forming a **U-shaped curve**. This means the graph will initially decrease, reach a minimum point, and then increase.
- If (c < 0), the parabola opens downwards, forming an **inverted U-shaped curve**. This means the graph will initially increase, reach a maximum point, and then decrease.

3.2.2. Trends separately for revenue and capital and major components of Expenditure thereunder.

Our study focuses on delineating the growth rates of revenue, capital and major components of expenditure of Karnataka through the application of quadratic functions (since it has better model fit). Given that the dependent variables, namely revenue, capital and major components of expenditure of Karnataka (Y), exhibit growth at an unspecified rate (CAGR), our investigation formulates the following models to assess trends (equation 1) and growth rates (equations 1 and 2) for the selected expenditure components of Karnataka.

$$y = ax^2 + bx + c \quad (1)$$

where

y is the dependent variable, x is the independent variable, a, b and c are the coefficients.

To estimate the CAGR from a quadratic model, we ran the regression and estimated the co-efficient, after that, we calculated the CAGR using the following formula.

Since we are looking for 5-year period, we calculated (y) for (x=0) (initial value, V_i) and (x=5) (final value, V_f).

Therefore, the CAGR formula for a quadratic model can be derived by solving for the average annual growth rate that would result in the same final value (y_n) from the initial value (y_0).

$$CAGR = \left(\frac{V_f}{V_i}\right)^{\frac{1}{n}} - 1 \qquad (2)$$

where n is the number of years (in this case, 5)

3.2.2. Measures to enhance allocative and technical efficiency of revenue and capital expenditure of Karnataka.

Primal system approaches.

Instead of the dual approach, Schmidt and Lovell (1979) show that the cost frontier problem can be reformulated as a primal problem that enables the estimation of the model parameters including both technical and allocative inefficiency. The only difference is that the primal starts from a parametric production function, instead of a cost function. Here, it is started with Cobb–Douglas production function.

$$\ln y = \ln f(x) + v - u, \qquad (1)$$

y indicates output

x indicates inputs

v indicates random error

u indicates inefficiency error and w indicates values

and write down the first order condition (FOCs) of cost minimisation, viz.,

$$\frac{f_j}{f_1} = \frac{w_j}{w_1} e^{\xi_j} \Rightarrow \frac{\frac{\partial \ln f}{\partial \ln x_j}}{\frac{\partial \ln f}{\partial \ln x_1}} \equiv \frac{s_j}{s_1} = \frac{w_j x_j}{w_1 x_1} e^{\xi_j}$$

$$\Rightarrow \ln s_j - \ln s_1 - \ln(w_j x_j) + \ln(w_1 x_1) = \xi_j, \qquad j = 2, \dots, J. \qquad (2)$$

Hence,$\xi_j (\gtreqless 0)$ is called as allocative inefficiency for the input pair (j, 1).

If $\xi_2 < 0 \Rightarrow\ w_2 e^{\xi_2} < w_2$, then input x_2, relative to input x_1, is over-used.

If $\xi_2 > 0 \Rightarrow w_2 e^{\xi_2} > w_2$, then input x_2, relative to input x_1, is under-used.

The estimation results are invariant to the choice of input used as numeraire ($for\ the\ present\ study\ x_1\ was\ used\ as\ a\ numeraire$) in equation (2). Estimating allocative inefficiency (assuming absence of technical inefficiency) for the case of two inputs ($x_1 \& x_2$) is graphically shown in Fig 2.1. As per the law of equi-marginal returns, the equilibrium point (optimal input quantities) is said to be at the tangency point between the isoquant and the isocost line. Mathematically, it was represented as Marginal Rate of Technical Substitution (MRTS) = $\frac{f_1}{f_2} = \frac{w_1}{w_2}$(slope of the iso-quant is equal to the slope of the price line).

It can be seen from figure 2.1 that A and B are the two input combinations, which produce the same output level y_0. The input combination A did not satisfy the equilibrium condition, whereas point B satisfies the condition,that is, the observed input quantities are optimal with respect to the input price at point B ($MRTS = \frac{w_1}{w_2}$). However, at point A ($MRTS = \frac{w_1}{w_2 e^{\xi_2}}$), it shows the failure on the part of the producer to allocate inputs optimally. This failure is viewed as allocative inefficiency.

Now, assume that the producer is technically inefficient, i.e., $y = f(x)e^{-u}$ (ignoring the presence of the stochastic noise component, v). Figure 2.2 shows that technical inefficiency shifts the production function neutrally from $y_0 e^u$ to y_0, where $y_0 e^u > y_0$, the slope of the isoquant will be unchanged. Thus, technical inefficiency is defined with respect to the y_0 isoquant by dropping down radially from points A to A' and B to B'. Allocative inefficiency can be represented by the difference in the slopes of the y_0 isoquant between points A' and B'.

A derivation of the joint probability density function requires distributional assumptions to be made on the error components, which were derived from the primal system (1) and (2). Assumptions are as follows:

$v \sim N(0, \sigma_v^2)$; $u \sim N^+(0, \sigma_v^2)$, (truncated at zero from below); $\xi \sim MVN\ (0, \Sigma)$; ξ_j are independent of v and u.

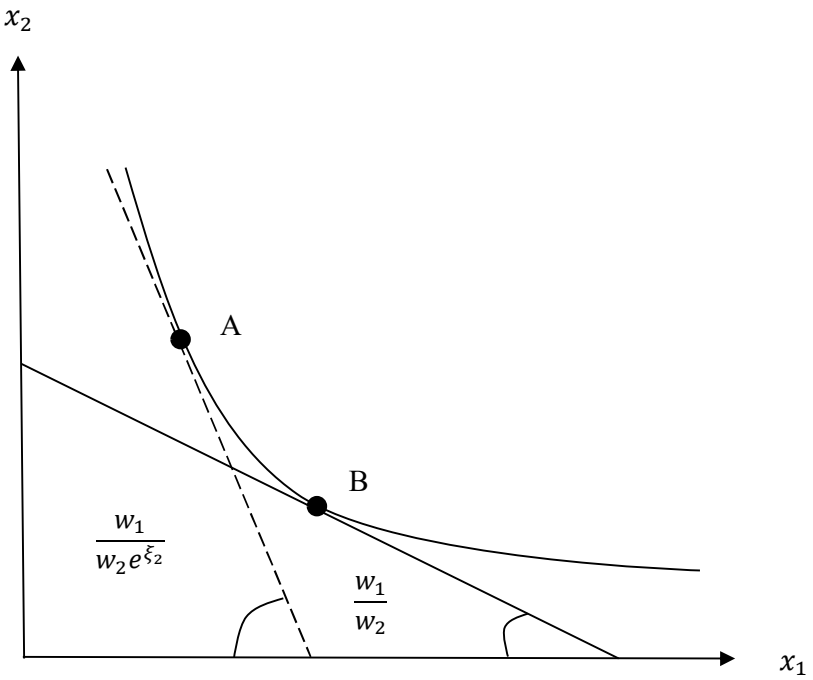

Figure 2.1. Input allocative inefficiency without technical inefficiencies

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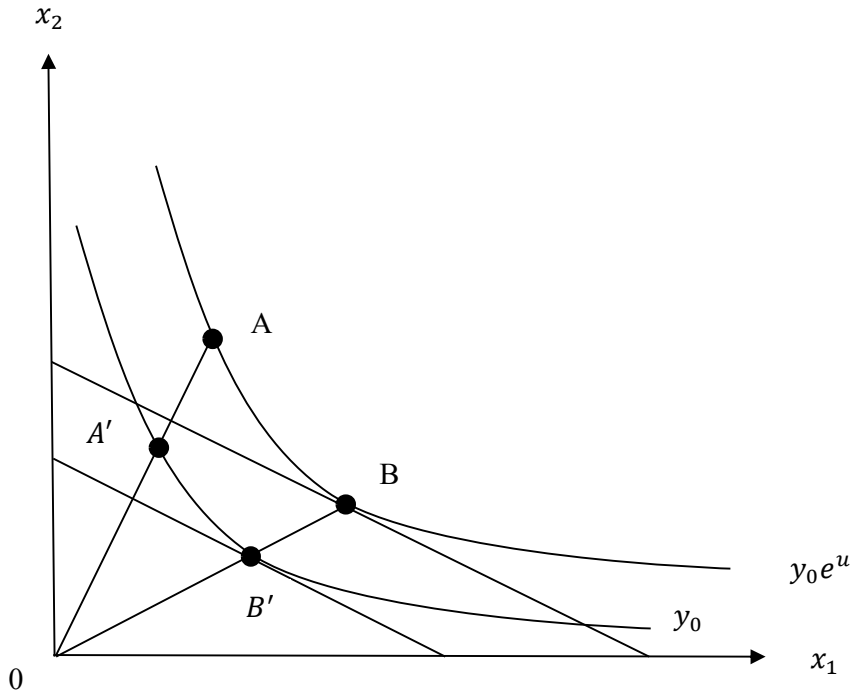


Figure 2.2. Input allocative inefficiencies with output-oriented measure of technical inefficiencies

The assumptions on v and u are standard in the efficiency literature, although other distributions such as exponential and truncated normal can be used for u (see, e.g., Kumbhakar and Lovell, 2000). Since ξ_j can take both positive and negative values (meaning that inputs can be over-used or under-used), it is convenient and reasonable to assume normal distributions on allocative errors. The final assumption of independence is for simplicity.

With the above distributional assumptions, the joint probability distribution of v - u and ξ is

$$f(v-u,\xi) = g(v-u).h(\xi),$$
(3)

where

$$g(v-u) = \frac{2}{\sigma}\phi\left\{\frac{(v-u)}{\sigma}\right\}\Phi\left\{\frac{-(v-u)\sigma_u}{\sigma_v\sigma}\right\}$$

and $\phi(.)$ and $\Phi(.)$ are the pdf and cdf of a standard normal variable, respectively, and $\sigma = \sqrt{\sigma_u^2 + \sigma_v^2}$. The multi-variate normal pdf for ξ is given by h(ξ).

The likelihood function for the system in (1) and (2) is

$$L = g(v-u).h(\xi).|J|,$$
(4)

where $|J|$ is the determinant of the Jacobian matrix, viz.,

$$|J| = \left|\frac{\partial(v-u,\xi_2,\xi_3,\dots\dots,\xi_J)}{\partial(\ln x_1, ln\ x_2,\dots\dots,\ln x_J)}\right|$$

The Jacobian is necessary for the model because inputs (x) are endogenous under the cost minimisation assumption.

The log-likelihood function, for the i[th] observation, is

$$\ln L_i = constant - \frac{1}{2}\ln\sigma^2 + \ln\phi\left(\frac{(v_i-u_i)}{\sigma}\right) + ln\Phi\left(-\frac{(v_i-u_i)\sigma_u}{\sigma_v\sigma}\right) - \frac{1}{2}\ln|\Sigma| - \frac{1}{2}\xi_i'\Sigma^{-1}\xi_i + \ln\ |J_i|$$

The likelihood function can be concentrated with respect to Σ. The elements of Σ, σ_{jk}, can be obtained from

$$\sigma_{jk} = \frac{1}{N}\sum_i \xi_i \xi_i' \quad (5)$$

Substituting (5) into the above log-likelihood function gives the concentrated log-likelihood function. The observation sum of this concentrated log-likelihood function can be maximised to obtain the ML estimates of the parameters.

After estimating the parameters, one would like to obtain (observation-specific) estimates of output oriented (OO) technical inefficiency (u) and input allocative inefficiency (ξ). The technical inefficiency u (for each observation) can be estimated using the Jondrow et al. (1982) formula, viz., $E\{u|(v-u)\}$, which for the present model is

$$E\{u|(v-u)\} = \mu^* + \sigma^* \frac{\phi(\mu^*/\sigma^*)}{\Phi(\mu^*/\sigma^*)}$$

where $\mu^* = -(v-u)\sigma_u^2/\sigma^2$ and $\sigma^* = \sigma_u\sigma_v/\sigma$s.

Allocative inefficiencyξ_j for the input pair (j,1) can be obtained from the residuals of the FOCs. The sign of ξ_j shows whether input j is over or under-used relative to numeraire input. However, the extent of over-use (under-use) of inputs cannot be inferred from the values of ξ_j alone. For this, we need to derive the input demand function.

For the present study, SFA-primal system analysis was performed using STATA (Version 17) software. Variables considered for the present study are given in Table 2.1.

Table 2.1: Variables considered for the present study.

Variables		**Particulars**
Dependent variable		
Output	:	Index (un-equal weightage) was prepared using gross state domestic product output of Karnataka-indicators of 9 sectors include 1. Agriculture 2. Power sector 3. Insurance 4. Telecom health 5. Infrastructure 6. Health 7. Manpower 8. Education 9. Environment
Independent variables		Quantity and value components of RE and CE

Annexure 3.2: Expenditure pattern of revenue and capital expenditure of Karnataka (in last 5 years)

	Value			% Share		
Year	Total Expenditure (Rs. Crore)	Revenue Expenditure (Rs. Crore)	Capital Expenditure (Rs. Crore)	Total Expenditure (in %)	Revenue Expenditure (in %)	Capital Expenditure (in %)
2019-20	202821	165292	37529	100%	81%	19%
2020-21	215864	168533	47331	100%	78%	22%
2021-22	249507	199196	50310	100%	80%	20%
2022-23	262393	205486	56907	100%	78%	22%
2023-24	285859	233948	51911	100%	82%	18%
Average	243289	194491	48797.6	100%	80%	20%

Annexure 3.3: Expenditure pattern of revenue expenditure

Year	**Revenue Expenditure (Rs. Crore)**	**Interest Payments (Rs. Crore)**	**Salaries/Wages (Rs. Crore)**	**Pension (Rs. Crore)**	**Subsidy (Rs. Crore)**	**Other Expenditure on Revenue Account (Rs. Crore)**
2019-20	165292	16035		16384		132873
2020-21	168533	19453		18936		130144
2021-22	199196	22319		20666		156212
2022-23	205486	25620	17817	24020		138030
2023-24	233948	27651	20603	24859		160834
Average	194491	22215.6	19210	20973		143618.6

Annexure 3.4: Expenditure pattern of capital expenditure

Year	**Capital Expenditure (Rs. Crore)**	**Salaries/Wages (Rs. Crore)**	**Other Expenditure on Capital Account (Rs. Crore)**
2019-20	37529		37529
2020-21	47331		47331
2021-22	50310		50310
2022-23	56907		56907
2023-24	51911		51911
Average	48798		48798

Annexure 3.6: Public expenditure pattern of Karnataka – Sector-wise (share)

	General Sector			General Sector		
Year	General Sector (Rs. Crore)	Revenue (Rs. Crore)	Capital (Rs. Crore)	General Sector (in %)	Revenue (in %)	Capital (in %)
2019-20	45098	44320	779	100%	98%	2%
2020-21	53656	52550	1106	100%	98%	2%
2021-22	60944	60004	940	100%	98%	2%
2022-23	68705	67056	1650	100%	98%	2%
2023-24	74791	71819	2972	100%	96%	4%

Annexure 3.7: Public expenditure pattern of Karnataka-Social Sector-wise

	Social Sector			Social Sector		
Year	**Social Sector (Rs. Crore)**	**Revenue (Rs. Crore)**	**Capital (Rs. Crore)**	**Social Sector (in %)**	**Revenue (in %)**	**Capital (in %)**
2019-20	77054	66754	10300	100%	87%	13%
2020-21	74198	61571	12627	100%	83%	17%
2021-22	93780	79573	14207	100%	85%	15%
2022-23	93415	80869	12547	100%	87%	13%
2023-24	105649	93569	12080	100%	89%	11%

Annexure 3.5: Public expenditure pattern of Karnataka – Sector-wise

Year	**By Sector (Rs. Crore)**	**General Sector (Rs. Crore)**	**Social Sector (Rs. Crore)**	**Economic Sector (Rs. Crore)**	**Grants-in-aid-Contributions (Rs. Crore)**	**By Sector (in %)**	**General Sector (in %)**	**Social Sector (in %)**	**Economic Sector (in %)**	**Grants-in-aid-Contributions (in %)**
2019-20	202821	45098	77054	74244	6425	100%	22%	38%	37%	3%
2020-21	229598	53656	74198	96063	5681	100%	23%	32%	42%	2%
2021-22	249507	60944	93780	88167	6616	100%	24%	38%	35%	3%
2022-23	262393	68705	93415	94610	5662	100%	26%	36%	36%	2%
2023-24	285859	74791	105649	99190	6229	100%	26%	37%	35%	2%
Average	246036	60639	88819	90455	6123	100%	25%	36%	37%	2%

Annexure 3.8: Public expenditure pattern of Karnataka-Economic Sector-wise

Year	Economic Sector			Economic Sector		
	Economic Sector (Rs. Crore)	**Revenue (Rs. Crore)**	**Capital (Rs. Crore)**	**Economic Sector (**in %**)**	**Revenue (**in %**)**	**Capital (**in %**)**
2019-20	74244	47794	26450	100%	64%	36%
2020-21	96063	48732	47331	100%	51%	49%
2021-22	88167	53003	35164	100%	60%	40%
2022-23	94610	51900	42711	100%	55%	45%
2023-24	99190	62331	36860	100%	63%	37%

4. FISCAL PERFORMANCE AND LIABILITIES OF KARNATAKA (2012-13 to 2023-24)

4.1. Introduction

This chapter focuses on the fiscal performance of Karnataka from 2012-13 to 2023-24 and critically analyses the different indicators to paint a picture of the condition of finance and debt of the state. A study conducted by Dholakia et al. (2004) talks about different indicators like public debt to GSDP ratio, fiscal deficit to GSDP ratio, primary deficit to GSDP ratio, interest payments to revenue receipts, interest payments to total expenditure, state's own revenue to revenue receipts and revenue deficit to gross fiscal deficit to assess the fiscal performance of the state government. In this chapter, we have analysed the trends in revenue surplus and fiscal deficit along with the debt to GSDP ratio over the years to understand the state's fiscal health. This chapter will also focus on the Fiscal Responsibility and Budget Management Act 2003, and its predecessor the Karnataka Fiscal Responsibility Act,2002 and their mandates.

In the late 1990s and early 2000s, Karnataka saw a worsening fiscal situation. The fiscal deficit level rose from 2.2% of GSDP to 5.20% of GSDP from 1997-98 to 2001-02 (Ramu, 2020). In 2001-02, there was a revenue deficit in the state budget. The main reason for this deficit was the poor performance of the public sector enterprises and the subsidies given to higher education institutes, irrigation, etc., which had uneconomic pricing, causing huge losses. These loss-making enterprises relied very heavily on government subsidies to stay afloat, and this increased public expenditure. Karnataka was one of the first states to implement a fiscal responsibility Act even before the centre to contain these issues and give a boost to its economic growth and increase spending on productive areas like infrastructure. In its white paper on state finances in 2001, it mentioned the need to take fiscal correction actions to achieve sustained growth and attract private investments (Ramu, 2020). The widening gap between revenue and expenditure and the fact that borrowed funds were diverted towards unproductive expenditures led to an increase in the state's debt. The Karnataka Fiscal Responsibility Act, 2002 laid down 17 fiscal management principles to help the state achieve its fiscal goals.

A deficit in simple terms means a shortfall or a loss. A revenue deficit is the difference between the revenue expenditure and revenue receipts. A fiscal deficit is when an economy has a higher total expenditure compared to its total revenue. According to the Fiscal Responsibility and Budget Management Act, 2003 a fiscal deficit is defined as "the excess of total disbursements, from the Consolidated Fund of India, excluding repayment of debt, over total receipts into the Fund (excluding debt receipts) during a financial year." India went through financial problems in the early 1990s, and the combined fiscal deficit levels of the central and state government reached double digits, before the central government implemented the Fiscal Responsibility and Budget Management (FRBM) Act in 2003, the Karnataka Government had proactively introduced the Karnataka Fiscal Responsibility Act (KFRA) ,2002. This Act was introduced to achieve fiscal discipline, which was mandated by the central government to all the states. The state was able to bring down its increasing revenue and fiscal deficit from 5.20% in 2001-02 to the permissible limit due to implementation of the KFRA Act. In 2001-02, there was a revenue deficit of 2.90% of GSDP. Soon after implementing the KFRA Act, this was brought down to zero. In 2018-19, the revenue deficit was 0.01% (near-zero) and the fiscal deficit and liabilities were under permissible limits even though these had increased during 2011-12 and 2019-20 (Source: Basic Data, CSO, Ministry of Statistics and Programme Implementation and National Institute of Public Finance and Policy database on Finance Accounts).

4.2. Fiscal Responsibility and Budget Management Act, 2003

The Fiscal Responsibility and Budget Management Act, 2003 specifies the targets with regards to three fiscal indicators – the revenue deficit, fiscal deficit, and fiscal liabilities in terms of percentage of GDP. A threshold limit was imposed over which these indicators could not increase. These limits had to be adhered to by all the states by the end of the financial year 2017-18. It also stipulated that the government should not borrow from the Reserve Bank of India unless under special circumstances. Its scope extends to all of India. The main objectives of the Act were to eliminate revenue deficit completely by 2008-09 and to reduce the fiscal deficit to 3% of GSDP. The financial crisis of 2008-09, which pushed the world into the worst recession of the time, forced the state government to infuse funds into the economy to keep it afloat. This was a major hurdle to the state to achieve its targets as set out by the Act.

Karnataka was the first major state to implement this Act on 27 August 2002. The fiscal liabilities of the state government had increased steadily from Rs. 119273 crore to Rs.164279 crore between 2012-13 and 2014-15. By 2014-15, the debt was growing at 18.8%. Further, during 2016-2022, it has continued increasing going up to Rs. 490256 crore. The Medium-Term Expenditure Framework Statement was introduced in the amended act in the budget of 2012-13, which provided targets for expenditure. Lalvani (2009) suggested to give powers to the comptroller and auditor general to act as a fiscal council for better enforcement of the rules of the act. C. Singh et al. wrote "The main reason behind the implementation of this act was to serve as a deficit management tool of the government which was believed to be the main cause of fiscal indiscipline, higher government debt, spillover into monetary policy, and higher inflation".

Reddy (2008) notes that despite implementation of the FRBM Act, the off-budget liabilities had increased, which directly causes an increase in fiscal deficit. Mohapatra (2014) talks about not only measuring fiscal deficit as a percentage of GSDP but also about focusing on lowering absolute levels of fiscal deficit to achieve fiscal prudence.

Fiscal prudence had been a major goal for the Indian government since 1958.The Estimates Committee in its 20th Report suggested a committee be established to keep an eye on new expenditures being added to the budget. The union budget recorded revenue deficit for the first time in 1979-80 and from there our fiscal situation started deteriorating. By 1991, the Balance of Payment crises had taken a turn for the worse and India had to resort to borrowing funds from the International Monetary Fund (IMF). When the FRBM Act was enacted on 26 August 2003, it mandated that the gross fiscal deficit had to be reduced by 31 March 2008, and a limit of 3% of GDP was imposed on it and the revenue deficit had to be brought down to zero by 31 March2008; and thereafter, the government had to focus on building a revenue surplus. In 2015, the Act was amended, and it was mandated that the revenue deficit be kept under 2% of GDP.

4.3. Karnataka Fiscal Responsibility Act (KFRA), 2002

Many studies have indicated that going forward, the way to sustainable economic growth can only be achieved if countries achieve fiscal discipline. The same was the case for India, especially in the late 1980s and 1990s when the country as well as Karnataka had the worst fiscal situation. In the budget for 2002-03, an announcement was made to bring out a fiscal responsibility bill to achieve the objectives of the Medium-Term Fiscal Plan of 2001-02 to

2004-05. The MTFP's objectives were to eliminate the revenue deficit, contain the fiscal deficit to 3% of GSDP and to cap the debt to GSDP ratio at 25%. The bill also mandated the state government to lay down MTFP before the houses of the state legislature every financial year. This bill also required the state government to maintain transparency in its fiscal operations.

In response to the above, the KFRA Act was framed in 2002, and it lays down mandates for key fiscal indicators of the state. The Act also provides for careful debt management by limiting the government's borrowings and ensuring more transparency in fiscal operations. It also mandates the government to lay down a MTFP every year for the next five years. The three key fiscal parameters – revenue, fiscal and primary deficit indicate the extent of overall fiscal situation during the period. The state has been able to adhere to the threshold limits on key indicators set by this Act since its enactment except for 2008-09 and 2009-10 due to the financial crisis that affected the whole world. The mandates were relaxed during the time so that the government could take all measures to boost the economy. It has also been able to maintain near- zero revenue deficit to GSDP ratio and have a surplus from 2004-05 onwards, which started falling when the net revenue from public sector enterprises started falling and went back to its deficit state during the pandemic in 2020. The fiscal deficit to GSDP has been maintained at below 3% except during 2020-21 and 2021-22, which were the two years when the world was affected by the COVID-19 pandemic. The state has reduced its capital expenditure to achieve these targets and also reduced expenditure on education and health marginally. This was detrimental to the state as it did not fare well in terms of improvements in social indicators of nutrition and education.

The Karnataka Fiscal Responsibility Act, 2002 was a predecessor to the Union Government's Fiscal Responsibility and Budget Management Act, 2003 and was enacted proactively by the Karnataka government. It was the only state to have a plan of action before the Union Government's mandates to all the states were laid down in the consecutive year. A revenue deficit of 2.90% of GSDP and a fiscal deficit of 5.20% of GSDP (Ramu, 2020) was the reason the Karnataka Fiscal Responsibility Act came into force.

4.4. Fiscal and Revenue Deficit in Karnataka

A snapshot of the revenue and fiscal deficit situation from 2012-13 to 2023-24 follows.

Table 4.1: Absolute Values of Fiscal and Revenue Deficit in Karnataka.

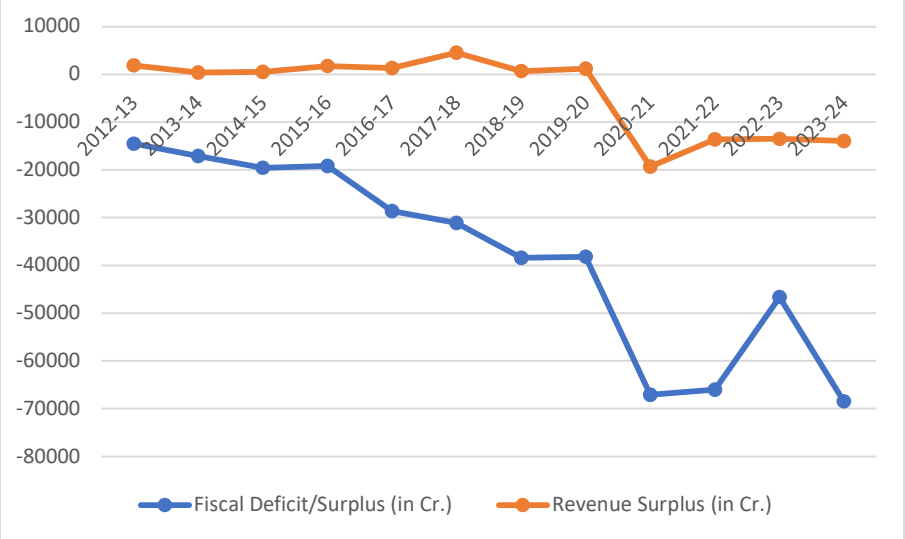
Year/Particulars	Fiscal Deficit (in Rs. crore)	Revenue Surplus (in Rs. crore)
2012-13	14507	1883
2013-14	17092	353
2014-15	19576	528
2015-16	19169	1789
2016-17	28664	1293
2017-18	31101	4518
2018-19	38442	679
2019-20	38166	1185
2020-21	67098	-19338
2021-22	66036	-13666
2022-23	46622	-13496
2023-24	68505	- 13951

Sources: Karnataka Budget Documents of various years; PRS.; GSDP at Current Prices Economic Survey of Karnataka; National Statistical Office, Advance Estimates of GSDP; MTFP Documents Karnataka.

From Table 4.1, we can see that the state was able to maintain a revenue surplus, albeit a falling surplus up to the year when the pandemic hit (2019-20). The revenue deficit had increased to Rs. 19388 crore during the pandemic year, and since then, the state has always had a deficit that has consistently remained around Rs. 13000 crore. This may be because the government was under pressure to increase economic activity during the period and major businesses had taken a hit as economic activity came to a standstill due to the lockdown that was imposed to curtail spread of the disease.

On the other hand, the fiscal deficit has been increasing over the years, especially from 2019-20 to 2023-24, where it doubled from Rs. 38166 crore to Rs. 68505 crore. This jump in fiscal deficit indicates the strain that was put on the government during the time as countries were grappling to come to terms with this new situation caused by the COVID-19 pandemic, causing massive unemployment, decreasing productive expenditures and increasing welfare expenditures.

Figure 4.1: Fiscal and Revenue Deficit/Surplus from 2012-13 to2023-24



Source: Computed from CAG state reports

Table 4.2: Fiscal and Revenue Deficit as a Percentage of GSDP

Year/Particulars	Fiscal Deficit (%)	Revenue Surplus (%)
2012-13	2.09	0.27
2013-14	2.09	0.04
2014-15	2.14	0.06
2015-16	1.83	0.17
2016-17	2.37	0.11
2017-18	2.33	0.34
2018-19	2.60	0.05
2019-20	2.37	0.07
2020-21	4.13	-1.19
2021-22	3.36	-0.70
2022-23	2.08	-0.60
2023-24	2.67	-0.54

Source: Computed from Data from CAG State Reports

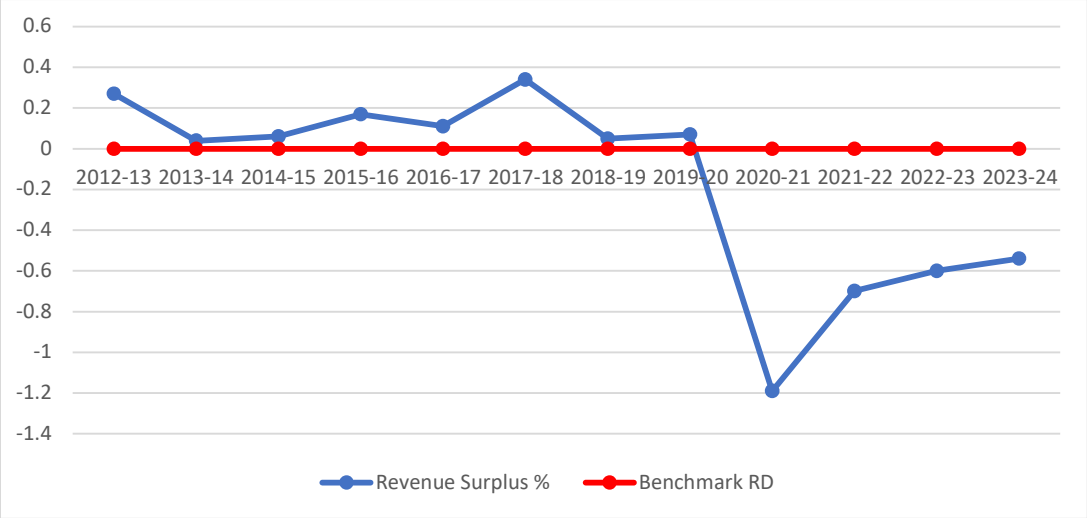
The first mandate of the KFRA Act was to maintain revenue surplus, which the government was able to do up to 2019-20. The state was able to meet this target up to 2019-2020, but in 2020-21, they saw a revenue deficit of 1.19%. This revenue surplus that they were able to maintain till 2019-20 was one of the reasons the state was able to increase its capital

investment, which propelled the growth over the years. K. Gayathri, et al. write "The revenue surplus that has been achieved has been contributing to the enhancement of capital outlays; however there has been a decline in the revenue surplus in the recent past. The increased reliance on low-cost market borrowings may help in lesser interest burden, however an issue for concern would be their repayments, as it is primarily important that borrowed fund are productively used."

The revenue deficit in 2019-20 was due to the pandemic and the economic crisis caused by it as there was very slow recovery during this period. The nature of deficit indicates the extent of fiscal prudence in financial management.

In 2020-21, the state had a revenue deficit of Rs. 19,388 crore. This was an effect of the pandemic as there was a lot of unemployment and low demand during the period due to which the government's revenue through taxes could have fallen, leading to a deficit. However, the revenue receipts picked up in the consecutive years, improving the deficit.

Figure 4.2: Comparison of actual and benchmark revenue surplus as a percentage of GSDP



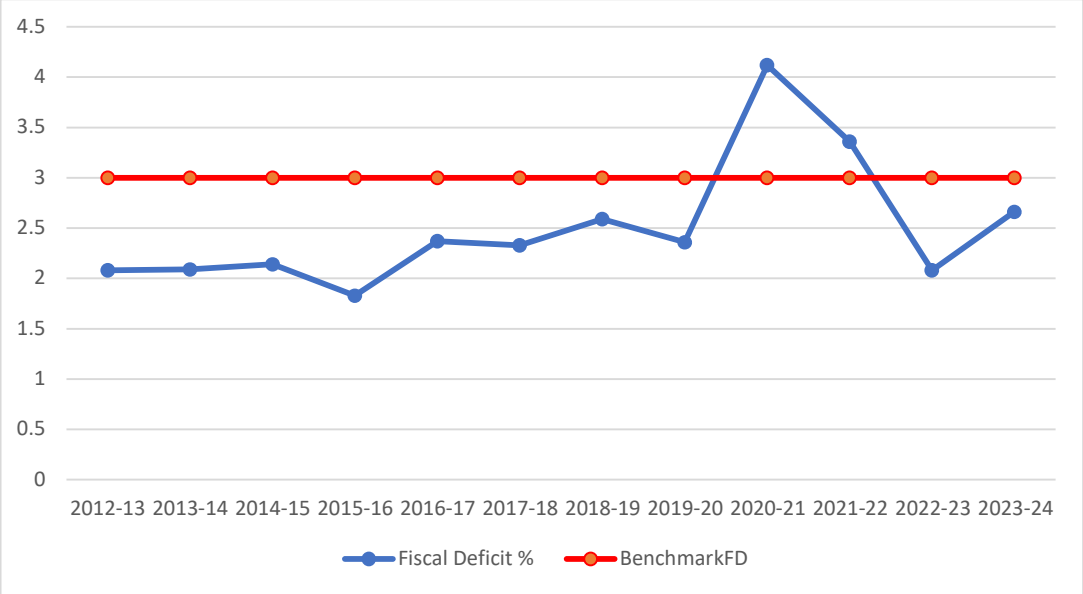
Source: Computed from CAG state reports

The graph in Figure 4.2 shows a benchmark line for revenue surplus at 0,which indicates the Act's original mandate had been to reduce revenue deficit to zero and then start building a revenue surplus. The blue line graph indicates the trend of revenue surplus over the years

from 2012-13 to 2023-24. This line was above the benchmark line all the way up to 2019-20 after which there is a steep fall, indicating the first year of revenue deficit during this period. Even though the deficit has improved since then, we have not yet reached the zero-revenue deficit mark since the pandemic.

The second mandate was to maintain the fiscal deficit as a percentage of GSDP below 3% up to 2019-20, below 5% in 2020-2021 and below 4% in 2021-22. These two revised benchmarks were for the pandemic years, which were an exception. The fiscal deficit as a percentage of GSDP has been within the targeted level of 3% between 2011 and 2016 with a moderate fall in the rate during 2015-16 to 1.83%. The only time they went above the stipulated levels was again during the pandemic years, where they went marginally above 3% to 4.12% and 3.36% in the years 2020-21 and 2021-2022, respectively. The state was able to adhere to this target all through from 2012-13 to 2023-24. The fiscal deficit in absolute values kept increasing between 2017 and 2022 with a steep increase from Rs. 38166 crore to Rs. 67098 crore between 2019-20 and 2020-2021 and then slightly improved in the consecutive years.

Figure 4.3: Comparison of actual and benchmark fiscal deficit as a percentage of GSDP



Source: Computed from CAG state reports

The above graph represents the fiscal deficit as a percentage of GSDP. The red line is a clear indicator of the benchmark levels as mandated by the KFRA Act, which stands at 3%.

The blue line graph indicates the trends in fiscal deficit over the years from 2012-13 to 2024. The fiscal deficit has been higher than the benchmark rate in 2020-21 and 2021-22, indicating breach of mandate during these two years. The reasons are the same as above, and during these two years, the benchmark rate was revised keeping the raging pandemic in mind, which caused a massive slowdown in the world economy.

The third mandate was to maintain the debt to GSDP ratio below 25% up to 2020-21. This was maintained up to the end of 2020. In 2020-21, this ratio slightly exceeded by 25.59%. The following section will discuss the issue of debt in detail.

4.5. Issue of Debt

Over the years, from 2012-13 to 2023-24, the GSDP of Karnataka has increased 4 times from Rs. 695431 crore to Rs. 2567340 crore. The fiscal liability/debt has also increased by 5 times from Rs. 119273 crore to Rs. 581246 crore over this period. Both figures have shown an increasing trend and so the debt to GSDP ratio has also shown a mostly similar trend.

Debt to GSDP (Gross State Domestic Product) Ratio

The debt to GSDP ratio is calculated state wise to understand the repayment capacity of the state's debts. The lower this ratio, the better it is for the state as it increases the ability of the state to repay its debt from its income/revenue. Here, debt comprises all the fiscal liabilities of the state government including market borrowings, off-budget borrowings, central government debt, public debt and borrowings from outside agencies.

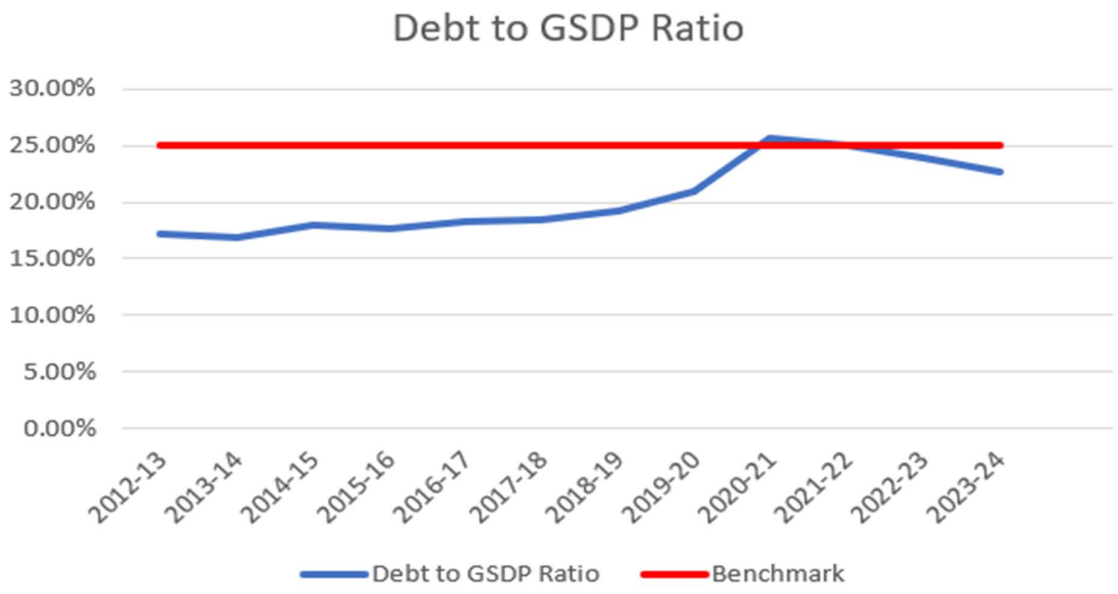
The GSDP of Karnataka has been increasing over the years. The state has mostly seen double digit growth rates except during 2019-20 and 2020-21 when the growth rate of GSDP was 9% and 1%, respectively. The major contributors to high growth in the previous years have been the manufacturing sector and transport and communication (air transport and railways). From 2016 onwards, growth has been mainly driven by the IT, real estate, and industrial sectors, which have been thriving in the past decade. The GSDP growth rate was in double digits till 2018-19, after which it fell and then picked up after 2020-21 when the vaccine was introduced, and lockdown was lifted and economic activity picked up again. Subsequently, the debt to GSDP has been calculated in Table 4.3 for Karnataka from 2012-13 to 2023-24.

Table 4.3: Debt to GSDP Ratio of Karnataka from 2012-13 to 2023-24.

Year	Fiscal Liabilities (in Rs. crore)	GSDP (in crore)	Debt to GSDP Ratio	Growth Rate of GSDP
2012-13	119273	695413	17.15%	-
2013-14	138261	816666	16.93%	17%
2014-15	164279	913923	17.98%	12%
2015-16	183322	1045168	17.54%	14%
2016-17	221319	1207608	18.33%	16%
2017-18	246231	1333240	18.47%	10%
2018-19	285238	1479391	19.28%	11%
2019-20	337520	1611134	20.95%	9%
2020-21	415926	1625073	25.59%	1%
2021-22	490256	1962725	24.98%	21%
2022-23	553363	2241368	24.69%	14%
2023-24	581228	2567340	22.64%	15%

Sources: Fiscal Liabilities-CAG Audit Reports; Directorate of Economics and Statistics, Government of Karnataka; National Statistical Office, Government of India (as per First Advance Estimates).

Figure 4.4: Comparison of actual and benchmark debt to GSDP ratio.



Sources: Fiscal Liabilities-CAG Audit Reports; Directorate of Economics and Statistics, Government of Karnataka; National Statistical Office, Government of India (as per First Advance Estimates).

Figure 4.4 indicates the trend in debt to GSDP ratio over the years. As per the original mandate, a benchmark line has been drawn at 25% and we see that the debt to GSDP ratio has only marginally exceeded this benchmark once in 2020-21; during the rest of the time, the state has done a good job of keeping the fiscal liabilities under control. The 13th Union Finance Commission stipulated that this ratio must be restricted to 25.5%. This ratio steadily increased over the years until 2020-21 when it was 25.59%. After this, the ratio fell slightly and came back below the mandated levels. The 14th Union Finance Commission mandated the debt to GSDP ratio to be not more than 28%. From Table 4.3,we can see that Karnataka despite seeing an increase in debt over the years has been able to maintain this ratio to under 28% even during the pandemic.

In 2021-22, the state government amended the KFRA to raise the fiscal deficit from 3% to 4% of the estimated GSDP. Slow recovery during this period led to the revenue deficit and total liabilities to exceed 25% of the GSDP to aid in growth of the economy. The state recorded revenue surplus from 2004-05 onwards, barring the last few years from 2020-21 to the present; and the fiscal deficit and debt to GSDP ratio was well within the limit of 3/5% and 25%/28% of GSDP as prescribed under the Act. During the years when the state

had revenue deficit, due to the effects of the pandemic on the economy, it was met out of borrowed funds. The fiscal deficit and total liabilities as a percentage of GSDP increased during 2021-22 due to the very low growth in GSDP when compared to the previous year. Pattanayak (2024) stated that according to a senior government official, the Centre is not targeting the states to reduce the debt to GSDP ratio steadily as of now and it proposes to do that only by 2026-27. The priority right now is to reduce the fiscal deficit, as without this reduction, it is impossible to reduce the debt to GSDP ratio sustainably.

Use of Debt

Between 2017 and 2022, the money borrowed was used for repayment and interest payment on previous debts. However, during 2021-22, a part of it was used to cover a part of revenue expenditure as the revenue receipts were not enough to cover these expenditures. We have seen the state's revenue deficit during these years. Between 2017-18 and 2018-19, the net availability of borrowed funds is negative, indicating that the borrowed funds were not enough to cover the capital expenditure. During 2020-22, the net availability of borrowed fund turned positive because of the GST compensation given to the state government as back-to-back loan, a portion of which was used to cover revenue expenditure as the government had a revenue deficit at the time as per the CAG State Audit Reports.

4.6. Medium-Term Fiscal Plan and Aggregates

The MTFP or Medium-Term Fiscal Plan was formulated by the Karnataka government for the first time for the period 2000-05 as an effort to adhere to the KFRA's requirements of maintaining fiscal discipline. The MTFP is released every year for a period of five years outlining the finances and projections of the state government. In the MTFP (2011-15), the state government projected that in the coming years, it would continue with better enforcement measures for raising revenue, review and monitoring of tax efforts and intense use of information technology. Between 2012 and 2016, the three indicators of revenue deficit, in this case, a surplus which Karnataka had been maintaining since the early 2000s, fiscal deficit to GSDP ratio and the ratio of total outstanding debt to GSDP remained within the prescribed limits.

Table 4.4: Comparison of actual estimation and MTFP projections of absolute values of revenue surplus, fiscal deficit and total liabilities.

	MTFP Projections (in crores)				Actuals (in crores)			
	Revenue Surplus	Fiscal Deficit	Total Liabilities	GSDP	Revenue Surplus	Fiscal Deficit	Total Liabilities	GSDP
2012-13					1883	14507	119273	695413
2013-14 (MTFP 2012-16)	3000	17889	134884	596286	353	17092	138261	816666
2014-15 (MTFP 2012-16 / MTFP 2013-17)	4800 /4515	20483 /20666	154175 /156744	682757 /688870	528	19576	164279	913923
2015-16 (MTFP 2012-16 /MTFP 2013-17)	7800 /8857	23453 /23663	176218 /180407	781768 /788767	1789	19169	183322	1045168
2016-17 (MTFP 2013-17)	13665	27092	207499	903053	1293	28664	221319	1207608
2017-18					4518	31101	246231	1333240
2018-19 (MTFP 2017-21)	1372	35754	278174	1430163	679	38442	285238	1408112
2019-20 (MTFP 2018-22 /MTFP 2017-21))	198 /4518	39277 /39772	326066 /317946	1571064 /1590874	1185	38166	337520	1611134
2020-21 (MTFP 2018-22 /MTFP 2017-21))	237 /6191	43822 /44747	369889 /362693	1752886 /1789882	-19338	67098	415926	1625073
2021-22(MTFP 2020-2024 /MTFP 2018-22)	973 /126	58363 /48286	427056 /418175	2012532 /1931453	-13666	66036	490256	1962725
2022-23 (MTFP20 20-2024)	-30743	65832	492888	2270067	-13496	46622	537256	2241368
2023-24 (MTFP20 20-2024)	-46831	72536	565424	2501241	-13951	68505	581246	2567340

Source: MTFP Plans and CAG audit Reports; *2018-19 GSDP is different in CAG reports and different in MTFP actuals figure; *2022-23 actual total liabilities and GSDP at current prices are also different from MTFP report and CAG audit reports; *2016-17 MTFP GSDP and some other figures different to actuals given in CAG audit reports.

Table 4.4 compares some of the projected values from the MTFP over the years to actual figures. The values given in the table are absolute figures measured in crores. It focuses on three things from the MTFPs – revenue surplus, fiscal deficit and total liabilities – and compares them to GSDP in Table 4.5 by computing them as a percentage of GSDP.

The projected values of revenue surplus have been too optimistic for the years 2013-14 to 2018-19 as we can see that the major differences between the projected and actual values and the actual values are much lower than the projected values in this case. The projected total liabilities and fiscal deficit are much closer to their actual values except for 2020-21, where the projected figure as per the MTFP is lower than the actual fiscal deficit and total liabilities at the time. For this year, the MTFP figure for fiscal deficit was Rs. 43822 crore and Rs. 44747 crore as per MTFP 2018-22 and MTFP 2017-21, whereas the two actual figures for the same years wereRs. 67098 crore and Rs. 415926 crore.

The projected total liabilities as per the MTFP 2018-22 and MTFP 2017-21 were Rs. 36889 crore and Rs. 362697 crore compared to the actual value of Rs. 415926crore. This higher fiscal deficit and liabilities figure indicates that the government had to step up and increase its borrowings to cope with the effects of the pandemic on the economy at the time.

The opposite is true for the GSDP figures for the same time where the actual GSDP for 2020-21 was Rs. 1625073 crore, which is much lower than the projected values of Rs. 1752886 crore and Rs. 1789882 (as per MTFP 2018-22 and MTFP 2017-21).

The MTFP 2020-24 has pessimistic predictions of revenue deficit as the world was dealing with the effects of the pandemic and had no historical experience or data to rely on to base their figures. The projected revenue deficit for 2022-23 was Rs. 30743 crore.For 2023-24, it was projected as Rs. 46831 crore, but the actual revenue deficit was much lower at Rs. 13496 crore and Rs. 13951 crore for these years, respectively. This means the government was able to quickly adjust to the situation and start closing the gap between revenue expenditure and income sooner than expected.

Table 4.5 focuses on the ratios and compares these figures as a percentage of GSDP. Here also we have the projected figures and the actual figures to present a clear picture of the situation.

Table 4.5: Comparison of actual estimation and MTFP projections of revenue surplus to GSDP, fiscal deficit to GSDP and debt to GSDP ratios.

	MTFP Projections			Actual Figures		
	Debt to GSDP Ratio (%)	Fiscal Deficit to GSDP (%)	Revenue Surplus to GSDP (%)	Debt to GSDP Ratio (%)	Fiscal Deficit To GSDP (%)	Revenue Surplus to GSDP (%)
2012-13				17.15	2.09	0.27
2013-14 (MTFP 2012-16)	22.62	3.00	0.50	16.90	2.09	0.04
2014-15 (MTFP 2012-16 / MTFP 2013-17)	22.58 /22.75	3 /3	0.70 /0.66	17.90	2.14	0.06
2015-16 (MTFP 2012-16 /MTFP 2013-17)	22.54 /22.87	/3	1 /1.12	17.59	1.83	0.17
2016-17 (MTFP 2013-17)	22.97	3.00	1.51	18.32	2.37	0.11
2017-18				18.40	2.33	0.34
2018-19 (MTFP 2017-21)	19	2.50	0.10	20.26	2.73	0.05
2019-20 (MTFP 2018-22 /MTFP 2017-21))	20.75 /19.98	2.50	0.01 /0.28	20.94	2.37	0.07
2020-21 (MTFP 2018-22 /MTFP 2017-21))	21.1 /20.26	2.50	0.01 /0.35	25.5	4.13	-1.19
2021-22(MTFP2020-2024 /MTFP 2018-22)	21.21 /21.65	2.9 /2.5	0.05 /0.01	24.97	3.36	-0.70
2022-23 (MTFP2020-2024)	21.71	2.90	-1.35	23.97	2.08	-0.60
2023-24 (MTFP2020-2024)	22.61	2.90	-1.87	22.64	2.67	-0.54

Source: Computed from MTFP Reports

The debt to GSDP ratio in the MTFP projections have always been within the mandated 25% and sometimes even been under 20% (in 2018-19). The actual ratios have also always stayed under these limits except for 2020-21 when it went up to 25.59% of GSDP. This tells us that Karnataka has done well in terms of this fiscal parameter by maintaining the debt of the state under the limit even during the pandemic.

For a fiscally strong economy, the fiscal deficit to GSDP ratio is mandated to be under 3%. The MTFP projections for this parameter in the table have always been predicted to be within the limit, which shows the government has taken steps to contain the fiscal deficit and tried to adhere to the mandates of the act. The actual figures on the other hand had exceeded the mandated figures in 2020-21 to 4.13% and in 2021-22 to 3.36%. We have explored the reasons for the breach in mandate in the previous sections.

The projected revenue surplus as a percentage of GSDP has been much higher than actual values throughout the period of 2012-13 to 2019-20, where in reality, the state has only been able to maintain a marginal revenue surplus compared to the very optimistic figures in the MTFP. In 2020-21, the state saw a revenue deficit and the ratio of revenue deficit to GSDP was 1.19%, but since then, the government has made all the efforts and brought down this ratio to 0.54% by 2023-24.

2.7. Medium-Term Fiscal Plan 2024-28

The latest medium-term fiscal plan for 2024-28 lays down the objectives of the state government for the upcoming four years in terms of achieving fiscal prudence. It compares the actual values of previous year with the budget estimate for the current year and projections for the next three years ahead. The plan states that India achieved a growth rate of 7.3% in 2023 and this is attributed to a surge in domestic consumption along with an increase in public expenditure, especially in the infrastructure of the country.

Karnataka has been one of the most important contributors to this boost in the growth of the country and the state's projected growth rate is almost as high as 10.2% for 2023-24, which is more than the country average. The state has seen a slowdown in its agriculture sector as the contribution of this sector to the state's GSDP was minimal and grew only by 5.6%. As with the previous years, a major contributor to the increase in GSDP was the services sector, which has been growing exponentially in the state at 12.8%.

Table 4.6: MTFP 2024-28 projections of absolute values of revenue surplus, fiscal deficit and total liabilities.

	BE 2024-25	2025-26	2026-27	2027-28
Revenue Surplus	-27354	-21911	-9927	2351
Fiscal Deficit	82981	86071	85507	80088
Total Liabilities	665095	747925	843101	945930
GSDP	2809063	3146151	3523689	3946531
Debt to GSDP Ratio (%)	23.68	23.77	24	23.97

Source: MTFP Report 2024-28

Another major challenge for Karnataka was the revenue deficit of the state, which was not previously an issue as the state had a revenue surplus for most of the time until the pandemic. The GST compensation given by the Government of India to the states has stopped with effect from July 2022 and this could be one reason for the state not reverting to a revenue surplus after the pandemic ended. The revenue expenditure grew from 2020 to 2024-25, whereas capital expenditure has mostly remained the same. One point of concern is Karnataka's inflation outlook. The state's inflation projections exceed the country's projection at this point of time as the inflation has increased from 5.48% to 6.65% from 2022-23 to December 2023. The main cause of this increase is the rising fuel and food prices. Slow agricultural growth due to failure of the 2023 monsoon is the main reason of rising living costs.

The overall growth rate of Karnataka projects an immense growth for the state of up to 10.2% due to infrastructure and technological developments owing to significant partnerships formed by the state with various international firms for the upcoming years.

The MTFP estimates a GSDP growth rate of 12.5% for 2024-25. The state's own tax revenue is also expected to go up by 18% and it constitutes a major part of the revenue receipts of the state, which should ideally improve the revenue deficit. The report estimates an increase in expenditure by 17% over the revised estimates of 2023-24. The major revenue expenses of the state constitute committed expenses like payment of salaries, pensions, interests, subsidies, transfers to local bodies, and social security guarantee schemes. The estimated fiscal deficit as per MTFP for 2024-25 is Rs. 82981 crore. The estimated percentage of fiscal deficit as a percentage of state GSDP is 2.95%, which is

below the prescribed limit of 3% as per the FRBM and KFRA Act. The total outstanding liabilities as a percentage of GSDP is estimated to be about 23.68%.

A part of the capital receipts of the state including market borrowings will see a portion of it going towards bridging the estimated revenue deficit. The capital to fiscal deficit ratio is 62%, which indicates the extent to which borrowings are being used for capital investments. It is good that a major part of borrowing being used for productive expenses will generate further income for the state.

This anticipated revenue deficit in 2024-25 is Rs.27354 crore, which is then projected to decrease to Rs. 21911 crore and then to Rs. 9927 crore. Finally, in 2027-28, it is expected that the state will be able to turn over to looking to revenue surplus of Rs. 2351 crore This deficit, which will be covered using borrowed funds, is due to a decrease in revenue receipts and an increase in revenue expenditure. The revenue deficit is forecast to keep falling until 2026-27.

The debt as a percentage of GSDP remains more or less the same over these years until 2027-28 as it is estimated to be maintained under 25% as per the mandates of the FRBM and KFRA Acts.

Table 4.7 outlines the actual expenditure and budget estimates for the years 2014-15 to 2023-24. These figures have been taken from the budget documents of the Karnataka government.

Table 4.7: Comparison of total budgeted expenditure and total actual expenditure.

Year	Total Budgeted Expenditure (in Rs. lakh)	Total Actual Expenditure (in Rs. lakh)
2014-15		11345383
2015-16	13871579	13231181
2016-17	16732785	13931008
2017-18	17447268	17423109
2018-19	20605307	20097295
2019-20	22169991	21089748
2020-21	22306120	22025473
2021-22	23091066	25301887
2022-23	24189986	26574773.4
2023-24	29942966	

Source: Budget Documents, Government of Karnataka

We can see that the actual figures have remained approximately close to the estimates throughout, except for 2021-22 and 2022-23.

A major part of the expenditure of the state government that needs to be monitored closely is the money spent on debt servicing. Table 4.8 has been derived from the expenditure figures to study how the money spent on debt servicing has changed over the years. We can see that this expenditure has steadily increased over the years from Rs.1421620.94 lakh in 2014-15 to Rs. 4736964.73 lakh in 2022-23.

Table 4.8: Comparison of budgeted expenditure and total actual expenditure of debt servicing.

Debt Servicing (in Rs. Lakh)		
Year	**Budget Estimates**	**Actual**
2014-15		1421620.94
2015-16	1699057	1592657.13
2016-17	2004795	1945299.73
2017-18	2268453	2219874.36
2018-19	2769442	2720552.88
2019-20	2937467	2904980.69
2020-21	3517167	3463620.26
2021-22	4372564	4273515.22
2022-23	4557330.55	4736964.73
2023-24	5846767.4	

Source: Budget Documents, Government of Karnataka

Further, we have analysed the expenditure on some of the important sectors of Karnataka like information technology and infrastructure. The money spent on information technology increased up to 2017-18 and then fell until 2020-21 when it picked up again. However, the expenditure was still less compared to pre-pandemic highs.

Table 4.9: Comparison of budgeted expenditure and total actual expenditure on information technology

Expenditure on Information Technology (in Rs. Lakh)		
Year	**Budget Estimates**	**Actual**
2014-15		20872.58
2015-16	20200	21942.43
2016-17	22178	22922.71
2017-18	29902	32842.51
2018-19	25296	25750.4
2019-20	19053.71	12944
2020-21	10327	19990.33
2021-22	7884	9384.8
2022-23	17129	16949.48
2023-24	23722.34	

Source: Budget Documents, Government of Karnataka

However, a look at the figures for the infrastructure head shows an increase in spending from Rs. 10591.62 lakh to Rs. 153492.57 lakh from 2014-15 to 2022-23. In this case, the budget estimates have been different from the actual figures.

Table 4.10: Comparison of budgeted expenditure and total actual expenditure on infrastructure

Expenditure on Infrastructure (in Rs. Lakh)		
Year	**Budget Estimates**	**Actual**
2014-15		10591.62
2015-16	21535	2392.73
2016-17	15695	81228.23
2017-18	13098	10302.84
2018-19	10064	6540.21
2019-20	1656.59	6547.88
2020-21	8204	18145.35
2021-22	8972	61712.97
2022-23	14571.92	153492.57
2023-24	103856.11	

Source: Budget Documents, Government of Karnataka

The Medium-Term Fiscal Report ends by stating the challenges and opportunities the state will face over the next four years, including achieving a revenue surplus by reducing non-productive committed expenses, which are not being spent towards welfare of the public and state. The transformation of the revenue deficit into a surplus may be achieved sooner than the projected figures if the state keeps up its growth and no other external circumstances change too much.

2.8. Conclusion

This chapter focuses on the fiscal performance of Karnataka from 2012-13 to 2023-24. The Karnataka Fiscal Responsibility Act, 2002 predates the Union Government's Fiscal Responsibility and Budget Management Act, 2003 and specifies the targets with regards to three fiscal indicators—the revenue deficit, fiscal deficit, and fiscal liabilities—in terms of percentage of GDP. The state was able to meet this target revenue surplus up to 2019-20, but in 2020-21, they saw a revenue deficit of 1.19%, which might have happened due to the pandemic and the economic crisis caused by it. The fiscal deficit as a percentage of GSDP has been within the targeted level of 3% between 2011 and 2016 with a moderate fall in the rate in 2015-16 to 1.83%. The only time they went above stipulated levels was again during the pandemic years, where they went marginally above 3% to 4.12% and 3.36% in the years 2020-21 and 2021-2022, respectively. Moreover, the debt-to-GSDP ratio below 25% was maintained up to the end of 2020, slightly exceeding this range to 25.59% in 2020-21. The focus should be given to reducing the fiscal deficit further, as without this, it would be difficult to reduce the debt-to-GSDP ratio sustainably.

Recommendations:

- Though Karnataka has performed commendably in achieving the goals set in the mandate for most of the decade with a little deviation during pandemic years, it would be prudent to try and achieve it every year without deviating to achieve more sustainable economic growth. Moreover, the state should plan and abide by the targets of the medium-term fiscal plans.
- Focusing on expenditure rationalisation by evaluating schemes to check their impact will help pour resources into state-run schemes that are most effective, making the expenditures productive, with some even generating greater revenues, contributing to reduced fiscal deficit, and it will also help in reducing non-

productive committed expenses that are not being spent towards the welfare of the public and state.

- Some reforms in public finance management, like regularising prompt publication of fiscal data on public platforms after audits, will ensure higher investment inflow in the form of PPP or otherwise, which might reduce the immediate fiscal burden on the state while contributing to faster infrastructure development in the state, which will further attract more revenue.

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5. ANALYSIS OF TRANSFERS TO LOCAL BODIES

This main objective of this chapter is to analyse the transfers to local bodies in rural and urban areas. This is ToR vii on state transfers to local government. The chapter is presented in two parts. In the first part, an analysis of both central and state transfers to urban local bodies (ULBs) is carried out. In the second part, an analysis of transfers to rural local bodies is provided.

5.1. Analysis of State Transfers to Urban Local Bodies

The first part of this chapter deals with Karnataka's transfers to its ULBs, covering the period 2012-13 to 2023-24. This part is organised as follows. First, we introduce ULBs in the state. Following this we provide a brief description of the finances of the state's ULBs. After this, we analyse the central finance commission grants and devolution to the state's ULBs, comparing with all-India level wherever possible, and then discuss the state finance commission grants. Conclusions are provided at the end.

5.1.1. Introduction to ULBs in Karnataka

At 38% urbanisation, Karnataka is a moderately urbanised state, although some recent research (Sridhar 2020) has found that if the state were to define its urban areas more liberally (base it only on population density for example), the state would have been 55% urban even as of 2011. This is seen in an increase in the number of ULBs of the state from only 217 in 2010-11 to 279 in 2017-18, and in the population each ULB covers. As per a memorandum submitted to the 15th CFC by the Government of Karnataka, during 2010-17, not only the number of ULBs, but also the population covered by the ULBs increased by 40%. Correspondingly, there has been a continuous increase in their number and status through upgradation (Table 5.1). Based on increasing demand from the citizens, the expectation of funds from the ULBs has also been rising to enable them to deploy necessary infrastructure for the basic services they provide.

Table 5.1 Number of Urban Local Bodies in Karnataka and Population served by them

	2010-11		2017-18		Population Per ULB		ULBs being upgraded
	Number	Population (in 000)	Number	Population (in 000)	2010-11 (in 000)	2017-18 (in 000)	
City Corporation	8	9176	11	14462	1147	1314.7	1
City Municipal Corporation	44	4361	58	4957	99.1	85.5	25
Town Municipal Council	94	2932	115	3465	31.2	30.1	71
Town panchayat	68	999	91	1408	14.7	15.5	15
Notified Area Council	3	28	4	37	9.5	9.4	
All Urban Local Bodies	217	17497	279	24329	80.6	87.2	

Source: Government of Karnataka, Memorandum to the 15th Finance Commission.

Paul et al. (2012) showed how economically dominant Bengaluru is in the state, even though the metropolis did not top the provision of basic services to its citizens. They reported smaller ULBs (such as Shivamogga and Bidar) as being much superior to Bengaluru in terms of their property tax collection efficiency and the provision of basic services such as sanitation facilities. Hanagodimath, & Brahmanandam (2015) analysed the state of services of Karnataka's ULBs along with those in the southern region, in terms of benchmarking urban services. Among the 30 districts in Karnataka, they found Udupi district scored the maximum and Yadgir, the lowest. Interestingly, they reported that among the bottom performing five districts, three districts were from Gulbarga, two from Bangalore division. In the category of City Municipal Councils (CMC), Udupi, Gokak, Shimoga, Tumkur, and Jamkhandi were in the top place in the overall ranking. In the case of City Corporation (CC), seven CCs were from Mysore division in top performance and two CCs were from Gulbarga division for poor performance.

Based on their analysis, the authors concluded by suggesting that North Karnataka in general, and Hyderabad Karnataka region in particular are underdeveloped in urban service level benchmarking. Paul et al. (2012) and Sridhar (2023b) found that Bengaluru is the primate city in the state, which is more than 10 times the size of the second biggest city. Hence special attention should be given to the rest of the state and the backward regions for planning and allocation of funds.

5.1.2. Description of finances of the state's ULBs.

Gayithri, Chandrakanth and Ramanjini (2018) pointed out that while Karnataka for long has been a fiscally prudent state in comparison with many other states in the country, the state experienced a sharp deterioration in its fiscal situation after the mid-1990s into the early years of 2000. Nonetheless, as per Jacob and Chakraborty (2020), even before the federal government passed the Fiscal Responsibility and Budget Management (FRBM) Act, 2003, Karnataka was the first state in the country to establish a framework for fiscal laws. They found that the state's tax-to-GSDP ratio, at 7% of GSDP, was however not rising.

Rao and Choudhury (2004) examined local government's expenditures for human development in Karnataka in education and demonstrated that these funds do not flow to areas with greater needs. Their analysis of decentralisation of expenditures showed that the local governments lacked the flexibility to spend money on the things they preferred and access to sufficient resources for doing so. Bashir (2002) found that if the Government of Karnataka adopts fiscally sustainable strategies in school education, provided fiscal reforms are successful, financing requirements for the educational system expansion of higher quality could be met, mainly from its own resources, and private sector mobilisation, as well as from the adoption of cost-reducing strategies to narrow the financing gap.

Makandar et al. (2019) evaluated the revenue and expenditure management by Karnataka. They described that the state's various initiatives in the primary sector, especially in agriculture and allied activities, have contributed to better redistribution of wealth and inclusive growth.

Murali and Manasi (2020) investigated how various financing arrangements of ULBs affected their accountability systems in India with a focus on Bruhat Bengaluru MahanagaraPalike. They discovered a pattern of financialisation of ULBs that mirrored global trends and its implications on the provision of services to people, who are treated more like customers than as politically engaged citizens. They came to the conclusion that the covenant between the ULBs and the citizens could not be allowed to erode or be broken, regardless of the sources of municipal funding or the conditions they set.

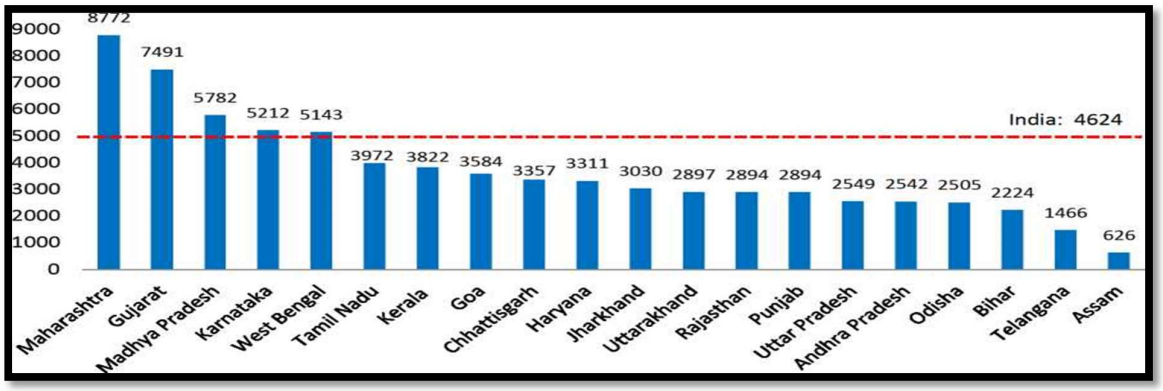
As per the draft urban development policy of Karnataka (2009), the resource gap for the development of urban areas in the state is estimated to be roughly Rs. 100,000 crore, with Bengaluru alone accounting for over 50%. As pointed out by Sridhar et al. (2019), based on the Karnataka Municipal Corporation Act of 1976, ULBs in the state are authorised to impose property tax, which forms the most significant revenue source for them, constituting more than half (53%) of their own revenues, consistent with those in other Indian states. Nonetheless, Sridhar et al. (2019) reported

that in the Class I cities of the state (excluding Bengaluru) – Hubballi Dharwad, Davanagere and Bidar, per capita own source revenues increased in Hubballi-Dharwad and Bidar, while they declined somewhat in Davanagere during 2015-16 and 2016-17. The most interesting finding reported by Sridhar et al. (2019) was that the class I cities followed by class III cities in the state excelled in raising their own sources of revenues – namely property tax revenues and user charges, trailed by class II cities.Assessing the potential from land as a financing instrument for cities, the study by Sridhar et al. (2019) found the most promise in class III cities. The mid-tier, class II cities, had the highest revenues from trade license fees, although the other classes of cities had the potential to tap this too.

Sridhar and Ravi (2022) using data from Karnataka's ULBs examined the determinants of their own source revenues. Their regression results showed that the per capita grants have a highly significant effect on own source revenues per capita, and the level of public services, i.e. water supply and road length positively influenced the own revenue-raising capabilities of ULBs. It is also found that the city's literacy rate of the ULB had a major effect on ULBs. They concluded that better quality of public services, i.e. education, roads, should not be viewed as expenditure as they increase the city's own sources of income.

The ICRIER report for the 15th Central Finance Commission gave a comparative picture of the state's finances in the context of other states. Figure 5.1 presents the total municipal revenue of all states including Karnataka, while Figure 5.2 summarises the own source municipal revenue, both per capita, for all the Indian states.

Figure 5.1 Total Municipal Revenue Per Capita, Indian States (in Rs.)

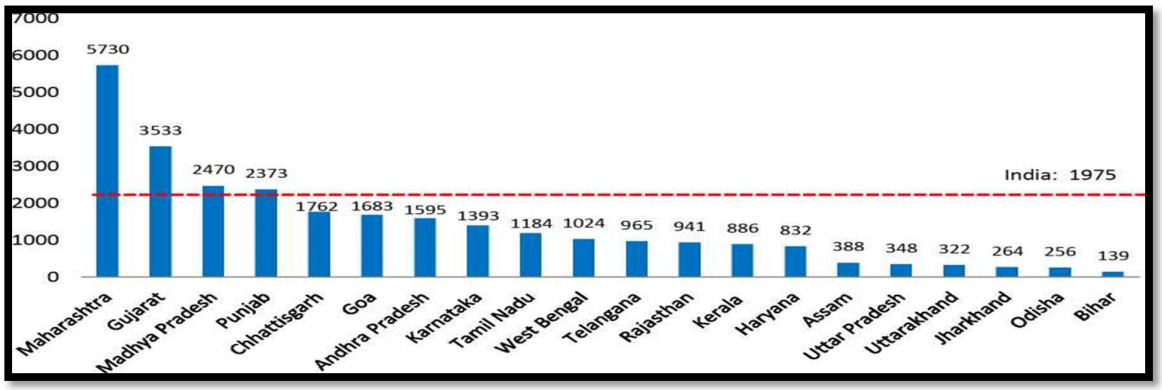


Source: ICRIER report to the 15th Finance Commission

Figure 5.1 shows that Karnataka's municipal revenues per capita (when transfers are included) are higher than the all-India average (of Rs.4,624 per capita). However, Figure 5.2 shows that when municipal own source revenues are considered, Karnataka's per capita (at Rs.1,393) is below the

all-India average (of Rs.1,975). So, Karnataka's ULBs need help in boosting their own source municipal revenues as Sridhar et al. (2019) also found. In the meantime, Karnataka's ULBs need support in the form of transfers from the Centre.

Figure 5.2 Total Municipal Own Source Revenue Per Capita, Indian States (in Rs)



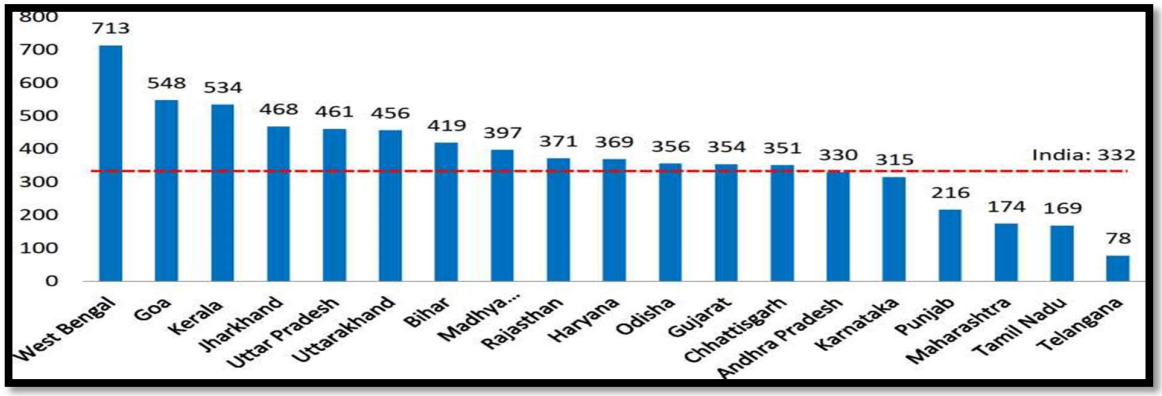
Source: ICRIER report to the 15th Finance Commission

5.1.3. Analysis of CFC grants to state's ULBs

The Central Finance Commission is appointed by the President of India once every 5 years to recommend the devolution of financial resources from the centre to the states. Until now 15 finance commissions (FCs) have been set up in the country, which have made recommendations for transfer of funds to the states and local bodies – both Panchayati Raj Institutions (PRIs) and Urban Local Bodies.

It is instructive to note that CFC transfers to the state have been lower than average. Figure 5.3 shows this. While all-India transfers are at Rs.332 per capita, CFC grants to Karnataka has been only at Rs.315 per capita.

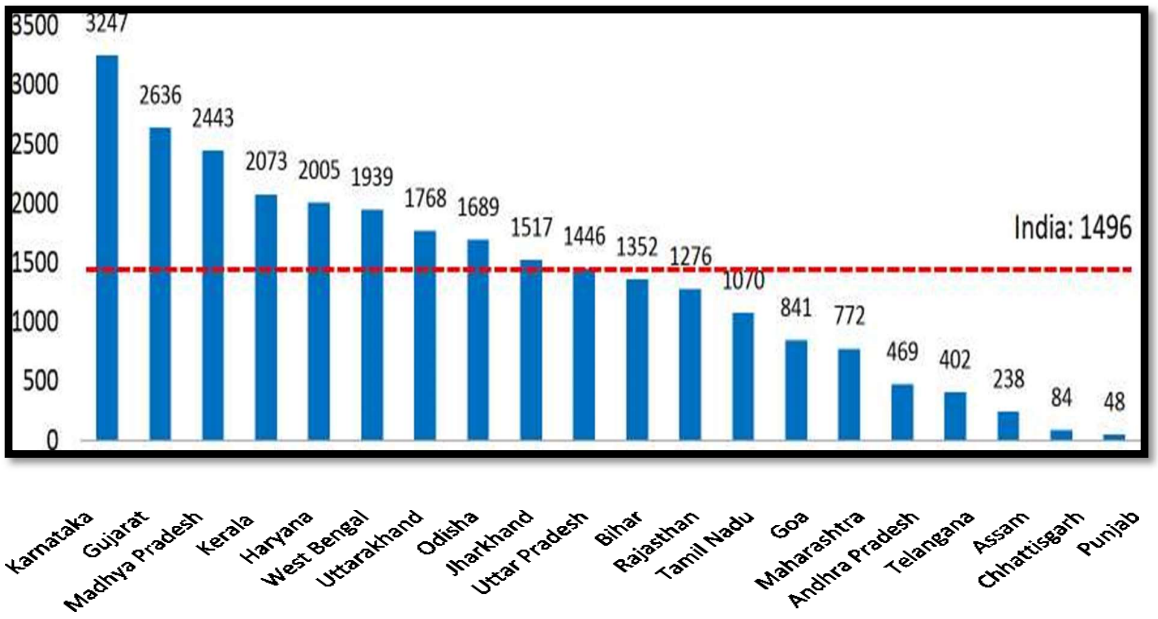
Figure 5.3CFC Grants to Indian States, in Rs Per Capita



Source: ICRIER report to the 15th Finance Commission

However, Karnataka's transfers to its own local bodies have been above average, in fact, they top the Indian states, when compared with that for the other states (see Figure 5.4).

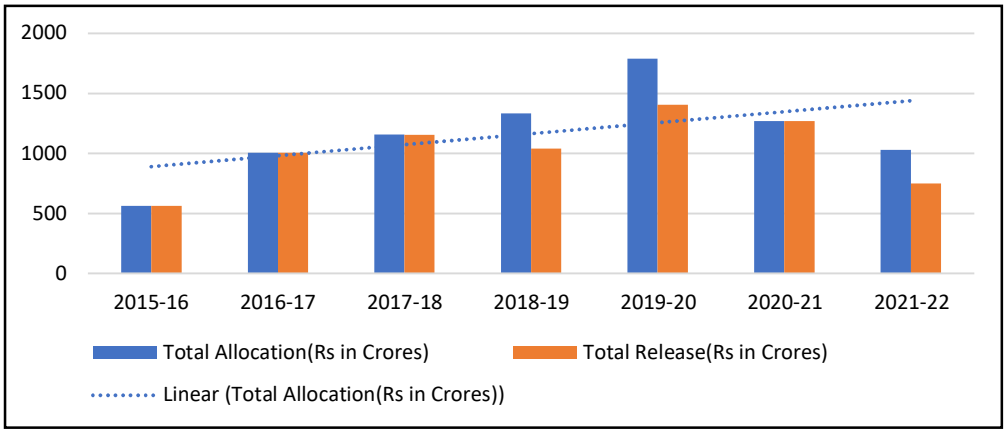
Figure 5.4 State Transfers, in Rs Per Capita



Source: ICRIER report to the 15th Finance Commission

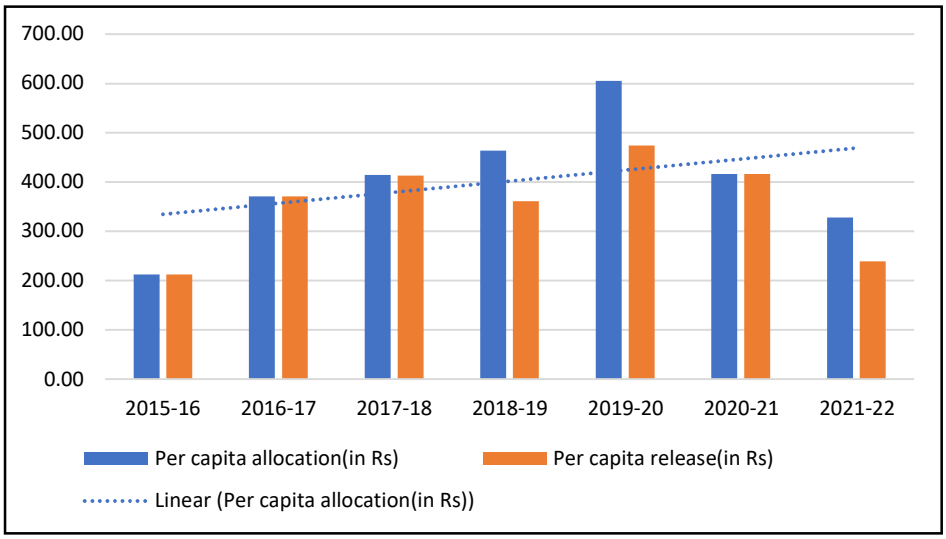
The 11th Finance Commission proposed Rs 10,000 crore as grant to local bodies (20% or Rs. 2,000 crore to ULBs) during 2000-05. This amount was raised to Rs. 25,000 crore by the Twelfth Finance Commission. The 13th Finance Commission recommended 2.28% of the relevant divisible pool (2009-2014) as grant to local bodies. The grant had two components – a basic grant equivalent to 1.5% of the previous year's divisible pool, shared amongst the states based on criteria and weights as given by the Commission and a performance grant of 0.78% of divisible pool. The 14thFinance Commission recommended a grant of Rs. 287,436 crore to local bodies (Rs. 200,292 crore to PRIs and Rs. 87,144 crore to ULBs). This worked out to Rs. 488 per capita per annum at the aggregate level for ULBs. Figures 5.5-5.6 show the total allocation and release and the per capita allocation and release of central finance commission funds to Karnataka's ULBs.

Figure 5.5 Allocation and Release of CFC Funds to Karnataka's Urban Local Bodies



Source: https://sansad.in/getFile/loksabhaquestions/annex/1711/AU4439.pdf?source=pqals

Figure 5.6 Per Capita Allocation and Release of CFC Funds to Karnataka's Urban Local Bodies



Source: https://sansad.in/getFile/loksabhaquestions/annex/1711/AU4439.pdf?source=pqals

Figures 5.5-5.6 indicate that over the period considered – 2015-16 to 2021-22, there was a peak in 2019-20, with per capita allocation of Rs.605 and per capita release of Rs.475, of the CFC funding to Karnataka's ULBs. This could be the case because the same political party was in power that year both at the centre and the state. In three out of the 7 years considered, the allocation and release were the same in the sense that all the allocated funds were released to the state's ULBs. However, in four of the seven years considered, the release was less than the allocation, with the lowest being

in 2021-22, most likely due to the COVID pandemic when the central and state finances were in poor condition, given the lockdowns.

When we compare allocation and release of Central Finance commission grants to Karnataka's ULBs to all-India level during the period, we find Karnataka is above all-India average as far as both allocation and release are concerned up to 2019-20. Howeverin the post-COVID period, per capita allocation and release to the state's ULBs have been less than all-India average (Table 5.2).

Table 5.2 Allocation and Release of Central Finance Commission Grants to ULBs: Comparison of Karnataka with India

	Per capita allocation to ULBs (in Rs)		Per capita release to ULBs (in Rs)	
Year	**India**	**Karnataka**	**India**	**Karnataka**
2015-16	192.88	212.91	188.63	212.91
2016-17	337.65	371.12	330.43	371.12
2017-18	379.06	414.64	340.79	413.21
2018-19	426.52	464.01	320.90	361.48
2019-20	559.27	605.04	423.85	474.72
2020-21	509.53	416.48	508.25	416.48
2021-22	399.39	328.34	362.99	238.85
Average	**400.61**	**401.79**	**353.69**	**355.54**

Source: https://sansad.in/getFile/loksabhaquestions/annex/1711/AU4439.pdf?source=pqals

Further, grants to all state's ULBs under the 15th FC totalled Rs.22,114 crore in 2021-22, increasing to Rs.22,908 crore and to a further high of Rs.24,222 crore in 2023-24 (states' share not available). Besides, grants for incubating new cities are at Rs.2,000 crore each for 2022-23 and 2023-24. There are grants allocated for shared municipal services at Rs.90 crore for each year during 2021-26. Here too, individual state shares are not available.

During 2021-26, Karnataka's share of funds for ULBs from the centre, was Rs.6,409 crore, which represented 5% of funds to all state ULBs. The states with the highest share of funds for their ULBs are Bihar (8.26% of all funds), Madhya Pradesh (6.56%), Maharashtra (9.59%), Rajasthan (6.36%), Uttar Pradesh (16.05%) and West Bengal (7.26%). While most of the Indian states have a lower share of funds for their ULBs, some very urbanised states such as Maharashtra have higher shares, and some very less urbanised states (such as Uttar Pradesh and Bihar) have a greater share of funds. While it is understandable that the higher urbanised states such as Maharashtra and West Bengal have greater funds for their ULBs, it is less clear why the less urbanised states are getting a higher share. This leads to a debate about performance versus equity considerations in a federal structure.

Given cities are the engines of economic growth in the states, and urban development is a state subject in the Constitution of India, the fact that Karnataka gets only 5% of funds to ULBs at all-India level, needs special attention.

Comparative analysis of tied and untied grants from CFCs to Karnataka

The tied grants from the CFC to state ULBs are allocated for specific, high-priority urban development and service delivery objectives. Based on the 15th Finance Commission (2021-26)recommendations, these purposes include:

- Water Supply and Sanitation: Ensuring access to clean drinking water, rainwater harvesting, water recycling, and maintaining open-defecation-free (ODF) status.
- Solid and Liquid Waste Management: Treatment of household waste, faecal sludge management, and maintaining sanitation infrastructure.
- Air Quality Improvement: Especially for million-plus cities,tied grants focus on reducing pollution through urban planning and infrastructure upgrades.
- Health Infrastructure: Support for urban health and wellness centres, diagnostic facilities, and primary healthcare services (e.g., via health grants).

For example, the 15th CFC allocates 100% of grants to million-plus cities as tied grants, while non-million-plus cities (NMPC) receive60% as tied grants for water and sanitation. These priorities align
with national goals like Swachh Bharat Mission and AMRUT (Atal Mission for Rejuvenation and Urban Transformation).

We have disaggregated the tied grants given from CFC to the state ULBs in Table 5.3.[1] As far as the CFC grants to the non-million plus cities of the state are concerned, half of the grants in 2020-21 were each meant for tied and untied purposes. Since 2021-22 to 2024-25, 60% of the CFC grant to ULBs has been allocated for tied purposes, mirroring the SFC trend (discussed in the next section).

Karnataka's urban development with its sizeable urban population (at nearly 39% as of 2011) could be hampered by the lack of funds. Table 5.4 summarises the gaps and requirement of funds for basic services in Karnataka's ULBs as of 2016. It shows the particularly acute fund crunch with respect to the supply of drinking water and municipal wastewater management, drainage, sanitation, roads and parks, which are essential in the post-COVID world. It is instructive to note that Sridhar (2023a)

[1] For CFC, the DMA only had information from the fiscal year 2020-21 onwards. This is due to the fact that the 14th Finance Commission did not categorise grants as tied and untied; instead, it only allocated grants to ULBs.

found a negative association between the existence of parks/open spaces and the prevalence of COVID-19.

Table 5.3: CFC Grants to Non-Million Plus Cities of Karnataka

Year	Allocation (In Rs. crore)			Release (In Rs. crore)			%Tied, Allocation	%Tied, Release
	Tied	Untied	Total	Tied	Untied	Total		
2020-21	495.5	495.5	991	495.5	495.5	991	50.00%	50.00%
2021-22	450	300	750	450	300	750	60.00%	60.00%
2022-23	466.2	310.8	777	466.2	310.8	777	60.00%	60.00%
2023-24	492.6	328.4	821	383.98	255.99	639.97	60.00%	60.00%
2024-25	522	348	870	216.94	144.62	361.56	60.00%	60.00%

Source: Directorate of Municipal Administration, Finance Department, Government of Karnataka and author's analyses

The state's own allocation for urban development is presented in Figure 5.7, which shows that the allocation was rising until the onset of COVID, after which it has declined. Table 5.5 summarises the disparities between allocation and release, which further shows that half the time, the release was greater than that of allocation, while during the other half, the allocation was higher than the actual funds released.

Table 5.4 Assessment of gaps and requirement of funds for basic services in ULBs, Karnataka,2016

Sl. No	Basic Service	Total	Covered		Uncovered or Gap		Funds required/ estimated inRs. crore
			Number	%	Number	%	
1	Drinking Water Supply with>135 LPCD by ULBs (CPHEEO)	275	38	13.82	237	86.18	Rs. 4,754.14
2	Piped Water Supply, 2017 (KUWSSB)	275	145	53.5	126	46.5	
	(i) MCs	11	8	72	3	28	
	(ii)CMCs	57	36	63	21	37	
	(iii)TMCs	114	57	50	57	50	
	(iv)TPs	89	44	49	45	51	
	(v)NAC						
3	No. of ULBs with UGD network& STP,2017	275	68	24.72	207	75.28	Rs. 7580.69
	(i)MCs(covering151new projects)	11	11	100	0	0	
	(ii)CMCs	57	23	40.35	34	59.65	
	(iii)TMCs	114	30	26.32	84	73.68	
	(iv)TPs	89	4	4.5	85	15	
	(v)NACs	4	0	-	-	-	
4	HHs with Toilets/Sanitation in lakhs	50.44	42.84	84.93	7.6	15.04	
5	ODF:Districts which are open defecation free	30	5	16.66	25	83.34	Rs. 1277.50

Sl. No	Basic Service	Total	Covered		Uncovered or Gap		Funds required/ estimated inRs. crore
			Number	%	Number	%	
6	Solid Waste Mgt(SBM)-ULBs with processing and disposal sites(ForO&Mcostof handling 10,000 TPDinBBMPand all other ULBs)	275	207	75.27	68	24.73	
7	Municipal Waste Processed by ULBs (excluding BBMP) In TPD	5790	1410	23.35	4380	75.65	Rs. 5968.29
8	Upgradation of Urban roads in km (asphalt, concrete & WBM)	38196	26661	69.8	11535	30.2	Rs 4637.77
9	Urban Drainage-Storm Water Drains covered with concrete/ stone lining(includes desilting of 6667 km)	33604	18129	53.95	15475	46.05	
10	Street Lighting-ULBs covered with more than 100%	275	7	2.55	267	97.45	
	(i) MCs	11	4	36.36	7	63.64	
	(ii)CMCs	57	1	1.75	56	98.25	
	(iii)TMCs	114	1	0.88	113	99.12	
	(iv)TPs	89	1	1.12	88	98.88	
	(v)NACs	4	NA	NA	NA	NA	
			No	%	No	%	
11	No. of Parks Developed+Protection(for5218works)	8491	3325	39.15	5166	60.85	Rs. 1266.03
12	Housing (Demand) in no. of Dwelling units	1,402,604					
	Total						**Rs. 25,484.42**

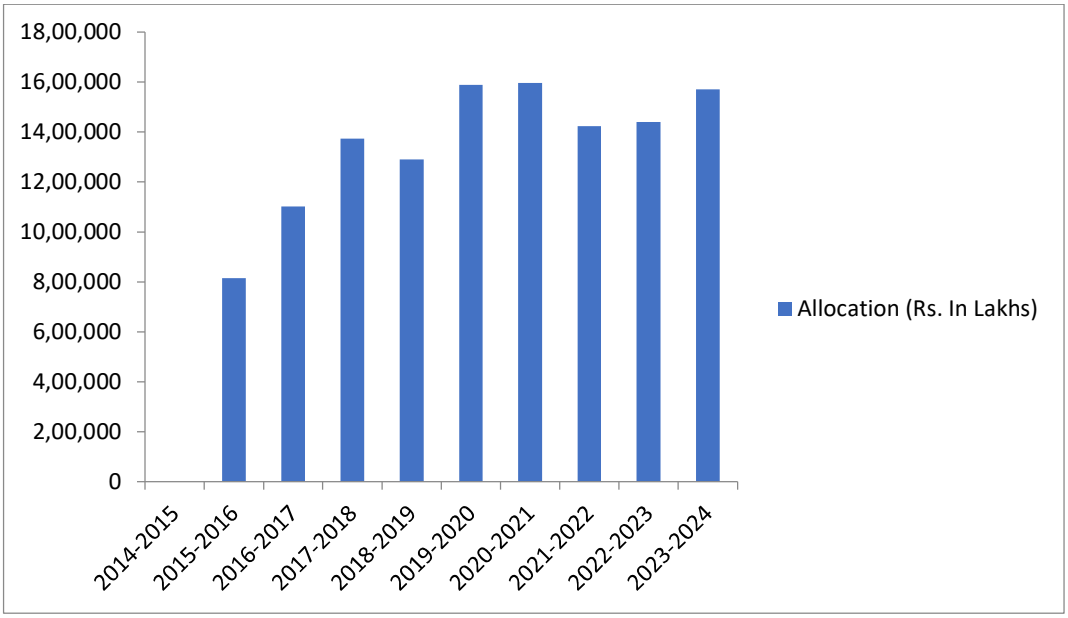
Source: State 4th SFC report.

Table 5.5 Karnataka's Allocation to and Releases for Urban Development (in Rs. Lakh)

Year	Budget (Allocation)	Accounts (Amount Released)	Proportion Release to Allocation
2014-2015	NA	7,35,694	NA
2015-2016	8,14,973	8,26,080	101.36
2016-2017	11,02,926	12,01,057	108.90
2017-2018	13,73,249	13,06,470	95.14
2018-2019	12,90,448	11,94,293	92.55
2019-2020	15,89,075	11,96,037	75.27
2020-2021	15,97,333	13,50,847	84.57
2021-2022	14,23,760	17,92,777	125.92
2022-2023	14,39,895	17,07,168	118.56
2023-2024	15,70,169	NA	NA

Source: Budget of Karnataka, various years

Figure 5.7: Karnataka's Allocation to Urban Development, 2015-15 to 2023-24



Source: Budget of Karnataka, various years

5.1.4. Analysis of SFC grants to ULBs

State Finance Commissions are statutory bodies set up to recommend devolution and transfer of funds from the states to the local governments under the Constitution, through the 73rd and 74th Constitution Amendment Acts– relating respectively to the rural and urban local bodies. The transfer of funds to the local bodies (Panchayati Raj institutions and Urban Local Bodies) from the stateis deemed as horizontal fiscal devolution.

After the 73rd and 74thConstitutional Amendment Acts, the state of Karnataka constituted 5 SFCs. Karnataka constituted its first State Finance Commission in 1994, which submitted its report in 1996. The period covered by the first SFC was from 1997-98 to 2001-02. The second SFC covered the period 2005-06 – 2010-11. The third SFC period covered the period 2011-12 to 2015-16. The state's 4thSFC covered the period 2018-19 to 2022-23.Due to paucity of time, the state's 5th SFC prepared its First Report only for 2024-25. The state's 5th SFC report for the balance period from 2025-26 to 2028-29 was not available at the time of finishing this report.

Gnaneswar (2000) provides an overview of recommendations of SFCs in the southern Indian states (Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu). The study points out that Karnataka was one of the few states (along with Tamil Nadu), which advocated cost recovery through user/service charges in services such as water supply, solid waste disposal, sanitation, etc., either on a sharing

basis or cross-subsidisation, primarily in higher-grade municipalities and corporations. The Karnataka state government follows the "pragmatic normative approach" in revenue sharing. Both administrative feasibility and the norms of services were taken into consideration by the Government of Karnataka for estimating the financial requirements of ULBs. The government worked out gaps between the needs and actual services being provided and estimated the costs for providing the service at certain minimum levels, which was mandated to be done by every local body. Through this method, Karnataka estimated the volume of financial requirements for rural and urban local bodies and arrived at the percentage. It worked out to 36% of the divisible pool, i.e., non-loan gross own revenue receipts (NLGORR) of the state and it turned out to be very near the then current level that is 34.27%. Gnaneshwar (2000) concluded that ULBs should be strengthened to adopt alternative strategies like privatisation and cost recovery. So, state governments should consider the SFC reports seriously and make concerted efforts to implement the recommendations. Gnaneshwar (2008) too applauded the financial reforms of the Government of Karnataka in encouraging private participation in the provision of urban infrastructure and the setting up of the Bangalore Agenda Task Force (BATF).

So, the funds from the state must be distributed across the rural and urban areas in some way. Based on certain indicators, the ratio of distribution of funds between rural and urban areas of the state decided by the 1st, 2nd and 3rd SFCs were 85:15, 80:20 and 70:30, respectively, indicating that the lion's share of the funds was allocated to the rural local bodies only. The state's fourth SFC recommended a 75:25 ratio for distribution of funds, making it more unfavourable to the urban areas. However, this is because of the weightage to population in the rural (61%) versus that in urban areas (39%) of the state (see Table 5.6 for information on indicators for the determination of shares of ULBs and PRIs). According to the Karnataka's fourth State Finance Commission (SFC) report, the flow of funds to the state's ULBs under various devolution parts (such as tax devolution, grants from the central Finance Commission and grants from state and central schemes) declined from Rs 6,486 crore in 2013-14 to Rs 5,980 crore in2016-17. The 4th State Finance Commission reported that Karnataka's own tax revenue too declined to 62.81% in 2017-18 from 68.76% in 2012-13, resulting in a decrease of its total own source revenue from 5% to 4.7%.

No doubt with central grants declining and own source revenues dwindling, the ULBs are dependent on the state government for support. Table 5.5 shows that grants released to ULBs continuously increased after 2015-16.

Table 5.6 Indicators for the determination of shares of Rural and Urban areas (PRIs and ULBs)

Sl. No	Indicators	Total	Rural	%in Rural	Urban	% in Urban
Demography						
1	Population in lakhs	610.95	374.69	61.33	236.26	38.67
2	Net increase in Population in lakhs(2001-2011)	82.44	25.80	31.30	56.64	68.70
3	Area in sq.km	191791	185783	96.87	6008	3.13
4	SC and ST population in lakhs	147.24	109.26	74.21	37.98	25.79
5	Illiterates in lakhs	132.87	103.03	77.54	29.84	22.46
Decentralised Governance						
6	Percentage of inter-se allocation in NLNORR by the State Government	42	32	76.19	10	23.81
7	SFC devolution to PRIs and ULBs in 2016-17(in ₹. cr.)	39166	29558	75.47	9608	24.53
Basic Household Amenities (2011Census)						
8	Households without access to tap water	4472947	3432081	76.73	1040866	23.27
9	Households without drainage facility	5178066	4518789	87.26	659277	12.74
10	Households without electricity	1234444	1044384	84.60	190060	15.40
11	Households without specified assets	1878504	1565256	83.32	313247	16.68
Rounded off to				**75**		**25**

Source: State 4th SFC report

Tied grants from the SFC to ULBs are spent on specific purposes decided by the state: salaries and wages of ULB employees, electricity bills for ULB operations, such as powering street lights, water pumping stations across cities and towns of the state, pension contribution and grants for DA hike for municipal pensioners, the Water Scarcity Fund to ULBs to address drinking water challenges, which includes the drilling of borewells and the installation of motors. The tied grants from the SFC to ULBs are also used for repayment of loans taken by KUIDFC and KUWS&DB on behalf of ULBs. Untied grants provided under the SFC are allocated to ULBs for the development of capital assets and to cover expenses related to specific activities of the ULBs.

We have obtained data on the comparative performance of tied versus untied SFC grants to ULBs of the state, as with the CFC grants. As may be seen from Table 5.7, a majority of SFC grants to ULBs in the state, especially in recent years, are tied. As per the state's

Directorate of Municipal Administration, 100% of tied grants are utilised by the ULBs, while 80% to 90% of untied grants are utilised. While both types of grantsare utilised to create capital assets within ULBs, SFC untied grants face constraints due to state guidelines prioritising salary payments and allowances overcapital investments. This 'tied' nature of even the untied grants limits the intendeddevelopmental impact of untied grants. Strengthening monitoring mechanisms and aligning fundutilisation with intended objectives can further enhance theimpact of untied grants.

Table 5.7: SFC tied and untied grants to ULBs: allocation, releases and expenditure

Year	SFC Tied (Entry Tax Devolution) (in % to total)			SFC Untied (Other Devolution) (in % to total)			Total(in Rs. Lakh)		
	Allocation	Releases	Expenditure	Allocation	Releases	Expenditure	Allocation	Releases	Expenditure
2011-12	54.42%	55.78%	27.53%	45.58%	44.22%	21.56%	1,65,085.37	1,61,032.39	3,26,117.76
2012-13	58.73%	70.67%	31.89%	41.27%	29.33%	13.27%	1,89,781.53	1,56,728.69	3,46,510.22
2013-14	61.25%	67.91%	32.15%	38.75%	32.09%	15.22%	2,04,393.14	1,84,351.18	3,88,744.32
2014-15	60.57%	67.21%	31.60%	39.43%	32.79%	15.53%	2,05,912.67	1,85,475.14	3,91,387.81
2015-16	67.32%	73.44%	34.90%	32.68%	26.56%	12.64%	2,48,614.64	2,25,606.25	4,74,220.89
2016-17	75.12%	80.12%	80.04%	24.88%	19.88%	19.96%	2,82,093.25	2,63,688.76	2,62,814.63
2017-18	78.79%	81.43%	81.43%	21.21%	18.57%	18.57%	3,29,261.89	2,88,982.10	2,87,907.85
2018-19	78.97%	83.35%	83.70%	21.03%	16.65%	16.30%	3,14,177.06	2,99,889.07	3,04,348.66
2019-20	83.60%	85.27%	86.12%	16.40%	14.73%	13.88%	3,50,465.00	3,42,152.52	3,26,645.17
2020-21	94.26%	94.13%	94.48%	5.74%	5.87%	5.52%	3,42,297.63	3,32,508.03	3,28,328.38
2021-22	92.42%	92.50%	92.50%	7.58%	7.50%	7.50%	3,74,946.00	3,71,411.06	3,71,411.06
2022-23	90.67%	97.70%	99.34%	9.33%	2.30%	0.66%	4,13,391.91	3,80,168.20	3,69,524.88
2023-24	88.71%	88.26%	40.84%	11.29%	11.74%	4.44%	3,41,805.87	2,95,442.58	6,37,248.45

Source: Directorate of Municipal Administration, Finance Department, Government of Karnataka and author's analyses

Table 5.8 from the state's 4th SFC report, shows that grants to Municipal corporations (MCs) are the largest chunk of the state government's spending for ULBs, followed by that on CMCs/TMCs and then the Town Panchayats/Notified Area Committees.

Table 5.8 Share of Government of Karnataka Grants to Various Tiers of ULBs (in percent)

Year	MC	CMCs/TMCs	TPs/NACs	Row total
2011-12	67.42	26.51	6.07	100
2012-13	66.58	28.09	5.34	100
2013-14	72.37	22.69	4.94	100
2014-15	72.75	22.71	4.54	100
2015-16	70.88	25.60	3.52	100

Source: Karnataka 4th SFC report

Table 5.8 shows also that grants released to City Municipal Councils (CMCs)/Town Municipal Councils (TMCs) increased by 13% in 2015-16 when compared with the release of funds in 2014-15, while the grants released to Town Panchayats (TPs)/Notified Area Committees (NACs)showed a decrease of 22%,similar to that for the MCs (which saw a 3% reduction in their grants over the same period). As the Karnataka 4th SFC report points out, during 2015-16, as against the 3rd SFC recommendation of 10% (Rs. 8,090 crore) of non-loan own net revenue resources (NLNORR) (Rs.80,905 crore), only 7.5% (Rs. 6,076 crore) was released, and hence, there was a shortfall to the extent of Rs.2014 crore to ULBs. Further, in each of the years during 2011-12 to 2015-16, the budgeted grant was always higher than the actual grant released. The proportion of grant released, varied from a low of only 5% in 2013-14 to a high of 98% in 2011-12. In 2013-14, we found that Municipal Corporations (MCs) and CMCs got less than 1% of the budgeted funds, but TPs/NACs were better, as they got about 72% of their budgeted funds as grants, in 2013-14.

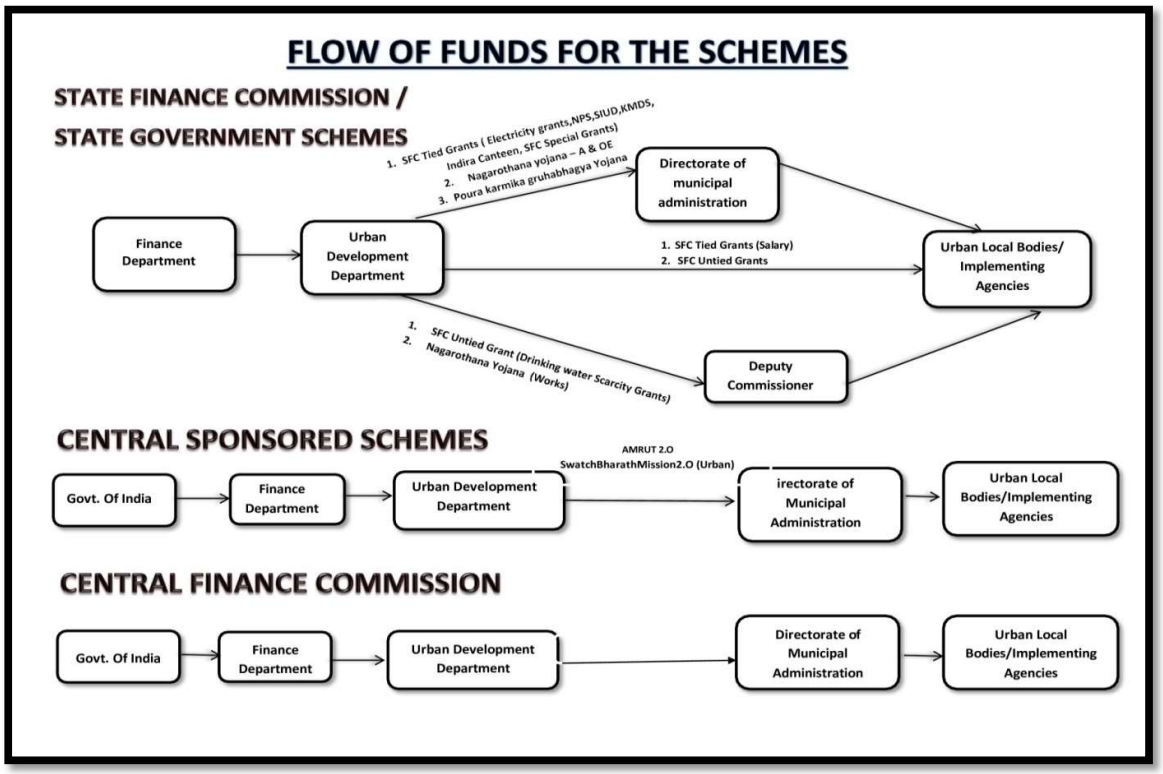
So, the ULBs are severely deprived of funds for basic urban services, constantly captured in the demand for funds by them. Therefore the 5th SFC suggested that the financial powers be adequately delegated to the ULBs so that they may be able to satisfactorily discharge their obligatory functions. The 5th SFC also suggested that the central Finance Commission base its recommendations, on those made by the SFCs, which are aware of the local conditions.

Further, the 5th SFC recommended that the devolution of funds to larger ULBs like BBMP and City Municipal Corporations should be at the ward level, to guarantee equitable distribution of funds, which is consistent with recommendations of the Administration

Reforms Commission-2 of Karnataka. With respect to ULBs, the devolution of funds suggested by the 4th SFC was based on four characteristics: 1) Population with weightage of 40%; 2) Area, with weightage of 20%; 3) Level of illiteracy, carrying weight of 20% and 4) the proportion of SC/ST Population with weightage of 20%. The 5th SFC suggested to continue the same criteria for horizontal devolution to the ULBs for 2024-25.

Figure 5.8 summarizes the flow of funds from the SFC and state government in the case of state government programs, and from the Central Finance Commission, in the case of central programs.

Figure 5.8 Flow of Funds for SFC, State Government and CFC



Source: Directorate of Municipal Administration

As is seen, all funds come from the state's Finance Department to the Urban Development department, then to the DMA and to the ULB/implementing agencies.

Karnataka is one of the pioneering and progressive states with regard to decentralisation. Of the 18 functions which were to be transferred to ULBs as per the 74thConstitutional Amendment Act, there are three functions in which the ULBs have full jurisdiction (burial grounds, slaughterhouses and cattle pounds), a function in which the ULBs have a dual role (roads and bridges), and eight functions in which there are overlapping roles for the ULB with other agencies (state departments and parastatals). However, there aretwo functions in which the ULBs have no role (town planning and slum upgradation), three functions in which ULBs are mere implementing agencies (planning for social and economic development, protecting the weaker sections of the society, and urban poverty alleviation, and one function which is not devolved to ULBs (fire services).

Much against the popular notion of the ULBs not getting adequate funds, functions or functionaries as per provisions of the 74th Constitutional Amendment Act, several significant changes have occurred in Karnataka's urban decentralisation since June 2024. Some distinctive features may be pointed out:

1. The transfer of funds from state and central governments to ULBs is now happening directly; earlier, it used to be routed through the district.
2. Only upon physical completion of works, the funds are transferred to ULBs.
3. In funding and responsibility of program implementation (for e.g., Swachh Bharat Mission), all the three levels of government – centre, state and ULBsparticipate in the ratio of 80:15:5.
4. The choice of works is now decided by ULB based on local needs.
5. The functionaries are now selected by local government, even though funds come from higher levels of government.

5.2. Analysis of Transfers to Rural Local Bodies

This part will deal with transfers to rural local bodies in Karnataka. There are five sub-sections in this part. After this brief introduction, the major decentralisation initiatives in Karnataka are discussed in sub-section 2. This is followed by the discussion on the resource allocation to PRIs in Karnataka in sub-section 3. Devolution of funds to PRIs are presented in sub-section 4. The services provided by the PRIs and gaps in the service provision are discussed in sub-section 5.

5.2.1. Spread of Rural Local Bodies

Karnataka is one of the pioneer states in democratic decentralisation. With the enactment of 73rd Constitutional Amendment Act, Panchayat Raj Institutions in Karnataka have three tier structure, namely, Zilla Panchayat, Taluk Panchayat and Grama Panchayat. The 11th schedule of the constitution provides the list of 29 functions assigned to PRIs.

As can be seen from Table 5.8, the number of these institutions has been increasing with time. Both Zilla Panchayats and Taluk Panchayats have increased in the last two-decade period. Similarly, the number of GPs in the state has also increased. Typically, new GPs are formed after the reorganisation exercises to redefine the jurisdiction of the existing GPs. Based on the projected population, the average population per institution is worked out. As per this, the average population per ZP comes to around 12.19 lakhs, while it is 1.58 lakhs for TP. The average size of GP is 6,349.

Table 5.8 Current spread of Rural Local Bodies in Karnataka

	2001	2016	2023	Increase between 2016 and 2023	Average population per institution (2021 projected rural population	Average Geographic area (sq. km) (2011 census rural area in sq. km)
Zilla Panchayat	27	30	31	1	12,19,387	5993
Taluk Panchayat	175	176	239	63	158,163	777
Gram Panchayat	5629	6022	5954	(-)68	6,349	31
Total	***5831***	***6228***	***6224***	--	--	--
Villages	29406	29340	30715	1375	--	--

Source: 1) Memorandum to the Fifteenth Finance Commission report of Government of Karnataka; 2) RDPR 2024; 3) Local Government Directory[2]; 4) Census 2011; 5) MHFW 2019

[2] https://lgdirectory.gov.in/reportonStatewiseEntityDetails.do?OWASP_CSRFTOKEN=E89A-RDDM-3ZVN-52B1-0JXV-P4B4-BVMT-SXT5

5.2.2. Major decentralisation initiatives

There are several decentralisation initiatives initiated by the Department of Rural Development and Panchayat Raj (RDPR), Government of Karnataka. Some of the major decentralisation initiatives are discussed below.

i. RDPR has initiated a comprehensive platform called **Panchatantra 2.0,** which aims to digitise and centralise all key functions and operations of Grama Panchayats. It will act as a single solution, enabling the digitisation of essential aspects and at the same time ensuring seamless linkages and integrations with other applications and databases. The goal is to provide a unified platform for end-to-end operations, governance, and reporting (RDPR, GoK).

ii. To enhance the existing database of assessed and unassessed properties in rural areas, **a manual survey** was conducted for all lands and buildings not subject to agricultural tax determination in the Grama Panchayats of the state. The details of these surveyed properties were uploaded to Panchatantra 2.0, facilitating easy tax calculation and ensuring transparency (RDPR, GoK).

iii. Initiated the **WhatsApp chat service** for the citizens to access details and services of any Grama Panchayats and to register complaints. Citizens can send a message to the provided WhatsApp number either in Kannada or English. This service is available for all districts, taluks, grama panchayats and villages (RDPR, GoK).

iv. Enabling **different modes of payment of property tax** in the rural areas. It can now be paid online on Bapuji Seva Kendra web portal, through other platforms such as Google Pay, Phone pe, Paytm and at the office of the Gram panchayat (RDPR, GoK).

v. Rural public libraries are revived by adding more reading material and services to make them citizen friendly and child centric. The libraries in the grama panchayats are identified as repository of the information on democracy, government schemes/ services, financial devolution, etc.

Accordingly, the department has taken over the Grama Panchayat Libraries and renamed them as **'Arivu Kendra'**. Of the total 5895 GP libraries, 5383 GPs have been converted to Digital Libraries by enrolling about 43.42 lakh children (GoK 2024).

vi. Childcare centres called **'Kusina Mane'** are initiated by the RDPR in a phased manner to provide childcare support to rural women workers. It is beneficial to the mothers who are working in MGNREG so that they can actively be involved in their work. Children who are less than three years are also given nutritious food (GoK 2024).

vii. Towards localising sustainable development goals, GPs are entrusted with the responsibility of preparing **Grama Panchayat Perspective Plan (GPDP)**for five years. GoK has also identified some sectors as priority sectors for the preparation of the GPDP. These sectors are poverty, livelihood and skill development, health, education, women and child development, environment and natural resources, infrastructure and good governance (GoK 2024).

viii. **Grama Arogya campaign**was launched to prevent non-communicable diseases among the workers in MGNREGS across all districts of Karnataka. These workers were distributed the health kits and health screenings were done to identify blood pressure, diabetics, etc. (GoK 2024).

ix. The MGNREGS assets are **photo geotagged by using the GeoMGNREGS software** to ensure the transparency and accountability. Technology is being used to provide details of work including wages and materials costs. The geotagging of works along with the photographs in three stages, i.e. before initiation, during the work and after completion of work are taken (MoRD 2023).

x. Presence of RDPR department, GoK, in the social media (Twitter, Facebook and Instagram, YouTube) provides more visibility of the work and initiatives taken by the RDPR.

5.2.3. Resource allocation for district sectors

The data on budget allocation for district sectors are presented for 12 years, i.e. 2012-13 to 2023-24. The allocation of funds to district sector and PRIs used to be plan and non-plan programmes. However, from 2017-18 onwards, both plan and non-plan were merged. Hence, the combined data are provided here for all the years. When one looks at the allocation of funds for district sectors, education appears to be the priority sector as nearly half of the budget allocated to this sector for most of the years (Table 5.9). The allocation to education sector has increased greatly in the recent years.The share of other rural development programmes has been second highest, and it has been increasing over a period (Figure 5.9). Similarly, there is an increase in the share for the welfare of SCs, STs and OBCs. However, there has been a decline in the share of allocation to some sectors such as rural employment, water supply and housing.

Table 5.9 Budget Allotment for PRIs during 2012-13 to 2023-24 (in Rs. crore)

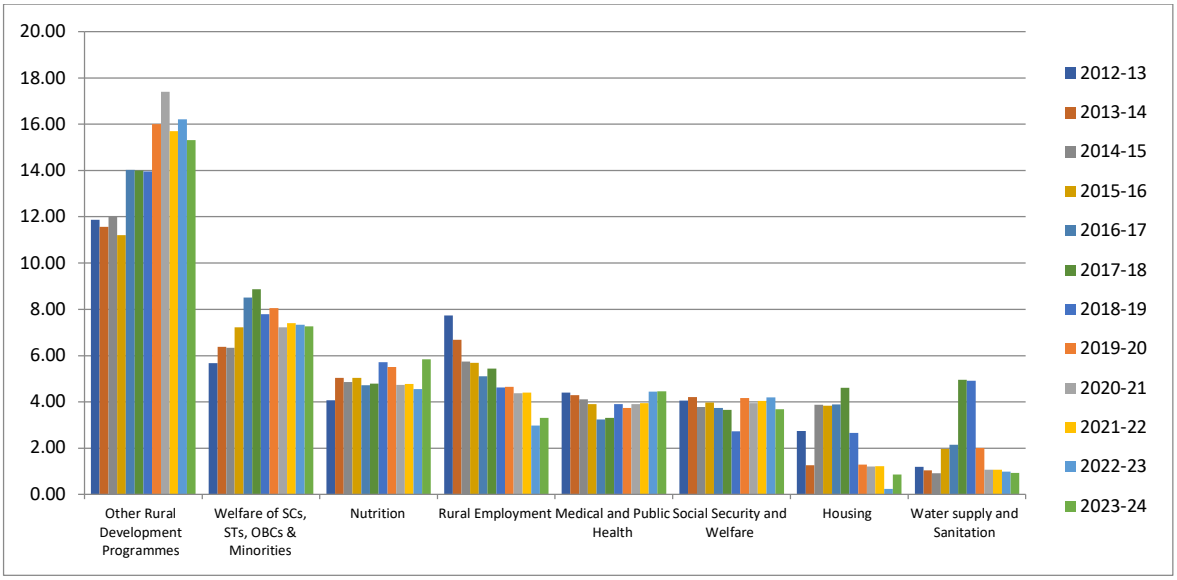
Major Head Description	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
General Education	9221.85	11078.48	12820.24	12783.12	13569.27	14045.03	17377.00	18368.00	20267.00	20578.00	21946.43	24758.55
Other Rural Development Programmes	2324.22	2618.68	3169.82	2976.84	4143.01	4587.35	5260.00	6263.00	7247.00	6488.00	6962.85	7435.55
Welfare of SCs, STs, OBCs and Minorities	1109.04	1442.49	1669.61	1919.18	2515.04	2904.90	2938.00	3150.00	3004.00	3056.00	3154.93	3523.67
Nutrition	796.03	1138.25	1278.63	1335.87	1394.70	1566.93	2150.00	2150.00	1972.00	1973.00	1956.49	2832.98
Rural Employment	1512.80	1512.80	1510.00	1510.00	1510.00	1782.64	1740.00	1816.00	1816.00	1816.00	1280.00	1600.00
Medical and Public Health	860.01	969.85	1080.07	1034.22	955.67	1081.31	1469.00	1459.00	1622.00	1626.00	1910.06	2165.70
Social Security and Welfare	794.80	953.84	997.32	1053.42	1101.35	1195.49	1026.00	1627.00	1641.00	1670.00	1800.31	1783.77
Housing	536.68	282.25	1019.99	1020.00	1147.00	1506.75	1000.00	500.00	500.00	500.00	100.00	410.00
Water supply and Sanitation	232.65	233.32	240.26	518.88	630.45	1623.85	1850.00	787.00	438.00	438.00	423.53	451.24
Animal Husbandry	336.11	395.21	438.71	553.20	479.21	501.56	614.00	658.00	744.00	747.00	800.76	852.74
Family welfare	368.86	444.78	493.96	525.45	520.81	461.53	563.00	569.00	635.00	647.00	645.24	699.19
Roads & Bridges	372.48	400.00	428.90	294.60	330.59	438.85	468.00	505.00	429.00	419.00	461.17	484.14
Crop Husbandry	241.40	271.38	280.03	286.95	301.17	307.40	383.00	368.00	382.00	367.00	385.16	434.83
Public Works	165.19	178.47	199.17	179.18	199.29	167.60	191.00	192.00	206.00	199.00	214.58	216.12
Special programmes for Rural Development	148.09	122.14	150.67	79.27	351.89	137.54	103.00	151.00	145.00	220.00	250.00	200.00
Forestry and Wildlife	67.13	74.16	83.27	83.38	92.61	143.08	174.00	201.00	185.00	185.00	229.99	249.93
Village and Small Industries	94.01	108.40	114.05	105.85	110.99	121.97	137.00	143.00	146.00	140.00	148.62	158.16
Soil & Water Conservation	113.85	116.46	61.19	56.89	33.57	33.56	39.00	35.00	38.00	36.00	40.87	45.03
Sports and youth services	25.95	32.16	33.88	29.45	36.42	49.26	57.00	57.00	49.00	34.00	33.81	30.72
Other Special Area Programme	124.40	118.91	112.00	112.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Major Head Description	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Fisheries	19.46	23.90	23.74	24.96	27.23	29.00	34.00	38.00	42.00	39.00	47.90	53.42
Minor Irrigation	23.72	25.28	20.30	22.16	25.60	25.78	28.00	31.00	31.00	31.00	40.21	42.41
Secretariat-Economic Services	13.82	15.80	31.45	19.77	25.71	26.03	27.00	22.00	22.00	25.00	26.36	29.65
Art and Culture	0.70	0.88	1.04	1.66	1.94	2.40	4.00	4.00	51.00	51.00	84.92	80.45
Labour, Employment & Skill Development	7.94	8.99	14.25	12.72	13.76	13.79	16.00	16.00	16.00	16.00	16.99	14.70
New and Renewable Energy	19.25	18.96	15.69	16.86	18.94	17.64	8.00	5.00	0.00	0.00	0.00	0.00
Hill Areas	33.43	29.16	40.50	4.05	4.46	4.46	0.00	0.00	0.00	0.00	0.00	0.00
Co-operation	4.70	5.14	5.01	5.68	5.64	5.71	6.00	6.00	4.00	4.00	4.39	4.97
Other General Economic Services	1.55	2.05	2.52	3.67	4.86	5.40	7.00	8.00	2.00	2.00	4.12	4.35
Industries	4.37	4.76	4.99	4.59	4.92	5.19	4.00	3.00	1.00	0.00	0.31	0.33
Other Scientific Research	1.51	1.52	1.57	1.76	2.02	2.18	2.00	2.00	2.00	2.00	2.08	2.33
Civil Supplies	0.10	0.10	0.15	0.18	0.19	0.16	0.00	0.00	0.00	0.00	0.00	0.00
Total	**19576.10**	**22628.57**	**26342.95**	**26575.81**	**29558.31**	**32794.34**	**37675.00**	**39134.00**	**41637.00**	**41309.00**	**42972.09**	**48564.94**

Source: Various years of Budget Documents for District Sectors

https://finance.karnataka.gov.in/english

Figure 5.9 Share of budget among the sectors

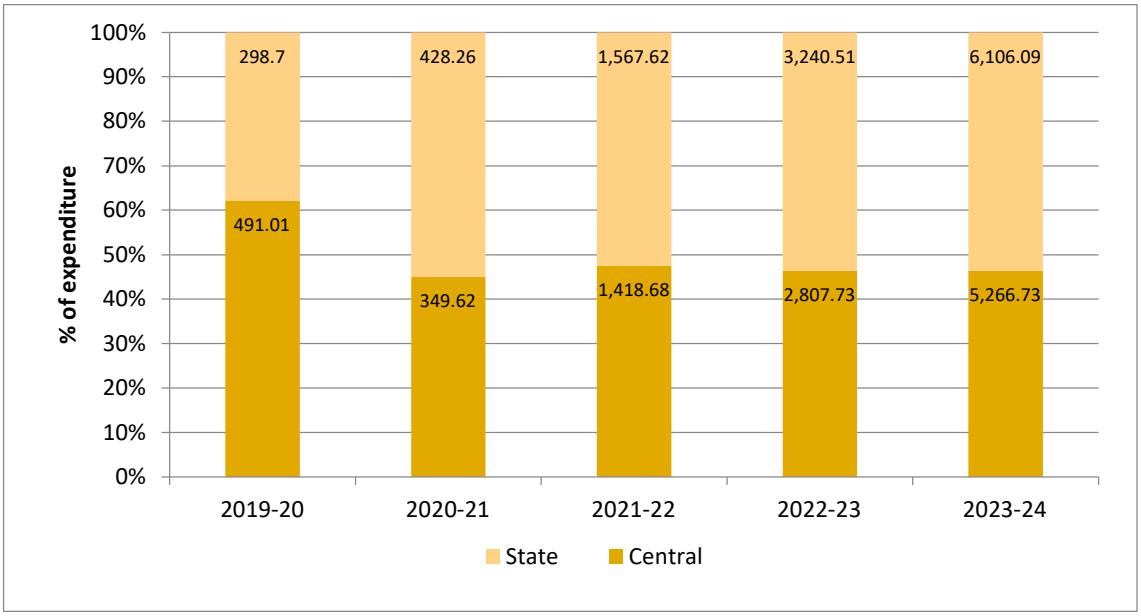


Source: Prepared by the author based on the data compiled from various years of Budget Documents for District Sectors https://finance.karnataka.gov.in/english

It may, however, be noted that separate funds for water supply have been allocated under Jal Jeevan Mission (JJM) programme. However, these funds are not included in the budget allotment for PRIs. This is because the funds are released to the Rural Drinking Water and Sanitation Department, Government of Karnataka. The department calls tenders for work

from licensed contractors and upon completion of work, funds are released through Zilla Panchayat. The Chief Executive Officer of the district is the administrative head and Executive Engineer is the technical head for managing the JJM funds. Figure 5.10 shows total expenditure of JJM was Rs.789.71 crore in 2019-20 and Rs.11,372.82 crore in 2023-24. As far as the role of GP in JJM is concerned, GP officials only facilitate the work such as showing the roads, houses, presence of the overhead tank and its distance from the village and resolving any problems during the JJM works. In addition, GPs are responsible for maintenance of completed works.

Figure 5.10 Expenditure (in Rs. crores) of Jal Jeevan Mission between 2019-20 and 2023-24 and its share between Central and State governments



Source: Compiled from official website of Jal Jeevan Mission https://ejalshakti.gov.in/JJM/JJMReports/Financial/JJMRep_StatewiseAllocationReleaseExpenditure.aspx

5.2.4. Devolution of funds to PRIs

As mentioned in the 15th Finance Commission report, inter-governmental transfer happens through Finance Commission and Union Ministries. Three components are transferred through Finance Commissions: (a) Share in central taxes based on formula (Devolution); (b) General purpose grants[3] (based on post-devolution current deficit) (Grant-in-aid); and

[3]These grants are typically provided without any conditions attached. Typically, these grants are allocated on the bases based on a formula, as it is mandated by law. The general-purpose grants ensure the local autonomy (XV Finance Commission 2020).

(c) Specific purpose grants[4] (Grant-in-aid). From the Union government (non-FC transfers), two types of grants are provided – (i) matching grants for centrally sponsored schemes and (ii) other grants (XV Finance Commission 2020).

Of the total revenue receipts of Karnataka, the state's share of union taxes/ duties and Grants-in-aid from the Government of India accounts for about one-third (Table 5.10). Rs.53,393 crore were the receipts from GoI in 2017-18 and this was increased to Rs.65,399 in 2019-20. The COVID year 2020-21 received the lowest amount as compared to other years. In 2022-23, total amount received from GoI was increased to Rs.71,464.

Table 5.10 Revenue Receipts (Tax Revenue, Devolution and Grants) of Karnataka during 2017-18 to 2022-23 (in Rs crore)

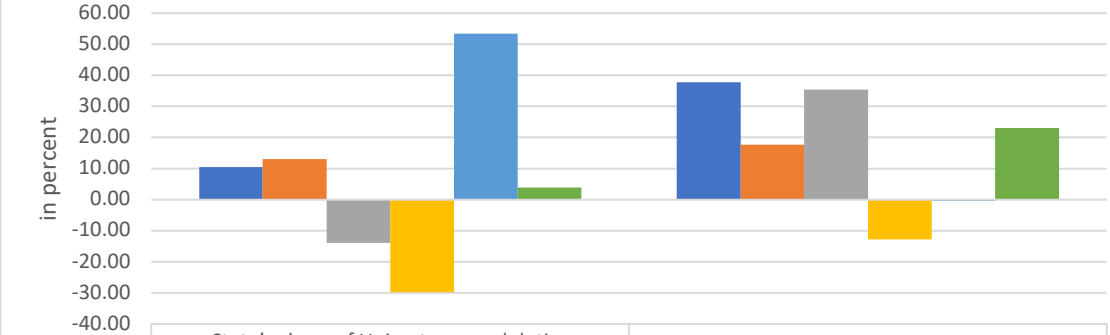
		2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Revenue Receipts (1 to 4)	**1,47,000**	**1,64,979**	**1,75,443**	**1,56,716**	**1,95,762**	**2,29,080**
	Non-Loan Gross Own Revenue Receipts (NLGORR)						
1	Tax Revenue	87,130	96,830	1,02,363	97,052	1,20,739	1,43,702
2	Non-Tax Revenue	6,477	6,773	7,681	7,894	11,777	13,914
	Resource from Government of India						
3	State's share of Union taxes and duties (Devolution from GoI)[5]	31,752	35,895	30,919	21,694	33,284	34,596
4	Grants-in-aid from GoI	21,641	25,481	34,480	30,076	29,962	36,868
	a) Finance Commission Grants[6] (FC grants to PRIs)	*2708 (1580)*	*3374 (1842)*	*4673 (2504)*	*5557 (3217)*	*6239 (2376)*	*3495 (2094)*
	b) Centrally Sponsored Schemes	*11617*	*10393*	*12214*	*9852*	*12659*	*11629*
	c) Other Transfer/Grants to State/UT with Legislature[7]	*7315*	*11714*	*17593*	*14667*	*11064*	*21744*
	Total amount received from GoI (3+4)	**53,393**	**61,376**	**65,399**	**51,770**	**63,246**	**71,464**

Source: Compiled from
(1) Various years of State Finance Audit Reports https://cag.gov.in/ag2/karnataka/en/audit-reportand
(2) Finance Accounts (2023) https://cag.gov.in/ae/karnataka/en/state-accounts-report?defuat_account_report_type=359

[4] Typically, the specific-purpose grants are attached with conditions either input based (require certain type of spending, e.g., current or capital) or output based (require certain results, e.g., operational or service delivery). It is a discretionary grant not allocated based on formula having influence on local programmes and performance (XV Finance Commission 2020).
[5] It includes Central Goods and Services Tax (CGST), Corporation Tax, Taxes on Income other than Corporation Tax, Customs, Union Excise Duties, Service Tax & Other Taxes and Duties and Commodities and Services (Finance Accounts 2023).
[6]Finance commission grants consist of Grants for Rural Local Bodies and Urban Local Bodies, Grants-in-Aid for State Disaster Response Fund and State Disaster Mitigation Fund, Post Devolution revenue Deficit Grant and Other Receipts (Finance Accounts 2023).
[7] Grants under provision to Article 275 (1) of the Constitution, Grants towards Contribution to National Disaster Response Fund, Grants from Central Road Fund, Grants to cover gap in resources, Compensation for loss of revenue arising out of implementation of GST, Special Assistance (Finance Accounts 2023).

The rate of growth of state's share of union taxes and duties and grants-in-aid received from the GoI is presented in Figure 5.11. As can be seen, there was a decline in the share during 2019-20 and 2020-21. However, there was substantial growth in 2021-22. Regarding the growth rate of grants-in-aid, it declined during the COVID-19 year by 12.77%. However, it improved by 2022-23.

Figure 5.11 Growth rate in the amount received from GoI in the form of state's share in union taxes and grants



	State's share of Union taxes and duties (Devolution from GoI)	Grants-in-aid from GoI
2017-18	10.40	37.81
2018-19	13.05	17.74
2019-20	-13.86	35.32
2020-21	-29.84	-12.77
2021-22	53.42	-0.38
2022-23	3.94	23.05

Source: Compiled from
(1) Various years of State Finance Audit Reports https://cag.gov.in/ag2/karnataka/en/audit-reportand
(2) Finance Accounts (2023) https://cag.gov.in/ae/karnataka/en/state-accounts-report?defuat_account_report_type=359

The resource allocation or transfer is done as per the recommendations of Finance Commissions. In Karnataka, five state finance commissions have been constituted as shown in Table 5.11.

Table 5.12 provides the criteria adopted to share the grants to local bodies by various finance commissions. The criteria of population and geographical area remained common across various finance commissions. The 11th Finance Commission includes three other indicators, namely, distance from highest per capita income, revenue mobilisation effort, and index of decentralisation.

Table 5.11 Constitution of SFCs in Karnataka

Particulars	1st SFC	2nd SFC	3rd SFC	4th SFC	5th SFC
Date of constitution	10.06.94	25.10.2000	28.08.2006	21.12.2015	11.10.2023
Date of submission of report	05.08.96	23.12.2002	December 2008	May 2018	February 2024
Period covered	1996-1997 to 2000-2001	2001-2002 to 2005-2006	2006-2007 to 2010-2011	2018-2019 to 2022-2023	2024-2025 to 2028-2029

Source: Karnataka State, 5th State Finance Commission Report for 2024-25 https://sfc.karnataka.gov.in/uploads/media_to_upload1712313467.pdf

While 12th Finance Commission included index of deprivation instead of index of decentralisation and increased the weightage for revenue mobilisation effort. On the other hand, the 13th Finance Commission broadens the criteria by including two new criteria, namely, weightage to SC/ST population and index on utilisation of FC grants by the local body. However, the 14th and 15th Finance Commissions followed only two criteria, namely, population and geographical area, to share the grants to local bodies.

Table 5.12 Criteria for inter-state sharing of grants to local bodies

Criteria	11 Finance Commission	12 Finance Commission	13 Finance Commission	14 Finance Commission	15 Finance Commission
Population	40%	40%	50%	90%	90%
Geographical Area	10%	10%	10%	10%	10%
Distance from highest per capita income- sectoral income	20%	20%	10% (RLB) 20% (ULB)	–	–
Index of deprivation	–	10%	–	–	–
Revenue effort	10%	20%	–	–	–
Index of decentralisation/ devolution	20%	–	15%	–	–
Proportion of SC/ST in population	–	–	10% (RLB) 0% (ULB)	–	–
FC local body grants utilisation index	–	–	5%	–	–

Source: Karnataka State, 5thState Finance Commission Report for the Year 2024-25 https://sfc.karnataka.gov.in/uploads/media_to_upload1712313467.pdf

The inter-state share of grants to different states based on their population and area is presented in Table 5.13. As mentioned earlier, the share of grants is based on 90% weightage to population and 10% weightage to geographical area. The ratio of allocation between the rural local bodies and local bodies is specified as follows.

	2021-22	2022-23	2023-24	2024-25	2025-26
RLB: ULB	67:33	67:33	66:34	66:34	65:35

As can be seen from Figure 5.12, the grant share based on the weightage has been highest for Uttar Pradesh, Maharashtra, Bihar, West Bengal, Madhya Pradesh and Rajasthan, in that order. The share based on population and area has been very low for eastern states. However, the good measure to examine the difference on the share across states is the per capita grant allocated for these states based on the criteria.

Table 5.13 Inter-state sharing of grants to States based on Population and Area (%)

States	Population 2011 (in million)	Area ('000 sq. km)	Population share	Area share	15 FC State-wise of grant share*
Andhra Pradesh	49.58	162.92	4.21	5.33	4.32
Arunachal Pradesh	1.38	83.74	0.12	2.74	0.38
Assam	31.21	78.44	2.65	2.57	2.64
Bihar	104.1	94.16	8.84	3.08	8.26
Chhattisgarh	25.55	135.19	2.17	4.43	2.39
Goa	1.46	3.7	0.12	0.12	0.12
Gujarat	60.44	196.24	5.13	6.43	5.26
Haryana	25.35	44.21	2.15	1.45	2.08
Himachal Pradesh	6.86	55.67	0.58	1.82	0.71
Jharkhand	32.99	79.72	2.8	2.61	2.78
Karnataka	61.1	191.79	5.19	6.28	5.29
Kerala	33.41	38.85	2.84	1.27	2.68
Madhya Pradesh	72.63	308.25	6.16	10.09	6.56
Maharashtra	112.37	307.71	9.54	10.07	9.59
Manipur	2.86	22.33	0.24	0.73	0.29

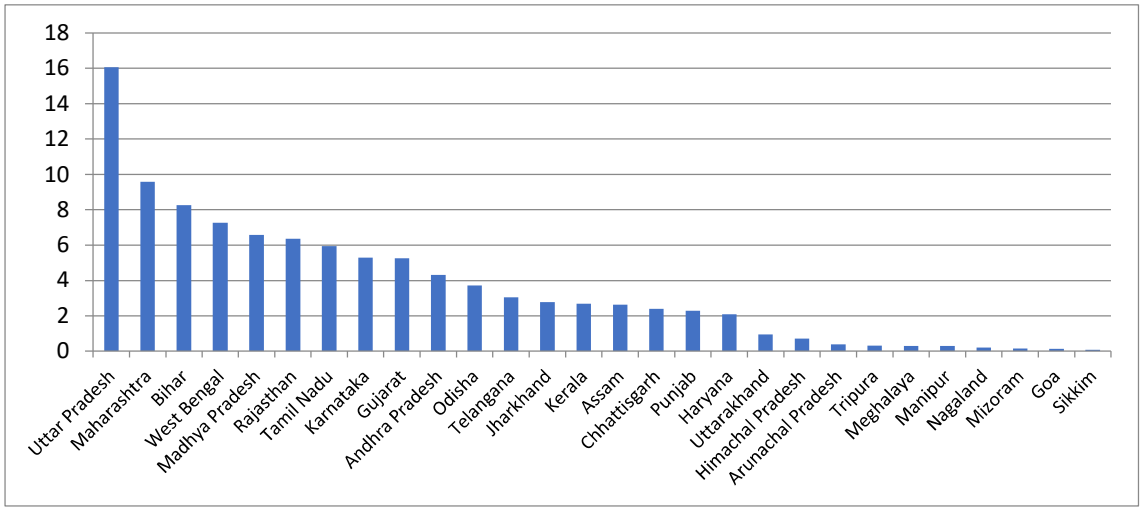
States	Population 2011 (in million)	Area ('000 sq. km)	Population share	Area share	15 FC State-wise of grant share*
Meghalaya	2.97	22.43	0.25	0.73	0.30
Mizoram	1.1	21.08	0.09	0.69	0.15
Nagaland	1.98	16.58	0.17	0.54	0.21
Odisha	41.97	155.71	3.56	5.1	3.72
Punjab	27.74	50.36	2.35	1.66	2.29
Rajasthan	68.55	342.24	5.82	11.21	6.36
Sikkim	0.61	7.1	0.05	0.23	0.07
Tamil Nadu	72.15	130.06	6.12	4.26	5.94
Telangana	35	112.12	2.97	3.67	3.04
Tripura	3.67	10.49	0.31	0.34	0.31
Uttar Pradesh	199.81	240.93	16.96	7.89	16.05
Uttarakhand	10.09	53.48	0.86	1.75	0.95
West Bengal	91.28	88.75	7.75	2.91	7.26
All States	**1178.19**	**3054.27**	**100**	**100**	**100**
Smaller States	*32.98*	*103.71*	*2.79*	*9.69*	
Other States	*1145.23*	*2950.54*			

Source: XV Finance Commission report. Volume-II Annexes, October 2020
https://fincomindia.nic.in/asset/doc/commission-reports/XV-FC%20-VOL%20II%20Annexes.pdf
Note: 1) Smaller States are Uttarakhand, Tripura, Sikkim, Nagaland, Mizoram, Meghalaya, Manipur, Himachal Pradesh, Goa and Arunachal Pradesh.
2) Other States are those other than the smaller ones.
3) * State-wise of grant share RLB and ULB both are same percentage

Each state is allocated with 15th FC grants for the five-year period, i.e. 2021-22 to 2025-26. The allocation between rural local bodies and urban local bodies is done as per the specified ratio. Based on the total grants allocated for the entire five-year period, the per capita grant allocated per state has been worked out. The per capita granted worked for both 2011 census population and 2021 projected population (Figure 5.13). The per capita grants allocated has been highest in Arunachal Pradesh, Mizoram, Sikkim, Himachal Pradesh, Nagaland, Manipur and Meghalaya. It has been lowest in Bihar, Uttar Pradesh, Haryana, Jharkhand and West Bengal, in that order. This implies that though the 15th FC share has been very low to northeastern states, the per capita grant allocated has been better among these states. In fact, five out of seven north-eastern states figure in the top ten states with highest per capita grant allocation. Similarly, the FC share for Uttar Pradesh, Maharashtra,

Bihar and West Bengal was high, however, the per capita grant allocated has been comparatively low.

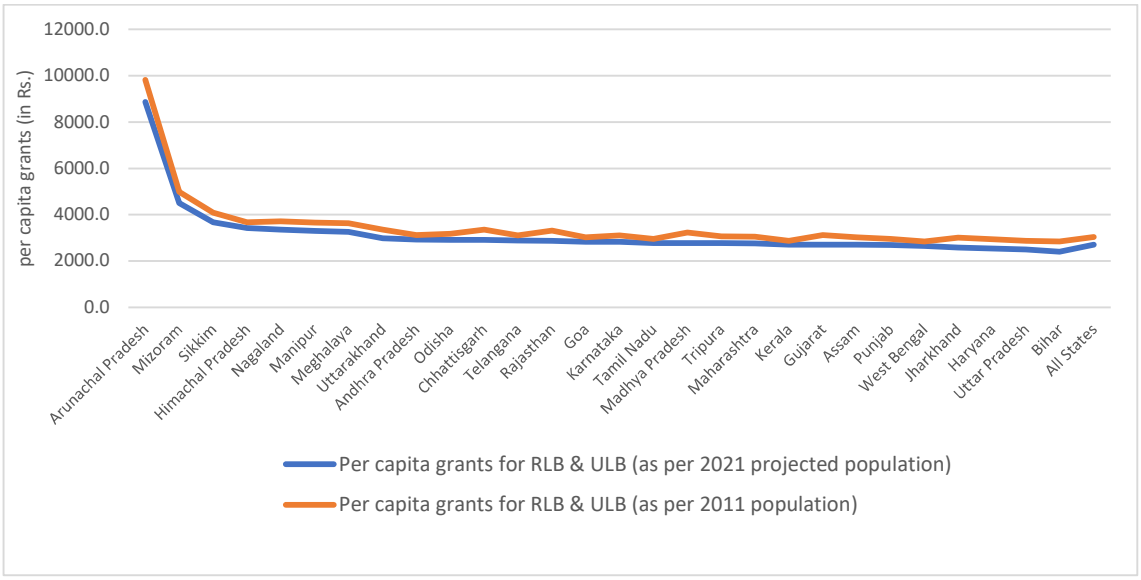
Figure 5.12 State-wise share of 15th FC grants



Source: XV Finance Commission report. Volume-II Annexes, October 2020

https://fincomindia.nic.in/asset/doc/commission-reports/XV-FC%20-VOL%20II%20Annexes.pdf

Figure 5.13 Per capita grant allocated to RLB and ULB based on the 15 FC share for the period 2021-22 to 2025-26



Source: XV Finance Commission report. Volume-II Annexes, October 2020

https://fincomindia.nic.in/asset/doc/commission-reports/XV-FC%20-VOL%20II%20Annexes.pdf

It is not that the grants recommended by FC are fully released. Table 5.14 presents the data on recommended grants and actual release of grants to PRIs forthe period 2015-16 to 2024-25. During the 14th Finance Commission (2015-16 to 2019-20), 90% of grants were basic grants and remaining 10% were performance grants. However, during 15th Finance Commission, this changed. As per the circular[8], the allocation and release was done on the basis of tied and untied grants. Untied grants were 60%, out of which, half should be spent on drinking water works (such as pipeline connection or expansion) and remaining half has to be compulsorily spent on sanitation works (such as solid waste management, drainage construction and cleaning, Anganawadi/ school toilet repair, etc). The remaining 40% of the total grants is untied. These untied grants can be used for streetlight maintenance, community assets maintenance, employees' salary, etc.). It is mentioned that 25% of the total grants should be reserved for the development of scheduled castes and scheduled tribes. Additionally, 5% of the available funds can be utilised for taking up of works for differently abled persons. Of the 15th FC grants to Karnataka, the state government has allocated 85% of the grants to Grama Panchayats, 10% to Taluk Panchayats and 5% to Zilla Panchayats. As mentioned earlier, the grants are released based on 90% of the population and 10% of geographical area. The GP Action plan prepared for 15th FC grants should be approved in the general meeting of GP. Similarly, the taluk and zilla panchayat action plans should be approved in the respective general meetings. Therefore, there is no need for approval of the higher level of officers.

As can be seen from the table, proportion of actual release to recommended ranged between 85% and 100%. In the last ten years, only in one year (i.e., 2020-21), the full amount was released as per the recommendation of FC. In the remaining years, there has been a shortfall ranging from 0.1% to 57.5%.

[8]https://rdpr.karnataka.gov.in/storage/pdf-files/Panchayatraj/go_300_22_01_07_22.pdf

Table 5.14 Recommended and actual release of FC grants (in Rs. crore) to PRIs in Karnataka during 2015-16 to 2022-23

FC period	Years	Recommended	Actual release	Shortfall		*% of actual release to recommended*	*% of shortfall*
14th FC period	2015-16	1,002.85	972.36	30.49		*97.0*	*3.0*
	2016-17	1,570.77	1,547.66	23.11		*98.5*	*1.5*
	2017-18	1,810.55	1,580.18	230.37		*87.3*	*12.7*
	2018-19	2,090.10	1,841.54	248.56		*88.1*	*11.9*
	2019-20	2,814.39	2,504.13	310.26		*89.0*	*11.0*
15th FC period	2020-21	3,217.00	3,217.00	0.00		*100.0*	*0.0*
	2021-22	2,377.00	2,375.50	1.50		*99.9*	*0.1*
	2022-23*	2,463.00	2,093.55	369.45		*85.0*	*15.0*
	2023-24	2,490.00	2,086.59	403.41		*83.8*	*16.2*
	2024-25	2,637.00	1,120.73	1,516.27		*42.5*	*57.5*
	Total	**22,472.66**	**19,339.24**	**3,133.42**		***86.1***	***13.9***

Source: 1) Various years of State Finance Audit Reports of the Comptroller and Auditor General of India. Government of Karnataka. https://cag.gov.in/ag2/karnataka/en/audit-report
2) For the years 2023-24 and 2024-25, data of 15th Finance Commission accessed at https://panchayat.gov.in/en/document/updated-15th-fc-2021-26-allocation-and-release-as-on-15-05-2024/

Note:* Based on the decision of cabinet meeting dated 26 April 2021, 15thFinance Commission grants were not released to the Taluk and Zilla Panchayats in view of the postponement of the general elections to the Taluk and Zilla Panchayats (RDPR Annual Report 2022-23)

Table 5.15 presents the criteria and weights assigned for sharing taxes and duties with the states. These criteria have varied across different Finance Commission periods. According to the recommendations of the 15th FC, the distribution of taxes and duties to the states will be based on the weightage assigned to the factors such as population, income distance, area, forest cover/ ecology, tax and fiscal efforts, and demographic performance.

Table 5.15 Criteria and weights assigned for sharing taxes and duties to all the States as per recommendation of Finance Commission

Criteria	Weight (per cent)				
	11th FC (2000-05)	**12th FC (2005-10)**	**13th FC (2010-15)**	**14th FC (2015-20)**	**15th FC (2020-26)**
Population	10.0%	25.0%	25.0%	17.5%	15.0%
Demographic Change				10.0%	
Income Distance	62.5%	50.0%		50.0%	45.0%
Area	7.5%	10.0%	10.0%	15.0%	15.0%
Forest Cover/ ecology				7.5%	10.0%
Tax and fiscal efforts	5.0%	7.5%			2.5%
Demographic performance					12.5%
Fiscal Capacity Distance			47.5%		
Fiscal Discipline	7.5%	7.5%	17.5%		
Index of infrastructure	7.5%				

Source: Based on 11th to 15th Finance Commission reports. https://fincomindia.nic.in/commission-reports

Table 5.16 presents the proportion of direct tax collected from the states(0020-Corporation Tax, 0021-Taxes on Income other than corporation tax&others)excluding GST collection for the period 2018-19 to 2022-23. As shown in the table, Maharashtra and Karnataka together contributed nearly 60% of the total direct tax collection. Tamil Nadu's tax collection remained close to 8%. The contribution from 12 states ranged between 6% and 1%, while the share of the remaining 13 states was less than 1%.

Table 5.16Direct tax Collection (%) from States

Sl. No.	States	2018-19	2019-20	2020-21	2021-22	2022-23
1	Maharashtra	45.08	44.14	41.60	43.91	43.79
2	Karnataka	12.70	12.52	14.57	14.12	14.64
3	Tamil Nadu	7.87	8.02	7.66	7.40	7.65
4	Gujarat	5.20	5.69	5.87	6.00	5.99
5	Andhra Pradesh	4.90	4.91	5.05	4.74	5.32
6	West Bengal	4.73	4.67	5.05	4.50	4.02
7	Haryana	3.17	3.20	3.07	3.16	3.09
8	Uttar Pradesh	2.93	3.10	3.35	2.91	2.60
9	Rajasthan	2.23	1.90	2.20	2.11	2.20
10	Kerala	1.80	1.74	1.82	1.64	1.70
11	Orissa	1.42	1.56	1.29	1.30	1.38
12	Madhya Pradesh	2.09	2.15	1.66	1.52	1.35
13	Telangana	1.15	1.61	1.99	2.28	1.21
14	Uttarakhand	0.35	0.39	0.39	0.35	1.18
15	Punjab	1.25	1.34	1.31	1.34	1.10
16	Assam	0.66	0.54	0.57	0.48	0.67
17	Jharkhand	0.73	0.76	0.70	0.59	0.65
18	Bihar	0.66	0.66	0.67	0.62	0.53
19	Chandigarh	0.29	0.31	0.23	0.30	0.46
20	Goa	0.26	0.25	0.33	0.24	0.26
21	Himachal Pradesh	0.26	0.29	0.29	0.26	0.11
22	Meghalaya	0.12	0.13	0.13	0.09	0.05
23	Tripura	0.03	0.03	0.06	0.04	0.04
24	Manipur	0.02	0.02	0.05	0.03	0.02
25	Arunachal Pradesh	0.03	0.03	0.02	0.02	0.01
26	Mizoram	0.01	0.00	0.01	0.01	0.00
27	Sikkim	0.05	0.05	0.04	0.03	0.00
28	Nagaland	0.01	0.02	0.02	0.02	0.00
	Total(in Rs. crore)	**9,43,585.93**	**8,70,594.56**	**7,98,052.47**	**11,94,461.90**	**14,02,650.23**

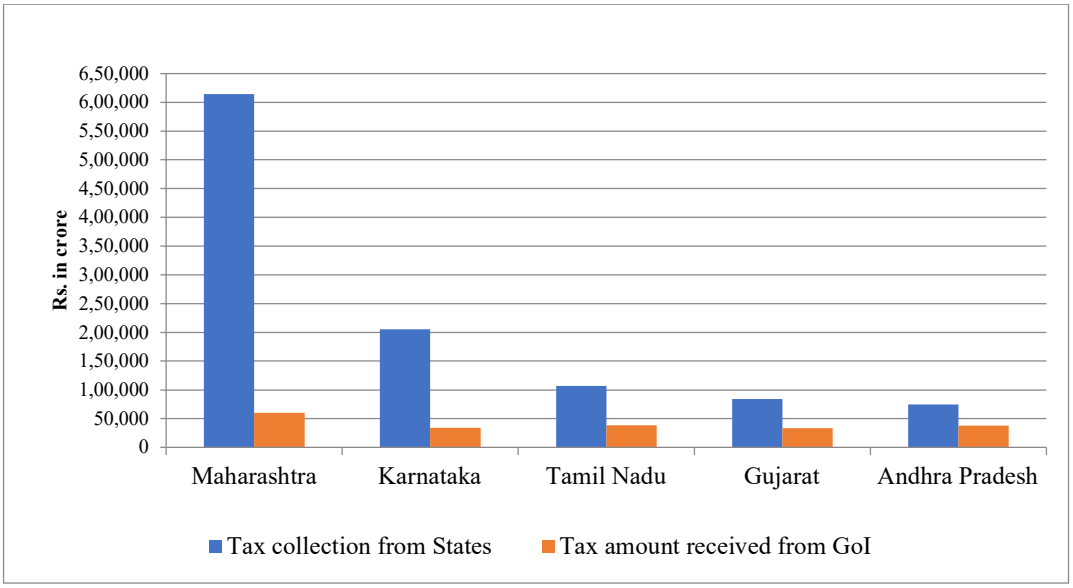
Source: Author's calculation based on information provided on revenue of centre and states for Rajya Sabha un-starred question no. 232 dated 05/12/2023
https://sansad.in/getFile/annex/262/AU232.pdf?source=pqars

When examining the distribution of states' shares based on the criteria and weights assigned for sharing taxes and duties by the 14th and 15th Finance Commissions, two key observations stand out. Firstly, states that excel in contributing significantly to the nation's tax revenues seem to have been allocated a disproportionately smaller share by the central government. This disparity raises concerns about the fairness and equity of the allocation

framework, especially given the substantial fiscal contributions made by these top performing states.

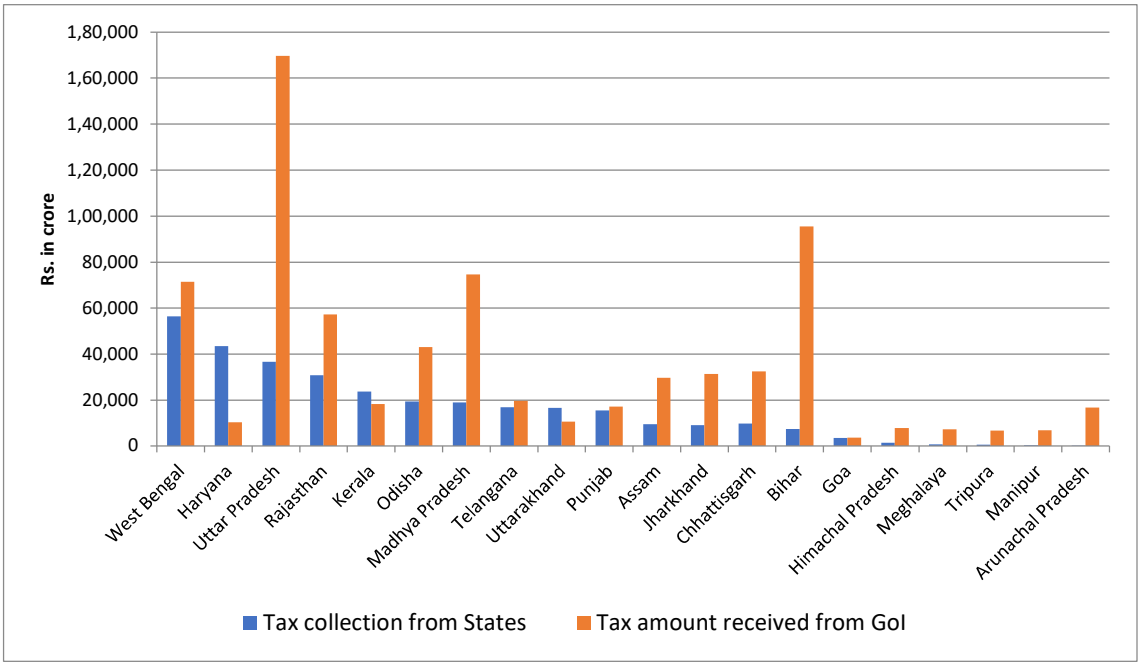
Figures 5.14 and 5.15 provide the total tax amount collected from each state by the Government of India, as well as the corresponding tax amount paid back to each state by the Government of India for 2022-23. As mentioned earlier, Maharashtra and Karnataka have been top performers in contributing to the nation's tax collection, together accounting for 60% of the total share. However, the proportion of tax amounts received was significantly lower, with Maharashtra receiving only 9.8% and Karnataka receiving 16.8% of their respective contributions. Tamil Nadu received 36.1%, Gujarat received 39.3% and Andhra Pradesh received 51.2% of their respective contributions (Figure 5.14). Meanwhile, 17 states received amounts significantly exceeding their actual contributions, surpassing 100%. In fact, Uttar Pradesh, Bihar and Madhya Pradesh, in that order, received the highest amount in absolute terms (Figure 5.15).

Figure 5.14Tax collection from top 5 states and amount received from GoI based on FC recommendation (in 2022-23)



Source: Author's preparation based on information provided on revenue of centre and states for Rajya Sabha un-starred question no. 232 dated 05/12/2023
https://sansad.in/getFile/annex/262/AU232.pdf?source=pqars

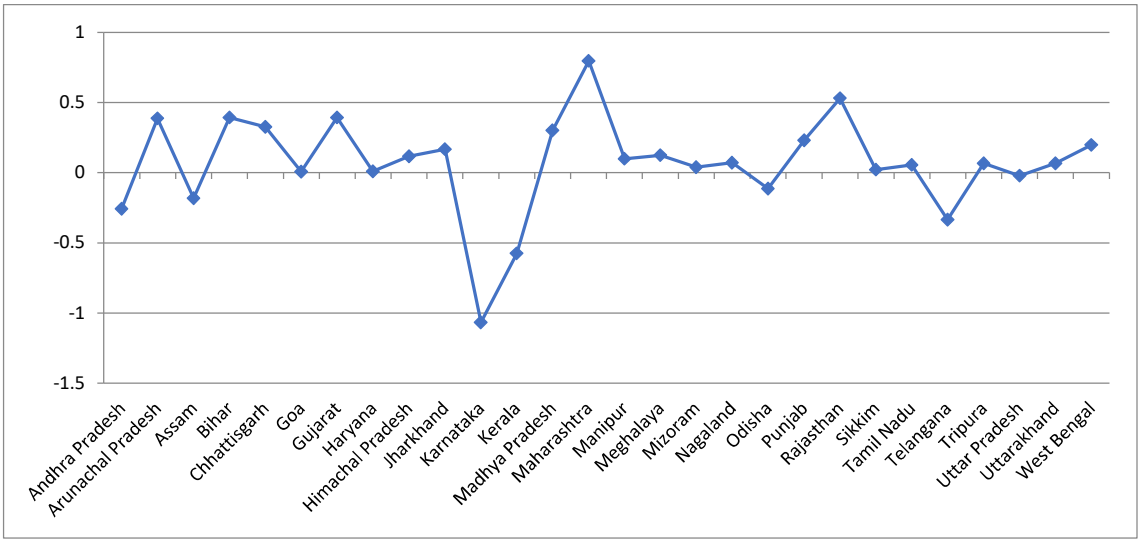
Figure 5.15Tax collection from remaining states and amount received from GoI based on FC recommendation (in 2022-23)



Source: Author's preparation based on information provided on revenue of centre and states for Rajya Sabha un-starred question no. 232 dated 05/12/2023
https://sansad.in/getFile/annex/262/AU232.pdf?source=pqars

The second observation is that, when comparingthe Inter-Se share of states between the 14th and 15th Finance Commissions, the share has increased for most states. However, it has decreased for seven states. Among them is Karnataka, which has been one of the top performers in contributing to the nation's tax collection. Karnataka's Inter-Se share, based on criteria of the 14th Finance Commission, was 4.71. However, based on the criteria of the 15thFinance Commission, it got reduced to 3.65, making it the only state among the top-performing states to have experienced steeper decline by 1.07% (Figure 5.16). It is advisable to reconsider the horizontal devolution criteria to promote equitable resource distribution. This would help resolve issues such as wealthier states disproportionately compensating poorer states, penalising states for successfully managing population growth, and insufficiently recognising tax efforts.

Figure 5.16 Difference between the 14th FC Inter-se shares and 15th FC Inter-se shares of States



Source: Author's preparation based on 14th to 15th Finance Commission reports. https://fincomindia.nic.in/commission-reports

The total funds released as grants-in-aid to rural local bodies by the government have been varying (Table 5.17). It was Rs.31,054.63 crore in 2017-18 and has increased to Rs.44,947.51 crore in 2022-23. Accordingly, the proportion of grants to PRIs to total grants released has increased from 82.7% to 88.8% between 2017-18 and 2022-23.

Table 5.17 Total Grants-in-aid given by the Government to PRIs in Karnataka (in Rs. crore)

	Total funds released as grants-in-aid					
	2017-18	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Panchayati Raj Institutions	**31,054.63**	**35,897.61**	**38,049.61**	**38,106.18**	**39,835.19**	**44,947.51**
ZP[9]	9811.41	11749.97	12104.59	11811.55	12942.96	14800.45
TP[10]	15704.88	19221.8	21126.99	21308.7	23096.94	23821.3
GP[11]	5533.12	4925.43	4801.78	4982.64	3789.37	6317.8
Others[12]	5.22	0.41	16.25	3.29	5.92	7.96
% of PRIs to Total	*82.7*	*86.9*	*85.6*	*87.0*	*85.8*	*88.8*
Total Grants released (to PRIs & ULBs)	**37,544.39**	**41,322.92**	**44,474.33**	**43,787.22**	**46,451.02**	**50,609.37**

Source: Various years of Finance Accounts Volume 1 reports, Government of Karnataka https://cag.gov.in/ae/karnataka/en/state-accounts-report?defuat_account_report_type=359

We know that Karnataka is one of the frontrunners in decentralisation. As per the eleventh schedule of the 73rd constitutional amendments, 29 functions are assigned to PRIs. The literature classified these functions as core, welfare, agriculture and allied and industries (Alok 2006).

[9] Block Grants (Sports and Youth services, Art and Culture, Family Welfare, Crop Husbandry, Soil and Water Conservation, Animal Husbandry, Fisheries, Village and Small Industries, Secretariat, Forestry and Wild Life Forestry, Co-operation, Elementary education, Secondary Education, Welfare of Scheduled Tribes and Scheduled Castes, Backward Classes, Welfare of minorities, Social Security Welfare, Labour and Employment Training, Other Scientific Research and Other General Economic Services), General Block Grants (Labour and Employment Training, Medical and Public Health, Industries, Roads and Brides) District Family Welfare Bureau, Rural Family Health Centres in PHCs, Rural Sub Centres under Family Welfare, Other Rural Development Programmes- Maintenance and Development Grants, DRDA-Administrative charges, MGNREA state share, General Education-Assistance to ZP CSS-Central Share Mid Day meal, Rashtriya Madhyamika ShikshanaAbhiyana, and XV FC Grants to ZPs (Finance Accounts 2023).

[10] Block Grants (Water Supply and Sanitation, Welfare of Scheduled Castes and Scheduled Tribes, Social Welfare, Crop Husbandry, Soil and Water Conservation, Animal Husbandry, Co-operation, Village and Small Industries)(Finance Accounts 2023).
Elementary Education, Sarva Shiksha Abhiyana, Secondary Education, Post Matric Scholarships to SCs and STs, Social Welfare Integrated Child Development Service, Nutrition, Other Rural Development Programmes, XV FC Grants to TPs (Finance Accounts 2023).

[11] General Block Grants – Housing, Block Grants – Special Programmes for Rural Development, Special Programmes for Rural Development Gram Panchayats-CSS (CPS), Other Rural Development Programmes-Grants to Grama Panchayats, Honorarium to Grama Panchayats Members, Swachh Bharat Mission, Water Supply and Sanitation, Employment and Skill Development. Grants to Gram Panchayats Libraries, XV FC Grants to GPs (Finance Accounts 2023).

[12] Includes 'Grants-in-Aid – Salaries' released to PRIs in Karnataka under the Major Head '2515 – Other Rural Development Programmes' (Finance Accounts 2023).

In the recent report on 'Status of Devolution to Panchayats in States – An Indicative Evidence Based Ranking', states/ union territories were ranked according to the overall panchayat devolution index. The index is based on six dimensions: framework, functions, finances, functionaries, capacity enhancement and accountability. As per the Overall Devolution Index, Karnataka stands first followed by Kerala, Tamil Nadu, Maharashtra, Uttar Pradesh and Gujarat[13]. Of the six dimensions, Karnataka tops in financial management practices and establishing standards for transparency and accountability. For other four dimensions, Karnataka is clearly above the national average with 3rd ranking for mandatory *framework*, 2nd rank for devolution of *functions*, 4thplace in *functionaries* - personnel management and capacity building and 11th place in institutional strengthening through capacity enhancement.

5.2.5. Services provided by PRIs and the gaps

In this section, four services are considered for the discussion. They are drinking water, sanitation, housing and rural roads.

a. Drinking water

Functional Household Tap Connections (FHTCs) are provided to the households under Jal Jeevan Mission. In Karnataka, 72.4% of the households are provided with the FHTCs (Table 5.18). In fact, 8,566 villages in the state have 100% FHTC water connections under Jal Jeevan Mission (GoK 2024).

Table 5.18 Access to drinking water facility in Rural Karnataka

Access	Total HHs	Covered HHs	Uncovered HHs
Functional Household Tap Connection (FHTC)	101,16,046	73,22,603 (72.4%)	27,93,443 (27.6%)

Source: Economic Survey of Karnataka 2023-34 (GoK 2024).

[13] See Press Information Bureau (PIB) dated 13 February 2025. https://pib.gov.in/PressReleasePage.aspx?PRID=2102965#:~:text=The%20latest%20report%2C%20prepared%20by,%2D14%20to%202021%2D22.

One of the indicators to measure the adequacy of drinking water is the norm of providing 50 LPCD of water in the rural areas. The data from 227 taluks shows that 64.4% of the habitations in 227 taluks have succeeded in meeting this adequacy norm of providing 50 LPCD water (GoK 2022). However, the provision of this norm is not uniform across the taluks. In 12.3% of taluks, only less than 25% of habitations were provided this facility. Similarly, in about 36.6% taluks the percentage of habitation having drinking water facility of 50 or more LPCD ranged between 25-50% and 50-75% (Table 5.19).

Table 5.19 Adequacy of drinking water facility in Rural Karnataka

Adequacy		**Percentage of habitations having drinking water facility of 50 or more LPCD**				
		<25%	**25-50%**	**50-75%**	**>75%**	**Total taluks**
Distribution of taluks by percentage of habitations having drinking water facility of 50 or more LPCD	Number	28	31	52	116	227
	Percent	*12.3*	*13.7*	*22.9*	*51.1*	*100.0*

Source: Economic Survey of Karnataka 2021-22 (GoK 2022).

b. Sanitation (Individual Household Latrines)

Economic Survey 2019-20 (GoK 2020) notes that 30 districts, 176 taluks, 6021 Grama Panchayats and 26,935 villages in Karnataka have been declared as Open Defecation Free by the end of November 2019.

The Ministry of Drinking Water and Sanitation, Government of India, directed to conduct a Left-Out Baseline (LOB) survey to find out the number of households without individual latrines (GoK 2020). Accordingly, this survey was conducted during 2018-19 and found out that 4.02 lakh rural households had no individual toilets. Following this survey, every year, individual household latrines were newly constructed. Between 2019-20 and 2023-24 (up to November), 5.62 lakh IHHLs were constructed (Table 5.20). Usage of toilets is another important issue. Rajasekhar and Manjula (2019) showed that 92% of the sample households having access to individual toilets were using them. Among the sample districts

chosen for the study, the usage was 100% in the development district and was least (68%) in the backward district. The low use of individual toilets was because of conversion of toilets for other purposes such as storage/ bathing, not having the culture of using the toilet, poor quality of construction and water insufficiency (Rajasekhar and Manjula, 2019).

Table 5.20 Sanitation status in Rural Karnataka

Sanitation	Total	Covered	Uncovered
No. of districts declared as Open Defecation Free (ODF) by November 2019	30 districts	30 (100%)	0 (0%)
Number of rural households without toilets as per Left Out Baseline (LOB) survey conducted during 2018-19	4.02 lakhs (HHs without toilets)	5.62 lakhs (IHHLs constructed between 2019-20 and 2023-24 up to November)	--

Source: Economic Survey of Karnataka 2019-20 and 2023-24 (GoK 2020 and 2024).

c. Rural Housing

The survey by Rajiv Gandhi Housing Corporation Limited (RGHCL) in 2020 revealed that the total number of houseless households in Rural Karnataka was 18.71 lakhs (GoK 2022). Between 2020-21 and 2023-24 (up to November), 4.48 lakhs of new houses were constructed (Table 5.21). However, there is still a large number of houseless households. It is more prevalent in Kalyana Karnataka region.

It may, however, be noted that through various schemes, Karnataka managed to give impressive performance wherein the total number of houseless households declined from 40.62 lakhs (as per SECC survey) in 2011 to 18.71 lakhs (as per RGHCL survey) in 2020 (GoK 2022). Rajasekhar, Babu and Manjula (2018: 158) note that "Housing insecurity is intense in rural Karnataka not so much due to homelessness but because of the presence of married children and the compulsion to lead life in congested houses. The housing insecurity is also due to imminent partitioning of households, and the pressure on the household head to provide decent housing to the children."

Table 5.21 Housing status in Rural Karnataka

Housing	Total	Covered	Uncovered
Number of houseless households as per RGHCL survey conducted in 2020	18.71 lakhs	4.48 lakhs (Houses constructed between 2020-21 and 2023-24 up to November)	14.23 lakhs

Source: Economic Survey of Karnataka 2021-22 and 2023-24 (GoK 2022 and 2024).

d. Rural Roads

Regarding rural road infrastructure, 77.51% of villages in Karnataka have access to all-weather roads (GoK 2022). In 21 out of 227 taluks (i.e., 9.3%), only less than 50% of villages had access to all-weather roads. More than 90% of the villages in 157 taluks had access to all-weather roads.

Table 5.22 Access to all-weather roads in Rural Karnataka

Adequacy		Percentage of villages having access to all-weather roads				
		<50%	50-75%	75-90%	>90%	Total taluks
Distribution of taluks by percentage of villages having access to all-weather roads	Number	21	26	23	157	227
	Percent	*9.3*	*11.5*	*10.1*	*69.2*	*100.0*

Source: Economic Survey of Karnataka 2021-22 (GoK 2022).

The total length of rural roads (cumulative as of March 2023) in Karnataka is 1,97,331.61 kms (GoK 2024). There are three types of rural roads, namely, bituminous surface, metal surface and earthen/ gravel surface. Improvement of rural roads including their maintenance are taken up under Pradhan Mantri Gram Sadak Yojana (PMGSY), Namma Grama Namma Raste Yojane (NGNRY), Mukhya Manthri Grameena Rasthe AbhivruddhiYojane (CMGSY) and Rural Infrastructure Development Fund (RIDF) schemes (GoK 2024).

Table 5.23 shows that more than half the road length (56.1%) were of earthen/ gravel surface type in 2023-24. This means these roads may not be suitable for all-weather conditions and their durability will be the concern. Poor access to all-weather roads were noticed in some of the hilly districts and backward districts (GoK 2022).

Table 5.23 Type of Rural Roads

Year	Total Length of Rural Roads (in km) as on 31 March 2023			
	Bituminous Surface	**Metal Surface**	**Earthen/ Gravel Surface**	**Total length of rural roads**
2023-24	60,721.05 *(30.8%)*	25,968.83 *(13.2%)*	1,10,641.73 *(56.1%)*	**1,97,331.61** *(100%)*
2022-23	61,777.81 *(31.3%)*	21,925.02 *(11.1%)*	1,13,580.00 *(57.6%)*	**1,97,282.83** *(100%)*

Source: Various year of Economic Survey of Karnataka reports
https://des.karnataka.gov.in/info-4/Economics+Survey/Reports/en

Conclusions

Due to the poor own resource base of the ULBs in Karnataka (as in other states), they are dependent on transfers from the state government. We find that a majority of SFC grants to the ULBs are tied. The smaller part of the untied grants too are 'tied'. With cities increasingly becoming the engines of economic growth, and given they generate substantial tax revenues for the central government too, they should be supported. However, central grants to the state's ULBs have been dwindling with some years better than others, and with more and less urbanised states surpassing Karnataka's share. So, the state's ULBs are dependent solely at the mercy of state government grants. However, it should be noted that that most states including Karnataka, have not been able to honour the setting up of six SFCs as per the mandate of the central finance commission. When the SFC is not set up, devolution to the local governments, here the ULBs, also suffers. We suggest that the states' urbanisation rate be made a criterion based on which devolution is made to ULBs. Based on our discussions, we find that urban decentralisation in Karnataka for the devolution of funds, functions and functionaries has reformed significantly.

As far as transfers to rural local bodies are concerned, it is concluded that the number of panchayats has been increasing over time. Karnataka is in the forefront when it comes to initiation of decentralisation reforms. Rural Development and Panchayat Raj department (RDPR) has taken up a major initiative on digitalisation of information and operations so that service delivery is improved. The reforms also aimed at survey of all the properties and determined property rates as per digital technology resulted in a steep increase in the number of properties assessed, current demand and tax collection. Manjula and Rajasekhar (2024) conclude that this reform is well on the way to improving own resource mobilisation. The state also introduced reforms aimed at improving governance, access to public libraries for children, child care support, planning and so on.

Allocation to PRIs over the years shows that education and welfare of SCs, STs and OBCs have been prioritised. It is however noticed that the share of allocation to rural employment, water supply and housing declined. There are also exclusive funds allocated under JJM for water supply works, which are with the line department and not with the PRIs. The total funds released to PRIs from GoI (devolution and grants-in-aid) have been varying over a period of time. In recent years, FC grants to PRIs have declined, and for most years, there has been a shortfall of 0.5% to 57.5% between recommended grants and actual releases. The services offered by PRIs are discussed in this chapter and gaps in the same have been identified. Funds to PRIs are essential to address the gaps in the service delivery. However, there are no exclusive funds for disaster management. Therefore, it is recommended to provide carryover funds to the local government, which can be used immediately in the event of a disaster.It is recommended to revisit the horizontal devolution criteria to ensure fair resource distribution by addressing issues of wealthier states unfairly compensating poorer states, penalising states that have controlled population growth and not adequately rewarding tax efforts.

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6. STATE PUBLIC ENTERPRISES IN KARNATAKA: AN OVERVIEW OF THE FINANCIAL POSITION[14]

Abstract

Public sector enterprises (PSEs) are established to provide a bridge between governmental goals such as ensuring decent work, and market-oriented goals such as profit maximisation and efficient allocation of resources. While these are valuable objectives for society, the dual motives of generating profit as well as operating in a socially responsible manner are often at odds. Coupled with this is growing inefficiency among PSEs owing to a number of factors. Consequently, these enterprises have begun to emerge as targets of criticism (e.g. Vaidyanathan and Sundar, 2011). Sustained losses over several years by many of these enterprises have been observed to place a significant burden on state finances owing to the need for continued support. Given the limitation of state government funds and the need to ensure efficiency and fiscal prudence in government spending, this paper looks at the most recently available financial data on state public sector enterprises (SPSEs) in the state of Karnataka to quantify the functioning of SPSEs: whether they place a burden on the state government's finances, and if so, to what extent. Data has been collated from the Comptroller and Auditor General of India, which provides the State Finance Reports for Karnataka. Using this data, we find that in recent years, SPSEs have become less competitive as the burden from losses is increasing and have required increasingly more support from state finances. It is observed that this support has been skewed towards grants rather than equity infusion and loans. In this context, we recommend that a thorough evaluation is made of the SPSEs, especially the commercial ones, to compare the monetary benefits they currently provide to the social value that they present, and appropriate action is taken.

6.1 Introduction

Proponents of the market economy support the view that state interventions often lead to inefficient allocation of goods and services. Here, efficiency is defined in terms of Pareto efficiency, which needs several stringent conditions to be fulfilled on the functioning of the

[14] We thank Sneha Sharma , Intern at IIT Jammu, for her valuable support in data compilation.
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market. However, in reality, such conditions are difficult to ensure and there are situations of market failures.

"Thus if the market structure is not complete in the sense of Arrow-Debreu, there is a scope for Government intervention."

(Srinivasan, 1992).

In a developing country like India, social desirability and planning for future growth and development are other important considerations for state intervention.

In the post-independence period, the government heavily invested in public enterprises in India, as they planned to build heavy industries that produced investment goods. Thus, substantial investments were made in steel and heavy manufacturing industries in different planning periods. Fiscal deficit at that time was not envisaged as a major problem. As Bimal Jalan writes, "In line with our socialistic traditions, a commitment to the expansion of the public sector was viewed as being synonymous with a commitment to the welfare of the poor. ….As a means of distancing India from the colonial powers, these views had some merit at the time of independence in 1947."

The need for a strong public sector was further emphasised during the initial stages of development of the Indian economy since, because of the lack of infrastructure, non-availability of information relating to technology and markets, and other such related reasons, it was felt that if left to the market, the required level of investment especially in heavy industries might not be made by private entities, and this situation might prevail as a vicious cycle (Basu, 1994). To break this cycle, a *big push* was considered essential by the then Indian Government, and consequently, the establishment of several public sector enterprises (PSEs) took place. The second motive, which was borne out of the continuous problem of foreign exchange, was to attain *self-reliance*. This was the emphasis, especially during the second five-year plan (1955-56), which indeed helped the development of basic and heavy industries relating to infrastructure and capital goods.

Thus, PSEs flourished in the country, initially in the heavy investment areas like steel, capital goods, and defence, but later encompassed all possible activities including the production of commercial goods. During the late sixties and early seventies, major banks, insurance companies, and coal mines were nationalised with the view of the government gaining commanding heights of the economy. In addition to the public enterprises

established by the central government (called central public enterprises), state governments have also established state public enterprises, governed and funded by the respective state governments. There is no public enterprise below the state level in India. From a mere 26 central PSEs in 1960-61, it increased more than 6 fold to 168 in 1980-81 (Table 1) and then to 239 in 1995-'96 (Public Enterprise Survey, various issues).

Table 1 Central Public Sector Units (Profit after Tax (PAT) in Rs. Billion)

	1960-61	1970-71	1980-81
Number of units	26	87	168
% of Pre-tax profit to capital employed	4.5	.6	.2
Profit after tax	.1	0	-1.8

Source: Economic Survey 2000-01 Government of India

Going by the more recent definition: A government company or public sector enterprise is defined in Section 2(45) of the Companies Act, 2013 "as a company in which not less than 51 *percent* of the paid-up share capital is held by Central Government, or by any State Government or Governments, or partly by the Central Government and partly by one or more State Governments, and includes a company which is a subsidiary of a Government Company" (Government of Karnataka, 2023).

Thus, it is clear that in addition to the PSEs established by the Union Government, state governments also established public sector units and Karnataka is prominent among them. The erstwhile state of Mysore, which forms a major part of present Karnataka, was quite rich in natural resources and, to utilise the same, industrialisation in the state began in early 1800 (Mendon, 1964). Sir M Visvesvaraya (then Dewan of Mysore), who propagated the slogan "Industrialise or Perish", was a pioneer in establishing a good number of basic and consumer goods industries as private investment was not forthcoming. The start of the flow of electricity from Sivasamundram in 1902 marked another major milestone in the state's industrialisation (Economic Development of Mysore, 1970) by providing electricity to a large number of the areas in the state, and subsequently, many PSEs were developed in the state.

This chapter is a modest attempt to discuss the financial status of Karnataka's state public enterprises in recent times. Against this backdrop, the chapter unfolds as follows. The next section presents a brief overview of the extant literature on public enterprises, both internationally as well as in India. Section 3 provides a historical account of the development of industry and public sector enterprises in Karnataka. Section 4 highlights some issues with the availability of data that limits the analysis, and discusses the numbers and types of public enterprises that are currently in operation. Section 5 collates the available data from different sources to perform an analysis of the financial status of these units as of the most recent years. The concluding section sums up the findings and provides some suggestions for a policy.

6.2 A Brief Overview of Literature

There is a large body of literature on the issues related to public sector enterprises, in general, and their reform and privatisation programs in particular. A comprehensive review of this is beyond the scope of this paper. We discuss below a few papers from international studies and a few from Indian literature.

As public enterprises are present in many countries across the globe, there also exist international studies that concentrate on different nations. China, for example, has a large state-owned enterprise sector. Zhang (2019) arrived at a few figures using different methods that estimate the share of SOEs in China's GDP to be 23-28% and the corresponding share in employment to be ranging between 5% and 16% in 2017.

An OECD report (OECD, 2015) argues that the approaches of the government towards state-owned enterprises (SOE) vary in different nations as does their role in development. Citing the example of Singapore, the report states that "Singapore, alongside some of its fellow ASEAN economies, is among the most widely cited examples of a proactive use of SOEs for development … with key companies in the network of industries controlled by the state and assigned roles in fostering development since the early days of independence". China and India, through their political legacy continue to have large SOE sectors. Brazil, following decades of privatisation, displays an interesting dichotomy, where many public enterprises are privatised. South Africa on the other hand is now trying to reverse the earlier adopted pro-market and privatisation-driven policies and is seriously conceptualising

methods to restructure the public enterprises and use them as a vehicle for development (OECD, 2015).

A number of papers examine the reform process of public enterprises in India and abroad. It is found that the reforms in PSEs, are usually centred on the pace and range of their reforms. Dewatripont and Roland (1992) talk about the process of gradual reform in newly democratised countries. Concentrating on country-specific experiences, Joskow et. al. (1994) take up the reform process in Russia, which, unlike India, was not gradual but rather rapid. MeKenzie et al. (2003) have observed that the reform process in a few Latin American countries demonstrated that privatisation gavethe poor better access to services.

Interestingly, it was also observed that privatisation, contrary to the theoretical understanding did not increase poverty and inequality. China's experience with regard to public sector reform also reveals some interesting features. Since 1984, the state-owned firms benefited from incentive contracts, which accorded a fair degree of autonomy to the managers in matters of internal management. Essentially, the managers were allowed to retain a part of the profits generated. They remitted to the central government a certain average percentage of the profits generated up to a certain ceiling. Additionally, a marginal rate of tax was applied to profits generated beyond the specified ceiling, a limit set by the central government. As a result, the profits retained by the firms rose from 17% in 1980 to 39% in 1989 (Xu, 1997). Lee (2002) discusses the regulatory reform and the impacts of reform relating to the telecommunication sector in Malaysia.

Moving on to the Indian situation, the attention that PSEs received starting from the 1960s to 1980s has been talked about by certain authors (see Vaidyanathan and Sundar, 2011).

"However, from the late 80s, the public sector enterprises have become objects of controversy and criticism"

(Vaidyanathan and Sundar, 2011).

The kind of attention and policy focus received by the sector during the initial phases of the five-year plans started to decline. The government also started to explore the profit-earning capabilities of public enterprises. However, they were not run in the manner in which a private enterprise was managed. The problems of multiple objectives of public enterprises have been discussed by Bos (1986) and Jones (1992). Bos (1986) examines

through a theoretical framework the various efficiency-related problems associated with public sector enterprises.

Several authors have written on the problems faced by public sector enterprises in the Indian context (see Krishnaswamy, 1981 and Narain, 1983). Jalan (1997) highlights the seriousness of the financial problems faced by the government, both at the state and at the centre, due to continuous loss-making by some of the PSEs. Ganesh (2001), in his book on public enterprises, touches upon different issues relating to PSEs including the report of various committees for its reform. It delineates the problems concerning various government efforts like the memorandum of understanding. The government's attitude of a loose approach to bringing efficiency to the PSEs and reluctance to give autonomy are some of the crucial elements for their failure. The pricing mechanism in public enterprises has been criticised, which neither brings equity or enhances welfare nor maximises profit. The issues related to price have been discussed in detail by Gouri (1985) and Sankar, Mishra and Nandgopal (1989) highlight that a necessary condition for public enterprises' underperformance is its presence in a wide range of activities, unrealistically expecting them to pursue multiple goals, which has led to operational and management constraints. Further, social welfare policies framed by the government, of which the public sector was an important part, suppressed an essential motivation for cost minimisation and profit generation, a necessary pre-requisite for the survival of the organisation, and emphasised a greater role of the public sector, particularly for the health and housing sectors. Baijal (2002) in his articles effectively highlights the positive effects of reforms on labour and argues for improved labour conditions in wages and a better working environment under privatisation than otherwise conceived by a populist belief. Citing different examples, he argues with great conviction that privatisation need not always affect labourers. Evidently, in more than one privatised PSE, the labourers have become better off in terms of wages after privatisation, and no labourer has lost their job.

Available literature on the aspects of state-level public enterprises is also large. Aziz (1989) covers various problems faced by the state public enterprises in Karnataka. In particular, the management problems of PSEs in Karnataka have been discussed by Ramu (1984), and their financial performances by Venkatswamy (1978). In the post-liberalisation era, public enterprise reform programs are underway in almost all states at varying extents and speeds.

While Khanna (2006) looks at the PSE reform program in Andhra Pradesh, Sawhney (2005) examines the problem of restructuring state public enterprises in Punjab. Examining the Public Sector Reform Program in Orissa, Mishra and Navin (2002) explore individual cases such as the rationale behind merging Hira Cables and Hirakud Industrial Works, the closing of ABS spinning mills, Orichen Ltd. In fact, out of 77 enterprises, 37 are under reform and 34 are under liquidation and closure in Orissa. Similarly, other states are also carrying out their reform program.

While there is some literature on state PSEs of Karnataka, there is very little literature on the subject in recent times. One would observe this as a substantial research gap.

Before moving on to examine the current status of the PSEs in Karnataka, to provide a perspective, we look at the historical background of the sector in the state.

6.3 State Public Enterprises in Karnataka: Historical Background

The erstwhile Mysore State began its industrial activities well before 1947 through the directed efforts of the state. Given the availability of natural resources, mining in particular became an important industrial activity. Kolar Gold Fields was converted into a prominent industrial town, with about 10,000 labourers engaged in the production of gold that touched a production figure of 16,325 ounces in 1886-87. The inauguration of the hydroelectric dam at Sivasamudram in 1902 marked a further milestone in the state's industrial development. Further, to enhance infrastructure facilities, the postal system was also modernised and education received priority. As part of infrastructure development, railway lines were constructed and the early 1900s saw further expansion of railways in Mysore. In 1917, the government decided to install a distillation plant to manufacture coal and a blast furnace for smelting iron. It was in August 1905 that the electric lighting scheme for Bangalore City was completed and it became the first Indian city with electric street lighting. During the same year, it was finally decided that the Tata Institute –now known as the Indian Institute of Science –was to be established in Bangalore.

Any account of the industrial history of Karnataka would remain incomplete unless one mentions the contribution of Sri Mokshagundam Visvesvaraya, who propagated the motto 'industrialise or perish'. After he retired from service, he became the Dewan of Mysore in 1912. One of the noteworthy initiatives of Sir M Visvesvaraya was to carry out a survey of

natural resources, whose report was published in 1913. In 1922, the Department of Industries and Commerce was reorganised to give a greater emphasis to the development of industries in the state. The decade 1931–41 witnessed the highest degree of industrial activity in the state. Apart from gold mining ventures, Mysore Iron and Steel Works, the aircraft factory, the Mysore Chemicals and Fertilisers, Mysore Sugar Company, and Mysore Paper Mills were *directly owned or aided by the government*. In the absence of a coordinated policy, Mysore had to evolve an individual policy of its own, to encourage and help private effort and direct government enterprise in fields beyond the capacity of private effort. As a result of this policy, there were 29 major industrial concerns (not including the hydroelectric works, the textile mills and the gold mining companies) during the 1920s with a total investment of about Rs. 500 lakh and employing 16,500 persons. The number of large industrial establishments that existed in 1944 was 605, employing about 77,518 persons. Since power was made available to all parts of the state, even cottage industries developed through proper policy initiatives were encouraged to develop further into small-scale and minor industries.

Further, with the advent of the Second World War, some new production activities were initiated in the state, which included the manufacture of starch for textile purposes, vegetable dyes, potash salts from molasses, caustic soda, radio sets, cement, etc. Thus, with government initiatives, there was substantial growth of large and small industries in the State.

6.4 Data Issues of State Public Enterprises in Karnataka

The primary source of data for the state public enterprises (PSE) was released by the government of Karnataka on a regular basis. Later as the reform drive got a certain amount of momentum, the bureau was given the name, Department of Disinvestment and State Public Enterprises Reforms, which (as per our knowledge) brought out a public enterprises survey (2000-01) and Performance Report of State Public Enterprises (2003-04). These reports contained the detailed balance sheets of the PSEs, which however, lacked certain essential information regarding government-provided loans that were converted to equity, sales taxes waived, etc. After 2004, however, there was a gap of almost nine years in publication of the reports and the Department of Public Enterprises brought out its report titled, State Level Public Enterprises in Karnataka at a Glance, only in July 2013. It is important to note that this latest report provides only a snapshot of the financial details of

the PSEs, not a proper balance sheet as was the case with reports published before 2004. In other words, it lacks information on a large number of important indicators and is highly insubstantial for the purpose of computing the costs to the government including tax paid, subsidies received, and other such variables. This important data gap needs to be taken note of.

More importantly, if one looks at the last ten years, there is a paucity of data published by the state public enterprise department. Available information is in the form of aggregative data available from the CAG reports. From 2022, the state government has also decided to abolish the state public enterprises department. Given the problem of data limitation, a detailed analysis is found to be untenable. The analysis carried out in this paper collates the available data that has been published from time to time in different reports to attempt to paint a picture of the current status of these units.

6.5 State Public Sector Enterprises: More Recent Scenario

SPSEs consist of state government companies and statutory corporations. Some SPSEs are established also to carry out activities of a commercial nature keeping in view the welfare of people and occupy an important place in the state economy (e.g. Mysore Soaps and Detergents). As per the C&AG report (Government of Karnataka, 2023), on 31 March 2023, there were 127 SPSEs in Karnataka, including six statutory corporations[24] and 121 government companies (including thirteen[25] inactive government companies[26]) . The names of these SPSEs are given in the Appendix 1.

The six (6) statutory corporations in Karnataka as per C&AG classification as listed as follows:

1. Karnataka State Warehousing Corporation (KSWC)
2. Karnataka State Financial Corporation (KSFC)
3. Karnataka State Road Transport Corporation (KSRTC)
4. Bangalore Metropolitan Transport Corporation (BMTC)
5. North Western Karnataka Road Transport Corporation (NWKRTC)
6. Kalyana Karnataka Road Transport Corporation (KKRTC)

However, there is a discrepancy between the list of statutory corporations of C&AG and that of GoK. The GoK in its Budget Memorandum considers all the Electricity Supply Companies (ESCOMs) as statutory corporations and hence, the total number of SCs as per this list, exceeds the number listed by C&AG. C&AG is the sole auditor for four (4) out of six (6) statutory corporations of Karnataka (all transport corporations, i.e. KSRTC, BMTC, KKRTC, NWKRTC). Audit for Karnataka State Warehousing Corporation and Karnataka State Financial Corporation is conducted by chartered accountants while the supplementary audit is carried out by the C&AG(C&AG, 2022).

C&AG classifies government companies into two groups, i.e. power sector companies and non-power sector companies from 2018 onwards. Power sector companies are again divided into four groups: i) power generation companies, ii) power transmission companies, iii) power distribution companies, and iv) others. Similarly, the non-power sector consists of three different groups of companies. The first group refers to government companies of the social sector that are established to provide benefits to targeted sections of the population such as Dr. B R Ambedkar Development Corporation (BRADCL), Karnataka Minorities Development Corporation (KMDC), D Devaraj Urs Backward Classes Development Corporation Limited (DUBCDCL), etc. The second group consists of government companies operating in a competitive environment such as Karnataka Soaps and Detergents Limited (KSDL), Mysore Paper Mills Limited (MPM), Hutti Gold Mines Company Limited (HGML), etc. These companies compete with the private sector in the market to promote their businesses. The third group refers to companies that are involved in development-promoting activities such as Karnataka Forest Development Corporation Limited (KSFDC), Karnataka Rural Infrastructure Development Limited (KRIDL), Karnataka Neeravari Nigam Limited (KNNL), etc. These companies are established to promote/encourage investment, production, and consumption, of certain socially desirable goods/services and they do not compete with the private sector rather they may complement the private sector.

There has been a gradual proliferation of working GCs over the years in the state while the number of SCs and non-working GCs remained the same over time. The total

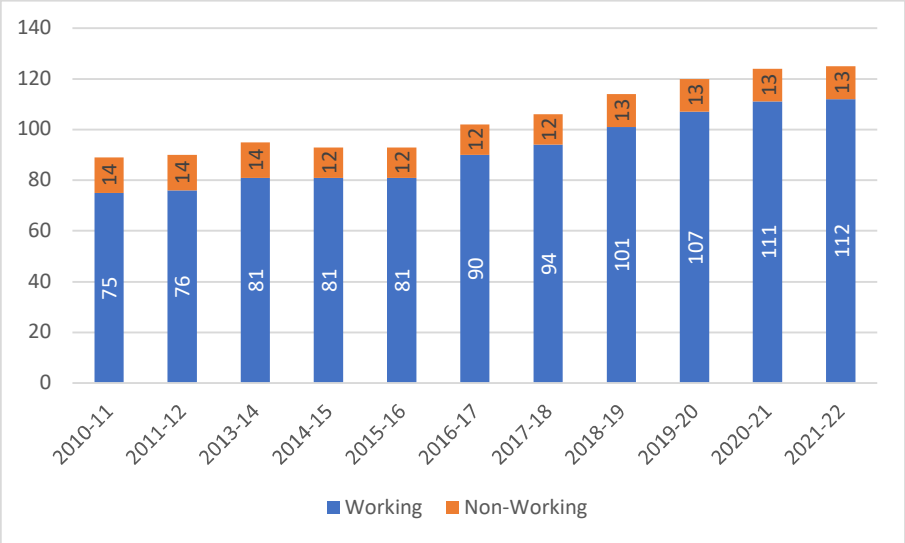
number of working government companies has increased from 69 in 2010-11 to 106 by the end of March 2022. In other words, the GoK has established 37 new GCs during the above 12-year period. On the contrary, the total number of statutory corporations has been unchanged for a decade. There were six SCs functioning in the state since 2010-11 and no other SC was incorporated thereafter.

Based on the data availability, we undertake an investigation into the combined performance of these SPSEs in the next section.

6.6 Performance of Public Sector Enterprises in Karnataka

6.6.1 Working and Non-working PSEs

Figure 1: Year-wise Number of Working and Non-Working PSEs



Source: CAG, GoK

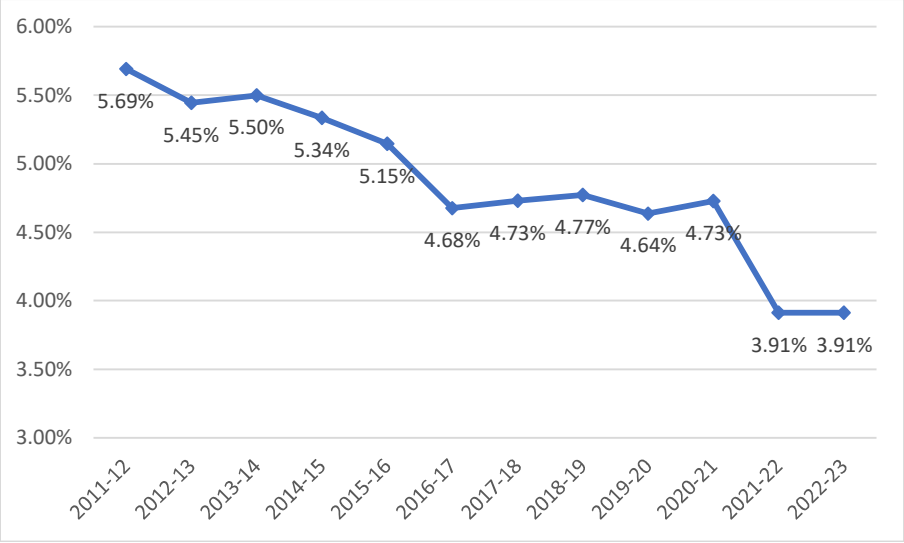
From the available data, displayed in Figure 1, it can be seen that there has been a slight increase in the number of SPSEs (State Public Sector Enterprises) over the years from 2010-11 to 2021-22. Over this decade, the number of working PSEs has grown by almost 50% from 75 enterprises to 112. On the other hand, the number of non-working PSEs has stayed largely the same, with this being 14 in 2010-11 and currently standing at 13 units.

Thus, in terms of the establishment of or conversion into state-led enterprises, the past decade has seen a relatively high amount of activity. However, given that many of these are enterprises that have the motive of profit in addition to their social goals, it is important to consider the contribution of these companies to the state's funds and whether they are capable of improving the government's ability to meet its goals. For this, we look at some pertinent metrics relating to the financial status of SPSEs in Karnataka.

6.6.2 Contribution to the state

Turnover is an important measure of enterprise performance, and we look at whether SPSEs have been able to keep pace with the expanding economic and competitive environment in Karnataka over the recent years. In order to capture this, we look at the ratio of total SPSE turnover to state gross domestic product. This provides an insight into the relative contribution of SPSEs to the state's economy.

Figure 2: Turnover as a % of GSDP (Ratio of Current Prices Considered)



Source: Turnover figures from CAG, GDP figures from MOSPI

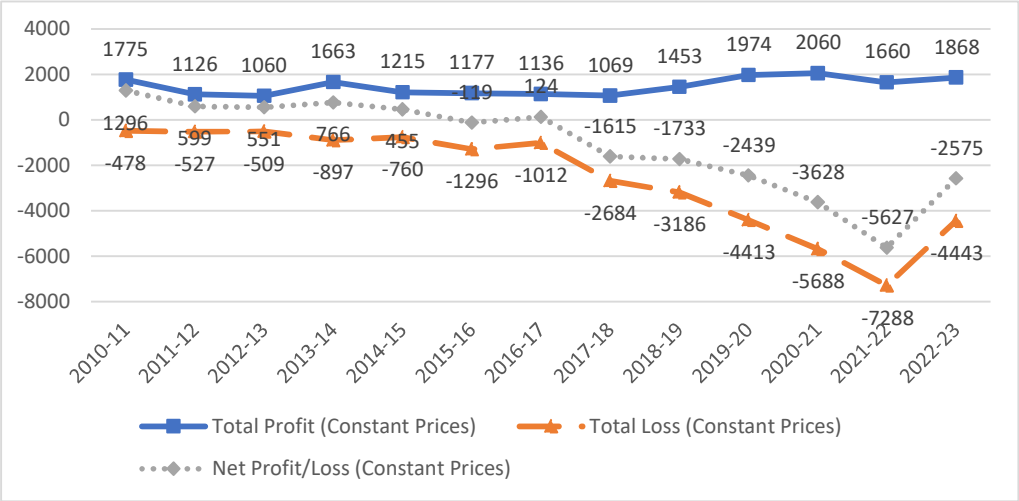
From Figure 2, it is clear that the share of SPSEs in total state GDP has been declining steadily over the years, falling from as much as 5.69% in 2011-12 to just 3.91% in 2022-23. Thus, in relative terms, SPSEs have been contributing less to the total output of the state over the years. However, this could be owing to increased private sector output over this period as well. Thus, it is also important to consider the specific performance of these units.

To obtain a perspective of the real growth in these figures, we use data on India's price indices (with a base of 2011-12) provided by the World Bank in order to deflate current monetary figures into constant prices. Using this data, we can compute that the total turnover of SPSEs grew from Rs. 34,491 crore in 2011-12 to Rs. 52,971 crore in 2022-23. This is a cumulative growth of 53.58%, which closely mirrors the growth in the number of SPSEs over this period. On the other hand, the state's real GDP grew from Rs. 6,06,010 crore in 2011-12 to Rs, 13,53,712 crore in 2022-23, which is cumulatively 123% higher. Thus, the state's economy appears to have far outpaced SPSEs in terms of output, whereas the increase in SPSE turnover is mirrored in the increase in the number of such firms, perhaps indicating that the per-SPSE turnover has not improved in real terms over this period.

6.6.3 Profit and loss

Given the declining prominence of public sector enterprises, it is important to further delve into their financial performance. While turnover provides an estimate of an enterprise's success in generating sales and capturing market share, it does not include the efficiency with which the enterprise manages its costs and operations. For this, it is necessary to also consider the profitability of these companies to understand whether they are balancing revenue generation and cost management adequately.

Figure 3: Yearly Total Profit and Total Loss Earned by PSEs in Karnataka (at Constant 2011-12 Prices, Rs. Crore)

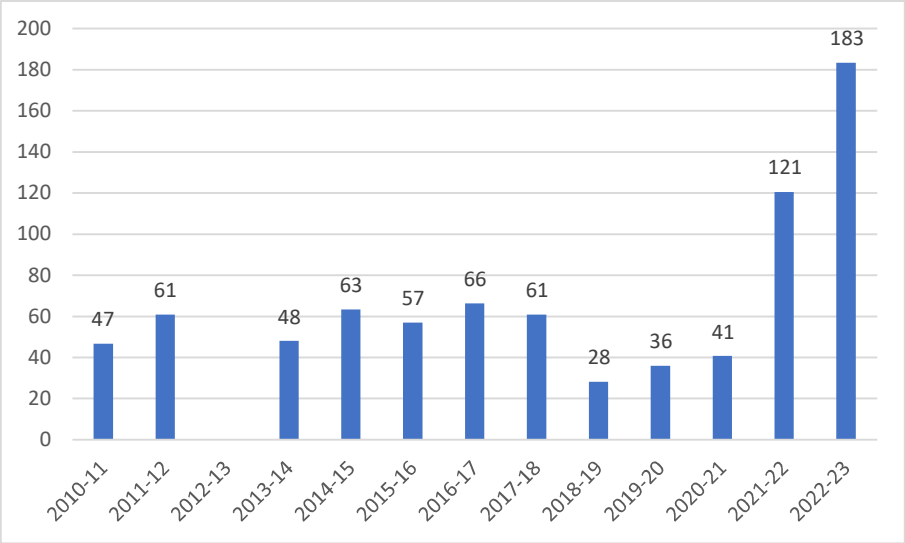


Source: Price Indices from the World Bank; Data on Profits and Losses from State Finance Report, CAG, GoK

Figure 3 shows the total profits generated by profit-making SPSE, the losses incurred by those that faced losses, and the net total profits earned by all SPSEs for each year in constant (2011-12) prices. The observation of stagnation in SPSE performance noted in the analysis of turnover is more strongly reflected here, where it can be seen that even among SPSEs that are profitable, the generation of profits has remained largely constant in real terms over the years. On the other hand, SPSEs making losses have been facing greater magnitudes of total loss from 2016-17 onwards. While in 2016-17, the real total loss incurred by SPSEs amounted to around Rs. 1,012 crore, this increased sevenfold to Rs. 7,288 crore by 2021-22. While there has been an improvement as of the most recent data, with total losses reducing to Rs. 4,443 crore, the profits generated by other SPSEs have not been adequate to cover this, and consequently, SPSEs currently experience a net loss of around Rs. 2,575 crore in 2011-12 prices. In current prices, this amounts to Rs. 4,318 crore.

6.6.4 Dividend paid to state

Figure 4: Real Dividend (in Rs Crore, Constant 2011-12 Prices) Paid to Government

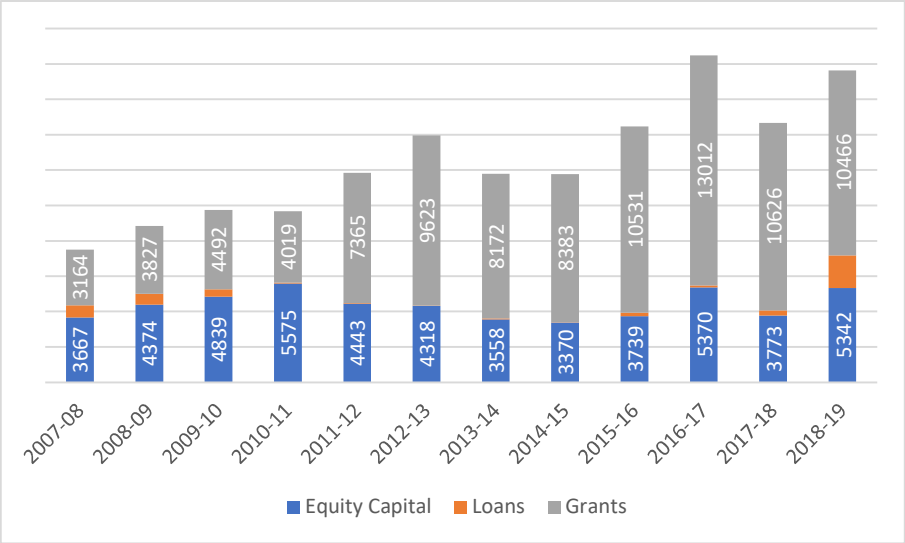


Source: CAG, GoK

The profit-making enterprises pay dividends to the state government, as seen in Figure 4. This amount was largely stable for most of the decade from 2010-11 to 2020-21, amounting to between Rs. 30 and 70 crore a year. In percentage terms, the dividend paid in 2011-12 was around 5.4% of profits, while in 2020-21, it amounted to 2%. However, there has been a significant jump in dividend pay-outs in 2021-22 and 2022-23, with the figures rising to Rs. 121 crore and 183 crore, respectively in real terms. However, this increase was not mirrored in the profits earned by these enterprises, and instead saw a greater share of profits being paid as dividends (7.3% in 2021-22 and 9.8% in 2022-23), which leaves even lower funds for SPSEs to invest in expanding capacity, competitiveness, increase market share, and engage in forays into new markets.

6.6.5 Budgetary support of the state

Figure 5: Different Sources of Budgetary Support to SPSEs (in Constant 2011-12 prices) Rs. Crore)



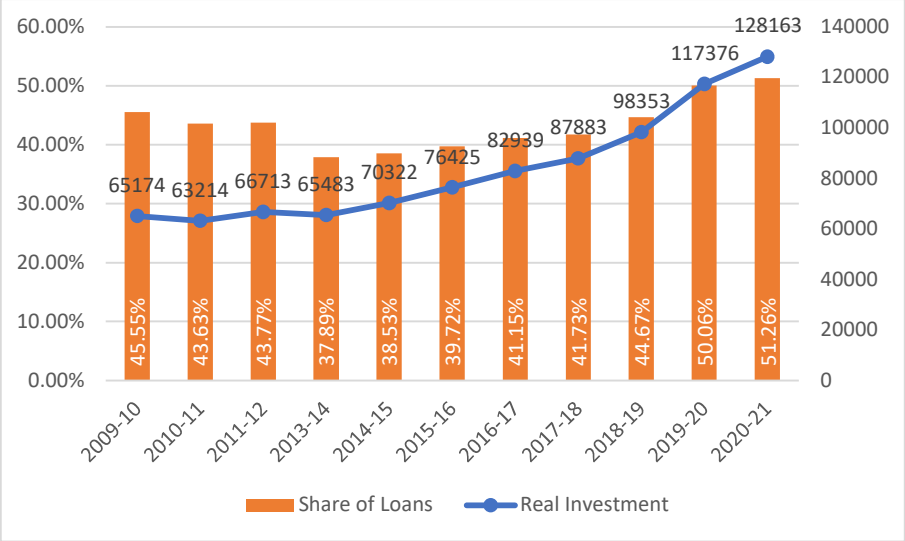
Source: CAG, GoK

Given that many SPSEs operate on significant losses, supporting their operations requires significant aid from the state government, and this would be drawn from the state's budget. Consequently, we can see in Figure 5 that the overall support given to SPSEs has been steadily rising from 2007-08 to 2018-19. Moreover, the composition of the support has been largely in the form of grants, and, more recently, increased loans, rather than increased equity infusions. While the equity capital for SPSEs in 2007-08 amounted to Rs. 3,667 crore, it was Rs. 5,342 crore in 2018-19 in real terms. On the other hand, grants grew threefold from Rs. 3,164 crore to Rs. 10,466 crore. In fact, the real grants to SPSEs have amounted to approximately Rs. 10,000 crore or more from 2015-16 onwards. Loans, too, have started to become a more prominent form of support to these units, amounting to Rs. 1.839 crores in 2011-12 prices as of 2018-19. Thus, the state government appears to have been increasing its support to SPSEs from its revenues, and the assistance provided has been increasingly and overwhelmingly in the form of grants rather than income-generating support such as equity infusions.

6.6.6 Financing & Debt

Considering only share capital and loans, it can be observed from Figure 6 that the composition of these investments has been increasingly skewed towards loans rather than equity. While loans accounted for 46% of total investment in SPSEs in 2009-10, this grew to as much as 51% in 2020-21. Despite stagnating profits and relatively low dividends for most years, the total investment in SPSEs has been climbing over the years and has almost doubled in real terms from 2009-10 to 2020-21 from Rs. 65,174 crore to Rs. 1,28,163 crore.

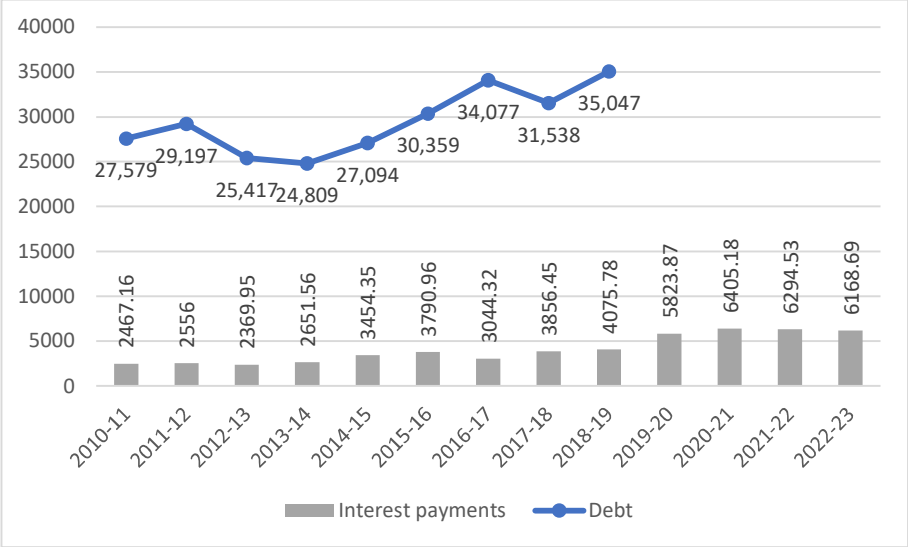
Figure 6: Real Total Investment (in Constant 2011-12 prices Rs. Crore) and Share of Long-Term Loans in PSE Investment



Source: CAG, GoK

Given that loans are becoming an increasingly more common mode of providing support to SPSEs, it is important to investigate the loan burden of these enterprises and their debt-servicing obligations. Figure 7 displays the real interest payments and real value of debt held by SPSEs.

Figure 7: Real Interest Payments & Debt by PSEs (at Constant 2011-12 Prices)

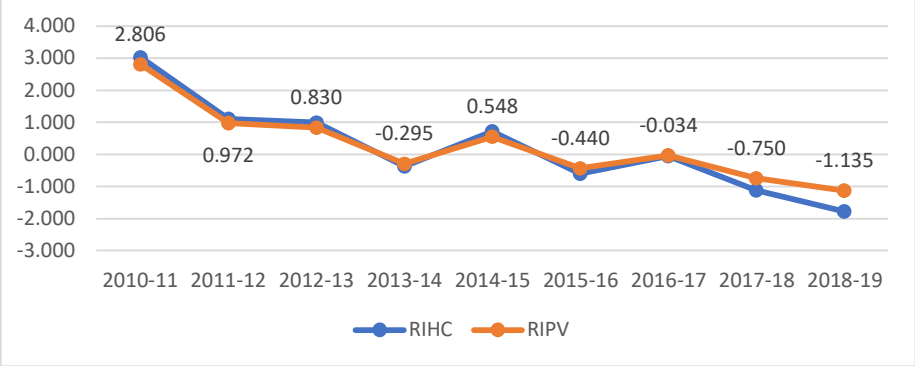


Source: CAG, GoK; Based on Data Availability

As seen earlier, the total debt held by SPSEs has been climbing, and there has been a consequent increase in the amount paid in interest. This has grown from Rs. 2,467 crore in 2010-11 to Rs. 4,076 crore in 2018-19, amounting to an increase of 65%. This has been followed by a sharp jump in the following years, and currently, the real value of interest payments sits at Rs. 6,169 crore as of 2022-23.

6.6.7 Returns to Investment

Figure 8: Returns to Investment based on Historical Capital (RIHC) and Returns to Investment based on Present Value (RIPV) for Public Sector Enterprises in Karnataka (in %)

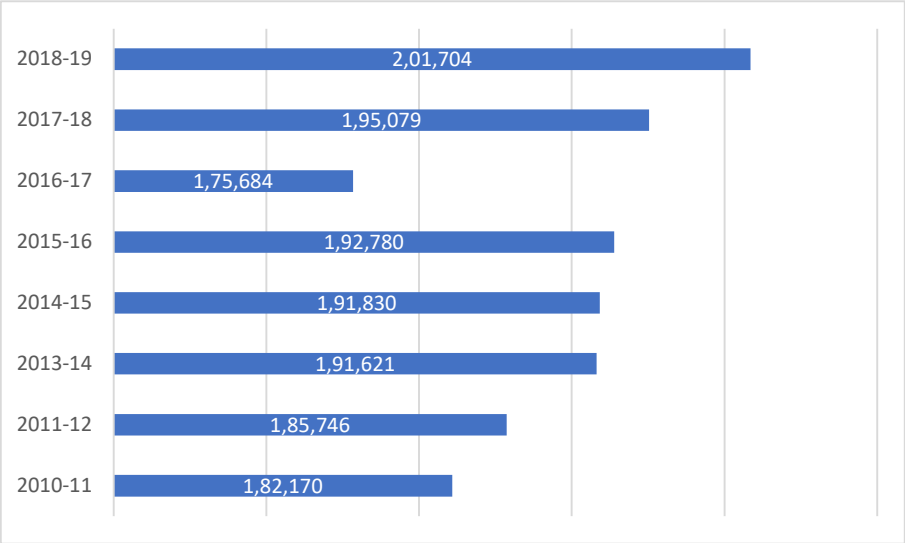


Source: CAG, GoK

Considering the significant total investments made into SPSEs by the state government, and their declining profitability, we look at the returns to investment of these enterprises in Figure 8. We use two measures – the returns based on historical capital, which is the ratio of the total yearly earnings to the original amount invested into the SPSEs; and the return based on present value – which enumerates the ratio of yearly earnings to the present value of total investments into these enterprises. While there were some returns generated earlier (going as high as 2.8% of the present value of investments in 2010-11), this has been declining over the years, and has crossed into negative territory after 2015-16.

6.6.8 Employment

Figure 9: Manpower (Persons) of Working PSEs



Source: CAG, GoK

Apart from profitability, SPSEs can also be used as an avenue to generate decent work and employment for the state's population. Even if returns are negative, the use of state funds could be justified in terms of providing remunerative work to citizens and improving their standards of living. In addition to providing a cushion against poverty, this could enhance the state's total consumption through the multiplier effect, and have an overall positive effect on the state's economic health. However, looking at the manpower of working SPSEs (in Figure 9), it can be seen that despite a two-fold increase in total investment, coupled with growing non-income-generating budgetary

support to these enterprises, the total employment has failed to grow commensurately. While in 2010-11, the manpower amounted to 1,82,170, this only grew by 11% to 2,01,704 by 2018-19.

6.6.9 Subsidies

While there is a paucity of data on the topic of subsidies, some figures have been provided in relation to the power sector, which is a major target of state subsidies in Karnataka. This information tabulated in Table 2.

Table 2: Power Sector Subsidies

	2018-19	2019-20	2020-21	2021-22	2022-23
Real Subsidy (Rs. Crore)	₹5,622	₹6,586	₹6,304	₹9,381	₹6,865
As a % of Total Expenditure	7.57	8.2	8.22	10.79	8.24
As a % of Total Subsidies	49.31	51.96	49.58	52.22	50.59

Source: CAG, GoK

The total subsidies to the power sector, in 2011-12 prices, have been growing considerably and were 22% higher in 2022-23 compared to 2018-19. Their share of total expenditure has also increased slightly, especially up to 2021-22. Currently, these subsidies make up around half of the total subsidies provided by the state government.

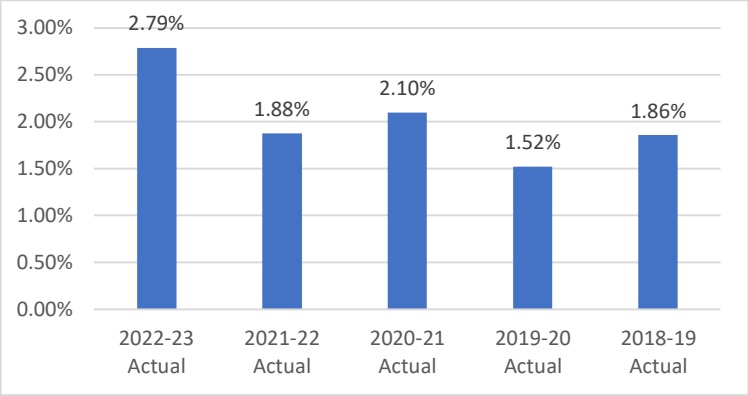
6.7 Share of Expenditure on PSEs: Analysis of Government of Karnataka Budget Data

To obtain a better understanding of the expenditure on supporting PSEs from the state budget, we can turn to the Finance Accounts of the Government of Karnataka. Data is available for this from 2019-20 up to 2022-23. Looking through the disaggregation of information based on minor heads of expenditure, figures have been provided for the revenue expenditure, capital expenditure (investments) and loans and advances given to "Public Sector and Other Undertakings" under code no. 190. For the section on capital expenditures, some firm-wise information has been provided, and a few of the firms

detailed were checked against the list of PSEs given in the appendix to this paper, and thus, the figures gathered from the state finance accounts can *provide an indicative picture* of the share of government expenses that goes towards supporting PSEs in the state.

6.7.1 Revenue Expenditure

Figure 10: Share of Revenue Expenditure on Public Sector & Other Undertakings in Karnataka

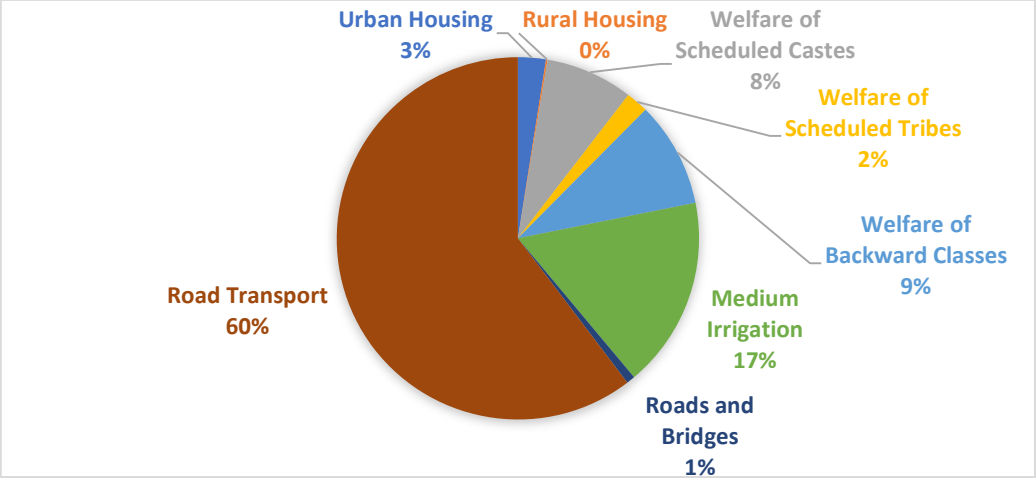


Source: Authors' calculations from Finance Accounts, GoK, available at the AG website.

Note: Revenue expenditures on Public Sector & Other Undertakings in Karnataka are directly available from the finance accounts as well as total revenue expenditure. These two figures are used to compute the percentages.

In terms of the share in total state revenue expenditure (Figure 10), the public sector and other undertakings only account for up to 2% or less. Notably, however, in the most recent year, the share has been somewhat higher than what was seen in previous years. Altogether, however, the share of revenue expenditures going towards supporting the operations of PSEs in the state is rather low. This expenditure is split between a number of different heads.

Figure 11: Share of Different Heads in GoK Revenue Expenditure on Public Sector & Other Undertakings

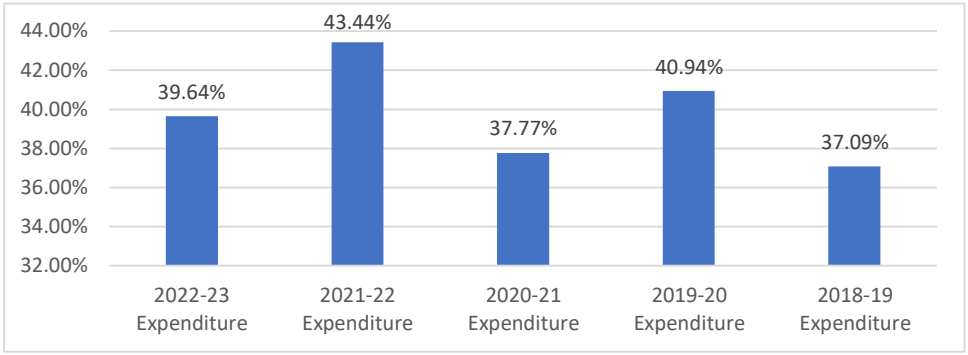


Source: Authors' Computations from Finance Accounts, GoK
Note: These subheads are directly given in the Finance Accounts Report of GoK under the heading revenue expenditure on public sector and other undertakings.

Road transport corporations account for a majority (60%) of revenue expenditure on PSEs (see Figure 11), followed by enterprises engaged in medium irrigation works (17%) and those geared towards the welfare of backward classes (9%) and scheduled castes (8%). Therefore, almost all of the state government revenue goes towards supporting PSEs that are engaged in promoting social welfare or providing crucial utilities for the state.

6.7.2 Capital Expenditure

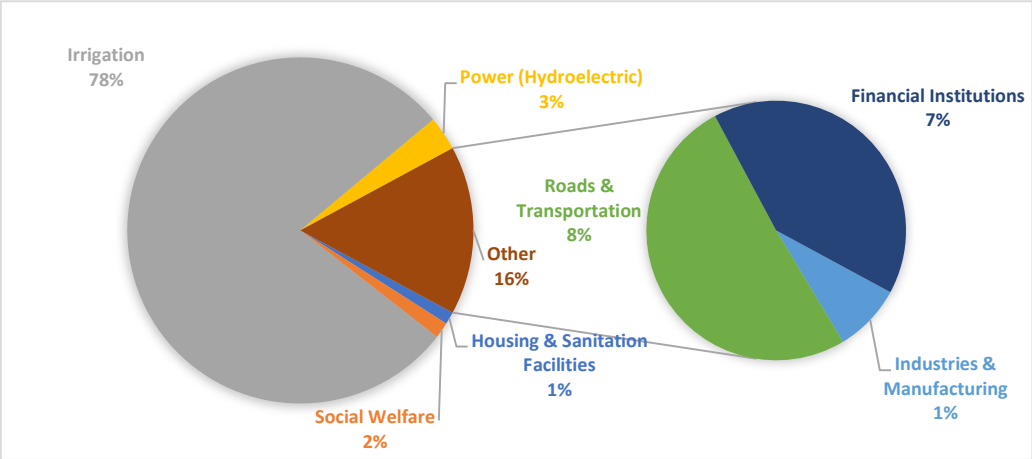
Figure 12: Share of Capital Expenditure on Public Sector & Other Undertakings in Karnataka



Source: Authors' Computations from Finance Accounts, GoK
Note: Figures Directly given under these heads in the above report.

While PSEs only account for a small share of revenue expenditure out of the state budget, they are responsible for a far more significant proportion of the capital expenditures (investments) made by the state exchequer (Figure 12). This has generally accounted for around a third to two-fifths of the state budget's capital expenditure and is at around 40% as of the most recent data. This was a slight reduction from the value seen in the previous year (2021-22), where capital expenditure on PSEs accounted for 43% of the total, but is higher than the average seen during the period 2018-19 to 2020-21. The distribution of funds across different types of PSEs is examined next.

Figure 13: Share of Different Heads in GoK Capital Expenditure on Public Sector & Other Undertakings



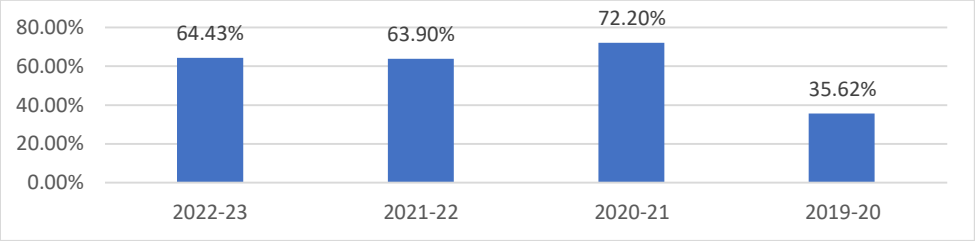
Source: Authors' Computations from Finance Accounts, GoK
Note: Figures directly given under these heads in the above report

Similar to what was seen in the case of revenue expenditure, irrigation works (78%) and roads & transportation (8%) make up an overwhelming majority of the capital investments made through the state budget (Figure 13). Thus, a significant portion of state expenditure on PSEs has been made on developing state agricultural and transport infrastructure, which is a valuable contribution towards sustained future development.

6.7.3 Loans and Advances

In addition to revenue and capital expenditure, information was also gathered upon the loans and advances made by the state government to different entities. As before, the information on public sector and other enterprises was culled out from this data and is presented as follows.

Figure 14: Share of Loans and Advances to Public Sector & Other Undertakings in Karnataka

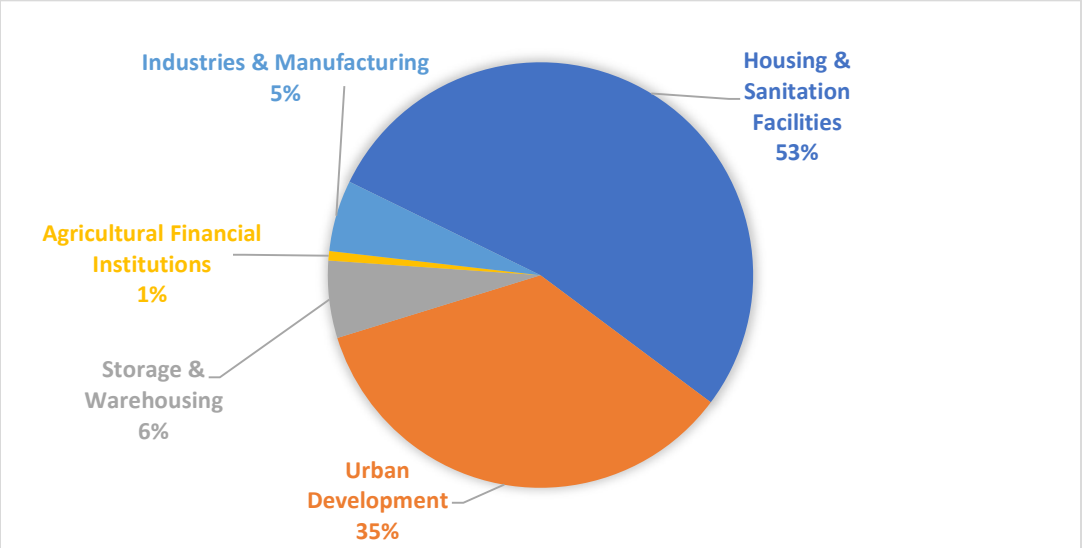


Source: Authors' Computations from Finance Accounts, GoK

Note: Figures directly given under these heads in the report
Note: The denominator (i.e., total loans and advances) has not been reduced by the BMRCL fund for the Bangalore Metro Rail construction for the years 2019-20 to 2021-22, and thus differs from the figures provided by the finance reports

PSEs make up a large percentage of the loans and advances made by the state government (Figure 14). While in 2019-20, these loans were around 35% of the total loans given by the state government, they have climbed to occupy a significant majority of the total from 2020-21 onwards and currently make up almost two-thirds of the total annual lending by the state exchequer.

Figure 15: Share of Different Heads in Loans &Advancesto Public Sector & Other Undertakings



Source: Authors' Computations from Finance Accounts, GoK
Note: Figures directly given under these heads in the above report

The largest shares of loans were given to PSEs engaged in housing, water supply, and sanitation-related works. Notably around Rs. 1,000 crore was given towards water

supply-related companies, and Rs. 73 crore towards other urban development works, which would improve the construction of the Bangalore metro (Figure 15).

Thus, while PSEs do make up a significant share of capital expenditures and loans and advances made by the Government of Karnataka, much of this expenditure has been channelled towards infrastructure-related works such as water supply improvements, irrigation, and metro rail transportation facilities, which can be expected to have significant positive returns over the long term for society.

6.8 Comparison with Central Public Sector Enterprises

While the preceding analysis has brought out some important aspects of the current status of public sector enterprises functioning under the Government of Karnataka, it would be further illuminating to put these results in context to other similar enterprises. Here, the public sector enterprises owned and operated by the central government provide a valuable basis for comparison and can help better situate the performance of Karnataka's SPSEs.

We look both at the performance of all central public sector enterprises across India, as well as the CPSEs present in Karnataka, which will provide a comparable contrast to situate this analysis. The data on central PSEs has been gathered from the annual reports of the Department of Public Sector Enterprises, Government of India, as well as the Public Survey Enterprise Survey conducted by the same wing of the government.

Data on the CPSEs in Karnataka have been gathered by comparing the list of CPSEs in Karnataka with information on individual CPSEs furnished within these reports. Correspondingly, the list of central PSEs present in Karnataka include the following:

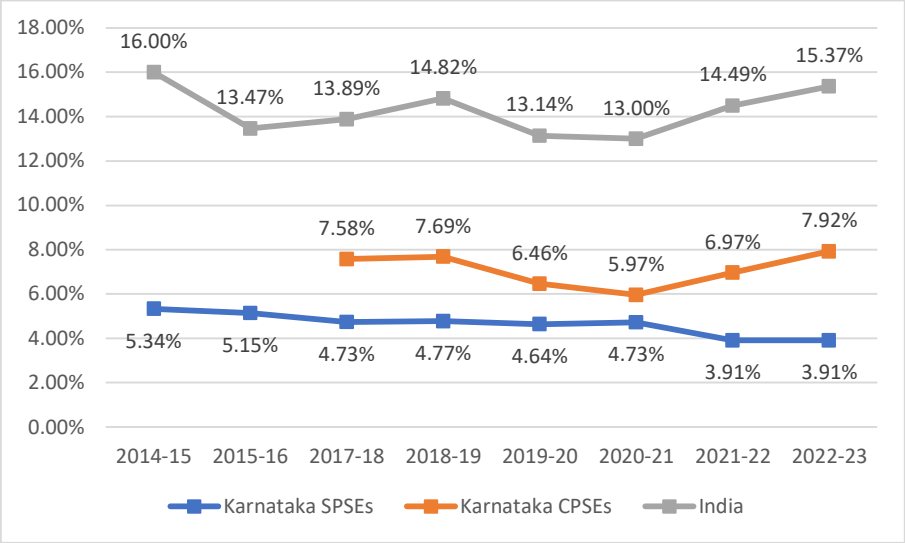
- Antrix Corporation Ltd.
- BEL-Thales Systems Ltd.
- BEML Ltd.
- Bharat Electronics Ltd.
- Hindustan Aeronautics Ltd.
- HMT (International) Ltd.
- HMT Ltd.
- HMT Machine Tools Ltd.
- I T I Ltd.
- Karnataka Antibiotics & Pharmaceuticals Ltd.
- KIOCL Ltd.
- Mangalore Refinery & Petrochemicals Ltd.
- Naini Aerospace Ltd.
- Newspace India Ltd.
- HMT Watches Ltd.
- Indo Russian Helicopters Ltd.
- Karnataka Trade Promotion Organisation
- Karnataka Vijay Nagar Steel Ltd.
- STCL Ltd.
- Tungabhadra Steel Products Ltd.
- Vignyan Industries Ltd

Correspondingly, in the following analysis, we consider three types of enterprises:

- India CPSEs: All public sector enterprises that are financed by the Indian central government
- Karnataka CPSEs: Those public sector enterprises that are financed by the Indian central government and are located in Karnataka. These correspond to the aforementioned list of enterprises.
- Karnataka SPSEs: The public sector enterprises financed by the state government of Karnataka.

Depending on the availability of information, aggregate figures were computed for these industries for each year, providing a snapshot of the performance of CPSEs in Karnataka.

Figure 16: Turnover as a % of GDP/GSDP

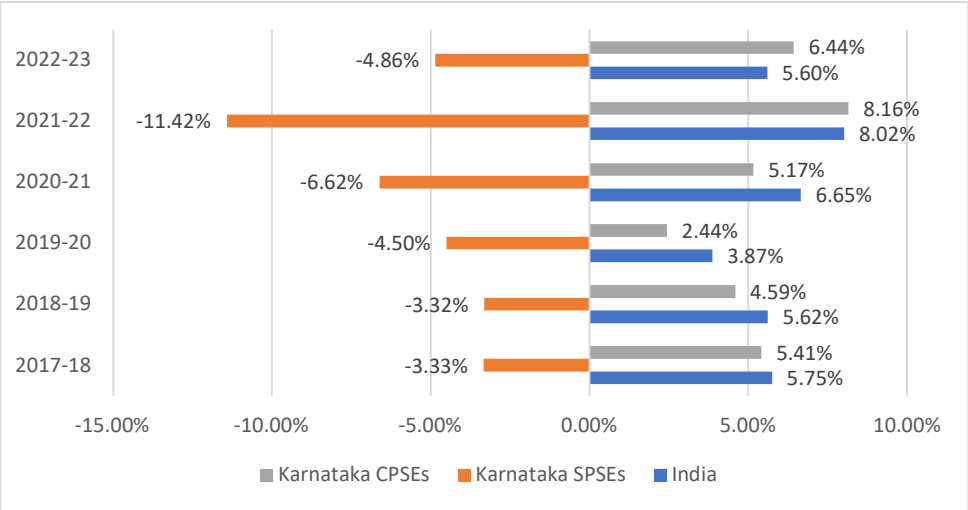


Source: CAG, GoK; Department of Public Enterprises, GoI

Examining the figures for turnover (Figure 16), we analyse the ratio of turnover to the GDP to obtain comparable estimates of performance. For the PSEs present in Karnataka, the nominal GSDP of Karnataka has been used, while the GDP of India has been used for computing the ratio at the all-India level of all CPSEs.

From figure 10, in relative terms, centrally owned and operated PSEs have demonstrated significantly better contributions to their respective economies than Karnataka's PSEs. While CPSEs in Karnataka have contributed less to the total state GDP, this figure still remains higher than the contribution by the state PSEs.

Figure 17: Ratio of Net Profit to Turnover



Source: CAG, GoK; Department of Public Enterprises, GoI

We also consider the profitability of PSEs to assess the burden/value they pose for their respective governing bodies. To provide an appropriate basis for comparison, we consider the ratio of net profit (total profit – total loss) divided by the total turnover.

The results of this analysis (displayed in Figure 17), reveal that while central PSEs have managed to maintain fairly similar levels of profitability at the aggregate level as well as only considering those in Karnataka, the PSEs under the Government of Karnataka have been overwhelmingly reporting net losses during this period, which highlights their financial stress.

In terms of employment, SPSEs in Karnataka were recorded as employing 2,01,074 individuals in 2018-19, across 114 enterprises, which approximates to 1,764 employees per enterprise, on average. In comparison, the 21 CPSEs in Karnataka had 76,876 employees in 2022-23, which is an average of 3,661 people per enterprise. Thus, while in terms of total employment, Karnataka's SPSEs employ more people than CPSEs in Karnataka, on a per-enterprise basis, CPSEs in the state are the larger employers.

6.9 Concluding Remarks

While Karnataka has a long history of industrial enterprises established by the state government, these enterprises appear to have been facing challenges of profitability in the recent decade. Notably, profits among the profitable units have been stagnating, and loss-making units have been seeing a deepening in their losses. Considering their turnover, it can be seen that it remains only a small percentage of the total economic output (GSDP) of the state and has continued declining over the years. There is also a growing trend towards requiring larger grants from state finances to continue operations, which are outflows that do not form a part of the state's revenue-generating assets. Employment, too, has remained largely unchanged over the past ten years, indicating that these units have perhaps not been able to address the growing challenge of unemployment faced by the Indian economy today.

As far as the potential for creating nontax revenue for the state government is concerned – if we consider only the profit of the profit-making companies for the latest year, 2022-23, it was Rs 3132.14 crore. The dividend paid in the same year was Rs. 307 crore, which constituted around 10% of profit. The total nontax revenue for the same year for Karnataka was Rs. 13914 crore. If we assume that the profits (and dividends) are mainly from the departmental and commercial enterprises, then the total profit is around 22% of the nontax revenue of the state. We also note that non-tax revenue contributed only 6% of the total revenue of the state. Improvements in the profitability of the PSEs have the potential to contribute a much higher share to the non-tax revenue of the state. An enterprise-level balance sheet analysis can provide a better picture of how such profitability may be improved. The availability of such data to the researchers is necessary to have such an analysis.

A comparison with central public sector enterprises, which are under the ambit of the Department of Public Enterprises at the central government level, reveals that the performance indicators of this group were considerably better than SPSEs in Karnataka, further highlighting the scope for improvement of state SPSEs.

An examination of the losses reveals that 56 PSEs incurred losses as per their latest data. As per the CAG report, the state government has invested Rs. 105664 crore as on 31 March 2023in the form of equity in 56 loss-making PSEs. The loss incurred by these PSEs decreased to Rs. 7449.75 (at current prices) compared to loss of Rs. 8246.47 crore in 2020-21 (see Appendix 2). Even though the losses have decreased, they still remained high. Concurrently, the number of inactive PSEs has remained stagnant at 13. Thus, there is a need to examine whether these loss-making enterprises are commercial in nature, and if so, strictly monitored fresh infusion of funds to these PSEs can help reinvigorate them. Moreover, the state may also consider monetisation of assets of inactive enterprises. While initiating such measures, it is to be taken care that adequate monetary compensation is obtained through the asset monetisation process. The Government of Karnataka in September 2024 constituted an expert committee under Sri K P Krishnan, Retired IAS, to analyse the potential of asset monetisation. Such expert committees may also look into the issue of asset monetisation of inactive PSEs.

However, it is also to be noted that many of the state PSEs are not created for profit motive. Several of them exist for the welfare of societies or public utilities and to advance other social-oriented goals. Thus, assessing such enterprises purely on the basis of profit does not provide a comprehensive picture of their value. Such an assessment is necessary for commercial enterprises, which are expected to be profit-oriented and dividend-generating for the state. Keeping loss-making commercial enterprises or inactive enterprises alive without any restructuring therefore is not desirable. This is however not the case for public utilities or developmental enterprises. However, without enterprise-level data on various financial indicators, it is difficult to pass judgement on the performance of state PSEs.

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Appendix 1

List of State Public Sector Enterprises under the Jurisdiction of Audit in Karnataka

Finance		
1	DDevarajUrsBackwardClassesDevelopmentCorporationLimited	DUBCDCL
2	KarnatakaStateWomen'sDevelopmentCorporation	KSWDC
3	Dr.B.R.AmbedkarDevelopmentCorporationLimited	BRADCL
4	KarnatakaMaharshiValmikiScheduledTribesDevelopmentCorporationLimited	KMVSTDCL
5	TheKarnatakaMinoritiesDevelopmentCorporationLimited	KMDC
6	KarnatakaThandaDevelopmentCorporationLimited	KTDCL
7	KarnatakaVishwakarmaCommunityDevelopmentCorporationLimited	KVCDCL
8	KarnatakaBhoviDevelopmentCorporationLimited	KBDCL
9	NijasharanaAmbigaraChowdaiahDevelopmentCorporationLimited	NACDCL
10	KarnatakaStateSafaiKarmachariDevelopmentCorporationLimited	KSSKDCL
11	KarnatakaAdiJambavaDevelopmentCorporation	KAJDC
12	KarnatakaUpparaDevelopmentCorporationLimited	KUDCL
13	TheKarnatakaHandloomDevelopmentCorporationLimited	KHDCL Handloom
14	KarnatakaStateHandicraftsDevelopmentCorporationLimited	KHDC; Handicrafts
15	KarnatakaStateIndustrialInfrastructureandDevelopmentCorporationLimited	KSIIDC
16	KarnatakaUrbanInfrastructureDevelopmentandFinanceCorporationLimited	KUIDFC
17	SreeKanteeravaStudiosLimited	KSL
18	KarnatakaAssetManagementCompanyPrivateLimited	KAMCPL
19	KarnatakaTrusteeCompanyPrivateLimited	KTCPL
20	KarnatakaBrahminDevelopmentBoard	KBDB Brahmin
21	KarnatakaSavithaSamajaDevelopmentCorporationLimited	KSSDCL Savitha Samaja
22	KarnatakaMadiwalaMachidevaDevelopmentCorporationLimited	KMMDCL Madivala
23	KarnatakaAryaVysyaCommunityDevelopmentCorporationLimited	KAVCDCL AryaVysya
24	KarnatakaAlemariAre-AlamariDevelopmentCorporationLimited	KAADCL Alemari
25	KarnatakaVeerashaiva-LingayathDevelopmentCorporationLimited	KVLDCL Veerashaiva

Infrastructure		
26	KarnatakaStateConstructionCorporationLimited	KSCCL
27	KarnatakaRuralInfrastructureDevelopmentLimited	KRIDL
28	KarnatakaStatePoliceHousingandInfrastructureDevelopmentCorporation Limited	KSPHIDCL
29	RajivGandhiRuralHousingCorporationLimited	RGRHCL
30	KarnatakaRoadDevelopmentCorporationLimited	KRDCL
31	KrishnaBhagyaJalaNigamLimited	KBJNL
32	KarnatakaNeeravariNigamLimited	KNNL
33	CauveryNeeravariNigamaLimited	CNNL
34	VishveswarayaJalaNigamLimited	VJNL
35	TadadiPortLimited	TPL
36	HubliDharwadBRTSCompanyLimited	HDBRTS
37	InvestKarnatakaForum	IKF
38	TumakuruMachineToolPark	TMTP
39	HubballiDharwadSmartCityLimited	HDSCL
40	DavanagereSmartCityLimited	DSCL
41	BelagaviSmartCityLimited	BSCL Belagavi
42	ShivamoggaSmartCityLimited	SSCL
43	TumakuruSmartCityLimited	TSCL
44	MangaluruSmartCityLimited	MSCL
45	BengaluruSmartCityLimited	BSCL Bengaluru
46	BengaluruPRRDevelopmentCorporationLimited	BPRRDCL
47	RailInfrastructureDevelopmentCompany(Karnataka)Limited	RIDCKL
48	CBICTumakuruIndustrialTownshipLimited	CTITLCBIC Tumakuru
49	BengaluruIntegratedRailInfrastructureDevelopmentEnterprisesLimited	Bi-Ride
50	BangaloreSolidWasteManagementCompanyLimited	BSWML
51	BangaloreAirportRailLinkLimited**(undervoluntaryliquidation)**	BARL
52	BangaloreSuburbanRailCompanyLimited**(Nonworking)**	BSRCL
Power		
53	KarnatakaPowerCorporationLimited	KPCL
54	KPCGasPowerCorporationLimited	KPCGPCL
55	RaichurPowerCorporationLimited	RPCL
56	KarnatakaPowerTransmissionCorporationLimited	KPTCL
57	BangaloreElectricitySupplyCompanyLimited	BESCOM
58	HubliElectricitySupplyCompanyLimited	HESCOM

59	MangaloreElectricitySupplyCompanyLimited	MESCOM
60	ChamundeshwariElectricitySupplyCorporationLimited	CESC
61	GulbargaElectricitySupplyCompanyLimited	GESCOM
62	KarnatakaRenewableEnergyDevelopmentLimited	KREDL
63	PowerCompanyofKarnatakaLimited	PCKL
Service		
64	KarnatakaStateTourismDevelopmentCorporationLimited	KSTDC
65	JungleLodgesandResortsLimited	JLR
66	D.DevrajUrsTruckTerminalsLimited	DDUTTL
67	KarnatakaFoodandCivilSuppliesCorporationLimited	KFCSCL
68	KarnatakaTourismInfrastructureLimited	KTIL
69	KarnatakaStateMedicalSuppliesCorporationLimited	KSMSCL Medicals
Others		
70	Dr.BabuJagjivanRamLeatherIndustriesDevelopmentCorporationLimited	LIDKAR
71	KarnatakaStateCoirDevelopmentCorporationLimited	KSCDCL
72	KarnatakaSoapsandDetergentsLimited	KSDL
73	TheMysorePaperMillsLimited	MPM
74	KarnatakaVidyuthKarkhaneLimited	KAVIKA
75	TheMysoreElectricalIndustriesLimited	MEI
76	NGEF(Hubli)Limited	NGEFH
77	KarnatakaSilkIndustriesCorporationLimited	KSIC
78	KarnatakaSilkMarketingBoardLimited	KSMB
79	KarnatakaStateTextileInfrastructureDevelopmentCorporationLimited	KSTIDCL
80	KarnatakaStateMineralsCorporationLimited	KSMCL
81	TheHuttiGoldMinesCompanyLimited	HGML
82	MysoreSugarCompanyLimited	MYSUGAR
83	MysorePaintsandVarnishLimited	MPVL
84	MysoreSalesInternationalLimited	MSIL
85	MarketingCommunicationandAdvertisingLimited	MCA
86	KarnatakaStateAgroCornProductsLimited	KSACPL
87	KarnatakaStateAgriculturalProduceProcessingandExportCorporationLimited	KAPPEC
88	KarnatakaStatePulsesAbhivridhiMandaliLimited	KSACPL
89	KarnatakaFisheriesDevelopmentCorporationLimited	KFDC Fisheries
90	KarnatakaSheepandWoolDevelopmentCorporationLimited	KSAWDCL
91	KarnatakaCompostDevelopmentCorporationLimited	KCDCL Compost

92	KarnatakaCashewDevelopmentCorporationLimited	KCDCL Cashew
93	KarnatakaForestDevelopmentCorporationLimited	KFDCLForestDev
94	KarnatakStateForestIndustriesCorporationLimited	KSFIC
95	KarnatakaStateSeedsCorporationLimited	KSSCL
96	FoodKarnatakaLimited	FKL
97	KarnatakaStateMangoDevelopmentandMarketingCorporationLimited	KSMDMCL
98	KarnatakaAntharagangaMicroIrrigationCorporationLimited	KAMICL
99	BangaloreBio-innovationCentre	BBC
100	KarnatakaStateSmallIndustriesDevelopmentCorporationLimited	KSSIDC
101	KarnatakaStateElectronicsDevelopmentCorporationLimited	KEONICS
102	KarnatakaStateBeveragesCorporationLimited	KSBCL
103	KarnatakaVocationalTrainingandSkillDevelopmentCorporationLimited	KVTSDCL
104	KarnatakaPublicLandsCorporationLimited	KPLCL
105	KarnatakaMiningEnvironmentRestorationCorporationLimited	KMERCL
106	ScienceGalleryBengaluru	SGB
107	InternationalFlowerAuctionBangaloreLimited	IFAB
108	CanaraPlasticForum	CPF
109	ShiggaonTextilePark	STP
110	KarnatakaAgroIndustriesCorporationLimited(Nonworking)	KAIC
111	TheMysoreTobaccoCompanyLimited(Nonworking)	MTC
112	KarnatakaPulpwoodLimited(Nonworking)	KPL(Pulpwood)
113	TheKarnatakaStateVeneersLimited(underliquidation)	KSVL
114	TheMysoreMatchCompanyLimited(Nonworking)	MMCL
115	TheMysoreLampWorksLimited(Nonworking)	MLW
116	MysoreCosmeticsLimited(underliquidation)	MCL
117	TheMysoreChromeTanningCompanyLimited(Nonworking)	MCT
118	NGEFLimited(Non working)	NGEF
119	KarnatakaTelecomLimited(underliquidation)	KTL
120	TheMysoreAcetateandChemicalsCompanyLimited(underliquidation)	MACCL
121	VijayanagarSteelLimited(Nonworking)	VSL
StatutoryCorporations		
122	KarnatakaStateRoadTransportCorporation	KSRTC
123	BengaluruMetropolitanTransportCorporation	BMTC
124	NorthWesternKarnatakaRoadTransportCorporation	NWKRTC
125	KalyanaKarnatakaRoadTransportCorporation (PreviouslyNorthEasternKarnatakaRoadTransportCorporation)	KKRTC
126	KarnatakaStateFinancialCorporation	KSFC
127	KarnatakaStateWarehousingCorporation	KSWC

Appendix 2

State Public Enterprises that incurred losses during 2020-21 to 2022-23

(₹ in crore)

Year	No of loss making SPSUs	Net loss for the year	Accumulated loss	Net Worth[48]
Statutory Corporations				
2020-21	5	(-)985.32	(-)3,141.26	(-)2,464.55
2021-22	4	(-)1,282.43	(-)3,877.52	(-)2,981.46
2022-23	4	(-)1,289.96	(-)5,912.82	(-)4,806.56
Government Companies				
2020-21	45	(-)7,261.15	(-)26,567.37	21,844.26
2021-22	46	(-)10,165.42	(-)32,951.29	25,000.29
2022-23	52	(-)6,159.79	(-)31,764.40	45,491.21
Total				
2020-21	50	(-)8,246.47	(-)29,708.63	19,379.71
2021-22	50	(-)11,447.85	(-)36,828.81	22,018.83
2022-23	56	(-)7,449.75	(-)37,677.22	40,684.65

Source: CAG Report on State Finances, 2023

7.POWER SECTOR REFORMS AND FISCAL HEALTH OF KARNATAKA

Abstract

The performance of Karnataka's power sector over the past five years has been a critical factor in shaping the state's fiscal health. The sector experienced modest growth in installed capacity, driven primarily by private sector investments in renewable energy. However, electricity generation has been inconsistent, and the financial instability of the state's Electricity Supply Companies (ESCOMs) poses a significant challenge. These ESCOMs have faced substantial losses, exacerbated by reduced government subsidies, which has strained Karnataka's overall fiscal management. Additionally, inefficiencies in power sales and procurement, along with the underutilisation of renewable energy potential, have further complicated the state's financial situation. Despite these challenges, Karnataka has maintained a commitment to fiscal discipline, but the ongoing issues in the power sector underscore the need for strategic policy interventions and improved resource management. Addressing these inefficiencies is essential for achieving long-term fiscal sustainability and supporting the state's broader economic development objectives.

7.1 Introduction to the Impact of Power Sector Reforms on Karnataka State's Fiscal Health

The power sector in India has undergone substantial reforms since the early 1990s, with an overarching goal of enhancing efficiency, increasing investment, and improving financial viability (Bajaj and Sharma, 2006). Karnataka, as one of the leading states in India, has been at the forefront of implementing these reforms, driven by the necessity to address the challenges of financial sustainability, infrastructure development, and service quality in the power sector. This study focuses on evaluating the impact of these reforms on Karnataka's fiscal health, drawing insights from various studies and reports. The reforms in India's power sector were initiated in response to the financial crisis that plagued the sector during the late 1980s and early 1990s. As Khurana and Banerjee (2014) noted, the sector was characterised by poor financial performance, with state electricity boards (SEBs) incurring significant losses, leading to a substantial drain on state finances. The situation in Karnataka mirrored this national trend, with the state's SEB facing severe financial difficulties due to inefficiencies, high transmission, and distribution (T&D) losses, and the inability to recover costs through tariffs. The reform process, as described by Bhattacharya and Patel (2008), aimed to address these issues by restructuring the SEBs, introducing competition, and encouraging private sector participation. In Karnataka, the reforms began with the unbundling of the Karnataka Electricity Board (KEB) into separate entities responsible for generation, transmission, and distribution. This restructuring was intended to create a more transparent and accountable system, which could attract investment and improve service delivery. Despite these efforts, the sustainability of power sector reforms in India has been a subject of debate. Bhattacharyya (2007) argued that while the reforms have led to some improvements, the financial health of the sector remains precarious. The experience in Karnataka reflects this broader trend, where the reforms have had mixed outcomes. On one hand, there have been improvements in operational efficiency and a reduction in T&D losses. On the other hand, the fiscal burden on the state government has persisted, as highlighted

by Gayithri (2014, 2018) due to continued subsidies and financial support to the power sector. The fiscal implications of these reforms are critical to understanding the overall impact on Karnataka's economy. As Sihag et al. (2004) discussed, power sector reforms can have significant implications for state finances, particularly in terms of subsidies and cross-subsidisation policies. In Karnataka, these issues have been compounded by the need to balance the objectives of financial viability with social equity, particularly in ensuring affordable access to electricity for the poor and rural populations. Rajkumari and Gayithri (2017, 2018) have provided a detailed analysis of the performance of Karnataka's power sector in the context of these reforms. Their research indicates that while there have been notable improvements in efficiency and service delivery, the financial sustainability of the sector remains a challenge. The state government continues to bear a significant fiscal burden, which has implications for its overall fiscal health and its ability to invest in other critical areas of public service delivery. In conclusion, the power sector reforms in Karnataka have had a profound impact on the state's fiscal health. While the reforms have led to some improvements in efficiency and service quality, the financial challenges remain significant. The state's experience underscores the need for a careful balancing act between achieving financial viability and ensuring equitable access to electricity. Further research and policy analysis are needed to explore sustainable solutions that can enhance the fiscal stability of Karnataka while continuing to improve the performance of its power sector.

7.2 Results and Discussion

7.2.1 Power sector performance

7.2.1.1. Power Generation

7.2.1.1.1. Progress in Power Sector

Table 2.1 outlines the progress in the power sector, focusing on installed capacity and electricity generation from different sources (public and private sectors, and central generating stations) over the years 2019-20 to 2023-24 (up to November 2023).

1. Installed Capacity: The public sector shows a consistent installed capacity of 8,740 MW across different sources like hydel, wind, thermal, and solar PV plants. No growth in installed capacity is observed during this period. In the private sector, there has been a gradual increase in installed capacity, especially in wind energy and solar plants, contributing to the total increase from 17,046.48 MW in 2019-20 to 18,470.20 MW by 2023-24. The total installed capacity, including the central allocation, grew from 30,061.48 MW in 2019-20 to 32,403.70 MW by November 2023.
2. Electricity Generation: The electricity generation data indicates fluctuations, with the highest recorded net generation in 2022-23 at 57,713.83 MU. The 2023-24 figures (up to November 2023) suggest a potential decline with 32,155.57 MU generated so far.
3. Electricity Imports: The data on electricity imports shows that central projects contributed significantly, with the total supply reaching 80,512.17 MU in 2022-23 but dropping to 46,867.42 MU up to November 2023.

7.2.1.2. Purchase of power and energy exchange

7.2.1.2.1. Procurement from other states through bilateral trade & purchase through energy exchanges

Table 2.2 presents data on power procurement from other states and energy exchanges from 2021-22 to 2023-24 (up to November 2023). The energy procured increased significantly over the years, from 502.64 MU in 2021-22 to 1,858.04 MU in 2023-24. The cost associated with procurement also surged, reflecting higher average rates per kWh, especially notable in 2022-23, where the rate reached 8.09 Rs/kWh.

Table 2.2: Procurement from other states through bilateral trade & purchase through energy exchanges

Year	Energy in MUs	Amount (in Rs. Crore)	Average rate Rs/kWh
2021-22	502.64*	212.53	4.23
2022-23	589.14	476.61	8.09
2023-24 (Upto Nov-23)	1858.04	1251.47	6.74

*Out of 502.64 MU, 466.13 MU for REC premium recovery trade and 36.51 MU for optimisation / meeting deficit

Source: Karnataka Power Corporation Limited

7.2.1.2.2. Sale of Surplus power through over Arching Agreement / DEEP Portal tenders / Energy exchanges (IEX& PXIL& HPX)

This table 2.3 details the sale of surplus power through various platforms from 2021-22 to 2023-24 (up to November 2023). The volume of surplus power sold decreased from 6,709.68 MU in 2021-22 to 658.34 MU in 2023-24. Despite the decrease in volume, the revenue from sales remained relatively stable due to varying average rates per kWh, peaking at 5.77 Rs/kWh in 2022-23.

Table 2.3: Sale of Surplus power through over Arching Agreement / DEEP Portal tenders / Energy exchanges (IEX& PXIL& HPX)

Year	Energy in MU	Amount (in Rs. Crore)	Average rate Rs/kWh
2021-22	6709.68	2895.62	4.32
2022-23	4385.57	2531.94	5.77
2023-24 (Up to Nov-23)	658.34	270.49	4.11

Source: Karnataka Power Corporation Limited

7.2.1.3. Power Transmission: Karnataka Power Transmission Utility (KPTCL)

7.2.1.3.1. Power stations & transmission lines of KPTCL

Table 2.4 shows the number of power stations and the length of transmission lines by voltage level as of November 2023. The state has a total of 1,358 power stations with a cumulative transmission line length of 42,487.21 CKmt across different voltage levels. The most extensive network is at the 220 kV level, followed by the 66 kV level, indicating substantial infrastructure for power transmission.

Table 2.1. Progress in Power Sector

Source	Unit	2019-20	2020-21	2021-22	2022-23	2023-24 (Up to Nov-23)
A. Installed Capacity						
1. Public Sector						
a) Hydel	MW	3,681.00	3,681.00	3,681.00	3,681.00	3,681.00
b) Wind energy	MW	5	5	5	5	5
c) Thermal	MW	5,020.00	5,020.00	5,020.00	5,020.00	5,020.00
d) Solar PV plant	MW	34	34	34	34	34
Total		**8,740**	**8,740**	**8,740**	**8,740**	**8,740**
e) Jurala Hydro	MW	117	117	117	117	117
2. Private Sector						
a) IPP Thermal (including small thermal-conventional)	MW	2,192.30	2,192.30	2197.3	2174.2	2176
b) Mini Hydel	MW	903.46	903.46	903.46	903.46	907.46
c) Wind energy	MW	4,814.34	4,962.34	5144.14	5,245.19	5272.74
d) Co-generation & Biomass	MW	1,870.19	1,870.19	1870.19	1,870.19	1,870.19
e) Solar (including solar roof top)	MW	7,266.19	7,355.01	7556.3	8039.86	8243.81
Total		**17,046.48**	**17,283.30**	**17,671.39**	**18,232.90**	**18,470.20**
Growth in % (base 2019-20)			1%	4%	7%	8%
3. Central Generating Station Allocation	MW		4,865.00	4865	4,744.35	4626.5
DVC	MW					450
Total Installed Capacity		**30,061.48**	**31,005.30**	**31,393.39**	**31,834.25**	**32,403.70**
Growth in % (base 2019-20)			3%	4%	6%	8%
B. Electricity Generation (Net) (for 2023-24 uptoNov-2023)						
a) Hydel (KPCL)	MU	13,622	12,232.53	13582.86	13228.95	5496.35
b) Thermal (KPCL)	MU	11,444.12	6,366.88	17143.42	16772.2	9846.88
c) Wind	MU	10,050.70	9,434.92	9376.45	9204.08	6734.6
d) Solar PV plant	MU	8,026.02	8,888.70	9281.34	9706.51	5219.77

Source	Unit	2019-20	2020-21	2021-22	2022-23	2023-24 (Up to Nov-23)
e) Mini Hydel	MU	1,816.45	2,140.12	2346.35	2307.2	835.36
f) Co-gen and Bio-Mass	MU	2,383.20	2,777.98	2976.83	3046.45	583.11
g) Private sector	MU	4,589.89	2,918.21	2548.04	3448.43	3439.5
Total		**51,932.38**	**44,759.34**	**57,255.29**	**57713.83**	**32155.57**
			-14%	22%	37%	-85%
C. Electricity imports						
Central projects	MU	22,665.07	23,060.76	18,241.82	22,798.34	14711.85
Total Electricity supply	**MU**	**74,597.45**	**67,820.10**	**75,497.11**	**80512.17**	**46867.42**
Growth in % (base 2019-20)			-9%	1%	8%	-37%

Source: KPCL, KPTCL, KREDL, PCKL& SLDC; Note: MU- Million Unit, MW-Mega watt

Table 2.4: Power stations & transmission lines of KPTCL (as on 30.11.2023)

Voltage Level in kV	No. of stations	Transmission Line in CKmt
400	9	3935.45
220	132	13085.65
110	498	12635.19
66	719	12830.92
Total	**1358**	**42487.21**

Source: KPTCL; CKmt-Circuit Kilometre

7.2.1.3.1. Transmission lines of different voltage class added during the period

Table 2.5 highlights the additions to the transmission lines across different voltage classes from 2019-20 to 2023-24 (up to November 2023). A total of 5,628.89 CKmt of transmission lines were added over these years, with significant contributions at the 110 kV and 66 kV levels, showcasing continuous expansion of the transmission network.

Table 2.5: Transmission lines of different voltage class added during the period (Transmission line length in CKmt)

Voltage class in kV	2019-20	2020-21	2021-22	2022-23	2023-24 (upto Nov-23)	Total
400	130.27	2.62	0	234.11	0	367.00
220	106.14	579.17	434.19	375.02	88.24	1582.76
110	202.68	260.96	654.58	503.89	300.94	1923.05
66	355.16	345.67	374.67	495.83	184.75	1756.08
TOTAL	**794.25**	**1188.42**	**1463.44**	**1608.85**	**573.93**	**5628.89**

Source: KPTCL kV-kilo Volt

7.2.1.3.2. Details of new sub-stations added, and capacity augmented during the last 5-year period.

Table 2.6 provides details on the number of new sub-stations added and the capacity augmented over the last five years. A total of 169 new sub-stations were added, with the majority being at the 110 kV and 66 kV levels. Sub-station capacity was also significantly augmented, particularly at the 66 kV and 110 kV levels, with a total augmentation of 670 sub-stations.

Table 2.6: Details of new sub-stations added, and capacity augmented during the last 5-year period.

Voltage Class (kV)	New Sub-stations added					
	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24 (Up to Nov-23)**	**Total**
400	1	2	-	1	-	4
220	3	6	10	7	1	27
110	9	12	21	20	13	75
66	19	16	10	13	5	63
Total	**32**	**36**	**41**	**41**	**19**	**169**
Voltage Class (kV)	**Sub-stations capacity augmented**					
	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24 (Up to Nov-23)**	**Total**
400	-	-	-	1	-	1
220	1	5	7	12	3	28
110	23	38	58	78	40	237
66	60	76	107	106	55	404
Total	**84**	**119**	**172**	**197**	**98**	**670**

Source: KPTCL

7.2.1.3.3. Trends in Transmission & Distribution losses and Aggregate Technical & Commercial Losses from 2017-18 to 2022-23

Table 2.7 shows the trends in Transmission & Distribution (T&D) losses and Aggregate Technical & Commercial (AT&C) losses from 2017-18 to 2022-23. AT&C losses fluctuated over the years, with a notable reduction to 12.15% in 2021-22 before increasing again to 14.11% in 2022-23. T&D losses also saw variations, with a general downward trend until 2021-22, followed by a slight increase in 2022-23.

Table 2.7: Trends in Transmission & Distribution losses and Aggregate Technical & Commercial Losses from 2017-18 to 2022-23

Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
AT & C Loss	15.12	15.27	15.73	16.99	12.15	14.11
T & D Loss	17.02	16.16	15.32	14.59	16.34	14.75

Source: KPTCL

7.2.1.4. Power Consumption

7.2.1.4.1. Electricity Consumption by various Category of Consumers

Table 2.8 provides data on electricity consumption by various categories of consumers and their corresponding percentage of sales, demand, and average revenue realised (ARR) for 2022-23 and 2023-24 (up to November 2023). The largest consumer category is IP Sets, accounting for over 39% of total consumption in 2023-24, followed by domestic consumers. The ARR varies across categories, with the highest rates observed in commercial lighting and industrial sectors.

Table 2.8: Electricity Consumption by various Categories of Consumers

Category of Consumers	Consumption (MU)		Percentage of Sales		Demand (in Rs. Crore)		ARR (Rs./Kwh)	
	2022-23	2023-24 (Up to Nov-23)	2022-23 (In %)	2023-24 (Up to Nov-23) (In %)	2022-23	2023-24 (Up to Nov-23)	2022-23	2023-24 (Up to Nov-23)
HT Industries	10,115.35	6,328.56	16.07	14.33	9,971.50	6,674.52	9.86	10.55
IP Sets	21,525.31	17,359.59	34.21	39.30	13,733.36	13,333.08	6.38	7.68
Domestic	14,852.55	9,842.53	23.60	22.28	12,950.57	9,951.86	8.72	10.11
LT Industries	2,223.78	1,360.29	3.53	3.08	2,344.10	1,647.63	10.54	12.11
Water Works & Sewage pumping	4,729.51	2,902.53	7.52	6.57	3,907.33	2,880.01	8.26	9.92
Commercial Lighting	6,890.96	4,764.64	10.95	10.79	9,090.67	6,748.87	13.19	14.16
Public Lighting	1,234.46	740.02	1.96	1.67	1,243.94	868.05	10.08	11.73
Others	1,357.77	876.42	2.16	1.98	2,273.46	1,430.14	16.74	16.32
Total	**62,929.69**	**44,174.58**	**100.00**	**100.00**	**55,514.93**	**43,534.16**	**8.82**	**9.86**

Source: KPTCL

7.2.1.5. Electricity, Demand and Supply Status

7.2.1.5.1. Trends in Peak Power Demand and Peak Energy Supply

Table 2.9 shows the trends in peak power demand and peak energy supply from 2017-18 to 2023-24 (up to November 2023). The peak power demand has steadily increased over the years, reaching 16,110 MW by 2023-24. Peak energy supply has also grown, reflecting the increasing demand, though the growth rate is more moderate.

Table 2.9: Trends in Peak Power Demand and Peak Energy Supply

Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24 (up to Nov-23)
Peak Power Demand (in MW)	10802	12881	13258	14367	14818	15826	16110
Peak Energy Supply (in MU)	242	259.15	259.21	275.27	285	301	309

Source: KPTCL

7.2.1.5.2. Power Supply & Demand Gap

These tables (2.10&2.11) outline the gap between projected demand and actual supply for both power and energy from 2012-13 to 2023-24. The gap between projected demand and supply has significantly reduced over the years, with zero shortages recorded from 2018-19 onward, indicating improved planning and resource management.

Table 2.10: Power Supply & Demand Gap (in MW)

Particulars	Projected Demand for Power (in MWs)	Shortage (in MWs)	Share of shortage to the projected demand of power
2012-13	9550	789	8.26%
201-14	10473	1250	11.94%
2014-15	11258	1709	15.18%
2015-16	10214	706	6.91%
2016-17	10895	653	5.99%
2017-18	11517	715	6.21%
2018-19	11882	0	0.00%
2019-20	13796	0	0.00%
2020-21	14040	0	0.00%
2021-22	14451	0	0.00%
2022-23	15300	0	0.00%
2023-24 (up to Nov-23)	17000	0	0.00%

Source: KPTCL

Table 2.11: Energy Supply and Demand Gap

Particulars	Projected Demand for Energy (in MUs)	Shortage (in MUs)	Share of shortage to the projected demand of power
2012-13	53540	4981	9.30%
201-14	57248	769	1.34%
2014-15	63001	3977	6.31%
2015-16	67833	3606	5.32%
2016-17	66164	516.23	0.78%
2017-18	70287	0	0.00%
2018-19	76145	0	0.00%
2019-20	78751	0	0.00%
2020-21	80628	0	0.00%
2021-22	81438	0	0.00%
2022-23	82233	0	0.00%
2023-24 (up to Nov-23)	89112	0	0.00%

Source: KPTCL

7.2.1.6. Vigilance efforts

7.2.1.6.1. Vigilance efforts by various authorities of the ESCOMs in reducing theft and pilferages

Table 2.12 documents the efforts to reduce theft and pilferages by inspecting installations and imposing penalties from 2019-20 to 2023-24 (up to November 2023). There has been a considerable increase in the number of installations inspected and cases detected over the years, particularly in 2022-23. The penalties imposed have also varied, with a peak of Rs. 926.75 crores in 2019-20, highlighting the importance of vigilance in reducing losses.

Table 2.12: Vigilance efforts by various authorities of ESCOMs in reducing theft and pilferages

Year	No. of Installations Inspected	No. of Cases Detected	Penalty Imposed (in Rs. Crore)
2019-20	6,23,036	65,154	926.75
2020-21	2,43,746	14,546	63.02
2021-22	2,63,915	12,090	57.54
2022-23	8,41,784	82,375	451.81
2023-24 (Up to Nov-2023)	5,09,671	44,374	166.24

Source: ESCOMs

7.2.1.6.2. Electricity Sales and Revenue Realisation

Table 2.13 provides detailed data on electricity sales and revenue realisation for various consumer categories for the fiscal years 2022-23 and 2023-24 (up to November 2023). The categories include BJ/KJ, AEH, commercial, irrigation pump sets, industries, street lights and water supply, and temporary installations.

1. LT (Low Tension) Categories: The total sales for LT categories decreased from 46,234.95 MU in 2022-23 to 33,498.34 MU in 2023-24. Revenue also saw a decline from Rs. 38,109.22 crore to Rs. 31,255.12 crore. However, the average revenue realisation per kWh increased from Rs. 8.24 to Rs. 9.33.
2. HT (High Tension) Categories: For HT categories, sales dropped from 16,694.73 MU to 10,676.24 MU, and revenue decreased from Rs. 17,405.71 crore to Rs. 12,279.04 crore. The average revenue realisation per kWh rose from Rs. 10.43 to Rs. 11.50.

Overall, the grand total for electricity sales decreased from 62,929.68 MU to 44,174.58 MU, and revenue dropped from Rs. 55,514.93 crore to Rs. 43,534.16 crore. The average revenue realisation per kWh increased from Rs. 8.82 to Rs. 9.86.

Table 2.13: Electricity sales and revenue realisation by categories of consumers

Category	Description	Sales (MU)		Revenue (Rs. Crore)		Average revenue realisation (Rs./kWh)	
		2022-23	2023-24 (Up to Nov-23)	2022-23	2023-24 (Up to Nov-23)	2022-23	2023-24 (Up to Nov-23)
LT1	BJ/KJ	884.50	543.69	779.22	555.21	8.81	10.21
LT2	AEH	13811.52	9199.20	12029.30	9288.07	8.71	10.10
LT3	Commercial	4088.87	2823.38	5034.16	3726.24	12.31	13.20
LT4	Irrigation Pump sets	20871.83	16897.06	13281.86	12903.13	6.36	7.64
LT5	Industries	2223.78	1360.29	2344.10	1647.63	10.54	12.11
LT6	Streetlights and water supply	3983.46	2472.56	3707.31	2722.75	9.31	11.01
LT7	Temporary Installations	370.99	202.16	933.27	412.09	25.16	20.38
Total LT		**46234.95**	**33498.34**	**38109.22**	**31255.12**	**8.24**	**9.33**
HT1	Water supply installations	1980.51	1169.99	1443.96	1025.30	7.29	8.76
HT2	HT Industrial & Commercial	12917.43	8269.81	14028.01	9697.15	10.86	11.73
HT3	Lift Irrigation	653.47	462.53	451.50	429.96	6.91	9.30
HT4	HT Residential	156.53	99.64	142.05	108.57	9.08	10.90
HT5	HT Temporary	986.79	674.27	1340.19	1018.06	13.58	15.10
Total HT		**16694.73**	**10676.24**	**17405.71**	**12279.04**	**10.43**	**11.50**
Grand Total		**62929.68**	**44174.58**	**55514.93**	**43534.16**	**8.82**	**9.86**

7.2.1.6.3. Energy Sales, Average Tariff, and Cost of Power

Table 2.14 provides data on energy sales, average tariff, and average cost of power supplied by different ESCOMs (electricity supply companies) for 2022-23 and 2023-24.

1. BESCOM: Energy sales increased from 29,333.59 MU to 30,013.92 MU. The average tariff rose from Rs. 8.70/kWh to Rs. 9.62/kWh, and the average cost increased from Rs. 8.77/kWh to Rs. 9.62/kWh.
2. MESCOM: Energy sales slightly decreased from 5,589.28 MU to 5,541.59 MU. The average tariff and cost both increased from Rs. 8.13/kWh to Rs. 8.61/kWh.
3. HESCOM: Energy sales decreased from 12,717.82 MU to 12,530.67 MU. The average tariff increased from Rs. 8.31/kWh to Rs. 8.69/kWh, and the average cost rose from Rs. 7.84/kWh to Rs. 8.69/kWh.
4. GESCOM: Energy sales increased from 8,426.84 MU to 8,489.30 MU. The average tariff and cost both increased from Rs. 8.11/kWh to Rs. 8.75/kWh.

5. CESC: Energy sales increased from 6,529.73 MU to 7,159.35 MU. The average tariff rose from Rs. 8.11/kWh to Rs. 8.59/kWh, and the average cost increased from Rs. 8.24/kWh to Rs. 8.59/kWh.
6. Hukkeri: Energy sales increased from 332.42 MU to 367.39 MU. The average tariff rose from Rs. 6.51/kWh to Rs. 6.97/kWh, while the average cost decreased from Rs. 8.22/kWh to Rs. 6.97/kWh.

Overall, total energy sales increased from 62,929.68 MU to 64,102.22 MU. The average tariff rose from Rs. 8.42/kWh to Rs. 9.11/kWh.

Table 2.14: Energy sales, average tariff and average cost of power supplied by ESCOMs

ESCOM	Energy sales (MU)		Average tariff (Rs./kWh)		Average cost (Rs./kWh)	
	2022-23 (Actuals)	2023-24 (KERC approved)	2022-23 (Actuals)	2023-24 (KERC approved)	2022-23 (Actuals)	2023-24 (KERC approved)
BESCOM	29333.59	30013.92	8.70	9.62	8.77	9.62
MESCOM	5589.28	5541.59	8.13	8.61	8.17	8.61
HESCOM	12717.82	12530.67	8.31	8.69	7.84	8.69
GESCOM	8426.84	8489.30	8.11	8.75	8.14	8.75
CESC	6529.73	7159.35	8.11	8.59	8.24	8.59
Hukkeri	332.42	367.39	6.51	6.97	8.22	6.97
Total	**62929.68**	**64102.22**	**8.42**	**9.11**	**8.39**	**9.11**

Source: ESCOMs.

7.2.1.6.4. Financial Position of ESCOMs for FY 2022-23

Table 2.15 summarises the financial performance of various ESCOMs in terms of profit and cumulative profit/loss for the fiscal year 2022-23. The majority of ESCOMs recorded losses, with BESCOM and HESCOM reporting significant cumulative losses of ₹4,479.94 crore and ₹7,258.10 crore, respectively. The total cumulative loss across all ESCOMs was ₹17,558.63 crore.

Table 2.15: Financial Position of ESCOMs for FY 2022-23 (in Rs. Crore)

Name of the Company	Profit/Loss	Cumulative Profit/Loss
BESCOM	-1767.50	-4479.94
MESCOM	51.85	262.98
HESCOM	-836.23	-7258.10
GESCOM	-296.21	-3397.52
CESC	-297.65	-2686.05
Total	**-3145.74**	**-17558.63**

Source: Energy Department

7.2.1.7. Subsidy in power sector

7.2.1.7.1. Subsidy Released by the State Government

Table 2.16 shows the subsidy amounts released by the state government to the power sector over the years, including any additional subsidies related to specific events like the COVID-19 pandemic. The subsidy released in 2022-23 was ₹14,092.61 crore, a decrease from the ₹16,944.93 crore in 2021-22. Up to November 2023, the subsidy released was ₹13,143.00 crore.

Table 2.16: Subsidy Released by the State Government

Year	Subsidy released (in Rs. Crore)	Remarks
2019-20	11,245.00	
2020-21	11,250.00	
2021-22	16,944.93	Includes previous subsidy arrears of Rs.5,500.00 Crore & COVID relief subsidy of Rs.68.93 Crore.
2022-23	14,092.61	Includes FAC subsidy of Rs.100.02 Crore & COVID relief Subsidy of Rs.92.59 Crore.
2023-24 (Up to Nov-23)	13,143.00	Includes Gruha Jyothi Subsidy of Rs.3,650.00 Crore.

Source: Energy Department.

7.2.1.8. Investment in Power Sector: Planned by KPCL, KPTCL & ESCOMs during 2022-23

7.2.1.8.1. Investment in Power Sector

Table 2.17 details the planned and actual investment in the power sector by KPCL, KPTCL, and ESCOMs from 2018-19 to 2023-24 (up to November 2023). The total investment in the power sector shows fluctuations, with the highest plan outlay in 2023-24 at ₹15,484.76 crore, although actual expenditure up to November 2023 was only ₹6,200.89 crore.

Table 2.17: Investment in Power Sector (In Rs. Crore)

Year	IEBR				Capital Outlay/ Expenditure for Power Projects (IR & EQUITY)		Total Outlay	
	KPCL		KPTCL & ESCOMs					
	Plan Outlay	Expr.	Plan Outlay	Expr.	Plan Outlay	Expr.	Plan Outlay	Expr.
2018-19	1404.00	1001.66	2000.00	3711.64	3129.00	3129.00	6533.00	7842.30
2019-20	1916.00	288.06	3208.00	2406.00	2181.31	2181.31	7305.31	4875.37
2020-21	2345.80	644.28	2000.00	1342.70	1640.40	1640.40	5986.20	3627.38
2021-22	1859.30	453.24	2000.00	4226.29	3427.00	3427.00	7286.30	8106.53
2022-23	1954.00	292.52	3521.80	4597.39	3837.88	3837.88	9313.68	8727.79
2023-24 (Upto Nov-23)	2222.75	190.00	11176.00	3924.88	2086.01	2086.01	15484.76	6200.89

Source: Details of Provision for Plan Schemes, Finance Department, GoK.

7.2.1.9. Rural Electrification

Table 2.18 outlines the progress in rural electrification, specifically the number of irrigation pump sets energised and the number of hamlets/Harijana bastis electrified. The number of energised irrigation pump sets increased consistently from 29.68 lakhs in 2018-19 to 34.10 lakhs in 2023-24 (up to November). However, the electrification of hamlets/Harijana bastis has significantly reduced, with no new electrifications recorded in 2023-24 (up to November).

Table 2.18: Progress in Rural Electrification

Year	Irrigation Pump sets Energised (in lakhs)	Hamlets/Harijana Bastis Thandas Electrified (No.)
2018-19	29.68	19
2019-20	30.28	39
2020-21	31.65	11
2021-22	32.57	09
2022-23	33.25	02
2023-24 (Up to Nov-2023)	34.10	0

Source: Energy Department

7.2.1.10. Karnataka Renewable Energy Development Limited (KREDL)

7.2.1.10.1. Capacity additions under Renewable Energy

Table 2.19 tracks the capacity additions in renewable energy (wind, hydro, solar, etc.) for the years 2021-22 to 2023-24 (up to November 2023). The total renewable energy capacity added in 2023-24 (up to November) was 235.50 MW, a decrease from 584.61 MW in 2022-23. Solar energy saw the largest addition in capacity during these years.

Table 2.19: Capacity additions under Renewable Energy (in MW)

Sources	Capacity addition during		
	2021-22	2022-23	2023-24 (Upto Nov-2023) (Provisional)
Wind Power	181.80	101.05	23.80
Small/Mini Hydro	0.00	0.00	4.00
Solar (including solar roof top)	201.29	483.56	202.70
Solar Wind Hybrid			5.00
Total	**383.09**	**584.61**	**235.50**

Source: KREDL

7.2.1.10.2. Cumulative Progress in Renewable Energy

As of November 30, 2023, the cumulative progress in renewable energy capacity in the region shows a mixed performance across different energy sources (Table 2.20). Wind power has the highest potential available at 124,139 MW, with 17,911.19 MW allotted but only 5,273.99 MW installed, indicating significant

underutilisation. Small/Mini Hydro has a potential of 3,100 MW, with 1,173.19 MW allotted and a fairly high installation rate of 907.46 MW. Co-generation exceeds its potential, with 2,212.65 MW allotted and 1,731.16 MW installed, reflecting effective utilisation. Solar energy, including rooftop installations, shows a considerable capacity with 24,700 MW potential and 8,276.56 MW installed out of 14,609.10 MW allotted. Hybrid systems have minimal installations, with only 3.75 MW for wind and 1.25 MW for solar out of 395.13 MW and 59.00 MW allotted, respectively. Biomass and waste to energy sources are underperforming, with biomass showing only 139.03 MW installed out of 625.85 MW allotted, and no installations in waste to energy despite a 685.75 MW allotment. Overall, out of a total potential of 155,074 MW, only 16,333.20 MW has been installed against 37,671.86 MW allotted, highlighting gaps in the realisation of renewable energy projects.

Table 2.20: Cumulative Progress in Renewable Energy (in MW) as on 30.11.2023

Source		**Potential Available**	**Allotted Capacity**	**Installed Capacity**
Wind Power		124139	17911.19	5273.99
Small/Mini Hydro		3100	1173.19	907.46
Co-generation		2000	2212.65	1731.16
Solar (including solar roof top)		24700	14609.10	8276.56
Hybrid	Wind		395.13	3.75
	Solar		59.00	1.25
Biomass		1000	625.85	139.03
Waste to Energy		135	685.75	0.00
Total		**155074**	**37671.86**	**16333.20**

Source: KREDL & Energy Department

7.2.2. Fiscal performance

7.2.2.1. Fiscal Consolidation

7.2.2.1.1. Revenue Deficit and Fiscal Deficit as a % to GSDP

Table 2.21outlines Karnataka's fiscal and revenue deficits as a percentage of gross state domestic product (GSDP) from 2017-18 to 2023-24. The fiscal deficit fluctuates, peaking at 3.84% in 2021-22, likely due to pandemic-related expenditures, before declining to a budget estimate of 2.60% in 2023-24. The revenue deficit, which indicates the gap between revenue receipts and expenditure, turned positive in 2020-21 at 1.07% of GSDP, reflecting increased fiscal stress during the pandemic. However, it is expected to decrease to 0.49% by 2023-24.

Table 2.21: Revenue Deficit and Fiscal Deficit as a % to GSDP

Particulars	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23 (RE)**	**2023-24 (BE)**
Fiscal Deficit as a % of GSDP	2.37	2.73	2.25	3.72	3.84	2.80	2.60
Revenue Deficit as a % of GSDP	-0.34	-0.05	-0.07	1.07	0.79	0.27	0.49

Source: Economic Survey 2022-23, Planning Department, GoK and Overview of Budget 2023-24, Finance Department, GoK.

7.2.2.1.2. Major Fiscal Indicators of Karnataka

Table 2.22 compares Karnataka's fiscal indicators with those of all states for 2019-24. Notably, Karnataka's revenue deficit as a percentage of the gross fiscal deficit (RD/GFD) shows a significant reduction from 28.82% in 2020-21 to an estimated 18.79% in 2023-24. In contrast, Karnataka's capital outlay as a percentage of the GFD remains robust, particularly in the 2023-24 budget estimate at 76.51%, indicating a focus on infrastructure and development projects.

Table 2.22: Major Fiscal Indicators of Karnataka

Fiscal Indicators	2019-20 (Accounts)		2020-21 (Accounts)		2021-22 (Accounts)		2022-23 (Revised Estimates)		2023- 24 (Budget Estimates)	
	KAR	All States	KAR	All States	KAR	All States	KAR	All States	KAR	All States
RD/GFD	-3.11	23.15	28.82	46.14	20.83	15.59	9.81	13.57	18.79	3.68
Capital Outlay/ GFD	93.12	79.73	67.67	51.42	72.96	81.31	86.31	79.29	76.51	91.50
Non-dev. Expenditure/ Aggregate Disbursement	22.20	28.80	23.90	28.80	23.10	28.50	25.90	26.90	25.50	27.20
STR/RE	63.20	53.20	59.60	45.60	63.30	51.70	70.90	51.70	74.00	57.10

RD = Revenue Deficit, GFD = Gross Fiscal Deficit, STR =State Tax Revenue, RE = Revenue Expenditure

Source: Economic Survey 2022-23, Planning Department, GoK and RBI-Study of Budgets 2023-24, Statements-1 and 4.

7.2.2.2. Karnataka vis-à-vis Other States

7.2.2.2.1. Karnataka's Fiscal Deficit (as a % of GSDP) Compared with the Southern States

Karnataka's fiscal deficit as a percentage of GSDP is consistently lower than that of other southern states like Andhra Pradesh, Kerala, Telangana, and Tamil Nadu (Table 2.23). For instance, Karnataka's fiscal deficit is estimated at 2.50% in 2023-24, compared to Andhra Pradesh's 3.80% and Kerala's 3.40%. This reflects Karnataka's relatively stronger fiscal management.

Table 2.23: Karnataka's Fiscal Deficit (as a % of GSDP) Compared with the Southern States

States	2018-19	2019-20	2020-21	2021-22	2022-23 (RE)	2023-24 (BE)
AP	4.10	4.10	5.40	2.20	3.60	3.80
Karnataka	2.50	2.30	3.90	3.30	2.70	2.50
Kerala	3.40	2.80	5.10	4.90	3.50	3.40
Telangana	3.10	3.30	5.10	4.10	3.80	4.00
Tamil Nadu	2.90	3.30	5.20	4.00	3.20	3.40

Source: Economic Survey 2022-23 Planning Department, GoK and RBI Report on State Finances: A Study of Budgets of 2023-24

7.2.2.2.2. Receipts and expenditure of Karnataka

Table 2.24 presents Karnataka's revenue and capital receipts and expenditures from 2018-19 to 2023-24. The state has seen consistent growth in revenue receipts, from ₹164,978.66 crore in 2018-19 to a budget estimate of ₹238,409.81 crore in 2023-24. However, revenue expenditure has also grown, leading to a persistent revenue deficit. Capital receipts and disbursements show significant volatility, reflecting the varying intensity of capital projects over these years.

Table 2.24: Receipts and expenditure of Karnataka(Rs. crore)

Items	2018-19 (A/Cs)	2019-20 (A/Cs)	2020-21 (A/Cs)	2021-22 (A/Cs)	2022-23 (RE)	2023-24 (BE)
Revenue receipts	164978.66	175442.79	156716.40	195761.83	212359.58	238409.81
Revenue expenditure	164299.85	174257.40	176053.91	209428.06	218356.07	250932.50
Capital receipts	41939.79	50706.51	84843.03	80773.58	67180.00	86068.00
Capital disbursements	50229.17	49778.91	59091.02	61845.88	71296.95	76814.12
Capital disbursement (outside the revenue account)	34659.32	35529.44	45406.05	47874.34	52765.92	50988.84

Source: Karnataka Economic Survey 2023-24

7.2.2.2.3. Fiscal Development and State Finances

Table 2.25 shows the percentage of GSDP for revenue receipts and expenditure, as well as capital receipts and disbursements from 2018-19 to 2023-24. The state's revenue receipts and expenditure as a percentage of GSDP reached their peak in 2021-22 at 11.37% and 12.17%, respectively, likely driven by pandemic-related fiscal policies. A decline in these percentages is expected in 2023-24, indicating a return to more sustainable levels of spending.

Table 2.25: Fiscal Development and State Finances

Items	2018-19 (A/Cs)	2019-20 (A/Cs)	2020-21 (A/Cs)	2021-22 (A/Cs)	2022-23 (RE)	2023-24 (BE)
% of GSDP						
Revenue receipts	11.72	10.33	8.69	11.37	9.74	9.29
Revenue expenditure	11.67	10.26	9.76	12.17	10.01	9.77
Capital receipts	2.98	2.99	4.70	4.69	3.08	3.35
Capital disbursements	3.57	2.93	3.28	3.59	3.27	2.99
Capital disbursement (outside the revenue account)	2.46	2.09	2.52	2.78	2.42	1.99

Source: (i) Economic Survey 2022-23, Planning Department, GoK (ii) Annual Financial Statement 2023-24, Finance Department, GoK. (iii) Overview of Budget 2023-24, Finance Department, GoK.

7.2.2.3. Revenue Receipts and Its Composition

7.2.2.3.1. Composition of revenue receipts

State taxes contribute the largest share of Karnataka's revenue receipts, although this share has slightly decreased from 7.64% of GSDP in 2018-19 to a budget estimate of 6.84% in 2023-24 (Table 2.26). The share of central taxes and grants from the Centre has also declined over the years, reflecting either a reduction in allocations or greater reliance on state-generated revenue.

Table 2.26: Composition of revenue receipts(% of GSDP)

Item	2018-19 (A/Cs)	2019-20 (A/Cs)	2020-21 (A/Cs)	2021-22 (A/Cs)	2022-23 (RE)	2023-24 (BE)
State taxes	7.64	6.88	6.83	7.54	7.08	6.84
Share of central taxes	2.55	1.82	1.20	1.93	1.59	1.45
Grants from Centre	1.05	1.18	0.90	1.22	0.57	0.51
Non-tax revenue	0.48	0.45	0.44	0.68	0.50	0.49

Sources: (i) Economic Survey 2022-23, Planning Department, GoK (ii) Overview of Budget 2023-24, Finance Department, GoK.

7.2.2.4. On Finance Commission Grants

7.2.2.4.1. Finance Commission Grants Recommended for all states and Karnataka (2021-26)

Table 2.27 details the grants recommended by the 15th Finance Commission for Karnataka compared to all states. Karnataka's share is modest across various categories, with the highest being 12.1% of state-specific grants. Overall, Karnataka's share in total grants is 3.7%, indicating a relatively small portion of the total allocated grants.

Table 2.27: Finance Commission Grants Recommended for all States and Karnataka(Rs. crore)

Grants	All states	Karnataka	Karnataka share in total (%)
Revenue Deficit grants	294514	1631	0.6
Grants for Local Bodies	436361	21877	5.0
Sector-specific grants	129987	4560	3.5
Grants under disaster management	122601	4369	3.6
State-specific grants	49599	6000	12.1
Total	**1033062**	**38437**	**3.7**

Source: 15th Finance Commission Report.

7.2.2.5. Outstanding Liabilities

7.2.2.5.1. Total Liabilities of State Government

Table 2.28 shows a steady increase in Karnataka's total liabilities from ₹246,232 crore in 2017-18 to an estimated ₹518,366 crore in 2022-23. As a percentage of GSDP, these liabilities rose from 18.78% to 27.49% over the same period, reflecting growing fiscal pressures on the state's finances.

Table 2.28: Total Liabilities of State Government

Particulars	Total liabilities of state government (in Rs. crore)	Total liabilities (as a % to GSDP)
2017-18	246232	18.78
2018-19	285238	20.26
2019-20	337520	19.87
2020-21	403530	22.37
2021-22 (RE)	458042	26.61
2022-23 (BE)	518366	27.49

Source: (i) Economic Survey 2022-23, Planning Department, GoK (ii) Medium Term Fiscal Plan (2022-26), Finance Department, GoK

7.2.2.6. Budgetary Developments in 2023-24

7.2.2.6.1. Overall Budgetary Position

Karnataka's total receipts and disbursements show significant growth from 2021-22 to 2023-24. Receipts are projected to grow by 16.08% in 2023-24 over 2022-23, driven by both revenue and capital receipts (Table 2.29). Disbursements also rise, but at a slightly lower rate of 13.15%, indicating efforts to balance expenditure with revenue growth.

Table 2.29: Overall Budgetary Position

	Receipts and Disbursements	2021-22 (A/Cs)	2022-23 (RE)	2023-24 (BE)	% variation in 2023-24 over 2022-23
A.	**Receipts**				
1	Revenue Receipts	195761.83	212359.58	238409.81	12.27
2	Capital Receipts	80773.59	67180.00	86068.00	28.12
	Total A: (1+2)	**276535.42**	**279539.58**	**324477.81**	**16.08**
B.	**Disbursements**				
1	Revenue Expenditure	209428.06	218356.07	250932.50	14.92
2	Capital Disbursements	66475.34	71296.95	76814.12	7.74
	Total B :(1+2)	**275903.40**	**289653.02**	**327746.62**	**13.15**

Sources: Annual Financial Statement 2023-24, Finance Department, GoK

7.2.2.6.2. Important Budgetary Indicators: Karnataka

Table 2.30 outlines key budgetary indicators for Karnataka for 2022-23 and 2023-24. There is a significant increase in aggregate receipts and revenue receipts, reflecting strong fiscal health. However, debt receipts as a share of aggregate receipts are also increasing, suggesting rising borrowing needs.

Table 2.30: Important Budgetary Indicators: Karnataka (Rs. crore)

Indicator	Unit	2022-23 (RE)	2023-24 (BE)
Aggregate Receipts (Revenue + Capital)	Rs. Crore	279539.58	324477.81
Revenue Receipts	Rs. Crore	212359.58	238409.81
State's Own Tax Revenue	Rs. Crore	154431.00	175652.00
Per Capita State's Own Tax Revenue	Rupees	21479	23963
Sales Tax / VAT Collection	Rs. Crore	18640.00	21100.00
Share of Sales Tax /VAT in the State's Own Tax Revenue	%	12.07	12.01
Non-Tax Revenue including Grants from the Centre	Rs. Crore	23332.58	25505.00
Share of Non-Tax Revenue in Revenue Receipts	%	10.99	10.70
Debt Receipts	Rs. Crore	67000.00	85818.00
Share of Debts Receipts in Aggregate Receipts	%	23.97	26.45
Per Capita Revenue Receipts	Rupees	29535	32525
Aggregate Expenditure (Revenue + Capital)	Rs. Crore	289653.02	327746.62
Developmental Expenditure	Rs. Crore	192601.36	214810.12
Per Capita Development Expenditure	Rupees	26787	29306
Share of Developmental Expenditure in Total Expenditure	%	66.49	65.54

RE: Revised Estimates, BE: Budget Estimates. Per capita are calculated on projected population of 2022 and 2023

Source: Annual Financial Statement 2023-24, Finance Department, GoK.

7.2.2.7. Receipt

7.2.2.7.1. State's Own Tax Revenue and Tax-GSDP Ratio

Karnataka's own tax revenue has steadily increased from ₹107,667 crore in 2018-19 to a budget estimate of ₹175,653 crore in 2023-24 (Table 2.31). However, the tax-GSDP ratio shows a slight decline over the years, from 7.64% in 2018-19 to an estimated 6.84% in 2023-24, indicating that tax revenue growth is not keeping pace with GSDP growth.

Table 2.31: State's Own Tax Revenue and Tax-GSDP Ratio

Particulars	State's Own Tax Revenue (Rs. crore)	Tax-GSDP Ratio
2018-19	107667	7.64
2019-20	116880	6.88
2020-21	110842	6.83
2021-22	129715	7.54
2022-23 (RE)	154431	7.08
2023-24 (BE)	175653	6.84

Source: (i) Economic Survey 2022-23, Planning Department, GoK (ii) Overview of Budget 2023-24, Finance Department, GoK

7.2.2.7.2. Revenue and Capital Receipts, Karnataka 2021-22 to 2023-24

Table 2.32 outlines the state's revenue and capital receipts, showing a significant increase across the years. The state's tax revenue, which constitutes a large portion of the total revenue receipts, is projected to grow by 12.63% from 2022-23 to 2023-24. Notable increases include a 21.74% rise in taxes on income and

expenditure and a 20.42% increase in taxes on property and capital transactions. Capital receipts are also expected to see a substantial rise of 28.12% in 2023-24, primarily driven by internal debt, which makes up over 90% of the capital receipts.

7.2.2.1. Trends in Expenditures

7.2.2.1.1. Expenditure Indicators in Karnataka

Table 2.33 compares revenue and capital expenditure for the state. Revenue receipts are expected to grow by 9.29% in 2023-24, while revenue expenditure is projected to increase by 9.77%. Developmental expenditure, which covers social and economic services, is anticipated to grow by 8.37%. Capital expenditure, however, shows a slight decrease in its growth rate from 2.42% in 2022-23 to 1.99% in 2023-24.

Table 2.33: Expenditure Indicators in Karnataka

Particulars	**2021-22 (Accounts)**	**2022-23 (RE)**	**2023-24 (BE)**
Revenue Receipts	195761.83 (11.37%)	212359.58 (9.74%)	238409.81 (9.29%)
Revenue Expenditure (RE)	209428.06 (12.17%)	218356.07 (10.01%)	250932.50 (9.77%)
Development Expenditure	191282.64 (11.11%)	192601.36 (8.83%)	214810.12 (8.37%)
Social Services	95801.99 (5.56%)	94751.61 (4.34%)	109967.19 (4.28%)
Economic Services	95840.65 (5.56%)	97849.75 (4.49%)	104842.93 (4.08%)
General Services	63608.86 (3.70%)	74640.59 (3.42%)	83663.45 (3.26%)
Capital Expenditure (CE) (outside the revenue account)	47874.34 (2.78%)	52765.92 (2.42%)	50988.84 (1.99%)
Total Expenditure (RE+CE)	**257302.40 (14.95%)**	**271121.99 (12.43%)**	**301921.34 (11.76%)**
Total Consolidated Fund of Expenditure	**275903.40 (16.03%)**	**289653.03 (13.28%)**	**327746.62 (12.77%)**
GSDP	**1721336.00**	**2181217.00**	**2567340.00**

Sources: 1. Annual Financial Statement 2023-24, Finance Department, GoK. 2. Overview of Budget 2023-24, Finance Department, GoK.

Table 2.32: Revenue and Capital Receipts, Karnataka 2021-22 to 2023-24 (Rs. Crore)

	Category of Receipts	2021-22 (A/Cs)	2022-23 (RE)	2023-24 (BE)	Percent Variation 202324 over 2022-23	2021-22 (A/Cs)	2022-23 (RE)	2023-24 (BE)
I.	**Revenue Receipts**					**% to total Revenue Receipts**		
A.	State's Tax Revenue (i+ii+iii+iv+v)	162998.77	189027.00	212904.81	12.63	83.26	89.01	89.30
(i)	Taxes on Income and Expenditure	1269.70	1150.00	1400.00	21.74	0.65	0.54	0.59
(ii)	Taxes on Property & Capital Transactions of which	69574.04	79513.00	95752.60	20.42	35.54	37.44	40.16
	(a) Sales Tax / VAT	19273.70	18640.00	21100.00	13.20	9.85	8.78	8.85
	(b) Taxes on Vehicles	6915.26	9007.00	11500.00	27.68	3.53	4.24	4.82
	(c) State Excise	26377.68	32000.00	36000.00	12.50	13.47	15.07	15.10
	(d) Taxes on Goods & Passengers	17.84				0.01		
	(e) Others	16989.56	19866.00	27152.60	36.68	8.68	9.35	11.39
(iii)	GST Compensation	8976.43	10548.00	2350.00	-77.72	4.59	4.97	0.99
(iv)	State Goods and Service Tax	49929.02	63220.00	76150.00	20.45	25.50	29.77	31.94
	State's Own Tax Revenue (i)+(ii)+(iii)+(iv)	129749.19	154431.00	175652.60	13.74	66.28	72.72	73.68
(v)	Tax Devolution from Centre	33249.58	34596.00	37252.21	7.68	16.98	16.29	15.63
B.	Non-tax Revenue	11777.03	10940.99	12500.00	14.25	6.02	5.15	5.24
C.	Grants-in-aid from Central Government (excl.GST compensation)	20986.00	12391.58	13005.00	4.95	10.72	5.84	5.45
	Total I: Revenue Receipts (A+B+C)	**195761.80**	**212359.57**	**238409.81**	**12.27**	**100.00**	**100.00**	**100.00**
II.	**Capital Receipts**					**% to total Capital Receipts**		
(i)	Loans from Government of India	0179.38	3964.86	6254.00	57.74	24.98	5.90	7.27
(ii)	Internal Debt	60461.43	63035.14	79564.00	26.22	74.85	93.83	92.44
(iii)	Recovery of Loans & Advances	126.70	162.00	227.50	40.43	0.16	0.24	0.26
(iv)	Misc. Capital Receipts	6.08	18.00	22.50	25.00	0.01	0.03	0.03
	Total II: Capital Receipts (i) to (vi)	**80773.59**	**67180.00**	**86068.00**	**28.12**	**100.00**	**100.00**	**100.00**
	AGGREGATE RECEIPTS: I + II	**276535.39**	**279539.57**	**324477.81**	**16.08**			
	CONSOLIDATED FUND OF RECEIPTS	**276535.39**	**279539.57**	**324477.81**				
	Total Tax Revenue as percent of Aggregate Receipts	**58.94**	**67.62**	**65.61**				

A/Cs: Accounts, RE: Revised Estimates. BE: Budget Estimates; Source: Annual Financial Statement 2023-24, Finance Department, GoK

Table 2.34: Trends in Key Expenditure Components(Rs. crore)

Category of Expenditure		2021-22 (A/C)	%*	2022-23 (RE)	%*	2023-24 (BE)	%*	Percent Variation (2023-24 over 2022-23)
I	**Developmental Expenditure**							
A	Economic Services of which	95480.65	49.92	97849.75	50.80	104842.93	48.81	7.15
1	Agriculture & Allied Services	23209.72	12.13	20166.21	10.47	25889.57	12.05	28.38
2	Rural Development	8121.35	4.25	11225.73	5.83	9404.41	4.38	-16.22
3	General Economic Services	7196.84	3.76	6191.66	3.21	10022.20	4.67	61.87
4	Water & Power Development	38849.64	20.31	38112.42	19.79	41793.55	19.46	9.66
5	Industry and Minerals	3091.57	1.62	3037.20	1.58	2634.77	1.23	-13.25
6	Transport and Communication	14748.24	7.71	18868.15	9.80	15022.75	6.99	-20.38
7	Others	263.29	0.14	248.38	0.13	75.68	0.04	-69.53
B	Social Services of which	95801.99	50.08	94751.61	49.20	109967.19	51.19	16.06
8	Education, Sports, Art and Culture	30774.33	16.09	33493.65	17.39	33271.05	15.49	-0.66
9	Medical & Public Health, Family Welfare, Water supply & Sanitation	23312.92	12.19	20052.31	10.41	22706.47	10.57	13.24
10	Social Security & Welfare Including SC / ST/OBCs/ Minorities Welfare	20164.62	10.54	23663.04	12.29	41767.40	19.44	76.51
11	Housing and Urban Development	12849.51	6.72	10795.04	5.60	6451.68	3.00	-40.23
12	Information and Publicity	216.03	0.11	329.89	0.17	109.30	0.05	-66.87
13	Others	8484.58	4.44	6417.68	3.33	5661.29	2.64	-11.79
	Total Developmental Exp. (A+B)	**191282.64**		**192601.36**		**214810.12**		**11.53**
II	**Non-Developmental Expenditure**							
14	General services	63608.86	75.17	74640.59	76.91	83663.45	74.08	12.09
15	Organs of the State	1860.27	2.20	2641.66	2.72	3144.57	2.78	19.04
16	Fiscal Services	1874.28	2.21	2620.08	2.70	2702.66	2.99	3.15
17	Interest payment & servicing of debts	28763.61	33.99	31394.61	32.95	36027.08	31.90	14.76
18	Administrative Services	9389.49	11.10	11721.62	12.08	13131.95	11.63	12.03
19	Pension & Miscellaneous General Services	20793.06	24.57	24549.45	25.30	25430.09	22.52	3.59

Category of Expenditure		2021-22 (A/C)	%*	2022-23 (RE)	%*	2023-24 (BE)	%*	Percent Variation (2023-24 over 2022-23)
20	Compensation & Assignment to Local Bodies and PRIs	6615.82	7.82	6418.98	6.61	6815.75	6.04	6.18
21	Capital Outlay on Police	149.89	0.18	566.62	0.58	573.56	0.51	1.22
22	Capital Outlay on PWD	778.26	0.92	1146.55	1.18	2653.54	2.35	131.44
23	Internal debt of the State Govt.	12559.79	14.84	14430.44	14.87	20774.54	18.39	43.96
24	Repayment of Loans to GoI	1411.75	1.67	1546.00	1.59	1666.05	1.48	7.77
25	Loans &Advances to Govt. Servants	4.51	0.01	15.68	0.02	16.68	0.01	6.38
26	Transfer to Contingency Fund	420.00	0.50					
	Total non- developmental Expenditure	84620.73		97051.69		112936.47		16.37
	Aggregate Expenditure I +II	275903.37		289653.05		327746.62		13.15
	Developmental Exp as % of total Exp	69.33		66.49		65.54		

A/Cs: Accounts, RE: Revised Estimates, BE: Budget Estimates

* Figures under developmental expenditure are percentages to the total developmental expenditure and figures under non-developmental expenditure are percentages to the total non-developmental expenditure

Source: Annual Financial Statement 2023-24, Finance Department, GoK.

7.2.2.1.1. Trends in Key Expenditure Components

Table 2.34 details the distribution of developmental and non-developmental expenditures. Developmental expenditure is slightly decreasing as a percentage of total expenditure, from 69.33% in 2021-22 to 65.54% in 2023-24. Economic services, which are a major part of developmental expenditure, are expected to grow by 7.15% in 2023-24, with significant increases in agriculture, general economic services, and water and power development.

7.2.2.2. Central Grants

7.2.2.2.1. Trends in Central Grants

The state's central grants are projected to decline sharply from Rs. 29,962.43 crore in 2021-22 to Rs. 15,355.00 crore in 2023-24 (Table 2.35). This decrease is largely due to reductions in grants from centrally sponsored schemes and other transfers to state legislatures.

Table 2.35: Trends in Central Grants(Rs. Crore)

Items	2021-22 (Accounts)	2022-23 (RE)	2023-24 (BE)
FC Grants	6239.03 (3.19)	4106.00 (1.93)	5223.00 (2.19)
Centrally Sponsored Schemes	12659.37 (6.47)	7763.36 (3.66)	7501.00 (3.15)
Other Transfers/Grants to State Legislatures	11064.03 (5.65)	11070.22 (5.21)	2631.00 (1.10)
Total Grants	29962.43 (15.31)	22939.58 (10.88)	15355.00 (6.44)
Total Revenue Receipts	195761.83	212359.58	238409.81

Source: Detailed Estimates of Revenue and Other Receipts 2023-24, Finance Department, GoK

The figures in bracket indicates % to total revenue receipts

7.2.2.2.2. Major Classification of Expenditure

Table 2.36 provides a breakdown of expenditures by sector. Economic services and social services continue to constitute the majority of the budget, although their proportions have shifted slightly. Public debt expenditures are growing significantly, from 5.06% of total expenditure in 2021-22 to 6.85% in 2023-24, indicating an increasing burden of debt servicing on the state's finances.

7.2.2.1. Review of Trends in Receipts and Expenditure during April-September 20

7.2.2.1.1. Receipts and Expenditure during April-September 2023

Table 2.37 gives a mid-year snapshot of the state's fiscal performance for 2023-24. Revenue receipts for this period are at 44.12% of the budget estimates, with notable growth in own tax revenues and devolution from the Centre. Capital receipts and public debt, however, show mixed results, with a

significant drop in non-debt capital receipts. On the expenditure side, revenue expenditure is at 39.08% of the budget estimates, while capital expenditure is lower, reflecting potential underutilisation of budgeted funds.

Table 2.36: Major Classification of Expenditure of Karnataka State Budget - 2023-24(Rs. Crore)

Description	**2021-22 (A/C)**	**2022-23 (BE)**	**2022-23 (RE)**	**2023-24 (BE)**
Economic Services	108213.61	92225.75	108648.18	118003.70
	(39.22)	(34.71)	(37.51)	(36.00)
Social Services	79803.00	79124.13	83429.78	96730.58
	(28.92)	(29.78)	(28.80)	(29.51)
General Services	62669.09	70758.89	72893.07	80371.29
	(22.71)	(26.63)	(25.17)	(24.52)
Public Debt	13971.53	14178.70	15976.44	22440.59
	(5.06)	(5.34)	(5.52)	(6.85)
Grants to Local Bodies	6615.82	6050.53	6418.97	6815.75
	(2.40)	(2.28)	(2.22)	(2.08)
Loans & Advances	4629.46	3381.88	2286.59	3384.69
	(1.68)	(1.27)	(0.79)	(1.03)
Grand Total	**275903.47**	**265719.90**	**289653.03**	

Note: Figures in bracket indicate percentage to total

Source: Annual Financial Statement 2023-24, Finance Department, GoK.

Table 2.37: Receipts and Expenditure during April-September 2023(Rs. crore)

	Item	**2023-24 BE**	**April to September 2023**	**% to BE**	**April to September 2022**	**% change over previous year**
I	Revenue Receipts	238409.81	105192.95	44.12	100330.00	4.85
(i)	Own Tax Revenues*	175652.00	76885.02	43.77	66734.79	15.21
(ii)	Non-tax Revenues	12500.00	6518.85	52.15	5724.20	13.88
(iii)	Devolution from Centre	37252.21	16609.98	44.59	13716.68	21.09
(iv)	GIA and Contributions	13005.00	5179.10	39.82	14154.39	-63.41
II	Capital Receipts (Non-debt)	250.00	50.64	20.26	126.98	-60.12
(i)	Recovery of Loans and Advances	227.50	18.56	8.16	127.26	-85.42
(ii)	Other Non-Debt Capital Receipts	22.50	32.08	142.58	-0.28	-60.12
III	Total Receipts (I+II)	238659.81	105243.59	44.10	100457.04	4.76
	Public Debt	85818.00	1191.10	1.39	3152.89	-62.22
	Total Receipts including Public Debt	324477.81	106434.69	32.80	103609.93	2.73
IV	Revenue Expenditure	250932.50	98070.00	39.08	86798.40	12.99
(i)	Interest Payments out of IV	34027.08	13739.00	40.38	12685.02	8.31
V	Capital Expenditure	54373.53	10292.10	18.93	15344.23	-32.93
(i)	Loans and Advances Disbursed out of V	3384.69	451.44	13.34	831.02	-45.68
VI	Total Expenditure (IV+V)	305306.03	108362.10	35.49	102142.63	6.09
	Internal Debt	22440.59	5354.38	23.86	3420.82	56.52
	Total Expenditure including Public Debt	**327746.62**	**113716.48**	**34.70**	**105563.45**	**7.72**

*Own tax revenue is inclusive of GST compensation

Source: Finance Department, GoK

7.2.2.1.2. State's Own Tax Revenue during April-September 2023

Table 2.38 on Karnataka's own tax revenue for April-September 2023 reveals strong fiscal performance, with the state achieving 44.36% of its annual target by mid-year. Key tax categories, including commercial taxes, state excise, motor vehicle taxes, and stamp and registration fees, all show significant growth compared to the same period in the previous year. Commercial taxes, the largest revenue source, grew by 15.14%, while motor vehicle taxes and other smaller tax categories saw notable increases of 17.08% and 125.03%, respectively. Overall, the state's tax revenue collection increased by 15.21% year-on-year, indicating a healthy upward trend in its fiscal health.

Table 2.38: State's Own Tax Revenue during April-September 2023(Rs. crore)

Particulars	**2023-24 BE**	**April - September 2023**	**% to BE**	**April - September 2022**	**Growth over previous year**
Commercial Taxes	98650.00	44830.52	45.44	38935.10	15.14
State Excise	36000.00	16611.11	46.14	14711.28	12.91
Motor Vehicle Taxes	11500.00	5244.23	45.60	4479.04	17.08
Stamp and Reg Fees	25000.00	9343.73	37.37	8229.23	13.54
Others	2152.60	855.43	39.73	380.14	125.03
Total (Own Tax Revenues-excl. GST compensation)	**173302.60**	**76885.02**	**44.36**	**66734.79**	**15.21**

Source: Finance Department, GoK

7.3. Conclusions

7.3.1. Power sector performance of Karnataka in last 5 years

The power sector in the region, as illustrated by the data from 2019-20 to 2023-24 (up to November 2023), shows a complex narrative of both progress and challenges. In terms of installed capacity, the public sector remained stagnant with no growth, while the private sector witnessed a gradual increase, especially in renewable sources like wind and solar energy. This contributed to a modest overall growth in installed capacity from 30,061.48 MW in 2019-20 to 32,403.70 MW by November 2023. However, electricity generation fluctuated during this period, peaking in 2022-23 but showing a potential decline in 2023-24. This fluctuation, coupled with a significant drop in electricity imports in the current year, points to challenges in maintaining consistent power supply. The procurement and sale of power further highlight these challenges. While energy procurement from other states and exchanges surged, reflecting the region's increasing reliance on external sources, the sale of surplus power significantly decreased. This suggests a shift in power management strategies, possibly due to rising costs and changing market dynamics. Infrastructure development, particularly in transmission lines and sub-stations, saw continuous expansion. The addition of new transmission lines and the augmentation of sub-station capacity underscore efforts to strengthen the grid, although these efforts need to be matched by

improvements in transmission and distribution losses, which showed some backsliding after years of gradual improvement. Consumer electricity consumption data reveals a dominant reliance on irrigation pump sets and domestic users, while revenue realisation varied significantly across consumer categories. Notably, while the average revenue realisation per unit of electricity increased, overall revenue and sales dropped, indicating inefficiencies and potential areas for policy intervention. The financial health of the power sector remains a concern, with ESCOMs (Electricity Supply Companies) recording substantial cumulative losses, further aggravated by decreased subsidies from the state government. Despite a planned increase in investment, actual expenditure remains low, hinting at potential delays or challenges in executing power sector projects. Renewable energy development, though marked by some progress, particularly in solar and wind energy, faces substantial underutilisation. The region's vast potential in renewable energy remains largely untapped, with a significant gap between allotted and installed capacities, particularly in areas like wind power and waste-to-energy projects.

In conclusion, the region's power sector is at crossroads. While there has been commendable progress in expanding infrastructure and integrating renewable energy, several challenges persist. These include fluctuating electricity generation, financial instability within ESCOMs, underutilisation of renewable energy potential, and inefficiencies in power sales and procurement. Addressing these issues through focused policy interventions, increased investments, and better resource management will be crucial for achieving long-term sustainability and reliability in the power sector.

7.3.2. Fiscal health of Karnataka in the last 5 years

The fiscal performance of Karnataka from 2017-18 to 2023-24 reflects a nuanced landscape of challenges and resilience, underscored by the impacts of the COVID-19 pandemic and the state's strategic fiscal management. Over this period, Karnataka's fiscal and revenue deficits have fluctuated, with significant peaks during the pandemic years. For instance, the fiscal deficit reached a high of 3.84% of GSDP in 2021-22, primarily driven by pandemic-related expenditures. However, the state has shown a commitment to fiscal consolidation, with a planned reduction of the fiscal deficit to 2.60% of GSDP by 2023-24. Similarly, the revenue deficit, which turned positive during the pandemic, is expected to decline to 0.49% by 2023-24, indicating an improving balance between revenue receipts and expenditures. Karnataka's fiscal management is particularly notable when compared with other southern states. The state's fiscal deficit as a percentage of GSDP has consistently been lower, reflecting its stronger fiscal discipline. For example, in 2023-24, Karnataka's fiscal deficit is estimated at 2.50% of GSDP, significantly lower than Andhra Pradesh's 3.80% and Kerala's 3.40%. Revenue generation remains a key strength for Karnataka, with consistent growth in revenue receipts from ₹164,978.66 crore in 2018-19 to an estimated ₹238,409.81 crore in 2023-24. However, this growth is accompanied by a persistent revenue deficit, driven by rising revenue expenditures. The state's capital outlay, which constitutes a substantial portion of the gross fiscal deficit (GFD), is particularly strong in 2023-24, reflecting a focus on infrastructure and development projects. On the revenue side, Karnataka's own tax revenue has shown steady growth, although the tax-GSDP ratio has slightly declined, indicating that tax

revenue growth is not entirely keeping pace with GSDP growth. The composition of revenue receipts also reveals a declining share of central taxes and grants, suggesting a greater reliance on state-generated revenue. Karnataka's rising liabilities, which have grown from ₹246,232 crore in 2017-18 to an estimated ₹518,366 crore in 2022-23, highlight the growing fiscal pressures on the state's finances. As a percentage of GSDP, these liabilities have increased significantly, pointing to the need for prudent fiscal management to ensure long-term sustainability. Despite these challenges, Karnataka's budgetary position for 2023-24 reflects a robust growth in receipts and a balanced approach to expenditure. The state's efforts to enhance revenue through its own tax sources, alongside strategic capital investments, are likely to support its fiscal health in the coming years. However, the rising burden of public debt and the decline in central grants underscore the importance of continued fiscal discipline and effective resource management.

In conclusion, while Karnataka faces significant fiscal challenges, particularly in managing its growing liabilities and ensuring sustainable revenue growth, the state's fiscal performance over the past few years demonstrates a strong commitment to maintaining fiscal stability. Continued focus on strategic expenditure, enhanced revenue generation, and prudent debt management will be crucial for Karnataka to navigate the complex fiscal landscape in the years ahead.

7.3.3. Power sector performance on the states' fiscal health

The performance of Karnataka's power sector over the past five years has had a significant impact on the state's fiscal health. The sector has seen both progress and challenges, particularly in terms of infrastructure development and the integration of renewable energy sources. While the installed capacity has grown modestly, especially in renewables like wind and solar, electricity generation has fluctuated, creating uncertainties in maintaining a stable power supply. The financial health of the electricity supply companies (ESCOMs) is particularly concerning, with substantial cumulative losses aggravated by reduced subsidies from the state government. This financial instability within the power sector adds pressure to Karnataka's overall fiscal health, as the state must balance the need for ongoing investment in power infrastructure with the challenges of managing these losses. The power sector's financial issues, including inefficiencies in power sales and procurement, have also strained Karnataka's budget, necessitating careful fiscal management. The underutilisation of the state's renewable energy potential further exacerbates these challenges, representing a missed opportunity for both environmental and fiscal benefits. Despite these challenges, the state has shown a commitment to addressing fiscal deficits and maintaining stronger fiscal discipline compared to other southern states. However, the power sector's ongoing issues highlight the need for focused policy interventions and better resource management to ensure that Karnataka can achieve long-term fiscal sustainability while also meeting its energy needs. Addressing the inefficiencies and financial instability in the power sector will be crucial for maintaining the state's fiscal health and supporting its broader economic development goals.

7.4. References

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8.ANALYSIS OF PUBLIC DEBT

8.1. Introduction

The state government's debt is made up of internal debt (open market loans & negotiated loans) of the government, loans taken from the Government of India, public accounts (Provident Fund and Insurance Fund, Reserve Fund and Deposits bearing Interests), and off-budget borrowings. Karnataka has witnessed an increase in the public debt over the past decade with greater emphasis on infrastructure development, welfare programs, and revenue shortfalls. The state's debt-to-GSDP ratio has been on an upward trend, though it remains within the limits prescribed by the Fiscal Responsibility and Budget Management (FRBM) Act. The proportion of internal debt and public accounts has continuously increased up to 2022-23, contributing to the increase in the debt to GSDP ratio as internal debt is a major component of the total fiscal liabilities of the state.

The substantial increase in off-budget borrowings and contingent liabilities presents a significant challenge to public debt management. These liabilities are not reflected in the official budget documents, even though they either already draw or are likely to draw on budgetary resources for repayment, whether in the current or future period. Off-budget borrowers often include public sector units (PSUs), special purpose vehicles (SPVs), and sometimes even the government itself. These entities rely on a combination of budgetary support from the government and other financing sources, including borrowing, to carry out their operations. While PSUs, SPVs, or government departments borrow in their own names, the responsibility for repayment ultimately rests with the government. In many cases, the borrowing entities repay interest and/or principal using grants received from the government. However, it is often difficult to identify the specific portion of the grant used for debt servicing. While off-budget borrowings offer flexibility, they pose several serious challenges. Governments frequently resort to these borrowings to circumvent debt and fiscal deficit targets set under fiscal responsibility laws. For state governments, this practice is further incentivised by the hard borrowing limits imposed by the Union under Article 293(3) of the Constitution. These limits encourage states to access funds through off-budget means, as these borrowings do not appear in official budget documents and are typically used to finance government programs or infrastructure projects without reflecting in the

formal fiscal deficit. Off-budget borrowings, therefore, while providing temporary relief to fiscal constraints, pose significant risks to transparency, fiscal sustainability, and overall macroeconomic stability. For long-term fiscal health, it was essential to bring such borrowings within the formal budget process to ensure proper accounting, transparency, and accountability. The Government of India ended its practice of off-budget borrowings in 2022-23 budget to increase fiscal transparency after the CAG and 15th FC had red-flagged the off-budget funding of welfare schemes through public sector entities.

The government often issues guarantee on the behalf of state-owned corporations / public sector entities / local bodies and cooperatives working under the control of various administrative departments in favour of various banks / financial institutions to enable them to implement different developmental schemes or projects. For example, to regulate the impact of sudden surge in international crude oil prices on domestic oil prices, government oil marketing companies were tasked to raise capital through interest bearing "oil bonds/coupons" from market. These bonds carried government guarantees and were financed on the maturity through revenue of oil marketing companies. Large-scale infrastructural projects such as highways, ports, construction of power stations and irrigation canals, distribution of their networks carried through government companies or public sector undertakings raise capital through banks and markets. Similarly, government programmes like loans extended to self-employment programmes (MUDRA), MSMEs, agriculture and housing loans for poor and socially vulnerable groups are supported through guarantees of government institutions. The liabilities incurred for supporting these institutions are *contingent* on the failure to repayment by loanee. Since these are not actual liabilities, they are not recorded in the budget accounts of the government. However, they are important to account for broad fiscal risks.

Even though no payments may turn out to be due, a high level of contingencies may indicate an undesirable level of risk on the part of the government offering them and can cause a substantial burden on the fiscal health of governments in future unless they are prudently managed. *Contingent liabilities* are legal obligations for governments to make payments on behalf of defaulters and therefore have potential to turn out an invisible fiscal cost or a hidden subsidy or a drain on future government finance and can lead to large increases in public debt (Poliakova 1998).

Article 292 of the Constitution of India extends the executive powers to the Union Government to give guarantees on the security of the Consolidated Fund of India, within such limits, if any, as may be fixed by the Parliament (Government of India, 2022). This provision also empowers the state governments to give guarantees within such limits to support developmental projects. In case of the State of Karnataka, to give effect to the proposals made in the Budget Speech and also for implementing the recommendations of the Technical Committee of State Finance Secretaries to fix limit on Government Guarantees, the Government of Karnataka brought "The Karnataka Ceiling on Government Guarantees Act, 1999" to provide for limits on Government Guarantees issued on behalf of the government departments, public sector undertakings, local authorities, statutory boards, corporations and co-operative institutions, etc., for promoting fiscal discipline in the state (Government of Karnataka, 1999). The act provides for a cap on outstanding guarantees extended by the government as on the first day of April of any year at 80% of the state's revenue receipts of the second preceding year.

8.2.Change in the Composition of Debt over the Years

The state government's fiscal liabilities are primarily made of public debt, liabilities on the public accounts and off-budget borrowing (debt which is incurred by the public entities outside the government's control, with government servicing debt). The public debt is raised through market borrowing and negotiated loans from the public financial institutions (LIC, GIC, NABARD, etc.) and the Government of India. The fiscal liabilities of Karnataka through public debt have increased from Rs. 75,052 crore (2012-13) to Rs. 5,16.075 crore (2024-25RE), registering a growth of 17.65 per annum (Table 8.1). The internal debt of the state through market borrowing and negotiated loans annually increased at the rate of 17.9% to 22.9% during 2013-14 to 2019-20, reaching a peak level at 27.6% during COVID pandemic year 2020-21 (Table 8.2). In the COVID pandemic and post-pandemic years, loan requirement of the state was significantly met by the Government of India (Rs. 26,617 crore in 2020-21, and Rs. 18,623 crore to Rs. 28,105 crore, thereafter), registering annual growth of 91.4% (2020-21) and 23-25% (thereafter) compared to average growth rate of 2.6% in the earlier period (2013-14 to 2019-20).

The other liabilities of the state, public accounts (small savings, PF, reserve funds, deposits and advance etc.), and off-budget borrowings also show significant growth (11.39% and 17.65% per annum, respectively) with remarkable annual variations. The off-budget

borrowings increased by 112% in 2013-14 but fell to -22.1% to 1.8% during 2020-21 to 2024-25, reflecting the impact of fiscal norms /ceiling stipulated by the central government. Out of these components, the proportion of internal debt in the total fiscal liabilities/debt is the highest (Table 8.2). As a result of an increase in this component, the fiscal liability of the state shows an increasing trend.

Table 8.1: Composition of Debt from 2012-13 to 2024-25 (in Rs. crore)

Years/ Particulars	Public Debt			Other Liabilities		Total Fiscal Liabilities
	Internal Debt	GoI Loans	Total	Public Accounts	Off-Budget Borrowings	
2012-13	63418	11634	75052	45279	1388	121719
2013-14	76428	12094	88522	46796	2943	138261
2014-15	92904	12681	105585	52967	5727	164279
2015-16	109545	13002	122547	53076	7699	183322
2016-17	132489	13794	146283	64788	10248	221319
2017-18	148581	14555	163136	69922	13173	246231
2018-19	179308	14657	193965	76410	14862	285238
2019-20	220337	13908	234245	85172	18103	337520
2020-21	281140	26617	307757	89784	18421	415962
2021-22	329042	14869	343911	99147	16682	490256
2022-23	353894	18623	372517	133024	17306	522847
2023-24	417455	22890	440345	149192	13478	603015
2024-25(RE)	487971	28105	516076	156258	12766	685101
ACGR (%)	**18.75**	**6.63**	**17.65**	**11.39**	**17.37**	**15.92**

Source: CAG State Finance Audit Reports; MTFP Reports, Government of Karnataka

Table 8.2: Annual Growth Rate (AGR) of Components of Debt

Years/ Particulars	Public Debt			Other Liabilities		Total Fiscal Liabilities
	Internal Debt	GoI Loans	Total	Public Accounts	Off-Budget Borrowings	
2013-14	20.5	4.0	17.9	3.4	112.0	13.6
2014-15	21.6	4.9	19.3	13.2	94.6	18.8
2015-16	17.9	2.5	16.1	0.2	34.4	11.6
2016-17	20.9	6.1	19.4	22.1	33.1	20.7
2017-18	12.1	5.5	11.5	7.9	28.5	11.3
2018-19	20.7	0.7	18.9	9.3	12.8	15.8
2019-20	22.9	-5.1	20.8	11.5	21.8	18.3
2020-21	27.6	91.4	31.4	5.4	1.8	23.2
2021-22	17.0	-44.1	11.7	10.4	-9.4	17.9
2022-23	7.6	25.2	8.3	34.2	3.7	6.6
2023-24	18.0	22.9	18.2	12.2	-22.1	15.3
2024-25 (RE)	16.9	22.8	17.2	4.7	-5.3	13.6

Source: Computed from above table

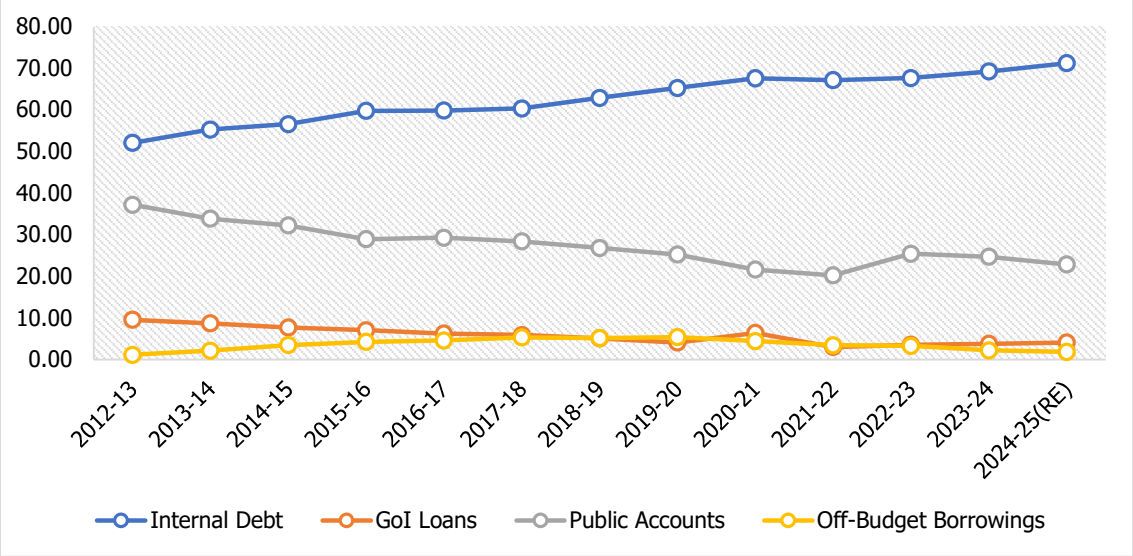
A look at the composition of debt shows that public debt constitutes a big chunk of the total liabilities of the state, and it has consistently increased from 61.66% in 2012-13 to 75.33% in 2024-25 (Table 8.3; Fig.8.3). Off-budget borrowings constitute the smallest percentage of total debt. The share of loans from the central government, which was 9.56% of total liabilities in 2012-13, has fallen to 4.27% in 2024-25(RE). The liabilities on public accounts also follow a similar trend with a consistent reduction in share from 37.2 % to 22.81% in the corresponding period, indicating a greater reliance on the market to meet the state's borrowing needs. Off-budget borrowings by public entities involving debt servicing commitment on the part of the state government accounted for 1.14% to 5.36% of the state's debt liabilities. The increase in the share of off-budgeting borrowings was largely witnessed during 2012-13 and 2019-20. However, since March 2022, the liabilities have seen gradual reduction after the central government stipulation that made off-budget borrowings as a part of state's net borrowing ceiling.

Table 8.3: Percentage Composition of Debt to Total Fiscal Liabilities

Years/ Particulars	Public Debt			Other Liabilities		Total Fiscal Liabilities
	Internal Debt	GoI Loans	Total	Public Accounts	Off-Budget Borrowings	
2012-13	52.10	9.56	61.66	37.20	1.14	100
2013-14	55.28	8.75	64.03	33.85	2.13	100
2014-15	56.55	7.72	64.27	32.24	3.49	100
2015-16	59.76	7.09	66.85	28.95	4.20	100
2016-17	59.86	6.23	66.10	29.27	4.63	100
2017-18	60.34	5.91	66.25	28.40	5.35	100
2018-19	62.86	5.14	68.00	26.79	5.21	100
2019-20	65.28	4.12	69.40	25.23	5.36	100
2020-21	67.59	6.40	73.99	21.58	4.43	100
2021-22	67.12	3.03	70.15	20.22	3.40	100
2022-23	67.69	3.56	71.25	25.44	3.31	100
2023-24	69.23	3.80	73.02	22.74	2.24	100
2024-25(RE)	71.23	4.27	75.33	22.81	1.86	100

Sources: Computed from above table

Fig.8.1: Composition of Debt to Total Liabilities of the State (%)



8.3.Analysis of the Current Contingent Liabilities

Apart from off-budget borrowings, guarantees extended by the state to various state institutions/ entities remain one of major concerns as these are contingent liabilities on the consolidated fund of the state and pose potential fiscal risk if borrowers fail to repay the outstanding amounts. From Table 8.4, it can be noted that the ***amounts of outstanding guarantees extended by the Government of Karnataka are increasing over the years, however, these are far below the limit prescribed in the Act*** (Government of Karnataka,1999) and stand at a better place as compared to other states (Table 8.4; ***Fig.8.2;*** Appendix Table 8.1).

With better economic growth performance, the limit of the maximum amount of guarantees that can be extended by Karnataka has increased from Rs. 13,262 crore in 2011-12 to Rs 78,147 crore in 2023-24 (Table 8.4). So also, the outstanding principal amounts, adjusted to repayment, show an increase from Rs. 6,491 crore to Rs. 44,162 crore during the corresponding period. The principal outstanding amount represents net balance on the account of the uptake in new borrowing and settlement of past loans by the state public entities, corporations and local bodies. The principal outstanding amount during 2013-14 to 2018-19 shows a significant increase (from Rs. 7671 crore to Rs. 23913 crore) and a much higher annual rate of growth than that of maximum amount of guarantees, resulting in an increase in share of utilisation from 45.9% to 77.8% of the maximum guarantees (Fig.8.2). During 2019-20 and 2023-24, there has been a decline in the rate of growth

principal outstanding amounts, and now it accounts for 56.5% of maximum amount of guarantees. Nevertheless, it is important to note that the principal outstanding has increased at a much higher rate (18.8% per annum) than the rate of state revenue receipts (11.9%). A decline in the average lending rates since 2013 is a good opportunity for restructuring the existing high-cost loans (high interest loans) with low-interest rate borrowings.

Table 8.4: Guarantees Extended Government of Karnataka and Amount Outstanding as on 31 March (in Rs. crore)

Year	Maximum amount guarantees * (A)	Amount Outstanding as on 31 March			Revenue Receipts of the Second Preceding year	Year to year change (%) in maximum amount guaranteed and amount outstanding			
		Principal (B)	Interest (C)	Total (D)		A	B	C	D
2011-12	13262	6491	149	6640	49156	-	-	-	-
2012-13	14306	6565	123	6688	58206	7.9	1.1	-17.4	0.7
2013-14	16145	7671	112	7783	69806	12.9	**16.8**	-8.9	16.4
2014-15	16869	10890	143	11033	78176	4.5	**42.0**	27.7	41.8
2015-16	18358	13155	170	13325	89544	8.8	**20.8**	18.9	20.8
2016-17	21115	15227	165	15392	104142	15.0	**15.8**	-2.9	15.5
2017-18	24025	18266	149	18415	118817	13.8	**20.0**	-9.7	19.6
2018-19	30719	23913	178	24091	133214	27.9	**30.9**	19.5	30.8
2019-20	35694	26679	151	26830	147000	16.2	11.6	-15.2	11.4
2020-21	45104	32506	226	32732	164979	26.4	21.8	49.7	22.0
2021-22	49467	33095	98	33193	175443	9.7	1.8	-56.6	1.4
2022-23	70095	38262	95	38357	156716	41.7	15.6	-3.1	15.6
2023-24	78147	44162	85	44247	195762	11.5	15.4	-10.4	15.4
ACGR (%)	**16.5**	**18.8**	**-2.2**	**18.6**	**11.9**	**-**	**-**	**-**	**-**

Note – *Principal only**; Source:** Based onVarious Issues of Karnataka Account at Glance, CAG

The impact of COVID-19 is clearly visible in declining the revenue receipts of the state (Table 8.4). As a result, the principal ***outstanding amount as percentage to total revenue receipts of the second preceding year during 2022-23 jumped to 24.5% from 18.9% (2021-23) due to a short fall in the revenue of the state in 2020-21 (Fig.8.3).*** Maximum amount guaranteed as percentage to revenue receipts also witnessed huge jump from 28.2% (2021-22) to 44.7% (2022-23) due to shortfall in the revenue receipts of the state in 2020-21. The recovery in the growth of the state economy and revenue receipts, there has been decline in the share of both maximum guarantees and the principal outstanding amount in 2023-24 (Figures 8.2 and 8.3).

Fig. 8.2: Guarantee Extended by the Government of Karnataka as on 31 March (% to Revenue Receipts of the State)

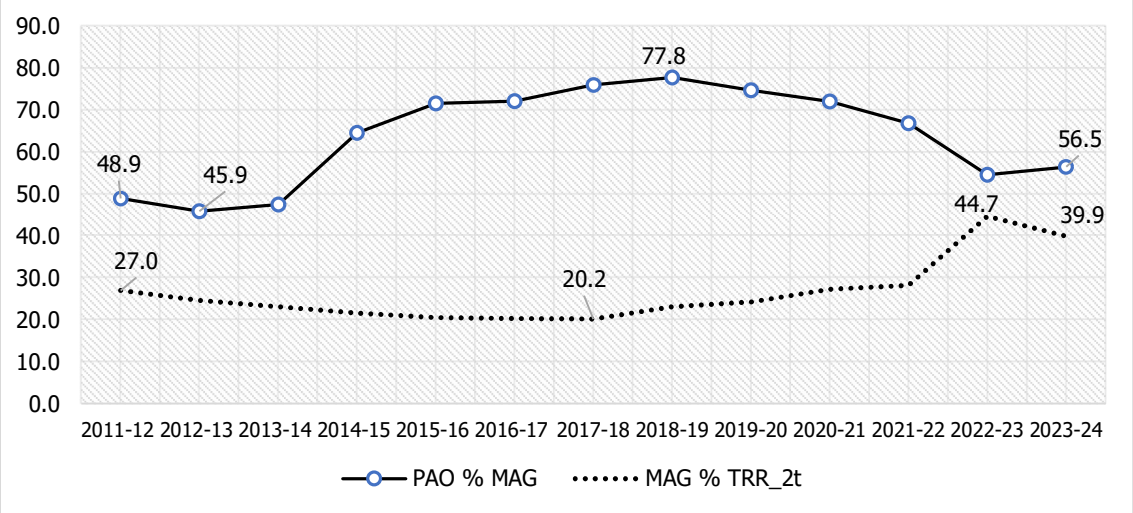
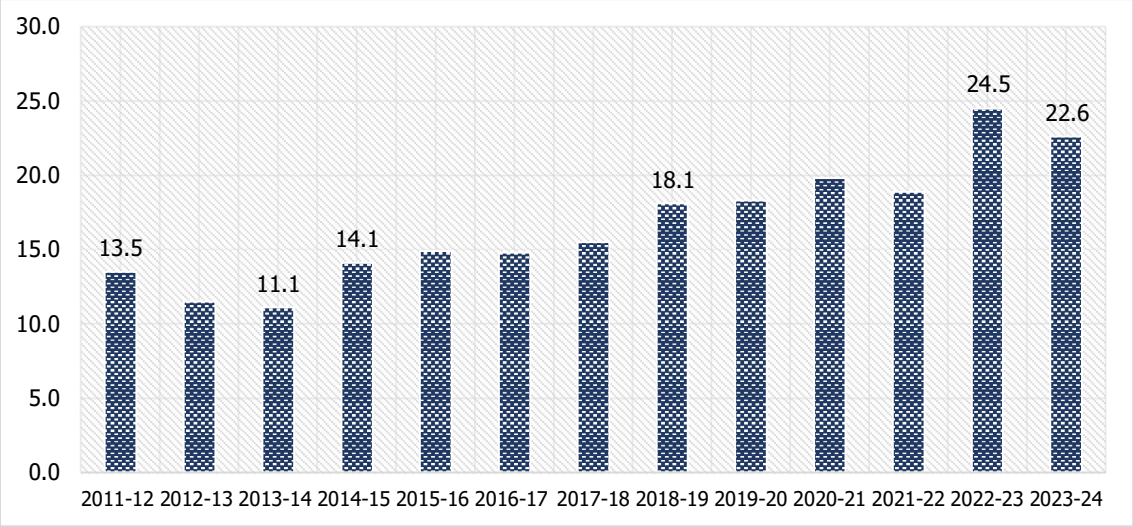
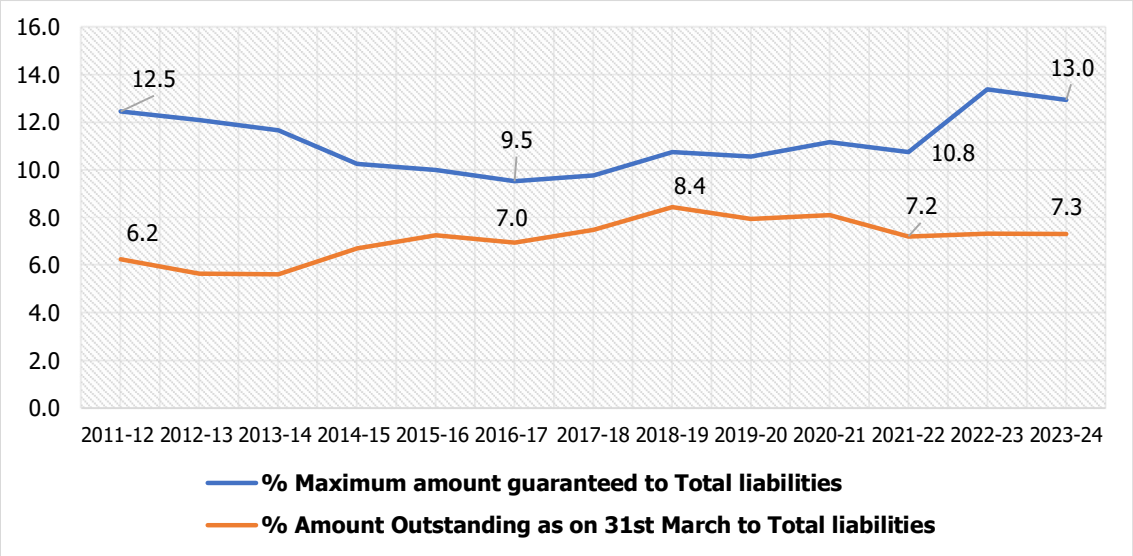


Fig. 8.3: Guarantee Extended by the Government of Karnataka as on 31 March (% to Revenue Receipts of the State)



Note - PAO % MAG =Principal Amount Outstanding as % to Maximum Amount Guaranteed; GAO % TRR_2t = Guaranteed Amount Outstanding as % to total revenue receipts of second preceding year (Ceiling 80%); MAG % TRR_2t =Maximum Amount Guaranteed as % to total revenue receipts of the state in second preceding year (Ceiling 80%)
Source: Based on Table 1

Fig. 8.4: Guarantee Extended by the Government of Karnataka and Amount Outstanding as on 31 March (% to Total Liabilities of the State)



Source: Based onVarious Issues of Karnataka Account at Glance, CAG

The total outstanding amount (principal + interest) guaranteed has increased from 13.5% of the state's total revenue receipts in 2011-12 to 18.9% in 2021-22. In 2022-23, a significant increase in the share (24.5%) of outstanding amount is observed due to denominator effect, shortfall in revenue receipts of the state witnessed during the COVID-19 pandemic year (2020-21). As far as the fiscal risk in terms of potential liabilities on the state is concerned, the total outstanding amount under guarantees extended by Karnataka has increased from 6.2% to 8.4% total liabilities of the state from 2011-12 to 2018-19.However, thereafter, this was brought down to 7.3% in 2023-24 by restructuring of loans as well as availing fresh loans from some PSUs and local bodies at lower market interest rates and through low-cost loanable funds (bonds & securities) (Fig.8.3).

8.4.Contingent Liabilities by Departments

The department-wise distribution of outstanding amounts of guarantees extended by the Government of Karnataka is presented in Table 8.5a. Table 8.5a indicates a significant change in the pattern of outstanding amounts of guarantees over a decade. The Energy and Water Resource Departments account for almost 85% of total outstanding amounts of guarantees. The shift is far significant in terms of number (Rs. 1363 in 2012 to Rs. 32654 in 2023) and overall share (20.5% to 85% in the corresponding periods). Energy and water resources are the most capital-intensive sectors and burdened with substantial outstanding

power purchase dues, loans, and accumulated losses. These sectors also need an infusion of capital to meet growing demands for energy and water. To clear power purchase dues and demand for capital assistance, thestate government has often encouraged state public sector undertakings such Karnataka Power Cooperation Limited; Power Company of Karnataka; regional distribution companies (BESCOM; HESCOM; CESCOM; MESCOM) and Karnataka Neeravari Nigam Ltd; Krishna Bhagya Jala Nigam Ltd; Cauvery Neeravari Nigam Ltd; Visvesvaraya Jala Nigam Ltd to raise funds from market through extension of guarantees (Table 8.5b). From 2011 to 2023, these guarantees have helped PSUs to raise capital from banks, agencies such as Indian Renewable Energy Development Agency, ADB., for construction and upgradations of 400kv, 220kv, 110kv, 66kv and 11kv substations, extension of transmission lines, strengthening networks of renewable energy plants and augmentation and strengthening capacities of regional distribution companies as well as carrying out power reforms. However, the precarious financial positions of energy and water PSUs pose substantial risks, as potential defaults on guaranteed loans could trigger significant liabilities upon the state government and therefore need further reforms.

Table 8.5a: Department-wise Distribution of Outstanding Amounts of Guarantees Extended by Government of Karnataka as on 31 March, 2012, 2020 and 2023

	Departments	**Total Outstanding Amounts of Guarantees (Rs. Crore)**			**Distribution of Outstanding Amounts of Guarantees (% to total)**		
		2012	2020	2023	2012	2020	2023
1	Energy	302	4075	18179	4.6	15.2	47.4
2	Water Resources	1061	16866	14475	16.0	62.9	37.7
3	Co-operation	2305	1282	1215	34.7	4.8	3.2
4	Housing	366	1139	1261	5.5	4.2	3.3
5	Urban Development	519	1047	648	7.8	3.9	1.7
6	Public Works	220	310	911	3.3	1.2	2.4
7	Commerce & Industries	480	155	89	7.2	0.6	0.2
8	Finance	821	1362	695	12.4	5.1	1.8
	Social Welfare*	364	132	34	5.5	0.5	0.1
	Others	202	462	845	3.0	1.7	2.2
	Total	**6640**	**26830**	**38356**	**100.0**	**100.0**	**100.0**
A	Statutory Corporations /Boards	1692	2745	11736	25.5	10.2	30.6
B	Government Companies	2618	22743	24735	39.4	84.8	64.5
C	Cooperative Societies & Banks	2305	1342	1412	34.7	5.0	3.7
D	Other Institutions	25	0	474	0.4	0.0	1.2

Note: *incl minorities, backward classes and women & disabled

Source: Based on Budget Memorandum (in Budget Documents) for 2013-14; 2021-22 and 2024-25; Department of Finance, Government of Karnataka.

Similarly, to support various ongoing and new irrigation projects, the PSEs have raised capital for construction, modernisation of canals and distributaries; Supervisory Control

and Data Acquisition (SCADA) automation (SCADA automation Narayanapur Left Bank Canal, SCADA Phase-II project as a part of the water use efficiency improvement project); strengthening and raising of barrage; tank filling; piped network schemes; land acquisition & rehabilitation; and lift irrigation scheme. The water resource department has also extended guarantees to meet capital requirements of Neeravari Nigam Ltd; Krishna Bhagya Jala Nigam Ltd; Cauvery Neeravari Nigam Ltd; Visvesvaraya Jala Nigam Ltd in the recent past.

Almost 65% of total outstanding amounts of guarantees were extended through state government companies and nearly 31% through statutory corporations and boards in 2023. Cooperative societies and banks cater to the needs of sugar factories, agricultural, housing, and social welfares.

Table 8.5b: Distribution of Outstanding Amounts of Guarantees Extended by Government of Karnataka to Energy and Water Resource Department as on 31 March 2023

	State Government Undertakings	**Maximum amount guaranteed**	**Principal Outstanding Amount of Guarantees**
I	**Energy Department**		
	Karnataka Power Corporation Limited	1350	695
	HESCOM	5998	3817
	GESCOM	3871	1725
	MESCOM	125	0
	BESCOM	10543	3531
	CESCOM	2422	1202
	Power Company of Karnataka	3767	2293
II	**Water Resource Department**		
	Karnataka Neeravari Nigam Ltd	7355	3755
	Krishna Bhagya Jala Nigam Ltd	11470	5647
	Cauvery Neeravari Nigam Ltd	3535	2800
	Visvesvaraya Jala Nigam Ltd	3905	2274

Source: Based on Budget Memorandum (in Budget Documents) for 2024-25; Department of Finance, Government of Karnataka.

8.5. Public Debt Management: Challenges and Reforms

The burden of fiscal liabilities on the state has been increasing over the years. The interest payment as percentage to revenue receipts has gone up from 8.7% in 2011-12 to close to 14% in 2024-25. Given the falling average weighted lending rates in India, the Government of Karnataka should explore the possibility of low interest-cost funds for debt restructuring.

Pension Reforms

In December,the Karnataka government announced the reintroduction of the Old Pension Scheme (OPS) for some of its employees who got notified in April 2006 but joined at a later date. It has recently taken steps towards this decision.

In January 2024, the government issued a notification allowing approximately 11,300 government employees to move from the New Pension Scheme (NPS) to the Old Pension Scheme. This decision was based on a committee recommendation. This committee was originally formed to study the impact and implementation of the OPS, and it was reconstituted in December 2023, expanding by 3-5 members to address the challenges, especially technical and to study the feasibility of reverting to this scheme. The OPS promises a fixed monthly payment to the retired employees, the equivalent to half of their last drawn salary. This scheme, unlike the NPS, is funded wholly by the government and not by the employees contributions during service. It will provide more security for these employees who will be able to rely on these welfare payments making their retirement secure, but it will pose a major payment obligation on the government financially. A Reserve Bank of India's study estimates the cumulative financial burden of the OPS to be 4.5 times higher than the NPS. This is a steep increase in the financial burden of the government, which may reduce other welfare or developmental expenditure due to the increased fiscal stress on the government.

According to a report published in the Economic Times on 30 June 2023, The Economic Advisory Council to the Prime Minister warned of "adverse effects on the economic growth and inequality" deepening the inequality in the economy. This might lead to diminishing fund availability for welfare development expenditures, affecting the broader population like health and education.

In conclusion, the move to move certain employees back to the OPS will pose a major financial strain on the government despite providing a solid and secure future for the retired employees; and hence, it is important to consider the economic impacts and weigh the pros and cons of providing a fixed economic security to retired employees while ensuring the fiscal responsibility of the government is maintained.

Best Practices adopted by Government of Karnataka for Fiscal & Debt Management and Monitoring Flow of Funds

To reflect the Karnataka Government's commitment to leveraging technology and implementing sound fiscal policies to manage fund flow and debt effectively and efficiently, the government has introduced and implemented several best practices and IT systems.

Some of the main initiatives include:

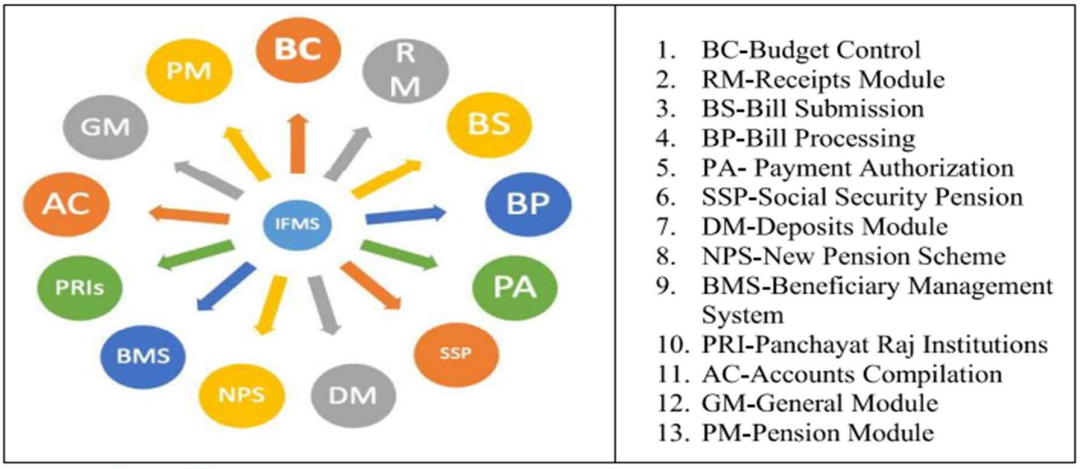
- **Karnataka State Data Centre (KSDC):** It is a common platform for different departments of the state government to improve integration and management of financial data. IT was introduced in 2006 under the Centre for e-Governance (CeG). It provides a common platform for various government departments, enhancing the integration and management of financial data.
- **Public Financial Management System (PFMS):** This is an IT platform introduced to make digital payments, receipt collections and accounting and reconciliation easy and quick and ensure it reaches the beneficiaries instantly.
- **Pratibimba**was a public portal launched **i**n 2017, which showcases the Karnataka government's performance. It was to enable tracking of progress of government programmes and projects by citizens as well as officials promoting more accountability and transparency in usage of public funds.
- **Fiscal Responsibility Measures** like the Debt Swap Scheme, Debt Consolidation and Relief Facility have been implemented for easier maintenance of fiscal discipline and sustainable debt management.

Khajane II (K2)

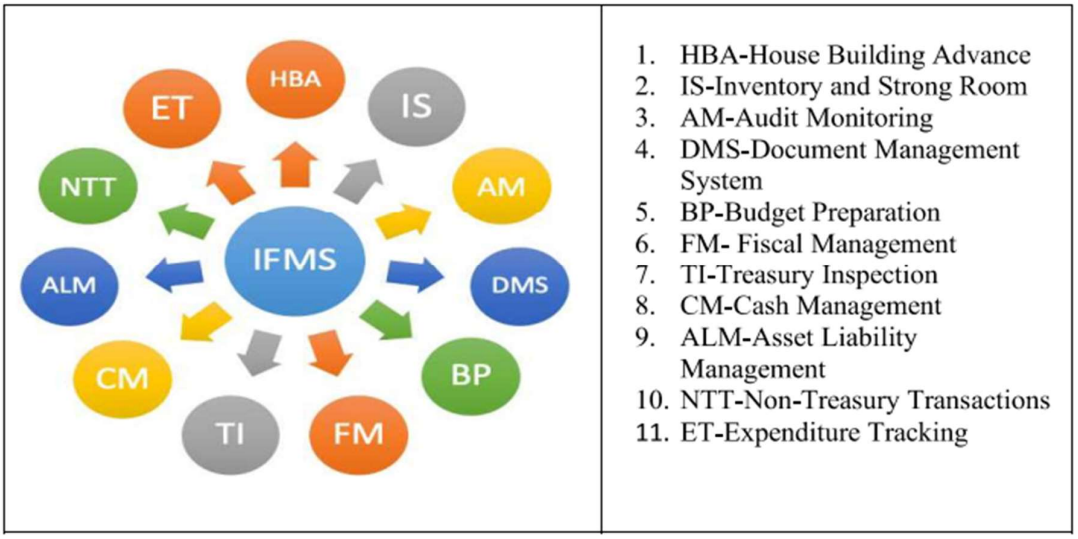
In 2001, the Government of Karnataka introduced '*Khajane*', an IT platform for computerisation of Treasuries. Later in 2009, the state government took initiatives to

upgrade it into an Integrated Financial Management System (IFMS) to support management of public sector budgetary, financial and accounting operations and to promote better public sector financial management with a centralised registry of public sector revenue and expenditures. For better fiscal & debt management and monitoring of flow of fund, the IFMS integrates budgetary, accounting and treasury and public debt management processes as well as generate corresponding reporting documents (Government of Karnataka, 2022). This IT platform is also known as '*Khajane II'* (or K2). K2 use latest web-based technologies with electronic interface to enable dynamic fiscal management for users within and outside the governments. K2 applications comprise 24 modules and are implemented in two stages. State I includes 13 modules and Stage II, 11 modules.

Stage I:



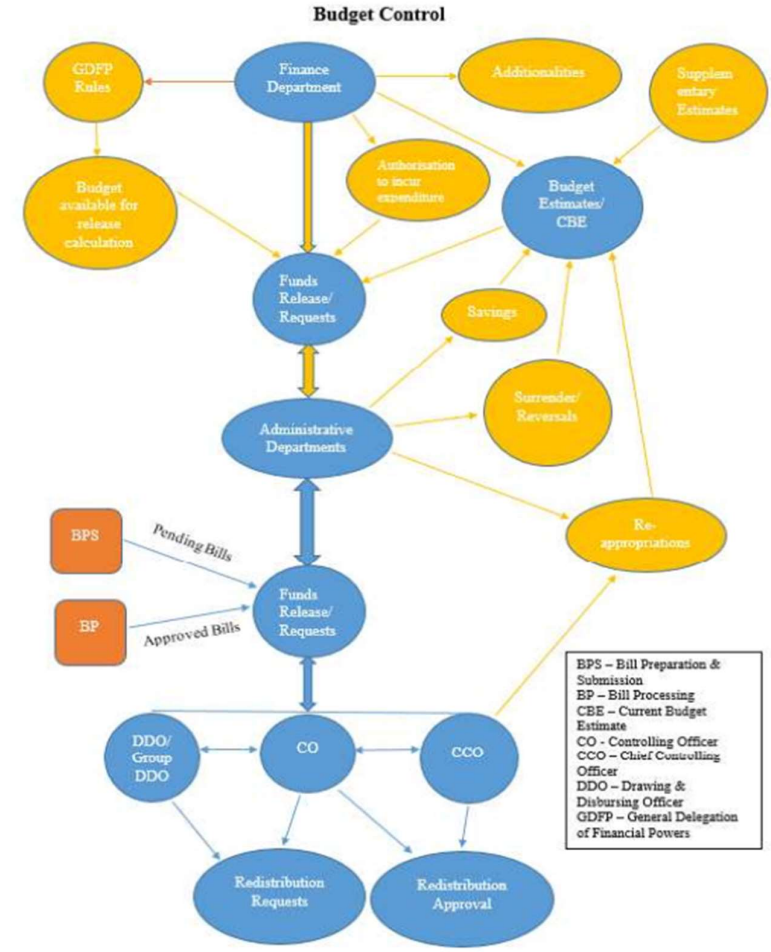
Stage II:



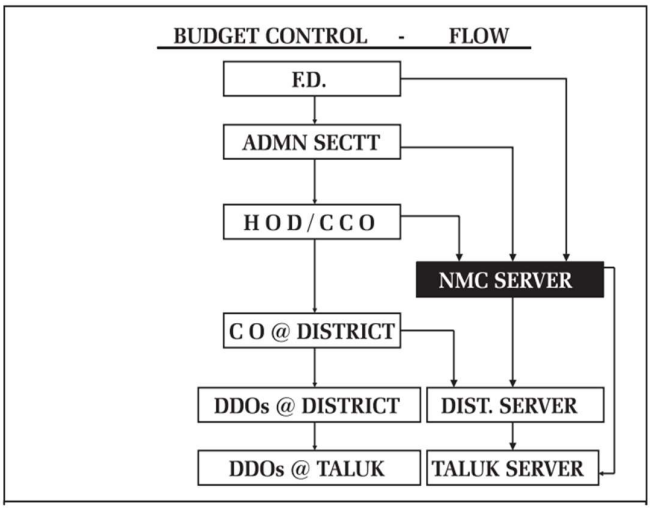
Source: Government of Karnataka (2022)

K2 application has revolutionised treasury operations by introducing process automation, enhancing transparency, accountability, and governance. It has significantly improved efficiency and delivered tangible benefits to the government, citizens, and other stakeholders. The system enables citizens to make online payments for government services with instant fund realisation via the e-Receipts module and Treasury Unified Gateway. It supports over 72 departments in collecting revenues and facilitates direct beneficiary payments for social security schemes, ensuring real-time tracking and identification of unauthorised or ghost accounts.

Budgetary Control Module



Budget Cycles and Flow of Funds



Source: Government of Karnataka (2022)

K2 has streamlined financial workflows through Business Process Re-engineering (BPR), reducing manual bill preparation time from hours to just 10 minutes and enabling faster treasury processing. End-user payments are now completed within 2–3 hours of bill approval, compared to the earlier 3–5 day wait for cheque clearance. The system also provides real-time budget release to Drawing and Disbursement Officers (DDOs) and offers instant reporting on departmental revenue and expenditure, with 92 departments currently using Khajane-II for budget and bill management.

8.6. Concluding Remarks

A look at the composition of debt as a percentage of the total fiscal liabilities shows that off-budget borrowings constitute the smallest percentage of total debt. In this, the outstanding amount of guarantees extended by the Government of Karnataka has been increasing over the years but remains well within the legal limits (ceiling - 80%) and is in a better position compared to other states. The Energy and Water Resource Departments account for nearly 85% of these guarantees, witnessing a significant rise from 20.5% in 2012 to 85% in 2023. These sectors are capital-intensive– and the government through public sector undertakings / companies/boards/local bodies – is using this channel to fulfil financial / capital requirement, primarily when expenditure requirement of other sectors have taken centre stage in the annual budgets. Most loans were used for upgrading

substations, transmission lines, and renewable energy networks, funded by banks and agencies like the Indian Renewable Energy Development Agency and ADB. In the water resources sector, guarantees were extended for various irrigation projects, including canal modernisation, SCADA automation, and lift irrigation schemes, supporting entities like Neeravari Nigam Ltd and Krishna Bhagya Jala Nigam Ltd. It is, however, important to keep the rising outstanding amounts and risk associated with unmindful borrowing under check by establishing a supervisory body.

The government's debt composition has changed over the last decade. Internal debt has always been the biggest component whereas loans from the Government of India and off-budget borrowings were pretty much constant. The composition of public debt has increased over the years. Contingent liabilities are not actual liabilities of the government as ithas to bear the debt only if the companies fail. A closer look at the overall fiscal liabilities of the government shows an increasing trend. The government's focus should be on reducing the fiscal liabilities to encourage fiscal discipline sustainably. This will also have a positive effect on the debt to GSDP ratio.

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Appendix Table 8.1: State-wise Outstanding Guarantees of State Governments as Percentage to Total Revenue Receipts of Second Preceding Year of Respective States

	States	2011-12	2016-17	2017-18	2018-19	2019-20	2020-21	2016-21	2021-22	2022-23
1	Telangana	NA	58.7	52.3	93.4	100.9	103.5	**85.4**	131.9	134.1
2	Rajasthan	171.6	56.0	61.6	64.6	63.3	59.9	**61.3**	NA	NA
3	Andhra Pradesh	19.0	10.7	40.6	54.8	74.0	95.0	**57.5**	105.8	NA
4	Sikkim	5.0	9.9	14.9	74.9	71.9	64.9	**50.2**	91.5	79.0
5	Uttar Pradesh	22.6	28.9	39.9	42.8	40.8	46.6	**40.7**	NA	NA
6	Punjab	206.3	52.8	51.2	10.0	42.0	NA	**35.3**	52.9	NA
7	Kerala	31.7	28.0	25.1	35.5	33.4	39.4	**33.0**	NA	NA
8	Haryana	26.7	20.2	29.7	34.7	33.1	35.0	**31.3**	NA	NA
9	Tamil Nadu	17.5	23.8	26.8	31.1	32.3	37.8	**31.0**	52.7	NA
10	Madhya Pradesh	13.5	37.7	29.1	25.1	NA	24.6	**27.4**	NA	NA
11	All States/UT	29.3	19.6	23.4	26.3	25.6	28.2	**25.1**	20.0	8.0
12	Nagaland	1.8	1.1	1.5	113.5	2.3	1.3	**23.8**	1.4	1.6
13	Chhattisgarh	14.6	10.5	8.4	20.1	30.9	NA	**17.7**	NA	NA
14	Karnataka	13.5	14.8	15.5	18.1	18.3	19.8	**17.6**	18.9	NA
15	Meghalaya	37.5	15.3	11.6	12.9	12.1	31.5	**17.2**	NA	NA
16	Maharashtra	17.3	4.4	14.4	12.3	16.9	14.6	**13.1**	16.0	NA
17	Himachal Pradesh	32.1	25.5	18.4	6.8	6.9	6.9	**11.6**	NA	NA
18	Bihar	3.4	5.9	5.4	5.1	4.6	12.2	**6.9**	19.8	28.6
19	West Bengal	27.7	9.0	7.8	5.6	NA	5.3	**6.5**	11.8	NA
20	Manipur	4.5	5.0	6.2	5.2	4.0	5.7	**5.2**	8.1	NA
21	Odisha	9.5	4.0	2.5	5.6	4.1	7.1	**4.9**	6.0	5.9
22	Tripura	2.1	3.4	3.5	0.0	7.3	6.4	**4.3**	NA	NA
23	Uttarakhand	18.3	6.2	5.5	5.3	2.1	2.3	**4.1**	1.2	1.0
24	Gujarat	17.9	5.2	5.0	4.3	3.6	2.7	**4.0**	2.2	2.4
25	Jharkhand	NA	0.5	0.4	3.3	NA	4.0	**2.2**	7.2	8.6
26	Mizoram	7.8	2.3	1.3	1.0	0.0	1.0	**1.0**	1.1	1.4

Source: Based on Handbook of Statistics on Indian States 2023 and State Finances: A Study of Budgets of 2023-24, Mumbai: Reserve Bank of India

9. SUBSIDIES IN KARNATAKA STATE: AN ANALYSIS OF COSTS, BENEFITS, TARGETING AND EVALUATION

9.1. Introduction

This chapter deals with subsidies given by Karnataka (other than central subsidies), their costs and benefits, targeting and evaluation. The main data source for this section is the secondary data collected from the state finance audit reports of Karnataka. This chapter is organised as follows. In the first section, we review the theoretical literature on defining subsidies. This is followed by an empirical review of studies on subsidies, including those focusing on Karnataka's subsidies in the second section. In the third section, we analyse various subsidies in Karnataka and the expenditure incurred on them. In this section, the expenditure on subsidies incurred by different departments of Karnataka is presented in two parts, with each discussing the explicit and implicit subsidies provided by different departments in Karnataka, respectively. In the last section, we undertake an analysis of the existing explicit subsidy programs of the Government of Karnataka, covering the period 2012-13 to 2023-24, subject to data availability. In this analysis, we include all programs which have a subsidy component (either where it is explicit or where we have been able to compute the subsidy). In addition, the description of schemes within the top three sectors, namely, energy, food and agricultural departments, is discussed.

9.2. Review of Literature on Subsidies

9.2.1. Understanding Subsidy

As per Rolph (1956), subsidies are transfer payments from the government, given to specific groups like veterans, producers, or the unemployed, and function similar to negative taxes. Government services rendered to the firms and households are also considered subsidies. According to Hubbell (1957), a subsidy is a government financial support allowing buyers to receive more goods and services than if the transactions had occurred without government intervention.

However, there are problems in understanding how the subsidy is to be allocated: as cash or in-kind transfer to the economic agent. Pigou (1952) pointed out that cash payments *to*

consumers are not considered subsidies and are treated separately as welfare transfers. In other words, transfers are special sorts of consumption goods and services and subsidies are a special sort of intermediate goods and services.

Ricketts (1985) attempted to give a different dimension to understanding subsidy from the normative economic perspective. He highlighted that *one person's tax is another person's subsidy; and which person is which, depends upon one's point of view.* The paper points out that there is no distinctive policy instrument called a subsidy, whose presence is inferred from the tax system and mentions that if a commodity is less taxed, it is subsidised. He regards subsidies as a negative tax: tax rates less than zero would imply subsidies.

Schwarts and Clements (1999) discuss in detail the meaning of subsidies, their functioning and why they should be used as a fiscal tool and the economic impact on welfare. The study claims that subsidies can be defined as government assistance that allows consumers to purchase goods and services at nominal prices, lesser than the market prices offered by the private sector. The common forms of subsidies are producer subsidy, consumer subsidy, budgetary cost and grant equivalents. The authors note that using government budgets for assessing the cost of subsidies is not efficient, due to three drawbacks:

- This category does not include all government subsidies;
- Government fiscal accounts do not show many operations that lead to subsidies;
- Fiscal accounts do not show the full economic impact of present subsidy practices.

Schwartz and Clements (1999) discuss why subsidies may be used as a policy tool. Some studies claim that from an economic perspective, subsidies allow the redistributionof resources to achieve a desirable outcome. Credit subsidies also enhance the formal credit system. However, there are some arguments against subsidy being a policy tool since the resources are not fully utilised nor properly allocated, leading to offset of market imperfections; subsidies can also lead to free-rider problems. Schwartz and Clements (1999), using 16 years data from 1975 to 1990 for 60 countries from the United Nations' System of National Accounts, found that Eastern European countries had the highest subsidy outlays and spent 9.4% of GDP, while the world spent 2.5% of GDP. Developing countries, Middle Eastern and North African countries had double the subsidy outlay compared to Asian countries. The study concluded by saying that subsidies impose a large

burden on the economy in terms of fiscal costs and adverse effects on efficiency. In the process of assessing the fiscal burden of subsidies to reform, it should be focused on increasing transparency, limited duration and selecting a pragmatic approach to subsidy policies.

Park (2012) focuses on government subsidies from a demand and supply side perspective. From the demand side perspective, it focused on the effect of the level of coordination among economic agents on the incentive and capacity to lobby for subsidies, through labour unions and employees of the firm as they have strong incentives to lobby for subsidies. From the supply perspective, it focuses on the provision of subsidies by political actors depending on the level of demand from the private sector. He draws a clear distinction between general and specific subsidies, with general subsidies being classified as public goods and non-excludable and specific subsidies referring to private goods. It is to be noted that there exists no linear relationship between the incentive and capacity of the lobby for the specific tax.

He explains how general and specific subsidies work. The study mainly aims to show the non-linear relationship between the size of specific subsidies and the level of centralisation and uses data from the EU countries by measuring specific and general subsidies. The study uses regression analysis, the results strongly supported that the size of sectoral state aid showed an inverted U-shaped relationship along the level of centralisation among economic agents. They found that the size of general state aid increases as the level of centralisation increases with diminishing marginal effects because the well-coordinated sectoral organisations of labour unions and employers can coordinate demands for general subsidies as effectively as the centrally organised labour and capital.

9.2.2. Empirical evidence on subsidies in India

Sarva et al. (2019) pointed that food security in the Indian economy is acute, which affects deaths, disease and has a direct impact on productivity. For addressing this concern, Amma Unavagam food subsidy program by Tamil Nadu brought a new dimension in food security. Several states started the program with different dimension viz. Rajasthan, Madhya Pradesh, Odisha, Andhra Pradesh, and Karnataka (Indira canteens and Anna Bhagya).

Nair et al. (2017) examined the influence of various schemes and subsidies implemented by government departments and other agencies on small holders' livestock production system of North Malabar Region in Kerala. This study showed that a majority of respondents received benefits in the calf feed subsidy scheme. However, 43.7% of respondents did not receive any subsidy during the last five years. Overall, it was found that only 264 beneficiaries out of 501 respondents received the benefits of subsidy/schemes only once and 18 dairy farmers received the benefits in between 2 and 5 times. About 219 respondents received no subsidy or benefits during the last five years.

Tilak (2004) analysed the subsidies in education, such as free education, fee exemptions, textbooks, noon meals, etc.and also discussed the size of the subsidy, targeting versus universalism, and methods of cost recovery. He pointed that the level of subsidies in education in India is not particularly high, nor is the rate of cost recovery particularly low, in comparison with other developed and developing countries.

9.2.3. Literature on subsidy schemes in Karnataka

Howes and Murgai (2002) analysed the distribution pattern of electricity subsidy among farmers of Karnataka and concluded that electricity subsidies were not good from an equity perspective because large-size category farmers were much more likely to have pump sets than small-size category farmers.

Malladadavar (2023) analysed the power subsidies to agriculture and allied activities with the objectives being an analysis of the demand and supply of power, trend and composition of power subsidies to agriculture in Karnataka and analysis of the role of subsidy in the performance of power distribution companies (DISCOMs). About 97.24% of the subsidy

was spent on supplying free power to IP sets. He pointed that metering of agriculture consumption, timely payment of subsidies, and timely revision of tariffs and strengthening the possible areas of improvement play an important role in maintaining the financial health of DISCOMs.

John et al. (2014) highlighted the effectiveness of fishery subsidies and explored whether the subsidies meant for small-scale fishermen had achieved their putative purpose of providing social security to them in coastal Karnataka. They found that introduction of new subsidies, which facilitated the phasing out of small mesh size nets, high-speed engines and destructive gears, can encourage better management of depleting resources.

Ramakrishna (2014) analysed the performance of 125 micro enterprises facilitated by a government-run programme in Karnataka, which had received training and subsidy support from the government, under various subsidy and employment promotion programmes. He suggested that choice of the activity, forward or market linkages, hand-holding support for an extended period may be more vital than subsidy for successful micro entrepreneurship promotion.

Raman et al. (2020) analysed the Krishi Bhagya Scheme (KBS), mainly to improve the livelihood of dry-land farmers of Karnataka. Some 30 districts in Karnataka implemented the scheme along with farm pond, diesel pump set, micro- irrigation units focusing on agricultural and horticultural farmers. They found that access to the scheme was significantly influenced by education level and land size.

Gayithri (2003) pointed out that for promotion industry in the backward regions, capital investment subsidy is an important fiscal concession. Financial benefits on account of capital investment subsidy have largely reached industrial units in Bangalore Urban and Rural districts. They together constitute 58.22% of the total subsidy amount disbursed in the Bangalore Division. However, it was found that the basic objective of promoting industry in the backward areas of Bangalore was not being met effectively through capital investment subsidy scheme.

Gopi (2021) analysed the Ganga Kalyana Yojana (GKY) Scheme of Karnataka to uplift the

small and marginal farmers (SMFs) in rural areas. The scheme targeted the SMFs and subsidised the finance to lift the water by digging the bore and later supplied the electrification. Following descriptive and analytical research methods, it was found that SC/STs had less awareness of the scheme. It concluded among other things that the Karnataka government should frame a design to make particularly SC/ST SMFs aware of the program.

Kuruvilla et al. (2005) studied the Yashasvini Health Insurance Scheme for rural farmers and peasants in Karnataka, which covers 2.2 million farmers and peasants who pay an annual premium of Rs. 60 ($1.50) for comprehensive coverage of all surgical procedures and outpatient care. The scheme is unique in that it has overcome many of the problems associated with health insurance schemes for the poor (such as low levels of coverage and benefits). They also described the origins and functioning of the scheme and analysed its performance to date, with a view to assessing the generalisability of this model of health insurance to other populations and countries.

Most recently, Chakravarthy and Seth (2024) performed an evaluation of the Shakti scheme of the Government of Karnataka, which was introduced in July 2023. Their study covered Bengaluru Urban, Chamarajanagar, Haveri, Udupi, and Yadgir districts, based on 786 personal interviews. They found that 7% of women started using buses after the scheme's introduction, the average monthly savings was greater than Rs 1,000 for regular salary workers and self-employed workers, amounting to over Rs 12,000 per annum per individual. Their survey results pointed to an increase of more than 15 minutes in wait time in Bengaluru, Haveri, and Yadgir, where bus numbers had not kept up with passenger demand in these districts.

While we are not able to undertake a comprehensive evaluation of all subsidy programs of the Government of Karnataka, we merely focus on a trend analysis of the important subsidy programs of the state, where we had data on the expenditure and subsidy component, along with the beneficiaries.

9.3. Analysis of the various subsidy schemes, their expenditure and targets

Expenditure comprises of revenue expenditure and capital expenditure. Revenue expenditure is incurred to meet the present services and past obligations, which includes salaries and wages, expenditure on pensions, interest payments, subsidies, transfers to local bodies, expenditure incurred on operations and maintenance of capital works and so on.

Revenue expenditure can be classified as committed expenditure, inflexible expenditure and non-committed expenditure.

- Committed expenditure will have to be incurred, irrespective of the fiscal position of the state except during emergency situations. These are: expenditure on salaries, wages, pensions, interest payments, etc.
- The inflexible expenditure consists of commitment for centrally sponsored schemes, transfers to reserve funds, statutory devolution to local bodies, etc.
- The non-committed expenditure consists of those other than committed expenditure. Subsidies are the major components of this expenditure.

In the ensuing paragraphs, we will provide data on these three components for Karnataka (Table 9.1). The committed expenditure together with inflexible expenditure formed between 70.1% and 78.7% during the period 2018-19 and 2022-23. The proportion of expenditure on non-committed activities ranged from 29.9% to 21.3% during the same period (Table 9.1).

Table 9.1 Three components of Revenue Expenditure (in Rs. crores)

Years	**Committed Expenditure**		**Inflexible Expenditure**		**Non-committed Expenditure**		**Revenue Expenditure**
2018-19	60,461	*36.8%*	54,644	*33.3%*	49,195	*29.9%*	**1,64,300**
2019-20	70,756	*40.6%*	61,658	*35.4%*	41,844	*24.0%*	**1,74,258**
2020-21	75,482	*42.9%*	63,075	*35.8%*	37,497	*21.3%*	**1,76,054**
2021-22	83,832	*40.0%*	73,799	*35.2%*	51,797	*24.7%*	**2,09,428**
2022-23	92,219	*42.8%*	77,432	*35.9%*	45,933	*21.3%*	**2,15,584**

Source: Prepared by the author based on the data compiled from State Finance Audit Report (GoK 2024).

Subsidies constitute a major share of non-committed expenditure in Karnataka, and these subsidies are called as explicit subsidies[15]. It should be noted that any government provides two kinds of subsidies, explicit and implicit. Explicit subsidies are thosein which there are upfrontallocations for the samein the budget provided for by the government, as opposed to implicit subsidies where product prices are deliberately reduced. Both these subsidies are discussed in detail in the ensuing paragraphs.

Explicit Subsidies

There has been a steady increase in the expenditure on explicit subsidies over a period of time. Rs.7,390 crore was the explicit subsidies in 2011-12. This subsidy amount increased to Rs.13,149 crore in 2015-16 and to Rs.15,400 crore in 2018-19. During the COVID years, the explicit subsidy amount was further increased to Rs.18,432 crore and Rs.28,219 crore for 2020-21 and 2021-22, respectively. When we look at the explicit subsidies as a percentage to revenue receipts, it increased from 10.59% in 2011-12 to 14.41% in 2021-22 (Table 9.2). However, it declined to 9.93% in 2022-23. The explicit subsidies as percent to revenue expenditure varied from 11.35% in 2011-12 to 9.93% in 2017-18. Subsequently, this percentage increased to 13.47% in 2021-22 but declined to 10.55% in 2022-23. The share of subsidies to total expenditure has been mostly between 8-9% during most of the years. The share of explicit subsidies has been highest in 2013-14, 2012-13 and 2021-22, in that order.

[15]The expenditure related to explicit subsidies is recorded in the accounts under the Object Head 106 – Subsidies.

Table 9.2 Expenditure on Explicit subsidies during 2011-12 to 2022-23

Years	Explicit subsidies (in Rs. crores)	Subsidies as percent to Revenue Receipts	Subsidies as percent to Revenue Expenditure	Subsidies as percent to Total Expenditure
2011-12	7,390	10.59	11.35	8.96
2012-13	10,709	13.70	14.04	11.53
2013-14	13,323	14.88	14.94	12.47
2014-15	11,153	10.71	10.76	9.01
2015-16	13,149	11.07	11.24	9.50
2016-17	14,387	10.80	10.91	8.88
2017-18	14,148	9.62	9.93	7.94
2018-19	15,400	9.33	9.37	7.57
2019-20	17,534	9.99	10.06	8.20
2020-21	18,432	11.76	10.47	8.22
2021-22	28,219	14.41	13.47	10.79
2022-23	22,754	9.93	10.55	8.24

Source: Compiled from various years of State Finance Audit Reports https://cag.gov.in/ag2/karnataka/en/audit-report

Explicit subsidies by the department-wise for 2014-15 to 2022-23 are provided in Table 9.3. If one looks at the department-wise, energy department has the highest portion. Energy subsidies, which constitute significant portion, include financial assistance to all the ESCOMs for supply to IP sets, Bhagya Jyothi and Kuteera Jyothi consumers. This was followed by the subsidy component for food and supplies department, agricultural and other allied activities and transport.

Table 9.3 Explicit Subsidies by Departments (in Rs. crores) during 2014-15 to 2022-23

Departments	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	All years
Energy	6,700	8,693	8,647	7,957	7,593	9,110	9,139	14,736	11,512	**84,087**
Food & Supplies	2,533	2,196	1,854	1,917	2,404	2,692	2,324	6,057	2,015	**23,992**
Agricultural and other allied activities	20	31	1,335	1,455	2,336	2,254	2,774	2,447	3,687	**16,339**
Co-operation	624	765	818	778	777	1,074	1,231	1,026	1,006	**8,099**
Transport	651	749	799	757	820	728	1,529	1,705	3,053	**10,791**
Housing	243	243	402	362	459	943	450	1,150	513	**4,745**
Others	382	492	532	922	1,011	733	985	1,098	968	**7,123**
Total	**11,153**	**13,149**	**14,387**	**14,148**	**15,400**	**17,534**	**18,432**	**28,219**	**22,754**	**1,55,176**

Source: Compiled from various years of State Finance Audit Reports https://cag.gov.in/ag2/karnataka/en/audit-report

Note: 1) Energy: includes financial assistance to ESCOMS for supply to IP sets, Bhagya Jyothi and Kuteera Jyothi consumers.

2) Food &Supplies: includes subsidy towards Annabhagya for BPL and APL beneficiaries.

3) Agricultural and Other Allied Activities: It includes subsidy towards crop husbandry, fisheries, forestry, soil and water conservation, wildlife, etc.

4) Co-operation: Represents waiver of overdue loans, both principal and interest

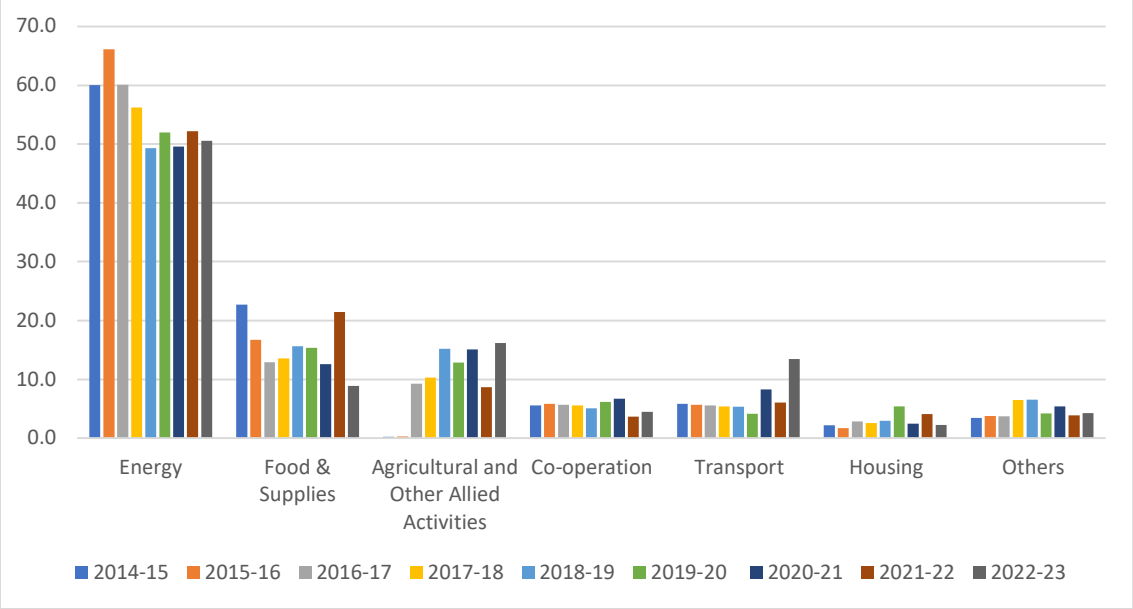
5) Transport: Subsidy is towards fare concession to students, concessional bus travel facility to senior citizens, free bus travel facility to endosulfan affected victims, to the blind and differently abled persons.

6) Housing: Subsidy is towards the Ashraya scheme.

7) Others: includes interest subsidy for crop loan and self-help group, assistance to industries, assistance to public sector and other undertakings in welfare of Scheduled Tribes, Scheduled Castes and Backward Classes.

The share of explicit subsidies was significantly high for the energy department as compared to other departments. This can be seen for all the years during the reference period. Though it has been highest all through the nine years, its share has been declining. In 2014-15, the share of explicit subsidies of energy department was 60.1% and it declined to 56.2% in 2017-18 and to 50.6% in 2022-23 (Figure 9.1). Similar declining trend could be seen in the share of food and supplies department, except during 2021-22.

Figure 9.1 Department-wise share of Explicit Subsidies (%) during 2014-15 to 2022-23

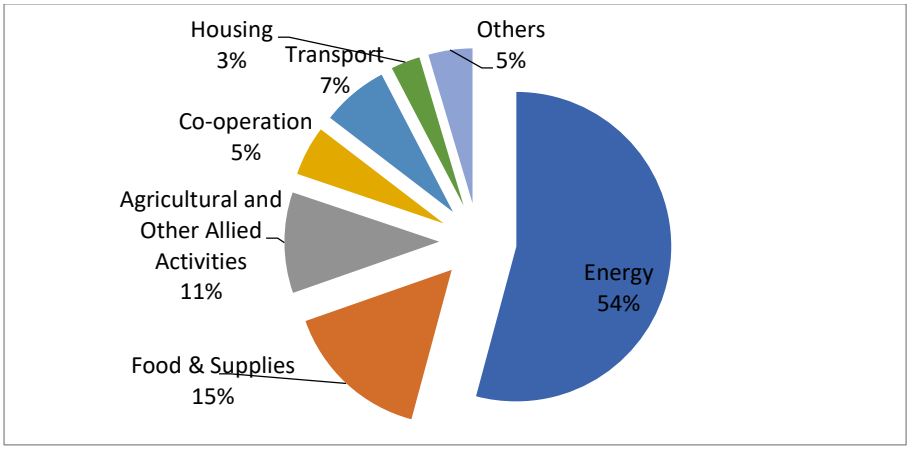


Source: Prepared by the author based on the data compiled from various years of State Finance Audit Reports

However, one can see reverse trend for agricultural and other allied activities. The share was 0.2% in 2014-15 and was increased to 15.2% in 2018-19. After some fluctuations in between years, it remained at 16.2% in 2022-23. Share of explicit subsidies for transport department has been slowly increasing and was highest (13.4%) in 2022-23.

As can be seen from Figure 9.2, at the aggregate level for the entire nine-year period (2014-15 to 2022-23), the energy department constituted 54%, followed by food and supplies (15%), agricultural and other allied activities (11%) and transport (7%).

Figure 9.2 Explicit Subsidies (%) for the entire period 2014-15 to 2022-23

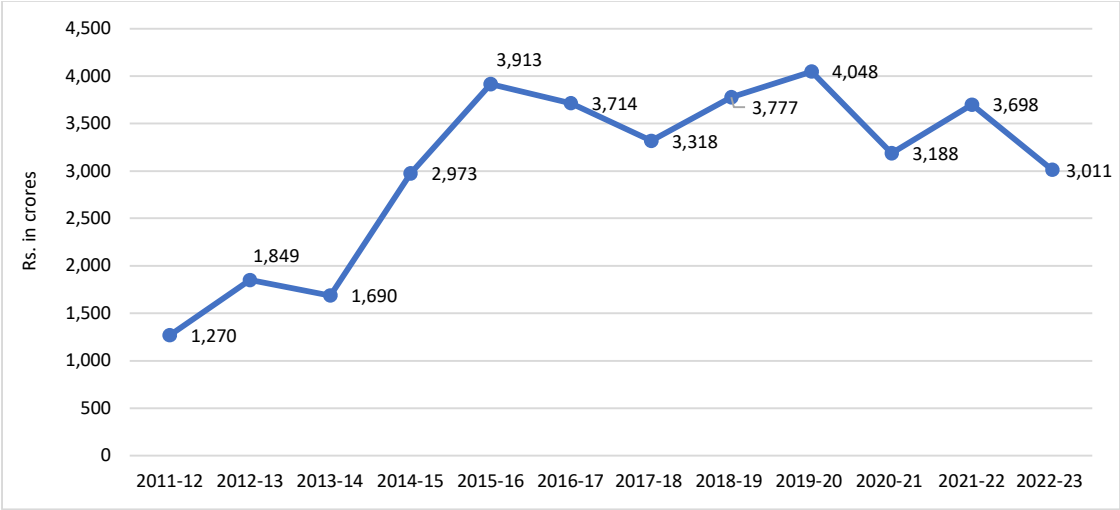


Source: Prepared by the author based on the data compiled from various years of State Finance Audit Reports

Implicit Subsidies

Implicit subsidies are provided by the state for "expenditure in nature of subsidy and the other where grants are provided for certain schemes of the Government. These subsidies can be indirect, in kind or take the shape of tax concessions" (GoK 2023: 40). Basically, these are the subsidies given in the form of financial assistance, incentives, etc., which have been increasing over a period. The implicit subsidy was Rs.1,270 crore in 2011-12, which was increased to Rs.3,913 crore in 2015-16 and to Rs.4,048 crore in 2019-20. However, there has been marginal decline during the COVID years (Figure 9.3).

Figure 9.3 Implicit Subsidies (%) for the entire period 2011-12 to 2022-23



Source: Prepared by the author based on the data compiled from various years of State Finance Audit Reports

As mentioned earlier, these implicit subsidies are given in the form of financial assistance by the government for various schemes, the details of which are provided in Table 9.4. In the last 12 years, implicit subsidies were given for 20 schemes such as Ashraya scheme, financial assistance for supply of seeds, Bhagyalakshmi scheme, Vidya Vikasa scheme, National Mission for Sustainable Agriculture (earlier it was called as micro and drip irrigation), minimum floor price scheme and so on. However, in the recent past, the implicit subsidies have not been given for all the 20 schemes. About eight schemes did not receive any subsidies in the recent past.

Table 9.4 Subsidies (in Rs. crores) in the form of financial assistance, incentives, etc. (implicit subsidies)

Sl. No.	Scheme Description	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
1	Vidya Vikasa Scheme	88.10	78.72	82.28	96.74	230.11	407.06	501.15	466.27	538.08	266.98	248.83	339.16
2	Vajpayee Urban Housing Scheme	177.00	85.00	108.25	100.00	100.00	100.00	336.62	250.00	93.75	150.00	250.00	100.00
3	Housing for weaker section	33.00	40.00	25.00	10.00	15.00	11.00	1.00	0.00	0.00	0.00	0.00	0.00
4	Ashraya	0.00	1.98	229.22	647.13	1,668.24	1,251.55	944.42	654.00	1461.35	600.00	1600.00	265.19
5	Bhagya Lakshmi	486.09	755.40	353.42	339.87	473.35	338.40	301.90	294.27	294.30	46.82	97.26	137.04
6	Supply of seeds & other inputs (Agricultural inputs & Quality Control)	49.33	101.89	279.58	535.02	554.66	677.57	213.20	559.95	590.85	550.38	491.63	852.80
7	National Mission for sustainable Agriculture (Micro Irrigation)	36.07	53.8	98.21	69.30	200.89	326.56	94.85	440.37	429.57	632.85	401.27	No data
8	National Mission for sustainable Agriculture (Drip Irrigation)	49.83	79.97	93.48	245.40	171.96	36.97	288.47	364.54	337.19	386.31	349.12	No data
9	Matsya Ashraya	0.00	9.00	12.00	11.43	0.00	26.28	15.00	4.00	0.00	0.00	0.00	0.00
10	Yashaswini	30.00	35.00	45.00	71.95	109.56	170.43	190.79	99.75	0.00	0.00	0.00	100.00
11	Weavers package	50.52	52.4	99.23	70.69	99.93	114.54	38.75	114.76	127.15	260.10	135.00	125.77
12	Weavers Package-KHDC	23.25	20	19.87	9.95	30.01	24.00	6.02	9.39	20.00	40.00	15.00	15.00
13	Refund of sales tax to eligible industries	40.99	25	0.00	0.00	0.00	89.41	80.00	299.46	155.26	195.00	50.00	0.00
14	Minimum Floor Price Scheme	3.50	10.00	1.00	150.00	64.23	140.00	306.00	220.30	0.00	60.00	60.00	1075.90

Sl. No.	Scheme Description	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
15	Bicycles to VIII standard students	0.00	155.73	171.9	177.21	189.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	House sites for rural landless	56.56	33.90	18.75	10.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Subsidy for fertiliser buffer stock	14.88	7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	New Agricultural Promotion Scheme	0.00	82.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Indira Awas Yojana	130.85	218.1	50	428	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Interest subvention for loans to SHG	0.00	4.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		**1269.97**	**1849.39**	**1689.69**	**2972.69**	**3912.60**	**3713.77**	**3318.17**	**3777.06**	**4047.50**	**3188.44**	**3698.11**	**3010.86**

Source: Compiled from various years of State Finance Audit Reports

If one organises these schemes department-wise, we can see that share of implicit subsidies was highest among schemes relating to agriculture and housing departments (Table 9.5). The share of implicit subsidies for agriculture was only 12.1% (Rs.153.61 crore) in 2011-12. However, in subsequent years, this share has considerably increased. By 2018-19, its share increased to 42% (Rs.1,585.16 crore), and it further rose to 51.1% (Rs.1,629.54 crore) in 2020-21 and 64.1% (Rs.1928.70 crore) in 2022-23. However, for the Women and Child Development Department, the quantum of implicit subsidies consistently decreased between 2011-12 and 2022-23.

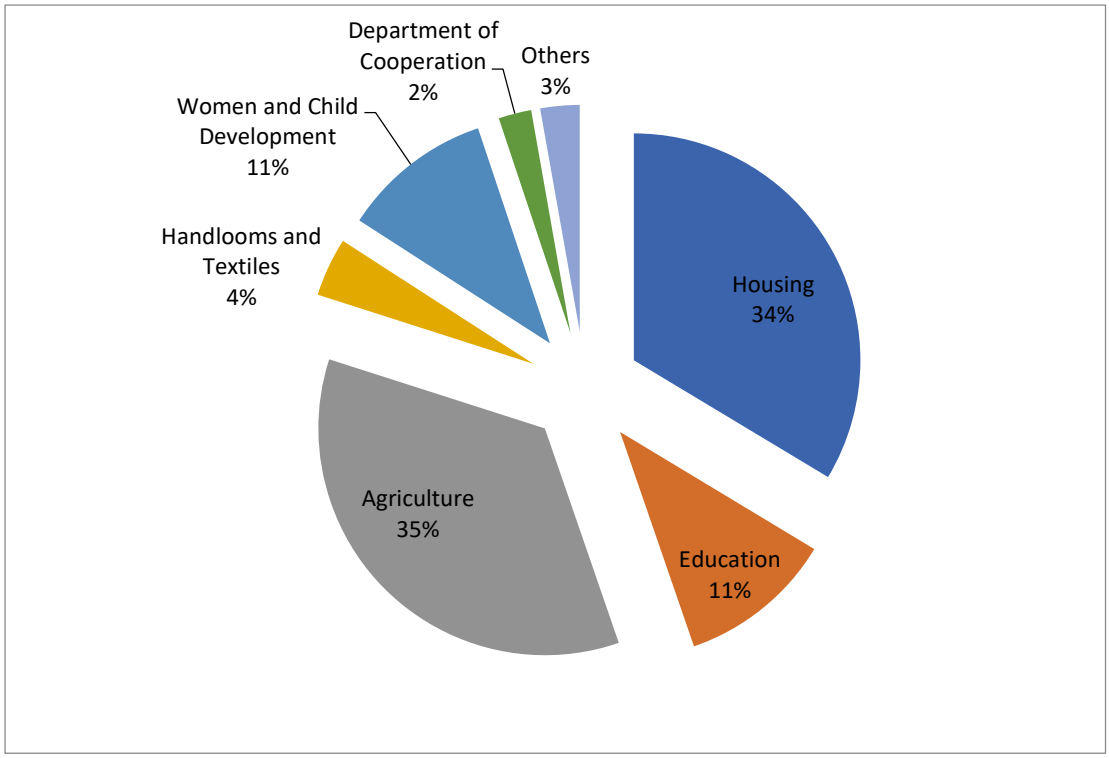
Table 9.5 Implicit subsidies (in Rs. crores) department-wise

Departments	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	All Years
Housing	397.41	378.98	431.22	1195.13	1788.24	1362.55	1282.04	904.00	1555.10	750.00	1850.00	365.19	12259.86
Education	88.10	234.45	254.18	273.95	419.77	407.06	501.15	466.27	538.08	266.98	248.83	339.16	4037.98
Agriculture	153.61	335.16	472.27	999.72	991.74	1181.10	902.52	1585.16	1357.61	1629.54	1302.02	1928.70	12839.15
Handlooms and Textiles	73.77	72.4	119.1	80.64	129.94	138.54	44.77	124.15	147.15	300.1	150	140.77	1521.33
Women and Child Development	486.09	755.40	353.42	339.87	473.35	338.40	301.90	294.27	294.30	46.82	97.26	137.04	3918.12
Department of Cooperation	30.00	35.00	45.00	71.95	109.56	170.43	190.79	99.75	0.00	0.00	0.00	100.00	852.48
Others	40.99	38.00	14.50	11.43	0.00	115.69	95.00	303.46	155.26	195.00	50.00	0.00	1019.33
Total	**1,269.97**	**1,849.39**	**1,689.69**	**2,972.69**	**3,912.60**	**3,713.77**	**3,318.17**	**3,777.06**	**4,047.50**	**3,188.44**	**3,698.11**	**3,010.86**	**36,448.25**

Source: Prepared by the author based on the data compiled from various years of State Finance Audit Reports

Overall, in the last 12 years, approximately one-third of the implicit subsidies were spent on schemes relating to agriculture and housing departments. On an average, the share in Education and Women and Child Development departments was 11% each (Figure 9.4).

Figure 9.4 Share of Implicit Subsidies across the departments during 2011-12 to 2022-23



Source: Prepared by the author based on data compiled from various years of State Finance Audit Reports

9.4. Sectoral analysis of the explicit subsidy components of programs of GoK

As is clear from the preceding section, the Government of Karnataka is quite development oriented and has initiated many subsidies for vulnerable sections of the population. Given explicit subsidies are a lot easier to measure and understand, our detailed analysis of subsidies hinges only on explicit subsidies.

We understand from figures 9.1-9.2 that energy subsidies have accounted for half or more of the explicit subsidies bill of the Government of Karnataka, ranging from accounting for a low of 51% of all explicit subsidies of the state (in 2022-23) to a high share of 66% of the explicit subsidy bill (in 2015-16). We further understand that food and supplies are the second biggest part of the state's explicit subsidy bill, ranging from a low of 9% (in 2022-23, again being the COVID year), to a high of 23% of the subsidy bill in 2014-15. Finally,

agriculture and allied activities are the third biggest category of explicit subsidies, ranging from a low of 9% in 2021-22 to a high of 16% in 2022-23 (Figure 9.1).

Hence, in this part of the chapter, we choose to focus on schemes within these top three sectors (energy, food and agriculture) departments to understand the government's subsidies. We are able to evaluate their success in a very limited way, as we do not have data on beneficiaries. Subject to the availability of the data, we have focused on one measure of performance as a result of the subsidy in each case.

Following a description of subsidies in energy, food and agriculture, we analyse the five guarantees of the Government of Karnataka: (i)freebustravelforwomen (Shakti scheme), (ii) free electricity up to 200 units for domestic consumers (termed Gruha Jyoti), (iii) Rs 2,000 monthlyfinancialassistancetowomanheadof family(called GruhaLakshmi),(iv)5 kgadditionalfoodgrains to eligible persons under Annabhagya, and (v) monthly unemployment allowance of Rs 3,000 for degree holders and Rs. 1,500 for diploma holders (called Yuvanidhi).

9.4.1. Energy subsidies

Based on the assumption that energy is a crucial part of our basic living, the Government of Karnataka provides subsidy for free power supply to farmers using IP (irrigation pump) sets with 10 horsepower or less. As Malladadavar (2023) points out, the assumptions behind the IP set subsidies appear to be that (i) the poorer farmers cannot afford to pay an electricity tariff, which presumably includes the cost of its generation and supply; (ii) the cost of production of agricultural yield, food and vegetables will rise substantially if the power tariffs were to be increased, and (iii) metering farm usage will prove costly for the electricity companies. So, the power tariffs have been kept well below the cost and the charging of IP sets has been based on the pumps' horsepower rather than their usage (Sant and Dixit, 1996).

The Bhagya Jyothi Scheme was started by the Karnataka government with the objective of providing electricity to Below Poverty line (BPL) consumers by way of reimbursement. Subsidy was reimbursed as per a determined tariff issued by the State Electricity Regulatory Commission (KERC) from time to time. Beneficiaries had been receiving 18 units of free

electricity every month, and SC/ST families were receiving 75 units free under an earlier Amrutha Jyothi scheme. The power supply to IP sets was made free with effect from 2008, whereas the BJ/KJ beneficiaries have been enjoying free power since a long time. Since 2017-18, free power supply to BJ/KJ was enhanced from 18 units to 40 units per installation per month. The entire cost of supply of free power to agricultural sector & BJ/KJ connections was made good by the state government through subsidy. As on November 2019, before the launch of Gruha Jyothi scheme, there were a total number of 28,98,914 Bhagya Jyothi/Kutira Jyothi (BJ/KJ) connections and 30,30,688 irrigation pump (IP) sets in the state.

Consequent to introduction of Gruha Jyothi (GJ) (domestic household up to 200 units per month), BJ/KJ category is subsumed under the GJ category. Under this scheme, electricity will be supplied for free if the consumption of any household is 200 units or below per month.

The energy subsidy provided by the state government during the study period is provided in Table 9.6.

Table 9.6 Energy Subsidies, Karnataka

	Subsidy in Rs. Crore	**% BJ/KJ subsidy**	**% IP subsidy**	**% GJ subsidy**
2010-11	3,742	2.87%	97.13%	NA
2011-12	4,205	4.27%	95.73%	NA
2012-13	4,777	3.08%	96.92%	NA
2013-14	5,460	2.51%	97.49%	NA
2014-15	6,256	2.68%	97.32%	NA
2015-16	8,143	2.13%	97.87%	NA
2016-17	8,644	2.11%	97.89%	NA
2017-18	8,841	4.39%	95.61%	NA
2018-19	9,250	4.22%	95.78%	NA
2019-20	11,245	4.43%	95.57%	NA
2020-21	11,250	5.08%	94.92%	NA
2021-22	19,440	3.05%	96.95%	NA
2022-23	14,000	4.41%	95.59%	NA
2023-24	23,389	1.10%	73.98%	24.93%
Average	**9,903.04**	**3.31%**	**94.91%**	**24.93%**

Source: Energy Department Government of Karnataka and author's analysis

Table 9.6 shows that the IP sets subsidy scheme accounts on average, 95% of the energy subsidies of the Government of Karnataka. The BJ/KJ accounts for a little over 3% on average, while in 2023-24, GJ accounted for about one-fourth of the energy subsidy.

We are unable to conduct a full-blown cost-benefit analysis of the subsidy. We do not have information on the targeting of these beneficiaries except some numbers for a single year. We have just been able to examine the availability and use of power. Table 9.7 shows the per capita availability of power in Karnataka versus that of India (in KwH). Undoubtedly, we find that the per capita availability of power in the state has been higher than that of India for all the years of study. Even Malladadavar (2023) reported that Karnataka's installed power capacity increased at a 3% CAGR from 28,618.67 MW in 2018-19 to 31,517.58 MW in 2022-23, with the private sector contributing significantly. Power generation increased at a 0.49% CAGR, while consumption increased by 3.6%.Agriculture accounted for the greatest share of consumption (38.67%) in 2021-22. T&D losses fell dramatically from 18.11% in 2010-11 to 16.4% in 2021-22. One could make the case that this is because of the subsidies continually provided by the state government to ensure power security.

Table 9.7 Per Capita Availability of Power in Karnataka and India

Year	Karnataka	India
2011-12	883.7	708.9
2012-13	933.1	750.8
2013-14	949.6	793.1
2014-15	980.3	851.8
2015-16	997.4	901.4
2016-17	1088.5	938.1
2017-18	1107.5	978.1
2018-19	1172.7	1028.9
2019-20	1190.7	1042.6
2020-21	1125.9	1031.4
2021-22	1184.6	1115.3
2022-23	1237.6	1221.0

Source: RBI Handbook of Statistics on Indian States and author's analysis

https://www.rbi.org.in/Scripts/AnnualPublications.aspx?head=HandbookofStatisticsonIndiaStates

Next, we turn our attention to the second sector, food, which takes the second highest explicit subsidy of the state government.

9.4.2. Subsidies to Food: Anna Bhagya

Karnataka Anna Bhagya Scheme, also called Karnataka's Free Rice Distribution Scheme, is one of the major welfare schemes of the Karnataka government, which started in July 2013, and is ongoing. The main objective behind launching Karnataka Anna Bhagya Scheme is to provide food grains to the poor, free of cost. However, the Karnataka government faced a setback from the central government. The Government of India refused to provide additional quantity to the Karnataka government as demanded, to fulfil the people's requirements. So, instead of giving 5 kg of additional rice to eligible people, now, the Karnataka government is providing rice at a subsidised rate under the Anna Bhagya Scheme, at Rs. 34 per kg to all eligible beneficiaries. Only those who belong to BPL are eligible to get free of cost rice under the scheme. There is no cap on family members; every family member will get an additional 5 kg rice per month.

Table 9.8 shows the allocation and expenditure of funds under the program. It shows that the actual expenditure has been much higher than the allocation for several years – 2015-16 and 2016-17 in a row, then again during 2018-19, and the post-COVID years 2021-22 and 2022-23. The actual expenditure has been higher than the allocated funds because the state has had to pay an amount equivalent to the price of rice, i.e. Rs.34 per kg multiplied by 5 kg, i.e. Rs.170 per member in Antyodaya Anna Yojana (AAY) and Priority Household (PHH) cards. However, we note that this subsidy forms a small proportion of the total subsidies of the food and supplies department of the state (at a maximum of 1%, in 2020-21, the COVID year).

Table 9.8 Progress of Anna Bhagya for Karnataka's Food Security

Anna Bhagya	Allocation in Rs lakh	Expenditure in Rs lakh	% Expenditure	Total Food Subsidy (In Rs. lakh)	% of Anna Bhagya expenditure to total food and supplies subsidy
2012-2013	1079.58	1079.58	100.00%	NA	NA
2013-2014	1752.73	1752.73	100.00%	NA	NA
2014-2015	1208.91	1145.44	94.75%	2,53,300	0.45
2015-2016	1098	1359.07	123.78%	2,19,600	0.62
2016-2017	1656	1797.9	108.57%	1,85,400	0.97
2017-2018	1969	1833.36	93.11%	1,91,700	0.96
2018-2019	2117	2127.46	100.49%	2,40,400	0.88
2019-2020	2465	222.403	9.02%	2,69,200	0.08
2020-2021	2464	2390.97	97.04%	2,32,400	1.03
2021-2022	2782	3229	116.07%	6,05,700	0.53
2022-2023	3892.1	4003.41	102.86%	NA	NA

Source: Government of Karnataka various year budgets

We are unable to evaluate the costs, benefits and targeting of the Anna Bhagya program, primarily due to the unavailability of appropriate and relevant data, and the lack of time to conduct primary surveys. Since Anna Bhagya pertains to the free distribution of rice, we focus on the consumption of food grains. The only data on rice consumption focuses on rice consumption in Karnataka by income fractile as compared to India for 2011-12, which Table 9.9 summarises. Table 9.9 is instructive, showing that as far as the poor are concerned, Karnataka (both its rural and urban areas) scored way above that of all-India in the quantity of consumption, considering all the 12 fractiles of MPCE during 2011-12. We do not have the corresponding data for a more recent year.

Table 9.9 Average Monthly Household Consumption of Rice from Public Distribution System and Other Sources in Rural and Urban Areas of Karnataka, Compared with All-India, July 2011-June 2012

	Karnataka: Rural	India: Rural	Karnataka: Urban	India: Urban
Fractile class of Monthly Per Capita Consumer Expenditure (MPCE)	Quantity (in kg) consumed by HHs with BPL/Antyodaya Ration card	Quantity (in kg) consumed by HHs with BPL/Antyodaya Ration card	Quantity (in kg) consumed by HHs with BPL/Antyodaya Ration card	Quantity (in kg) consumed by HHs with BPL/Antyodaya Ration card
1	12.96	**12.78**	10.11	**7.85**
2	16.87	**11.22**	14.97	**6.29**
3	14.26	**9.19**	10.1	**4.68**
4	13.25	**8.08**	9.29	**3.85**
5	12.97	**7.26**	6.86	**3.21**
6	11.94	**6.73**	5.44	**2.56**
7	9.57	**6.39**	3.98	**2.08**
8	10.23	**5.82**	2.01	**1.39**
9	8.71	**5.06**	1.81	**0.88**
10	9.15	**4.16**	0.98	**0.57**
11	8.77	**3.24**	0.09	**0.29**
12	5.08	**2.36**	0.03	**0.14**
All	10.79	**6.39**	4.31	**2.23**

Source: Ministry of Statistics & Programme Implementation, Government of India. (ON2 619)

Tables 9.10-9.11, respectively, summarise the data on rice consumption for rural and urban areas of the state for 2022-23. These tables show that the consumption of rice, considering its relative share among other cereals, is well above that in the country, especially for the poor households (in the lower fractiles of consumption). While we are not able to establish causation, we conjecture that this could be due to the Anna Bhagya program of the state.

Table 9.10 Percentage Share of Rice, and Other Grains in Total Consumption of Cereals in Rural Areas of Karnataka, August 2022-July 2023

		%age Share in Total per Capita Cereal Consumption			
	Monthly per capita cereal consumption (in kg)	**Rice**	**Wheat**	**Coarse Grains**	**Other Cereals**
Karnataka	9.01	65.95	13.95	19.43	0.67
India	**9.61**	**55.35**	**40.93**	**3.48**	**0.22**
Karnataka		**5.94**			
India		**5.32**			

Source: Ministry of Statistics and Programme Implementation, Government of India. (ON 2616)

Table 9.11 Percentage Share of Rice, and Other Grains in Total Consumption of Cereals in Urban Areas of Karnataka, August 2022-July 2023

		%age Share in Total per Capita Cereal Consumption			
	Monthly per Capita Cereal Consumption (In kg)	**Rice**	**Wheat**	**Coarse Grains**	**Other Cereals**
Karnataka	7.8	68.53	17.99	12.94	0.54
India	**8.05**	**53.2**	**44.53**	**2.09**	**0.19**
Karnataka	**5.35**				
India	**4.28**				

Source: Ministry of Statistics and Programme Implementation, Government of India. (ON 2616)

We next turn our attention to the third sector, agriculture and allied activities, which takes the most of the explicit subsidies.

9.4.3. Subsidies to Agriculture and Allied Activities

Under this head of subsidies to agriculture, we could only get data for a single program, the Krishi Bhagya.

9.4.3.1. Krishi Bhagya

The Krishi Bhagya Scheme was started in 2014-15 by the Government of Karnataka. This is a program that attempts to upgrade the livelihood of farming communities by guaranteeing irrigation for sustainable and productive agriculture, especially in the drought-prone or dryland areas of the state. The program provides the twin benefits of both irrigation and rainwater harvesting for sustainable agriculture and improved yields. The scheme is implemented through the deployment of on-farm rainwater harvesting to secure greater income for farmers and to yield 'more crop per drop'.

Under the program, the Government of Karnataka has helped over 1,00,000 farmers in the rain-fed areas of 131 taluks in 25 districts, extending financial assistance of Rs. 968.37 crore. Table 9.12 shows the progress of the program over time since its start in 2015.

Table 9.12 Progress of the Krishi Bhagya Program

Krishi Bhagya	Allocation in Rs lakh	Expenditure in Rs lakh	% Expenditure
2014-2015	50,000	50,000	100.00%
2015-2016	35,000	32600	93.14%
2016-2017	800	787.21	98.40%
2017-2018	1,200	646.85	53.90%
2018-2019	1,200	597.7	49.81%
2019-2020	500	487.9	97.58%

Source: Government of Karnataka various year budgets

What are the effects of the program? We measured this using two indicators:

a. Proportion of net irrigated area to net sown area in Karnataka when compared with all-India (Table 9.13).
b. Given one of the objectives of the program is 'more crop per drop' of water, we examined the crop yield of the state, comparing it with all-India for the entire study

period. Table 9.14 presents the crop yield of all food grains in Karnataka, compared with all-India, as these data were available from the RBI.

It shows that the Krishi Bhagya program has not been very successful, given its objective of increasing the proportion of area irrigated by tubewells. The area irrigated by tubewells in the state as a proportion of its sown area is below that of all-India for all the years considered. On average, nearly one-fourth of net sown area represents area irrigated by tubewells all overIndia, but in Karnataka, it is just about 15% of net sown area, which shows that the Krishi Bhagya may not have had significant effects on irrigation.

Table 9.13 Net Irrigated Area, Karnataka, Compared with all-India

	Net Sown Area (Thousand Hectares)		**Net Irrigated Area (Thousand Hectares)**		**Proportion of Net Irrigated Area to Net Sown Area**	
Year	**Karnataka**	**India**	**Karnataka**	**India**	**Karnataka**	**India**
2011-12	9,941	1,40,980	3,440	65,707	34.60	46.61
2012-13	9,793	1,39,746	3,421	66,589	34.93	47.65
2013-14	9,923	1,41,238	3,556	68,419	35.84	48.44
2014-15	10,044	1,39,445	3,589	68,582	35.73	49.18
2015-16	10,006	1,38,974	3,243	67,772	32.41	48.77
2016-17	9,855	1,39,000	3,104	69,270	31.50	49.83
2017-18	9,895	1,38,770	3,155	70,164	31.88	50.56
2018-19	10,664	1,38,439	4,032	72,244	37.81	52.18
2019-20	10,804	1,39,901	4,235	75,469	39.20	53.94
2020-21	11,453	1,41,544	4,931	77,729	43.05	54.92
Average	**10,238**	**1,39,804**	**3,671**	**70,195**	**35.70**	**50.21**

Sources: RBI Handbook of Statistics on Indian States, Indiastat.com and author's analysis

Table 9.14: Estimates of Yield (kg per hectare), All Food Grains, Karnataka and all-India

Year	Karnataka	All-India
2013-14	1,620	2,120
2014-15	1,689	2,028
2015-16	1,354	2,041
2016-17	1,333	2,129
2017-18	1,542	2,235
2018-19	1,422	2,286
2019-20	1,658	2,343
2020-21	1,767	2,394
2021-22	1,726	2,425
2022-23	1,832	2,494
2023-24	1,710	2,515
2013-14 to 2023-24	**17,653**	**25,010**

Source: RBI Handbook of Statistics

As tables 9.13 and 9.14 demonstrate, the performance of the state in terms of the irrigated area or the crop yield per hectare for each year is below that of all-India. So, we conclude that Krishi Bhagya has not been very successful in the state.

Five Guarantees of the Government of Karnataka

The yearly expenditure on the five guarantee programs (Gruha Lakshmi, Gruha Jyoti, Shakti, Yuvanidhi and Annabhagya) is estimated to be roughly Rs 52,000 crore under which Gruha Lakshmi was expected to cost Rs 17,500 crore in 2023-24, Annabhagya Rs 10,275 crore, Rs 9,000 crore for Gruha Jyothi scheme, and Rs 2,800 crore for Shaktischeme, with the expenditure on these five programs accounting for 16% of the state's budgeted revenue expenditure in 2023-24.

It is estimated that the Shakti scheme increased the Karnataka government's total liabilities by 0.75%. Nonetheless, it was estimated by Sangondimath (2024) that the total value of the free bus tickets to women under the program from June 2023 to March 2024, was Rs. 4,380.37 crore. As an outucome, it was estimated that both female labor force and general workforce participation rates increased since the scheme's implementation. Further, since the free bus tickets leaves disposable income available with women consumers, assuming the household spends the entire amount in the same proportion as the adjusted consumption expenditure pattern of 2011-12 as per a report by NSSO,

Sangondimath (2024) estimated that the total GST collection from such spending was at Rs. 153.48 crore, mitigating the fiscal burden of the program.

As per Sangondimath (2024), the savings of the Gruha Jyoti Scheme beneficiaries are estimated to be Rs.926.73 crore, which presumably led to other spending. The GST collected from these savings was estimated to be Rs. 268.56 crore, representing 4.43% of total SGST collected in 2024-25. So, while the scheme adds to the state expenditure, it also enhances GST revenue, partially offsetting its fiscal burden. The scheme has the potential to boost economic growth by increasing consumer spending and improving overall quality of life.

Based on similar assumptions, the Gruha Lakshmi scheme's revenue collection is estimated to be Rs.953.2 crore with an adjusted consumption pattern, with GST collections totalling Rs.1,115.28 crore from August 2023 to July 2024.

In2024-25, Rs 53,674 crore, 47%higher than the revised estimates for 2023-24, was proposed to be spent on these schemes.More than half theallocation in 2024-25, Rs 28,608 crore,wastowards theGruha Lakshmi scheme, Rs 9,744 crore to theAnnabhagyascheme, Rs 9,657 crore was towards theGruhaJyothischeme, and Rs 5,015 crore on the Shakthi Scheme. The government's commitment to alleviating the problems with unemployment was reflected in the increased budget for Yuvanidhi program from Rs. 100 crore in 2023-24 to Rs. 650 crore in 2024-25. As per Nihaal (2024), the scheme has a diverse beneficiary base, with 60% OBC, 22% SC, 8% ST, and 10% general.

In the most recent budget for 2025-26, which was tabled in March 2025, Rs 51,034 crore outlay has been allocated for the five guarantees.

9.5. Conclusion

Subsidies, which form a major part of non-committed expenditure, are categorised as explicit subsidies. These have been increasing over time, with energy subsidies leading, followed by food, supplies, and agriculture. Implicit subsidies, provided as financial assistance for various state schemes, were previously given to 20 schemes, but now only 12 schemes receive them. Most implicit subsidies are spent on agriculture, housing,

education, and women and child development. It is crucial to address inefficiencies in targeting to ensure subsidies reach the intended beneficiaries.

We have reviewed relevant subsidy programs of the state that form a major part of the state's expenditure on explicit subsidies. Considering the three sectoral subsidies that account for a major part of the state's bill on this account, we find energy and food subsidies have been effective in targeting the poorer sections of the population. However, we are not able to conclude this definitively in the case of subsidies to agriculture, even though the IP sets subsidy, while classified as an energy subsidy, could be considered an agricultural subsidy too. Despite the expenditure on the five guarantee programs, we find the state's revenue deficit in 2025-26 is estimated at Rs. 19,262 crore (0.63% of GSDP) and the fiscal deficit at Rs. 90,428 crore (2.95% of GSDP), which could be the case because of the consumption effects of the programs, and the GST based on the estimated consumption. However we are unable to comment on this further as we do not have information on what the consumption would have been without the programs.

Beyond this, due to data availability, time and budget constraints, we are unable to assess their costs, targeting or evaluate the programs.

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10. OUTCOME EVALUATION OF 14TH AND 15TH FINANCE COMMISSION RECOMMENDATIONS

This chapter has two parts. The first part of the chapter deals with the aspects relating to centrally sponsored schemes applied to Karnataka, while the second part covers the development schemes of the Government of Karnataka.

10.1 CENTRALLY SPONSORED SCHEMES APPLIED TO KARNATAKA

Fiscal federalism entails the central government transferring funds to the state for various purposes. Historically, these transfers were made through plan grants, non-plan grants[16] and finance commission grants. Plan grants consisted of centrally sponsored schemes (CSS), central sector schemes and other plan grants, while Article 282 of the constitution enables the centre and state governments to make discretionary grants for any public purposes (Varghese and Anilkumar 2023).

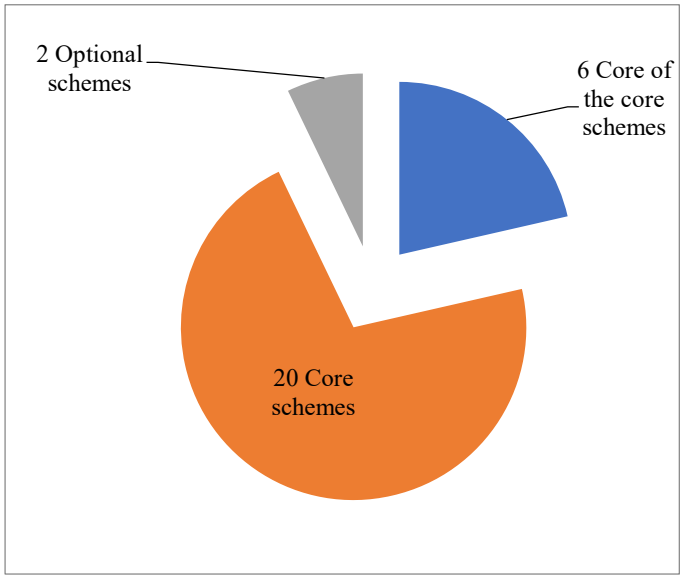
The National Institution for Transforming India (NITI Aayog) appointed a sub-committee to rationalise the plan grants to the states, and based on its report, changes were made in the sharing pattern between centre and state, as well as in the structure of CSS, thereby reducing the number of schemes (Varghese and Anilkumar 2023).India's specific-purpose transfers have been channelled through numerous discretionary cost-sharing centrally sponsored schemes and non-matching central sector schemes(XV Finance Commission 2020).

CSSs, which are implemented by the states based on the guidelines of Union ministers, varied from 188 in 2002-03 to 147 in 2011-12 (Verghese and Anilkumar 2023). After a committee headed by B.K.Chaturvedi was constituted to restructure the large number of CSS, the number of CSSs was reduced from 147 to 66 schemes (Table 10.1)[17].

[16]However, after 2017-18, both plan and non-plan grants were merged.
[17]Lok Sabha Unstarred Question No. 2578 and response from Ministry of Planning, dated 3 January 2018. https://sansad.in/getFile/loksabhaquestions/annex/13/AU2578.pdf?source=pqals

Based on a recommendation by a sub-group of Chief Ministers formed by NITI Aayog, the Government of India in 2016-17 rationalised the CSS from previous 66 schemes to 28 umbrella schemes (Figure 10.1), comprising of six core of the core schemes, 20 core schemes, and two optional schemes (XV Finance Commission 2020).

Figure 10.1: Distribution of 28 umbrella schemes of centrally sponsored schemes



States must compulsorily participate in Core Schemes, while participation in Optional Schemes is voluntary. Core of the Core Schemes, which are either legislatively backed or aimed at supporting vulnerable sections of the population, will continue with the existing funding pattern (Office Memorandum of NITI Aayog dated 17 August 2016[18]).

The following is the funding sharing pattern for these schemes, as mentioned in the Office Memorandum of NITI Aayog dated 17 August 2016, and the Ministry of Finance response to the Rajya Sabha Unstarred Question No.1512[19]:

[18] Office Memorandum of NITI Aayog, Government of India.https://megplanning.gov.in/Instruction/Rationalisation%20of%20CSS.pdf
[19] Rajya Sabha Unstarred Question No.1512 and response from Ministry of Finance, Department of Expenditure, Government of India, dated 20 December 2022. https://sansad.in/getFile/annex/258/AU1512.pdf?source=pqars

- **Core of the Core Schemes:** No change in the erstwhile funding pattern (fully funded by the central government).

- **Core Schemes:** For the eight North Eastern states and Himalayan states of Uttarakhand, Himachal Pradesh and the Union Territory of Jammu & Kashmir, the sharing pattern is 90:10. While for the rest of the states, sharing ratio between centre and state is 60:40.

- **Optional Schemes:** For the eight North Eastern states and Himalayan states of Uttarakhand, Himachal Pradesh and the Union Territory of Jammu & Kashmir, the sharing pattern is 80:20 and for the remaining states, sharing ratio between centre and state is 50:50.

Table 10.1: List of 28 umbrella schemes of Centrally Sponsored Schemes

Sl No.	**Name of the Centrally Sponsored Schemes (CSSs)**
(A)	***Core of the Core Schemes***
1.	National Social Assistance Programme
2.	Mahatma Gandhi National Rural Employment Guarantee Programme
3.	Umbrella Scheme for Development of Scheduled Castes
4.	Umbrella Scheme for Development of Scheduled Tribes
5.	Umbrella Programme for Development of Minorities
6.	Umbrella Scheme for Development of Backward Classes, Differently Abled and other Vulnerable Groups
(B)	***Core Schemes***
7.	Green Revolution (Krishi Unnati Schemes and RashtriyaKrishiVikas Yojana)
8.	White Revolution (Animal Husbandry and Dairying)
9.	Blue Revolution (Integrated Development of Fisheries)
10.	Pradhan Mantri Krishi Sinchai Yojana
a	Har Khet ko Pani
b	Per Drop More Crop
c	Integrated Watershed Development Programme
d	Accelerated Irrigation Benefit and Flood Management Programme
11.	Pradhan Mantri Gram Sadak Yojana (PMGSY)
12.	Pradhan Mantri Awas Yojana (PMAY)
a	PMAY-Rural
b	PMAY-Urban
13.	National Rural Drinking Water Mission
14.	Swachh Bharat Mission (SBM)
a	SBM-Rural
b	SBM-Urban
15.	National Health Mission (NHM)
a	National Rural Health Mission
b	National Urban Health Mission
c	Tertiary Care Programmes

Sl No.	Name of the Centrally Sponsored Schemes (CSSs)
d	Human Resources in Health and Medical Education
e	National Mission on AYUSH
16.	RashtriyaSwasthya Suraksha Yojana (erstwhile RSBY)
17.	National Education Mission (NEM)
a	Sarva Shiksha Abhiyan
b	Rashtriya Madhyamik Shiksha Abhiyan
c	Teachers Training and Adult Education
d	RashtriyaUchch Shiksha Abhiyan
18.	Mid Day Meal Programme
19.	Integrated Child Development Services
a	Anganwadi Services
b	National Nutrition Mission
c	Maternity Benefits Programme
d	Scheme for Adolescent Girls
e	Integrated Child Protection Scheme
f	National Creche Scheme
20.	Mission for Protection and Empowerment for Women (Betibachao-betipadao, one-stop centre, women helpline, hostels, Swadhargreh, gender budgeting, etc.)
21.	National Livelihood Mission (NLM)
a	National Rural Livelihood Mission
b	National Urban Livelihood Mission
22.	Jobs and Skill Development
a	Employment Generation Programmes
b	Pradhan Mantri Kaushal Vikas Yojna
23.	Environment, Forestry and Wildlife (EFWL)
a	National Mission for a Green India
b	Integrated Development of Wildlife Habitats
c	Conservation of Natural Resources and Ecosystems
d	National River Conservation Programme
24.	Urban Rejuvenation Mission (AMRUT and Smart Cities Mission)
25.	Modernisation of Police Forces (including Security Related Expenditure)
26.	Infrastructure Facilities for Judiciary (including Gram Nyayalayas& e-Courts
(C)	***Optional Schemes***
27.	Border Area Development Programme
28.	Shyama Prasad Mukherjee Rurban Mission

Source: Office Memorandum of NITI Aayog, GoI. https://megplanning.gov.in/Instruction/Rationalisation%20of%20CSS.pdf

The Economic Survey 2023-24 (GoK 2024) highlights that Central grants play a significant role in state budgets, categorising into three main types:

1) Grants for Centrally Sponsored Schemes;
2) Finance Commission Grants for Rural Local Bodies/Urban Local Bodies/State Disaster Response Fund; and
3) Other Transfers/Grants to State Legislatures (including those for the National Disaster Response Fund and compensation for revenue lossesdue to GST implementation).

Table 10.2 provides details of trends in the central grants to Karnataka. The share of grants to total revenue receipts was 14.72% in 2017-18 and was increased to 19.65% in 2019-20. However, in the subsequent years, there has been a decline. It declined from 19.65% of total revenue receipts in 2019-20 to 6.44% in 2023-24.The growth rate during 2017-18 and 2023-24 has been varying with negative growth rate in the recent past. Due to the decrease in Karnataka's share of central taxes and reduction in central funds for CSS, there is a reduction in the transfer of central grants to Karnataka (GoK 2024).

Table 10.2: Trends in central grants (in Rs. crores) to Karnataka during 2017-18 to 2023-24

Items	2017-18 (A/Cs)	2018-19 (A/Cs)	2019-20 (A/Cs)	2020-21 (A/Cs)	2021-22 (A/Cs)	2022-23 (A/Cs)	2023-24 (BE)
Finance Commission Grants	2708.18 (1.84)	3373.89 (2.05)	4672.91 (2.66)	5557.00 (3.55)	6239.03 (3.19)	3495 (1.53)	5223 (2.19)
Centrally Sponsored Schemes	11617.25 (7.90)	10393.44 (6.30)	12213.55 (6.96)	9851.88 (6.29)	12659.37 (6.47)	11629 (5.08)	7501 (3.15)
Other transfers/ Grants to States	7315.35 (4.98)	11713.92 (7.10)	17593.08 (10.03)	14667.03 (9.36)	11064.03 (5.65)	21744 (9.49)	2631 (1.10)
Total Grants-in-aid from GoI	**21640.78 (14.72)**	**25481.25 (15.45)**	**34479.54 (19.65)**	**30075.91 (19.19)**	**29962.43 (15.31)**	**36868 (16.1)**	**15355 (6.44)**
Total Revenue Receipts	***146999.65***	***164978.66***	***175442.79***	***156716.40***	***195761.83***	***229080***	***238409.81***
Growth rate of total grants-in-aid from GoI	37.81	17.74	35.32	(-)12.77	(-)0.38	23.05	(-)58.35

Source: (1) Various years of Economic Survey of Karnataka reports https://des.karnataka.gov.in/info-4/Economics+Survey/Reports/en(2) Data for 2022-23 taken from State Finance Audit ReportGoK (2023)https://cag.gov.in/ag2/karnataka/en/audit-report/details/118806
Note: The figures in parentheses indicate percentageto total revenue receipts.

The share of grants to total grants-in-aid from GoIshow that grants for centrally sponsored schemes and Finance Commission grants have declined in the recent past (Figure 10.2).

Figure 10.2: Share of different grants to total grants-in-aid from GoI

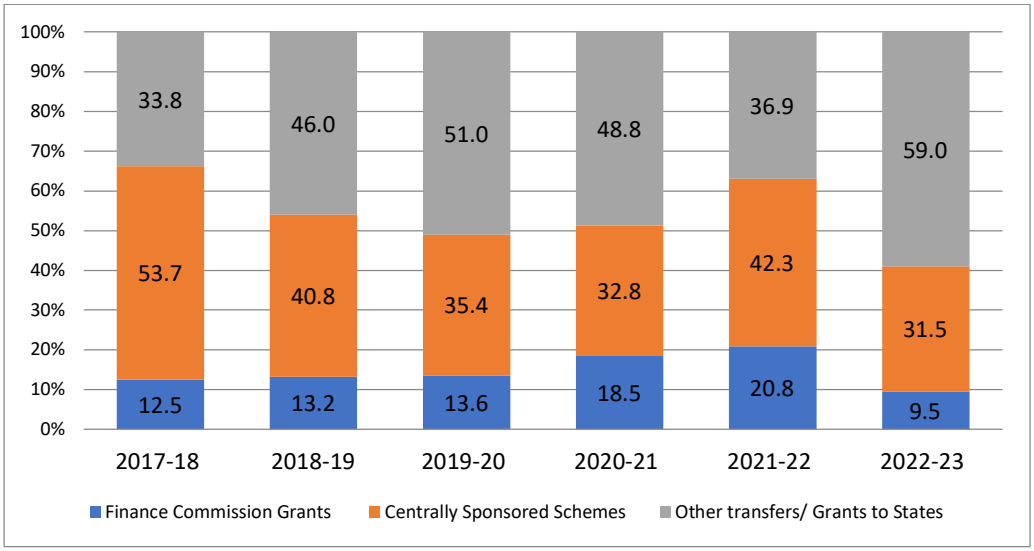


Table 10.3 presents the scheme-wise central receipts for various CSS during 2021-22. Although, there are 28 umbrella schemes of CSS, Table 10.3 provides more central receipts for more number of schemes including sub-schemes. XV Finance Commission (2020) notes the confusion about the number of existing centrally sponsored schemes. In its report, it is mentioned as "till recently, there seemed to be confusion about the number of existing CSS, indicating the complexity of the entire structure. The Department of Expenditure, Ministry of Finance, has recently drawn up a list of 131 CSSs. The Union Budget 2020- 21 shows that fifteen of the thirty umbrella CSS account for about 90% of the total allocation under CSS. Many umbrella schemes have, within them, a number of small schemes, some of them with negligible allocations" (XV Finance Commission (2020: 369).

Table 10.3: Central Receipts for the Centrally Sponsored Schemes (in Rs. crores) from 2021-22 (Accounts)

Sl. no	Scheme Name	Central Receipts	Sl. no	Scheme Name	Central Receipts
1	National Health Programme	1619.98	37	Development of InfrastructureFacilitiesfor Judiciary Including Gram Nyayalayas	27.00
2	Jal Jeevan Mission (JJM)/ National Rural Drinking Water Mission	1252.19	38	Pre-Matric Scholarship to OBC- PM YASASVI	25.00
3	Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	1212.02	39	Sub-Mission on Agriculture Extension	24.00
4	Saksham Anganwadi and Poshan 2.0 (ICDS - Anganwadi Services and SNP)	1009.49	40	Special Central Assistance to TSP	21.40
5	Mission for Development of 100 Smart Cities	897.16	41	GIA Under Article 275(1) of Constitution	21.00
6	Assistance to Intra State Movement of foodgrains and FPS dealers margin under NFSA	779.27	42	National Family Benefit Scheme (NFBS) of NSAP	18.86
7	Pradhan Mantri GramSadak Yojana	704.25	43	National Ayush Mission	18.21
8	Establishment of New Medical Colleges attached with District/Referral Hospitals (Chikkamagalur, Haveri,Yadgiri)	519.36	44	Pre Matric Scholarship for ST Students	17.53
9	Per Drop More Crop (PMKSY)	500.00	45	PM Formalisation of Micro food processing Enterprises (PMEME)	17.47
10	Pradhan Mantri Poshan Shakti Nirman: PM- Poshan (MDM)	488.34	46	Indira Gandhi National Disability Pension Scheme (IGNDPS) of NSAP	16.18
11	Samagra Shiksha	474.51	47	National Cyclone Risk Mitigation (NCRMP)	14.00
12	Indira Gandhi National Old Age Pension Scheme (IGNOAPS) of NSA	291.52	48	Shyama Prasad Mukherjee RurbanMission	13.69
13	National Rural Livelihood Mission (NRLM)	260.37	49	National Afforestation Programme (National Mission for a Green India)	13.46
14	Pradhana Mantri Awas Yojane (Urban)	257.54	50	Integrated Development of Wildlife Habitats	12.56
15	Swachh Bharat- Urban	216.23	51	PM Ayushman Bharat Health Infrastructure Mission	11.25
16	CSS of Post-matric Scholarships for Scheduled Tribes	170.81	52	Babu Jagjivan Ram Chhatrawas Yojana	10.13
17	Urban Rejuvenation Mission (500 Cities- AMRUT)	169.27	53	National Livestock Mission	9.71
18	Indira Gandhi National Widow Pension Scheme (IGNWPS) of NSAP	167.61	54	Rainfed Area Development and Climate Change	7.75

Sl. no	Scheme Name	Central Receipts	Sl. no	Scheme Name	Central Receipts
19	Submission on Agricultural Mechanisation	147.84	55	Shakti Sadan (SwadharGreh,Ujjwala)	6.68
20	Pradhan Mantri Krishi Sinchayi Yojna - Watershed Development Component	119.84	56	Fast Track Special Courts	6.64
21	Rashtriya Krishi VikasaYojane (RKVY)	113.08	57	Development of particularlyVulnerableTribal Group	6.61
22	Accelerated Irrigation Benefits Programme	111.78	58	Externally Aided Projects	5.03
23	Pradhan Mantri AnusuchitJaatiAbhyuday Yojana-PM AJAY (SCP to SCSP)	100.13	59	RashtriyaUchchatar Shiksha Abhiyan(RUSA)	3.74
24	Pradhan Mantri Matsya Sampada Yojana (PMMSY)	98.84	60	Pradhan Manthri Koushalya Vikas Yojane	3.32
25	National Food Security Mission	86.49	61	Tertiary Care Programmes	3.28
26	Pradhan Mantri Adarsh Gram Yojana PMAGY (PMAJAY) - SCSP	82.44	62	Post Matric Scholarship for SC Students	3.10
27	Pre Matric Scholarship for SC Students	76.58	63	Project Elephant Karnataka	2.61
28	Strengthening of Machinery for Enforcement of Protection of Civil Rights Act 1955	61.85	64	National Project on Agro-Forestry (KrishonnatiYojane)	2.50
29	National Horticulture Mission	54.00	65	Skill Strengthening for Industrial Value Enhancements (STRIVE) and Up-gradation of ITI	2.41
30	Post-Matric Scholarship to OBC-PM YASASVI	50.00	66	Integrated Sample Survey	1.90
31	Mission Vaatsalya (Integrated Child Protection Scheme)	42.52	67	Support to Tribal Research Institute	1.84
32	Modernisation of Police Forces	41.54	68	Forest Fire Prevention and Management Scheme	1.57
33	Pradhan Mantri Jan Vikas Karyakaram	35.14	69	Ujjwala Scheme	1.24
34	National Urban Health Mission	34.14	70	Market Development Assistance to Coir Sector	1.23
35	Project Tiger	29.57	71	National Database for Unorganised Workers	1.00
36	Rashtriya Gram Swaraj Abhiyan (RGSA)- erst while RGPSA	29.15	72	National Service Scheme (NSS)	0.61
				Total	**12659.36**

Source: Planning department, GoK (2024b).

Table 10.4 shows the share of centre and state in the expenditure on centrally sponsored schemes and central sector schemes. The share of expenditure by centre ranges from 50.2% in 2022-23 to 89.5% in 2021-22. However, expenditure share by the state was as low as 10.5% in 2021-22 and to 49.8% in 2022-23 (Table 10.4).

Table 10.4: Proportion of Expenditure of Centrally Sponsored Schemes and Central Sector Schemes by Centre and State

Year	Expenditure (in Rs. crore)			% of expenditure	
	Central	State	Total	Central	State
2018-19	16235.52	12340.81	28576.32	56.8	43.2
2019-20	13303.83	10181.32	23485.15	56.6	43.4
2020-21	14825.28	10671.27	25496.55	58.1	41.9
2021-22	22270.69	2619.65	24890.34	89.5	10.5
2022-23*	7623.48	7547.96	15171.44	50.2	49.8

Source: Various years of Finance Accounts Volume 2, Government of Karnataka. https://cag.gov.in/ae/karnataka/en/state-accounts-report?defuat_account_report_type=359

As far as flow of funds is concerned, Report of Finance Accounts (2023) mentions that the Ministry of Finance, Government of India[20] has outlined the procedure for releasing funds under CSS as well as monitoring its utilisation. This must be done through Single Nodal Agency (SNA). Each CSS has an SNA with its own bank account in a scheduled commercial bank authorised by the state government to conduct government business. According to the procedure, the state government must transfer the central share received in its accounts to the SNA's account, along with the corresponding state share (Finance Accounts 2023: 67).

The Government of India has already restructured all 66 CSS into 28 umbrella schemes, following the recommendations of the 14thFinance Commission. Learning from this experience of the Government of India, the state government will also streamline its schemes into umbrella schemes, allowing departments the flexibility to include eligible components. Merger of schemes will provide greater flexibility in fund utilisation (Planning Department, GoK, 2024a). In the 2024-25 budget, there are 1806 schemes, categorised into four groups based on their allocations. Among these, 840 schemes (46.5%

[20]vide letter No. 1(13)PFMS/FCD/2020 dated 23.03.2021

of total schemes) each have a maximum allocation of Rs.10 crore, collectively accounting for just 0.86% of the total budget allocation (Table 10.5). In other words, nearly half of the schemes accounts for less than 1% of the total budget allocation. Therefore, rationalising these schemes is crucial to prevent the thin spread of resources and to ensure a focused approach to monitoring (Planning Department, GoK, 2024a).

Table 10.5: Classification of Schemes for 2024-25

Type of the allocation	Number of schemes	% to total number of schemes	Amount provided (in Rs. crore)	% to the budget
Up to one crore	278	15.39	97.04	0.03
up to ten crore	554	30.68	2612.89	0.83
up to 100 crore	636	35.22	24595.14	7.84
More than 100 crore	338	18.72	286370.53	91.30
Total	1806	100.00	313675.60	100.00

Source: Planning Department, GoK (2024a)

The Planning Department, GoK (2024a) provides the following criteria for the merger of schemes to avoid duplication, reduce thin spread of resources and promote equitable and efficient distribution of funds: "1. All salaried and admin related schemes could be brought under one head. 2. If two or more departments are implementing similar type of schemes, all could be brought one department through convergence under one umbrella scheme. 3. Schemes with similar objectives could be merged together. 4. Smaller schemes could be merged with bigger schemes. 5. All scholarship schemes could be brought under one head. 6. Subsidies and incentive could be brought under one head. 7. All Pension schemes could be brought under one head. 8. State Plan schemes which have objectives similar to that of CSS could be merged together to get more central funds wherever possible (Ex. MGNREGA)" Planning Department, GoK (2024a: 2).

10.2 STATE'S OWN SCHEMES FOR DIFFERENT DEVELOPMENT OBJECTIVES

In this part, we cover the general development schemes of the Government of Karnataka. These general development schemes include infrastructure programs (such as those for water supply, underground drainage and sewage), urban development and start-up policies for encouraging innovation, for which we were able to get data for a reasonably long period covered in the ToR.

The rest of this section contains a description of the development programs, followed by an analysis of the allocation and expenditure on these programs.

Nagarothana Yojana

To fill infrastructural gaps, the Government of Karnataka initiated the Mukhyamantrigala Nagarothana Yojana (MNY) as early as 2008-09, as stated by Sridhar and Reddy (2014), to improve basic services such as drinking water, sewerage, and roads in its cities and towns. As pointed out by Sridhar and Reddy (2014), the MNY has two components: one is the special Rs.100 crore package program for city corporations in the state (apart from Bengaluru) and the other is the Chief Minister's Small and Medium Towns Development Program (CMSMTDP).

Phase 3 of the program was announced in 2016-17, with the allocation being Rs. 2890.00 crore for 263 urban local bodies (ULBs) in the state (Table 10.6). The grant allocation was such that there was a 50% grant from the state government and 50% loan from KUIDFC. The scheme period was envisaged to be 3 years up to 2018-19, with this phase of the project planned to be complete by March 2020.

Table 10.6: Details of ULB-wise allocation, Phase 3, Nagarothana

Category	No. of ULBs	Per ULB Allocation (Rs crores)	Total (Rs crore)
District headquarters for Grade1 CMCs	23	35	805
Other CMCs	35	25	875
Existing TMC and upgraded TMCs	96	7.5	720
Newly created TMCs	19	10	190
Newly created TPs	40	5	200
Existing TPs	50	2	100
Total	**263**		**2,890**

Source: **http://ballaricity.mrc.gov.in/sites/ballaricity.mrc.gov.in/files/Nagarothana_Eng.pdf**

Nagarothana Special Grants with a grant allocation of Rs.150.00 crore with the same project period of 3 years (up to 2018-19) was planned to be completed by March 2020. The ULBs covered by this

special grant were Chikkaballapura, Chamarajanagar and Haveri CMCs. Examples of works undertaken are basic infrastructure development works such as road works, footpath, storm water drain, office building works, parks, stadium, ranga-mandira, market, lake development, glasshouse, graveyard, public toilet and abettors. Table 10.7 shows the progress of the Nagarothana program during 2012-13 to 2020-21.

Table 10.7: Progress of Nagarothana, Phase 3

Nagarothana	Allocation for City Corpns (in Rs lakh)	Allocation for Town panchayats and NAC (in Rs lakh)
2012-2013	52,257	3,764
2013-2014	1,06,000	7,927
2014-2015	1,21,453	7,169
2015-2016	1,34,465	5,707
2016-2017	1,04,857	1,368
2017-2018	90,299	8,488
2018-2019	2,973	8,489
2019-2020	8,488	8,488
2020-2021	6,214	*0*

Source: Government of Karnataka various year budgets

URBAN INFRASTRUCTURE

The provision of infrastructure services is fundamental to ensuring a good quality life. Urban infrastructure covers the following: water supply (for drinking, industrial, commercial and public usages), sanitation (including sewerage and drainage), domestic energy (covered in the chapter on subsidies), road and urban transport.

The Government of Karnataka provides Rs.40 lakh per acre towards providing basic amenities like drainage, roads, drinking water, electricity, etc. for newly developed layouts of cities from 2011-12. For this work, Rs.3.00crore was provided in 2019-20 budget, as against the Rs.6.08 crore, which was spent during that financial year only up to November 2019.

Water Supply

The Karnataka Urban Water Supply and Drainage Board is responsible for providing water supply and sewerage schemes in 276 urban areas of Karnataka except Bruhath Bangalore MahanagaraPalike (BBMP). Table 10.8 summarises the funding pattern for different types of ULBs. The government support is the highest for the smaller ULBs such as TMCs and TPs (where there is no loan even). The city corporations and CMCs have a higher financial sharing responsibility in the case of these schemes.

The Board has implemented assured safe drinking water supply scheme in 231 urban areas from surface sources. The Board is implementing five schemes [1) Malur, 2)Bangarpet, 3)Gajendragad, 4)Naregal, 5)Anekal] for shifting the source of water from ground water to an assured surface source of water. All these schemes were proposed to be completed by December 2020, after which only 40 urban areas would be left with sub-surface water as sources. The scheme wise progress of the program is shown in Table 4from 2009 to 2019-20 (up to November 2019). Less than 100 water supply schemes were completed as against the target of 155 schemes per year.

Table 10.8: Funding pattern of Water Supply Schemes

Category	Government Grant	Loan from financial institution	ULB Share
City Corporation	40	50	10
City Municipal Council	60	30	10
Town Municipal council	75	20	5
Town Panchayat	95	NA	5

Source: Economic Survey of Karnataka, Various Years

Table 10.9 summarises the financial and physical progress of the urban water supply schemes in the state during 2011-20. The financial achievements during all the years of study are above the targets implying cost overruns. However, physical completion leaves much to be desired, with the actual achievements trailing way below that of the physical targets envisaged (except during 2015-16). It is possible that it may not have been feasible to finish the physical work with the financial resources available, with cost overruns. Hence, financial progress is overachieved, and physical progress is under achieved. It is also possible that in some years, some balance or arrears due may have been carried over, so the financial progress is greater than the envisaged target.

Table 10.9: Progress of Karnataka's urban water supply schemes

Year	Financial (in Rs. Crores)			Physical (No. of Schemes)		
	Target	Achievement	% Achievement to Target (Financial)	Target	Achievement	% Achievement to Target (Physical)
2011-12	160.03	176.44	110.25	**17**	**11**	64.71
2012-13	186.31	276.33	148.32	**11**	**8**	72.73
2013-14	175.97	218.06	123.92	**9**	**4**	44.44
2014-15	176	305.43	173.54	13	7	53.85
2015-16	149.16	208.14	139.54	11	12	109.09
2016-17	197.53	213.85	108.26	11	8	72.73
2017-18	197.53	197.53	100.00	8	7	87.50
2018-19	234.73	234.73	100.00	7	4	57.14
2019-20(Upto November 2019)	134.29	209.48	155.99	4	1	25.00

Source: Economic Survey of Karnataka, Various Years

Urban drainage and sewerage

Under Ground Drainage (UGD) Schemes: During 2019-20, there were 49 ongoing underground drainage schemes with budget allocation of Rs 520.18 crore. It was then proposed to commission 11 schemes during 2019-20, of which, Nargund underground drainage scheme was commissioned and the remaining projects are in progress. The funding pattern of the program is shown in Table 10.10, demonstrating that the primary share of the loan is from the state government as far as TMCs and TPs are concerned, as in the case of water supply. The local body shares are the highest in the case of corporations. The progress of the program is summarised in Table 10.11, which shows that a story similar tothat of water supply schemes holds good even with respect to UGD.

Table 10.10: Funding pattern of UGD Scheme

Category	Loan From Financial Institution	Govt. Loan	Local Body Contribution
Corporations	50%	20%	30%
City Municipal Council	50%	25%	25%
Town Municipal Council and Town Panchayat	50%	30%	20%

Source: Economic Survey of Karnataka, Various Years

Table 10.11 shows that there are many years (2013-14 to 2016-17) during which there is cost overrun, likely due to the time overruns in terms of completing the physical targets observed in all years, except 2015-16, where 7 as opposed to the 6 schemes planned, were completed. As in the case of water supply schemes, here too, it is also possible that in some years, some balance from the previous years may have been carried over, so the financial progress is greater than the envisaged target.

Table 10.11: Progress under UGD Scheme

	Financial (Rs. in Crores)		Proportion of Achievement to Target (Financial)	Physical (No of Schemes)		Proportion of Achievement to Target (Physical)
Year	**Target**	**Achievement**		**Target**	**Achievement**	
2011-12	84.01	64.31	76.55	**7**	**1**	14.29
2012-13	148.65	83.03	55.86	**6**	**1**	16.67
2013-14	109.92	127.17	115.69	**9**	**1**	11.11
2014-15	112	253.85	226.65	11	1	9.09
2015-16	134.33	270.03	201.02	6	7	116.67
2016-17	180.06	259.87	144.32	8	6	75.00
2017-18	180.06	180.06	100.00	13	6	46.15
2018-19	180.06	180.06	100.00	13	7	53.85
2019-20(Upto November 2019)	106.12	103.36	97.40	4	3	75.00

Source: Economic Survey of Karnataka, Various Years

Karnataka Startup Policy

Recognising the potential of Bengaluru as a startup hub of the country, the Government of Karnataka has developed a Startup Policy for the state. The objective is to setup 20,000 technology startups. The Government of Karnataka in partnership with NASSCOM set up the first startup warehouse at Diamond District, Old Airport Road, Bengaluru. The first startup warehouse has been running successfully and it has incubated 64 startups. It started in 2015 and ended in 2020 (5-year policy) and there is a new one for the period 2022-2027. Table 10.12 shows the progress of the startup policy in the state, with the expenditure matching the allocation in most years during 2016-2023. In 2018-19, the actual expenditure exceeded the allocation, and in the pre-COVID year 2019-20, the expenditure was only half of the allocation. In 2018-19, there was a greater increase in startup applications, with 820 startups having been registered, of which around 200 companies had received funding from the government, 77 startups shortlisted for grant fund to be disbursed. The major reasons were incentives and concessions in GST and sales tax, patent and marketing reimbursements and technology-based incubators.

Table 10.12: Progress of Startup Policy for Innovation

Startup Policy 2015	Allocation in Rs lakh	Expenditure in Rs lakh	% Expenditure
2016-2017	5923	5923	100.00%
2017-2018	5575	5575	100.00%
2018-2019	4404	5289	120.10%
2019-2020	3238	1619	50.00%
2020-2021	750	750	100.00%
2021-2022	1000	1000	100.00%
2022-2023	6900	6900	100.00%

Source: Government of Karnataka various year budgets

Conclusion

Following the restructuring, the number of CSS was reduced from 147 to 66. These 66 schemes were classified into 28 umbrella schemes, which include 6core of the core schemes, 20 core schemes, and 2 optional schemes. There has been a decline in the transfer of central grants to Karnataka, and similarly, financial grants have also decreased recently. The share of expenditure by the centre has been fluctuating. Learning from the experience of the Government of India, the state government has also attempted to streamline the schemes. Nearly half of these schemes account for less than 1% of the total budget allocation, thus necessitating the rationalisation of schemes to avoid the thin spread of resources.

We find that the Government of Karnataka has initiated a large number of programs covering urban development, urban infrastructure and innovation that is much necessary for economic growth. These schemes have progressed well, as evident here from their allocations and expenditures. However, the problem seems to be that physical progress in these developmental programs fall short of targets, which lead to cost over runs. Therefore, the state needs greater human resources, with technology and training support for furthering its development objectives.

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11.SUSTAINABLE DEBT ROADMAP 2026-31

INTRODUCTION

Karnataka has consistently been a national leader in fiscal reforms, exemplified by its early adoption of the Karnataka Fiscal Responsibility Act (KFRA) in 2002 and demonstrating its commitment to fiscal discipline. Despite strong commitment to fiscal prudence, the state has recently faced mounting challenges in controlling fiscal deficits and growing debt liabilities. Key pressures include rising committed expenditures, reduced central transfers from the 15th Finance Commission, sluggish revenue growth, economic volatility, natural disasters, and political factors. Moreover, fiscal decentralisation has compounded these challenges through increased obligations: higher local body transfers (Third State Finance Commission), mandated allocations for SC/ST sub-plans, minimum infrastructure maintenance spending (13th Finance Commission) on roads, bridges and irrigation projects, and special development funds for Kalyana Karnataka (Hyderabad–Karnataka region).

The concerning rise in public debt from the COVID-19 pandemic shock, implementation of Seventh Pay Commission, expanded welfare schemes & services (five guarantees, etc), and deliberation on pension reforms prompts examination of State fiscal management and debt sustainability. In this chapter, we have attempted to evaluate Karnataka's current debt position, identify sustainability factors, and develop policy scenarios based on revenue trends and expenditure management to chart a sustainable debt roadmap for 2026-31.

DEBT SUSTAINABLITY AND DETERMINANTS

Debt sustainability reflects a government's capacity to meet debt obligations—both interest and principal—without compromising its fiscal stability. For state governments like Karnataka, borrowing serves as a vital instrument to: (1) finance development projects, (2) bridge short-term revenue-expenditure gaps, and (3) implement countercyclical fiscal policies during various phases of economic fluctuations. However, unchecked debt accumulation can stifle growth and undermine development objectives. Prudent debt management therefore becomes critical – ensuring borrowings effectively support long-term economic growth and welfare programmes while maintaining better fiscal health. The balance lies in leveraging debt as a growth catalyst without letting it undermine fiscal stability.

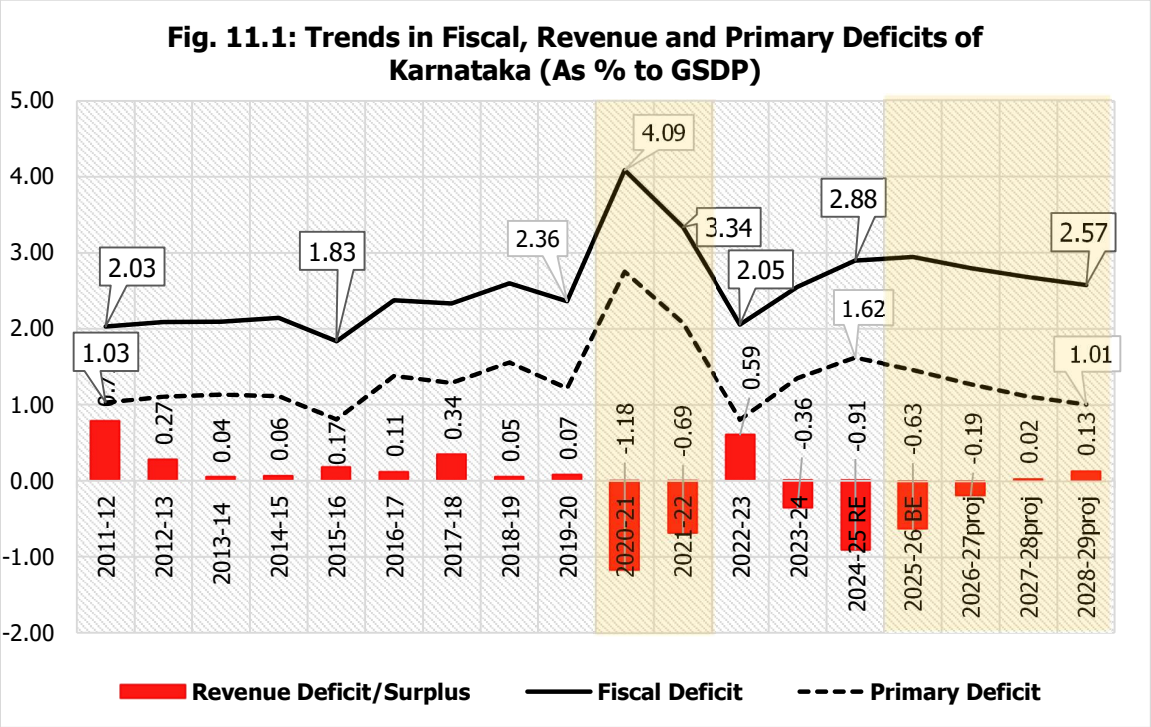
Debt sustainability of the state is primarily evaluated through key indicators such as the debt-to-GSDP ratio and interest payments relative to revenue receipts. These metrics provide crucial insights into a government's ability to manage its debt obligations while maintaining fiscal space

for developmental initiatives. The comprehensive approach to debt sustainability, however, also includes ratios of -

- Fiscal, Revenue and Primary Deficits to GSDP
- Revenue and Capital Expenditures to GSDP
- State's Own Tax and Non-tax Revenue
- Outstanding Debt and Debt Serving to GSDP
- Interest Payments to Revenue Receipts
- Committed Expenditures (Scheme & Non-Scheme) to Revenue Expenditure

Karnataka has demonstrated strong fiscal discipline by consistently maintaining its fiscal deficit within FRBM Act limits, with only two exceptions in recent history. During 2009-10 and 2020-21 and 2021-22, the deficit rose to 3.24 %, 4.09 % and 3.34% of GSDP, respectively (Fig.11.1). These deviations were primarily due to revenue shortfalls and economic contractions resulting from the global financial crisis (2009-10) and the COVID-19 pandemic (2020-21 & 2021-22). To manage these extraordinary challenges, the state resorted to additional borrowings, causing a significant increase in debt burden on the state. By 2022-23, Karnataka successfully reduced its fiscal deficit to 2.05% of GSDP, reflecting a recovery in revenue receipts and economic growth. However, the implementation of the five welfare programmes (guarantees) and the Seventh Pay Commission recommendations led to an increase in the fiscal deficit upto 2.88% by 2024-25. The state aims to keep fiscal deficit within a limit of 3% of GSDP by progressively reducing it to 2.57% by 2028-29 (MTFP, 2025).

Karnataka's fiscal health (deficit) is closely tied to its revenue balance. Between 2011-12 and 2019-20, the state's revenue surplus declined sharply from 1.08% to 0.07% of GSDP. The COVID pandemic and implementation of five welfare schemes and pay hike for the state employees and pensioners and rising interest payments for debt servicing have further worsened the situation, causing revenue deficit in 2020-21 & 2021-22 and 2023-24 & 2024-25. Moreover, the state's actual GST collections have consistently fallen short of the protected revenue levels assured by the Government of India and the discontinuation of GST compensation after 2022-23, coupled with reduced horizontal devolution under the 15th Finance Commission, also contributed to the revenue deficit (MTPF, 2025). Over the past five years (2020-21 to 2024-25), due to inadequate central allocations or restrictive grant conditions, the state was obliged to top up centrally sponsored schemes (CSS), causing additional fiscal burden of Rs. 23,402 crore, elevating its effective share in CSS to 50%, far exceeding the stipulated 40% (MTPF, 2025).



Source: Various Issues of Medium-Term Fiscal Plan (MTFP), Budget Documents, Department of Finance, Government of Karnataka & GSDP estimates from CSO, MOSPI, GoI.

Our analysis of Karnataka's expenditure patterns further reveals a substantial increase in revenue expenditure, which surged from Rs. 65,115 crore in 2011-12 to Rs. 2.84 lakh crore in 2024-25 (R.E.), with a projected rise to Rs. 4.14 lakh crore in 2028-29 (MTFP, 2025). However, despite this absolute increase, expenditure as a percentage of GSDP has gradually declined, falling from 10.74% in 2011-12 to 9.84% in 2024-25 (Fig. 11.3). This relative decrease stems from the growing share of non-taxable software exports in the state's economy. These fiscal imbalances have created a mismatch in Karnataka's budgetary calculations, imposing a substantial debt burden.

The contraction in revenue balance coincides with a corresponding rise in fiscal deficit, primary deficit and outstanding debt, highlighting the interdependence of these indicators (Fig. 11.2a, b&c). The shortfall in revenue surplus or revenue deficit did not significantly constrain capital expenditure, as the state primarily funded such expenditure through borrowings (Fig. 11.2 b&c).

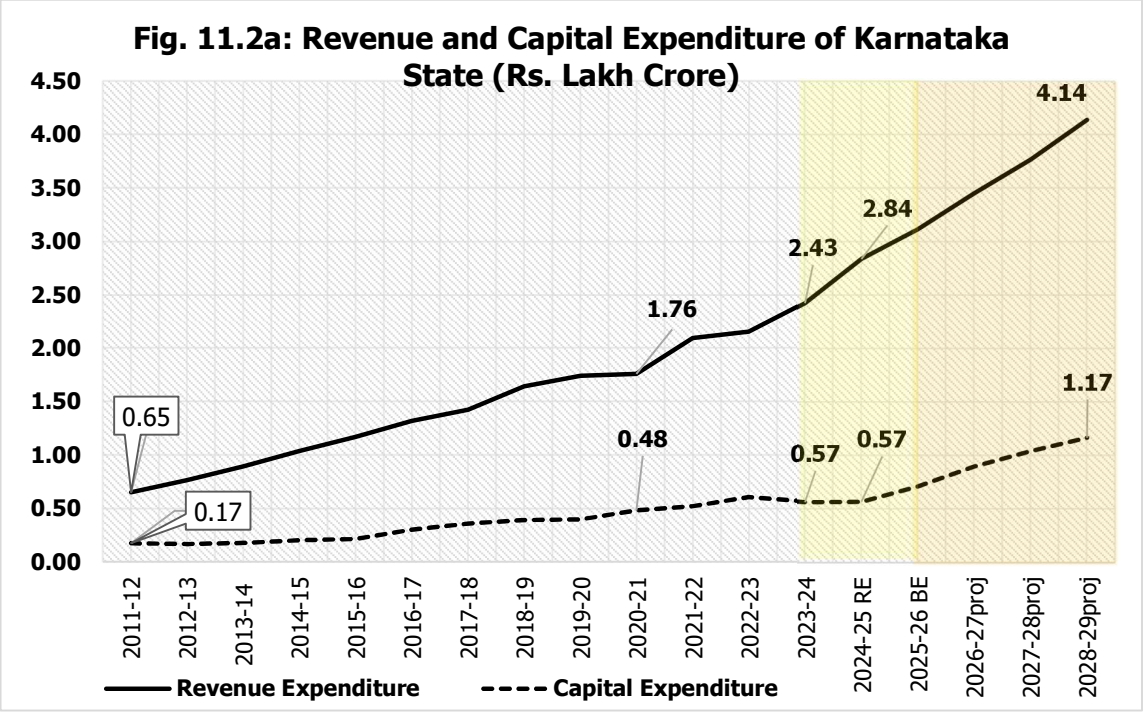
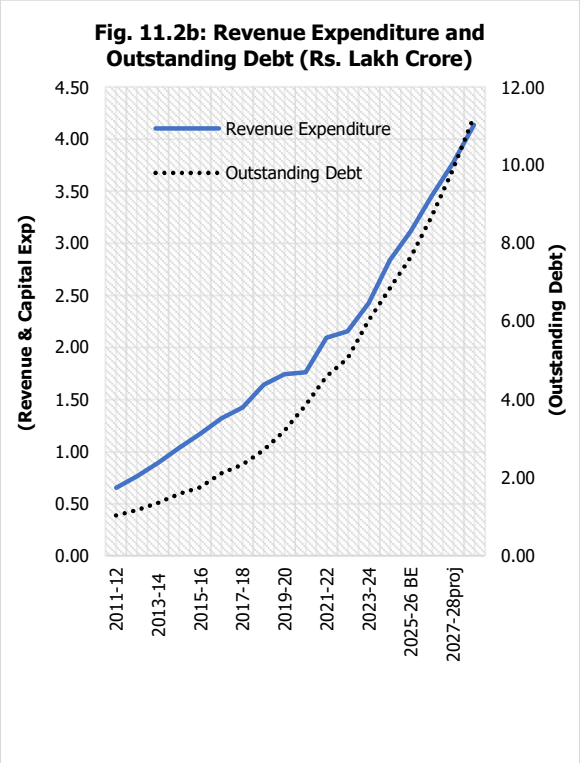
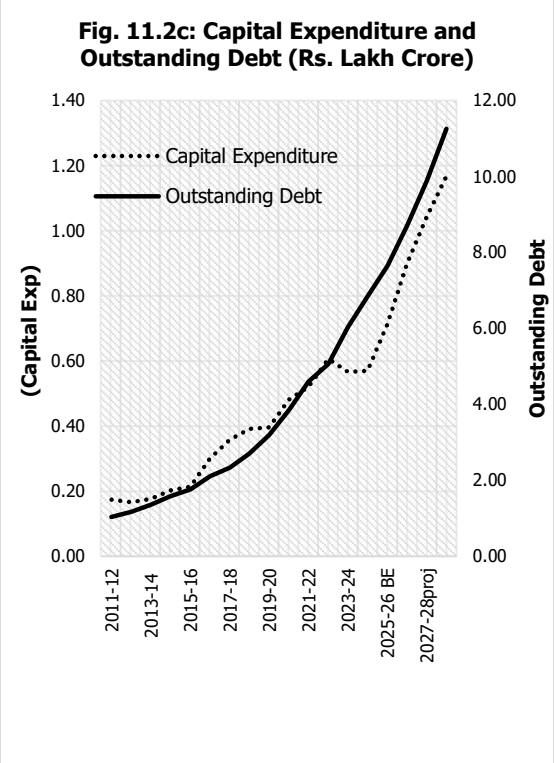
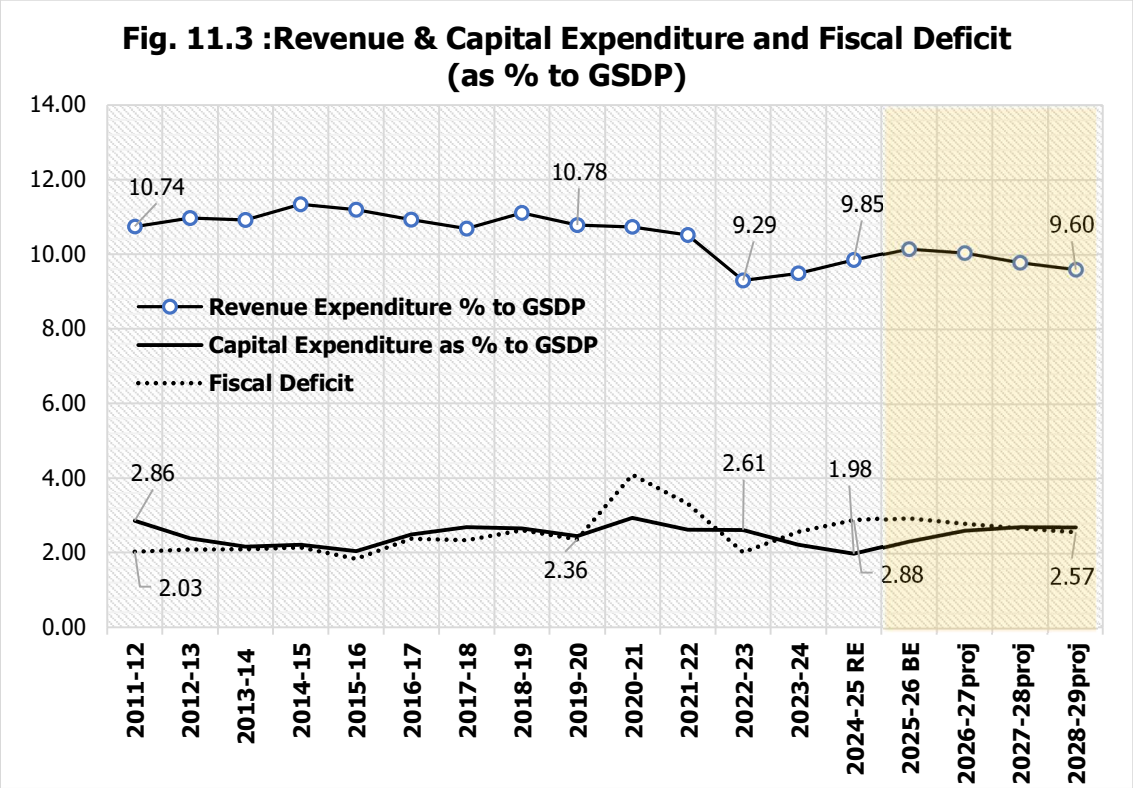


Fig. 11.2a: Revenue and Capital Expenditure of Karnataka State (Rs. Lakh Crore)
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.65
0.17
1.76
0.48
2.43
0.57
2.84
0.57
4.14
1.17
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
2017-18
2018-19
2019-20
2020-21
2021-22
2022-23
2023-24
2024-25 RE
2025-26 BE
2026-27proj
2027-28proj
2028-29proj
Revenue Expenditure
Capital Expenditure





Source: Based on Medium-Term Fiscal Plan (MTFP), Budget Documents, Dept of Finance, GoK



Source: Various Issues of Medium-Term Fiscal Plan (MTFP), Budget Documents, Department of Finance, Government of Karnataka & GSDP estimates from CSO, MOSPI, GoI.

The welfare policy measures have major fiscal implications significantly shaping the state's budgetary obligations. Scheme-based commitments including subsidies, social security pensions, grants-in-aid (GIA), financial assistance, and devolution to local bodies account for one-third of the state's total receipts (Table 11.1). Meanwhile, non-scheme-based committed expenditures such as salaries, interest payments, pensions, and administrative costs have risen sharply, increasing from 34.94% of total receipts in 2011-12 to 54.66% in 2022-23.

With the implementation of five (guarantees) welfare schemes (2023-24) and seventh pay hike for the state employees and pensioners (2024-25 & 2025-26), the state's revenue account has put more fiscal pressure (Fig.11.1; Fig. 11.2b & Table 11.2). The state in its medium-term fiscal plan, however, aimed to bring down its revenue deficit from 0.36% of GSDP in 2023-24 to 0.19% in 2026-27 and achieve revenue surplus of 0.13% by 2028-29 (MTFP, 2025). The obligations on salary, pension expenditures, subsidies and transfers are projected to be in tune with regular inflation with no substantial expansion in existing welfare schemes. Interest payment is expected to increase proportionately to the state's borrowing requirements and outstanding debt obligations.

Table 11.1: Scheme and Non-Scheme Based Committed Expenditure of Karnataka State as per MTFP (in Rs. Crore & Percentages)

Year	**Total Scheme Based Committed Exp**	**Total Non-Scheme Based Committed Exp**	**% SBCE to Revenue Receipts**	**% NSBC Exp to Revenue Receipts**	**Net Borrowing (NB) (Rs. Crore)**	**NB % to revenue Receipts**
2011-12	27567	24379	39.5	**34.92**	-	
2012-13	35414	31591	45.3	**40.41**	11876	15.19
2013-14	42239	36481	47.2	**40.74**	20106	22.45
2014-15	46400	41101	44.6	**39.47**	26018	24.98
2015-16	53919	44594	45.4	**37.53**	19041	16.03
2016-17	54750	46929	41.1	**35.23**	38000	28.53
2017-18	60964	51008	41.5	**34.70**	24417	16.61
2018-19	77573	61812	47.0	**37.47**	39501	23.94
2019-20	79671	71089	45.4	**40.52**	52282	29.80
2020-21	57582	90254	34.0	**53.37**	66000	42.11
2021-22	74879	97150	35.0	**45.42**	56220	28.72
2022-23	69766	116068	32.9	**54.66**	63107	27.55

Source: Based on data from various issues of MTFP reports

Table 11.2: Major Components of Revenue Expenditures of the State (Rs. Crore)

		2023-24	**2024-25 RE**	**2025-26 FE**	**2026-27 proj**	**2027-28 proj**	**2028-29 proj**
1	Salaries	61498	71862	85860	94446	102473	112721
2	Pensions	25738	30907	38580	42438	46045	50650
3	Interest Payment	30826	36634	45600	52440	60306	67543
4	Subsidies #	62899	77412	79925	87918	94512	101128
5	Social Security Pension	10554	10230	10835	12135	13470	15221
6	**Guarantees@**	**34859**	**51770**	**51034**	**53586**	**56265**	**59078**
i)	Gruhalakshmi	16964	28608	28608	30038	31540	33117
ii)	Gruha Jyothi	8900	9657	10100	10605	11135	11692
iii)	Annabhagya	5706	8079	6426	6747	7085	7439
iv)	Shakthi	3200	5015	5300	5565	5843	6135
v)	Yuvanidhi	89	410	600	630	662	695

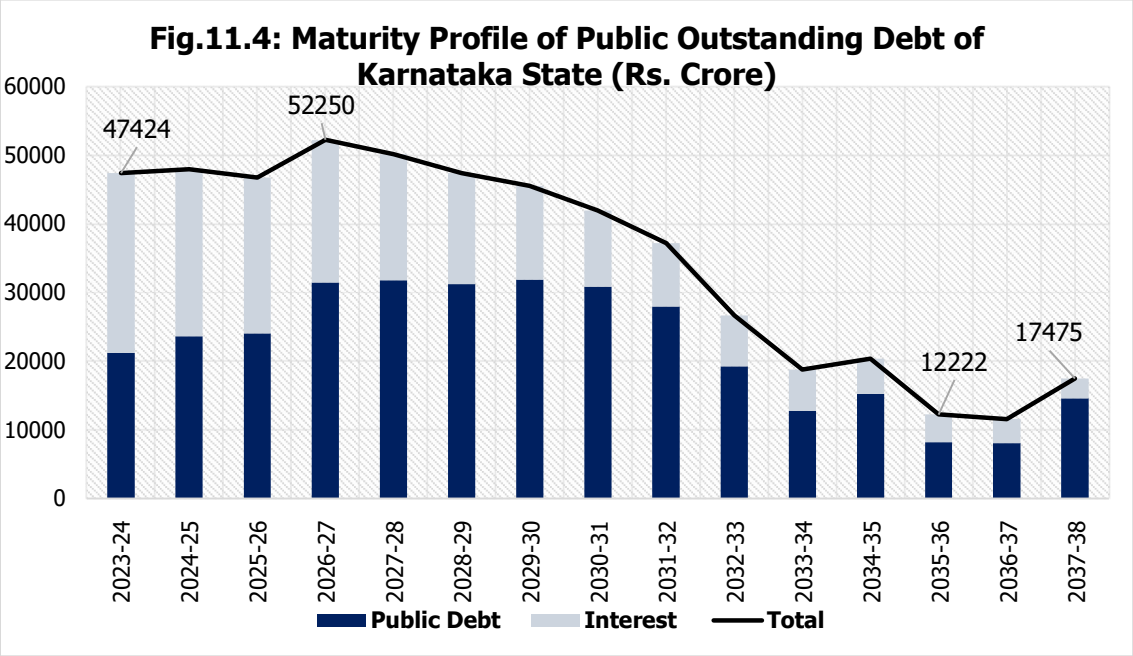
Note: @ projections based on 5% inflation adjusted allocations; Source: MTFP (2025)

The post-COVID slowdown in revenue receipts had temporarily shifted fiscal pressures towards non-scheme commitments. While economic recovery is expected to normalise central transfers and improve the state's fiscal stability, any shortfalls in Karnataka's own tax revenues could exacerbate its debt burden. For example, the pandemic had forced the state to increase borrowing significantly, with outstanding debt reaching 42.11% of total revenue receipts at the crisis peak – a sobering indicator of fiscal vulnerability during economic shocks.

It is important to note that introduction of the Old Pension Scheme (OPS), which is being considered by the state will have a serious implication on state finances. The cumulative fiscal burden of implementing OPS on Karnataka is expected to be four times the outgo towards existing National Pension System (RBI, 2023) and switchingback to OPS, therefore, would be fiscally disastrous for the state's finances in the long-term and would lead to cutting back on welfare and developmental expenditure (MTFP, 2025).

Karnataka's outstanding debt have shown a steady upward trajectory, growing from Rs. 1.03 lakh crore in 2011-12 to Rs. 6.85 lakh crore in 2024-25 (RE). The state's borrowing strategy demonstrates prudent financial stewardship, ensuring borrowed funds channelled into capital expenditures programmes, targeting infrastructure development social welfare initiatives and key economic sectors to foster sustainable growth. The approach underscores Karnataka's commitment to responsible fiscal policies balancing immediate development needs with long-term financial sustainability, however, also face the looming risk of burgeoning debt burden.

Karnataka's debt profile, so far, has been favourable in terms of maintaining debt stability. Approximately 90% of the state's debt consists of long- and medium-term maturities, with the majority being raised through markets. The state's exposure to foreign-currency denominated debt is minimal, and this composition is expected to remain unchanged in the medium term.



Source: Government of Karnataka (2024). State Finance Audit Report of the Comptroller and Auditor General of India for the year ended March 2023. Report No. 1 of the year 2024.

As on March 2023, Karnataka's outstanding public debt exhibits the following maturity structure – about 40.47% (Rs. 1.63 lakh crore) matures within 1-6 years; 27.24 % (Rs. 1.09 lakh crore) falls under maturity bracket of 7-10 years, and 32.3%(Rs.1.3 lakh crore) belongs to the maturity bracket of more than ten years (Fig.11.4). While additional borrowing was essential to meet expenditure obligations, the state needs to take a major initiative towards reduction of committed expenditure, which constitutes a major portion of revenue expenditure. It is important to note that rising debt levels will inevitably increase interest payments, would further strain the fiscal position of the state. During 2023-24 and 2024-25, the repayment of interest has exceeded the principal and in 2025-26 to 2028-29, it would be more than one third of the principal.

The debt-to-GSDP ratio serves as a crucial indicator of fiscal sustainability, measuring the government's total debt burden against its economic output capacity. This metric reflects long-term repayment viability, while interest payments as a share of revenue receipts reveal immediate fiscal stress from debt servicing obligations. Three key factors determine sustainable debt levels – 1) the state's current revenue generation capacity; 2) its projected economic growth trajectory; and 3) prevailing macroeconomic conditions that influence fiscal performance. This assessment framework incorporates critical economic assumptions that shape thestate's fiscal outlook, emphasising the interdependence between debt management, revenue potential, and growth prospects. An increasing debt to GSDP ratio indicates that Karnataka is heading towards unstainable debt (Figs.11.5 & 6). However, thestate appears to be on strong footing as far as its revenue generation capacity and economic growth trajectory. For example, Karnataka's nominal GSDP is expected to grow at 10.87 % (2024-25 to 2030-31) as per the Medium Term Fiscal Plan Report (2025) of the Government of Karnataka. Though this is slightly lower than the trend (ACGR) based growth rate (12.28%) computed based on GSDP of the state during 2011-12 to 2024-25 and the growth rate is higher than the all-India growth rate of GDP, it will certainly allow the state flexibility to borrow and improve debt servicing capacity.

The state, however, faces exposure to fiscal risks from natural disasters, non-repayment of loans by state public sector undertakings (PSUs), particularly power sector units, materialisation of government guarantees, and revenue shortfalls. While these risks could negatively affect debt sustainability, the overall fiscal risk exposure from these factors is considered minimal.

DEBT ROADMAP FOR 2026-31

A sustainable debt roadmap typically includes a comprehensive, long-term plan for managing debt, integrating sustainability criteria into decision-making to account for both short- and long-term impacts of borrowing. To properly assess a country's debt sustainability, it is crucial to consider all

types of debt that could pose risks to public finances. A narrow view of public debt may lead to unexpected challenges,for instance, if a loss-making or financially debt-ridden PSUs or financial institutions cannot service its debt. The state government often assumes this responsibility due to public guarantees and welfare concerns, which can unexpectedly weaken the country's debt sustainability.

New borrowing needs to be aligned with fiscal spending and deficit strategies, ensuring that it is carefully structured to maintain public debt on a sustainable path. This requires an assessment of the state's debt-carrying capacity as well as a comprehensive approach, comparing the returns from borrowing with the costs of accumulating debt. Debt that finances productive investments in social and infrastructure projects can generate higher income, which may offset debt service costs and help mitigate risks to long-term debt sustainability.

Efforts should also be made to improve debt reporting and statistics, particularly within the framework of medium-term debt management strategies.

The KFRA fiscal and debt norms in the regard do provide a pathway to manage state finances by adhering to sustainable public debt.

Table 11.2: Fiscal Consolidation Roadmap of Karnataka

Particulars	Statutory norm
Revenue Deficit (RD)	Reduce RD to Nil by 31 March 2006
Fiscal Deficit (FD)	Reduce FD to not more than 3% of estimated GSDP by 31 March 2006.
Total Liabilities to GSDP (TL/GSDP)	To ensure that TL/GSDP does not exceed 25.2% of GSDP by 31 March 2015.
Outstanding Guarantees (OG)	OG on 1 April of any year should not exceed 80% of Revenue Receipts of second preceding year.

Source: MTFP 2013-2017, Government of Karnataka.

The state has adhered to the above fiscal roadmap with a few exceptions during the COVID-19period. However, when we look at the trend of liabilities and outstanding debt and their ratios to GSDP, Karnataka is most likely to breach the prescribed limit of total liabilities to GSDP ratio (25.2%) during 2026-27 to 2030-31. The Medium-Term Fiscal Plan report (2024) of Karnataka, however, expect to maintain it within prescribed limit with optimistic growth projections of economy (@12% - nominal); revenue mobilisation (11.6%) and rationalisation of expenditures.

Since enactment of Karnataka Guarantee of Ceiling Act, 1999, Outstanding Guarantees as percentage to revenue receipts of presiding second year limit have not been breached (80% Ceiling) and also expected to remain within a prescribed limit for 2026-31.

Approach to the Estimation of Sustainable Debt Roadmap 2026-31

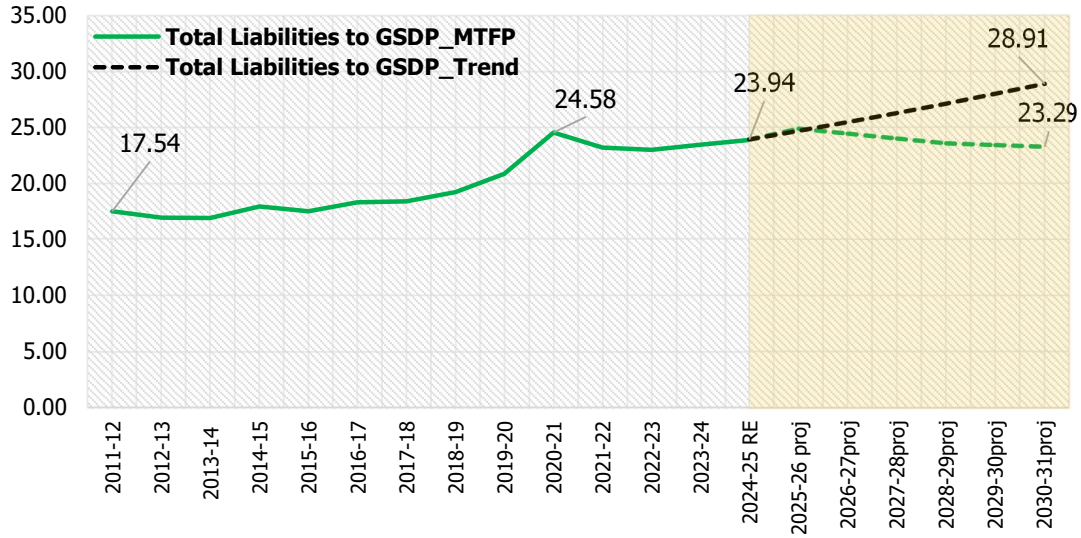
We have relied on the *Medium-Term Fiscal Plan (MTFP)* (Department of Finance, Government of Karnataka) for fiscal data spanning 2011–12 to 2023–24 (actuals), 2024–25 (revised estimates), and 2025–26 to 2028–29 (projections). For the remaining years (2029–30 and 2030–31), we derived estimates by computing growth rates based on MTFP projections from 2024–25 to 2028–29. Additionally, we calculated trend estimates for the period 2011–12 to 2024–25 to establish a baseline for projections up to 2030–31.

The MTFP's fiscal projections highlight the state's commitment to fiscal targets, with proactive measures in place to ensure adherence to prescribed limits. This involves continuous monitoring and adjustment of key fiscal indicators to achieve effective fiscal management goals. In contrast, the trend estimates represent a "business-as-usual" scenario, where projections simply extend historical trends (indicative path) led to achieve long-term state policy objectives. By comparing these two approaches, the projections will help us reveal convergences or divergences from the stated policy objectives—particularly in achieving long-term fiscal sustainability and debt management goals.

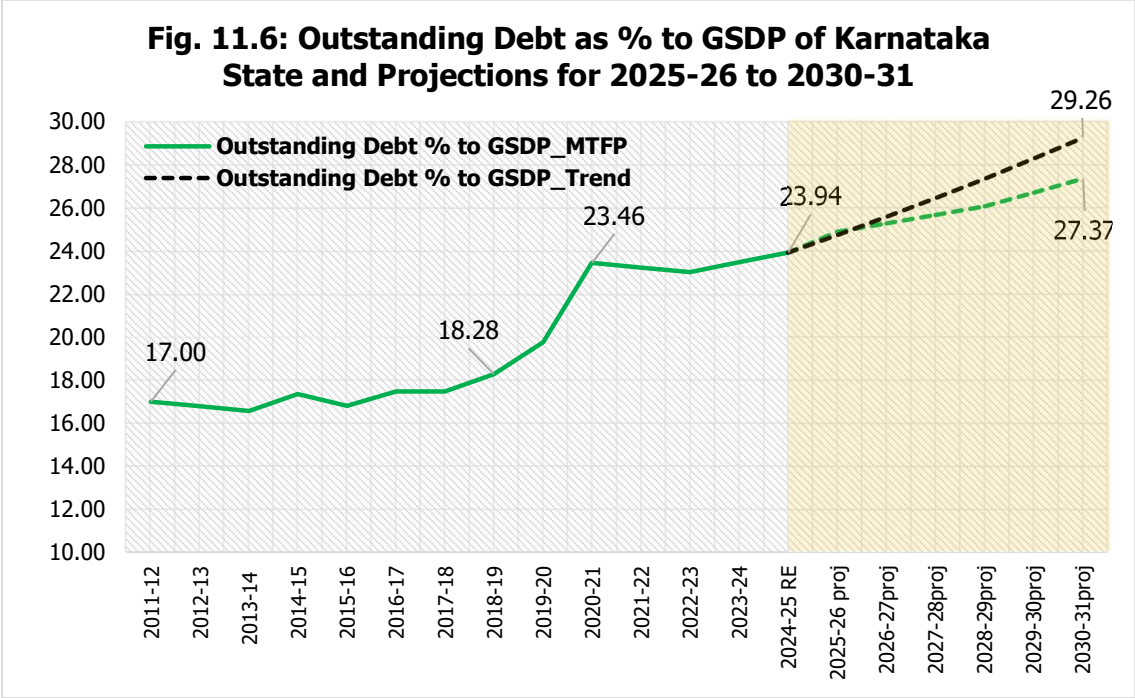
Debt and Debt Serving Ratio to GSDP

A high debt-to-GSDP ratio signifies that debt burden is substantial relative to the state income, exposing the state to financial vulnerability and reduced fiscal flexibility. Elevated debt levels put higher interest payment burden on the state, leaving little fiscal space for essential expenditures such as healthcare and education and new investment. Additionally, high debt may raise borrowing costs (high interest rates bearing fund).

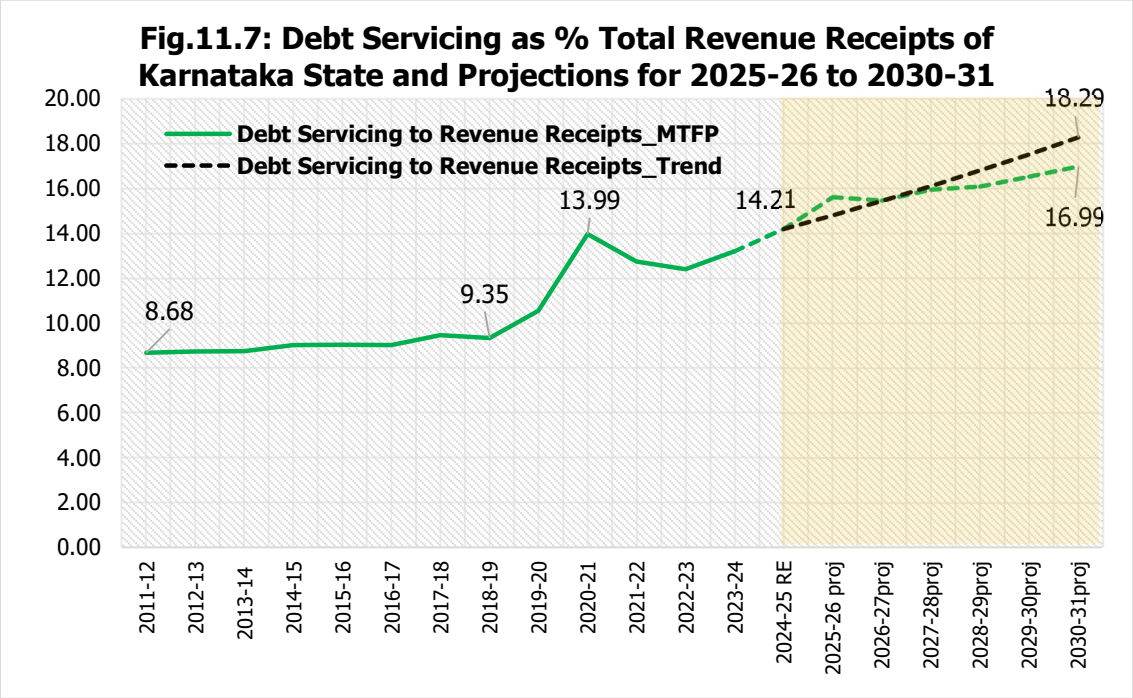
Fig. 11.5: Total Liabilities as % to GSDP of Karnataka State and Projections for 2025-26 to 2030-31

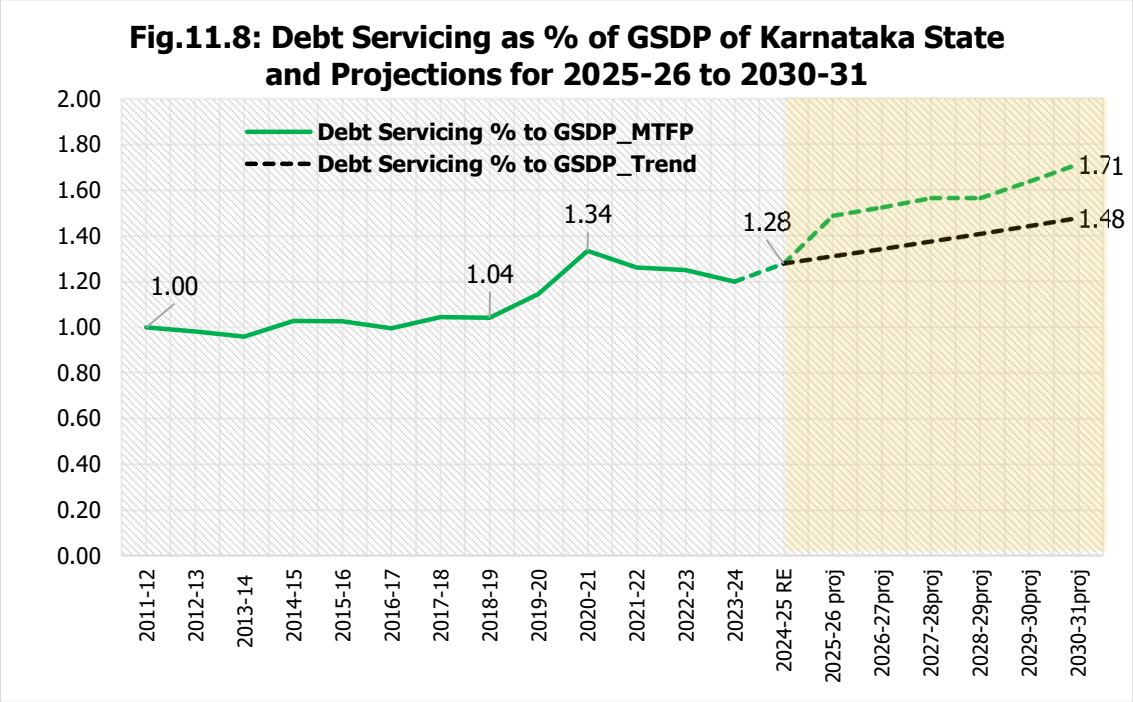


The total liabilities of Karnataka as percentage to GSDP have consistently increased during the period 2011-12 to 2020-21, from 17.54% to 24.58% in the corresponding years (Fig.11.4). During 2021-22 to 2023-24, the ratio has marginally declined (23.24%). According to MTFP, projections for 2026-31 debt to GSDP ration are likely to be below the prescribed limit. The trend projections, however, do not hold such optimistic view, indicating to breach it in 2026-27 and rise to 28.91% in 2030-31. The difference in the growth projections of MTFP and trend is largely on the account of difference in the rate of growth trajectory of the total liabilities. ***MTFP expects the total liabilities to grow at rate of 10.32% much lower than trend growth rate (ACGR 15.79%) as trend estimates includes substantial public debt raised during the pandemic. In fact, total liabilities from 2011-12 to 2019-20 have increased at a much lower rate (12.62%) than during 2011-12 to 2024-25 (15.79%).*** The rising public debt will be concern for the state as it is almost near to its prescribed limit and to maintain the status quo, Karnataka will have to implement debt reduction strategies for the fiscal and financial stability.



Debt servicing (interest payment & repayment of loans) as percentage to revenue receipts and GSDP serves as a crucial component of public debt management. Interest payments as percentage to state's revenue receipts indicates how much fiscal space (primary balance) is left for the state to run the government, invest and carry out welfare programmes. The interest payments as percentage to total receipts of the state, which was around 8.68% in 2011-12, increased marginally high upto 9.35% in 2018-19 and significantly jumped to 13.99% during the COVID-19 pandemic period due to decline in the revenue receipts (Fig.11.6). Thereafter, with a marginal depth in 2021-22 and 2022-23, it remained at an elevated level (2023-24). ***MTFP, expects the interest payment to grow at 16.19 % each year during 2025-26 to 2030-31 due to high maturity of public outstanding debt (see Fig. 11.4).*** This is a little higher than the trend (14.94%) estimate for 2011-12 to 2024-25. The interest payment as percentage to total revenue receipts of the state is therefore likely to increase within a range upto 16.99% to 18.29 % by year 2030-31 from around 14.21% in 2024-25. Debt servicing which claimed around 1% of the state GSDP in 2011-12 has now increased to 1.28% in 2024-25 and is likely to increase further up to 1.48% to 1.71% by 2030-31 (Fig.11.8).





The revenue receipts of the state have registered an impressive growth (10.20%) during 2011-12 to 2024-25 despite some pullback during the post-pandemic period (Fig.11.9). The revenue receipts of the state grew from almost Rs. 70,000 crore (2011-12) to Rs.2.33 lakh crore (2024-25).

Fig.11.9: Revenue Receipts of Karnataka State and Projections for 2025-26 to 2030-31

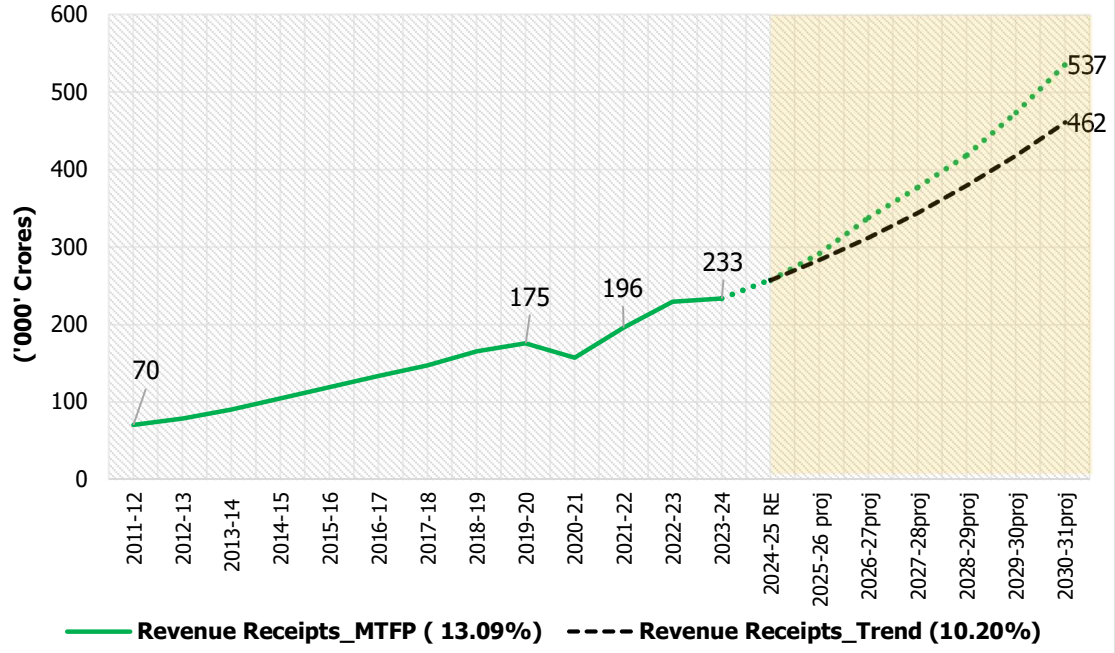
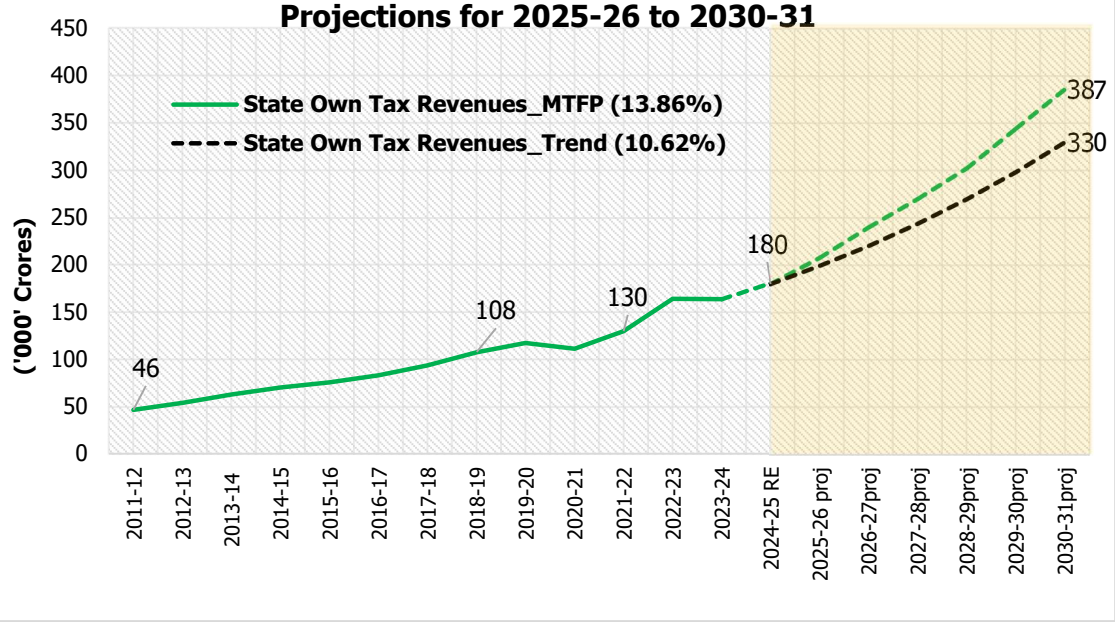
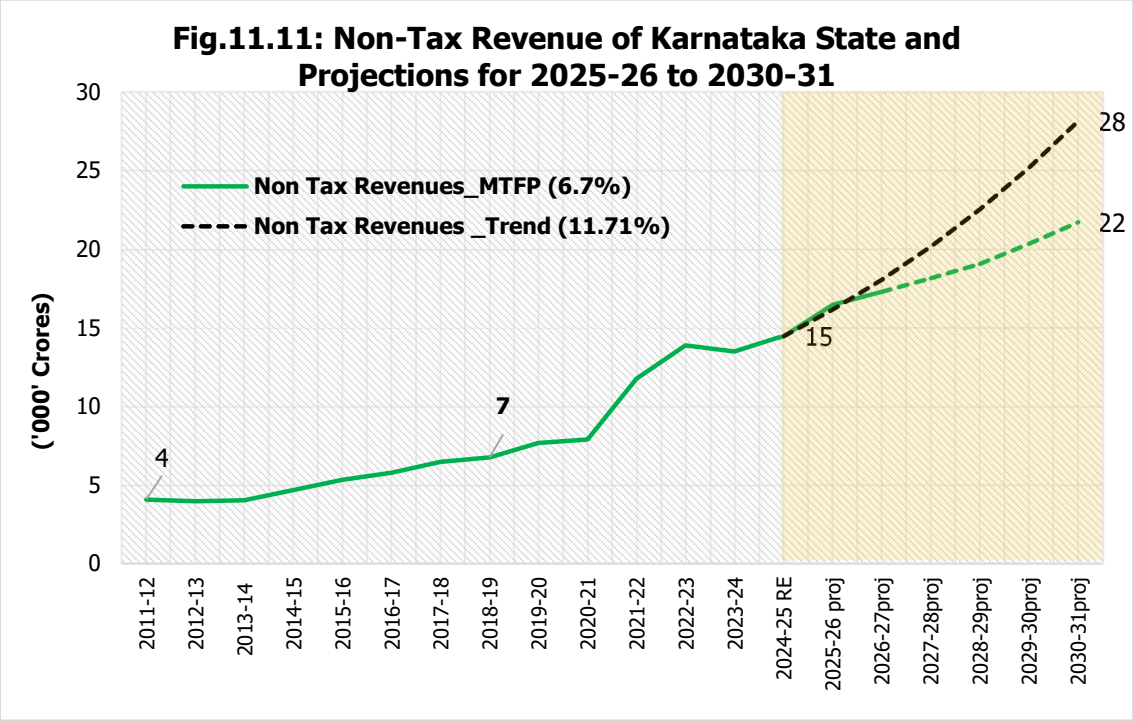
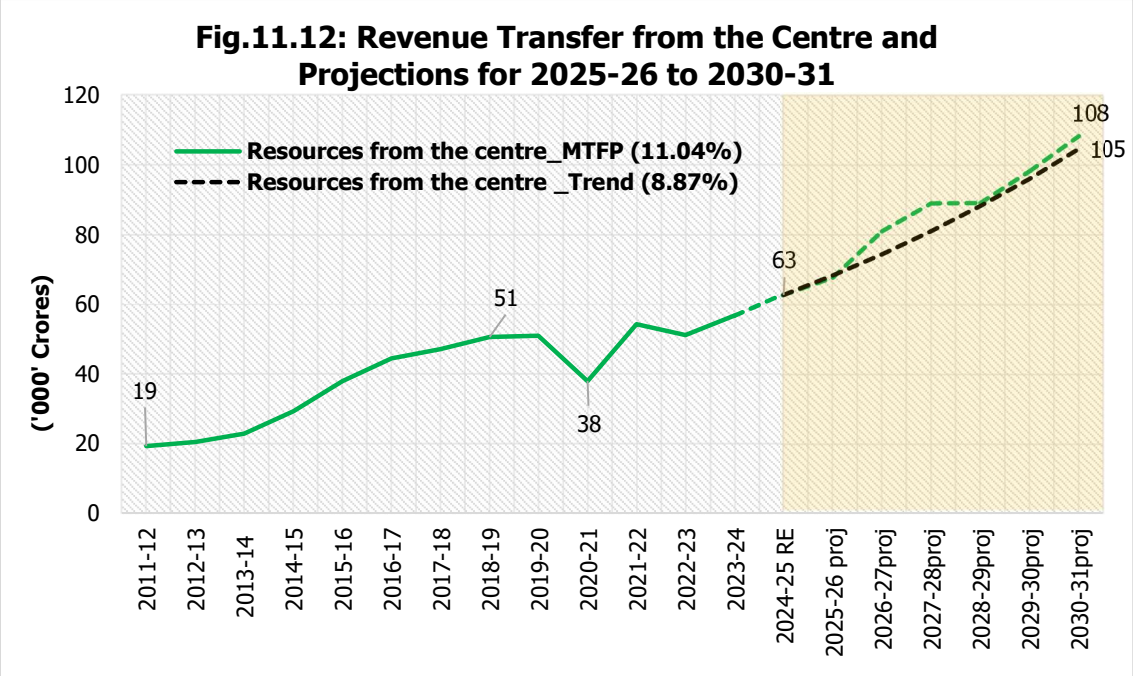


Fig.11.10: State Own Tax Revenue of Karnataka State and Projections for 2025-26 to 2030-31







A significant proportion of the state revenue comes from its own tax and non-tax revenue sources (Fig.11.10 & 11.11). In fact, the revenue receipts of the state were significantly impacted by decline in the transfer for the centre (Fig.11.12) and were compensated through increase in tax and non-tax revenue in post pandemic years. A recovery in the state and national economy with corresponding

increase in the tax revenue of the state and resources from the centre, MTFP appears to be more optimistic about growth in the revenue receipts and major components. The total revenue receipt of the state is expected to increase from Rs. 2.27 lakh crore to Rs. 4.62 lakh crore to Rs. 5.37 lakh crore by 2030-31 with corresponding increase in state own taxes (Rs. 1.61 lakh crore to Rs.3.3 lakh crore or 3.87 lakh crore), non-tax revenue (Rs. 15,000 crore to Rs. 22,000 croreto Rs. 28,000 crore) and transfers from the centre (Rs. 63,000 crore to Rs.1.05 lakh crore to 1.08 lakh crore).

Concluding Remarks

Karnataka has demonstrated commendable fiscal leadership through early adoption of the KFRA (2002) and consistent adherence to FRBM targets. However, the state now faces mounting fiscal pressures from rising committed expenditures, reduced central transfers, implementation of welfare schemes (5 guarantees) and 7th Pay Commission recommendations and growing outstanding public debt. Our analysis reveals a critical divergence in debt projections. Based on trend estimates our findings suggest that Karnataka is most likely to breach the prescribed limit of total liabilities to GSDP ratio (25.2%) during 2026-27 to 2030-31. The Medium-Term Fiscal Plan report (2024) of Karnataka, nonetheless, is expected to maintain it within prescribed limit with optimistic growth projections of economy, revenue mobilisation and rationalisation of expenditures.

The COVID pandemic caused a significant debt and debt servicing burden on the state revenue. It likely is grow at 16.19 % each year during 2025-26 to 2030-31 due to high maturity of public outstanding debt in the corresponding period. Debt profile of the state has so far been favourable in maintaining debt stability. Approximately 90% of the state’s debt consists of long-and medium-term maturities. Higher burden of subsidies and committed transfers for welfare programme, increasing burden of loans of public power undertakings, and revenue shortfalls pose fiscal risks to the state finances. However, minimal, could negatively affect debt sustainability. Any shortfall in the revenue receipts of the state will have serious implication on its public debt. However, the higher rate of growth rate provide flexibility to the state to borrow and improve debt servicing capacity.

While Karnataka's robust economic trajectory provides debt servicing flexibility, maintaining fiscal sustainability will require strict adherence to MTFP's growth and revenue assumptions; contingency planning for revenue shortfalls; continued prudent debt management; and balanced approach to welfare spending. The state's institutional framework positions it well to navigate these challenges, but sustained fiscal discipline remains imperative to avoid breaching debt sustainability thresholds.

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