Analysis of Fiscal Indicators of Kerala

Prepared for the 15th Finance Commission

By

R. Mohan
Visiting Fellow
Centre for Development Studies
Thiruvananthapuram

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Highlights

The objective of the study is to analyse the past trends in fiscal indicators of Kerala (from 2000-01 to 2018-19) in order to make future projections and lay down a road map for a fiscal consolidation path for Kerala during 2020-21 to 2024-25. The data sources used for this study are from Finance Accounts published by Comptroller and Auditor General (C& AG), Budget documents of the State government and various issues of 'State Finances : A Study of the Budgets' published by Reserve Bank of India, The highlights of the findings are briefly discussed in the following paragraphs.

The study analyses the major fiscal indicators of Kerala for the period 2000-01 to 2018-19. Kerala, along with all other States, faced enlarged fiscal and revenue deficits during the latter half of the 1990s. The fiscal correction path embarked through expenditure contraction in the early 2000s was not successful in Kerala. But the State moved toward fiscal consolidation during 2016-17 to 2012-13 through robust growth of one tax revenue. The high own tax revenue growth sharply decelerated since 2013-14, during which the growth rate hovered around at less than 10 percent per annum as against 18-19 percent during the earlier period. The revenue expenditure has been downwardly inflexible and revenue and fiscal deficits have been rising since 2013-14. In the latest budget (2018-19), the government has announced renewed efforts at fiscal consolidation by rationalising expenditure and aiming at higher own tax revenue growth rate. The initial response from Goods and Services Tax (GST) has however not been encouraging, but it is expected to improve, after problems of implementation and transition are resolved.

The study finds that though the targets for revenue and fiscal deficits as per the Fiscal Responsibility and Budget Management (FRBM) Act and the Medium Term Fiscal Policy (MTFP) Statement have not been achieved, major fiscal indicators show a movement towards consolidation. But the high proportion of revenue deficit (RD) to fiscal deficit (FD) at more than 60 percent is impeding capital expenditure.

The interest payment – revenue receipts ratio has come down to 234 as per 2018-19 BE from 324 during 2004-05. The cost of borrowing has also declined and the share of low cost market borrowings has gone up from 17.49 percent during 2000-01 to 57.25 percent during 2018-19 BE. Statistically, the revenue receipts and revenue expenditure is co integrated at their logarithmic first differences and the debt is stationary at logarithmic first difference. The gap between GSDP and nominal interest rate growth has been positive, though narrowing down.

The study visualises a path for revenue consolidation in Table 4.5 .This would require own tax revenue growth at 15 percent per annum and revenue expenditure growth returning to its long run median growth rate of 13.88 percent. The over all revenue receipts would have to grow at 17 -17.5 percent and this would require growth in central devolution. As per this path, RD should almost come to nil and entire borrowed find should be utilised for capital expenditure. The consequence of the consolidation in revenue account would be reduction and stabilisation of Borrowings and Liabilities to GSDP ratio.

The Borrowings and Liabilities to GSDP ratio is proposed to be brought down to around 28 percent by 2024-25 from the present 30.5 percent, assuming an annual growth rate of 11.5 percent in GSDP. If the growth rate of GSDP rises, the Borrowings and Liabilities to GSDP ratio can further come down. However, aiming at a sharper reduction in the short run would adversely affect the capital expenditure of the State.

The study also analyses the trends in subsidies and performance of public sector undertakings and suggests limiting explicit and implicit subsidies to 1-1.25 percent of GSDP by 2024-25. It also suggests the need for updating audit of the balance sheets of the Public Sector Units and their adhering to a plan for working profitably and efficiently.

It needs special mention that in the this report, the additional fiscal burden due to impact of unprecedented floods of July-August 2018 has not been factored in. The sector wise impact of the additional revenue and capital expenditure would have to be obtained from the State government, as these are not yet officially available in published sources. Based on official figures of the damages and expenditure required for rebuilding in the wake of the unprecedented natural disaster of 2018, the fiscal consolidation targets would have to be reconsidered.

Experts from UNDP in their Post Disaster Need Assessment (PDNA) has estimated the loss to Kerala's GSDP at ₹ 31000 crore. This would impose a heavy cost of relief, rehabilitation and rebuild. Besides, the state's own tax revenue would also slowdown in 2018-19. How far the additional expenditure commitments would burden the State finances is difficult to estimate now, but the cost of rebuilding would put substantial pressure on revenue and capital expenditure during the next three years. The State has requested the Centre for a special package as well as for relaxing the borrowing limit to 4.5 percent from 3 percent of GSDP for 2018-19.

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Chapter 1
Brief Survey of State Finances and Economy of Kerala

Kerala's fiscal scenario at present can be described as one which is sought to be put on a path of fiscal consolidation through renewed efforts. Along with all the Indian States, Kerala also faced increasing revenue and FDs during the latter half of the 1990s. Attempts to reduce these deficits, through temporary expenditure control measures during the early 2000s met with stiff resistance from various sections of the society. However, the State could embark on a path of revenue - led fiscal consolidation and bring all the major deficit indicators down during the second half of the first decade of the 2000s. But this received a setback, since 2013-14, when the State's own tax revenue grew at a significantly lower rate, while the growth rate of revenue expenditure has been downwardly inflexible. The one - time reduction in growth rate of revenue expenditure during 2015-16 made possible by postponement of committed revenue expenditure arising from State Pay Commission recommendations resulted in additional fiscal stress in the immediately following financial year, 2016-17. The initial impact of Goods and Services Tax (GST),p during 2017-18, has not been very encouraging, but the State expects gains in the own tax revenue front, once the implementation of GST stabilises. At present, the State is attempting the task of a renewed fiscal consolidation, as can be seen from Kerala Budget, 2018-19 and the Medium Term Fiscal Policy (MTFP) Statement, 2018. This is to be achieved by increase in revenue collections and rationalisation of expenditure.

Here, it needs special mention that the State was ravaged by heavy floods in August 16-18, 2018. The Central Water Commission (CWC) in its report "Kerala Floods of August 2018" has stated that:

"*Kerala experienced an abnormally high rainfall from 1 June 2018 to 19 August 2018. This resulted in severe flooding in 13 out of 14 districts in the State. As per IMD data, Kerala received 2346.6 mm of rainfall from 1 June 2018 to 19 August 2018 in contrast to an expected 1649.5 mm of rainfall. This rainfall was about 42% above the normal. Further, the rainfall over Kerala during June, July and 1st to 19th of August was 15%, 18% and 164% respectively, above normal.*"

In this study, the additional burden due to flood impact is not factored in. The sector wise impact of the additional revenue and capital expenditure would have to be obtained from the State government, as these are not yet officially available in published sources. Based on official figures of the damages and expenditure required for rebuilding in the wake of the unprecedented natural disaster of 2018, the fiscal consolidation targets would have to be reconsidered.

Experts from UNDP in their Post Disaster Need Assessment (PDNA) has estimated the loss to Kerala's GSDP at ₹ 31000 crore. This would impose a heavy cost of relief, rehabilitation and rebuild. Besides, the state's own tax revenue would also slowdown in 2018-19. How far the additional expenditure commitments would burden the State finances is difficult to estimate now, but the cost of rebuilding would put substantial pressure on revenue and capital expenditure during the next three years. The State has requested the Centre for a special package as well as for relaxing the borrowing limit to 4.5 percent from 3 percent of GSDP for 2018-19.

The period of analysis is from 2000-01 to 2018-19. The figures for the last two financial years are Revised and Budget Estimates. For statistical tests on relationship between revenue receipts and expenditure and analysis of underlying trends, a longer period of 30 years is taken. Based on the findings of this analysis, we make projections for receipts, expenditure, deficits and borrowings and liabilities for the period 2020-21 to 2024-25

The award of the 14th Finance Commission resulted in the increase of divisible pool of the Union taxes shareable with the States from 32 to 42 percent with Kerala's inter-se share going up to 2.5 percent from 2.34 percent. Besides, the flexible part of central transfers increased as against the tied part[1]. But the States also got lower central share at 60 percent as against previous 75 percent, in many Centrally Sponsored Schemes (CSS), classified as 'core schemes[2] and also stopped getting plan grants (Gadgil formula grants) since 2015-16. There has also been a slowdown in growth rate of own tax revenue and in the economy. Even in the face of these trends, the State has to maintain spending in social and economic sectors, in which a substantial portion is revenue in nature. Due to the factors mentioned above, the State is facing strain in meeting fiscal consolidation targets. The damages caused by the floods of an unprecedented scale in July-August 2018 and need to rebuild has placed additional stress on State finances (for non-availability of official data we do not factor in the fiscal cost of the rebuilding efforts)., we analyse the fiscal indicators of Kerala during the period 2000-01 to 2018-19 and make projections for the future till 2024-25 in the following parts of this. study.

Table 1.1: Kerala GSDP and all India GDP Growth Rates -2012-13 to 2015-16 (%)

Year	Primary	Secondary	Tertiary	Construction Sector	GSVA(GVA)	GSDP (GDP)
2012-13	3.80 (11.23)	10.22 (11.1)	17.42 (15.98)	4.43 (9.02)	13.38 (13.5)	13.26 (13.82)
2013-14	11.29 (13.32)	9.27 (9.8)	14.30 (13.94)	16.10 (8.46)	12.54 (12.6)	12.79 (12.92)

[1] The part of the central resources which the State can use completely according to its own priorities is the flexible part and the part of Central resources which is transferred for specific purposes and with conditions is the tied part. Tax Devolution and RD grants are flexible components and other Central transfers constitute the tied part.

[2] After restructuring of the CSS, they have been classified into core of core, core and optional schemes. In core of core, Central share is 90 percent. Most of the schemes are in core and Central share is 60 percent.

2014-15	14.17 (7.24)	6.53 (8.8)	10.46 (13.38)	8.97 (6.38)	9.95 (10.8)	10.22 (10.79)
2015-16	-5.52 (3.72)	5.10 (7.7)	10.09 (10.87)	0.95 (2.29)	6.61 (8.5)	8.59 (9.94)

Source: Central Statistics Office, mospi.gov.in (within parentheses are all India figures).

Before proceeding to analyse the fiscal indicators, a look at the general economic trends would reveal that there is slowdown in growth rate of the State economy during the period since 2013-14. (Table 1.1) Its growth rate during 2015-16 has fallen below the all India growth rates. The impact of slowdown has been marked in the construction sector, which is a major base of commodity tax revenue in Kerala. The trends of slowdown in Kerala economy has been across all the sectors. The figures for 2016-17 (Revised Estimates) for Kerala economy indicates a nominal GSDP growth rate of 10.71 percent which is below the 13-14 percent growth during the period 2006-07 to 2012-13. In the VAT revenue of the State, around 40 percent is from supply of goods relating to activities in the construction sector. The considerable slowdown in this sector has adversely impacted the growth rate of own tax revenue of the State.

Chapter 2
Trends in Kerala's Fiscal Indicators – An Overview

Kerala had legislated its Fiscal Responsibility and Budget Management (FRBM) Act in 2003. It has since been amended twice, in 2011 and 2018 respectively. The FRBM Act, targeted to achieve zero RD and FD at 3 percent of Gross State Domestic Product (GSDP) by 2014-15. As per the budget actuals till 2016-17, the State could not reach these targets. Though the movement of major fiscal indicators over a period of two decades has been towards fiscal consolidation, the achievements have fallen short of targets. The time frame for eliminating RDs and containing FD at 3 percent of GSDP has been revised to 2017-18 - 2019-20 in the amendment in 2018. The debt of the Government is targeted to be contained at 30.40, 30.01 and 29.67 percent of GSDP for 2017-18, 2018-19 and 2019-20 respectively. The relevant parts of the amendment are reproduced below:

:"……*the Governrnent shall elirninate the RD completely during the period from 20l7-2018 to 2019-20and shall,--*

(a) build up surplus amount of revenue and utiiise such amount for discharging liabilities in excess of assets;

(b) maintain the FD to 3 per cent of, the Gross State Domestic Product during the period from 2017-2018 to 2019-2020"

To carry out these objectives, the State government, has projected revenues to grow at 20 percent per annum and announced measures to rationalise revenue expenditure in the budget 2018-19.The government also is planning to raise non - tax revenue from the services rendered by it in stages. These will be discussed later in this study. Given these objectives of the State Government, let us look at some of these indicators which reflect the movement towards fiscal consolidation, though they have fallen below the targets.

2.1 Trends in Components of FD

The FD (FD) is borrowings during a financial year to cover the gap between total receipts and expenditure. This includes revenue and capital receipts and expenditure. In other words, components of FD are RD (RD), Capital Outlay (CO) and Net Lendings (NL), implying the gap between revenue receipts and revenue expenditure, investment by government in physical capital outlay and on - lendings by government for investment in physical capital respectively. A rising share of Capital Outlay and Net Lendings is generally considered as reflecting improvement in quality of utilisation of borrowed funds, as they are not used for current expenditure, which is classified as revenue expenditure[3].

It can be seen from Table 2.1 and Figure 2.1 that the share of RD in FD is coming down and that of Capital Outlay going up since 2014-15. This implies that the proportion of borrowings in a financial year utilised for meeting current expenditure is declining. But, it is still more than 50 percent (Table 2.1).

Table 2.1: Components of FD – 2000-01 to 2018-19 BE (%)

Year	RD/FD	CO/FD	NL/FD	RD/GSDP	FD/GSDP	PD/GSDP
2000-01	80.98	15.03	4.79	3.96	4.88	2.01
2001-02	79.72	17.07	4.89	3.09	3.88	0.93
2002-03	82.55	14.01	5.01	4.38	5.31	2.17
2003-04	66.46	11.55	23.31	3.52	5.30	2.11
2004-05	82.41	17.00	4.40	3.08	3.73	0.70
2005-06	74.82	19.54	6.86	2.29	3.06	0.28
2006-07	69.02	23.63	9.13	1.72	2.49	-0.24
2007-08	62.05	24.18	14.64	2.16	3.48	1.01
2008-09	58.49	26.73	15.51	1.83	3.13	0.83
2009-10	63.81	26.16	11.13	2.16	3.39	1.11
2010-11	47.53	43.52	9.84	1.39	2.93	0.77
2011-12	62.70	30.07	7.80	2.21	3.52	1.79
2012-13	62.33	30.68	7.57	2.27	3.64	1.89
2013-14	66.74	25.34	8.64	2.43	3.64	1.87
2014-15	74.00	22.82	3.99	2.69	3.64	1.73
2015-16	54.20	42.09	4.73	1.73	3.19	1.20
2016-17	58.55	38.29	4.39	2.51	4.29	2.32
2017-18 RE	57.43	38.06	5.87	1.91	3.32	1.34
2018-19 BE	53.68	43.12	4.60	1.68	3.13	1.18

Source: Budget Documents, Government of Kerala.

It can be clearly seen that during 2003-04 to 2010-11, a movement towards reduction in deficits has taken place. The slippage occurred since 2011-12 and has continued till 2016-17. But 2016-17, was an abnormal year affected by the shock of demonetisation and a burden of implementation of the quinquennial Pay Revision which was awarded in 2014, but delayed in implementation. The State is seen returning to fiscal consolidation since 2017-18, as reflected by lower RD,FD and primary deficit (PD) to GSDP ratios.

But, the State is lagging behind other Non- Special category States in containing major deficit ratios (Table 2.1A). The RD component of FD as well as primary deficit is higher. But the State has made clear the objective to bring FD to GSDP ratio to 3 percent by 2019-20. Though Kerala has signed the agreement for Ujwal Discom Assurance Yojana (UDAY) in 2017, no borrowing under this has been made so far. Hence, there has so far been no impact on FD due to this.

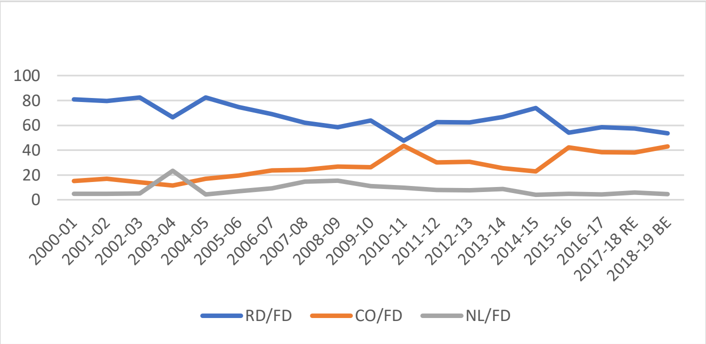
[3] In this, revenue expenditure in health and education sectors, which are important for human capital formation, is not considered as productive expenditure. The Centre's Medium Term Fiscal Policy (2018), mentions this and taken the decision to do away with RDs as an operational target.

Table 2.1A Deficit Indicators Kerala and Non-Special Category States

Year	FD-GSDP (%)	RD-GSDP(%)	PD-GSDP(%)
2014-15	2.7 (3.64)	0.4 (2.69)	1.1 (1.75)
2015-16	3.3 (3.19)	0.1 (1.73)	1.7 (1.20)
2016-17	3.7 (4.29)	0.4 (2.51)	2.0 (2.31)
2017-18 (RE)	2.9 (3.32)	0.4 (1.91)	1.1 (1.34)
2018-19 (BE)	2.6 (3.13)	0.0 (1.68)	0.9 (1.18)

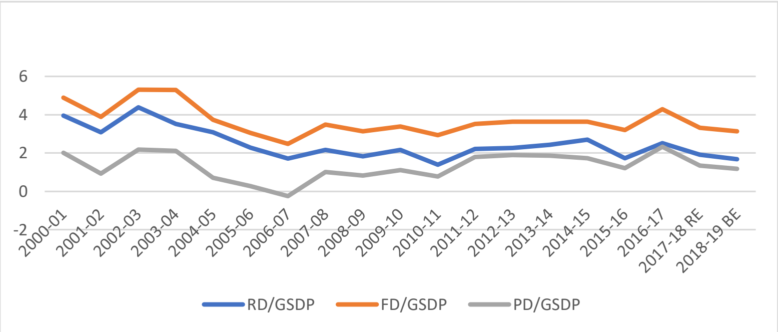
Source: Budget Documents, Government of Kerala & State Finances: A Study of Budgets, 2018, Reserve Bank of India.

Figure 2.1: Components of FD- 2000-01 to 2018-19 BE



Source: Table 2.1

Figure 2.2 Trends of Fiscal, Revenue and Primary Deficit as a ratio of GSDP (2000-01 to 2018-19 BE



Source: Table 2.1.

2.2 Debt Stress – Ratio of Borrowings and Liabilities to Revenue Receipts

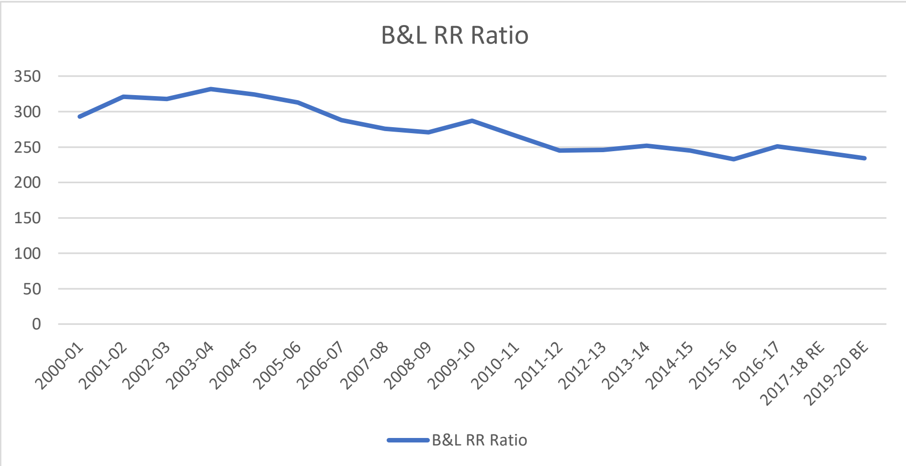
A common indicator to analyse debt stress is the ratio of outstanding borrowings and liabilities to revenue receipts (which is the total of own tax revenue, own non - tax revenue, central tax devolution and central grants) during a financial year. A declining ratio is an indicator of movement towards fiscal consolidation. During the period, 2006-07 to 2018-19, this ratio has been falling for Kerala (Table 2.2 and Figure 2.3).

Table 2.2: Ratios of Borrowings and Liabilities to Revenue Receipts -2000-01 to 2018-19 BE (%)

Year	B&L RR Ratio
2000-01	293
2001-02	321
2002-03	318
2003-04	332
2004-05	324
2005-06	313
2006-07	288
2007-08	276
2008-09	271
2009-10	287
2010-11	266
2011-12	245
2012-13	246
2013-14	252
2014-15	245
2015-16	233
2016-17	251
2017-18 RE	243
2019-20 BE	234

Source: Budget Documents, Government of Kerala.

Figure 2.3: Ratios of Borrowings and Liabilities to Revenue Receipts (%)



Source: Table 2.2.

Though this indicator has been moving towards fiscal consolidation, it needs to be taken note of that Kerala could not meet the deficit targets (that is, zero RD and FD– GSDP ratio of 3 percent), by 2014-15[4], as suggested by the 13th Finance Commission. To find out the reasons for the slowdown in the pace of fiscal consolidation, it is necessary to look at the trends in various components of receipts and expenditure, which is done in the following two chapters of this study.

[4] It is also not likely to meet the amended FRBM targets (2018 amendment) by 2019-20, as can be seen from the MTFP Statement, 2018, in which RD/ GSDP ratio is projected at 1.51 and 1.33 percent for 2019-20 and 2020-21 respectively. But the FD/GSDP ratio is projected at 3.01 and 2.91 percent for 2019-20 and 2020-22, which is within the revised FRBM targets.

Chapter 3
Revenue Receipts -Trends and Projections

Revenue Receipts of the State comprise own tax revenue, own Non - Tax revenue, central tax devolution and central grants. Before analysing the trends in the components, let us look at how the share of the components of revenue receipts during 2000-01to 2018-19 (Table 3.1 and Figure 3.1).

The share of own tax revenue has fallen since 2015-16, when compared to earlier periods, while that of own non - tax revenues and central taxes has been rising. The share of central taxes has gone up since 2015-16, after the enhanced share of the States in the divisible pool of Union taxes, consequent to the recommendations of the 14th Finance Commission. The increase in share of central grants during 2014-15, is due to the change in method of grant disbursement. Since 2014-15, Central share in CSS is routed through the State budgets instead of to the implementing agencies directly, as was done prior to 2014-15[5]. But there is a fall in share of central grants since 2014-15. Despite its falling share, own tax revenue continues to be the major component of revenue receipts.

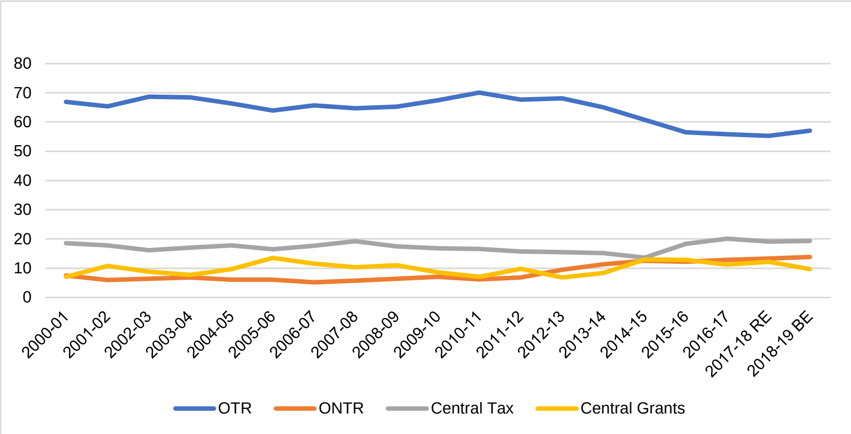
Table 3.1: Share of Components of Revenue Receipts – 2000-01 to 2018-19 BE

Year	OTR	ONTR	Central Tax	Central Grants
2000-01	66.94	7.52	18.52	7.02
2001-02	65.40	6.00	17.82	10.77
2002-03	68.68	6.38	16.13	8.82
2003-04	68.42	6.83	17.09	7.68
2004-05	66.40	6.07	17.81	9.73
2005-06	63.94	6.13	16.46	13.47
2006-07	65.66	5.16	17.66	11.52
2007-08	64.76	5.73	19.20	10.31
2008-09	65.23	6.36	17.44	10.96
2009-10	67.51	7.09	16.85	8.55
2010-11	70.09	6.23	16.59	7.09
2011-12	67.66	6.82	15.76	9.76
2012-13	68.14	9.51	15.50	6.85
2013-14	65.06	11.34	15.19	8.41
2014-15	60.79	12.57	13.68	12.96
2015-16	56.49	12.20	18.38	12.92
2016-17	55.78	12.83	20.14	11.25
2017-18 RE	55.31	13.29	19.14	12.26
2018-19 BE	56.99	13.88	19.39	9.74

Source: Budget Documents, Government of Kerala.

[5] Even after 2014-15, a part of the central share of CSS is being given directly to implementation agencies, as pointed out by C&AG Report on Kerala State Finances.

Figure 3.1: Components of Revenue Receipts- 2000-01 to 2018-19 BE



Source: Table 3.1.

3.2 Trends in Own tax revenues

The components of own tax revenue, which is the largest component in revenue receipts of the State, are Sales Tax/ VAT/GST, Motor Vehicles Tax, State Excise Duty, Stamp Duty and Registration fees, Electricity Duty and other minor taxes. The General Sales Tax levied on commodities other than petroleum products and alcoholic liquor for human consumption was subsumed into Value Added Tax (VAT) on intra - State trade of commodities from 2005-06. Since 1st July, 2017, the goods and services, other than alcoholic liquor for human consumption are levied with Goods and Services Tax (GST) in accordance with Article 366 (12A) of the Constitution. For the present, Sales Tax on petroleum products, Stamp Duty and Registration fees and Electricity Duty are also outside the GST. Before proceeding to analyse the trends in each of the components, let us look at the shares of these in own tax revenues (Table 3.2 and Figure 3.2).

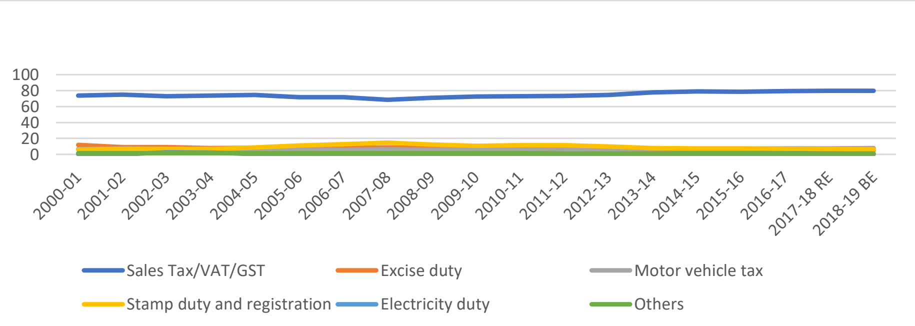
Table 3.2: Shares of Components of Own tax revenue -2000-01 to 2018-19 BE

Year	Sales Tax/VAT/GST	Excise Duty	Motor Vehicle Tax	Stamp Duty and Registration	Electricity Duty	Others
2000-01	74.00	11.74	6.73	5.81	0.26	1.47
2001-02	74.98	9.13	7.63	6.65	0.08	1.50
2002-03	73.16	9.08	7.02	6.67	2.64	1.42
2003-04	74.06	8.11	7.24	6.80	2.35	1.43
2004-05	74.75	8.32	6.80	8.65	0.11	1.36
2005-06	71.97	8.60	6.43	11.26	0.33	1.41
2006-07	71.70	7.98	5.93	12.73	0.27	1.39
2007-08	68.56	8.55	6.24	14.84	0.29	1.52
2008-09	71.15	8.74	5.86	12.53	0.35	1.37
2009-10	72.46	8.60	6.42	10.76	0.14	1.63
2010-11	72.89	7.83	6.13	11.75	0.10	1.31
2011-12	73.64	7.32	6.17	11.61	0.08	1.17
2012-13	74.84	7.69	6.40	9.77	0.08	1.21
2013-14	77.78	6.07	6.75	8.10	0.13	1.16
2014-15	79.23	5.05	6.71	7.55	0.14	1.46
2015-16	78.82	5.04	7.22	7.38	0.15	1.55
2016-17	79.32	4.79	7.37	7.13	0.15	1.40
2017-18 RE	79.76	4.62	7.70	6.82	0.25	1.10
2018-19 BE	79.86	4.79	7.99	6.43	0.32	0.93

Source: Budget Documents, Government of Kerala.

The share of the main component, Sales Tax, VAT/GST has risen since 2015-16, while that of Excise Duty has fallen. The share of Motor Vehicle Tax has increased and it is the second largest component since 2015-16. The share of Stamp Duty and Registration fees which was in double-digit during 2005-06 to 2011-12 has fallen continuously since 2012-13.

Figure 3.2: Shares of Components of Own tax revenue- 2000-01 to 2018-19BE



Source: Budget Documents, Government of Kerala.

3.2.1 Trends in Sales Tax/VAT/GST

When we look at the share of VAT and other components of commodity taxes, namely, Sales Tax on petroleum products, alcoholic liquor for human consumption and Central Sales Tax (CST) from 2000-01 to 2016-17, it is seen that the share of VAT has become more than that of the latter since 2007-08.

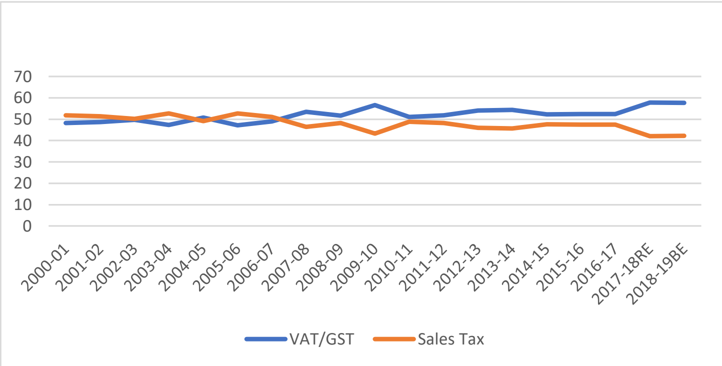
Table 3.3: VAT/ GST and Other Commodity Taxes -2000-01 to 2018-19 BE

Year	VAT/GST (₹ crore)	NON-VAT/GST (₹ crore)	VAT- GST / NON-VAT-GST Ratio
2000-01	1923	2065	93
2001-02	2033	2147	95
2002-03	2481	2506	99
2003-04	2502	2789	90
2004-05	3224	3116	103
2005-06	3095	3456	90
2006-07	4189	4374	96
2007-08	5014	4358	115
2008-09	5881	5496	107
2009-10	7235	5536	131
2010-11	8097	7736	105
2011-12	9803	9136	107
2012-13	12171	10340	118
2013-14	13513	11372	119
2014-15	14605	13303	110
2015-16	16131	14605	110
2016-17	17563	15890	111

2017-18RE	22527	16405	137
2018-19BE	27000	19791	136

Source: Finance Accounts, C&AG, www.keralataxes.gov.in
Note For 2017-18 RE, ₹ 6337 crore is from VAT and ₹16200 crore is from GST.
For 2018-19 BE, ₹ 27000 crore is GST.

Figure 3.3: Share of VAT/GST and Others in Commodity Taxes



Source: Table 3.3.

As can be seen from Table 3.4, there is a slowdown in the growth of the commodity taxes, the largest component of the own tax revenue. Since 2006-07, there had been robust growth in the revenues from commodity taxes till 2012-13. Subsequently, the growth rates fell till 2016-17. After implementation of GST, the State is assured of 14 percent growth rate per annum with 2015-16, as the base, for a period of 5 years from 2017-18.

The fast growth rate of commodity taxes after implementation of VAT was made possible by proactive administrative reforms and changing of enforcement strategies by the Government. Software, namely, Kerala Value Added Information System (KVATIS), was installed and facility for filing e- returns was introduced. Since revenue from inter-State trade is substantial for a consumption State like Kerala, modernisation of check posts was done on a priority and social audit to avoid corruption was initiated. The consequence of these administrative efforts was reflected in higher growth rate of commodity taxes during 2006-17 to 2012-13, before the slowdown in growth rate set in since 2013-14.

3.2.1.1 VAT Performance – The Pre-GST Scenario

Under the VAT regime, the rates of taxation were 2, 5 and 14.5 percent respectively. To start with the rates were 1, 4 and 12.5 respectively. Apart from these, there was compounding scheme for gold jewellery, quarrying and some other taxable trading activities, under which the assesses could pay an estimated tax.

Table 3.4: Pre - VAT and Post - VAT Growth Rates of Commodity Taxes

Year	Sales Tax/VAT Growth Rate (%)	Median Growth Rate (%)
2001-02	5.74	Period 2001-02 to 2004-05. Pre- VAT
2002-03	22.02	
2003-04	0.85	
2004-05	28.86	
2005-06	-3.99	**13.88**
2006-07	35.34	2005-06 to 2010-11. First five years after introduction of VAT.
2007-08	19.69	
2008-09	17.29	
2009-10	23.02	
2010-11	11.91	**18.49**
2011-12	21.07	2011-12 TO 2016-17. Second five years after introduction of VAT.
2012-13	24.16	
2013-14	11.03	
2014-15	8.08	
2015-16	10.45	
2016-17	8.16	**10.74**

Source: Finance Accounts, C &AG, various issues.

The median growth rate of commodity taxes has increased from 13.88 during 2001-02 to 2004-05, the pre-VAT period to 18.49 percent during 2005-06 to 2010-11. Later, it fell to 10.74 percent, which is below that of pre- VAT period. As can be seen from Table 3.4, the growth rate of commodity taxes was highly uneven during the pre-VAT period.

The first five years of VAT saw a decline in volatility of year on year growth rate in commodity tax collections and also an increase in median growth rate from 13.88 to 18.49 percent. The pickup in growth rate of VAT collections started from 2006-07 after a negative growth rate of 3.99 percent in 2005-06, the initial year of introduction, 2005-06. The rise in growth rate continued beyond the first five years and the momentum of growth picked up sharply during 2011-12 and 2012-13, to reach 21.07 and 24.16 percent respectively. This was followed by a substantial decline in growth rate of VAT collections to 11.03, 8.08, 10.45 and 8.16 percent respectively during 2013-14, 2014-15, 2015-16 and 2016-17 (Table 3.4).

The financial year 2017-18 was the first year after introduction of GST for which provisional results are available . It is seen that with compensation, the GST revenue (till June 30,2017, it was VAT) was ₹ 20575 crore with compensation and ₹18477crore without compensation. This implies a growth rate of 15.24 percent (with compensation) and 3.49 percent (without compensation) for 2017-18 over

VAT revenue of ₹ 17854 crore for 2016-17. It should be taken note of that during 2017-18, certain major provisions of GST Act like e-way bill had not been implemented. With the implementation stabilising, the growth rate is likely to improve, As can be seen from the earlier experience of VAT during 2015-16, there has been a transition year shock, though milder, in growth rate of GST also in. 2017-18

3.2.1.2 Economic and Administrative Reasons for slowdown in growth of Commodity Taxes

The most widely used proxy for the tax base of a State is nominal GSDP[6] and at the national level, nominal Gross Domestic Product (GDP). The buoyancy of a tax is the ratio of its growth rate and the growth rate of the economic base proxied by GSDP. We use two series of nominal GSDP based on 2004-05 and 2011-12 prices separately, without splicing, as their method of computation is different.

Buoyancy captures both impact of discretionary changes in tax policy and responses to the changes in economic base. During 2012-13, the standard rate of VAT was raised from 12.5 percent to 13.5 percent and the lower rate from 4 to 5 percent. In 2013-14, the standard rate was further raised to 14.5 percent. Almost 75 percent of VAT revenue was from standard rate (14.5 percent) commodities, 23 percent from lower rate (5 percent) and 2 percent from concessional rate (2 percent). The higher growth rate of 24.16 percent during 2012-13 on the back of a higher growth rate of 21.07 percent in 2011-12 can be partly attributed to rate increase of standard and lower rate and partly to higher inflation during 2011-12, leading to postponement of some discretionary purchases of standard rate commodities to 2012-13. A similar trend is discernible in 2009-10, when VAT rate grew at 23.02 percent on the back of a 17.29 percent during 2008-09, and there was 10.22 percent inflation rate in 2008-09.

Table 3.5: Trends in Buoyancy of VAT Revenue- Using old series of GSDP

Year	Nominal GSDP Growth Rate (2004-05 series) (%)	VAT Collection Growth Rate (%)	Real GSDP Growth Rate (2004-05 series) (%)	Buoyancy	Inflation Rate (Nominal GSDP growth- Real GSDP Growth)
2005-06	14.74	-3.99	10.09	-0.27	4.65
2006-07	12.38	35.34	7.90	2.85	4.48
2007-08	13.89	19.69	8.77	1.42	5.12
2008-09	15.78	17.29	5.56	1.10	10.22
2009-10	14.41	23.02	9.17	1.60	5.24
2010-11	13.7	11.91	6.92	0.87	6.78

6 This could be due to want of year wise data on consumption expenditure, which can be taken as a better proxy for consumption based taxes.

2011-12	18.54	21.07	5.85	1.14	12.69
2012-13	11.25	24.16	5.92	2.15	5.32
2013-14	13.93	11.03	6.27	0.79	7.65

Source: Finance Accounts and Economic Review, various issues.

Table 3.6: Buoyancy of VAT Revenue- using new series of GSDP

Year	Nominal GSDP Growth Rate (2011-12 series) (%)	VAT Collection Growth Rate (%)	Real GSDP Growth Rate (2011-12 series) (%)	Buoyancy	Inflation Rate (Nominal GSDP growth- Real GSDP Growth)
2012-13	13.26	24.16	6.50	1.82	6.76
2013-14	12.79	11.03	3.89	0.86	8.90
2014-15	10.22	8.08	7.31	0.79	5.92
2015-16	8.59	10.45	8.10	1.22	1.99
2016-17	10.6	8.16	7.4	0.77	3.2

Source: Finance Accounts, various issues and mospi.gov.in

Inflation rate has been steadily coming down in the recent years. The nominal growth rate of GSDP has also been slowing down despite the change in base from 2004-05 to 2011-12. Growth Rate in VAT collection has fallen since 2013-14 and buoyancy has also been lower (Tables 3.5 and 3.6). The median buoyancy for the period 2006-07 to 2010-11 (using 2004-05 GSDP series) is 1.42 and the buoyancy during 2011-12 to 2016 - 17 (2011-12 GSDP series) is 0.85. The underlying economic trends do partly explain the slowdown in VAT collections. But that does not tell the whole story of the decline in growth rates of VAT collection and its buoyancy.

Intuitively, Private Final Consumption Expenditure (PFCE) could not have fallen in Kerala during 2013-14 and 2014-15, as the remittances from abroad which are a major driver of PFCE rose to more than ₹ 1 lakh crore in 2014-15, a growth of 17 percent compared to the prior year, according to State Level Bankers Committee (SLBC). The 68th round of Consumption Expenditure Survey during 2011-12, by National Sample Survey Organisation (NSSO) has put Kerala at the top of Indian States in PFCE. There is a view that GSDP does not capture PFCE adequately and the mismatch between the NSSO and CSO estimates has been growing (Sundaram and Tendulkar, 2001). But GSDP is still used commonly as a proxy for tax base because it is a continuous data series available unlike NSSO's comparable data which are available only quinquennially. In short, the macroeconomic environment does not fully account for the fall in growth rate of VAT collections. But in the post-2015-16 scenario, with oil price[7] and commodity

[7] From 2017-18, there has been an upward trend in oil prices.

price downside trends and impact of demonetisation, VAT collection growth rate has been adversely affected.

C & AG has pointed out (Report 7 of 2004) that the KVATIS (Kerala Value Added Tax Information System) software installed in 2008 has not been subsequently updated and the mismatch between input tax credit claimed and output tax paid is not reconciled. Several administrative and enforcement lapses have been pointed out in the report.

To state in brief, the VAT, which has an element of self- auditing, when combined with an effective monitoring (examples being introduction of e -filing of returns, KVATIS software and monitoring at check posts with social auditing) during 2006-07 to 2010-11, witnessed a faster growth rate than the earlier five year time period (Table 3.4).[8] This brings to the fore the equal importance of self - auditing and administrative efficiency. If the latter goes down, the former alone does not help. In the post-GST scenario, the administrative architecture, as well as enforcement mindset, is expected to undergo a change and this could facilitate improved compliance.

In preparation to GST, Kerala undertook proactive measures to train the assessees as well as practitioners and has been raising the relevant issues before the GST Council. Kerala has made good progress in registration of GST dealers. According to reports (*Business Line* September 18, 2017), during the pre-GST period, there were 2,65,412, and out of them 2,08,063 dealers have migrated to GST. Since dealers in Kerala have been familiar with e-filing of returns under the VAT regime right from 2009 onwards, the task of filing returns under GST would become easier.

The State GST Department had conducted regular workshops for officials, tax practitioners and trade communities ahead of implementation of the GST. GST Facilitation Centres were established in each district to ensure troubleshooting and dissemination of authentic information to stakeholders. Stakeholders could also raise any issues through e-mail in postgstquestions@gov.in. All information pertaining to GST is available in the official portal of Central Board of Excise & Customs at www.cbec.gov.in, and official website Kerala SGST Department, at www.keralataxes.gov.in. Frequently asked questions (FAQs) and replies to them have been published in the local language.

In spite of these measures, the growth rate of tax revenue under GST regime during July-January of 2017-18, when compared with VAT revenues during the same period of 2016-17, does not present a very positive picture. The growth rate of GST during April-January, 2017-18 when compared with VAT during April-January, 2016-17 is 5.44 percent. The main reasons for this seem to be beyond the control of the State government. To state in brief, three major reasons for fall in growth rate of GST revenue are

[8] Self compliance and auditing together can account for better compliance as pointed out but by Operand (2015) in a study conducted in the context of Chile.

a) The State's share of Integrated Goods and Services Tax (IGST) levied and collected by the Union on inter-State transactions, get credited after a considerable time lag, that is only when the dealer in the destination State pays output tax and files the return, claiming input tax credit. In the meantime. this causes liquidity crisis for a State like Kerala

b) Check posts have been stopped with effect from 1st July, 2017, but e waybill for tracking inter-State transactions have not been implemented. (It has been implemented since February 2018).

c) There is a rate fall of 5.5 percent under the GST regime. Under VAT regime, the standard rate, at which 75 percent of the commodities were taxed, was 14.5 percent. Now the standard rate is 18 percent and the States' share is 9 percent.

However, the State would get compensation for a growth rate of 14 present with actual collections for 2015-16 as the base till 2022-23[9]. It is also expected that implementation of e- way bill and the early sharing of States' share in IGST on a provisional basis, would improve the growth rate of revenue from SGST.

As regards, petroleum products, it is possible to include them in the GST, if the GST Council takes a decision to do so. The loss of revenue for the State in that event, would be substantial, as under the present GST Acts, maximum rate that can be levied is 40 percent, with the shares of the Union and the States at 20 percent respectively. This will be a substantial loss from the present rate of 34 percent in the State. The Sales Tax and Excise Duty revenue from alcoholic liquor for human consumption is expected to stabilise due to the recent revised Abkari policy of the State Government. Stamp Duty and Registration fees are intimately connected to growth of the construction sector, which has witnessed a steep fall from 8.97 percent in 2014-15 to 0.95 percent in 2015-16.

3.3.1Measuring Tax Potential – A Review of the Attempts and Suggestions

Various studies have attempted to measure Kerala's Own tax revenue potential using different methodologies. The estimates have also widely varied from 10-35 percent[10]. A transparent method is to measure tax potential from Private Final Consumption Expenditure estimates by the National Sample Survey Organisation (NSSO). But latest data are not available and the last available data are from quinquennial Survey of 2011-12. As pointed out, statistical methods like regression

[9] As per the latest figures available in GST Department of Kerala, the growth rate for July-March 2017-18 over that of the same period in 2016-17 is 14.56 percent, which is below the 20 percent growth rate expected in the budget estimates for financial year 2017-18.

[10] See Isaac and Mohan (2016) for a review of the studies. The relevant Table is given in Annexure 1.

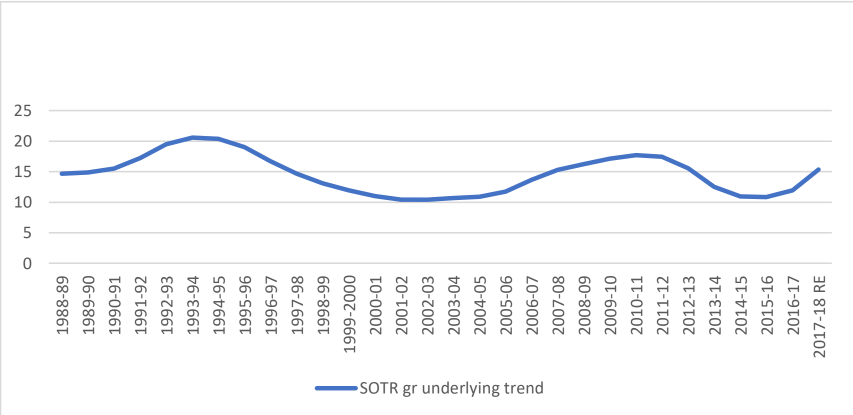
and stochastic frontier analysis have also yielded varied estimates. However, none has come close to the actuals.

It is felt that a better approximation to project potential own tax revenue would be to make projections on the basis of past trends in buoyancy of own tax revenue. Buoyancy is the ratio of growth rate of own tax revenue and tax base proxied by growth of nominal GSDP. The share of commodity taxes comprises four-fifths of the own tax revenue and its buoyancy would be the most proximate proxy for buoyancy of own tax revenue. The past trends in growth rates of these two have been similar.

Looking at the buoyancy of commercial taxes (VAT and Sales Tax) during the first five years of VAT, that is, 2006-07 to 2010-11, median buoyancy was 1.36. The overall buoyancy in the post-VAT Period 2006-07 to 2015-16 (excluding the first year 2005-06 being a transitional year and 2016-17 due to impact of demonetisation) was 1.17. This is due to slowdown in buoyancy during 2011-12 to 2016-17 to 0.85 from 1.36 in the previous period.

If we look at the underlying trend in growth rate of own tax revenue over a long period 1988-89 to 2017-18 RE (Figure 3.4), the growth rate picked up during 2006-07 to 2010-11, the initial five years of VAT implementation and later slowed down since 2013-14. The underlying trend in growth rate of own tax revenue reflects the trend in commodity taxes.

Figure 3.4: Trends in Growth Rate of Own tax revenue – 1988-89 to 2017-18 RE



Source: Computed from data in Budget Documents, Government of Kerala.

But GST regime would add services sector to the tax base and also bring higher revenues from inter-State transactions to the destination of final supply. These two would benefit Kerala. At the same time, standard rate under GST regime is lower than that under the VAT regime and the GSDP is in a slower growth phase. Assuming a real growth of 7 percent and inflation of 4.5 percent, the nominal GSDP, is projected to grow at 11.5 percent in the next seven year period.

During the last four years, 2013-14 to 2016-17, non - VAT component of commercial taxes had a median growth rate of 10.34 percent, reflecting the slowdown trends in the economy. As already stated, since 79 percent of Own tax revenue is constituted by commercial taxes, its buoyancy is the major determinant of buoyancy of own tax revenue. The higher median buoyancy of 1.36 was achieved during 2006-07 to 2010-11, when the median nominal GSDP growth was 13.89. Considering the lower GSDP growth expectations at 11.5 percent, the buoyancy of own tax revenue during the GST regime needs to be moderated. However, considering the inclusion of services sector and higher revenues from inter-State transactions on destination basis, buoyancy of 1.3 is assumed for commercial taxes and for own tax revenue. This will result in 15 percent annual growth rate of own tax revenue for the period till 2024-25. The own tax revenue - GSDP ratio is projected to improve to 8.79 by 2024-25.

Box 1 Plus and Minus factors in GST Regime

Plus Factors under GST Regime

Higher Tax Base by Inclusion of Services
Higher Revenue from Inter-State Trade for consumption destination States
Plugging of Tax leakages arising from tax rate differences

Minus Factors under GST Regime

Lower Standard Rate – Reduction of 5.5 percent from 14.5 percent to 9 percent
Slow distribution of IGST share to the States
Implementation problems including delay in putting into effect e Way bills.

Presently, Economic Growth is also at a slower pace.

Table 3.7: Projection of Own tax revenue Potential based on Buoyancy

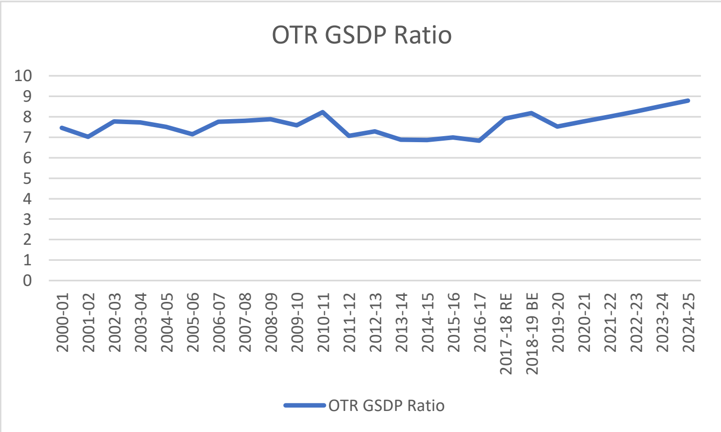
Year (1)	OTR (₹crore) (2)	GSDP (Current) (₹crore) (3)	OTR - GSDP Ratio (4)	OTR Growth Rate (%) (5)	GSDP Growth Rate (%) (6)	OTR Buoyancy (5)/(6)
2000-01	5870	78592	7.47			
2001-02	5923	84287	7.03	0.90	7.25	0.12
2002-03	7303	93991	7.77	23.30	11.51	2.02
2003-04	8089	104595	7.73	10.76	11.28	0.95
2004-05	8964	119264	7.52	10.82	14.02	0.77
2005-06	9779	136842	7.15	9.09	14.74	0.62
2006-07	11942	153785	7.77	22.12	12.38	1.79
2007-08	13669	175141	7.80	14.46	13.89	1.04
2008-09	15990	202783	7.89	16.98	15.78	1.08
2009-10	17625	232381	7.58	10.23	14.60	0.70
2010-11	21722	263773	8.24	23.25	13.51	1.72
2011-12	25719	364048	7.06	18.40	38.02	0.48
2012-13	30077	412313	7.29	16.94	13.26	1.28
2013-14	31995	465041	6.88	6.38	12.79	0.50
2014-15	35222	512564	6.87	10.09	10.22	0.99
2015-16	38998	557947	6.99	10.72	8.85	1.21

2016-17	42176	617035	6.84	8.15	10.59	0.77
2017-18 RE	48823	686451	7.91	15.76	11.25	1.40
2018-19	56146	765393	8.18	15.00	11.25	1.33
2019-20	64568	853414	7.53	15.00	11.5	1.30
2020-21	74254	951556	7.77	15.00	11.5	1.30
2021-22	85392	1060985	8.01	15.00	11.5	1.30
2022-23	98200	1182998	8.26	15.00	11.5	1.30
2023-24	112931	1319043	8.52	15.00	11.5	1.30
2024-25	129870	1470733	8.79	15.00	11.5	1.30

Source : Budget Documents, Government of Kerala, Estimations as in text.

Note: Entries marked in red are future projections.

Figure 3.5: Own tax revenue GSDP Ratio – Trends and Projections



Source: Table 3.7

3.3 Own Non -Tax Revenue

Own non -tax revenue is mainly from General, Economic and Social Services. Though a substantial part of the revenue spending is in social sector, the non - tax revenue from that sector is the least. Social sector mainly comprises education and public health. Since private sector provides these services at a much higher cost, it is the poorer sections of the population that depend on the public provisioning of these services. Due to this, costs of these public services cannot straight away be raised. The government is engaged in an effort to improve the quality of public education and health and then attract the middle classes to availing of these public services. Initially, this causes additional fiscal burden to the State. The government is also making efforts for increasing non – tax revenues by gradual increase in charges for rendering services at 5 percent per annum, as stated in the budget, 2018-19.

The major amount from non-tax revenue is under General Services and it comes from lotteries. This is gross receipts from lotteries, but 85 percent of this would be revenue expenditure through payment of commission and prize money.

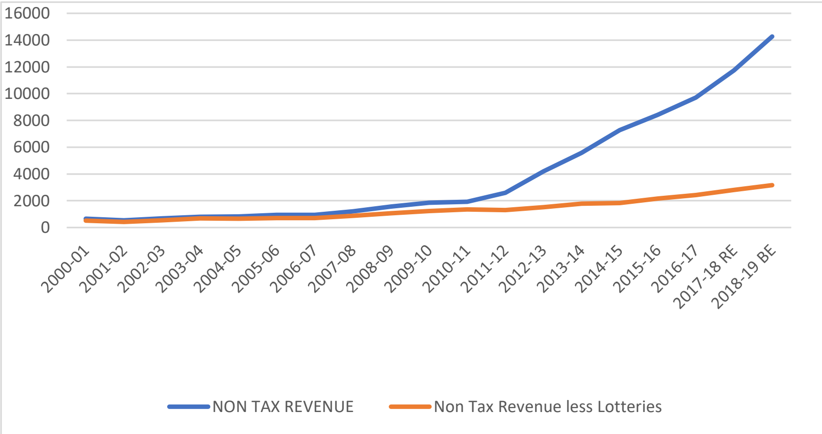
Table 3.9 and Figure 3.7 clearly reveal that non - tax revenue excluding lotteries has been stagnant as a proportion of GSDP. The lower ratio since 2011-12 is due to the change in GSDP to 2011-12 prices and the resulting larger denominator effect. With the decision in Kerala Budget 2018-19, to automatically increase 5 percent per annum, the charges for services, the ratio is likely to improve in future. But, own non - tax revenue can only be of limited help in resource mobilisation and the thrust will have to be on tax mobilisation.

Table 3.8: Non -Tax Revenues including and excluding Lotteries (₹ crore)

Year	Non Tax Revenue	General	Social	Economic	Lottery Gross	Non Tax Revenue less Lotteries
2000-01	659	253	77	280	134	525
2001-02	543	217	82	208	122	421
2002-03	678	262	106	264	128	550
2003-04	807	307	128	320	134	673
2004-05	819	305	125	319	151	668
2005-06	937	417	125	331	230	707
2006-07	938	392	142	328	236	702
2007-08	1210	526	148	437	325	885
2008-09	1559	818	185	439	481	1078
2009-10	1852	1004	187	481	624	1228
2010-11	1931	952	231	500	571	1360
2011-12	2592	1625	272	492	1282	1310
2012-13	4199	3106	291	581	2674	1525
2013-14	5575	4229	422	674	3796	1779
2014-15	7284	5600	425	714	5445	1839
2015-16	8425	6889	429	913	6271	2154
2016-17	9700	8064	540	857	7283	2417
2017-18 RE	11729	9725	626	1055	8915	2814
2018-19 BE	14271	12028	723	1165	11110	3161

Source: Budget Documents, Government of Kerala;

Figure 3.6: Non Tax Revenues including and excluding Lotteries (₹ crore)



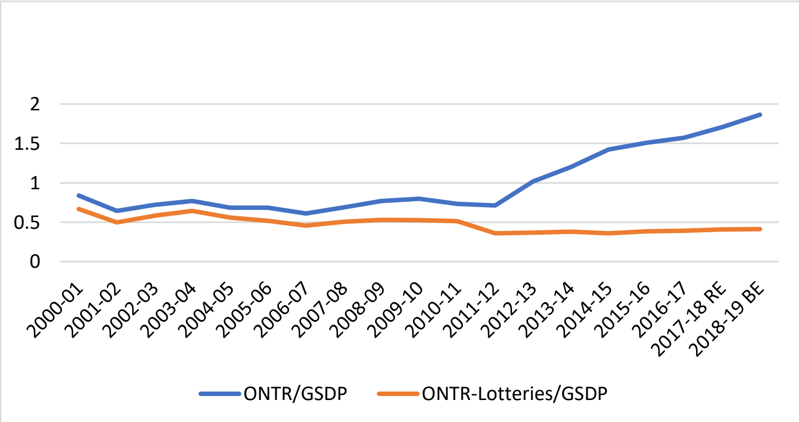
Source: Table 3.8

Table 3.9: Non -Tax Revenue (including and excluding lotteries) – GSDP Ratio (%)

Year	ONTR/GSDP	ONTR-Lotteries/GSDP
2000-01	0.84	0.67
2001-02	0.64	0.50
2002-03	0.72	0.59
2003-04	0.77	0.64
2004-05	0.69	0.56
2005-06	0.68	0.52
2006-07	0.61	0.46
2007-08	0.69	0.51
2008-09	0.77	0.53
2009-10	0.80	0.53
2010-11	0.73	0.52
2011-12	0.71	0.36
2012-13	1.02	0.37
2013-14	1.20	0.38
2014-15	1.42	0.36
2015-16	1.51	0.39
2016-17	1.57	0.39
2017-18 RE	1.71	0.41
2018-19 BE	1.86	0.41

Source: Budget Documents, Government of Kerala.

Figure 3.7: Non Tax Revenue (including and excluding Lotteries) – GSDP Ratio (%)



Source: Table 3.9

3.3.2 Future Projection of Own Non – Tax Revenues

The median growth rate of own non - tax revenue excluding lotteries is 16.41 percent during 2012-13 to 2016-17. The Revised Estimates for 2017-18 show a growth rate of 16.43 percent. Taking the median growth rate of 16.41 percent as the normal growth rate, an additional 5 percent is added to the growth rate, as the government has stated that it proposes to increase charges for services in a graded manner by 5 percent per annum. The projection of own non - tax revenue till 2024-25 along with past trends is given in Table 3.10. Based on these projections, own non-tax revenwu- GSDP ratio would be 0.64 percent of GSDP by 2024-25

Table 3.10: Past Trends and Future Projection of Own Non - Tax Revenue (excluding Lotteries)

Year	ONTR - Lotteries gr %	ONTR – Lotteries (₹ crore)
2001-02	-19.81	421
2002-03	30.64	550
2003-04	22.36	673
2004-05	-0.74	668
2005-06	5.84	707
2006-07	-0.71	702
2007-08	26.07	885
2008-09	21.81	1078
2009-10	13.91	1228
2010-11	10.75	1360
2011-12	-3.68	1310
2012-13	16.41	1525
2013-14	16.66	1779
2014-15	3.37	1839
2015-16	17.13	2154
2016-17	12.21	2417
2017-18 RE	16.43	2814
2018-19 BE	12.33	3161

2019-20	17.23	3706
2020-21	18.09	4410
2021-22	19.00	5289
2022-23	19.95	6397
2023-24	20.94	7737
2024-25	21.99	9438

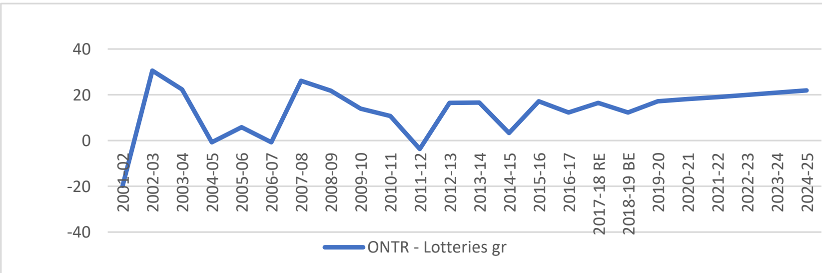
Source: Budget Documents, Government of Kerala and Estimations in the text.Note: Entries marked in red are future projections.

Table 3.10A Buoyancy of ONTR- Lotteries

Period	Buoyancy
2005-06 to2009-10	0.99
20010-111 to 2018-19(BE)	0.54
2019-20 to 2024-25	1.79

Source : Table 3.10 and mospi.go.in for GSDP growth rates

Figure 3.8: Past Trends and Future Projection of Own Non-Tax Revenue (excluding Lotteries)



Source: Table 3.10

3.4 Resources from Centre

Resources from Centre comprise central tax devolution and central grants. The latter had as its components plan grants (till 2015-16), central share in CSS and central sector schemes, grants given by Finance Commissions under Article 275 and loans from Centre. Tax devolution is formula based transfer based on the recommendations of the Finance Commission under Article 280 of the Constitution. All the grants other than under post tax devolution revenue deficit grants Article 275 are tied to the purposes and States have no flexibility in their utilisation. The previous plan grants were based on what was known as Gadgil formula and the States had flexibility to use it for schemes within State plans. When the 14th Finance Commission raised the share of the States in divisible pool of Union taxes from 32 to 42 percent, share of the Centre in CSS was reduced for many Schemes. Kerala's position in components of resource transfer from the Centre is given in Table 3.11 below.

The flexible part of the Central transfers has increased while the tied part has come down The increase in 2014-15 is due to the change in method of disbursement of grants from direct to implementation agencies to the State budget.

We do not make separate projections for central tax devolution and for central grants, but based in recent trends project growth rate of revenue receipts during 2020-21 to 2024-15. Revenue receipts (the median growth rate during 2012-13 to 2018-19 is 16.5 percent) are expected to grow at 16.75 percent for 2019-20 and 2020-21 and 17 percent for 2021-22. After the 15th Finance Commission award, the growth rate of revenue receipts is expected to go up to 17.5 percent per annum during 2022-23 to 2024-25.

Table 3.11: Central Transfers to Kerala – Trends in Components

Components of Central Transfers										
Year	Central Tax Devolution (1)	Finance Commission Grants (2)		Non-plan Grants other than FC(3)	State Plan Grants(4)	Central Share of CSS(5)	Total Central Transfers(6) =(1)+2(a)+ 2(b)+(3) +(4)+(5)	Flexible Part(7) = (1) +2(a)	Tied Part(8) = 2 (b)+ (3) + (4)+(5)	Year to Year Net Increase
		General Purpose Grant(2a)	Special Purpose Grant (2b)							
2011-12	5990	0	1174	259	904	1372	9699	5990	3709	---
2012-13	6841	0	601	57	1163	1201	9863	6841	3022	164
2013-14	7469	0	1568	111	1154	1305	11607	7469	4138	1744
2014-15	7926	0	1574	410	1555	3969	15434	7926	7508	3827
2015-16	12691	4640	531	6	60	3684	21612	17331	4281	6178
2016-17	15225	3350	1605	296	158	3101	23735	18575	5160	2123
Share of the Components in Total Central Transfers (%)										
	Central Tax Devolution	FC General Purpose Grants	FC Specific Purpose Grants	Non Plan Grants other FC	State Plan Grants	Central Share in CSS	Share of Flexible Part	Share of Tied Part		
2011-12	61.76	0.00	12.10	2.67	9.32	14.15	61.76	38.24		
2012-13	69.36	0.00	6.09	0.58	11.79	12.18	69.36	30.64		
2013-14	64.35	0.00	13.51	0.96	9.94	11.24	64.35	35.65		
2014-15	51.35	0.00	10.20	2.66	10.08	25.72	51.35	48.65		
2015-16	58.72	21.47	2.46	0.03	0.28	17.05	80.19	19.81		
2016-17	64.14	14.11	6.76	1.25	0.67	13.07	78.28	21.72		
Growth Rates of Total, Flexible and Tied parts of Central Transfers (%)										
	Growth Rate Total Central Transfers	Growth rate of Flexible Part	Growth Rate of Tied Part							
2012-13	1.69	14.21	-18.52							
2013-14	17.68	9.18	36.93							
2014-15	32.97	6.12	81.44							
2015-16	40.03	118.66	-42.98							
2016-17	9.82	7.18	20.53							

Source: Table 1.5 Second Report of the Fourth Kerala Public Expenditure Review Committee & Budget in Brief 2018-19, Government of Kerala.

Chapter 4
Revenue and Capital Expenditure – Trends and Projections

4.1 Revenue Expenditure

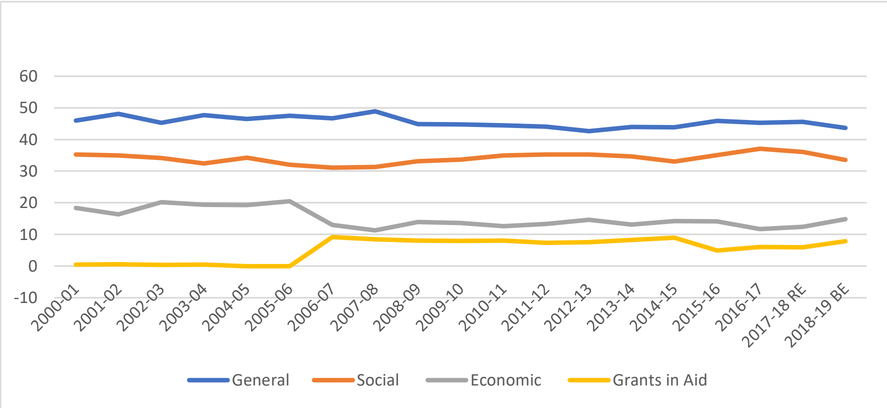
Revenue expenditure comprises expenditure on General, Social and Economic sectors and Grants-in-aid to Local Self Governments (LSGs). The devolution to grants to LSGs is separately shown under non - plan revenue expenditure (Account head no 3048), since 2006-07, accepting the recommendations of the Third State Finance Commission. Prior to 2006-07, grants to LSGs were through the line departments of the State Government. Let us look at the shares of the components of revenue expenditure during 2000-01 to 2018-19.

Table 4.1: Share of Components of Revenue Expenditure (%)

Year	General	Social	Economic	Grants in Aid	Total
2000-01	45.93	35.26	18.34	0.47	100
2001-02	48.11	34.95	16.36	0.57	100
2002-03	45.26	34.14	20.21	0.39	100
2003-04	47.74	32.43	19.35	0.48	100
2004-05	46.51	34.24	19.26	-0.02	100
2005-06	47.52	32.00	20.47	0.00	100
2006-07	46.69	31.11	13.02	9.18	100
2007-08	48.95	31.30	11.32	8.44	100
2008-09	44.88	33.17	13.92	8.03	100
2009-10	44.76	33.62	13.62	7.99	100
2010-11	44.48	34.94	12.57	8.02	100
2011-12	44.09	35.24	13.32	7.36	100
2012-13	42.60	35.29	14.60	7.51	100
2013-14	43.99	34.69	13.11	8.22	100
2014-15	43.81	33.06	14.21	8.92	100
2015-16	45.86	35.08	14.10	4.96	100
2016-17	45.22	37.07	11.70	6.02	100
2017-18 RE	45.60	36.09	12.38	5.93	100
2018-19 BE	43.67	33.56	14.87	7.89	100

Source: Finance Accounts, C&AG and Budget Documents, Government of Kerala.

Figure 4.1: Share of the Components of Revenue Expenditure



Source: Table 4.1.

The largest share is that of the General Services followed by Social and Economic services (Table 4.1 and Figure 4.1). The latter two are classified as development expenditure. The main components of Social services are education and health. These are personnel oriented, and salary is the major expenditure in these sectors. But when these personnel retire, their pension is classified under General Service. In other words, a higher development Expenditure of the past would be reflected as non - development expenditure in the present. It should be taken note of that the spending on Social and Economic services is underestimated in the budget as substantial portion of Grants-in-Aid to LSGs is also spent on Economic and Social services(Table 4.2).

4.1.1 Devolution to LSGs

Kerala devolves substantial funds and functions to the LSGs. The functions devolved are a) General Education, b) Medical and Public Health, c) Urban Development, d) Labour and Employment, e) Welfare of Scheduled Castes, Scheduled Tribes, Other Backward Communities and Minorities, f) Crop husbandry g) Soil and Water Conservation, h)Animal husbandry, i) Other Rural Development Programmes, j) Special Programmes for Rural Development, k) Village and Small industries and l) Social security and Welfare. Along with the State budget, a separate LSG budget is also presented in the State assembly. Out of the 29 functions pertaining to Panchayati Raj institutions in the Eleventh Schedule of the Constitution, 26 have been transferee in 1995. The three subjects not transferred relate to minor forest produce, land reforms and distribution of electricity. The Twelfth Schedule of the Constitution mentions 18 items relating to Urban Local Bodies and out of this, 17 have been transferred, except the function relating to fire services (Report Number 5 of C&AG, December, 2016).

The funds devolved are categorised as General Purpose, Maintenance and Development grants. A share of the Own tax revenues of the State is assigned to the LSGs for the first two grants and the third is a part of the State Plan funds (at present 22 percent) is allotted to LSGs.

Kerala has been regular in constituting State Finance Commissions and implementing their recommendations. So far five State Finance Commissions have submitted their reports and they have been implemented. As regards, the recommendation of the 5th State Finance Commission, in the Action Taken Report by the State government, it has been stated that

a) General Purpose Fund will be 3.5 percent of the State's Own tax revenue
b) Maintenance Fund will be 5.50 percent, 5.60 percent 5.75 percent, 5.90 percent and 6 percent of the State's Own tax revenue for 2016-17,2017-18, 2018-19, 2019-20 and 2020-21 respectively.
c) As regards, Development Fund, it will be linked to the State plan size (23 percent during 2016-17 which would increase to 25 percent in 2020-21) instead of State's Own tax revenue as recommended by the 5th SFC. The recommendation of the 5th SFC was that Development Fund shall be 11 percent of State's Own tax revenue in 2016-17 and should increase to 14.5 percent in 2020-21.

The shares of the State's Own tax revenue are based on the latest audited figures (t-2) instead of the current year (t). But the share of Maintenance Grants is increasing every year and this would compensate for use of t-2 figures.

It is suggested that there should be uniformity in accounting devolution to LSGs by the States in their budgets, so that the Union Finance Commission gets a comparable picture of the devolution by the States to the LSGs. Oommen (2017) states that devolution of State plan funds cannot be counted as untied transfers as they are tied and scheme specific. Resource transfers from the State is the single largest source of funds for the LSGs and was 73.21 percent followed by 18.46 percent from Centre and 8.16 percent Own revenue during 2015-16. The major sources of own tax revenue for LSGs are property tax, profession tax and entertainment tax. The property tax is collected within a band rate by the LSGs, with Panchayats, Municipalities and Corporations having a maximum limit of 6, 9 and 9 percent respectively of annual value of all buildings, based on self assessment. Own non tax revenues are meagre and mainly constitute rent from buildings. The entertainment tax levied and collected by the LSGs have not been subsumed under GST. However, GST is leviable on supply of entertainment services. If both are levied, the combined tax burden would be more than 50 percent. The Government of Kerala, has taken a policy decision of requiring LSGs not to levy entertainment tax. The State government has announced a decision to compensate the LSGs for this amount. The LSGs are subject to regular and performance audit by the Local Fund Audit of the State government and a sample audit by the C&AG.

Though the grants to LSGs are not classified as development expenditure, a substantial portion of the grants, that is 75-80 percent are spent by the LSGs in activities categorised as development expenditure (Table 4.2). To this extent, the development expenditure of the State is not reflected in the State budgets.

Table 4.2: Development Expenditure by LSGs as a share of Grants-in-Aid (%)

	Grants to LSGs	Development Expenditure of LSGs	Share of Development Expenditure %
2011-12	3389	2714	80.08
2012-13	4017	3203	79.74
2013-14	4971	4012	80.71
2014-15	6397	5267	82.34
2015-16	3903	3061	78.43
2016-17	5481	4183	76.32
2017-18 RE	6012	4565	75.93
2018-19 BE	9130	7563	82.84

Source: Budget in Brief, Government of Kerala, 2018-19

4.1.1 Trends in Committed Revenue Expenditure

Revenue expenditure has a committed and a flexible portion. The committed portion comprises salary, pension and interest payments and cannot be reduced in the short or medium term. The share of the committed portion in the Revenue expenditure is coming down (Table 4.3).

Table 4.3: Share of Salaries, Pension and Interest in Revenue Expenditure (%)

Year	Salaries+ Pension	Salaries+ Pension + Interest
2000-01	54.05	73.06
2001-02	51.77	73.12
2002-03	47.17	67.15
2003-04	48.24	69.72
2004-05	46.28	67.32
2005-06	45.96	67.29
2006-07	47.44	67.56
2007-08	50.69	68.09
2008-09	48.71	65.22
2009-10	46.60	63.59
2010-11	48.56	64.98
2011-12	53.82	67.49
2012-13	48.94	62.41
2013-14	48.46	62.12
2014-15	45.52	59.14
2015-16	46.47	60.59

2016-17	47.46	60.76
2017-18 RE	47.77	61.12
2018-19 BE	44.22	57.14

Source: Budget Documents, Government of Kerala.

The increase in share of salaries and Pension during 2007-08, 2011-12, 2016- 17 and 2017-18 RE is due to impact of five yearly pay revision to government employees. The lower share of committed expenditure gives more space for controlling RD in the short run.

4.1.2 Explicit Subsidies – Components and Trends

The proportion of explicit subsidies as a proportion of GSDP in Kerala is at 0.28 percent. The major component of the subsides is for Food and Civil Supplies, which comprises 86 percent of the total subsidies during 2016-17. The subsidy for the power sector has gradually come down and for 2015 -16 and 2016-17, it is only the amount given for non - conventional and renewable sources of energy. Out of the food subsidy, substantial amount is spent is for reimbursement of price difference between price of food grains under the Public Distribution System (PDS) and the price of procurement from Food Corporation of India (FCI) and the payment for paddy procurement through Kerala State Civil Supplies Corporation and other agencies. These two components constituted 91 and 87 percent of the food subsidy during 2015-16 and 2016-17 respectively. Table 4.4 gives the trend in components of subsidies during 2011-12 to 2016-17.

Table 4.4: Trends in Components of Subsidies (₹ crore)

Year	Food	Power	Others	Total	Subsidy/GSDP (%)
2011-12	700	55	260	1014	0.28
2012-13	895	75	297	1267	0.31
2013-14	903	150	226	1279	0.28
2014-15	1027	50	176	1253	0.24
2015-16	1106	1.27	266	1372	0.25
2016-17	1492	1.03	238	1731	0.28

Source: Finance Accounts, C&AG.

4.13Projection of Future Trends in Revenue Receipts and Revenue Expenditure

A projection of revenue expenditure, revenue receipts, RD and GSDP is made for the period till 2024-25 based on their past trends.

Revenue expenditure is estimated to grow at 14.15 percent for 2019-20 and 2020-21(based on the the median growth rate for the period 2012-13 to 2018-19 is 14.12 percent). It is expected to grow faster at 19 and 16 percent during 2021-22 and 2022-23 due to the likely impact of future five year pay revision for government employees (based on past trends of revenue expenditure during pay revision years).[11] After that, it is projected to grow at a lower rate of 13.8 percent (which is the median growth rate for the period 1987-88 to 2018-19).

Revenue e (the median growth rate during 2012-13 to 2018-19 is 16.5 percent) are expected to grow at 16.75 percent for 2019-20 and 2020-21 and 17 percent for 2021-22. After the 15th Finance Commission award, the growth rate of revenue receipts is expected to go up to 17.5 percent per annum during 2022-23 to 2024-25. The growth rate of nominal GSDP is projected at 11.5 percent.

The growth rates of own tax and own non- tax revenues have been projected in Chapter 3. Based on past trends, the growth rate of revenue receipts, which include central tax devolution and central grants, has been projected at 16.5 to 17..5 percent for the period 2020-21 to 2024-25. For this, the e devolution of taxes and grants will have to be buoyant. It is projected to grow at a median rate of 17.80 percent with a share of 32.20 percent of Revenue Receipts and 5.14 percent of GSDP.

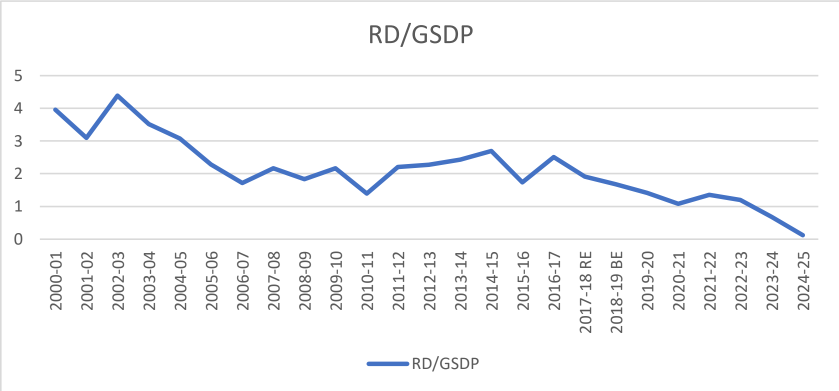
Table 4.5: Projection of Revenue Expenditure, Revenue Receipts and RD

Year	Revenue Receipts (₹ crore)	Revenue Expenditure (`₹crore)	RD (RD) (₹ crore)	GSDP (₹ crore)	RD/ GSDP (%)
2019-20	120020	132027	12007	853414	1.41
2020-21	140424	150709	10285	951556	1.08
2021-22	164998	179344	14346	1060985	1.35
2022-23	193872	208039	14166	1182998	1.20
2023-24	227800	236748	8948	1319043	0.68
2024-25	267665	269419	1754	1470733	0.12

Source: Estimations as in Text.

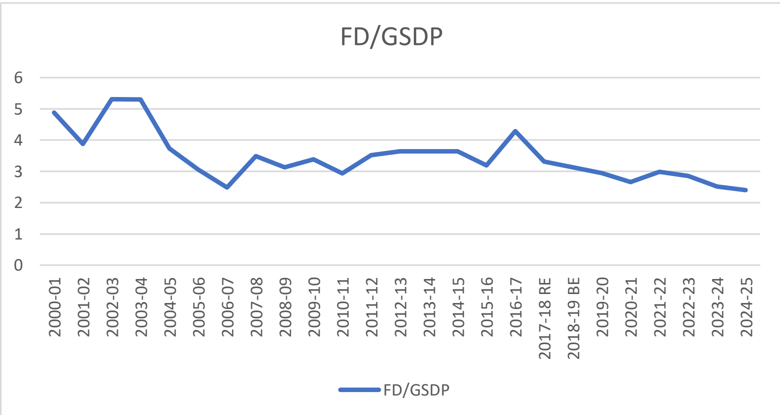
[11] RE grew at 32 percent during 2011-12 when pay revision was implemented in whole. The next pay revision has been implemented in three years, 2016-17, 2017-18 and 2018-19.the growth rate of RE was 15.77 percent for 2016-17. It is expected that next pay revision would come along with revised UGC scales also and a higher estimation is made at 19 and 16 percent is made for 2021-22 and 2022-23. Projection of salary and pension is not made as assumptions on the norms by the pay commission cannot be made. But overall prudence in revenue expenditure is expected for fiscal consolidation.

Figure 4.2: RD - GSDP Ratio 2000-01 to 2024-25



Source: Budget in Brief, Government of Kerala and Table 4.5.

Figure 4.3: FD - GSDP Ratio 2000-01 to 2024-25



Source: Budget in Brief, Government of Kerala, Table 4.5 and Table 5.3.

The State Government has announced measures to bring in more transparency in spending. The grants in aid to LSGs have been based on bills system instead of crediting the amounts. Unspent amounts at the end of the year cannot be carried forward by transferring them to the Public Account. Under bill system, only actually spent amounts will be reflected. Though, it may cause initial difficulties, it is a step towards capacity building, spending efficiency and fiscal discipline. This practice is now made mandatory for all government departments also. This is a major step towards expenditure rationalisation and fiscal consolidation. The consequence of fiscal consolidation would be reduction interest payments and further reduction in committed part of revenue expenditure. Through expenditure rationalisation and revenue growth, the State can gradually reduce RDs and have more space for capital expenditure.

4.2 Trends in Capital Expenditure

The revenue expenditure component is preponderant in total expenditure and capital expenditure has a very limited space. Since FD or borrowings during a financial year is limited as a percentage of GSDP (at present 3 percent), unless revenue account imbalances are kept within limits, capital expenditure will not get adequate fiscal space. During the period since 2013-14, there was slowdown in own tax revenue and consequent slippage in the RD. Though, there was an apparent improvement in 2015-16, it was mainly due to postponement of commitments arising from the recommendations of the Tenth State Pay Commission. The apparent improvement thus achieved in 2015-16, caused further stress on revenue account for 2016-17, the year in which own tax revenue was also adversely affected due to impact of demonetisation. In the scenario projected in Table 4.5, revenue account consolidation is visualised for providing more space for capital expenditure. Let us look at the trends in capital expenditure, which is the total of capital outlay and loans and disbursements by the government.

Table 4. 6: Components of Capital Expenditure (₹ crore)

Year	Capital Outlay	Loan Disbursements	Capital Expenditure	General	Social	Economic
2000-01	577	184	761	39	58	480
2001-02	558	160	718	26	59	473
2002-03	699	250	949	41	83	575
2003-04	640	1291	1931	40	56	544
2004-05	757	196	953	42	90	550
2005-06	817	287	1104	68	135	614
2006-07	903	349	1252	39	116	747
2007-08	1475	893	2368	57	135	1283
2008-09	1696	984	2680	53	291	1352
2009-10	2059	876	2935	67	364	1629
2010-11	3364	761	4125	119	479	2766
2011-12	3853	999	4852	162	595	3096
2012-13	4603	1136	5739	147	562	3894
2013-14	4294	1464	5758	148	617	3529
2014-15	4255	743	4998	135	875	3245
2015-16	7500	842	8342	257	1035	6208
2016-17	10126	1160	11286	211	1293	8622
2017-18 RE	8668	1337	10005	280	1791	6597
2018-19 BE	10330	1102	11432	328	2978	7024

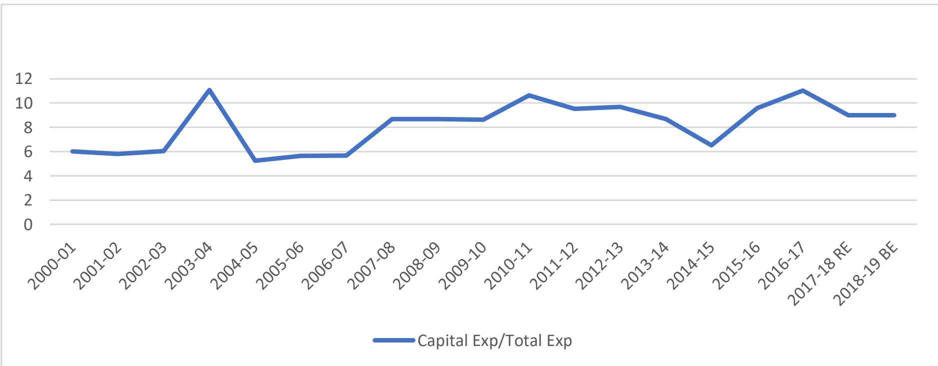
Source: Budget Documents, Government of Kerala.

Table 4.7: Share of Capital Expenditure in Total Expenditure (%)

Year	Capital Expenditure/Total Expenditure
2000-01	6.02
2001-02	5.80
2002-03	6.04
2003-04	11.08
2004-05	5.26
2005-06	5.65
2006-07	5.67
2007-08	8.69
2008-09	8.67
2009-10	8.62
2010-11	10.63
2011-12	9.53
2012-13	9.69
2013-14	8.69
2014-15	6.51
2015-16	9.59
2016-17	11.02
2017-18 RE	8.99
2018-19 BE	8.99

Source: Budget Documents, Government of Kerala.

Figure 4.4: Share of Capital Expenditure in Total Expenditure (%)



Source: Table 4.6.

The share of capital expenditure has been rising since 2007-08 as compared to earlier periods and is now at around 9 percent of the total expenditure. At present around 57 percent of borrowed funds is utilised for revenue expenditure (2018-19 BE). When this is gradually reduced to negligible proportions, borrowings during the financial year can be almost entirely used for capital expenditure. If 15 percent growth rate is maintained for capital expenditure on the budget estimates for 2018-19, it can be stabilised at 9 percent of the total expenditure during 2024-25. Given consolidation in the revenue account, there will be further space for capital expenditure.

The State Government is planning to increase capital spending through the Kerala State Infrastructure Investment Fund Board (KIIFB), constituted as per a legislative act in 1999. The aim of KIIFB is

"*To finance critical and large infrastructure projects the Government intends to mobilize funds both in the medium as well as long term. Government has approved a plan to issue General Obligation Bonds against unconditional Government guarantee and Revenue Bonds with structured payment mechanism for medium term requirement and has initiated steps to raise funds to meet long term requirements through Alternative Investment Funds (AIF), Infrastructure Investment Trust (InVIT), Infrastructure Debt Fund (IDF) and build the institutional framework needed for this. In this new scenario KIIFB has been restructured to act as the key Special Purpose Vehicle (SPV) for mobilising and channelling the funds to the various infrastructure SPVs. KIIFB through its well organised and professional approach will act as the key arm of Government to facilitate planned, hassle-free and sustained development of both physical and social infrastructure ensuring all round well being and prosperity in the State.*"(kiifb.kerala.gov.in)

The State has securitised a portion (upto 30 percent) of its Motor Vehicle Tax revenues and the revenue from Petroleum cess to KIIFB. This will increase over a period of time against which KIIFB can borrow following SEBI guidelines. It has been clarified in the budget speech of 2016-17, that under no circumstances the funds would be diverted for routine expenditure of the State government. It would be spent only for projects approved by the KIIFB. The borrowings of the KIIFB would be fully guaranteed by the State within the limits imposed by the legislative act. It is expected as a faster and efficient channel for assured capital spending for which the budget space at present is limited.

As a source for investment the State also intends to tap NRI funds through Kerala State Financial Enterprises (KSFE) Ltd., a statutory corporation which has been running chit schemes. The scheme is called Pravasi Chitty. The funds will be available for KIIFB based on the provisions of section 14 of the Chit Funds Act, 1982 read with section 20 of Indian Trusts Act, 1882, which provide for investment of funds collected from chit schemes in State government bonds or bonds fully guaranteed by the State government. To the extent, KIIFB bonds are out of KSFE chit funds, it would have to be guaranteed by the State government and would be the contingent liability of the State.

Chapter 5
Sustainability of Borrowings and Liabilities – An Analysis

Kerala's borrowings and liabilities are at 30.77 percent of GSDP during. 2016-17, the latest year for which budget actuals is available. It was 31.27 percent during 2010-11. But during 2011-12, it came down to 25.60 percent and rose to 28.79 percent during 2015-16, before reaching 30.77 percent in 2016-17. The reduction in ratio of borrowings and liabilities to GSDP after 2011-12 is due to nominal GSDP becoming larger as a result of shifting of its base from 2004-05 to 2011-12 prices. The ratio is projected be at 31.22 percent and 31.47 percent for 2017-18 and 2018-19, Revised and Budget Estimates respectively.

The FRBM Act, 2003 (amended in 2011 and 2018) targets a FD of 3 percent per annum. When nominal GSDP growth is projected at 11.5 percent per annum, the ratio of borrowings and liabilities would stabilise at the present ratio during the period till 2024-25, if FD – GSDP ratio is maintained at 3 percent. Alternate scenarios of FD - GSDP Ratios are projected in Tables 5.1, 5.2 and 5.3 respectively.

Table 5.1: Scenario 1 FD at 3 %of GSDP

Year	GSDP	FD 3%	B& L	B&L /GSDP
2018-19	765393		240897	31.47
2019-20	853414	25602	266499	31.23
2020-21	951556	28547	295046	31.01
2021-22	1060985	31830	326875	30.81
2022-23	1182998	35490	362365	30.63
2023-24	1319043	39571	40193	30.47
2024-25	1470733	44122	446058	30.33

Table 5.2: Scenario 2 FD at 2.75 % of GSDP

Year	GSDP	FD 2.75%	B& L	B&L /GSDP
2018-19	765393		240897	31.47
2019-20	853414	23469	264365	30.98
2020-21	951556	26168	290533	30.53
2021-22	1060985	29177	319710	30.13
2022-23	1182998	32532	352243	29.78
2023-24	1319043	36274	388516	29.45
2024-25	1470733	40445	428962	29.17

In scenario 1, when FD – GSDP ratio is 3 percent, Borrowings and Liabilities reach 30.33 percent by 2024-25. In the alternate scenario of FD at 2.75 percent of GSDP, the Borrowings and Liabilities ratio would stabilise at 29.17 percent of GSDP by 2024-25. Under both these scenarios, FD GSDP ratio is projected ex-ante at a fixed percentage of GSDP.

Let us now look at another scenario, in which FD and Borrowings and Liabilities - GSDP ratios are projected ex-post. The assumptions underlying this this scenario are

a) the revenue account consolidation is in accordance with the projections in Table 4.5 (as per assumptions stated in three paragraphs preceding Table 4.5)
b) This should give space for the State to have a growth rate in capital expenditure at 15 percent per annum with 2018-19 budget estimates as the base for the three financial years, 2019-20, 2020-21 and 2021-22 . In the last two financial years, the revenue account balancing would leave sufficient fiscal space for 25 and 40 percent growth rate respectively in capital expenditure.
c) It is also expected that the consistent increase in capital expenditure would lead to higher growth rate in GSDP (assumed to grow at 11.5 percent per annum during 2020-21 and 2021-22), which is projected to grow faster at 12.5 percent during 2022-23 and at 13 percent for financial years 2023-24 and 2024 -25.
   d) FD is projected as a consequence of above assumptions..

d) The Borrowing and Liabilities as a ratio of GSDP is projected to come down to 28.02 percent of GSDP by 2024-25.

Table 5.3: Scenario 3 Based on Table 4.5 estimates as in Text

Year	RD as per Table 4.5 (₹ crore)	Capital Expenditure(₹ crore)	GSDP (₹ crore)	FD (₹ crore)	FD/ GSDP(%)	Borrowings & Liabilities (₹ crore)	B & L / GSDP (%)
2019-20	12017	13147	855331	25144	2.94	266050	31.10
2020-21	10285	15119	953694	25304	2.66	291454	30.56
2021-22	14346	17387	1063369	31733	2.98	323187	30.39
2022-23	14166	19995	1196290	34161	2.86	357347	29.87
2023%24	8934	24993	1351808	33941	2.51	391289	28.95
2024-25	1754	34991	1527543	36745	2.41	428033	28.02

The estimates of made in this study are used in scenario 3 (Table 5.3) and this study uses scenario 3, which is based in estimates of revenue, capital receipts and expenditure for its conclusions.

5.2 Sustainability Indicators of Borrowings and Liabilities

5.2.1 One major indicator as regards sustainability of Borrowings and Liabilities, which finds place in budget documents, is the difference between nominal interest rates and nominal GSDP growth. This is called Domar gap, as the concept was elaborated by Domar (1944). Due to fall in growth rate of nominal GSDP, Domar gap has been narrowing in the recent years. This has been observed in the second report of the fourth Kerala Public Expenditure Review Committee. The relevant portion is extracted below:

"*Table 1.3 Domar Gap – Projections in MTFP Statement 2017-18 and Actuals (%)*

Year	*GSDP Growth Rate (MTFP Projections) (1)*	*Actual GSDP Growth Rate (2)*	*Nominal Interest Rate (3)*	*Domar Gap(As per GSDP growth rate projections in MTFP) (4)=(1)-(3)*	*Revised Domar Gap(Based on Actual GSDP Growth Rate) (5)=(2)-(3)*	*Primary Deficit/GSDP Ratio (Actuals)*
2013-14	*12.79*	*12.79*	*7.43*	*5.36*	*5.36*	*1.87*
2014-15	*13.11*	*10.22*	*7.68*	*5.43*	*2,54*	*1.73*
2015-16	*11.85*	*8.59*	*7.59*	*4.26*	*1*	*1.21*

Source: MTFP statement, 2017-18, Government of Kerala, & mospi.nic.in

It is also important to note that the Domar Gap, though still positive, has significantly narrowed down in recent years (Table 1.3). If the decline in nominal GSDP growth rate continues and interest rates remain at the level projected in MTFP 2017, sustainability of debt would become a challenge in the medium term. This is especially so, as Primary Deficit is expected to persist till 2019-20, according to the MTFP statement 2017. In this context, addressing the twin challenges of Primary Deficit and formulating innovative steps to revive economic growth assumes significance."

The Medium Term Fiscal Policy Statement,2018, projects a Domar gap of 4.45 to 5.55 for 2017-18 and 2020-21 respectively. But the narrowing of Domar gap during 2014-15 and 2015-16 , due to downward revision of nominal GSDP growth rates calls for emphasising on other indicators.

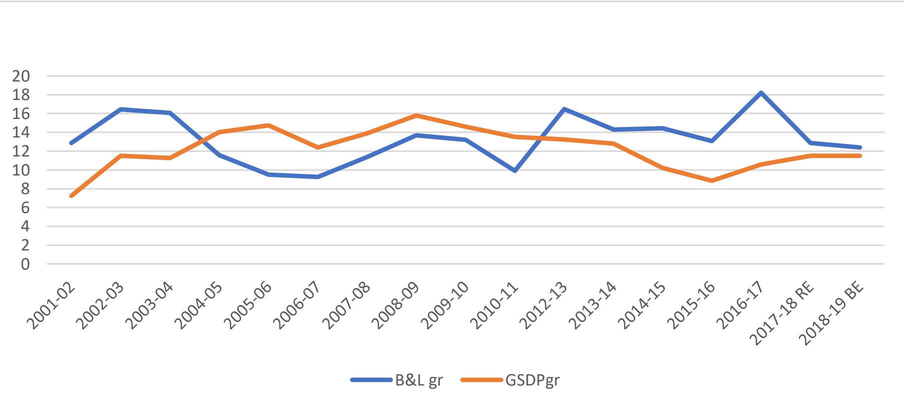
5.2.2 Trends in Growth Rates of Borrowings and Liabilities and Nominal GSDP

The nominal GSDP growth rate of Kerala has fallen below that of growth rate of borrowings and liabilities since 2012-13 (Figure 5.1)[12]The growth rate of

[12] The year 2011-12 is eliminated as it has an abnormal GSDP growth rate of 38.02 percent due to change in base from 2004-05 to 2011-12.

borrowings and liabilities has gone up and remained above that of nominal GSDP during 2012-23 to 2016-17.

Figure 5.1: Growth Rates of Borrowings and Liabilities and Nominal GSDP (%)



Source: Budget Documents, Government of Kerala, mospi.gov.in

5.2.3 Borrowings and Liabilities as a proportion of Revenue Receipts

This is an indicator of debt stress, and the ratio has been coming down steadily during 2000 - 01 to 2018-19, as seen from Table 2.2 and Figure 2.2. This indicates the trend towards sustainability.

5.2.4 Ratio of Interest Payments to Revenue Receipts

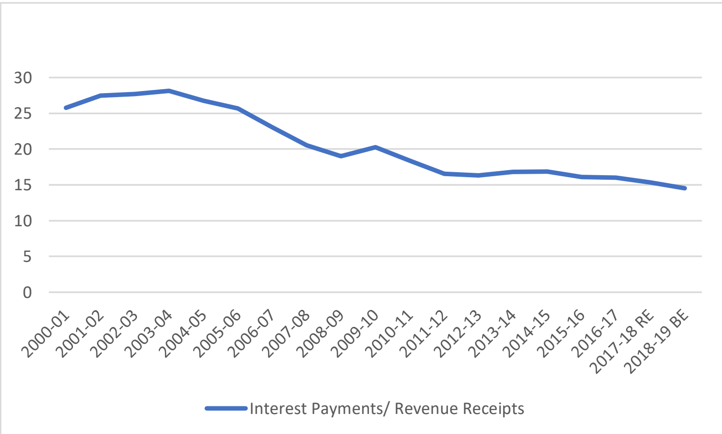
Table 5.4: Ratio of Interest Payments to Revenue Receipts (%)

Year	Interest Payments/ Revenue Receipts
2000-01	25.75
2001-02	27.48
2002-03	27.71
2003-04	28.15
2004-05	26.76
2005-06	25.69
2006-07	23.04

2007-08	20.51
2008-09	19.01
2009-10	20.27
2010-11	18.36
2011-12	16.56
2012-13	16.32
2013-14	16.81
2014-15	16.86
2015-16	16.09
2016-17	16.03
2017-18 RE	15.32
2018-19 BE	14.53

Source: Budget Documents, Government of Kerala.

Figure 5.2: Ratios of Interest Payments to Revenue Receipts (%)



Source: Table 5.4.

The ratio has fallen from 25.75 percent in 2000-01 to 16.03 percent per 2016-17 Budget actuals and is projected at 14.53 percent in 2018-19 Budget Estimates. This is an indicator of movement towards sustainability. But it needs mention that it is still above the 10 percent fixed by the 14th Finance Commission for availing of additional borrowing of 0.25 percent of GSDP (over and above the 3 percent ceiling in FRBM Act). The C&AG Report on State Finances, 2016-17, has pointed out as follows and this is another favourable indicator.

"Interest payments as a percentage of revenue receipt showed a decreasing trend during the last two years, which indicated that State's interest liability was not growing with increase in debt liability."

5.2.5 Changing Composition of Borrowings and Liabilities

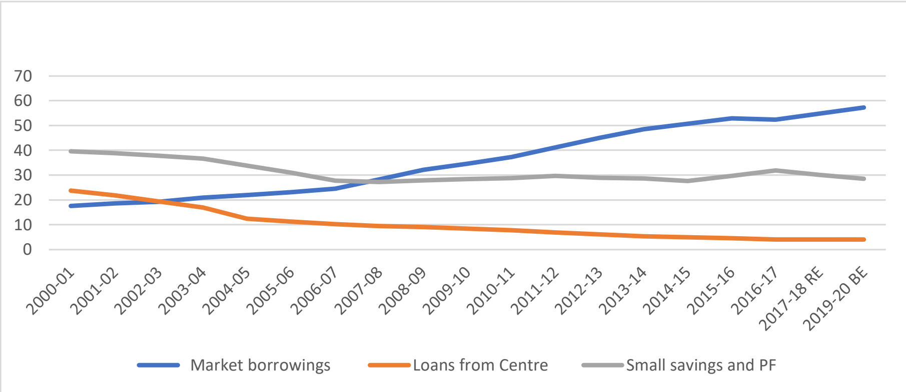
The composition of borrowings and liabilities has shifted markedly towards Market Borrowinsg, which has a lower interest burden. The share of central Loans and that from Small Savings and Provident Funds have come down. The former declined as Government of India discontinued with passing on external assistance as central loans, with a grant component, accepting the recommendations of the Twelfth Finance Commission. The change in composition has helped in reducing the burden of interest payments and is a movement towards fiscal consolidation. The coupon rate of the State is not different from what it is for other States. It need mention that the State has a Treasury Savings Bank, inherited from pre-independence days. This is a liability under the Public Account and is available for ways and means for the State government. As part of fiscal consolidation and expenditure rationalisation, the government has done away with the practice of use of Treasury Savings Bank (TSB) accounts by departments to draw funds and spend them later or in other words prevent them from lapsing at the end of the financial year. This would lead to expenditure rationalisation and maintaining deficit targets.

Table 5.5: Composition of Borrowings and Liabilities (%)

Year	Market borrowings	Loans from Centre	Small savings and PF
2000-01	17.49	23.72	39.61
2001-02	18.53	21.86	38.79
2002-03	19.28	19.33	37.79
2003-04	20.97	16.89	36.70
2004-05	21.94	12.36	33.78
2005-06	23.07	11.30	30.96
2006-07	24.53	10.26	27.75
2007-08	28.26	9.49	27.19
2008-09	32.07	9.06	27.82
2009-10	34.59	8.40	28.37
2010-11	37.27	7.71	28.84
2011-12	41.12	6.86	29.64
2012-13	44.95	6.10	28.84
2013-14	48.49	5.37	28.64
2014-15	50.66	4.97	27.67
2015-16	52.82	4.50	29.66
2016-17	52.42	4.01	31.90
2017-18 RE	54.80	4.09	30.10
2019-20 BE	57.25	3.95	28.51

Source: Budget Documents, Government of Kerala.

Figure 5.3: Compositions of Borrowings and Liabilities (%)



Source: Table 5.

5.2.6 Co - integration between Revenue Receipts and Revenue Expenditure

To analyse the sustainability of debt, the long run association between revenue receipts and revenue e was tested for the thirty year period 1987-88 to 2018-19. (the figures for 2017-18 are Revised Estimates and for 2018-19 are Budget Estimates. The figures for the remaining years are Budget Actuals).

The null hypothesis is that there is unit root and the time series variable is not stationary. Non - stationarity is taken as an indicator of non - sustainability. When the variables are co-integrated, they move in the same direction during the time period.

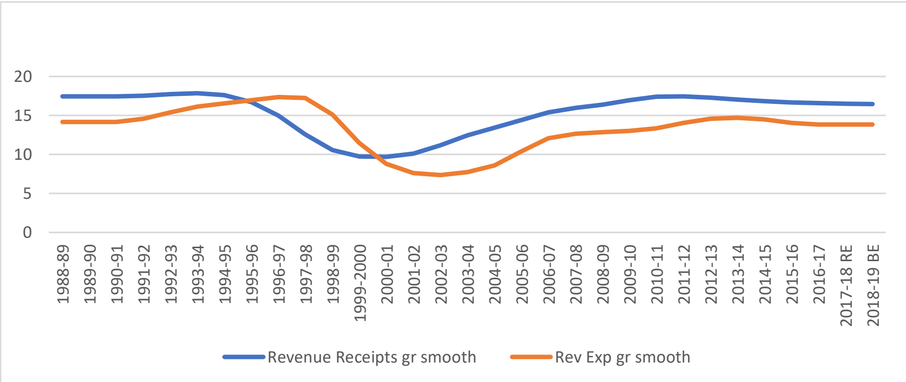
Revenue receipts and revenue expensituee for 1987-88 to 2018-19 are stationary at first difference of their logarithmic transformations at 1% level of significance and the residuals are stationary at levels at 1% level of significance. The revenue receipts and revenue expenditure are co– integrated at their logarithmic first differences or in other words, their growth rates, by Eagle Granger test (Table 5.6). This indicates long-run movement in the same direction of the two variables and is an indicator of possibility of consolidation in the revenue account.

Table 5.6: Results of Stationarity and Co-integration Tests for Revenue Receipts and Revenue Expenditure

	t-ADF 1% and 5 %	t-ADF value
Constant	5% -3.591%- 4.76	2.074
Revenue Receipts	5% -3.60 1%-4.37	-4.681**
Revenue Expenditure	5% -3.60 1%-4.37	-5.578**
Residuals	5% -3.60 1%-4.37	-4.374**

It would also be useful to look at the underlying trends in growth rates of revenue receipts and revenue receipts during the period 1988-89 to 2018-19. When cyclical fluctuations are removed[13], it can be seen that the underlying trend of revenue expenditure is below that of revenue receipts (Figure 5.4). This also implies that a consolidation in revenue account is possible over a period of time.

Figure 5.4: Underlying Trends of Revenue Expenditure and Revenue Receipts -1988-89 to 2018-19



[13] The smoothening of the series is down through moving average command in STATA package.

5.2.7 Stationarity Test for Borrowings and Liabilities – An Analysis

Whether borrowings and liabilities are stationary or not during the period 2000-01 to 2018-19[14] was tested using Augmented Dicky Fuller (ADF) tests.[15] The null hypothesis is that there is unit root and the time series variable is not stationary. Non - stationarity is taken as an indicator of non -sustainability. When stationarity of Borrowings and Liabilities for the period 2000-01 to 2018-19 was tested using ADF test for stationarity, it was found that its logarithmic transformation was stationary at first difference at 5 percent level of significance (Table 5.7).

Table 5.7: Results of Stationarity Test of Borrowings and Liabilities (log first differences) 2000-01 to 2018-19

	t- ADF at 1% and 5 %	t- ADF value
Constant	5% 3.73 1% -4.67	-1.756

It is seen from the above that the sustainability of borrowings and e is positive by all indicators except the growth rate of nominal GSDP being less than that of Borrowings and Liabilities since 2012-12. But the sustainability has become fragile as can be seen from the narrowing of the Domar gap and the growth of Borrowings and Liabilities exceeding the growth of nominal GSDP since 2012-13.

If FD as a proportion of GSDP is steadily maintained at around 3 percent till 2024-25, by which period the borrowings and liabilities as a ratio to GSDP would stabilise by 2024-25 (Table 5.1). In alternate scenarios it comes down to 29.17 and 28.02 percent of the GSDP (Tables 5.2 ad 5.3).

This suggestion can be critically viewed as a pro-cyclical fiscal policy in a period of slowdown of GSDP. But the suggestion in fact is for consolidating revenue account by rationalising revenue expenditure and tapping tax revenue potential more intensively. This would give more fiscal space increase capital expenditure and would be growth enhancing, which has the effect of a counter cyclical fiscal policy in the period of economic slowdown. The fragility in the sustainability of borrowings and liabilities need to be addressed for this.

5.3 Guarantees given by the Government – An Analysis

The Audit Report in State finances by C&AG (2017) has given details of guarantees issued and outstanding. The Kerala Ceiling in Government Guarantees Act, 2003 initially fixed the limit of government guarantees at ₹ 14000 crore. This was amended in 2015 and the ceiling was raised to ₹ 21000 crore. The guarantees issued and outstanding for the period 2011-12 to 2016-17 is as under:

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[14] All the time series variables in this paper were analysed for their trends during 2000-01 to 2018-19. Only for testing co-integration and underlying trends, a longer thirty year period is used for more statistical accuracy.
[15] See Hamilton and Lavin (1986) for a similar exercise.

Table 5.8: Guarantees Issued and Outstanding by the Government of Kerala (₹ crore)

Year	Guarantee issued	Guarantee Outstanding	Guarantee Ceiling
2011-12	11332.11	8277.44	14000
2012-13	11482.25	9099.50	14000
2013-14	12275.21	9763.36	14000
2014-15	13123.30	11126.87	14000
2015-16	13712.77	12538.52	21000
2016-17	20204.10	16245.56	21000

Source: Table 1.26 C&AG, Audit Report No 2 of 2017, State Finances.

It can be seen that the guarantees issues have been below the ceiling prescribed in the Kerala Ceiling in Government Guarantees Act, 2003, as amended in 2015. The State budget 2018-19, has proposed more flexibility in guarantees by making it a percentage of total borrowings and liabilities, to facilitate the State's borrowing for infrastructural needs while keeping fiscal consolidation as a priority. However, C&AG Report on State finances, 2016-17 has pointed out the following, which needs to be remedied

"As per Section 6 of the Act, the Government has to constitute a Guarantee Redemption Fund. The guarantee commission charged under Section 5 of the Act was to form the corpus of the Fund. However, the Fund was not constituted and consequently, guarantee commission of ₹ 854.08 crore collected during 2003-04 to 2016-17 was not credited to the Fund but was treated as non-tax revenue in the relevant years and used for meeting the revenue expenditure of the Government. Non-constitution of Guarantee Redemption Fund resulted in under-statement of revenue expenditure to that extent."

Chapter 6
Public Sector Enterprises in Kerala - Brief Overview

There are 128 Public Sector Undertakings (PSUs) in Kerala and out of which 113 are working and 15 are non-working, according to C&AG Report No 7 of 2017. The total investment in working PSUs and Statutory Corporation is ₹19675.24 crore and non-working ones is ₹ 111.65 crore as on 31st March, 2016. The single largest investment is in power sector which is ₹5381.65 crore, followed by financial sector at ₹ 4659.96 crore. Together they constitute 53.7 percent of the total investment in PSUs and statutory corporations. The State government supports these PSUs and statutory corporations through equity, loans, subsidies, interest waiver etc. Total support given during financial years 2013-14, 2014-15 and 2015-16 works out to ₹ 4670 crore, ₹ 5579 crore and ₹ 6485 crore. If this is added to the explicit subsides mentioned in Table 4.4, it would take the average subsidy to GSDP ratio to 1.66 percent for the period 2013-14 to 2015-16. On performance of the PSUs and Statutory corporations, C&AG Report No 7 of 2017 have observed as under:

"An analysis of the latest finalised accounts of all working PSUs in the State revealed that 50 PSUs earned profit of `395.55 crore, 56 PSUs incurred loss of `1,019.33 crore and three working PSUs had no profit or loss. Four working PSUs have not yet (September 2016) finalised any of their accounts. The major contributors to profit were Kerala State Beverages (Manufacturing and Marketing) Corporation Limited (` ₹ 151.06 crore in 2014-15), The Kerala State Financial Enterprises Limited (₹70.72 crore in 2014-15) and Kerala State Industrial Development Corporation Limited (₹ 21.32 crore in 2014-15).The major PSUs which incurred loss are Kerala State Road Transport Corporation (₹583.90 crore in 2013-14), The Kerala State Civil Supplies Corporation Limited (₹ 89.11 crore in 2013-14) and The Kerala State Cashew Development Corporation Limited (₹ 88.77 crore in 2012-13)."

Kerala Economic Review, 2017, cites the following reasons for the lacklustre performance of the PSUs in Kerala

"Erosion of working capital, lack of timely up-gradation of technology, limited product diversification, inability to cope up with the changing market demand, increase in cost of production, tough competition from other firms, competition from cheap imports and mounting financial liabilities (including statutory payouts) have adversely affected the performance of State PSUs."

But the Economic Review, 2017, also notes the turnaround in performance during 2016-17 and till August, 2017.

"The increased dependency on budgetary support even for continuing regular operations of PSUs was a major concern during the Twelfth Five-Year Plan. However, from the last year of the Twelfth Five-Year Plan (2016-17) onwards, major initiatives for strengthening and revamping of PSUs under the Industries Department are being undertaken. Five units namely Travancore

Titanium Products Ltd., Travancore Cochin Chemicals Ltd., Trace Cable Company Ltd., Steel Industrial Forgings Ltd. and Transformers and Electricals Kerala Ltd. have seen a turnaround in 2016-17. But in 2017-18, PSUs under Industries Department have made remarkable achievements. The combined net profit made by all 40 State PSUs as on 30th August, 2017 was 21.5 crore. It is notable that these PSUs have registered positive combined net profit after incurring net combined losses for 4 years. An amount of 270 crore was allocated in the State budget for 2017-18 specifically for various projects as part of capacity enhancement and also to meet some of the working capital needs. Steps have also been taken to formulate action plans to optimize the operation in all units through capacity augmentation and introduction of new products."

The Kerala government has the policy of making PSUs profitable and as a conscious decision does not favour disinvestment. It has decided to infuse professional management and reforms to make the PSUs profitable. A major initiative taken is in the case of Kerala State Road Transport Corporation (KSRTC). The KSRTC is making continuous losses and has been unable to meet salary and pension expenditure of employees. The Kerala government has decided to revamp the corporation by rescheduling the high cost loans, improving employee and vehicle productivity, making the corporation into three autonomous centres, infusing professional management and taking over temporarily salary and pension burden. The Government of Kerala has appointed a committee with Prof. Sushil Khanna as its Chairman for making recommendations to make KSRTC profitable. These efforts are expected to have an impact on the profitability of KSRTC in the immediate future.

The Kerala State Electricity Board (KSEB), another important public utility service provider, is run as a public sector company. Its tariff is determined by an independent Electricity Tariff Regulatory Commission and explicit subsidies for power sector are nil except for that of non-conventional energy sources. The government had decided to earmark the revenues from Electricity Duty for the sinking fund for pension contribution for the KSEB employees. But the accumulated losses of KSEB and its staffing pattern needs a detailed examination to make it run profitably in the medium run.

KSEB is still one legal entity under the name KSEB Limited in the public sector. But Generation , Transmission and Distribution has been separated within it under different profit centres. The Annual Revenue Requirement of these Profit centres are made to the Electricity Regulatory Authority separately. The electricity connections in Kerala are 100 percent metered. It is understood that the process for smart metering has been initiated by the KSEB and Distribution Transformer (DT) metering is now done under the Accelerated Power Development Programme (APDP).

Besides. KSEB, there is power generation by some small scale hydro, thermal and wind energy units, which is of course insignificant (Details in Annexure 3). As regards, distribution, other than KSEB, the Municipal Corporation of Thrissur is engaged in distribution of power for 36000 connections over 12.63 sq.km. The entity is called Thrissur Electricity Department (TCED). In short, there is no significant player other than KSEB Ltd.in power sector in Kerala.

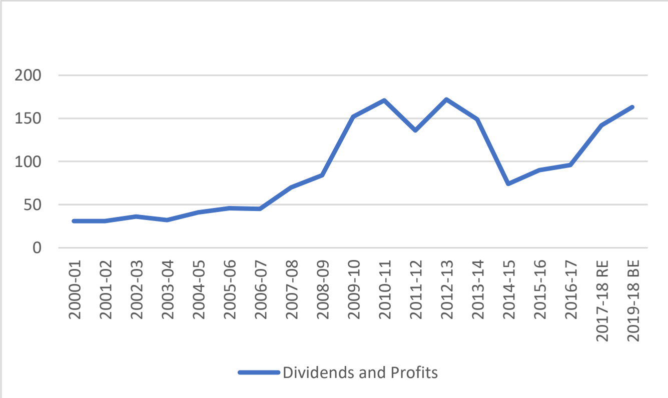
The trend in revenues from dividends and profits form the PSUS is given in Table 6.1 and Figure 6.1. In absolute figures, there was a significant rise during 2006-07 to 2010-11 as compared to the earlier period 2000-01 to 2005-06. There is a decline till 2014-15 and it has again risen.

Table 6.1: Dividends and Profits (₹ crore)

Year	Dividends and Profits	Revenue Receipts	Dividends/Revenue Receipts (%)
2000-01	31	8769	0.35
2001-02	31	9056	0.34
2002-03	36	10634	0.34
2003-04	32	11823	0.27
2004-05	41	13501	0.30
2005-06	46	15295	0.30
2006-07	45	18187	0.25
2007-08	70	21107	0.33
2008-09	84	24512	0.34
2009-10	152	26109	0.58
2010-11	171	30991	0.55
2011-12	136	38010	0.36
2012-13	172	44138	0.39
2013-14	149	49177	0.30
2014-15	74	57950	0.13
2015-16	90	69033	0.13
2016-17	96	75612	0.13
2017-18 RE	142	88267	0.16
2019-18 BE	163	102801	0.16

Source: Budget Documents, Government of Kerala.

Figure 6.1: Dividends and Profits 2000-01 to 2018-19 (₹ crore)



Source: Table 6.1.

As a proportion of the amount invested as in 31st March 2016, which is ₹ 19787 crore, Dividends and Profits during 2015-16, which is ₹ 90 crore is 0.45 percent. The policy of the Kerala government is not for disinvestment but to make PSUs, especially in public utility providing service profitable by a professional approach. The thrust of the industrial policy is to emphasise on private and public investment in knowledge based and non - polluting industries and thus have a sustainable development.

As far as suggestions for improving efficiency are concerned, the most important are:

a) Statutory audit of all PSUs should be updated. Currently, there is a backlog in statutory audit for around three years. Government should make any assistance conditional on update audited balance sheets.
b) Memorandum of Understanding (MOU) should be signed with every PSU and the government setting efficiency standards. If these cannot be met by a PSU, the government should consider divesting its stake in it.

Chapter 7
Summary and Conclusions

When aggregates are looked at separately for a financial year, the conclusion that would be drawn is that Kerala has failed to achieve fiscal consolidation as per the targets laid down in the FRBM Act or those suggested by the 13th and 14th Finance Commissions. But a detailed look at different indicators reveals that the State has made substantial attempts toward fiscal consolidation, though the targets have not been achieved. The State would have to take forward the renewed efforts for fiscal consolidation already initiated during the period 2020-21 to 2024-25, which is the award period of the 15th Finance Commission. The State has amended the FRBM Act in 2018, aiming to a) eliminate RD during 2017-18 to 2019-20 and b) maintaining FD at 3 percent of GSDP. Going by the current trend, even though, the movement is toward fiscal consolidation, there will be postponement in the time period.

On an analysis of past trends, the study finds that for achieving fiscal consolidation,

1. The Revenue Receipts should start growing at 16.75 percent in the beginning of the period and by the end of the period, it should be at 17.5 Percent.
2. The buoyancy of the own tax revenue should reach 1.3 and the Own tax revenue - GSDP ratio be 8.79 percent at the end of the period.
3. The suggested growth projections own non-tax revenue, other than lotteries, needs to reach from 17.23 percent in 2019-20 to 21.99 percent in 2024-25.
4. The revenue expenditure growth would have to be at 14.15 percent during 2019-20 and 2020-21. It is likely rise to 19 and 16 percent during 2021-22 and 2022-23 due to implementation of Pay Commission recommendations. The growth rate during 2023-24 and 2024-25 should come down to 13.8 percent, which is the long run (1987-88 to 2016-17) median revenue expenditure growth rate. The Government of Kerala has committed in Budget 2018-19 to rationalise expenditure by making on the basis of bill system and only actually spent amounts are reflected as expenditure.
5. The RD-GSDP ratio would have to come down from 1.41 percent in. 2019-20 to 0.12 percent in 2024-25.
6. Capital expenditure needs to grow at 15 percent per annum on the 2018-19 Budget Estimates till 2022-23 and later there is room for a substantially higher growth, if the projected consolidation in revenue account takes place.
7. The ratio of Borrowings and Liabilities to GSDP need to decline from 31.17 percent in 2019-20 to possibly between 28.02 percent in 2024-25.
8. The government policy needs to professionalise and make PSUs undertakings profitable.
9. The total subsides including implicit subsidies for the PSUs and statutory corporations are at 1.66 percent of GSDP. The explicit subsidy component for Food, Power and other sectors is only 0.28 percent of GSDP. The

government can target a subsidy (implicit and explicit) of 1 to 1.25 percent of GSDP as total subsidy for the period till 2024-25.

Based on an analysis of the major fiscal indicators, the study concludes that Kerala has to carry forward its commitment to fiscal consolidation by rationalising revenue expenditure, mobilising revenue by tapping its potential more intensively and finding more space for capital expenditure. The study makes projections with these aims till 2024-25, the award period of the 15th Finance Commission. It is felt that the State needs an empathetic approach from the 15th Finance Commission in devolution of Central Taxes and Grants to augment its efforts towards fiscal consolidation.

It needs mention here that Kerala's economy is intricately linked to the trends in all India and global economic trends and any positive or negative changes in these would have a significant impact on the projected fiscal scenario.

Annexure 1: Estimation of Tax Potential of Kerala by various studies

Sl No	Name of Study	Methodology	Kerala Related Findings	
1	Garg, Goyal and Pal (2014)	Stochastic Frontier Analysis.It considers not only economic but also structural and Analysis institutional variables like education, corruption etc	Tapping 90 percent of the Tax Potential	
2	Panagariya, Chakraborty and Rao (2014)	Regression Method Uses per capita GSDP and share of primary sector in GSDP	Andhra Pradesh, Chhattisgarh, Karnataka, Kerala. Madhya Pradesh, Rajasthan and Tamil Nadu having above average Tax effort, while Assam, Bihar, Gujarat, Haryana, Jharkhand, Maharashtra, Odisha, Punjab, Uttar Pradesh and West Bengal have index below 100 during 2009-10	
3	Raychaudhuri and Roy (2013)	Regression method Use presence of unorganised sector,	Andhra Pradesh, Chhattisgarh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Tamil Nadu and Uttar Pradesh have more than average tax effort and Bihar, Goa, Gujarat, Haryana, Jharkhand, Odisha, Rajasthan and West Bengal have less than average tax effort.	

4	Raju (2012)	Regression method Uses Average Private Final Consumption Expenditure. Co efficient is not significant at 0 or 1 percent level but at 5 % level.	estimated taxable capacity of 17 non-Special Category States for aggregate tax effort and has ranked Andhra Pradesh as first followed by Madhya Pradesh, Bihar, Rajasthan, *25* Uttar Pradesh and Kerala.	
5	Purohit (2006)	Regression method 1Different explanatory variables used. Per capita GSDP for Commodity Taxes	Estimated taxable capacity and tax effort of various taxes comprising Own tax revenue of States and found that in Sales Tax effort, Kerala ranks first followed by Tamil Nadu, Goa, Andhra Pradesh and Karnataka.	
6	Rakhee (2003)	Regression Method Uses Personal Consumption Expenditure and GSDP including remittances.	has measured the tax leakage at 35 percent of own tax revenue for Kerala. In this study consumption expenditure as well as GSDP including remittances has been used to estimate tax potential15. The co-efficient of consumption expenditure is not significant at 5 percent level.	
7	Sen (1997)	Regression Method Different explanatory variables used. Per capita GSDP for Commodity Taxes	Measures capacity of a State for Sales tax collection as a function of per capita net State Domestic Product, share of agriculture in total SDP, urbanisation as per 1991 census and number of scheduled bank branches. Kerala ranks first in tax effort for Sales Tax, followed by Gujarat, Karnataka, Bihar and Tamil	

			Nadu.	
8	Condoo et al (2001)	Regression Method (1986-87 to 1996-97)	Estimated relative tax performance for selected states during 1986-87 to 1996-97, the best performing States are Goa, Gujarat, Karnataka, Kerala, Rajasthan and Tamil Nadu and the worst performing states are Assam, Orissa and West Bengal. The States with medium level performance are Bihar, Haryana, Madhya Pradesh and Uttar Pradesh.	
9	Bagchi and Sen(1988)	Regression Method Suggests own best performance in the past of the State as an indicator 10 Oommen (1987) Regression Method Ranks States on the basis of relative tax effort separately for automatic response to income and discretionary changes, that is buoyancy and elasticity separately.		

Source: Table 10 Working Paper No 469, Centre for Development Studies, 2016 www.cds.edu

Annexure 2. Assumptions made to project, Receipts and Expenditure Table 4.5 and Table 5.3

The study projects the scenario 3 as the one which is best attainable based on the following assumptions.

1 Revenue Expenditure is estimated to grow at 14.15 percent for 2019-20 and 2020-21(the median growth rate for the period 2012-13 to 2018-19 is 14.12 percent). It is expected to grow faster at 19 and 16 percent during 2021-22 and 2022-23 due to the likely impact of future five year pay revision for government employees (based on past trends of revenue expenditure during pay revision years).[16] After that, it is projected to grow at a lower rate of 13.8 percent (which is the median growth rate for the period 1987-88 to 2018-19).

2. Revenue Receipts (the median growth rate during 2012-13 to 2018-19 is 16.5 percent) are expected to grow at 16.75 percent for 2019-20 and 2020-21 and 17 percent for 2021-22. After the 15th Finance Commission award, the growth rate of Revenue Receipts is expected to go up to 17.5 percent per annum during 2022-23 to 2024-25.

3. Projections for growth of Own tax revenues and Own non tax revenues other than Lotteries are given in Tables 3.7 and. 3.10 respectively and in paragraphs above that. Considering the inclusion of services sector and higher revenues from inter-State transactions on destination basis, buoyancy of 1.3 is assumed for commercial taxes and for Own tax revenue. This will result in 15 percent annual growth rate of Own tax revenue for the period till 2024-25. The Own tax revenue - GSDP ratio is projected to improve to 8.79 by 2024-25.

[16] RE grew at 32 percent during 2011-12 when pay revision was implemented in whole. The next pay revision has been implemented in three years, 2016-17, 2017-18 and 2018-19.the growth rate of RE was 15.77 percent for 2016-17. It is expected that next pay revision would come along with revised UGC scales also and a higher estimation is made at 19 and 16 percent is made for 2021-22 and 2022-23. Projection of salary and pension is not made as assumptions on the norms by the pay commission cannot be made. But overall prudence in revenue expenditure is expected for fiscal consolidation.

4. The median growth rate of Own Non - Tax Revenue excluding Lotteries is 16.41 percent during 2012-13 to 2016-17. The Revised Estimates for 2017-18 show a growth rate of 16.43 percent. Taking the median growth rate of 16.41 percent as the normal growth rate, an additional 5 percent is added to the rate, as the government has stated that it proposes to increase charges for services in a graded manner by 5 percent per annum. The projection of Own Non - Tax Revenue till 2024-25 along with past trends is given in Table 3.10. Based on these projections, Own Non-Tax Revenue- GSDP ratio would be 0.64 percent of GSDP by 2024-25

5. This should give space for the State to have a growth rate in capital expenditure at 15 percent per annum with 2018-19 budget estimates as the base for the three financial years, 2019-20, 2020-21 and 2021-22 . In the last two financial years, the revenue account balancing would leave sufficient fiscal space for 25 and 40 percent growth rate respectively in capital expenditure.

6. It is also expected that the consistent increase in capital expenditure would lead to higher growth rate in GSDP (assumed to grow at 11.5 percent per annum during 2020-21 and 2021-22), which is projected to grow faster at 12.5 percent during 2022-23 and at 13 percent for financial years 2023-24 and 2024 -25.

Annexure 3 Private Sector Entities in generation of Power in Kerala

Hydro	**Station Capacity (MW)**	**Year of Commissioning**
Maniyar	12	1994
Kuntungal	21	2001
Ullunkal	7	2008
Iruttukanam	4.5	2010
Pampumkayam (Mankulam)	0.11	2012
Karikkauam	10.50	2013
Meenvallom	3	2014
Kallar	0.05	2015
Thermal	**Station Capacity (MW)**	**Year of Commissioning**
BSES	157	2001&2002
Kasargode Power Corporation	21.90	2001
MPS Steel Castings Ltd (Co generation plant)	10	2009
Philips Carbon (Co generation plant)	10	2011
Wind	**Station Capacity (MW)**	**Year of Commissioning**
Ramakalmedu	14.25	2008,2009&2010
Agali	18.60	2008&2010
Ahalya, Kanjikode	8.40	2016
Solar	**Station Capacity (MW)**	**Year of Commissioning**
Cochin International Airport Ltd.	13	2013&2015

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