EVALUATION OF
STATE FINANCES IN BIHAR

SUBMITTED TO
FIFTEENTH FINANCE COMMISSION
GOVERNMENT OF INDIA, NEW DELHI

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Executive Summary

The present study was undertaken by the Centre for Economic Policy and Public Finance (CEPPF), Asian Development Research Institute (ADRI), Patna, at the request of the Fifteenth Finance Commission.

Objectives

The major objectives of the study include:

- Analysis of State's tax and non-tax revenues and estimation of its revenue capacities;
- Analysis of the expenditure patterns and trends including allocative and technical efficiency;
- Analysis of fiscal and revenue deficits;
- Analysis of the State's transfers to urban and rural local bodies;
- Analysis of the impact of working of the State public enterprises and of power sector reforms on the State's financial health;
- Analysis of contingent liabilities and subsidies of the State;
- Outcome Evaluation of State Finances in the context of recommendations of the 14th Finance Commission; and
- Determination of a sustainable debt roadmap for 2020-25, taking into account the impact of introduction of GST and other tax/non-tax trend forecasts.

Methodology

Trend and composition analysis; Regression and forecasting for estimation and projection; checking the best practices from other comparable states; Debt sustainability analysis; analysis of maturity profile of the state debts; Financial and ratio analysis of the balance sheets of public sector enterprises.

Data sources

Finance accounts and Budget documents of the state government; National Accounts Statistics; Financial statements of departmental enterprises and commercial undertakings; Audit Reports of the Comptroller & Auditor General of India; State Government Departments like Finance, Energy etc.; Report of the previous Finance Commissions, etc.

Reference Period

The study has been conducted with reference to the data for the 10 year period 2007-17 for the purpose of analysis and estimation of the different objectives related to different dimensions of the State's finances. As we were not certain about the objectivity and correctness of the State's budgeting processes, and also because the past budgets reflected wide variances from the actual receipts and expenditure, the revised estimates for 2017-18 and budget estimates for 2018-19 have not been used in calculation, except only for the purpose of comparison wherever needed.

Major Findings and Conclusions

Tax and Non-Tax Revenues

Ever since 2004-05, and especially after the enactment of the FRBM Act in 2005-06, the state had started generating increasing surpluses in its revenue account which it has been utilizing towards creating a viable capital base which in turn accelerated its growth, though its dependence on Central resources continued unabated. The revenue surplus of the state rose to Rs. 12,507 crore in 2015-16, before declining to Rs. 10819 crore in 2016-17 due to the slowing down of growth in respect of almost all important components of tax and non-tax revenues. State excise was hit the hardest as a result of adverse revenue impact of the prohibition policy of the State government. Loss of excise combined with the loss of VAT on alcohol made the state lose about Rs 4500 crore in 2016-17.

The total tax revenues of the state grew by only Rs. 8251 crore in 2016-17 as against the growth of Rs. 16659 crore during the previous year, and non-tax revenue grew by just Rs. 217 crore as against Rs. 628 crore in the previous year. Apart from the impact of prohibition policy, the muted growth both in respect of tax and non-tax revenues is perhaps also indicative of an overall slowing down of the economic activities within the state, partly as a result of demonetization that had hit the real estate and the informal sector, which employ a bulk of the workforce in Bihar, very hard. Stamp duty and registration fees which are related to the real estate sector, in fact, came down from Rs. 3409 crore to Rs. 2982 crore between 2015-16 and 2016-17. This slowing down of the revenue receipts has limited the state government’s capital spending to only Rs. 3242 crore in 2016-17 compared to more than Rs. 5800 crore during the previous year. This has also resulted in its Gross Fiscal Deficit rising to 3.8 percent of GSDP, breaching the FRBMA limit of 3 percent of GSDP.

After recommendations of the Fourteenth Finance Commission increasing the total devolution from the Central divisible pool to states from 32 percent to 42 percent, state’s share of Central taxes has predictably increased; however, this increase has been offset by a stagnation in the Central grants which had increased only marginally to Rs. 19,566 crore in 2015-16 and to Rs. 20559 crore in 2016-17.

The total tax revenue of the state government has increased from Rs. 28,210 crore in 2007-08 to Rs. 105,585 crore in 2016-17, growing annually at a compound average rate of 15.8 percent. The own tax revenue of the state government grew from Rs. 5,085 crore to Rs. 23742 crore during this period, implying a higher annual growth rate of 18.7 percent; though during the last 5 years this growth was only 10 percent due to the sacrifice of revenues from alcohol. The contribution of the non-tax revenue has been rather subdued, accounting for about barely 2 percent of its total revenue receipts. Over 80 percent of the non-tax revenues are collected only from two sources: Non-Ferrous Mining and Metallurgical Industries and Interest Receipts.

There is one aspect of the state finances that has remained unchanged over the years, which is the state's dependence on Central transfers. It is only through a sustained growth of its economy and thereby higher own tax revenues that Bihar can lessen this dependence. During the ten year period 2007-17, between 70-80 percent of the total receipts of the state government came from the Central government by way of state’s share of divisible pool of Central taxes and Central grants. During 2016-17, Central transfers constituted about 75 percent of total State revenue — 56 percent from the state's share of central taxes and 19 percent from central grants. The state's own resources from tax and non-tax revenues contributed about 25 percent to the total revenue.

The Tax: GSDP ratio of Bihar which had increased from only 4.5 percent in 2007-08 to 6.7 percent in 2016-16, declined substantially to 5.4 percent only in 2016-17, not only from the drying up of excise revenues but due to lower growth in almost all major taxes during the year. Bihar's Tax: GSDP ratio is among the lowest in the country, but the measures initiated by the state government to enhance the Tax: GSDP Ratio during the last few years were hardly significant. GST has taken away the powers of the State to increase or decrease tax rates in respect of most important taxes. There were some occasional minor revisions in the rates of the remaining taxes which did not contribute significantly to the tax coffer of the State.

As regards the non-tax revenue, most of the State Government departments do not levy any user charges, and some only levy a minimal amount of user charges unrelated to their costs. There is neither any concept of recovering a certain part of the actual cost, nor a system of raising resources for maintenance of such services. Neither is there any system of linking the user charges with returns on the investments made by the state on creating the assets required for providing these services.

Introduction GST has also adversely impacted the state's own revenues. It has subsumed both VAT and Taxes on Goods and Passengers, two of its most buoyant sources of revenue. The immediate loss of revenue to the State from these two taxes was of the order of Rs. 18000 crore in 2016-17. As against this, the collections from GST during the year 2017-18 (July-March) totalled to less than Rs. 6200 Crore only; including the GST grants from the Centre, the total amount received by the State from GST during the year amounted to Rs. 9200 crore.

During the five year period that the State would be eligible for GST compensation, there would be a potential loss to the state which is the difference between the collections projected at the current rate of growth (17%) and the total compensation receivable by the State, calculated @ 14% over the 2015-16 figures. For the five years, this loss is estimated at Rs. 10140 crore.

We have estimated the revenue capacities, both in respect of tax and non-tax revenues, for the period 2017-18 through 2024-25 by using regression analysis. The total own revenues of the State are projected to grow from Rs. 41,117 crore in 2017-18 to Rs. 167,272 crore in 2024-25, growing at an average annual compound linear rate of 22 percent. For 2017-18, the estimated revenue of Rs. 41,117 crore compares with the State government's revised estimate of 40,328.

The tax administration of the State needs much strengthening. There was Rs 5700 crore of uncollected arrears of revenue as on 31 March 2016 which the Government needs to pursue proactively. Besides, there are huge pending assessments with the Commercial Taxes Department; VAT alone accounted for more than one lakh pending cases at the end of 2015-16.

Evasion of tax remains an endemic problem. In the pre-GST regime, in respect of VAT, less than 30 percent of the registered dealers were paying any VAT. The situation may not be very different now, but the record of the Commercial Taxes Department in checking tax evasion has been far from satisfactory. Clearly the administrative machinery of the state government is not geared adequately to handle the problems as yet.

Expenditure Patterns

Over the ten year period 2007-17, the total expenditure of the state Government has increased four-folds, from Rs 31572 crore to Rs 126302 crore, growing at a CAGR of 16.7 percent. Revenue expenditure has also increased four-folds, from Rs 23563 crore to Rs 94765 crore during the same period. Capital expenditure has grown a little slower, at a CAGR of 16.4 percent, due to the slower growth in debt repayments; however, within capital expenditure, the growth of capital outlay at a CAGR of 18.1 percent, has been truly remarkable. Capital outlay has grown by nearly 4.5 times during this ten year period. The growth of total expenditure has been more or less uniform over the years, making the forecast of it a viable proposition.

Over these ten years, except during the four years from 2011-12 to 2014-15, the respective shares of revenue and capital expenditure in total expenditure have remained more or less constant with the former claiming around three-fourth of the total expenditure throughout. Within the revenue expenditure, expenditure on Social Services has always claimed the largest share – about 43 percent of the total revenue expenditure. Compared to the expenditure on economic services, the expenditure on general services has claimed a disproportionate share of the total expenditure, mainly on account of salaries. However, the growth of revenue expenditure on economic services has been picking up vis-à-vis the growth of revenue expenditure on general services. Consequently, the share of general services has declined from 39 percent of revenue expenditure to 32 percent over this ten year period, while the share of economic services has risen from 19 percent to 25 percent. Within general services, pension and interest payments together accounted for more than two thirds of the total expenditure in 2016-17. Within capital outlay, the largest investments were made in economic services whose share ranged between 74 percent and 87 percent over these ten years, followed by social services and general services in that order. There has been no major structural shift in the expenditure patterns over the years, except some minor shifts between capital outlay and discharge of public debt.

Among the social services, education claimed the bulk of expenditure (47 percent), followed by health; the 11 percent share of health in 2016-17 was practically the same as in 2007-08. Among the economic services, rural development claimed the highest share followed by energy; the share of energy increased steadily and significantly from 16 percent in 2007-08 to as much as 33 percent in 2016-17. But the shares of agriculture and irrigation – sectors which are interlinked in terms of agricultural productivity – had both declined, which should be a cause for serious concern for a state whose population is heavily dependent on agriculture for their livelihood.

The salary and pension constitute the two most important items of revenue expenditure. The salary of the state government employees accounted for 17 percent of the total revenue expenditure in 2016-17, significantly less than 28 percent in 2007-08. The salary expenses constituted 3.6 percent of GSDP in 2016-17, despite the fact that the State Government is yet to revise the pay scales of its employees following the Seventh Pay Commission recommendations for the Central Government employees.

Similarly, pension payments constituted 13 percent of revenue expenditure in 2016-17 or 3.1 percent of GSDP. During the period from 2007-08 to 2016-17, expenditure on salary and pension together increased by nearly Rs. 19000 crore - accounting for 30 percent of total revenue expenditure of the state and 6.5 percent of its GSDP. The pension payments increased annually at a rate of 18 percent from Rs. 2789 crore in 2007-08 to Rs. 12508 crore in 2016-17, while the salary expenditure increased at an annual rate of 10 percent during this period. Together they consumed around 27 percent of the state's total revenue receipts in 2016-17, exceeding the State's own revenue receipts of Rs. 26145 crore.

During this period, the amount of subsidies given by the state government increased from Rs 4313 crore to Rs 8633 crore. During 2016-17, nearly 79 percent of the total subsidy expenditure of the Bihar Government was provided to the power sector alone. There does not appear to be any system of need-based targeting and evaluation of the subsidies given by the state government.

The quality of expenditure incurred can be judged by the proportion of expenditure devoted to creation of social and physical infrastructure and the quantum of developmental expenditure on social and economic services as opposed to the non-developmental expenditure on general services bulk of which is paid as salary. Judged by these parameters, the quality of expenditure in Bihar had improved over the ten year period 2007-17. The non-salary component of developmental revenue expenditure had increased substantially from 69 to 85 percent during this period, while the share of capital outlay in total expenditure increased marginally from 19 to 22 percent. Per capita expenditure in Bihar increased more than three-folds during the period; however, this increase conceals the immense intra-state disparity in state government expenditure because of structural and historical factors.

As regards resources, Bihar was not able to spend whatever limited funds it had. During the three years (2014-15, 2015-16 and 2016-17), it could not spend Rs 22,188 crore, Rs 8,357 crore and Rs 18,394 crore respectively from the funds that were approved by the Legislature.

As in the case of revenue capacities, the expenditure of the State government for the period 2017-18 through 2024-25 were also estimated by using regression analysis. On the basis of such estimation, it was noticed that for the capital outlay to be sustained at the current levels as suggested by the past trends, there needs to be consistent and high levels of surplus in the revenue account. The borrowing being limited by the FRBMA, the 3 percent limit of FRBMA falls far short of the capital investment requirements. Grants from Centre and devolution should bridge this gap after taking into account the requirements of debt repayments.

Fiscal Deficit

The Gross Fiscal Deficit of the State has increased by Rs. 4,418 crore in 2016-17, compared to the increase of only 883 crore in the previous year, reflecting the weakening of state's fiscal position during the year. The debt level increased to 31.6 percent of the GSDP during 2016-17, from 30.5 percent in the previous year.

The 14^{th} Finance Commission recommendations allowed relaxation of up to 0.5 percent over and above the 3 percent FRBMA limit depending on the State's fulfilling certain conditions. As per these conditions, Bihar is eligible for 0.25 percent relaxation that would bring its fiscal deficit of 3.2 percent within the modified FRBMA limit in 2015-16, but not in 2016-17. The ratio of fiscal deficit to GSDP is likely to rise further in the coming years, if the present trends continue. This indicates that the debt problem which has hitherto remained reasonably under the control of the state government may need to be monitored and managed so as not to slip into the dangerous territory.

Though the GFD of Bihar was financed mostly by net borrowing in the Consolidated Fund of the state government, in some years, the net borrowing from Public Account also contributed significantly to finance the GFD; in the earlier years, GFD had be financed even by drawing down the cash balances. Financing by public account also brings into focus the problem of surplus borrowing, otherwise avoidable. The problem arises because of the nature of public account, in which availability rather than need determines the borrowing.

In 2008-09, and then again in 2015-16 and 2016-17, the net public debt exceeded the fiscal deficit by 69 percent, 18 percent and 5 percent respectively, indicating over-borrowing to that extent, which resulted in increasing the cash balance in 2015-16. In fact, the cash balance was rendered surplus in other years as well, due to the combined borrowing from Consolidated Fund and Public Account exceeding the Fiscal Deficit requirements. This reflects adversely upon the effectiveness of cash management by the state government, as it does not make much sense to borrow while sitting with idle cash. This can be avoided or minimized if the cash balances are utilised optimally. In 2008-09, the cash balance went up by as much as 66 percent of the GFD and by 53 percent again in 2010-11. The government could have reduced its borrowings by substantial amounts (about Rs. 1600 crore in 2008-09 and Rs. 2000 crore in 2010-11) if it could only utilize the surplus cash available with it. Thus there is enough scope for improving the cash management of the state government.

Debt Position

The total outstanding liabilities of the state government had accumulated to Rs. 138,526 crore at the end of 2016-17, growing steadily at an annual rate of 11.8 percent during the ten-year period 2007-17. Public Debt constituted nearly 77 percent of the total outstanding liability at the end of 2016-17. Loans from Public Account constituted 8 percent part of the total liability of the state government, though it is not a debt in the strict sense of the term.

The structure of debt has undergone a significant change since 2002-03. This occurred first by swapping of the high-cost central government loans with low-cost market loans and then, as a result of the recommendations of the Twelfth Finance Commission, by consolidation and rescheduling of all central government loans for payment over a 20-year period at 7.5 percent rate of interest. The Commission also recommended that if the state governments wanted to raise loans, they should raise the loans from the market and the Central government's assistance should only be limited to grants. As a result, 91 percent of outstanding public debt of Bihar at the end of 2016-17 was due to the internal loans raised by the state government and only 9 percent due to loans from the Central government.

Bihar's outstanding liability as a percentage of its GSDP had decreased significantly from 45 percent in 2007-08 to 32 percent in 2016-17, due mainly to the much higher growth of GSDP at an annual rate of more than 16.2 percent, compared to an annual growth rate of 11.8 percent for outstanding liability during the period. The major factors that contributed to the lower growth of outstanding liability of the state government included the State's enactment of the FRBM Act in 2005-06 and its complete elimination of deficit in the revenue account, enabling it to get the full benefits of debt waiver recommended by the 12^{th} Finance Commission during the period 2005-10. However, the ratio of outstanding liability to GSDP had reached a much lower level of 27 percent in 2011-12 and remained at that level till 2013-14; it has since been rising again which is a matter for concern.

The outstanding market loans and dues to NSSF together constituted 83 percent of the total internal debt liability of the state government. Loans from Financial Institutions constituted only 6 percent of the total outstanding public debt; of the total loans of Rs. 6029 crore, Rs. 5885 crore (97.6 percent) were due to NABARD alone. Almost the entire outstanding Central loans were on account of State Plan Schemes only. Following the recommendations of the Fourteenth Finance Commission, Bihar has preferred to opt out of the NSSF loans in 2015-16; as a result, no fresh NSSF loans were availed during and since 2015-16. The loans from NSSF outstanding against the state government at the end of 2016-17 amounted Rs. 23,218 crore.

97.8 percent of the state government's outstanding loans were carrying less than 10 percent rate of interest, with 35 percent carrying interest rate less than 8 percent. 66 percent of the outstanding Central loans carried interest below 6 percent. Among the outstanding internal debt, the securities issued to NSSF carried interest rates between 9 and 11 percent while market loans carried interest between 8 and 9 percent. The weighted average interest on the outstanding public debt works out to about 8.3 percent.

Before the award period of the 15^{th} Finance Commission, the State will have discharged 17.5 percent of its outstanding debt as on 31^{st} March 2017, but 42.5 percent of its debt will get discharged during the award period of the 15^{th} Finance Commission (2020-25), amounting to Rs 45165 crore. Any debt sustainability roadmap of the State must factor in this maturity profile of its outstanding debt.

The outstanding liability on Public Account has been growing rather slowly, at an annual rate of 8.3 percent during 2007-17. Small Savings, Provident Fund and Other Accounts together constituted only 27 percent of the total liability on Public Account at the end of 2016-17, compared to 59 percent at the end of 2007-08. The share of Deposits and advances gradually climbed from 36 percent to 70 percent during these ten years, while the share of Reserve Funds in Other Liabilities decreased from 6 percent in 2007-08 to only 2 percent in 2016-17.

As regards the sustainability of debt which indicates the ability of the State to maintain a constant debt-GSDP ratio over a period of time, a necessary condition for stability states that if the rate of growth of economy exceeds the interest rate or cost of public borrowings, the debt-GSDP ratio is likely to be stable, provided there is a sustained primary surplus (at least not a continued substantial deficit in the primary account). This condition is not satisfied in Bihar's case; and even though the growth rate of its GSDP outstripped the growth rate of its outstanding liability, there has been a continuously increasing deficit in its primary account since 2011-12. As a result, the ratio of outstanding liabilities to GSDP has been increasing after falling from 45 percent to 27 percent (2011-12 to 2013-14) and stood at 32 percent at the end of 2016-17. This trend is likely to continue, putting strain in the servicing of debt in future, since the non-debt receipts would not be sufficient to bridge the resource gap together with the net borrowed funds available. The liabilities might then become unsustainable in the long run.

State's Transfer to Local Bodies: PRIs and ULBs

As of March 2016, there were 8,969 PRIs in Bihar with a total of 135725 elected representatives in the State, besides 123589 members (8398 Sarpanchs and 115191 Panchs) of Gram Katcharies. The last election to the elected bodies of PRIs was held during April-May 2016.

Devolution to PRIs and ULBs has three components, Functions, Funds and Functionaries. As regards the devolution of Functions, PRIs at all the three levels have been given the right of self-governance in respect of 29 subjects of 20 Departments. It was decided in July 2014 by all the Principal Secretaries/Secretaries of the Government to frame Operational Guidelines for effective devolution of powers to PRIs. In first phase 12 Departments were selected for framing the Operational Guidelines. However, only two departments have so far framed these Guidelines. The Fifth State Finance Commission (Fifth SFC) observed that the progress so far on Department wise and subject wise activity mapping was unsatisfactory and Parastatal Bodies were also carrying the functions of PRIs.

As regards Funds, no taxes were levied and collected by the PRIs as the State Government did not notify the rates of taxes. Of the three level of PRIs, so far only the ZPs have some own non-tax revenue from rent of shops/Inspection Bungalows, leasing of ponds/bus-stand etc., whereas PSs and GPs do not have any revenue from their own sources.

As regards Functionaries, ZPs in the State did not have adequate staff to discharge the devolved functions - 79 per cent of sanctioned posts were lying vacant as of January 2017. In two ZPs, men-in-position were less than 10 per cent of sanctioned strength. At GP level, 3160 posts of the Panchayat Secretaries (38 per cent of the total 8398 posts) were lying vacant as of 31 March 2016.

PRIs are mainly financed by the grants from the Central and State governments (Central/ State Finance Commission grants), other transfers from the Central government (e.g. BRGF/ MNREGS), recurring and non-recurring grants from the state government, and their own resources. No taxes are as yet levied and collected by the PRIs. However, untied grants are made available to three levels of PRIs under

Fourteenth Finance Commission (FFC), Fifth SFC and Rajeev Gandhi Panchayat Sashaktikaran Yojana (RGPSY) during 2015-16. Backward Region Grant Fund (BRGF) was delinked from the support of the Central Government from 2015-16. As per Fifth SFC report, funds available to the PRIs from various sources were grossly inadequate for their assigned functions. Further, they were not able to utilise even the allocated funds due to capacity constraints like serious deficiencies in skilled manpower, office space, IT facility, equipment etc.

The Fifth SFC was constituted in December 2013 for the period 2015-20 and submitted its report in February 2016. As per its recommendations, two types of financing, (i) the share of net tax revenue of the State (ii) amount in shape of grants, are to be made available to the PRIs to be spent on water supply, sanitation, smart panchayat, e-governance, Panchayat Sarkar Bhawan etc. The amount was to be distributed among GPs, PSs and ZPs in the ratio of 70:10:20 respectively. The state had made provision of Rs. 1823 crore to be released to PRIs during 2015-16, which is yet to be released. The Fifth SFC has estimated the receipts and expenditure of the PRIs for the period 2015-20, according to which the resource gap of the PRIs for the period would be of the order of Rs. 31300 crore, even after the 14th Finance Commission transfers.

Being almost entirely dependent on the State government grants and partly upon the Central Finance Commission grants which are not adequate for its range of functions and activities, ULBs in Bihar are neither equipped financially nor administratively to carry out their assigned functions. Besides, they also lack functional autonomy, as decision on all key issues rests largely with State Government. There does not seem to be any clear and true devolution of functions. No activity mapping also seems to have been done. Government needs to make serious efforts towards empowering and enabling them to become the effective agents of change. Due to their lack of capacity, many ULB functions are being discharged by the Government departments.

As per the estimates of the Fifth SFC, the ULBs are likely to face a resource gap of Rs 8505 crore during the period 2015-20 covered by the 14th Finance Commission. They had accumulated unspent funds of Rs 929 crore at the end of 2015-16, which testifies to their collective lack of capacity. Obviously, much remains to be done to empower, enable and transform these ULBs which only then can play a transformational role in changing the urban landscape in Bihar.

Public Sector in Bihar

As of March, 2016, the public sector in Bihar comprised 71 government companies and 3 statutory corporations. However, of the 71 government companies, only 31 were working. The total investment by the state government in public sector amounted to Rs. 46,694 crore till March 2016 (Rs. 31,394 crore as equity and Rs. 15,299 crore as long term loans). Of these, Rs. 729 crore were invested in non-working companies. The turnover of the working PSUs increased from Rs. 7,811 crore in 2011-12 to Rs. 12,880 crore in 2015-16. However, their contribution to the State GDP increased from 2.28 per cent to 2.64 per cent during this period. As of March 2016, they employed 17,349 employees, including 1350 employees with non-working companies.

The majority of the working companies belong to power, infrastructure and financial sectors (total 19 companies). Agriculture, Manufacturing, Services and others accounted for remaining 12 working companies. Among the public sector in Bihar, investment is mainly focused on the power sector, which accounted for nearly 83 percent of the total state government investment in public sector undertakings at the end of 2015-16. During 2015-16, out of 34 working PSUs, 15 had earned profits of Rs. 545 crore and 14 incurred losses of Rs. 1145 crore. Out of 15 profit-earning PSUs, only five companies proposed total dividend for a meagre amount of only Rs. 15.5 crore.

As of March 31, 2016, out of 34 working PSUs, only three PSUs had finalised their accounts for the year 2015-16 and the Accounts of 31 PSUs were in arrears for periods ranging from one year to 25 years. AS regards the status of arrears in accounts of the 40 non-working PSUs, some of these have never prepared the accounts ever since their inception and for many, their accounts are pending since 1977-78.

As regards the performance of the public sector in Bihar, their return on capital employed decreased from 18.41 per cent in 2012-13 to a negative value of 1.02 per cent in 2015-16. Accumulated losses of the working companies have decreased from Rs 9,649 crore in 2011-12 to Rs 3,953 crore in 2015-16.

Of the 40 non-working companies, 10 are under liquidation process, as their continuance may not serve any useful purpose; five of are under the process of liquidation for the last 15 years. Overall, the public sector does not inspire much confidence in Bihar, and lot needs to be done to revamp this sector, which may call for difficult and sometimes politically risky decisions.

Power Sector Reforms in Bihar

Prior to November 2012, the Bihar State Electricity Board (BSEB) was mandated for management of electricity generation, transmission, distribution and related activities in Bihar. Under the new Bihar State Electricity Reforms Transfer Scheme 2012, the BSEB has been unbundled into 5 companies with effect from 1st November, 2012 — Bihar State Power (Holding) Company Limited (holding company), Bihar State Power Transmission Company, Bihar State Power Generation Company, North Bihar Power Distribution Company and South Bihar Power Distribution Company.Faster economic growth and higher population growth have been driving up the demand for electricity in recent years leading to high AT&C (Aggregate Technical and Commercial) losses, which stood at 40.6 percent in 2016-17. The distribution companies have been trying to address the issue of high AT&C losses by improving the metering, billing and collection systems, but this remains a major challenge to which an answer is yet to be found.

The State Government is providing annual budgetary support to the power sector for more than Rs. 5300 crore. This is in addition to the liability taken by the State under the UDAY scheme which exceeds Rs. 2300 crore. Without any tangible return, these are bound to contract the already tight fiscal space of the Government, adversely affecting its other development commitments. Added to these are the subsidies on account of power of the order of nearly Rs. 4000 crore.

The power sector reforms in Bihar may have increased the availability of power, but resulted in additional expenditure of Rs. 9300 crore, apart from a liability of Rs. 2300 crore on account of UDAY loans and annual committed expenditure on interest thereon. All these will create strains in the already adverse fiscal situation faced by the state which are likely push up the GFD/GSDP ratio of the State by about 1.5 to 2 percent.

Chapter 1

Introduction

The present study "Outcome evaluation of state finances in the context of recommendations of the 14th Finance Commission: Determination of a sustainable debt roadmap for 2020-25, taking into account impact of introduction of GST and other tax/non-tax trend forecasts" was undertaken by the Centre for Economic Policy and Public Finance (CEPPF), Asian Development Research Institute (ADRI), Patna, at the request of the Fifteenth Finance Commission. Though the CEPPF serves as a think-tank of the Bihar Government and has assisted the State Finance Department in preparing the memorandum to be given the Commission, this is an independent assessment of the finances of the State meant to serve as inputs to the Fifteenth Finance Commission for making appropriate recommendations in its report.

1.1 Objectives of the Study

The objectives, methodology and data sources for the study are specified in Table 1.1. The Commission required the study to cover 13 aspects of State finances as listed below. The study has been conducted with reference to the data for the 10 year period 2007-17 for the purpose of analysis and estimation of the different objectives related to different dimensions of the State's finances. As we were not certain about the objectivity of the State's budgeting processes, and also because the past budgets reflected wide variances from the actual receipts and expenditure, the revised estimates for 2017-18 and budget estimates for 2018-19 have not been used in calculation, except only for the purpose of comparison wherever needed.

Table 1.1: Objectives, methodology and data sources

Sl. No.	Objectives	Data sources	Methodology
i	Estimation of revenue capacities of State and measures to improve the tax-GDP ratio during last five years. Suggestions for enhancing the revenue productivity of the tax system in the State.	Finance accounts for revenue data; National accounts statistics for GSDP data; Finance department for additional measures taken or revenue augmentation during the last five years.	Trend and composition analysis; comparison of tax: GSFD ratio of other states; Regression and forecasting for estimation and projection.
ii	Analysis of the state's own non-tax revenues and suggestion to enhance revenues from user charges and profits from departmental enterprises and dividends from non-departmental	Finance accounts for non-tax revenue data; Financial statements of departmental enterprises and commercial undertakings for data on profits and dividends.	Trend and composition analysis; Regression and forecasting for estimation and projection.

	commercial enterprises.		
iii	Expenditure pattern and trends separately for Revenue and Capital, and major components of expenditure there under. Measures to enhance allocative and technical efficiency in expenditures during the last 5 years. Suggestions for improving efficiency in public spending.	Finance accounts for data on major head-wise analysis of revenue and capital expenditure items.	Trend and composition analysis; Analysis of allocative efficiency in terms of salary and non-salary expenditure on various major heads; checking the best practices from other comparable states if possible.
iv	Analysis of Deficits – Fiscal and Revenue.	Finance accounts for data on revenue surpluses, capital outlays and loans and advances made and recovered by the state government during the last 10 years.	Trend analysis; analysis of composition and financing of fiscal deficits. Analysis of revenue surpluses (Bihar has been a revenue surplus state since 2004-05).
v	The level of Debt: GSDP ratio and the use of debt (i.e. whether it has been used for capital expenditure or otherwise). Composition of the state's debt in terms of market borrowing, Central government debt (including those from bilateral/multilateral lending agencies routed through the Central government), liabilities in public account (small savings, provident funds etc.) and borrowings from agencies such as NABARD, LIC etc.	Finance accounts for data on public debt and public account liabilities; National accounts statistics for GSDP data.	Trend analysis of debt and its components; analysis of debt burden and repayment liabilities;, analysis of net debt accrued to the state after discharging of liabilities; analysis of maturity profile of the state debts.
vi	Implementation of FRBM Act and commitment towards targets. Analysis of MTFP of various departments and aggregate.	Finance accounts and Budget documents of the state government.	Year wise analysis of achievements FRBM targets and reasons for failure, if any; Department wise analysis of MFTP.
vii	Analysis of the state's transfers to urban and rural	Finance and Panchayati Raj Department, State Finance	Trend analysis. Analysis of the resources of local

	local bodies in the State. Major decentralization initiatives.	Commission other concerned departments; Audit Reports on Local Bodies.	bodies; comparison with other comparable states, if feasible. Examination of the results of decentralization initiatives.
viii	Impact of State Public Enterprises finances on the State's financial health and measures taken to improve their performance and/or alternatives of closure, disinvestment etc.	Financial statements of working public enterprises of the state; Audit reports of the Comptroller & Auditor General of India;	Financial and ratio analysis of the balance sheets of public sector enterprises, especially of those in the power sector; Examination of measures taken by the state for liquidation of loss-making enterprises and the results thereof.
ix	Impact of Power Sector Reforms on States' fiscal health. In case reforms have not been implemented, the likely outcome on the States' fiscal health.	Annual reports and accounts of the power generation and distribution companies in the State; Data from Energy Department.	Financial analysis of power sector companies; examination of the power situation and receipts from power sector and their impact of state resources.
x	Analysis of contingent liabilities of the State.	Finance Accounts.	Trend analysis; examination of guarantees and their discharge etc.
xi	Subsidies given by the States (Other than Central subsidies), its targeting and evaluation.	Finance Accounts; Budget documents.	Trend analysis; evaluation of the use of subsidies and impact thereof.
xii	Outcome Evaluation of State Finances in the context of recommendations of the 14th Finance Commission.	Report of the 14th Finance Commission; Finance Accounts; Finance Department of the Bihar Government.	Outcome evaluation vis-à-vis 14th Finance Commission recommendation.
xiii	Determination of a sustainable debt roadmap for 2020-25, taking into account impact of introduction of GST and other tax/non-tax trend forecasts.	Finance Department for data on GST; Finance accounts for data on capital receipts and repayment obligations; National accounts for growth of GSDP.	Trend analysis; Debt sustainability analysis; regression and estimation.

1.2 Organisation of the Study

The findings of this evaluation study is presented in 8 chapters, broadly matching the 13 dimensions of the state finances mentioned above, based on the 10 year long time series data (2007-08 to 2016-17). Leaving this Introductory Chapter, the contents of the remaining 7 chapters are briefly described below.

Chapter 2 (Revenue Capacity) analyses the medium term trends in own tax receipts, central grants, measures to improve Tax: GSDP ratio, and non-tax revenues (especially from user charges and profits from public sector undertakings). In other words, this Chapter addresses the first two of the 13 aspects of the state finances mentioned above.

Chapter 3 (Expenditure Patterns) covers the third of the 13 aspects mentioned above and the analysis is done in terms of revenue and capital expenditure and the quality and impact of public expenditure. However, besides the third aspect, the Chapter also includes an analysis of the subsidies provided by the state government (eleventh of the 13 aspects) as well as an outcome evaluation of state finances in the context of recommendations of the 14th Finance Commission (twelfth aspect).

Chapter 4 presents an analysis of the Gross Fiscal Deficits of the state government (fourth of the 13 listed aspects), as well as progress on the implementation of the Financial Regulation and Budget Management (FRBM) Act (sixth of the 13 listed aspects).

Chapter 5 is the devoted to the analysis of the present debt position of the state government (fifth of the 13 listed aspects) and how it has improved during the last decade. The contingent liabilities (tenth of the 13 listed aspects) as well as the last aspect, determination of a sustainable debt roadmap for 2020-25, have also been analysed in this chapter.

Chapter 6 focusses on the state government's transfer to local bodies, which is gradually becoming more substantive, thanks to various initiatives, both by the central and state government. This Chapter corresponds to the seventh of the 13 listed aspects listed above.

Chapter 7 incorporates an exhaustive analysis of the functioning of the public sector enterprises of the state government, corresponding to the eighth of the 13 aspects listed above. The power sector is the largest among all the public sector undertakings and power sectors (ninth of the 13 listed aspects) are also discussed in this chapter.

Finally, Chapter 8 summarises the major conclusions and findings of this study.

1.3 Persons associated with the Study

The study has been conducted by the following faculty members of CEPPF under guidance and supervision of Professor Govinda Bhattacharjee: Dr. Bakshi Amit Kumar Sinha, Assistant Professor, CEPPF Dr. Barna Ganguly, Assistant Professor, CEPPF, and Dr. Nijara Deka, who was appointed as a Research Associate specifically for this study. Dr. P. P. Ghosh of ADRI provided valuable advise, guidance and support throughout, besides editing the entire manuscript.

1.4 Acknowledgement

The Study team acknowledges their gratitude to the official of the State Government who provided invaluable help from time to time, and without whose support, this study could not have been completed in time. The team also expresses their deep gratitude to Dr. Shaibal Gupta, Director, CEPPF, without whose encouragement and support this study would not have been undertaken in the first place.

Chapter 2

Revenue Capacity : Tax and Non-Tax Revenues

Objectives:

To analyse revenue trends of Bihar Government in respect of tax and non-tax revenues;
To estimate revenue capacities of the State;
To suggest measures to improve the Tax-GDP ratio during last five years and for enhancing the revenue productivity of the tax system in the State as well as the non-tax revenues from user charges.

Data Sources:

Finance accounts for revenue data; National accounts statistics for GSDP data; Finance department of Bihar Government.

Methodology:

Trend and composition analysis; Comparison of Tax: GSFD ratio of different states; Regression analysis for estimation and projection.

2.1 Summary of financial position

Rising deficits in the revenue account had characterized the finances of during the eighties which seriously weakened the fiscal health of the state, leading to huge fiscal deficits, unsustainable levels of debt and lesser government expenditure, particularly capital outlay which stunted the growth of the state. But, fortunately, a corrective process was started in 2005-06 with the enactment of the FRBM Act, after which the state government had started generating increasing surpluses in its revenue account. Bihar has since then remained a revenue surplus state and it has utilized the surplus from its revenue account successfully towards creating a viable capital base which in turn accelerated its growth rate, though its dependence on Central resources continued unabated.

Ever since 2004-05 when Bihar generated a modest revenue surplus of only Rs. 1076 crore for the first time, it has consistently been a revenue surplus state. The revenue surplus has increased from Rs. 6441 crore in 2013-14 to Rs. 12,507 crore in 2015-16, the highest so far, before declining to Rs. 10819 crore in 2016-17 due to the slowing down of growth rates in respect of almost all important components of tax and non-tax revenues, viz. sales tax, taxes on goods and passengers, state excise, stamp duty and registration fee, royalty on mines and minerals etc. Only taxes on motor vehicles among tax revenues and interest receipt among the non-tax revenues have registered some growth over the previous year. State excise was hit the most, its yield coming down from Rs. 3136 crore in 2015-16 to only Rs. 30 crore in 2016-17, as a result of adverse economic impact of the prohibition policy of the State government. Since January 2016, Country Liquor and since April 5, 2016 all liquor became prohibited in the State, and Rs. 30 crore that was collected came only from the arrears of the previous year, while the cost of collection was three times as much, due to the higher cost associated with enforcement of the prohibition policy. Likewise, the arrears of VAT on these prohibited commodities yielded only Rs. 37

crore during the year, as against Rs. 1353 crore in the precious year (Rs. 355 crore under country liquor and Rs. 998 crore under IMFL). Thus the total impact of the prohibition policy in terms of revenue loss thus came to Rs. 4489 crore.

The total tax revenues have grown by only Rs. 8251 crore in 2016-17 as against the growth of Rs. 16659 crore during the previous year, and non-tax revenue by just Rs. 217 crore as against Rs. 628 crore in the previous year. Apart from the impact of prohibition policy, the muted growth both in respect of tax and non-tax revenues is perhaps also indicative of an overall slowing down of the economic activities within the state, partly as a result of demonetization that had hit the real estate and the informal sector, which employ a bulk of the workforce in Bihar, very hard. Stamp duty and registration fees which are related to the real estate sector, in fact, came down from Rs. 3409 crore to Rs. 2982 crore between 2015-16 and 2016-17. This slowing down of the revenue receipts has limited the state government's capital spending to only Rs. 3242 crore compared to more than Rs. 5800 crore during the previous year. This has also resulted in its Gross Fiscal Deficit rising to 3.8 percent of GSDP, breaching the FRBMA limit of 3 percent of new estimates of GSDP (2011-12 series). Table 2.1 summarises the receipts and expenditure of Bihar Government during the last five years.

Table 2.1 : Receipts and Expenditure of Bihar Government

(Rs. crore)

Item	2012-13	2013-14	2014-15	2015-16	2016-17
Total Receipts Revenue Account, *of which*	**59567**	**68919**	**78417**	**96123**	**105585**
Tax Revenue	*48153*	*54790*	*57713*	*74372*	*82623*
Non Tax Revenue	*1135*	*1545*	*1558*	*2186*	*2403*
Grants in Aid and Contributions	***10278***	***12584***	***19146***	***19566***	***20559***
States Own Tax Revenue	16253	19961	20750	25449	23742
Total Exp. Revenue Account	54466	62477	72570	83616	94765
Revenue Deficit	**-5101**	**-6441**	**-5847**	**-12507**	**-10819**
Capital Receipts	9579	9922	15411	18402	21600
Capital Expenditure, *of which*	14740	17928	22128	28712	31537
Capital Outlay	*9585*	*14001*	*18150*	*23966*	*27208*
Total Expenditure	**69207**	**80405**	**94698**	**112328**	**126302**
Gross Fiscal Deficit	**6545**	**8352**	**11179**	**12062**	**16480**
Primary Deficit	2117	2893	5050	4964	8289
Total Borrowings	**9554**	**9907**	**13918**	**18383**	**21577**
Repayment of Public Debt	3070	3120	3609	4125	4215
Outstanding Public Debt	76308	86744	98860	116382	138526
GSDP	**282368**	**317101**	**342951**	**381501**	**438030**

Source: Finance Accounts of the Bihar Government for the respective years

The decreased revenue surplus has affected the primary accounts of the state adversely. The primary deficit shot up from Rs. 4964 crore in 2016-17 to Rs. 8289 crore and is projected to rise still further to Rs. 8521 crore in the budget estimates of 2017-18. While the total revenue receipts increased only by Rs. 9462 crore during 2016-17 over the previous year, the capital receipts grew by Rs. 3198 crore. The total expenditure went up by Rs. 13974 crore during this period. After recommendations of the Fourteenth Finance Commission increasing the total devolution from the Central divisible pool to states from 32 percent to 42 percent, state's share of Central taxes has predictably increased; however, this increase has been offset by a stagnation in the Central grants which had increased only marginally to Rs. 19,566 crore in 2015-16 and to Rs. 20559 crore in 2016-17.

The Gross Fiscal Deficit has increased by Rs. 4,418 crore in 2016-17, compared to the increase of only 883 crore in the previous year, reflecting the weakening of state's fiscal position during the year. Total borrowings during 2016-17 increased by Rs. 2,500 crore over the previous year, to Rs. 20,065 crore, while interest payments went up by Rs. 1,093 crore, to Rs. 8,191 crore. The debt level increased to 31.6 percent of the GSDP during 2016-17, from 30.5 percent in the previous year.

2.2 Revenue Receipts

In 2016-17, Bihar's revenue surplus has decreased due to decreases in growth in respect of both tax and non-tax revenues. The total revenue receipts increased by Rs. 9,462 crore, of which 87 percent came from increases in tax revenues alone – in fact, mainly from the State's share of Central taxes, since the state's own revenues had actually declined during the year. The own tax revenue of the state government had recorded an unprecedented decrease by Rs. 1707 crore against increase of Rs. 4699 crore (28 percent) in the previous year. As explained earlier, the decrease is mainly due to the sacrifice of nearly Rs. 4500 crore during the year from the state excise and sales tax receipts on alcohol, as a result of the government's prohibition policy, a cost that the government considers much less than its social benefits but which hardly makes any economic sense. Taking into account the modest increase of Rs. 217 crore in the non-tax revenues during 2016-17, the total own revenues of the state had still recorded a decline of Rs. 1490 crore.

But the state's share of Central taxes went up by Rs. 9,958 crore to Rs. 58,881 crore during 2016-17, resulting in overall increase in the state's revenue by Rs. 9,462 crore. After the 14th Finance Commission's recommendations came into effect from 2015-16, Bihar's share of Central taxes immediately went up by Rs. 11960 crore to Rs. 48923 crore (by 32 percent); in 2016-17, there was a growth in this component by Rs. 9958 crore (by 20 percent).The own revenue of the state government constituted 25 percent of its total revenue receipts, compared to 29 percent in the previous year. The share of central taxes accounted for 56 percent of the total revenue receipts in 2016-17 (51 percent in 2015-16) and Central grants constituted the remaining 19 percent of the total revenues (20 percent in 2015-16).

Table 2.2 shows the details of revenue receipts of the state government for the 10 year period from 2007-08 to 2016-17 and their percentage compositions. It can be seen that during all these years, between 70-80 percent of the total receipts of the state government came from the central government by way of state's share of divisible pool of central taxes and central grants. This share has come down from 80.3 percent in 2007-08 to 71.3 percent in 2015-16. During 2016-17, central transfers constituted 75.2 percent of total State revenue — 55.7 percent from the state's share of central taxes and 19.5 percent from central grants. The state's own resources contributed only 24.8 percent of total revenue – 22.5 percent from tax revenues and 2.3 percent from non-tax revenues. Share of tax revenues has gone down from 26.5 percent in 2015-16 when it was 26.5 percent; the peak was reached in 2013-14 at 29 percent, when the share of Central resources was also the lowest at only 68.8 percent.

Table 2.2: Revenue Receipts of the Bihar Government
(Figures in brackets indicate percentage shares)

(Rs. crore)

Year	State's Own Revenue			Central Transfers			Total Revenue Receipts
	Tax	Non-Tax	Total	Share of Central Taxes	Grants-in-aid	Total	
2007-08	5085 (18.0)	526 (1.9)	5611 (19.9)	16767 (59.4)	5832 (20.7)	22599 (80.1)	28210 (100)
2008-09	6172 (18.7)	1153 (3.5)	7325 (22.2)	17693 (53.6)	7962 (24.1)	25655 (77.8)	32981 (100)
2009-10	8090 (22.8)	1670 (4.7)	9760 (27.5)	18203 (51.2)	7564 (21.3)	25767 (72.5)	35527 (100)
2010-11	9870 (22.2)	986 (2.2)	10855 (24.4)	23978 (53.8)	9699 (21.8)	33677 (75.6)	44532 (100)
2011-12	12612 (24.6)	890 (1.7)	13502 (26.3)	27935 (54.4)	9883 (19.3)	37818 (73.7)	51320 (100)
2012-13	16253 (27.3)	1135 (1.9)	17388 (29.2)	31900 (53.6)	10278 (17.3)	42178 (70.8)	59567 (100)
2013-14	19961 (29.0)	1545 (2.2)	21505 (31.2)	34829 (50.5)	12584 (18.3)	47413 (68.8)	68919 (100)
2014-15	20750 (26.5)	1558 (2.0)	22308 (28.4)	36963 (47.1)	19146 (24.4)	56109 (71.6)	78418 (100)
2015-16	25449 (26.5)	2186 (2.3)	27635 (28.7)	48923 (50.9)	19566 (20.4)	68488 (71.3)	96123 (100)
2016-17	23742 (22.5)	2403 (2.3)	26145 (24.8)	58881 (55.7)	20559 (19.5)	79440 (75.2)	105585 (100)

Source: Finance Accounts of the Bihar Government for the respective years

2.2.1 Own revenues of the State

Charts 2.1 and 2.2 respectively show the composition of State's revenue receipts and the growth of the State's own revenues. Chart 2.3 shows the growth of State's own revenue receipts vis-à-vis the total revenues of the State. The total tax revenue of the state government has increased from Rs. 28,210 crore in 2007-08 to Rs. 105,585 crore in 2016-17, growing annually at a compound average rate of 15.8 percent. The own tax revenue of the state government grew from Rs. 5,085 crore to Rs. 23742 crore during this period, implying a higher annual growth rate of 18.7 percent; though during the last 5 years the growth was only 10 percent due to the sacrifice of revenues from alcohol, as pointed out earlier. The growth in own tax revenues has been negative, as discussed earlier, in 2016-17. The growth in non-tax revenue has been rather erratic, due to various reasons. The non-tax revenue has actually been on the decline since 2009-10 when it yielded Rs. 1670 crore; that level was crossed only in 2015-16. Till 2009-10, it was boosted by the debt relief available to the state government from the central government, as recommended by the Twelfth Finance Commission; but it was not available afterwards. The non-tax revenues of the State have been growing at a CAGR of 18.4 percent during the ten year period 2007-17, though during the last 5 years from 2012-17, the non-tax revenues of the State has grown at a compound annual average growth rate (CAGR) of 21 percent. Over 80 percent of the non-tax revenues are collected only from two sources: Non-Ferrous Mining and Metallurgical Industries and Interest

Receipts. However, the state's non-tax receipts constitutes a marginal amount, accounting for about barely 2 percent of its total revenue receipts.

As remarked earlier, there is one aspect of the state finances that has remained unchanged over the years, which is the state's dependence on central transfers. It is only through a sustained growth of its economy and thereby higher own tax revenue that Bihar can lessen this dependence.

Chart 2.1 : Percentage Composition of State's Revenue Receipts

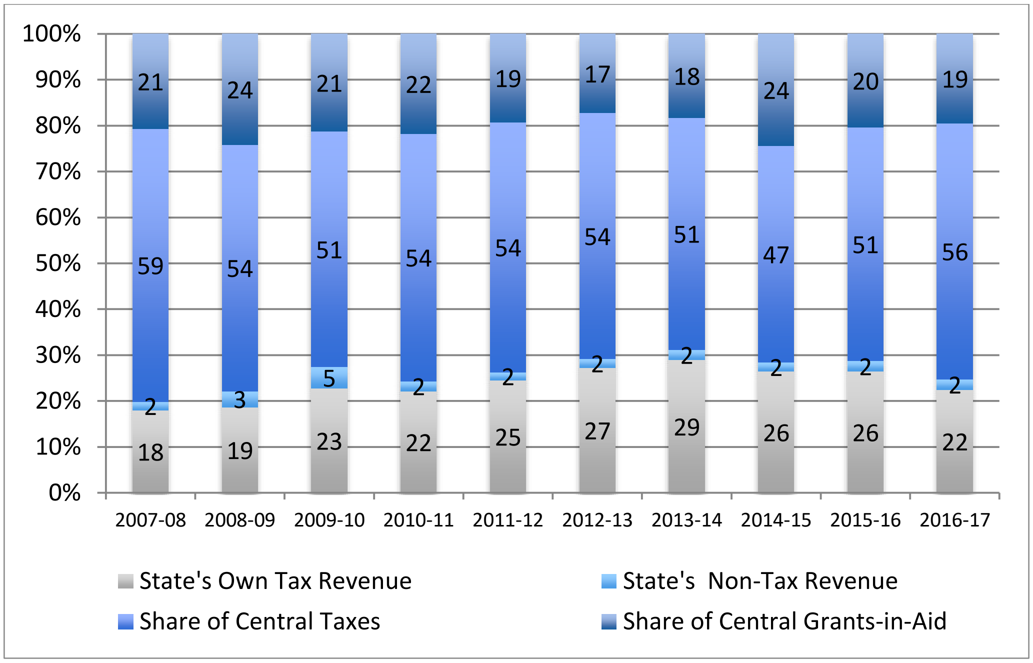


Chart 2.2 : Yield and Share of State's Own Tax and Non-Tax Revenue (Rs. Crore and Percent)

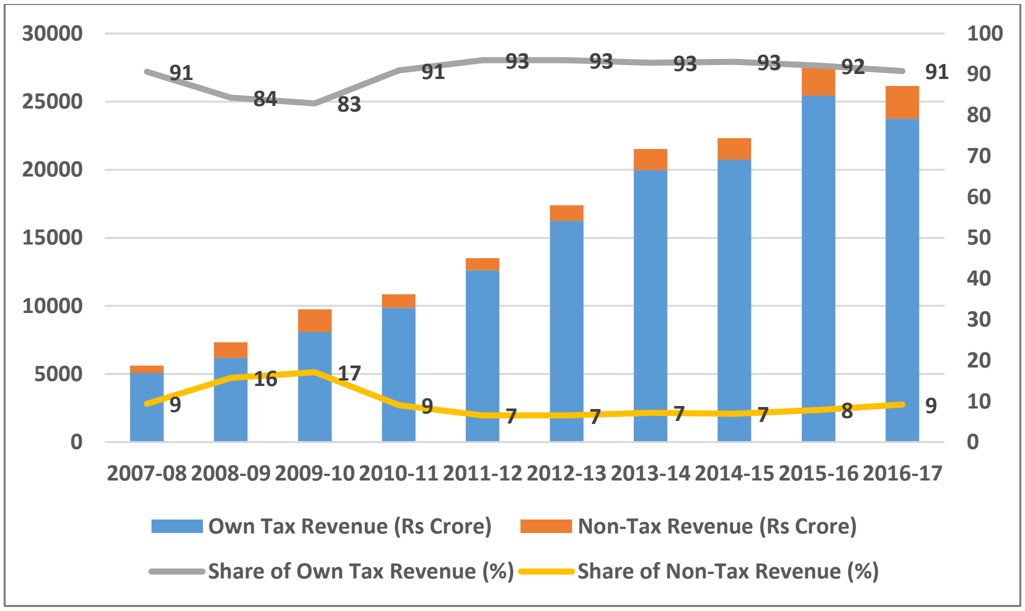
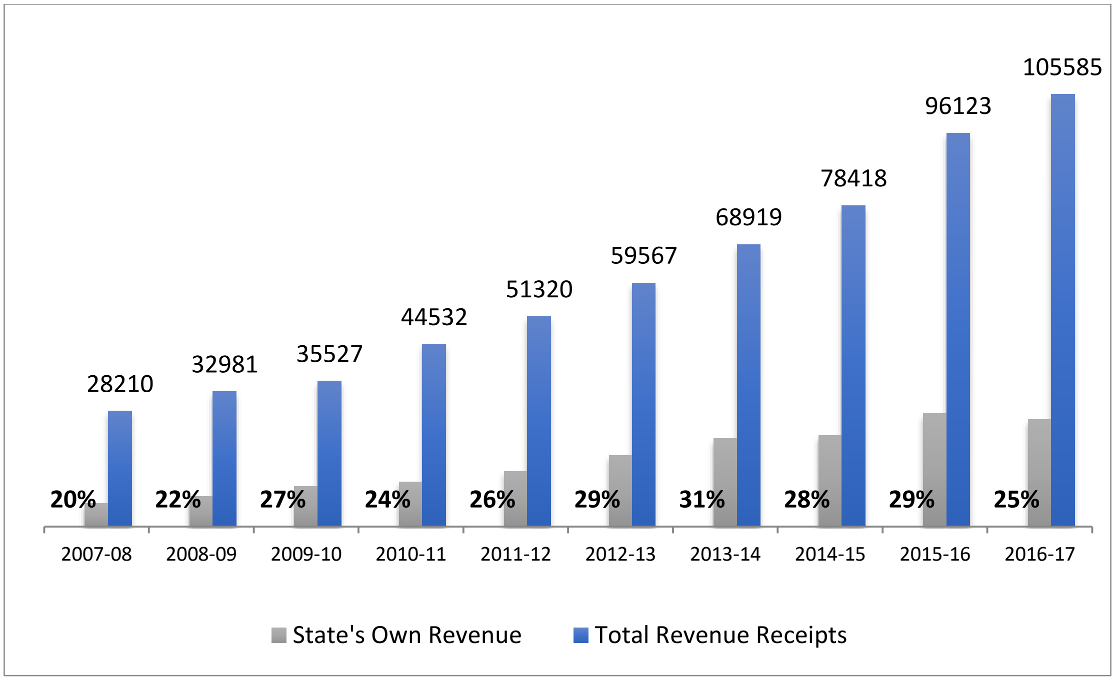


Chart 2.3: State's Own Revenue as Percentage of Total Revenues (Rs. crore)



2.2.2 Own Tax revenues of the State

Table 2.3 shows the collection of Bihar's own tax revenues from different taxes and duties during the ten year period 2007-17 and their respective shares in the State's total own tax revenues along with the Tax: GSDP ratios during these years for Bihar, while table 2.4 shows their growth rates. Charts 2.4 and 2.5respectively show the collections against the major tax revenues of the State and their percentage compositions during 2007-17. Chart 2.6 shows the annual growth rates of major taxes over the period.

Till the introduction of the GST in 2016-17, leaving aside land revenue the yield from which is insubstantial, the major contributors of Bihar's tax revenue were VAT, taxes on goods and passengers, state excise duties on alcohol and medicinal preparations, stamp duty and registration fees and taxes on motor vehicles. These five taxes constituted more than 95 percent of the total own revenues of the state, with VAT alone contributing nearly half the total own revenues, with some fluctuations. The rest came from land revenue, electricity duty and some other minor taxes like entertainment tax, taxes on advertisement, luxury tax from Hotels, tax on Professions, trades and calling etc. which together contributed about 5 percent of the State's own tax receipts.

In recent years, taxes on goods and passengers have registered significant growth and occupied larger share of the total own revenues of the state; in 2016-17, it constituted 26 percent of the total own tax revenues, following 50 percent by VAT and followed by stamp duty and registration fees that constituted 13 percent of the total own taxes of the State. Taxes on motor vehicles constituted 4 percent of own tax revenues, after state excise receipts practically came to naught. These four taxes thus constituted as much as 94 percent of the total tax revenues of the state from its own resources; rest 6 percent coming from other constituents. The Tax: GSDP ratio of Bihar (Chart 2.7) which had increased from a meagre 4.5 percent in 2007-08 to 6.7 percent in 2016-16, declined substantially to 5.4

percent only in 2016-17, not only from the drying up excise revenue but due to lower growth in almost all major taxes during the year. There has been a gradual structural shift in the composition of taxes over the years, between VAT and taxes on goods and passengers, till excise on alcohol was abolished in 2016-17.

Table 2.3 : Composition of Revenue Receipts of Bihar Government (Rs. crore)

(Figures in brackets indicate percentage shares)

Year	Taxes on Sales, Trade etc.	Taxes on Goods and Passengers	Excise Duties	Stamps & Registration	Motor Vehicles	Land Revenue	Total	Tax : GSDP Ratio
2007-08	2535 (49.8)	938 (18.4)	525 (10.3)	654 (12.9)	273 (5.4)	82 (1.6)	5085 (100)	4.5
2008-09	3016 (48.9)	1279 (20.7)	679 (11)	716 (11.6)	298 (4.8)	102 (1.6)	6172 (100)	4.3
2009-10	3839 (47.5)	1613 (19.9)	1082 (13.4)	998 (12.3)	345 (4.3)	124 (1.5)	8090 (100)	5.0
2010-11	4557 (46.2)	2006 (20.3)	1523 (15.4)	1099 (11.1)	455 (4.6)	139 (1.4)	9870 (100)	4.8
2011-12	7476 (59.3)	828 (6.6)	1981 (15.7)	1480 (11.7)	569 (4.5)	167 (1.3)	12612 (100)	5.1
2012-13	8671 (53.3)	1932 (11.9)	2430 (14.9)	2173 (13.4)	673 (4.1)	205 (1.3)	16253 (100)	5.8
2013-14	8453 (42.3)	4349 (21.8)	3168 (15.9)	2712 (13.6)	837 (4.2)	202 (1.0)	19961 (100)	6.3
2014-15	8607 (41.5)	4451 (21.5)	3217 (15.5)	2699 (13.0)	964 (4.6)	277 (1.3)	20750 (100)	6.1
2015-16	10603 (41.7)	6087 (23.9)	3142 (12.3)	3409 (13.4)	1081 (4.2)	695 (2.7)	25449 (100)	6.7
2016-17	11874 (50)	6246 (26.3)	30 (0.1)	2982 (12.6)	1257 (5.3)	971 (4.1)	23742 (100)	5.4

Source: Finance Accounts of the Bihar Government for the respective years

Chart 2.4 : Major Tax Revenues of Bihar (Rs. crore)

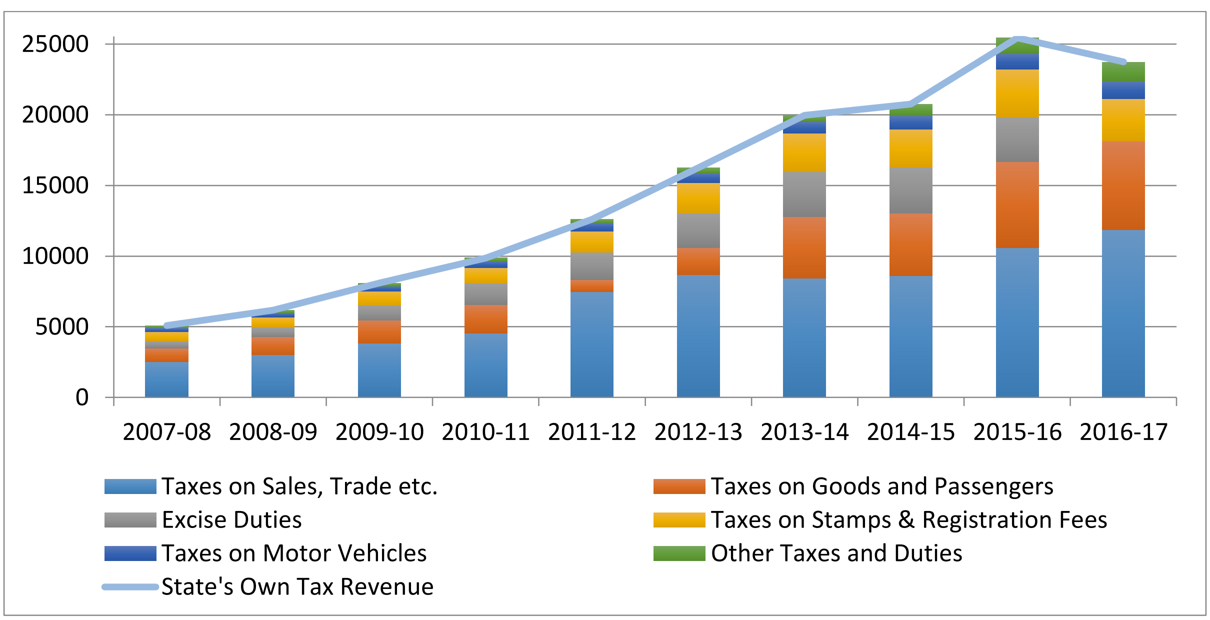


Chart 2.5 : Composition of State's Own Taxes (%)

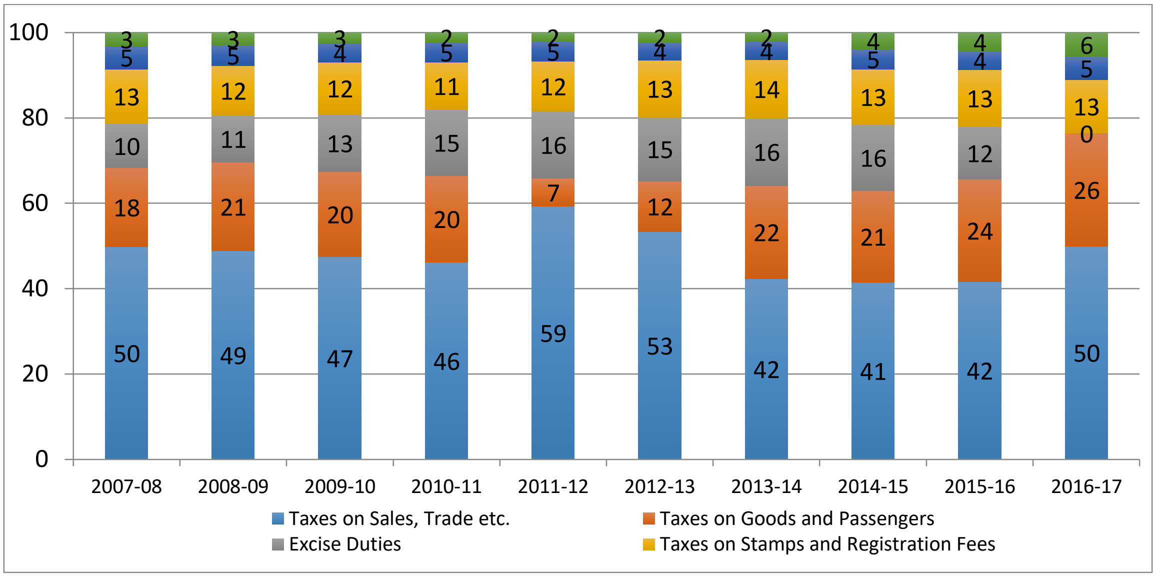


Table 2.4 : Yearly Growth Rates of Own Tax Revenue (Percent)

	Taxes on Sales, Trade etc.	Taxes on Goods and Passengers	Excise Duties	Stamps & Registration	Motor Vehicles	Land Revenue	State's Own Tax
2008-09	19.0	36.4	29.3	9.5	9.0	23.9	21.4
2009-10	27.3	26.1	59.3	39.3	15.9	21.8	31.1
2010-11	18.7	24.4	40.8	10.1	32.0	12.2	22.0
2011-12	64.1	-58.7	30.0	34.7	25.0	20.5	27.8
2012-13	16.0	133.3	22.7	46.8	18.3	22.7	28.9
2013-14	-2.5	125.1	30.4	24.8	24.4	-1.8	22.8
2014-15	1.8	2.4	1.5	-0.5	15.1	37.4	4.0
2015-16	23.2	36.8	-2.3	26.3	12.2	150.8	22.6
2016-17	12.0	2.6	-99.1	-12.5	16.2	39.7	-6.7

Source: Worked out on the basis of Table 2.3 above.

Chart 2.6 : Growth Rates of Major Taxes (Percent)

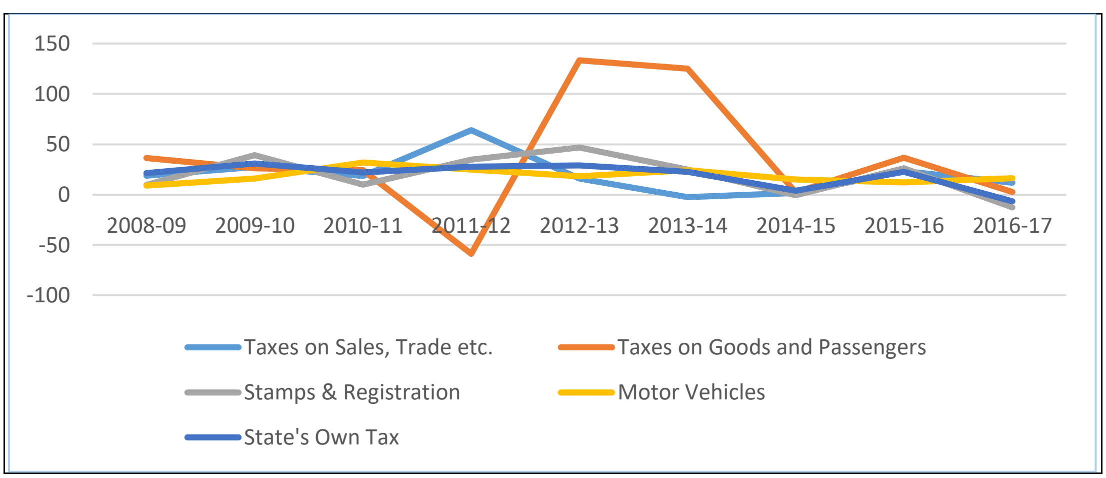


Chart 2.7 : Bihar's Tax GSDP Ratio (%)

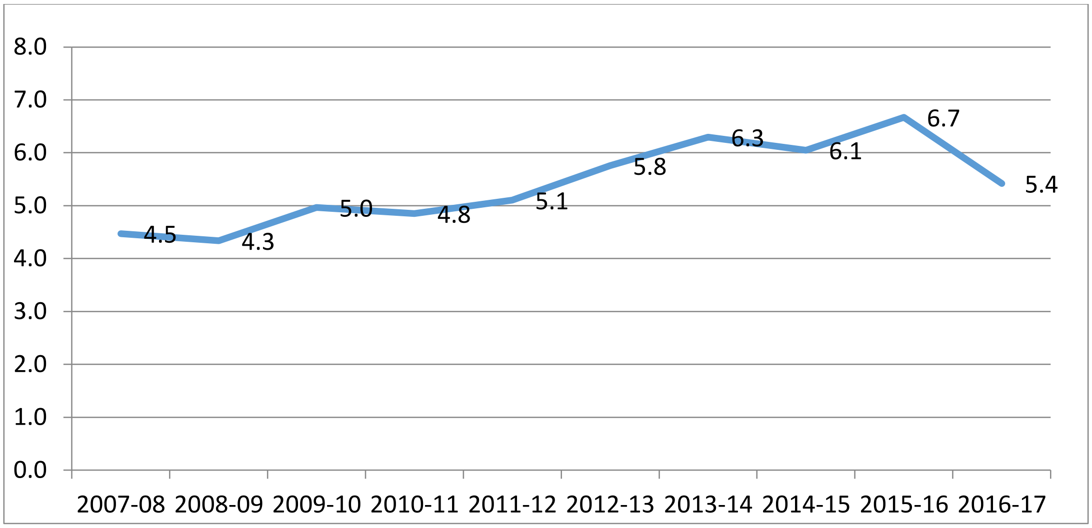


Chart 2.8 shows the growth of State's own tax revenues vis-à-vis its GSDP. During the period 2011-17, while the State's GSDP has increased at a CAGR of 12 percent, the State's own revenue grew at a rate of 13.5 percent. Tax: GSDP ratio thus grew from 5.1 percent in 2011-12 to 6.7 percent in 2015-16, before declining in 2016-17 due to declining growth in all major taxes, apart from the elimination of revenues from State excise on alcohol. From Table 2.5, we see that in 2016-17, no major tax, except the relatively minor contributors like land revenue and taxes in vehicles, was buoyant.

Chart 2.8 : Growth of State's Own Tax Vs GSDP (Rs Crore)

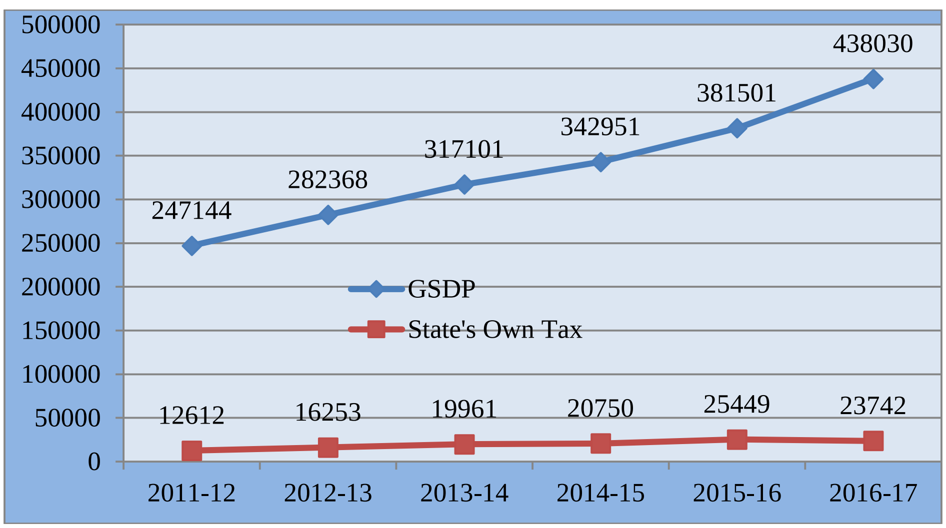


Table 2.5: Buoyancy of Important Taxes Revenues of the State

(Percentage)

Year	Taxes on Sales / Trade, etc	Stamp duty & registration fee	Tax on Goods & Passengers	State excise	Taxes on Vehicles	Land Revenue
2007-08	1.7	3.4	1.5	2.9	3.9	0.8
2008-09	0.8	0.4	1.4	1.2	0.4	1.0
2009-10	1.9	2.7	1.8	4.1	1.1	1.5
2010-11	0.7	0.4	1.0	1.6	1.3	0.5
2011-12	3.1	1.7	-2.8	1.4	1.2	1.0
2012-13	1.1	3.3	9.4	1.6	1.3	1.6
2013-14	-0.2	2.0	10.2	2.5	2.0	-0.1
2014-15	0.2	-0.1	0.3	0.2	1.8	4.6
2015-16	2.1	2.3	3.3	-0.2	1.1	13.4
2016-17	0.8	-0.8	0.2	-6.7	1.1	2.7

2.2.3 Tax Administration, Cost of Collection of Taxes and Arrears of Revenue

Before the introduction of GST last year, the own revenues of the state government were collected mainly by two departments, viz., Commercial Taxes Department and Department of Registration and Excise, with most of the major taxes being administered by the former which used to collect the bulk amounting to more than two thirds of the total receipts from the state's own taxes. The Commercial Taxes Department collected revenue under seven state acts — (i) Bihar Value Added Tax Act (VAT), 2005; (ii) Bihar Tax on Entry of Goods into Local Area (for Consumption, Use or Sale therein) Act, 1993 (ET); (iii) Central Sales Tax (CST) Act, 1956; (iv) Bihar Electricity Duty (ED) Act, 1948; (v) Bihar Entertainment Tax (ENT) Act, 1948; (vi) Hotel Luxury Tax (HLT) Act, 1988 and (vii) Bihar Advertisement Tax (Advt.) Act, 1981. The Department of Registration and the Department of Excise and Prohibitionwere merged in April, 2007 to constitute the unified Department of Registration, Excise and Prohibition (Registration) Department and is responsible for the collection of excise duty as well as the stamp duty and regstration fees. Table 2.6 shows the commercial taxes collected during 2011-12 to 2016-17. These accounted for 79 percent of total own revenues of the State in 2016-17.

Table 2.6 : Act-wise Collection of Commercial Taxes (Rs. crore)

Year	BST/ VAT	ET	CST	ENT	ED	ADV	HLT	PT	Total
2011-12	5668	2591	75	25	55	0	7	36	8458
2012-13	7391	3268	74	28	102	1	8	40	10911
2013-14	8546	4283	83	39	141	1	10	53	13156
2014-15	8796	4406	71	46	373	1	11	55	13758
2015-16	10726	6162	60	55	297	1	11	66	17378
2016-17	11908	6389	70	70	226	1	11	77	18751

Source: Department of Commercial Taxes, Govt. of Bihar

The administrative structure of the Department has not yet undergone any change subsequent to the introduction of GST. Now apart from VAT and Entry Tax, Entertainment Tax, Tax on Luxuries and

Advertisement Tax have also been subsumed in GST, but the total collections from these three are less than 1 percent of the Commercial Taxes.

The cost of collection of major taxes is shown in Table 2.7. As seen from the table, this cost is relatively higher for taxes on vehicles. Except for taxes on vehicles, the cost of collection of major taxes as a percentage of total taxes collected has been decreasing in recent years, as a result of the modernization of infrastructure and introduction of technology. Streamlining of the collection machinery, further rationalisation of taxation structure and more user-friendly automation and pro-active steps to collect the substantial arrears in revenue are needed to bring down the cost of collection further.The high proportion in the cost of collection in respect of excise in 2016-17 is obviously a result of imposition prohibition, and the high cost associated with the enforcement of the strict provisions of the prohibition act.

Table 2.7 : Cost of Collection of Taxes

Year	Collection (Rs. crore)	Expenditure on collection (Rs. crore)	Cost as Percentage of Collection	Collection (Rs. crore)	Expenditure on collection (Rs. crore)	Cost as Percentage of Collection
	Taxes on sales / trade, etc			**State excise**		
2012-13	8671	78	0.9	2430	43	1.8
2013-14	8453	70	0.8	3168	45	1.4
2014-15	8607	96	1.1	3217	50	1.6
2015-16	10603	90	0.9	3142	50	1.6
2016-17	11874	117	1.0	30	92	310.0
	Stamp duty and registration fee			**Taxes on Vehicles**		
2012-13	2173	45	2.1	673	25	3.8
2013-14	2712	55.0	2.0	837	30	3.6
2014-15	2699	52.0	1.9	964	38	4.0
2015-16	3409	55	1.6	1081	40	3.7
2016-17	2982	48	1.6	1257	46	3.7

Source : Finance accounts of respective years

As reported by the Comptroller and Auditor General of India, the arrears of revenue as on 31 March 2016 in respect of the principal heads of revenue amounted to Rs 5,728.97 crore of which Rs 500.03 crore was outstanding for more than five years as detailed in the Table 2.8. Of this, however, recovery of Rs 2082.64 crore has been stayed by the Courts which the Government needs to pursue. Besides, there are also huge pending assessments with the Commercial Taxes Department, with the percentage of finalisation of assessments ranging from only 19 percent to 58 percent for different taxes, with the rest lying unassessed as on 31st March 2016. Sales Tax alone accounted for more than 1.03 lakh such cases at the end of 2015-16.

Table 2.8 : Arrears of Revenue (Rs Crore)

Serial No.	Taxes/ Duties	Arrears outstanding as on 31/03/2016	Arrears outstanding for more than 5 years on 31/03/2016
1	Taxes or Sales/ Trade etc.	2206.42	315.95
2	Taxes on Goods and Passengers	1960.94	9.98
3	Taxes and Duties on Electricity	891.54	2.11
4	State Excise	60.09	16.13
5	Taxes on Vehicles	192.20	NA
6	Land Revenue	142.92	NA
7	Stamp and Registration fees	18.59	1.72
8	Mines and Geology (Non-Tax)	246.62	145.89
9	Other Taxes and Duties	9.65	8.25
	Total	**5728.97**	**500.03**

Source: Audit Report (Revenue Sector) of the Comptroller and Auditor General of India, 2015-16

2.2.4 Impact of GST

Before the introduction of GST, tax revenues in Bihar were collected under 7 major heads — (i) Taxes on Sales/Trade, etc., (ii) Stamp and Registration Fees, (iii) Taxes on Goods/Passengers, (iv) State Excise, (v) Taxes on Vehicles, (vi) Land Revenue, and (vii) Taxes and Duties on Electricity. Of these, the first three accounted for about 80 percent of the total tax revenue. Although there were some year to year variations, broadly speaking taxes on sales/trade accounts for 40 percent of the tax revenue; next in importance was taxes on goods/passengers, accounting for 20 percent of tax revenue; and finally, stamp/registration fees account for 13 percent of tax revenue (Table 4.4). Taxes on vehicles used to account for about 4 percent of the total taxes. Excise used to contribute about 15 percent to the State taxes before prohibition was imposed. This pattern more or less defined the structure of taxation in Bihar and remained stable over the years until prohibition was imposed. The impact of this almost eliminated excise collections but resulted in the share of sales tax going up significantly- by about 10 percent. Though excise from the sale of alcohol is not subsumed in GST, it does not affect Bihar.

Now GST has subsumed both VAT and Taxes on Goods and Passengers. The immediate loss of revenue to the State from these two taxes is of the order of Rs. 18000 crore (2016-17). As against this, the collections from GST during the year 2017-18 (July-March) totalled to Rs. 6159.56 crore only; including the SGST grants from the Centre, the total amount received by the State from GST during the year amounts to Rs. 9200.56 crore. The month-wise GST collections are shown in table 2.9.

Table 2.9 : Collections from GST in Bihar

(Rs. crore)

	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
SGST	0.03	375.61	262.51	308.49	248.58	263.26	281.54	270.80	316.80
IGST	0	275.49	346.13	491.63	528.44	565.22	537.11	549.89	538.03
Total	**0.03**	**651.1**	**608.64**	**800.12**	**777.02**	**828.48**	**818.65**	**820.69**	**854.83**
SGST Grant[1]	**0**	**0**	**0**	**692**	**1054**	**373**	**0**	**0**	**922**

Source: Department of Commercial Taxes, GOB

[1] This represents provisional compensation for total amount of Rs 3041 crore paid by the Centre during 2017-18; in addition Advance IGST for Rs 552 crore pending settlement was also paid in February 2018.

The 101st Amendment also provided for compensation to be paid to the States for loss of revenue arising on account of implementation of the GST for a period which may extend up to five years; this necessitated the legislation of another Act of Parliament. The GST (Compensation to States) Act, 2017 provides that for the purpose of calculating the compensation amount in any financial year, 2015-16 will be reckoned as the base year, from which revenue will be projected at a growth rate of 14% per annum for the five-year period. The base year tax revenue will consist of the states' tax revenues from State Value Added Tax (VAT), Central Sales Tax, Entry Tax, Octroi, Local Body Tax, Taxes on Luxuries, Taxes on Advertisements, etc. However, any revenue from alcohol and petroleum products will not be accounted as part of the base year revenue. The amounts will be as certified by the Comptroller & Auditor General of India. Thus for Bihar, to determine the base amount on which 14% growth will be calculated, we need to exclude from the Sales Tax revenue the collections on account of petroleum products.

The commodity-wise collection of Commercial Taxes is depicted in Annexure 2.1, from which it can be seen that petro-products have been the single biggest contributor to Commercial Tax and contributes around 30 percent of the total collection. They contributed Rs. 5118 crore in 2015-16, which was around 27 percent of the total collection of sales tax compared to 25 percent a year ago. Its contribution is nearly four times that of the second major contributor, viz., electrical goods (Rs 1374 crore) which yielded Rs. 1093 crore in the previous year. Other important contributors, in order of their contributions are — Cement, Unregistered Dealers and Works Contracts, IMFL, FMCG, Crude Oil, Four-Wheelers and Chassis of Automobiles, Two/Three-Wheelers, Drugs and Medicines, etc. However, the collections from Petro-products grew by only 17 percent during this year, compared to 34 percent during the previous year.

Sales tax revenues from petroleum products in Bihar during the last three years are shown in Table 2.10. During the last 6 years, this has grown at a CAGR of 15.9 percent. Revenue from the commercial taxes have grown at a CAGR of 17 percent during this period. As already explained, all but two of the commercial taxes have been subsumed in GST; the yield from these excluded taxes is also insignificant compared to the total collections. Table 2.11 shows the collection from GST projected at the minimum rate of 14% growth for determining the compensation amount payable to the State for the five year period from 2017-18 to 2021-22.

Table 2.10 : Sales Tax Collections from Petroleum Products

Name of commodity	Collection (in crore)		
	2014-15	2015-16	2016-17
Petro Products	3284	4385	5118
Crude Oil	635	1350	702
Diesel Oil	2	4	4
LPG	7	9	12
Kerosene	2	3	3
Petrol	2	3	0
Total	**3932**	**5754**	**5839**
Total Collections from Sales Tax (VAT)	**8796**	**10726**	**11908**
Petroleum revenue as percent of total VAT	**44.7**	**53.6**	**49.0**

Source: Department of Commercial Taxes, GOB

Table 2.11 : Projected collections from GST (Rs Crore)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
	Actuals			Amounts projected at their current growth rate calculated on average for the last 6 years			
Revenue from all commercial taxes	17015	18751	21939	25668	30032	35137	41111
VAT from Petroleum	5754	5839	6767	7843	9091	10536	12211
Base amount for determination of compensation	11261						
Base amount, projected @ 14% growth		12838	14720	16780	19130	21808	24861
Plus revenue from petroleum		5839	6767	7843	9091	10536	12211
Total receipts from GST+VAT		**18677**	**21487**	**24623**	**28221**	**32344**	**37072**
Potential Loss of Revenue			**452**	**1045**	**1811**	**2793**	**4039**

It is seen from Table 2.11 that during the five year period that the State would be eligible for compensation, there is a potential loss to the state which is the difference between the collections projected at the current rate of growth (17%) and the total compensation receivable by the State, calculated @ 14% over the 2015-16 figures. For the five years, this totals to Rs. 10140 crore.

2.2.5 Reasons for Shortfall of Revenue from GST

The total revenue collected in Bihar under GST for the 8-month period from August, 2017 to March, 2018 was Rs. 6747 crores which included net cash payment of SGST and IGST settlement (return-based and provisional). After adjusting the amount of protected revenue by the arrears of subsumed taxes and the tax on the pre-GST tax for the month of June, 2018 (paid in July, 2018), the State fell short of the assured sum (computed at a CAGR of 14% on the base year of 2015-16) by Rs. 3041 crores which was received as compensation from the Government of India. The State's shortfall from revenue protected under GST for the period 2017-18 worked out to 38% against the national shortfall of 16%.

Bihar was one of the States that was expected to gain substantially from the consumption-type destination-based GST. An analysis by the Finance Department has identified the following factors for this shortfall:

a) Reduction in effective rate of tax on goods: The incidence of State VAT rate on goods was higher than the GST rates. The SGST rate on goods with an effective VAT rate of 6.36% came down to either 6% or 2.5%, while the effective VAT rate of 16.88% on most of major revenue earners for the State came down to either 14% or even 9% in some cases.

b) Non-filing/incorrect/incomplete filing of returns during the first half of GST period: Non-filing of returns by many taxpayers till December, 2017 not only led to lower payment of SGST in cash, it also failed to occasion settlement of IGST, leading to higher accumulation in the IGST credit ledger. Further, many taxpayers failed to furnish information relating to either ineligible IGST credit or credit liable to reversal; this information in the summary return would have led to a higher inflow of funds to the State on account of settlement.

c**) Loss due to abolition of entry tax:** Even though entry tax was largely a non-cascading tax in Bihar, being adjustable from the eventual VAT liability, the accruals under this head from crude oil, power utilities and telecom sector was, nevertheless, a net gain to the State since these sectors did not incur any VAT liability. Hence, around Rs. 1100 crores contributed by these sectors in the base year of 2015-16 represented a loss under GST.

d) Below par performance of service sector: While it was expected that there would be loss of revenue on account of goods due to removal of cascading of VAT on the Union Excise Duty, the said loss was expected to be made up by SGST on services. However, the major service sectors did not measure up to this expectation. One of the major reasons for this appears to be the mis-application of place of supply rules. The data from the summary returns indicate a far larger-than-average incidence of inter-state supplies from such service providers (almost thrice the average of around 10% of total liability across all sectors). This led to lower levels of discharge of SGST liability.

e) Non validation of credit claims: Against the proposed auto-drafting of available tax credits, the summary returns permit user-entry of such credits and paucity of readily available MIS in the initial period occasioned further challenges in the validation of such claims. Data available from part-auto-populated statements reveals excess credit claims in excess of Rs. 1500 crores.

f) Abeyance of TDS under GST: Gross receipts from TDS during 2016-17 was of the order of Rs. 1580 crores. The TDS mechanism not only helped in effective monitoring of the value chain in the construction sector, it also yielded a net revenue of around Rs. 900-1000 crores by way of net revenue to the State during the said year.

g) Enhancement in the tax-base of subsumed taxes in the pre-GST period: Subsumed taxes had been growing at a CAGR of around 18% during the 4-year period immediately preceding GST implementation. As against this, the protected revenue was capped at a CAGR of 14% on a base-year revenue.

The State claims to have taken the following steps to improve revenue collection:

a) Ensuring improvement in the quantity and quality of return filing

b) Intensified enforcement through inspections

c) Enhanced monitoring of top taxpayers

d) Verification of e-way bills

e) Monitoring of new registrants

The Finance Department informed that the shortfall from protected revenue during the first five months of the current fiscal year has almost halved from 38% to 20%.

2.2.6 Budget Estimates and Actual Realization of Taxes

Comparing the budget estimates of revenues with the actual collections during the five years from 2012-13 to 2016-17year, it is noted that there were huge variations in respect of individual taxes, with the actual collections falling way short of the budget estimates (Table 2.12).

Table 2.12 : Variation between the Estimated and Actual Realisation of Tax Revenues (Rs crore)

	VAT	Stamp duty & registration fee	Tax on Goods and Passengers	State excise	Taxes on Vehicles	Land Revenue	State Own Tax
Budget Estimate							
2012-13	7342	1856	2800	2765	644	154	15664
2013-14	12324	2628	1193	3680	800	205	20963
2014-15	12820	3600	4118	3700	1000	250	25663
2015-16	16025	4000	5147	4000	1200	300	30875
2016-17	14021	3800	7212	2100	1500	330	29730
Actuals							
2012-13	8671	2173	1932	2430	673	205	16253
2013-14	8453	2712	4349	3168	837	202	19960
2014-15	8607	2699	4451	3217	964	277	20751
2015-16	10603	3409	6087	3142	1081	695	25449
2016-17	11874	2982	6246	30	1257	971	23742
Percentage of Deviations (BE-Actual)							
2012-13	-18.1	-17.1	31.0	12.1	-4.5	-33.1	-3.8
2013-14	31.4	-3.2	-264.5	13.9	-4.6	1.5	4.8
2014-15	32.9	25.0	-8.1	13.1	3.6	-10.8	19.1
2015-16	33.8	14.8	-18.3	21.5	9.9	-131.7	17.6
2016-17	15.3	21.5	13.4	98.6	16.2	-194.2	20.1

Source : Finance accounts and State budgets of respective years

2.3 Non-Tax Revenue

Table 2.13 shows the major non-tax revenues of the state government, while its composition and growth rates are presented in Tables 2.14 and 2.15 respectively. Charts 2.9, 2.10 and 2.11 respectively show the trend of non-tax receipts, their composition and growth.

The most important source of non-tax revenues has always been the royalty from mines and minerals, classified as receipts from 'Non-Ferrous Mining and Metallurgical Industries', followed by interest receipts. The mining of minerals in Bihar is governed by the Bihar Minor Mineral Concession Rules, 1972 and Mineral Concession Rules 1960, framed by the state government under the Mines and Minerals (Regulation and Development) Act, 1957. The minor minerals available in the state are brick earth, stones, limestone, sand, etc. used mainly in the real estate sector. The receipts from this element of the non-tax revenues have grown consistently at an annual compound average rate of 21 percent during the period 2007-08 to 2016-17, but during 2016-17, there has hardly been any growth in this. This may be due to the impact of demonetization which hit the real sector to which these minor minerals serve as inputs. It can be expected that once the real estate sector revives by overcoming the impact of demonetization, State's receipt from this source will increase and reach its equilibrium at a much higher level reflecting its normal growth.

In comparison, interest receipts - the second most important element of its non-tax revenues -grew substantially during the year, though the growth of interest receipts has shown wide fluctuations during the period. In CAGR terms, however, its growth has been higher than from the royalty on mines and minerals. These fluctuations arise from the nature of the interest receipts which is tied to nature of loans and reliefs thereon. Interest receipts of the state mostly come from interest received on the investment of its cash balances, which accounted for 78 and 86 percent of total interest receipts during 2015-16 and 2016-17 respectively. Since the cash balances again vary widely during a year, the receipts are liable to wide fluctuations.

In 2016-17, the total receipts from these two sources of non-tax revenues increased to Rs. 1938 crore, 25 percent higher than in the previous year. The receipts from these two sources constituted 80 percent of the total non-tax revenues of the state during the year.

Table 2.13: Major Non-Tax Revenues (Rs. crore)

Sources of Revenue	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Non-Ferrous Mining and Metallurgical Industries	179	245	320	406	443	511	569	880	971	998
Interest Receipts	171	305	353	238	574	167	269	345	584	940
Miscellaneous General Services	3	386	770	0	-384	22	0	2	1	6
Other Administrative Services	12	8	9	20	11	10	10	22	73	100
Police	23	9	12	12	9	25	27	30	66	42
Major Irrigation	2	3	3	5	3	3	1	1	15	14
Education, Sports, Arts and Culture	21	24	17	34	7	8	14	11	41	17
Roads and Bridges	18	26	30	40	60	33	41	55	42	42
Medical and Public Health	21	17	14	15	24	41	30	30	40	40
Other Rural Development Programmes	7	10	29	22	30	21	28	29	24	36
Social Security and Welfare	3	1	1	2	1	1	-1	0	0	0
Others	65	119	112	192	111	294	555	154	328	168
Total	**526**	**1153**	**1670**	**986**	**890**	**1136**	**1543**	**1559**	**2185**	**2403**
Non-Tax: GSDP Ratio	**0.5**	**0.8**	**1.0**	**0.5**	**0.4**	**0.4**	**0.5**	**0.5**	**0.6**	**0.5**

Source: Finance Accounts of various years

The share of interest receipts in total non-tax revenue had increased to 39 percent in 2016-17 from 27 percent in the previous year. In 2007-08, its share was 32.5 percent, from which level, it had dipped to its lowest level of only 15 percent in 2012-13, due to less interest received from the investment of surplus cash balances of the state government. However, receipts on this account had increased to Rs 804 crore in 2016-17; consequently, the total interest receipts had also increased to Rs 940 crore in 2016-17. The non-tax revenues of the state government have been growing at a CAGR of 10 percent during 2007-17, with wide individual variations from year-to-year. The negative growth in respect of Miscellaneous General Services in 2011-12 relate to the recovery of excess amount of debt relief made in 2009-10 by the Central Government.

Chart 2.9 : Major Non-Tax Revenues of the State (Rs. Crore)

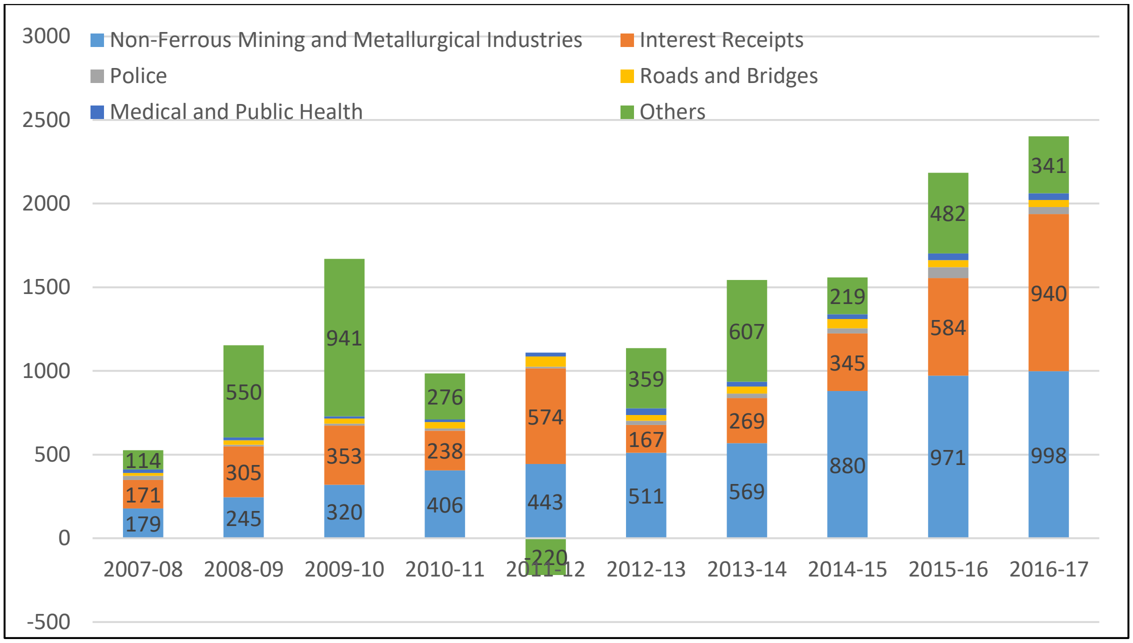


Table 2.14 : Composition of Non-Tax Revenues (%)

Revenue Sources	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Non-Ferrous Mining and Metallurgical Industries	34.0	21.2	19.2	41.2	49.8	45.0	36.8	56.5	44.4	41.5
Interest Receipts	32.5	26.4	21.1	24.1	64.5	14.7	17.4	22.1	26.7	39.1
Miscellaneous General Services	0.6	33.5	46.1	0.0	-43.1	1.9	0.0	0.1	0.0	0.3
Other Administrative Services	2.3	0.7	0.6	2.0	1.3	0.9	0.7	1.4	3.3	4.2
Other non-Tax Revenues	30.7	18.2	13.0	32.6	27.6	37.4	45.0	19.9	25.5	14.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source : Finance Accounts of various years

Table 2.15 : Growth Rates of Non-Tax Revenues (%)

Revenue Sources	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR 2007-17
Non-Ferrous Mining and Metallurgical Industries	37	31	27	9	15	11	55	10	3	21
Interest Receipts	78	16	-33	141	-71	61	28	69	61	21
Police	-60	26	0	-22	170	8	11	120	-36	27
Roads and Bridges	47	14	32	52	-45	24	34	-24	0	7
Medical and Public Health	-18	-18	9	56	71	-27	0	33	0	22
Total	119	45	-41	-10	28	36	1	40	10	10

Source : Finance Accounts of various years

Chart 2.10 : Composition of Non-Tax Revenues (%)

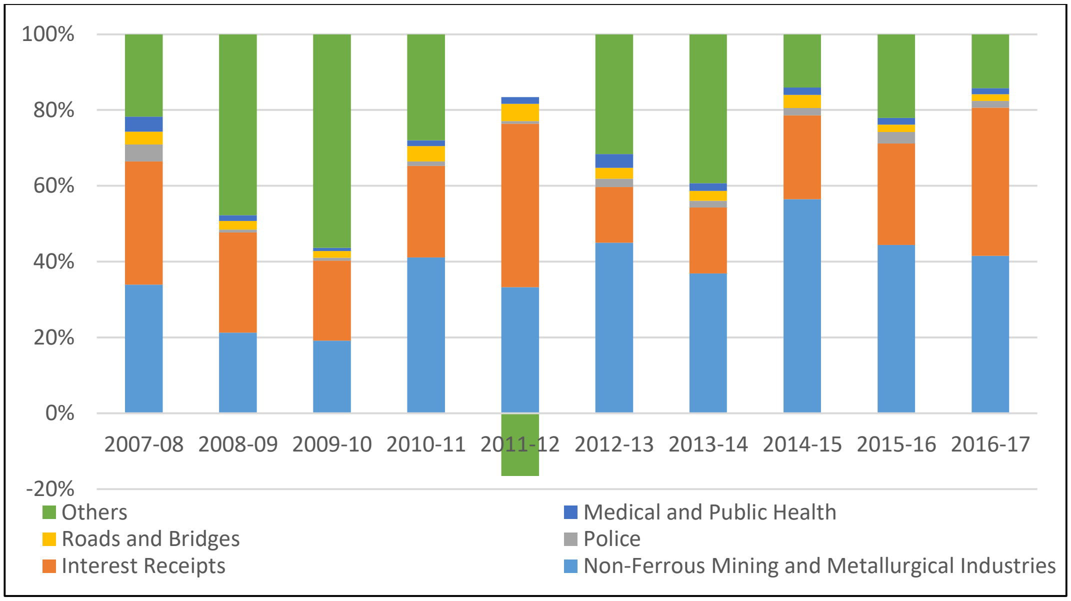
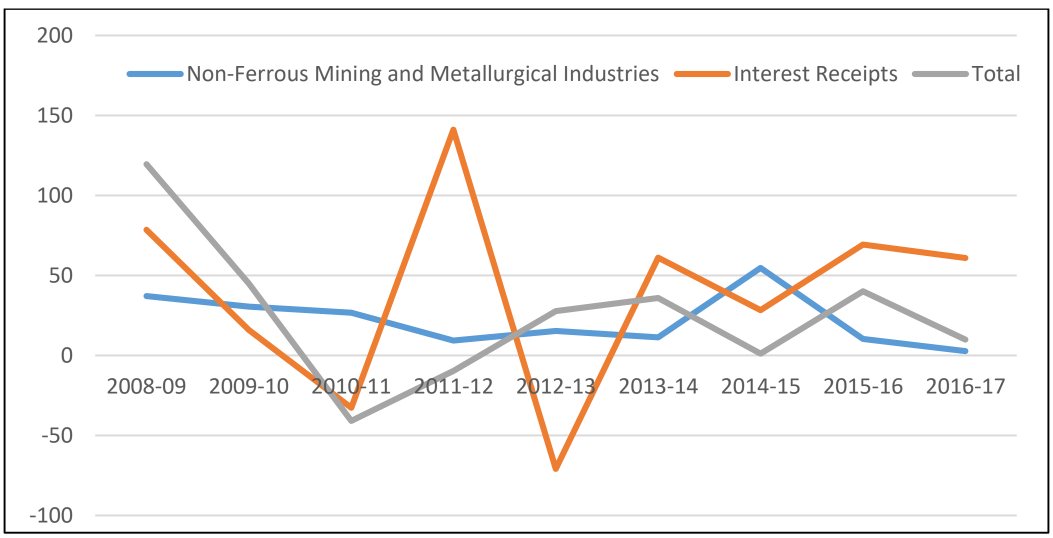


Chart 2.11 : Growth of Non-Tax Revenues (%)



Comparing the budget estimates of revenues with the actual collections for 2016-17 (Table 2.16), it is seen that there was a shortfall by Rs 5,943 crore (23 percent) in overall revenue collections by the state during the year. The shortfall against budget estimates in respect of tax revenues was Rs 5988 crore (25 percent) as discussed earlier (Table 2.12), which was partly offset by a small excess in respect of non-tax revenues for Rs 45 crore (2 percent). Major shortfall was recorded in respect of the receipts from Non-Ferrous Mining and Metallurgical Industries which was more than offset by substantial surpluses from interest receipts.

Table 2.16 : Variation between the Estimated and Actual Realisation of Major Non-Tax Revenues (2016-17)

(Rs. crore)

Revenue Sources	Budget Estimate(BE)	Actual Receipts	Variance (BE –Actual)	Percentage of Variation
Non-Ferrous Mining and Metallurgical Industries	1100	998	102	9.3
Interest Receipts	366	940	-574	-156.8
Other Administrative Services	23	100	-77	-334.8
Police	32	42	-10	-31.3
Major Irrigation	29	14	15	51.7
Education, Sports, Arts and Culture	11	17	-6	-54.5
Roads and Bridges	72	42	30	41.7
Medical and Public Health	32	40	-8	-25.0
Other Rural Development Programmes	31	36	-5	-16.1
Others	660	168	492	74.5
Total	**2358**	**2403**	**-45**	**-1.9**
Tax + Non-Tax	**32088**	**26145**	**5943**	**22.7**

Source: Finance Accounts and State Government Budget

2.3.1 Departmental and Non-Departmental Enterprises

Departmental enterprises, also known as Departmental Commercial Undertakings (DCUs) are unincorporated enterprises owned, controlled and run directly by public authorities. These enterprises normally do not hold or manage financial assets and liabilities apart from their working balances and accounts payables and receivables. They charge for the goods and services they provide on commercial basis and earn profits on those. Irrigation, Road & Water Transport, Forests, Milk Supply, Printing Presses, Electricity, Civil Aviation and Manufacturing are activities of the State Government which fall under such classification; all these activities form part of Economic Services. Bihar has no such entities, and hence earns no profit from these. However, the non-tax receipts from these activities under Economic Services (excluding the receipts from non-ferrous mining and minerals which have been shown separately) are shown in Table 2.17, from which it can be seen that the receipts from all these activities are rather insignificant and have always remained so.

Table 2.17 : Receipts from Economic Services

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Crop Husbandry	17.76	6.25	14.16	14.97	5.07	7.18	6.66	18.83	15.53	14.38
Animal Husbandry	0.26	0.20	0.26	0.84	0.89	0.80	0.84	0.55	0.61	0.80
Dairy Development	0.01	1.56	0.00	0.05	0.00	0.00	3.11	0.00	0.00	0.00
Fisheries	6.57	6.87	7.87	7.28	10.16	11.79	10.72	10.71	9.98	10.42
Forestry and Wild Forestry	6.64	6.15	6.78	7.64	11.04	16.60	19.58	25.24	29.70	27.69
Co-operation	0.99	0.79	0.50	1.30	8.99	10.95	35.99	7.30	2.29	6.80
Land Reforms	0.05	0.03	0.11	0.09	0.11	0.17	0.12	0.14	0.18	0.18
Other Rural Development Programmes	7.32	10.34	28.81	21.93	29.85	20.90	27.79	29.37	23.92	35.66
Major Irrigation	2.42	3.32	3.02	4.83	3.16	3.08	1.31	1.22	14.92	13.69
Medium Irrigation	9.67	10.64	14.80	15.45	17.59	13.99	18.22	16.95	10.86	11.65
Minor Irrigation	2.54	2.08	2.48	2.78	7.25	5.23	3.99	3.17	5.33	2.89
Village and Small Industries	0.12	-0.19	0.11	0.42	0.04	0.08	0.07	0.05	0.05	0.04
Industries	0.04	53.59	30.15	88.36	4.46	27.69	3.66	0.10	0.12	0.08
Civil Aviation	0.22	0.24	0.25	0.28	0.28	8.25	12.39	4.95	4.19	4.03
Roads and Bridges	17.95	26.40	30.02	39.60	60.35	32.56	40.72	54.52	41.85	41.93
Road Transport	0.06	0.05	0.04	0.23	0.05	0.06	0.07	0.10	0.14	0.19
Inland Water Transport	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Tourism	0.00	0.01	0.01	10.68	0.01	0.00	2.31	1.34	0.94	1.57
Civil Supplies	0.02	0.05	0.07	0.05	0.15	0.04	0.10	0.14	0.09	0.07
Total	**72.64**	**128.38**	**139.51**	**216.78**	**159.45**	**159.37**	**187.65**	**174.68**	**160.7**	**172.08**

Source: Finance Accounts of various years.

Non-departmental enterprises, also referred to as Non-Departmental Commercial Undertakings (NDCUs), comprise (i) government companies and subsidiaries of government companies and (ii) statutory corporations set up under special enactments of Parliament or State Legislatures (such as Road Transport Corporations, Warehousing Corporations, Electricity Boards, etc.).[2] The NDCUs differ from the DCUs in that they hold and manage the financial assets and liabilities as well as the tangible assets involved in their business, have separate Boards of Directors and present profit and loss accounts and balance sheets as in the case of private companies. These enterprises have been divided into two categories viz., (i) financial enterprises and (ii) non-financial enterprises. The financial enterprises comprise banks and financial institutions managed by the State while the non-financial enterprises consist of all other undertakings/ enterprises of governments and local authorities under the industry groups of agriculture, forestry and logging, fishing, mining, manufacturing, electricity and gas, road, air and water transport, storage and warehousing, trade, hotels and restaurants and other services. They are run on commercial basis and pay dividends to the Government when they earn profits.

Government companies are defined under the Indian Companies Act as companies in which not less than 51 per cent of the paid-up capital is held by the Government. Statutory corporations, owned by the

[2]https://m.rbi.org.in/scripts/PublicationsView.aspx?id=10216

State Government, as well as companies that are subsidiaries of Government companies are also treated as Government companies. These entities which are the same as NDCUs for Bihar have been discussed separately under the public sector undertakings of the Government of Bihar in Chapter 7, which includes Government companies and statutory corporations. Here we are only commenting on the profits and dividends paid by these entities, which are shown in Table 2.18.

As on 31 March 2016, in Bihar there were 74 PSUs, which included 31 working and 40 non-working Government companies, besides 3 Statutory Corporations. The total Government invest on these entities including both equity and long-term loans as on 31st March 2016 amounted to Rs 46,694 crore, and total dividend earned by the Government over the period 2007-08 amounted to a paltry Rs 30.66 crore which also included dividend from other investments. 2016-17, these entities paid a total dividend of Rs 3.44 crore to the Government, and the Government earned dividend from its other investments amounting to Rs 0.28 crore (Rs 1.78 crore in 2015-16). Mostly these are ill-managed and loss making entities without any commercial prospect, loose internal control and a poor or non-existent accountability structure.

Table 2.18 : Dividend paid by State Public Sector Undertaking (Rs Crore)[3]

	2007-08	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**
Govt. Investment	8684	9141	9622	10865	12375	8322	28221	33783	46694
Annual Profit (+)/ Loss (-)	-1253	-653	-1175	-1293	-2594	1	37	-37	-600
Dividend Earned	0.03	2.14	2.06	2.53	1.40	2.55	2.53	2.58	14.84

Source: Audit Reports on Public Sector Undertakings of the Comptroller and Auditor General of India and Finance Accounts of the Government of Bihar, various years

2.4 Central Grants

Table 2.19 shows the trend of revenues from grants and contributions from the central government for the period 2007-17. The total grants received by the state government was Rs 20,560 crore in 2016-17, as against only Rs 5,832 crore received in 2007-08. The total grants have thus increased two-folds during the five years from 2012-13 to 2016-17. In 2016-17, 80 percent of the total grants (82 percent in 2015-16) were received in respect of State Plan Schemes, after abolition of the direct off-budget transfers in respect of Centrally Sponsored Schemes which are now supposed to be entirely routed through the budget. The distinction between plan and non-plan expenditure being abolished from the current fiscal, giving the state more control over use of such grants to use for their own specific needs.

[3]Details of dividends and profits earned during the five years period (2012-15) are as follows (Figures in Rs Cr):

	2011-12	2013-14	2014-15	2015-16	2016-17
Dividends from public Undertaking	0.54	2.52	2.58	13.05	3.44
Dividends from other investments	0.87	0.01	0.00	1.78	0.29
Other Receipts	0.00	0.00	0.00	0.01	0.00
Total Dividends and Profits	**1.40**	**2.53**	**2.58**	**14.84**	**3.73**

Table 2.19 : Grants and Contributions from the Central Government (Rs. crore)

Year	Plan Schemes				Non-Plan	Total	Balance from Current Revenue
	State	Central	Centrally Sponsored	Total			
2007-08	2914	53	1360	4327	1505	5832	5124
2008-09	3600	135	1677	5412	2550	7962	6337
2009-10	3721	138	1449	5308	2256	7564	6074
2010-11	5457	176	2141	7774	1925	9699	9442
2011-12	5065	96	2159	7320	2563	9883	9987
2012-13	5052	36	2778	7866	2413	10279	14128
2013-14	6238	137	2921	9296	3288	12584	16242
2014-15	14936	117	822	15875	3271	19146	15483
2015-16	13886	2084	161	16131	3434	19565	26027
2016-17	16499	93	0	16592	3968	20560	27804

Source : Finance accounts of respective years

However, as indicated by the Accountant General in the Finance Accounts for the year 2016-17, the direct transfers are still continuing to flow unchecked. The unaudited data taken from the CPSMS (Central Plan Scheme Monitoring System) database portal of the Controller General of Accounts shows as much as Rs 3070.97 crore transferred directly to the implementing agencies in the state during 2016-17, up from Rs 792.71 crore during 2015-16 and Rs 651.74 crore during 2014-15. The agencies, government as well as private, who have received more than Rs 5.00 crore of such funds directly released to them by the Government of India during the year under various schemes of the Central Government are shown in Table 2.20.

Table 2.20 : Direct Transfer of central Funds to State Implementing Agencies Bypassing State Budgets (Rs Crore)

Agency	**GoI Scheme**	**2016-17**
Bihar Rural Development Society	MNREGA	1619.33
FA&CAO, East Central railway, Patna	Other Schemes	530.00
District Planning Officer	MPLADS	201.00
IIT, Patna	IIT	159.57
AIIMS, Patna	Establishment of AIIMS-type Super Speciality Hospitals-cum-Teaching Institutions	140.00
Bihar State Tourism Development Corporation	Swadesh Darshan- Integrated Development of Theme based Tourism Circuits	34.06
Bihar State Tourism Development Corporation	PRASAD	24.92
NIT Patna	Technical Education Quality Improvement	5.95
NIT Patna	NIT	63.00
CRC Patna	Person with Disabilities	10.88
Bihar State Milk Co-operative Federation	National Plan for Diary Development	12.87
NIPER Hajipur	NIPER, Mohali	5.00
Registrar General, HC, Patna	National Mission for Justice Delivery and Legal Reforms	26.41
Central University of South Bihar	National Mission on Teachers and Teaching	5.75
Heritage City Fund, GMC, Gaya	National Heritage Cities Programme	11.53
Bihar State AIDS Control Society	NACO	28.30
Nava Nalanda Mahavihara Agency	Kala Sanskriti Vikas Yojna	10.20
Dr Rajendra Prasad Agricultural University, Pusa	Central Agricultural University, Bihar	44.50
Upendra Maharathi Shilp Anusandhan Sansthan	Comprehensive Cluster Development Programme	11.30
Security and Intelligence Services (India) Ltd.	ASI	8.94
Total		**2953.51**

Source: Central Plan Scheme Monitoring System

2.5 Estimation of Revenue Capacities of State

Revenue capacities both in respect of tax and non-tax revenues for the period 2017-18 through 2024-25 were estimated by using regression analysis using the exponential model which was the best fit, and significant with R^2 values exceeding 96%.[4] The details of analysis are shown in Annexure 2.2. The regression line was fitted by using the data for each major tax and non-tax revenues from 2001-02 to 2016-17, using the semi-log method. The results in respect of tax revenues, non-tax revenues and total revenues are shown respectively in tables 2.21, 2.22 and 2.23 and also through Charts 2.12 A and B, 2.13 and 2.14.

Table 2.21 : Projection of Tax Revenues from 2017-18 to 2024-25 (Rs. Crore)

	Stamp Duty & Registration Fee	Taxes on Motor Vehicles	Taxes and Duties on Electricity	Land Revenue	SGST	Sales Tax on Petro-Products	Other Taxes & Duties	Total Own Tax Revenue
2017-18	4258	1345	377	693	21796	6780	2698	37947
2018-19	5072	1554	470	856	26517	7879	3117	45465
2019-20	6042	1796	586	1056	32260	9155	3601	54497
2020-21	7197	2076	731	1303	39247	10639	4161	65354
2021-22	8574	2399	912	1608	47747	12363	4807	78410
2022-23	10214	2772	1138	1985	58088	14366	5553	94116
2023-24	12167	3203	1420	2449	70669	16694	6416	113018
2024-25	14494	3701	1771	3023	85976	19399	7412	135776

Table 2.22 : Projection of Non-Tax revenues from 2017-18 to 2024-25 (Rs. Crore)

	Receipts from Non-Ferrous Mining and Metallurgical industries	Interest Receipts	Other Non-Tax Revenues	Total Non-Tax Revenues
2017-18	1557	1059	585	3200
2018-19	1940	1308	627	3876
2019-20	2419	1615	673	4707
2020-21	3015	1994	723	5732
2021-22	3759	2462	776	6997
2022-23	4686	3041	833	8559
2023-24	5841	3755	894	10489
2024-25	7281	4636	959	12876

[4] Estimation has been made using the semilog model: ln Ri = a + bTi, where Ri is the revenue for the i-th year and Ti the explanatory variable (i-th year). Estimation has been made using the STATA 13 software. The outcome of the regression analysis showing the summary statistics as well as the coefficient table is appended at Annexure 2.2.

Chart 2.12 A : Projection of Major Tax Revenue from 2017-18 (Rs. Crore)

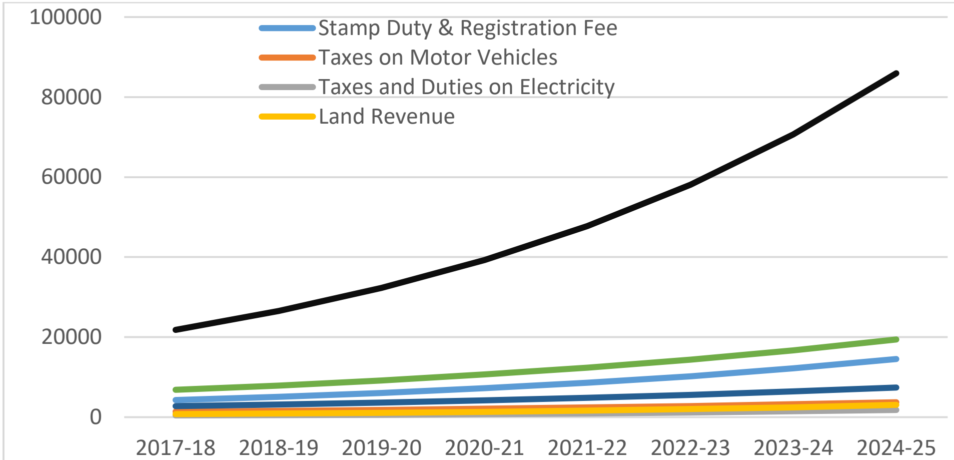


Chart 2.12 B : Projection of Major Tax Revenue from 2017-18 (Rs. Crore)

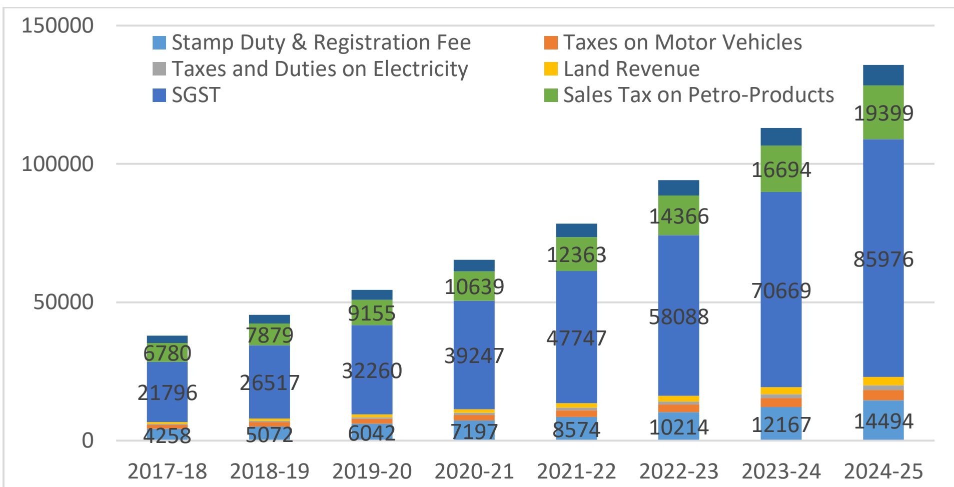


Chart 2.13 : Projection of Major Non-tax Revenue from 2017-18 to 2024-25 (Rs. Crore)

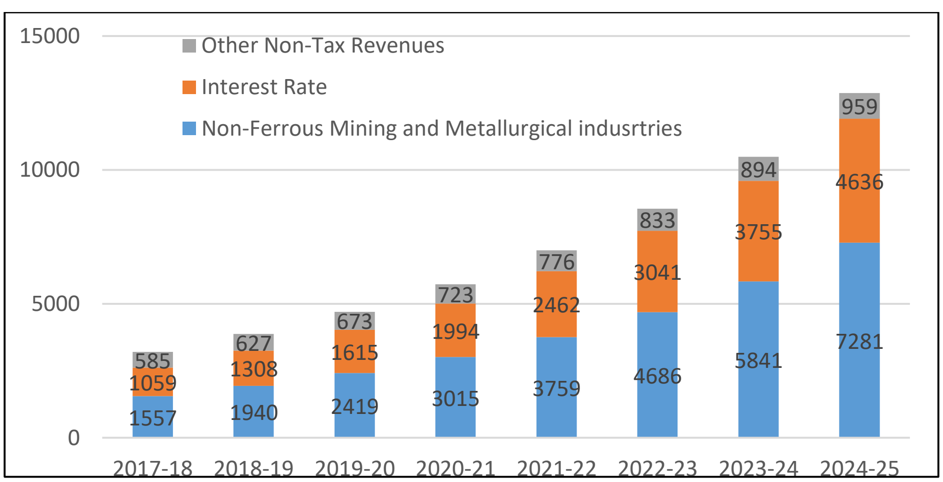
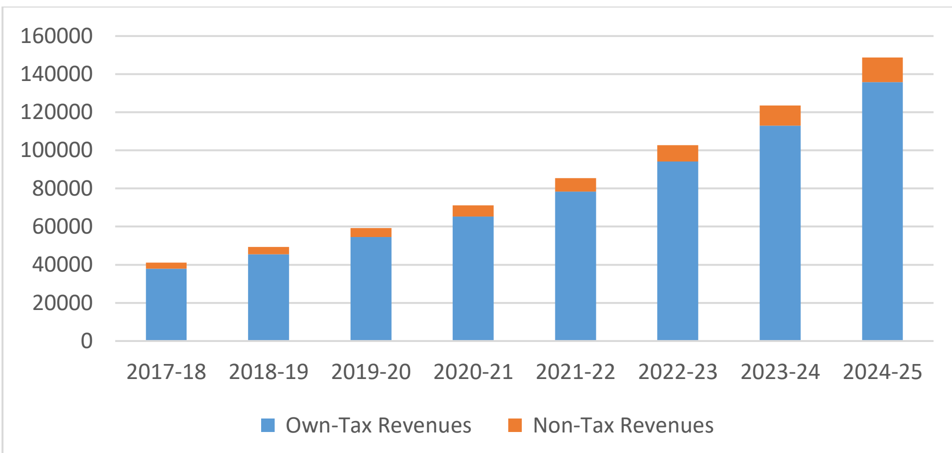


Table 2.23 : Projection of total revenues from 2017-18 to 2024-25 (Rs. Crore)

	Own-Tax Revenues	Non-Tax Revenues	Total Own Revenue
2017-18	37947	3200	41147
2018-19	45465	3876	49341
2019-20	54497	4707	59204
2020-21	65354	5732	71086
2021-22	78410	6997	85407
2022-23	94116	8559	102675
2023-24	113018	10489	123507
2024-25	135776	12876	148652

Chart 2.14 : Projected total revenues of the State: 20-17-18 to 2024-25 (Rs. Crore)

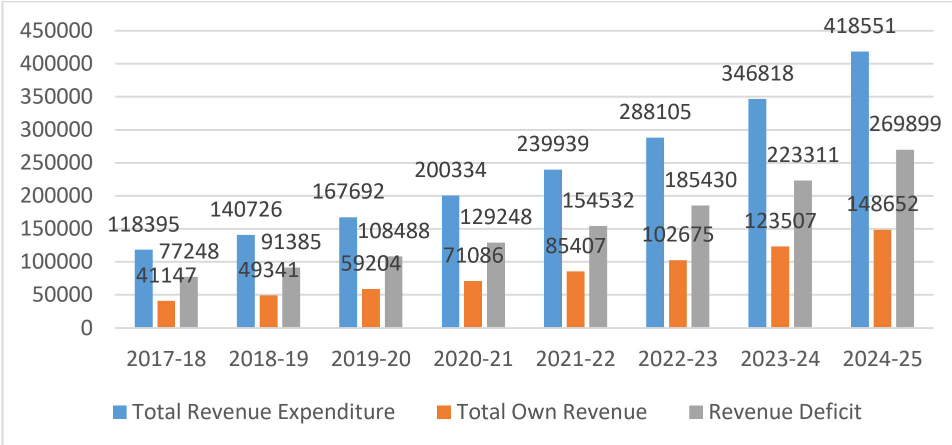


The total own revenues of the State are projected to grow from Rs. 41,117 crore in 2017-18 to Rs. 1,48,652 crore in 2024-25, growing at an average annual compound linear rate of 20 percent. The estimated revenue of Rs. 41,117 crore for 2017-18 compares with the State government's revised estimate of 40,328 crore (Rs. 38473 from Tax revenues and Rs. 2855 from non-tax revenues).

Table 2.24 : Projection of Revenue Deficit from 2017-18 to 2024-25 (Rs. Crore)

	General Services	Social Services	Economic Services	Total Revenue Expenditure	Total Own Revenue	Revenue Deficit
2017-18	34313	54880	29202	118395	41147	77248
2018-19	38777	66473	35477	140726	49341	91385
2019-20	43857	80686	43149	167692	59204	108488
2020-21	49641	98150	52543	200334	71086	129248
2021-22	56231	119649	64059	239939	85407	154532
2022-23	63742	146168	78194	288105	102675	185430
2023-24	72307	178943	95568	346818	123507	223311
2024-25	82077	219523	116950	418551	148652	269899

Chart 2.15 : Estimation of Revenue Deficit based on State's Own Revenues (Rs. Crore)



2.6 Measures to Improve the Tax-GDP Ratio during the Last 5 Years

Bihar's Tax: GSDP ratio is among the lowest in the country. We have also noticed earlier that the tax collections of the state government had increased substantially during the last few years till 2016-17 when the State Excise was abolished leading to fall in the tax collections and a consequent fall in the Tax: GSDP ratio. Before that there was some improvement in this ratio which, though marginal, was brought about by a series of reform measures initiated by the state government, both by removing some of the existing weaknesses in the tax administration as well as upward revision of old tax rates. Table 2.25 shows the tax and non-tax revenue as percentage of GSDP of Bihar during the 5 years till 2016-17. Table 2.26 compares the Tax: GSDP Ratio of Bihar with some of the other States for 2015-16, for which data were available for the other States. It can be seen that in 2015-16, Bihar's figures were comparable to quite a few other States of the country. However, the effect of abolition of excise is likely to be felt for quite some more time, and the Tax: GSDP ratio is unlikely to improve substantially in the near future.

Table 2.25 : Tax and Non-tax Revenue as Percentage of GSDP

Indicators	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Own Tax Revenue as % of GSDP	5.8	6.3	6.1	6.7	5.4
Own Non-Tax Revenue as % of GSDP	0.4	0.5	0.5	0.6	0.5
Total Revenue as % of GSDP	21.1	21.7	22.9	25.2	24.1
Buoyancy of Total Revenue	1.1	1.3	1.7	2.0	0.7
Buoyancy of State's Own Taxes	2.0	1.9	0.5	2.0	-0.5

Source : Finance accounts of the respective years and CSO data

Table 2.26 : Tax: GSDP Ratio of Major Indian States (2015-16)

State	Revenue Receipts (Rs. crore)	State's Own Tax (Rs. crore)	GSDP (Rs. crore)	State's Own Tax: Revenue Receipts	**State's Own Tax: GSDP**	Total Revenue: GSDP
Bihar	**96123**	**25449**	**381501**	**26.5**	**6.7**	**25.2**
Jharkhand	40638	11489	231294	28.3	**5.0**	17.6
West Bengal	109732	42519	921769	38.7	**4.6**	11.9
Odisha	83071	22527	341887	27.1	**6.6**	24.3
Uttar Pradesh	227076	81107	1120836	35.7	**7.2**	20.3
Madhya Pradesh	105511	40240	543975	38.1	**7.4**	19.4
Rajasthan	100285	42713	672707	42.6	**6.3**	14.9
Maharashtra	185036	126628	2001223	68.4	**6.3**	9.2
Gujarat	97483	62661	1033791	64.3	**6.1**	9.4
Punjab	41517	26689	391543	64.3	**6.8**	10.6
Haryana	47557	30933	399646	65.0	**7.7**	11.9
Karnataka	118817	75566	1016910	63.6	**7.4**	11.7
Andhra Pradesh	88648	39922	609934	45.0	**6.5**	14.5
Kerala	69033	39004	556616	56.5	**7.0**	12.4
Tamil Nadu	129008	80476	1161963	62.4	**6.9**	11.1
Himachal Pradesh	23440	6699	112852	28.6	**5.9**	20.8
Chhattisgarh	46068	17084	260776	37.1	**6.6**	17.7

Source: State Governments' Budgets

The measures initiated by the state government to enhance the Tax: GSDP Ratio during the last few years were hardly significant. In fact, the state taxes suffered a decline due to the abolition of State Excise Duty on alcohol as discussed earlier. GST has taken away the powers of the State to increase or decrease tax rates in respect of most important taxes. There were some occasional minor revisions in the rates of the remaining taxes which did not contribute significantly to the tax coffer of the State. Introduction of technology and computerisation have helped the tax departments in tax administration, with easing of the compliance burden to the taxpayers, but there are still a huge volume of assessments pending to be finalized as discussed earlier.

To increase the stamp and registration duties, the following initiatives are taken by the State Government for digitization of land records and land titles:

- Digitization of cadastral survey maps.
- Digitization of revisional survey maps.
- Digitization of consolidation maps.
- Digitization of RoR, tenants' ledger (Jamabandi Panji) has been completed and published on website for public viewing.
- There are certain gaps in digitization of RoRs, which are being attended to and will be completed within next six months.
- Online lagan payment and online Mutation has been started in all the 534 anchals.
- Land Survey/ Re-Survey
- Computerization of Registration

- Modern Record Rooms/ land records management centres at tehsil/taluk/circle/block level
- Training & Capacity building including strengthening of the Revenue (Survey) Training Institute.
- Eventual migration to a Core GIS by integrating (i) Spatial data from aerial photography or high-resolution satellite imagery; (ii) Survey of India and Forest Survey of India maps; and (iii) GIS-ready digitized cadastral maps form revenue records. Once the basic plot-wise data is created, seamless integration would be possible for micro and macro-planning and other relevant applications.

The impact of the above measures is yet to be seen in terms of significant improvement over and above the normal trend of collections.

Some Cesses and Surcharges were collected during the last five years. Agriculture Department levies a labour Cess at the rate of 1% on the contractor's bills related to construction works as per PWD code and the amount is deposited to the Secretary, Bihar Building and Other Construction Workers Welfare Board. The Commercial Tax Department levies surcharge on petrol, diesel, tobacco products and IMFL is being collected by the Commercial Tax Department on the basis shown in Table 2.27. The total collections against cess and surcharge is shown in table 2.28. The amounts collected were not very significant except for surcharges collected by the Commercial Tax Department.

Table 2.27 : Basis of Surcharge Levied by Commercial Tax Department

Year	Basis of surcharge
2013-14	@ 10% of Tax payable on HSD &LDO
	@ 10% of Tax payable on Motor spirit (w.e.f 9th May 13)
	@ 15% of Tax payable on Tobacco products (w.e.f 9th May 13)
2014-15	@ 10% of Tax payable on HSD &LDO (up to 8th March 15)
	@ 20% of Tax payable on HSD &LDO (w.e.f 9th March 15)
	@ 10% of Tax payable on Motor spirit (w.e.f 8th March 15)
	@ 20% of Tax payable on Motor spirit (w.e.f 9th March 15)
	@ 15% of Tax payable on Tobacco Product
2015-16	@ 20% of Tax payable on HSD &LDO
	@ 20% of Tax payable on Motor spirit
	@ 15% of Tax payable on Tobacco Product
	@ 20% of Tax payable on IMFL
2016-17	@ 20% of Tax payable on HSD &LDO (up to 1th Feb 16)
	@ 30% of Tax payable on HSD &LDO (w.e.f 2nd Feb 16)
	@ 20% of Tax payable on Motor spirit (up to 1th Feb 16)
	@ 30% of Tax payable on Motor spirit (w.e.f 2nd Feb 16)
	@ 15% of Tax payable on Tobacco Product
2017-18	@ 30% of Tax payable on HSD &LDO
	@ 30% of Tax payable on Motor spirit
	@ 15% of Tax payable on Tobacco products(up to 30th June)

Table 2.28 : Collections against cess and surcharge during the last 5 years (Rs Lakh)

	Agriculture Department			Commercial Tax Department
Financial Year	Cess (Labour cess 1%)	Royalty	Surcharge on verification of Weights & Measures	Surcharge
2013-14	99.21	42.18	9.14	272.30
2014-15	91.67	62.41	10.97	322.04
2015-16	83.03	16.07	14.28	714.97
2016-17	14.92	13.04	15.72	1081.17
2017-18	9.48	2.05	16.14 (till Feb., 2018)	NA
	99.21	**42.18**	**66.25**	**272.30**

2.7 Suggestions for enhancing the revenue productivity of the tax system in the State

After the introduction of the GST which has taken away most of the powers of the State to increase revenues from high yielding state taxes by altering rates or other mechanisms, there are very few taxes that remain within the jurisdiction of the state to raise revenues from, especially since the State excise on alcohol was abolished, with consequent loss of Rs. 4500 crore of revenue from excise and sales tax on alcohol. Hence the state finds itself in a rather disadvantageous position to improve its revenue productivity and hence the Tax: GSDP ratio. The only taxes the state can now rely on are the stamp duties and registration fees, sales tax on petroleum-products and taxes on motor vehicles. The first two has good potential being linked to the growth of real estate sector and travel, tourism and growth of automobile sector within the state. Since the state has been growing at a healthy rate, there is scope of increasing revenue from these taxes. However, it must be remembered that the real estate sector has not been demonetized completely, and anecdotal evidence suggests that the role of cash in real estate transactions again suppressing the reported price, leading to large scale evasion in respect of stamp duty and registration fees. Increasing use of advanced technology and effective monitoring may address this perennial problem.

The following suggestions may be worth consideration for improving the revenue productivity:

(a) **Collection of Tax Arrears and Controlling Tax Evasion**: We have already pointed out that there are arrears of revenue amounting to more than Rs. 5700 crore waiting to be realized from more than one lakh cases, the recovery of which has been embroiled by Court order is some cases and at various other stages and procedures. The State machinery does not seem geared up adequately to pursue these cases pro-actively with a time bound target for realization.

In the pre-GST regime, in respect of VAT, the Comptroller & Auditor General of India had once reported (2013) that of the total number of registered dealers in Bihar (192,645) only 53,340 (27.68 percent) were paying taxes. 75,200 dealers were not even filing any returns. The situation may not be very different now, but the record of the Commercial Taxes Department in checking tax evasion has not been very encouraging. Till 31st March 2016, it had detected only 1545 cases of tax evasion and, out of these, in 1019 cases, it has concluded the assessments and raised a demand for a meagre Rs. 21 crore. Investigations are pending for the remaining cases, of which 479 cases related to Commercial Taxes many of which have been subsumed in the GST, 47 cases to excise duty which has been abolished and only 4 cases related to stamp duty and registration fees.

The above picture presents only the tip of a vast iceberg as far as tax evasion is concerned. Clearly the administrative machinery of the state government is not geared adequately to handle so many of tax evaders and bring them into the tax net within a short time. This would require a radical revamp of whole tax administration and plugging the loopholes in tax evasion and tax collection. While GST architecture being technology driven, addresses some of the concerns, in respect of the residual taxes, making e-filing and e-payment of taxes mandatory could be steps in the right direction that would also minimize both the compliance and the administrative costs.

(b) **Strengthening of Tax Administration:** The Comptroller & Auditor General of India had reported that between 2010 and 2014, 99 percent of the assessment of VAT were left unscrutinised in the checked 10 circles, indicating the assessing officers whose primary duty it was to scrutinize the returns filed were not discharging these basic duties. There was no monitoring by officers at the higher levels; even the non-filers were not assessed in a large number of cases. Corruption remains an issue to be addressed effectively.

(c) **Cross-checking of transactions/ cross-linking of databases of different taxation and other Government departments:** Once technology is applied extensively to create databases about taxpayers in respect of major taxes like GST, Motor Vehicles Tax, Stamp Duty and Registration Fee etc., it will be easy to detect evasion by cross-checking of transactions between various Departments so as to get and verify tax-related data. Necessary institutional / administrative machinery may be set up for facilitating seamless transfer of / access to such data across various Departments.

(d) **Internal Controls within Tax Departments:** Internal controls which comprise effective supervision, vigilance, monitoring, standardization of procedures through written codes/ manuals, survey, inspection and regular internal audit conducted in an independent manner, are essential for ensuring optimum efficiency and productivity of tax departments. Bihar's tax departments are not only weak in internal controls, internal controls are almost non-existent in many Departments, with most of the elements of internal control missing in most tax departments. Unless these weaknesses are addressed in an integrated manner, tax collection and recovery will continue to be sub-optimal.

(e) **The collection of penalty and interest** on overdue tax payments and violations of tax provisions is also lax in the state, both in terms of statutory provisions and their enforcement. This aspect also needs strengthening.

(f) **Losses due to undervaluation of property**: High rates of stamp duties always lead to significant undervaluation of the transactions, causing revenue losses. To minimize this, the Government of Karnataka (2017) has now introduced an online automatic stamp duty and registration fee calculation. The new system in Karnataka is directly linked to the property transaction data which in turn is connected to GIS (Geographic Information System) maps to capture the spatial or geographical details with accuracy.[5] The Kaveri portal, which is the online portal of Department of Stamps and Registrations, Government of Karnataka, does not allow registration if the valuation of property is irrational, which thus minimizes the scope for any undervaluation of properties. Another example of use of technology is in Gujarat where online payment of registration fees and stamp duties at the local registrar's office has been enabled to make the process smooth.[6]

(g) **High Rate Stamp Duty and Registration fees are counterproductive**: An international comparison of stamp duties indicates that Indian stamp duty rates are exceptionally high.[7] Being the third-largest revenue source for most Indian states, the high rates impose high compliance costs on taxpayers leading to inevitable evasion and fraud. Lower stamp duty rates are not limited to industrial countries only; even countries such as Vietnam and the Philippines have stamp duty rates in the range of 1 to 2 percent. The high stamp duty rates prevalent in the Indian states provide powerful incentives for corruption and fraud in systems with weak tax administration. This evidence shows that a wide range of countries on the income scale have opted for a tax rate structure that may be both less distortionary and easier to administer.

(h) **Technological flaws**: VAHAN and SARATHI are the two schemes introduced by the government to make sure that the transportation related public services of government are effective, expeditious and transparent. However, the Comptroller and Auditor General of India has highlighted several problems related to the working of VAHAN software in Bihar, like absence of validation checks in the registration module of VAHAN, registration of vehicles on reduced sales figures, plying of different vehicles with the same registration numbers, delivery of vehicles without temporary registration etc. Similarly, SARATHI software was found deficient in many respects, like lack of inter-connectivity amongst the district transport offices, absence of inter-linking the database of the District Transport Officers with those of the Regional Transport Authorities, etc. which made detection of evasion difficult. These technological inadequacies can be easily addressed through modifying the software to include automatic validation control, security password of different kinds and proper training of staff to effectively handle the software, etc.[8]

(i) **Improving revenue from renewal of licenses by tightening pollution control measures**: According to a survey conducted by World Health Organization (WHO) based on Central Pollution Control Board (CPCB), Patna is the sixth most polluted city in the world. But State Transport Commissioner (STC) did not maintain any database of pollution testing stations, leading to loss of renewal fees due to nonrenewal of licences. The issue is important not only for the development of healthy urbanization of Patna, but also for improving the revenue collection from this.[9]

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[5] https://timesofindia.indiatimes.com/city/bengaluru/tech-to-size-up-property-fix-tax-leak/articleshow/61539255.cms

[6] https://timesofindia.indiatimes.com/city/ahmedabad/stamp-duty-act-soon-digital-validation-of-papers/articleshow 62907138.cms, accessed 27/05/2018.

[7] Stamp Duties in Indian States A Case for Reform (2004). James Alm, Patricia Annez, and Arbind Modi, World Bank Policy Paper.

[8] Report No 1 of 2017 of the CAG of India, Revenue Sector, Bihar.

[9] *Ibid*.

2.8 Suggestions for enhancing the non-tax revenues from user charges

2.8.1 Levy of user charges

Most of the State Government departments do not levy any user charges, and some only levies a minimal amount of user charges unrelated to their costs. There is neither any concept of recovering a certain part of the actual cost, nor a system of raising resources for maintenance of such services. There is also no system of linking the user charges with returns on investments made by the state government on creating the assets required for providing these services. The system of collection of user charges as well as their rates necessarily vary from one department to another. The department-wise details were available in respect of only a few departments which are presented below:

Health Department levies very nominal user charges in government health facilities which are obviously not at par with the expenditure on operation, maintenance & administration (O&M cost) as the Government is committed to provide free health services to its citizens. User charges, thus collected, is deposited in bank account of Rogi Kalyan Samiti (RKS), which is an NGO, and utilises the money for strengthening of health facilities, small repair works, procurement of small items as per need of patients, etc.

Nominal registration fees is charged in the district as well as in other health institutions located at block/ Panchayat level and also in the Medical College Hospitals. In addition, charge for various test and investigations are also collected at nominal rates for X-ray, Ultra Sound, ECG, common blood test and pathological investigation etc. which are far below the market rates.

Water Resource Department levies Sector-wise rates of user charges as shown in Table 2.29, which are collected through the Department as well as Water Users Associations (WUA).

Table 2.29 : Use Charges levied by Water Resources Department

<table>
<tr><th colspan="3">1. Water rate for Irrigation :-</th><th>(A) Perennial</th></tr>
<tr><th>Sl. No.</th><th>Name of Crop</th><th>Rate (Rupees per acre)</th><th>Effective From</th></tr>
<tr><td>1</td><td>Paddy</td><td>88.00</td><td rowspan="2">November 2001</td></tr>
<tr><td>2</td><td>Wheat, Barley, Potato, Onion</td><td>75.00</td></tr>
<tr><td>3</td><td>Peas, Gram, Pulse, and Oilseeds</td><td>40.00</td><td rowspan="5">November 1995</td></tr>
<tr><td>4</td><td>Hot Weather Paddy</td><td>100.00</td></tr>
<tr><td>5</td><td>Sugarcane</td><td>150.00</td></tr>
<tr><td>6</td><td>Jute</td><td>40.00</td></tr>
<tr><td>7</td><td>Vegetables, Bananas, Licchi and Mangoes</td><td>120.00</td></tr>
<tr><th colspan="3">2. Water rate for Irrigation :-</th><th>(B) Non Perennial</th></tr>
<tr><td>1</td><td>Paddy</td><td>44.00</td><td rowspan="2">November 2001</td></tr>
<tr><td>2</td><td>Wheat, Barley, Potato, Onion</td><td>56.00</td></tr>
<tr><td>3</td><td>Peas, Gram, Pulse, and Oilseeds</td><td>30.00</td><td>November 1995</td></tr>
<tr><th colspan="4">3. Water rate for Industrial, Commercial and Municipal use</th></tr>
<tr><td>1</td><td>Industrial, Commercial and Municipal use</td><td>18.00 per thousand gallon</td><td>October 2016</td></tr>
</table>

Irrigation water charges are collected through the department as percentage of O & M cost calculated in the following manner: (Kharif irrigation charges + Rabbi irrigation charges) X 100/ O&M charges, which translates to (1802516 X 2.47 X 88+562757 X 2.47 X 75) X 100 X 10^{-7} /98 or 50.62 %. The irrigation water charges collected through the WUAs as percentage of O&M Cost amounts to 30/70*100 = 42.86 %.

2.8.2 User / Beneficiary Associations

Some departments have also formed User Associations which are sometimes given the responsibility of maintaining the assets and providing the required services. They are also authorized to collect the user charges and use either the whole or a substantial part of these charges for the purpose of operation and maintenance of the respective services / maintenance of created assets. However, the effectiveness of the user association in collection of arrears and charges is not as per expectation. The practices in respect of a few departments are described below:

Water Resource Department: 54 (Fifty four) numbers Water Users' Association (WUAs) has been formed till now, having command area of around 151,000 Ha., but they are not effective in collection of arrears and user charges. Performances of these Associations are very poor in terms of collection of water charges.

Health Department: Rogi Kalyan Samitis have been set up as user associations in all the hospitals and primary health centers of the state. They are registered bodies under the Societies Registration Act, 1860, and have their own development funds in which are deposited grants from the state government as well as health service charges recovered from patients. The money is spent on maintenance and up-keep of the hospital. The new approach appears to have helped the state's healthcare system, with the result that the average number of patient visiting government hospitals every month for treatment has increased considerably.

2.8.3 Suggestions to Enhance Non-Tax Revenues[10]

- To levy user charges for services provided by the government or public sector enterprises is an accepted practice in public finances which is essential not only to step up the huge capital expenditure needed for creating viable infrastructure but also to maintain it. Tariff restructuring or subsidy design has always been a problem for their targeted impact on the poor, while questions

[10]The following resources have been consulted:

1) The lessons of user fee experience in Africa, Lucy Gilson Center for Health Policy, Department of Community Health, University of Witwatersrand, South Africa, and Health Economics and Financing Programme, School of Hygiene and Tropical Medicine, United Kingdom
2) Best Practice Guidelines For User Charging For Government Services, PUMA Policy Brief No. 3, Public Management Service, March 1998
3) User Charges in Local Government Finance, Richard M. Bird, http://www1.worldbank.org/publicsector/decentralization/June2003Seminar/Bird2.pdf
4) Benchmarking And Best Practice Program User-Pays Revenue, Report prepared for Australian and New Zealand Environment and Conservation, Council (ANZECC)
5) Review of current practices in determining user charges and incorporation of economic principles of pricing for Urban Water Supply, Ministry of Urban Development, Government of India.

regarding efficiency and accountability have never been addressed in the scenario that prevails in most states.

- The underlying assumption being that a citizen who benefits from a government service should pay for it, ideally the charges and fees should determined based on the quantity consumed. This provides the governments an indication of service needs and hence to maximize efficiency by proactively matching supply and demand. Additionally, when effectively implemented, user charges and fees provide information to consumers about how much public goods and services cost, thereby enhancing the efficient allocation of services and achieving pricing transparency. This can produce an added benefit of boosting fiscal transparency and also government accountability.[11]
- But it is to be kept in mind that the charges and fees disproportionately impact the citizens who are least able to pay, particularly at the lower end of the income strata. This creates an untenable situation in respect of essential government services, such as water, sewer, sanitation services, and others and gives rise to the important question of whether the provision of these goods and services should have a redistributive focus, or whether it should instead be guided by cost-based principles. The strength of a charges and fees framework will depend not only on the political climate but also on the Government's perceived legitimacy which will depend the existence or otherwise of an accountability structure. Such an accountability structure is weak in a state like Bihar and hence to that extent it constrains the Government's ability to impose a cost-based fees structure on services.

- The public appreciation and support is essential for effectively raising revenue, which can come only from good service delivery. A positive public attitude can lead to increased revenue and cost effectiveness through improved compliance. Good service delivery combined with good publicity can create have significant impact, and this can be an essential element in the Government's delivery system as a whole.

- To improve and streamline the non-tax revenue collection, providing relevant job training is very important along with simplification of rules and collection procedures. Adoption of e-payments and other modern means to set best practice with regard to non-tax revenue collection is possible only with efficient staff. Exposing and training the staff in the best collection practices will enhance the non-tax revenue collections while reducing compliance costs.[12]

- To improve revenue from user charges, the existing bottlenecks for its collection need to removed first. It must also be understood clearly that just as the user is obliged to pay the charges mandatorily for the services provided, the government entities, in their role as service providers, must also own up their responsibilities and obligations in a formal manner, without which the user charges cannot be made realistic and related to the cost of providing those services. In other words, both the service provider as well as their users must accept their respective rights and responsibilities in an accountability framework that will include penalties for violations of these by either party. Only when such formal commercial considerations guide the provision and availing of services, the system can be made cost effective and efficient.

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[11]Germán, L., & Glass, E, "Non-Tax Own-Source Municipal Revenues", *Leaders*, 2017, 66.

[12]https://www.chemonics.com/wp-content/uploads/2018/03/APFM-Final-Report_USAID-Approved.pdf

- Commercial decisions like fixing the tariff for electricity or water charges, should be delinked from political considerations, subject to some broad policy guidelines framed by the government, guided by the considerations of equity, efficiency and cost recovery. If political considerations are allowed to be factored in the determination of tariff or user charges, the inevitable result will be progressive deterioration in the quality of services till such services becomes economically unsustainable. Needless to say, given the level of capital expenditure needed to arrange for such services, government alone cannot be expected to create and maintain the necessary assets, and private sector needs to be given sufficient incentives to be made a partner in the process under suitable regulatory mechanisms.
- It is imperative, in the first place, to set the standards for cost-based pricing of the services, which enable the government to determine the cost of subsidy or cross-subsidies in providing these services. But this would be possible without simultaneously setting the standards for those services, in terms of their quality and efficiency and an effective mechanism for speedy redressal of user grievances. Unfortunately, none of these exist in the present scenario.
- The present system of fixing rates for user charges does not seem to be based either upon the expected return on investment or on the actual cost of services. Neither is there any evidence of collection of cost accounting data by the concerned departments to fix the user charges based on actual cost of various services, like electricity, water, education, healthcare or even hiring out government premises for private purposes. Collection of such data and creation of an asset register are the first steps towards rationalization of user tariff in respect of services. Next step would be to specify the standards of services to be provided and to draw up service level agreements between the provider department and the user, clearly prescribing the rights and obligations and penalties / damages for each, supported by creating an enforcement authority and a grievance-redressal authority. By imparting greater transparency into the system, misuse of the services also will certainly be reduced.
- Rationally fixing the user charges has to strike a balance between cost recovery, equity, user-affordability and efficiency of services. The charges so fixed should not subsidise the inefficiency of the service providing departments, as at present. The fixed rate should reflect the economic cost and efficiency and not administrative lethargy and avoidable overheads. In case of inefficiency, the service provider must compensate the users. The rate so fixed also must be simple, transparent, flexible and acceptable to the users and should be high enough to discourage wasteful usage and optimizing their use.
- Services should always be provided in response to their demands and their scope and quality cannot be improved except by recovering their full cost, which also ensures their allocative efficiency. While attempting to recover the full cost through user charges, cross-subsidization of services, keeping the principle of equity in mind, can be factored by prescribing differential rates for different types of users. User fee should also be annually revised in line with inflation; otherwise it undermines the amount of revenue generated.

- For providing quality healthcare, the possibility of tying up with medical insurance providers and recovering the cost of premium which would necessarily be large from the fees collected from in-patients as well as out-patients may be explored. In-patient fees and treatment charges should be graded according to the paying capacity of the patients, to be determined by devising a suitable mechanism, as well as to the cost of treatment. Further, in the sector of education, subsidized education should be provided only up to the secondary stage. In the case of post-secondary education, failure to charge 'full-cost recovery' results in a reverse subsidy to the rich.
- Pricing should be based on competitive market prices. It should aim at full cost recovery, unless there is a clear rationale for less than full cost recovery. Consideration should be given to adopting flexible budgetary arrangements for User / Beneficiary Associations, to enable them to respond to increased service volume by permitting proportional increases in expenditure. Revising user charges for one service can have a significant impact on the demand for substitute services, if they are not subjected to a similar charge. Consideration therefore needs to be given to also revising charges for substitute services.
- Differentiated prices for peak and off-peak periods may also be adopted in order to spread demand for services. For certain services, smart card scheme might be appropriate, whereby all consumers would access these services using the card, while low-income users may be given a certain initial credit on their cards to ensure that only the deserving get the subsidy.
- In developed countries¸ independent regulatory body for water is fairly common, leading to a transparent and efficient tariff determination. The government may set up state-level water regulatory authority with the overall responsibility of setting guidelines for fixing water charges, apart from monitoring and advising the state government on equity and efficiency. Using a Block Tariff system by grading the tariff when a consumer moves to a higher consumption slab is the most appropriate tariff structure.
- For fixing the tariff, recovery of cost of service and ability and willingness to pay – both these considerations should be kept in mind to serve the ends of revenue sufficiency as well as social equity. In the short run, water tariffs should focus to recover Operation and Maintenance cost (O&M) cost. Capital costs should be recovered through subsidies from government. However, these subsidies should be reduced gradually. A two-part tariff structure (consisting of a fixed charge and variable charge) should be adopted. While fixed charges would ensure sufficiency of revenue, the variable charges would pay for consumption.
- For local governments especially, the non-tax revenues can generate funds for their much needed infrastructure investments. Mostly the local governments being unable to raise funds from their own resources to finance large infrastructure projects depends on the State which lacks those resources equally. The essential civic services thus remain underfunded and hence inefficient. A strong base of non-tax own-source revenues can help the municipalities and local bodies – e.g., a municipality can expand the base of capital for water and sewer projects via issuance of municipal revenue bonds supported by local water and sewer fees. But such bonds would require State Government guarantees – at least initially – to generate the public interest in investing on them.

Municipal revenue bonds are bonds funded from a specific revenue source. They allow municipalities to dedicate discrete streams of revenues to support multiyear borrowings that produce capital for infrastructure investment. To pay principal and interest on the bonds, such borrowings require a pledge of specific assessments and charges — in this case, those related to water and sewer services.[13]

- The CAG Report No. 1 of 2017 of Bihar pertaining to the Revenue Sector highlights the need for improvement of internal control systems and inter-departmental coordination within the Government Departments to enforce the rules for augmenting the collection of non-tax revenues in Bihar. This can be facilitated through effective internal audit.
- One pragmatic alternative could be to involve communities instead of simply relying on the rules and government machinery to collect the non-tax revenues. For example, for leasing and auctioning public assets and resources – e.g. for extraction of sand and minor minerals, rules provide for a tender-cum-auction allotment procedure. The local communities often get affected by the activities of the agencies engaged through such procedure and resistance often builds up. Besides, the mines which are not cost effective are left underutilized. Involvement of local communities in these activities may help facilitate smoother and efficient collection of revenues.

[13]Germán, L., & Glass, E,"Non-Tax Own-Source Municipal Revenues", *Leaders*, 2017, 66.

Annexure 2.1 : Comparative Commodity-wise Collection of Sales Tax (Rs. crore)

Sl. No.	Name of commodity	Collection (in crore)			Rate of Growth (%)		
		2014-15	**2015-16**	**2016-17**	**2014-15**	**2015-16**	**2016-17**
1	Advertisement Tax	1	1	1	9.37	9.83	-11.30
2	Asbestos	32	45	48	21.79	40.10	6.00
3	Auto parts	74	95	159	2.98	27.94	68.46
4	Battery	96	112	141	-5.38	16.72	25.37
5	Beverages	129	100	128	80.10	-22.65	28.37
6	Bhujia	9	14	27	12.65	49.66	98.00
7	Bicycle	23	25	27	-14.70	8.38	7.21
8	Biscuits	126	177	208	-10.20	40.76	17.23
9	Bricks	36	43	51	7.77	17.22	20.68
10	Cement	920	1005	1165	-0.92	9.19	15.98
11	Coal	223	262	285	-40.89	17.19	9.10
12	Computer	68	76	116	13.50	12.13	52.75
13	Consumer Durables	173	225	288	19.60	30.26	27.69
14	Country Liquor	266	355	6	30.96	33.29	-98.32
15	Crockery, Cutlery, Glassware & Ceramic ware	3	4	5	23.03	3.70	50.92
16	Crude Oil	635	1350	702	-22.25	112.46	-47.98
17	Diesel Oil	2	4	4	367.92	87.02	18.42
18	Drugs and Medicines	459	469	544	12.66	2.07	16.09
19	Dry Fruits	3	3	4	-5.39	0.49	33.70
20	Edible Oil	107	135	176	12.73	26.21	30.24
21	Electrical Goods	787	1093	1374	43.96	38.88	25.75
22	Electricity Duty	1	1	1	-30.61	-14.34	71.62
23	Electronic Goods	106	121	147	5.80	13.77	21.93
24	Engine & Motors	24	25	29	-5.40	4.10	17.51
25	Entertainment Tax	10	10	14	-41.82	-2.21	35.75
26	Ethanol	7	12	7	-10.87	75.31	-42.03
27	Fast Food & Cooked Food	138	157	197	-0.32	13.71	25.70
28	Fertiliser & Insecticides	186	244	231	8.94	30.65	-5.16
29	Fire Work	6	7	8	48.24	18.81	19.69
30	FMCG	523	615	820	6.18	17.56	33.49
31	Foodgrains	89	86	127	-48.81	-3.30	48.10
32	Footwear	42	49	61	13.84	16.38	24.89
33	Four-Wheelers & Chassis of Automobile	528	596	747	7.53	12.88	25.39
34	Furniture	42	47	57	2.68	13.11	21.06
35	Ghee & Vanaspati	100	116	148	1.09	15.68	27.72
36	Glasses	11	14	16	11.36	22.82	15.89
37	Gun & Rifles	1	1	1	2.33	9.87	42.81
38	Hardware	34	36	41	16.75	7.08	12.35
39	Hawai Chappals	1	1	1	138.03	20.14	8.60
40	Hide & Skin	2	1	1	31.35	-7.30	-12.63
41	Hosiery And Readymade	80	93	140	9.78	16.30	49.75
42	IMFL	780	998	31	4.39	27.92	-96.92

43	Iron & Steel	293	333	352	4.29	13.72	5.54
44	Jewellery	14	17	21	8.19	26.04	24.55
45	Kerosene	2	3	3	4.66	25.34	5.55
46	Kirana	52	55	78	4.16	5.11	42.91
47	LPG	7	9	12	21.85	23.27	34.63
48	Lubricants	56	64	83	3.43	13.11	30.39
49	Luxury and Hotel	9	10	10	2.55	6.82	2.16
50	Marble and Granites	35	43	58	30.58	23.95	33.17
51	Matches	1	1	1	-7.94	-2.91	28.36
52	Moulded Luggage	9	11	14	-0.97	27.21	24.57
53	Not Available	0	0	0	301.18	-98.85	-100.0
54	Not Tagged	3	2	2	212.96	-41.64	46.14
55	Not Tagged with any Commodity	15	12	16	-22.78	-23.75	35.37
56	Others @ 1	0	0	0	603.74	21.21	92.09
57	Others @ 12.5	14	16	15	-58.88	9.00	-3.83
58	Others @ 13.5	85	160	209	91.42	88.13	30.86
59	Others @ 14.5	0	0	1	-	-	-
60	Others @ 4	7	9	6	0.01	25.14	-35.57
61	Others @ 5	51	59	75	46.08	15.84	26.09
62	Others(Tax Free)	15	15	13	-12.21	-0.43	-8.55
63	Paints	89	110	147	6.93	24.32	33.07
64	Pan Masala	76	11	59	-16.77	-86.07	458.40
65	Paper	39	40	44	2.91	2.84	8.82
66	Petro Products	3284	4385	5118	4.19	33.51	16.71
67	Petrol	2	3	0	23.78	73.97	-88.72
68	Plastic Goods	51	68	140	3.49	33.13	105.96
69	Plyboard	14	16	19	23.72	13.84	23.92
70	Plywood	12	15	19	29.35	23.56	28.48
71	Processed Vegetable & Food.	7	8	12	21.88	13.12	45.25
72	Professional Tax	52	65	77	2.95	24.66	17.25
73	Sand	26	20	69	154.65	-23.82	250.96
74	Sanitary Fittings & Tiles	50	59	69	8.76	18.82	17.32
75	Sarees More Than Rs.2000/Pc	0	0	5	-	-	-
76	Shewing Machine	1	1	1	21.76	18.72	-2.41
77	Spectacles	1	1	1	36.38	10.69	64.02
78	Sport Goods	1	1	2	7.84	9.68	16.23
79	Staple Yarn	3	2	2	-4.04	-12.79	2.56
80	Stationery	11	14	17	9.80	21.46	27.02
81	Stone Chips And Ballast	14	11	27	42.14	-20.13	146.56
82	Tea & Coffee	13	15	19	12.03	10.23	27.37
83	Telephone	141	180	203	24.57	27.69	12.58
84	Textile Fibres More Than Rs.500/Meter	0	0	5	-	-	-
85	Timber	22	22	26	26.97	2.15	18.93
86	Tobacco	167	200	256	5.69	19.60	27.96
87	Tools	10	9	9	-19.04	-7.00	6.38
88	Tractors	125	130	167	-0.73	4.14	28.28
89	Transporter	0	0	1	152.39	-56.36	241.18

90	Two and Three Wheelers	378	452	584	12.50	19.52	29.14
91	Tyres & Tubes	120	133	142	5.37	10.56	6.61
92	Unregistered Dealer Others	476	472	509	38.06	-0.70	7.77
93	Unregistered Dealer Works Contractor	750	912	1118	13.76	21.52	22.60
94	Utensils	4	4	7	-37.90	2.36	55.72
95	Watch & Clock	12	14	18	-4.12	20.11	24.12
96	Works Contract and Tds	248	371	605	-25.62	49.35	63.08
	Total	**13750**	**17378**	**18751**	**4.51**	**26.39**	**7.90**

Source : Department of Commercial Taxes, GOB

Annexure 2.2 : Technical note related to estimation of tax and non-tax revenues

The estimation is based on actual data in respect of different revenues for 16 years from 2001-02 to 2016-17. F-test has been used to test the statistical significance of the results, and the P-value related to the F test has been found to be close to zero. Since it is less than the values 0.01, 0.05 and 0.1 which corresponds to 99%, 95% and 90% confidence levels respectively, it can be concluded that the model is statistically significant at all levels of confidence. R-Square values corresponding to the exponential model was more than 0.9 as compared to around 0.5-0.8 for the linear models for different tax and non-tax revenues, which is why the exponential model has been used, indicating that more than 90 percent of the variations could be explained by the model. The coefficient table shows the coefficients for the regression equation and results of the tests of significance, including the t-statistic and P-values of the t-statistic. While the F-statistic evaluates the entire model, the t-statistic examines each relationship independently. The P-value for t statistic again was less than 0.01, confirming the statistical significance of the model at all levels of confidence.

Both the linear and exponential regression models have been tried to project the revenues. The comparison of the R-square values, F-statistics and t-statistics prove that exponential regression model has better estimates as compared to the linear regression model. The results of the analysis and associate graphs are shown below for the different tax and non-tax revenues. The graphical and statistical analysis both concludes that exponential regression is a much better fit than the linear model.

Projection of Tax and Non-Tax Revenues

Table A1 : Projection of Land Revenue

Year	Time (number of years)	Land Revenue	Ln of Land revenue	Exponential Projection of Land revenue	Linear Projection of Land Revenue
2001-02	1	34.1	3.5	23.9	196.5
2002-03	2	36.2	3.6	29.5	238.5
2003-04	3	33.8	3.5	36.5	280.4
2004-05	4	33.4	3.5	45.0	322.4
2005-06	5	55.0	4.0	55.5	364.3
2006-07	6	74.6	4.3	68.5	406.2
2007-08	7	82.1	4.4	84.6	448.2
2008-09	8	101.7	4.6	104.4	490.1
2009-10	9	124.0	4.8	128.8	532.1
2010-11	10	139.0	4.9	159.0	574.0
2011-12	11	167.5	5.1	196.2	616.0
2012-13	12	205.4	5.3	242.1	657.9
2013-14	13	201.7	5.3	298.8	699.9
2014-15	14	277.1	5.6	368.8	741.8
2015-16	15	695.1	6.5	455.1	783.8
2016-17	16	971.1	6.9	561.7	825.7
2017-18	17			693.2	867.7
2018-19	18			855.5	909.6
2019-20	19			1055.8	951.6
2020-21	20			1303.1	993.5
2021-22	21			1608.2	1035.5
2022-23	22			1984.7	1077.4
2023-24	23			2449.4	1119.4
2024-25	24			3022.9	1161.3

Output of Linear Model: Land Revenue (Ri)= 154.5601+41.95*(Ti).

Regression of Land Revenue (Linear)						Regression Statistics	
						Number of obs	16
						F(1,14)	19.57
Source	SS	df	MS			Prob>F	0.0006
Model	598268.454	1	598268.454			R-squared	0.5829
Residual	428055.353	14	30575.3823			Adj R-squared	0.5531
Total	1026323.81	15	68421.5871			Root MSE	174.86
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	41.94774	9.483016	4.42	0.001	21.6087	62.28679	
Cons	154.5601	91.6964	-1.69	0.114	351.2293	42.10912	

Output of Exponential Model: Land Revenue (Ri)= $2.96e^{0.21}$ (Ti)

Regression of Land Revenue (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	199.56
Model	15.0479937	1	15.0479937			Prob>F	0
Residual	1.05568945	14	0.075406389			R-squared	0.9344
Total	16.1036832	15	1.07357888			Adj R-squared	0.9298
						Root MSE	0.2746
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.2103778	0.0148924	14.13	0	0.1784368	0.2423188	
Cons	2.96492	0.1440026	20.59	0	2.656065	3.273775	

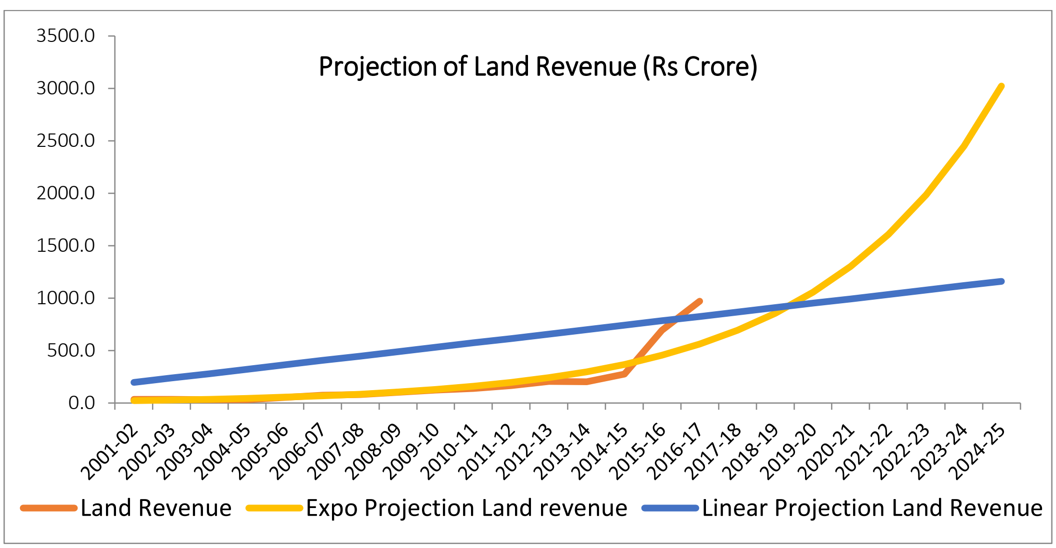


Table A2 : Projection of Taxes on Stamps and Registration Fees

	Time	Tax on Stamp and Registration Fees	Ln Tax on Stamp and Registration Fees	Expo Projection Tax on Stamp and Registration Fees	Linear Projection Tax on Stamp and Registration Fees
2001-02	1	304.44	6	259	676
2002-03	2	348.2	6	308	887
2003-04	3	417.55	6	367	1099
2004-05	4	429.14	6	438	1311
2005-06	5	505.29	6	521	1523
2006-07	6	455.02	6	621	1734
2007-08	7	654.14	6	740	1946
2008-09	8	716.19	7	881	2158
2009-10	9	997.9	7	1050	2370
2010-11	10	1098.68	7	1251	2582
2011-12	11	1480.07	7	1490	2793
2012-13	12	2173.0156	8	1775	3005
2013-14	13	2712.4	8	2114	3217
2014-15	14	2699.4933	8	2519	3429
2015-16	15	3408.5706	8	3000	3641
2016-17	16	2981.95	8	3574	3852
2017-18	17			4258	4064
2018-19	18			5072	4276
2019-20	19			6042	4488
2020-21	20			7197	4699
2021-22	21			8574	4911
2022-23	22			10214	5123
2023-24	23			12167	5335
2024-25	24			14494	5547

Output of Linear Model: Taxes on Stamp and Registration Fees(Ri)= 43.7824+211.7836*(Ti)

Regression of Taxes on Stamp and Registration Fees (linear growth rate)						Regression Statistics	
						Number of obs	16
						F(!,14)	88.16
Source	SS	df	MS			Prob>F	0
Model	15249778.5	1	15249778.5			R-squared	0.863
Residual	2421606.47	14	172971.891			Adj R-squared	0.8532
Total	17671384.9	15	1178092.33			Root MSE	415.9
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	211.7836	22.55528	9.39	0	163.4073	260.1599	
Cons	-463.7824	218.0992	-2.13	0.052	-931.5587	3.993871	

Output of Exponential Model :Taxes on Stamp and Registration Fees (Ri)= 5.38 e^0.17* (Ti)

Regression of Tax on Stamp and Registration Fees (Exponential growth rate)	Regression Statistics

						Number of obs	16
Source	SS	df	MS			F(1,14)	373.74
Model	10.4134201	1	10.4134201			Prob>F	0
Residual	0.390077025	14	0.027862645			R-squared	0.9639
Total	10.8034971	15	0.720233142			Adj R-squared	0.9613
						Root MSE	0.16692
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.1750077	0.0090526	19.33	0	0.1555919	0.1944236	
Cons	5.381322	0.0875341	61.48	0	5.19358	5.569064	

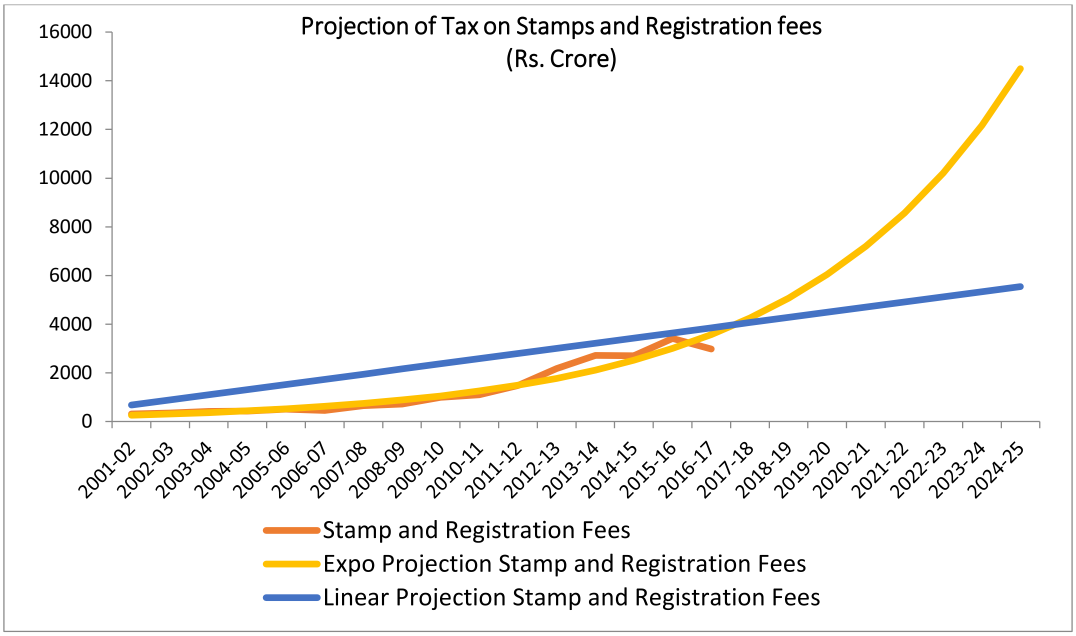


Table A3 : Projection of Taxes on Motor Vehicles

	Time	Taxes on Motor Vehicles	Ln Taxes on Motor Vehicles	Exponential Projection of Taxes on Motor Vehicles	Linear Projection Taxes on Motor Vehicles
2001-02	1	141.5	5.0	133.0440398	165.16039
2002-03	2	178.0	5.2	153.7425423	235.03625
2003-04	3	209.5	5.3	177.6612416	304.91211
2004-05	4	212.8	5.4	205.3011242	374.78797
2005-06	5	302.4	5.7	237.2411181	444.66383
2006-07	6	181.4	5.2	274.1502188	514.53969
2007-08	7	273.2	5.6	316.8015017	584.41555
2008-09	8	297.7	5.7	366.0883142	654.29141
2009-10	9	345.1	5.8	423.0429878	724.16727
2010-11	10	455.4	6.1	488.8584601	794.04313
2011-12	11	569.1	6.3	564.9132616	863.91899
2012-13	12	673.4	6.5	652.8003893	933.79485
2013-14	13	837.5	6.7	754.3606732	1003.67071
2014-15	14	963.6	6.9	871.7213325	1073.54657
2015-16	15	1081.2	7.0	1007.340532	1143.42243
2016-17	16	1256.7	7.1	1164.058867	1213.29829
2017-18	17			1345.158865	1283.17415
2018-19	18			1554.433734	1353.05001
2019-20	19			1796.266818	1422.92587
2020-21	20			2075.723403	1492.80173
2021-22	21			2398.656817	1562.67759
2022-23	22			2771.831023	1632.55345
2023-24	23			3203.0623	1702.42931
2024-25	24			3701.382953	1772.30517

Output of Linear Model: Taxes on Vehicles (Ri)= -95.28+69.87* (Ti)

Regression of Taxes on Vehicles (Linear Growth Rate)						Regression Statistics	
						Number of obs	16
Source	SS	df	MS			F(1,14)	85.51
Model	1660096.21	1	1660096.21			Prob>F	0
Residual	271807.97	14	19414.855			R-squared	0.8593
Total	1931904.18	15	128793.612			Adj R-squared	0.8493
						Root MSE	139.34
<u>Coefficient Table</u>							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	69.87586	7.556621	9.25	0	53.66852	86.0832	
Cons	-95.28453	73.06904	-1.3	0.213	-252.002	61.43298	

Output of Exponential Model: Taxes on Vehicles (Ri)= 4.74e^0.14* (Ti

Regression of Taxes on Vehicles (Exponential growth Rate)		Regression Statistics

					Number of obs	16
Source	SS	df	MS		F(1,14)	232.96
Model	7.10903787	1	7.10903787		Prob>F	0
Residual	0.427217451	14	0.030515532		R-squared	0.9433
Total	7.53625533	15	0.502417022		Adj R-squared	0.9393
					Root MSE	0.17469
Coefficient Table						
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]	
Time	0.1445992	0.0094737	15.26	0	0.1242801	0.1649184
Cons	4.746081	0.0916066	51.81	0	4.549604	4.942558

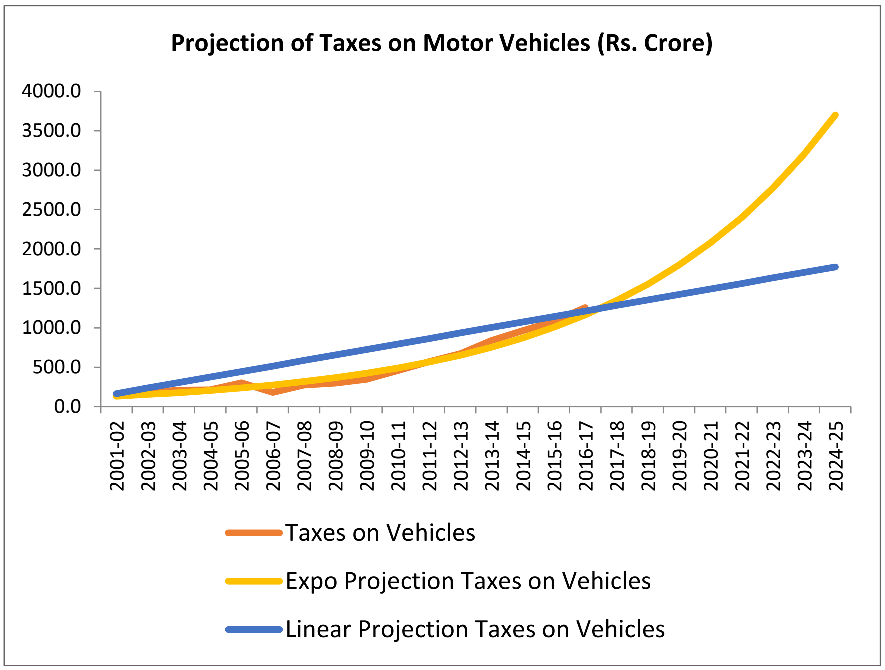


Table A 4 : Projection of Taxes and Duties on Electricity

	Time	Taxes and Duties on Electricity	Ln Taxes and Duties on Electricity	Expo Projection Taxes and Duties on Electricity	Linear Projection Taxes and Duties on Electricity
2001-02	1	14.08	2.644755351	10.95227503	74.97622
2002-03	2	14.3	2.660259537	13.66275339	93.36296
2003-04	3	17.62	2.869034621	17.04402325	111.7497
2004-05	4	9.54	2.255493485	21.26209266	130.13644
2005-06	5	18.06	2.893699548	26.52405349	148.52318
2006-07	6	62.84	4.140591813	33.08824886	166.90992
2007-08	7	64.05	4.159664028	41.2769569	185.29666
2008-09	8	67.62	4.213903797	51.49221339	203.6834
2009-10	9	66.63	4.199154927	64.23555027	222.07014
2010-11	10	65.22	4.17776617	80.13261903	240.45688
2011-12	11	54.69	4.001680877	99.96390792	258.84362
2012-13	12	102.5529	4.630378763	124.7030611	277.23036
2013-14	13	141.31	4.950956059	155.564681	295.6171
2014-15	14	374.7598	5.926285287	194.0639609	314.00384
2015-16	15	297.994	5.697073352	242.0910754	332.39058
2016-17	16	223.8982	5.411191484	302.0039812	350.77732
2017-18	17			376.744184	369.16406
2018-19	18			469.9811559	387.5508
2019-20	19			586.2924931	405.93754
2020-21	20			731.3886592	424.32428
2021-22	21			912.3933483	442.71102
2022-23	22			1138.193232	461.09776
2023-24	23			1419.874264	479.4845
2024-25	24			1771.265957	497.87124

Output of Linear Regression Model: Taxes and Duties on Electricity (Ri)= -56.58+18.38* (Ti).

Regression of Taxes and Duties on Electricity (Linear Growth rate)						Regression Statistics	
						Number of obs	16
Source	SS	df	MS			F(1,14)	26.24
Model	114944.543	1	114944.543			Prob>F	0.0002
Residual	61320.6661	14	4380.04758			R-squared	0.6521
Total	176265.209	15	11751.0139			Adj R-squared	0.6273
						Root MSE	66.182
<u>Coefficient Table</u>							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	18.38674	3.589219	5.12	0	10.68863	26.08485	
Cons	-56.58948	34.7061	-1.63	0.125	-131.0267	17.84769	

Output of Exponential Model : Taxes and Duties on Electricity (Ri)= 2.17e^0.22* (Ti)

Regression of Taxes and Duties on Electricity (Exponential growth rate)						Regression Statistics	
						Number of obs	16
Source	SS	df	MS			F(1,14)	91.07
Model	16.6249073	1	16.6249073			Prob>F	0
Residual	2.55578839	14	0.182556313			R-squared	0.8668
Total	19.1806957	15	1.27871305			Adj R-squared	0.8572
						Root MSE	0.42727
<u>Coefficient Table</u>							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.2211262	0.0231718	9.54	0	0.1714277	0.2708247	
Cons	2.172421	0.2240602	9.7	0	1.691859	2.652982	

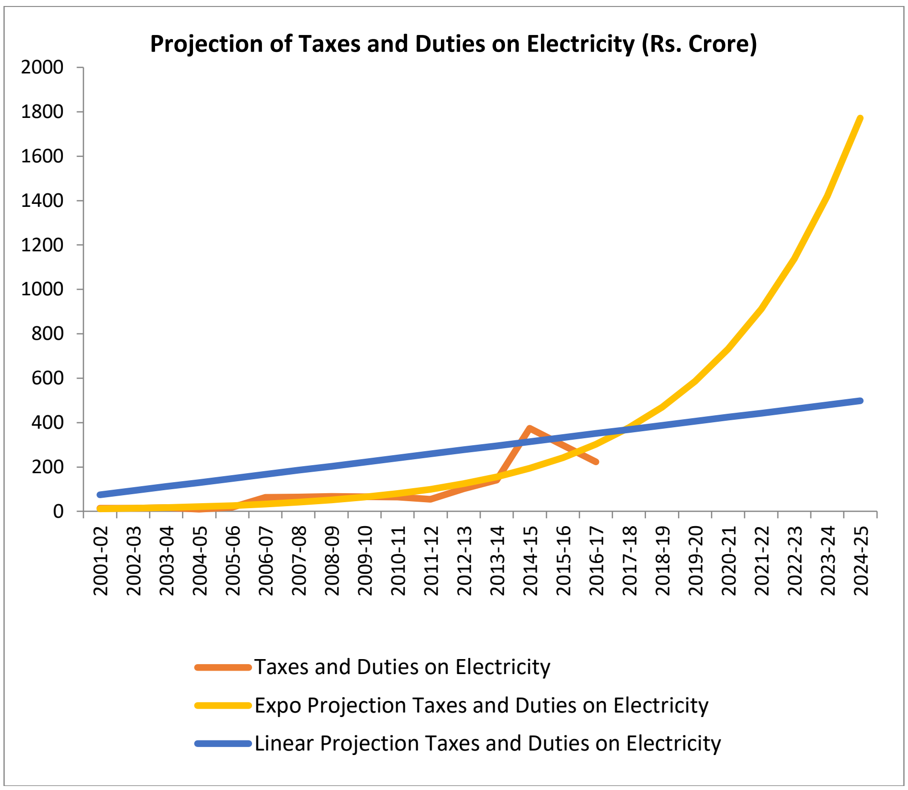


Table A 5 : Projection of Other State own Taxes

	Time	Total Other State's Own Taxes	Ln Other State's OwnTaxes	Exponential Projection of Other State's own Taxes	Linear Projection Other Taxes

2001-02	1	300	5.705181496	267.8753338	458.9706
2002-03	2	309	5.733373639	309.4768837	641.8162
2003-04	3	297	5.694775365	357.5392334	824.6618
2004-05	4	294	5.682184236	413.0657577	1007.5074
2005-06	5	332	5.80472374	477.2156571	1190.353
2006-07	6	393	5.974216654	551.328158	1373.1986
2007-08	7	539	6.289863983	636.9504716	1556.0442
2008-09	8	693	6.540726923	735.8700937	1738.8898
2009-10	9	1104	7.006332842	850.1521215	1921.7354
2010-11	10	1548	7.344712594	982.1823661	2104.581
2011-12	11	2036	7.618771847	1134.717159	2287.4266
2012-13	12	2496	7.822349453	1310.940897	2470.2722
2013-14	13	3266	8.0912386	1514.532516	2653.1178
2014-15	14	3377	8.124700911	1749.742302	2835.9634
2015-16	15	3276	8.094273433	2021.480616	3018.809
2016-17	16	189	5.244335197	2335.420408	3201.6546
2017-18	17			2698.115647	3384.5002
2018-19	18			3117.138149	3567.3458
2019-20	19			3601.235644	3750.1914
2020-21	20			4160.514402	3933.037
2021-22	21			4806.650217	4115.8826
2022-23	22			5553.132156	4298.7282
2023-24	23			6415.544162	4481.5738
2024-25	24			7411.890397	4664.4194

Output of Linear Model : Other Taxes (Ri)= -276.125+182.8456* (Ti)

Regression of Other State's Own Taxes (linear growth rate)					Regression Statistics	
					Number of obs	16
Source	SS	df	MS		F(1,14)	14.84
Model	1.14E+07	1	1.14E+07		Prob>F	0.0018
Residual	10722629.8	14	765902.131		R-squared	0.5146
Total	2.21E+07	15	1472645.53		Adj R-squared	0.4799
					Root MSE	875.16
Coefficient Table						
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]	
Time	182.8456	47.46213	3.85	0.002	81.04945	284.6417
Cons	-276.125	458.9369	-0.6	0.557	-1260.447	708.1968

Output of Exponential Model: Other Taxes(Ri)= 5.44e^0.144* (Ti).

Regression of Other Taxes (Exponential Growth rate)		Regression Statistics

Exponential					Number of obs	16
Source	SS	df	MS		F(1,14)	10.98
Model	7.08570566	1	7.08570566		Prob>F	0.0051
Residual	9.03672981	14	0.64548070 1		R-squared	0.4395
Total	16.1224355	15	1.07482903		Adj R-squared	0.3995
					Root MSE	0.80342
<u>Coefficient table</u>						
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]	
Time	0.1443617	0.0435715	3.31	0.005	0.0509102	0.2378132
Cons	5.44616	0.421316	12.93	0	4.542527	6.349793

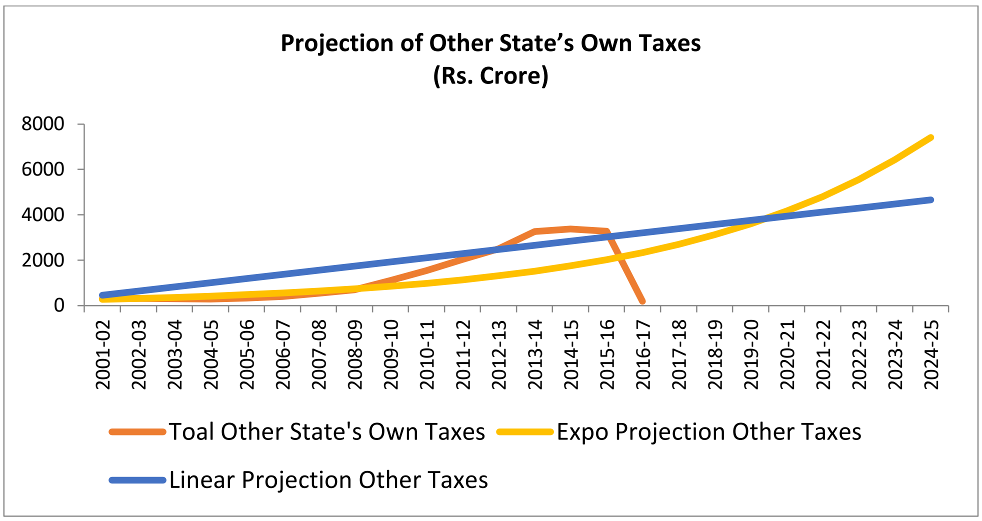


Table A 6 : Projection of Tax on Petroleum Products

	Time	Tax revenue on	Ln Tax revenue on Petro	Expo Projection on tax revenue	Linear Projection

		Petroleum		on Petro	Petro
2005-06	1	1498	7.311886164	1118.370171	569.4615
2006-07	2	1175	7.069023427	1299.590378	1000.5139
2007-08	3	1378	7.228388452	1510.175427	1431.5663
2008-09	4	1645	7.405495663	1754.883584	1862.6187
2009-10	5	1830	7.512071246	2039.244143	2293.6711
2010-11	6	2230	7.709756864	2369.68236	2724.7235
2011-12	7	2788	7.933079772	2753.66464	3155.7759
2012-13	8	3236	8.082093278	3199.867239	3586.8283
2013-14	9	3978	8.288534459	3718.372308	4017.8807
2014-15	10	3932	8.276903481	4320.89571	4448.9331
2015-16	11	5754	8.657650544	5021.051736	4879.9855
2016-17	12	5839	8.672314828	5834.660735	5311.0379
2017-18	13			6780.106576	5742.0903
2018-19	14			7878.752042	6173.1427
2019-20	15			9155.421532	6604.1951
2020-21	16			10638.96198	7035.2475
2021-22	17			12362.89467	7466.2999
2022-23	18			14366.17264	7897.3523
2023-24	19			16694.06089	8328.4047
2024-25	20			19399.15912	8759.4571

Output of Linear Model : Tax revenue on Petroleum (Ri= 138.40+431.05* (Ti)

Regression ofTax revenue on Petroleum (Linear Growth rate)						Regression Statistics	
						Number of obs	12
Source	SS	df	MS			F(1,14)	89.39
Model	26570288.4	1	26570288.4			Prob>F	0
Residual	2972393.86	10	297239.386			R-squared	0.8994
Total	29542682.3	11	2685698.39			Adj R-squared	0.8893
						Root MSE	545.2
<u>Coefficient Table</u>							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	431.0524	45.59163	9.45	0	329.468	532.6369	
Cons	138.4091	335.5453	0.41	0.689	-609.2325	886.0507	

Output of Exponential Model : Tax revenue on petroleum (Ri)= 6.87e^0.15* (Ti).

Regression of Tax Revenue on Petroleum (Exponential Growth rate)						Regression Statistics	
						Number of obs	12

Source	SS	df	MS			F(1,14)	206.93
Model	3.22508598	1	3.22508598			Prob>F	0
Residual	0.155850879	10	0.015585088			R-squared	0.9539
Total	3.38093686	11	0.307357896			Adj R-squared	0.9493
						Root MSE	0.12484
<u>Coefficient table</u>							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.1501767	0.0104397	14.39	0	0.1269157	0.1734378	
Cons	6.869451	0.0768339	89.41	0	6.698255	7.040648	

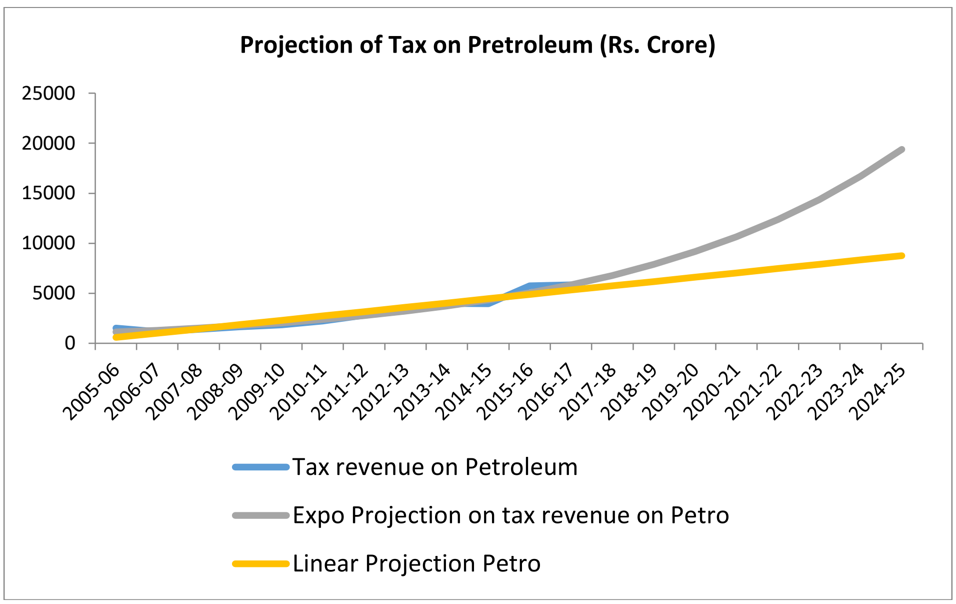


Table A7 : Projection of SGST

Years	Time	SGST Less VAT on Petroleum Products	* Projection at 14% growth rate on 2015-16	Ln SGST Less VAT on Petroleum Products	Exponential Projection SGST	Linear Projection of SGST

2001-02	1	1243		7.13	947	3682
2002-03	2	1495		7.31	1152	4713
2003-04	3	1413		7.25	1401	5744
2004-05	4	1696		7.44	1704	6775
2005-06	5	1181		7.07	2073	7806
2006-07	6	2083		7.64	2523	8837
2007-08	7	2634		7.88	3069	9868
2008-09	8	3344		8.11	3734	10899
2009-10	9	4726		8.46	4542	11930
2010-11	10	5881		8.68	5526	12961
2011-12	11	7523		8.93	6723	13992
2012-13	12	9826		9.19	8179	15023
2013-14	13	12042		9.40	9950	16054
2014-15	14	12448		9.43	12105	17085
2015-16	15	14148	*	9.56	14727	18116
2016-17	16	16128	16129	9.69	17916	19147
2017-18	17		18387		21796	20178
2018-19	18		20961		26517	21209
2019-20	19		23895		32260	22240
2020-21	20		27241		39247	23271
2021-22	21		31054		47747	24302
2022-23	22		35402		58088	25333
2023-24	23		40358		70669	26364
2024-25	25		46009		85976	28426
			* Using Geometric Method the model is 14148*1.14^Time			

Source: Finance Accounts of Various Years

Output of Linear Model: SGST (Ri)= -2650.575+1031.031* (Ti).

Regression of SGST (Linear)						Number of obs	16
						F(!,14)	116.46
Source	SS	df	MS			Prob>F	0
Model	361428391	1	361428391			R-squared	0.8927
Residual	43449425.1	14	3103530.37			Adj R-squared	0.885
Total	404877816	15	26991854.4			Root MSE	1761.7
<u>Coefficient Table</u>							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	1031.031	95.54073	10.79	0	826.1164	1235.945	
Cons	-2650.575	923.8349	-2.87	0.012	-4632.004	-669.1463	

Output of Exponential Model: SGST(Ri)= 6.64e^0.196* (Ti).

Regression of SGST (Exponential)						Number of obs	16
						F(!,14)	285.04
Source	SS	df	MS			Prob>F	0
Model	13.06732	1	13.06732			R-squared	0.9532
Residual	0.641822909	14	0.045844493			Adj R-squared	0.9498
Total	13.7091429	15	0.91394286			Root MSE	0.21411
<u>Coefficient Table</u>							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.1960441	0.0116119	16.88	0	0.171139	0.2209492	
Cons	6.65675	0.1122819	59.29	0	6.415929	6.897571	

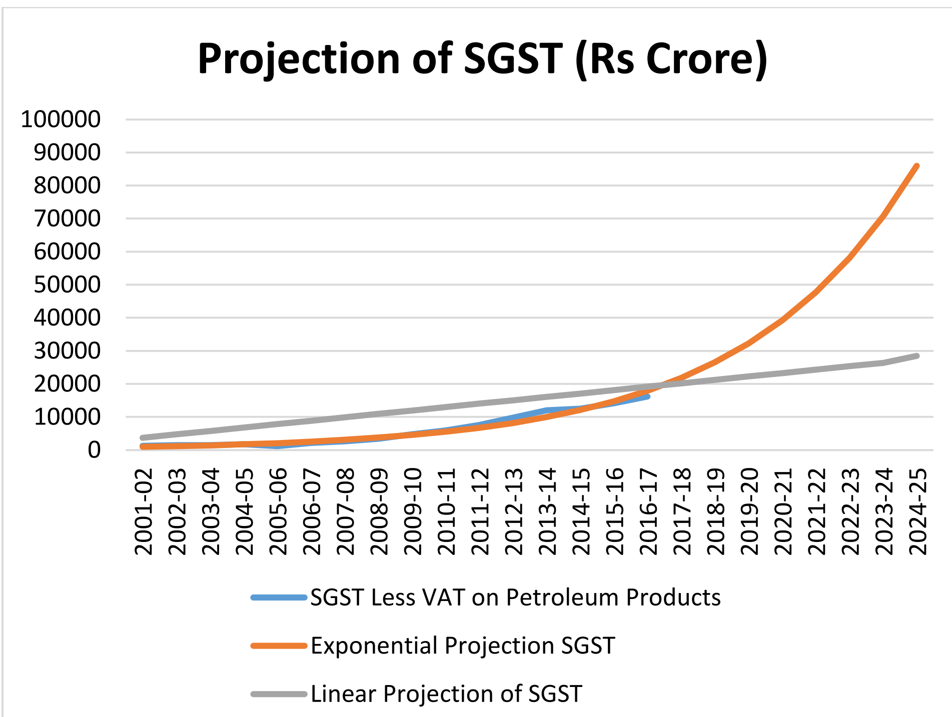


Table A8 : Projection of Interest Rate

	Time	Interest Receipts	LN (Interest Receipts)	Exponential Prediction (Interest Receipts)	Linear Prediction
2001-02	1	12	2.46	36	110
2002-03	2	53	3.97	45	151
2003-04	3	23	3.14	55	192
2004-05	4	75	4.32	68	234
2005-06	5	216	5.38	84	275
2006-07	6	176	5.17	104	316
2007-08	7	171	5.14	129	357
2008-09	8	305	5.72	159	398
2009-10	9	353	5.87	196	439
2010-11	10	238	5.47	242	481
2011-12	11	574	6.35	299	522
2012-13	12	167	5.12	369	563
2013-14	13	269	5.60	456	604
2014-15	14	345	5.84	563	645
2015-16	15	584	6.37	695	687
2016-17	16	940	6.85	858	728
2017-18	17		6.97	1059	769
2018-19	18		7.18	1308	810
2019-20	19		7.39	1615	851
2020-21	20		7.60	1994	893
2021-22	21		7.81	2462	934
2022-23	22		8.02	3041	975
2023-24	23		8.23	3755	1016
2024-25	24		8.44	4636	1057

Output of Linear model: Interest Rate (Ri)= 68.77+41.18* (Ti).

Regression of Interest Rate (Linear Growth Rate)					Regression Statistics	
Source	SS	df	MS		Number of Obs	16
Model	576758.86	1	576758.86		F(1,14)	25.18
Residual	320718.578	14	22908.4699		Prob>F	0.0002
Total	897477.438	15	59831.8292		R-squared	0.6426
					Ad R-squared	0.6171
					Root MSE	151.36
<u>Coefficient Table</u>						
	Coef.	Std. Err.	t	P> |t|	[95% Conf. Interval]	
time	41.18676	8.208401	5.02	0	23.58149	58.79203
_cons	68.775	79.37146	0.87	0.401	239.0099	101.4599

Output of Exponential Model: interest Rate (Ri)= 3.37e^0.21* (Ti).

Regression of Interest Rate (Exponential Growth Rate)					Regression Statistics	
Source	SS	df	MS		Number of Obs	16
Model	15.1238651	1	15.1238651		F(1,14)	37.2
Residual	5.69194398	14	.406567427		Prob>F	0
Total	20.8158091	15	1.38772061		R-squared	0.7266
					Ad R-squared	0.707
					Root MSE	0.63763
Coefficient table						
	Coef.	Std. Err.	t	P> |t|	[95% Conf. Interval]	
time	0.2109075	0.0345801	6.1	0	0.1367404	0.2850745
_cons	3.379844	0.3343741	10.11	0	2.662683	4.097005

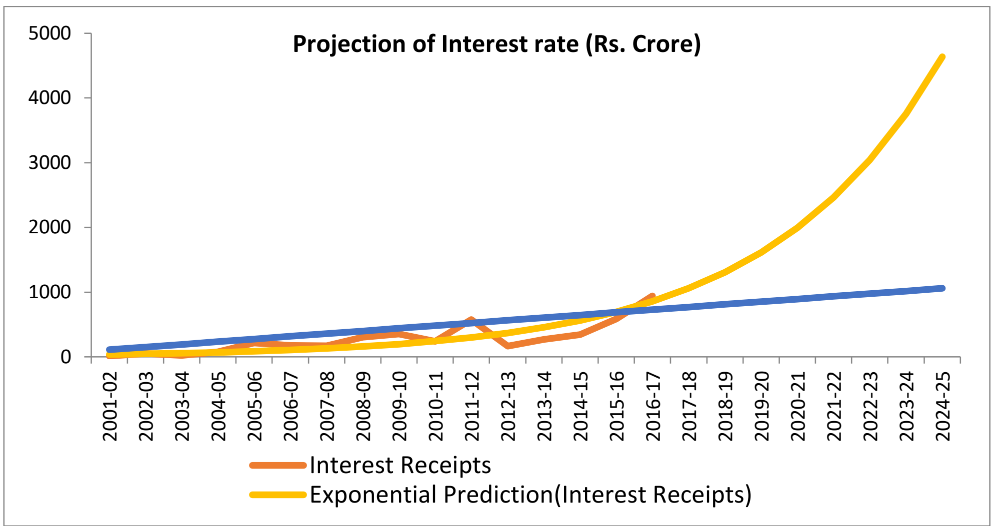


Table A9 : Projection of Revenue from Non-ferrous Mining and Metallurgical Industries

	Time	Non-Ferrous	LN (Non-Ferrous	Exponential Prediction	Linear

		Mining and Metallurgical industries	Mining and Metallurgical industries)	(Non-Ferrous Mining and Metallurgical industries)	Prediction
2001-02	1	39	3.67	46	249.15147
2002-03	2	61	4.11	57	314.87794
2003-04	3	73	4.30	71	380.60441
2004-05	4	80	4.38	89	446.33088
2005-06	5	101	4.61	111	512.05735
2006-07	6	128	4.85	138	577.78382
2007-08	7	179	5.19	172	643.51029
2008-09	8	245	5.50	214	709.23676
2009-10	9	320	5.77	267	774.96323
2010-11	10	406	6.01	333	840.6897
2011-12	11	443	6.09	415	906.41617
2012-13	12	511	6.24	517	972.14264
2013-14	13	569	6.34	645	1037.86911
2014-15	14	880	6.78	804	1103.59558
2015-16	15	971	6.88	1002	1169.32205
2016-17	16	998	6.91	1249	1235.04852
2017-18	17			1557	1300.77499
2018-19	18			1940	1366.50146
2019-20	19			2419	1432.22793
2020-21	20			3015	1497.9544
2021-22	21			3759	1563.68087
2022-23	22			4686	1629.40734
2023-24	23			5841	1695.13381
2024-25	24			7281	1760.86028

Output of linear Model: Non-Ferrous Mining and Metallurgical Industries (Ri)= -183.425+65.72* (Ti)

Regression of Non-Ferrous Mining and Metallurgical industries (Linear growth rate)						
Source	SS	df	MS		Regression Statistics	
Model	1468789.44	1	1468789.44		Number of Obs	16
Residual	175443.562	14	12531.683		F(1,14)	117.21
Total	1644233	15	109615.533		Prob>F	0
					R-squared	0.8933
					Ad R-squared	0.8857
					Root MSE	111.94
Coefficient Table						
	Coef.	Std. Err.	t	P> |t|	[95% Conf. Interval]	
time	65.72647	6.07107	10.83	0	52.70532	78.74762
_cons	-183.425	58.70445	-3.12	0.007	-309.3335	-57.51647

Output of Exponential Model: Non-Ferrous Mining and Metallurgical Industries (Ri)= 3.60e^0.22* (Ti).

Regression of Non-Ferrous Mining and Metallurgical industries (exponential growth rate)						
					Regression Statistics	
Source	SS	df	MS		Number of Obs	16
Model	16.5154527	1	16.5154527		F(1,14)	1017.27
Residual	0.227290292	14	0.016235021		Prob>F	0
Total	16.742743	15	1.11618287		R-squared	0.9864
					Ad R-squared	0.9855
					Root MSE	0.12742
<u>Coefficient table</u>						
	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
time	0.2203971	0.0069101	31.89	0	0.2055763	0.2352178
_cons	3.6035	0.0668179	53.93	0	3.46019	3.74681

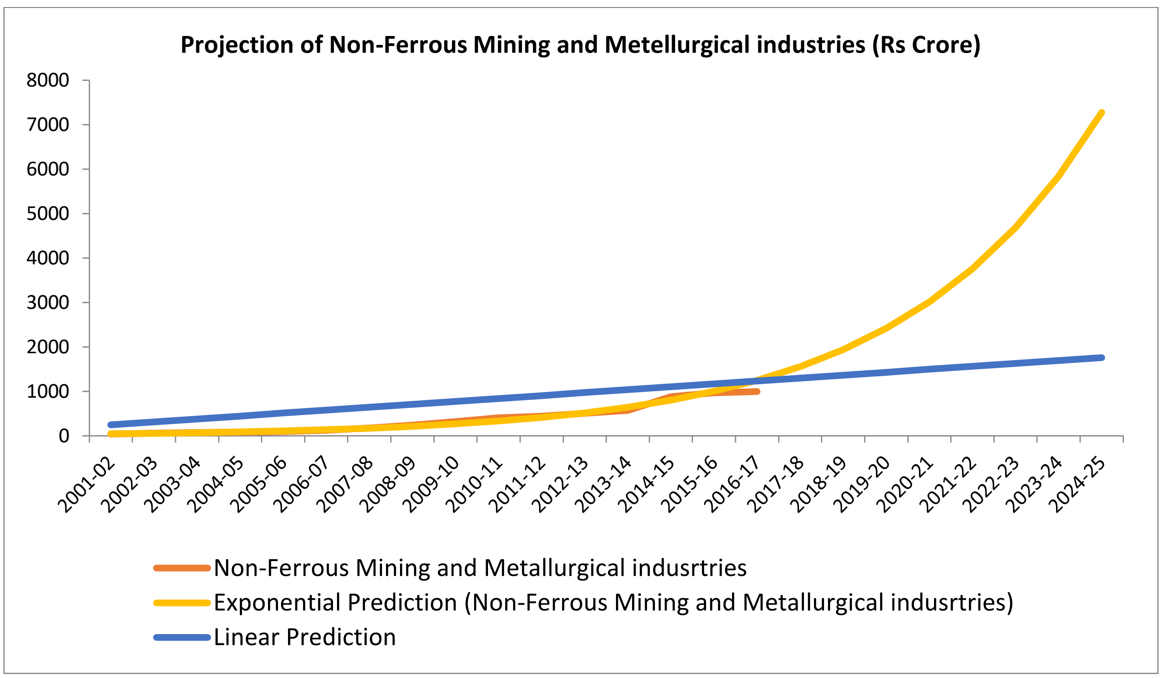


Table A10 : Other Non-tax Revenue

	Time	Other Non-Tax Revenue	ln Other Non-Tax Revenue	Exponential Prediction (Other Non-Tax Revenue)	Linear Prediction
2001-02	1	236	5.46	189	193
2002-03	2	147	4.99	202	218
2003-04	3	224	5.41	217	244
2004-05	4	262	5.57	233	269
2005-06	5	205	5.32	250	294
2006-07	6	208	5.34	269	319
2007-08	7	176	5.17	288	345
2008-09	8	604	6.40	309	370
2009-10	9	997	6.91	332	395
2010-11	10	342	5.83	356	420
2011-12	11	127	4.84	383	446
2012-13	12	457	6.12	411	471
2013-14	13	706	6.56	441	496
2014-15	14	333	5.81	473	521
2015-16	15	631	6.45	508	547
2016-17	16	465	6.14	545	572
2017-18	17			585	597
2018-19	18			627	622
2019-20	19			673	648
2020-21	20			723	673
2021-22	21			776	698
2022-23	22			833	723
2023-24	23			894	749
2024-25	24			959	774

Output of linear Model: Other Non-Tax Revenue (Ri)= 167.85+25.25* (Ti)

Regression of Other Non-Tax Revenue (Linear Growth Rate)				Regression Statistics	
				Number of Obs	16
Source	SS	df	MS	F(1,14)	4.47
Model	216821.753	1	216821.753	Prob>F	0.0529
Residual	679146.247	14	48510.4462	R-squared	0.242
Total	895968	15	59731.2	Ad R-squared	0.1879
				Root MSE	220.25

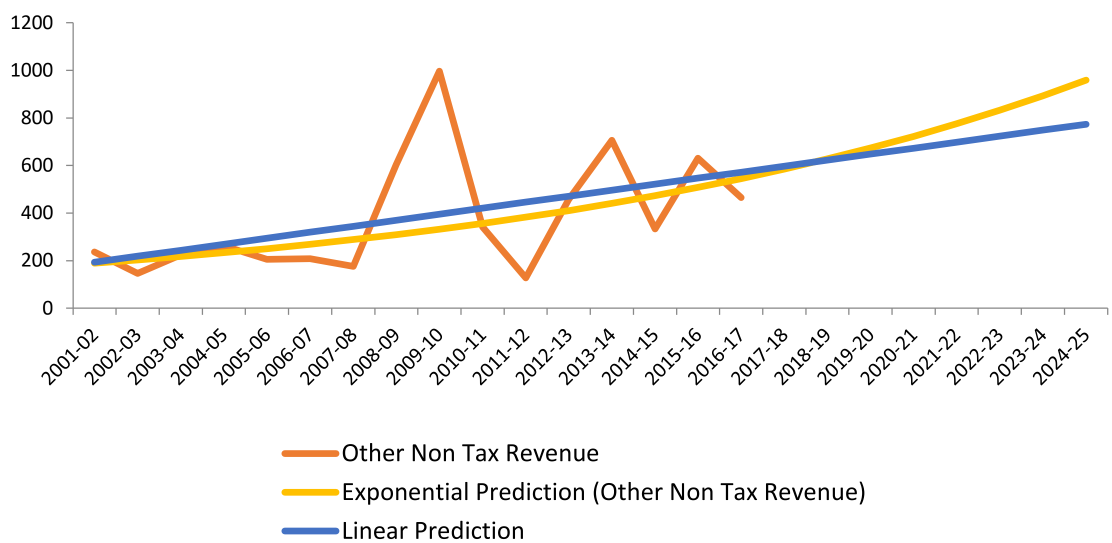
Coefficient Table

	Coef.	Std. Err.	t	P> |t|	[95% Conf. Interval]	
time	25.25294	11.94478	2.11	0.053	-0.3660652	50.87195
_cons	167.85	115.5005	1.45	0.168	-79.874	415.574

Output of Exponential Model: Other non tax revenue (Ri)= 5.16e^0.07* (Ti).

Regression of Other Non-Tax revenue (exponential growth rate)					Regression Statistics	
					Number of Obs	16
Source	SS	df	MS		F(1,14)	6.21
Model	1.699769	1	1.699769		Prob>F	0.0259
Residual	3.834229 94	14	0.273873567		R-squared	0.3072
Total	5.533998 94	15	0.368933263		Ad R-squared	0.2577
					Root MSE	0.52333
<u>Coefficient Table</u>						
	Coef.	Std. Err.	t	P> |t|	[95% Conf. Interval]	
time	0.070705 9	0.0283815	2.49	0.026	0.0098336	0.1315782
_cons	5.169	0.2744362	18.83	0	4.580393	5.757607

Projection of Other Non –tax revenue (Rs. Crore)



Chapter 3

Expenditure Patterns

Objectives

To analyse expenditure patterns and trends for revenue and capital expenditure during the last 10 years, and major components of expenditure there under;
To analyse the allocative and technical efficiency in expenditures during the last 5 years;
To analyse the subsidies given by the State, their targeting and evaluation;
To estimate the expenditure requirements of the State till 2024-25;
To suggest measures for improving efficiency in public spending;
To evaluate the outcome of State Finances in the context of recommendations of the 14th Finance Commission.

Methodology

Trend and composition analysis; Analysis of allocative efficiency in terms of salary and non-salary expenditure on various major heads; Comparison with the best practices from other States; Regression analysis of the major items of expenditure based on the data set for the period from 2001-02 to 2016-17.

Data Sources

Finance accounts for data on major head-wise analysis of revenue and capital expenditure items; Budget documents of the State Government; Report of the 14th Finance Commission; Data obtained from Finance Department of the Bihar Government.

A. Analysis of Expenditure Trends of Bihar Government

The expenditure of the state governments is classified under two major categories, revenue and capital, and within each of these under three major services — General Services, Social Services and Economic Services. Apart from revenue expenditure and capital outlay on these services, the other areas of spending are repayment of loans and advances on the capital account and grants to local bodies and autonomous institutions under the state government. The state government also gives loans for various purposes to its public sector undertakings, urban local bodies and Panchayati Raj Institutions and to its own employees as well for various purposes. It is to be noted that while the repayments of principal amounts of loans are made from the capital account, interest payment is made from the revenue account of expenditure, under the General Services.

3.1 Overview of Expenditure: Revenue and Capital Heads

Table 3.1, 3.2 and 3.3 respectively present the expenditure of the state government under different heads for the period from 2007-08 to 2016-17, their percentage compositions and the annual growth rates. Charts 3.1, 3.2 and 3.3 respectively show the trend of total expenditure and the trends of expenditure under the revenue and the capital heads respectively. Charts 3.4 shows the composition of total expenditure.

Over the ten year period 2007-17, the total expenditure of the state Government has increased four-folds, from Rs 31572 crore to Rs 126302 crore, growing at a CAGR of 16.7 percent. Revenue expenditure has also increased four-folds, from Rs 23563 crore to Rs 94765 crore during the same period. Capital expenditure has grown a little slower, at a CAGR of 16.4 percent, due to the slower growth in debt repayments; however, within capital expenditure, the growth of capital outlay at a CAGR of 18.1 percent, has been truly remarkable. Capital outlay has grown by nearly 4.5 times during this ten year period. The growth of total expenditure has been more or less uniform over the years, making the forecast of it a viable proposition. We shall be using the expenditure projections later in this Chapter to estimate the State Government's fiscal position over the award period of the 15th Finance Commission.

Over these ten years, except during the four years from 2011 to 2015, the respective shares of revenue and capital expenditure in total expenditure have remained more or less constant with the former claiming around three-fourth of the total expenditure throughout. Within the revenue expenditure, expenditure on Social Services has always claimed the largest share – about 43 percent of the total revenue expenditure, followed by the expenditure on general services and economic services. Compared to the expenditure on economic services, the expenditure on general services has claimed a disproportionate share of the total expenditure, mainly on account of the salaries paid to the huge army of employees engaged in running the day-to-day administration of the State. However, the growth of revenue expenditure on economic services has been picking up; at a CAGR of 20.3 percent, it has been far higher than the growth of revenue expenditure on general services (CAGR of 14.2 percent). Consequently, the share of general services has declined from 39.3 percent of revenue expenditure to 32.3 percent over this ten year period, while the share of economic services has risen from 18.8 percent to 24.7 percent.

While the revenue expenditure has been growing more or less uniformly throughout this ten-year period, the growth of capital expenditure has not been so. Capital expenditure has slowed down during the period from 2011-12 to 2012-13, due to the negative growth of capital outlay in 2011-12, and low growth in the next year. However, the share of capital outlay in total capital expenditure has always remained above 70 percent, except in these two years when it had declined to 65 percent; in 2016-17, capital outlay had claimed a share of 86.3 percent of the total capital expenditure.

Within capital outlay, the largest investments were made in economic services whose share ranged between 73.5 percent and 86.8 percent over these ten years, followed by social services and general services in that order.

Repayment of internal debt accounted for between 73.7 and 84.2 percent of the total debt repayments, the rest being on account of repayment of the Central loans.

Table 3.1 : Expenditure of State Government

(Rs. crore)

Expenditure Heads	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Revenue Expenditure, of which	**23563**	**28512**	**32583**	**38215**	**46500**	**54466**	**62477**	**72570**	**83615**	**94765**
General Services	9252	10530	12202	15287	17730	18645	22018	26408	27972	30607
Social Services	9868	12252	13186	15089	18729	23107	26395	31713	35943	40737
Economic Services	4438	5726	7088	7836	10038	12710	14060	14445	19696	23417
Grants & Contributions	5	4	107	3	3	4	4	4	4	4
Capital Expenditure, of which	**8009**	**8670**	**10212**	**12489**	**13681**	**14740**	**17929**	**22129**	**28712**	**31536**
Capital Outlay, of which	**6104**	**6437**	**7332**	**9196**	**8852**	**9584**	**14002**	**18151**	**23966**	**27208**
General Services	223	207	274	396	608	717	1333	1749	3617	2090
Social Services	799	640	1123	1072	807	1331	1858	1674	2740	3592
Economic Services	5082	5590	5935	7728	7437	7536	10811	14728	17609	21526
Discharge of Public Debt	**1632**	**1682**	**1983**	**2190**	**2922**	**3070**	**3120**	**3609**	**4125**	**4215**
Internal Debt	1203	1254	1169	1725	2457	2585	2559	2975	3423	3460
Loans & Advances from Centre	429	429	814	466	465	485	561	634	702	754
Disbursement of Loans & Advances	**273**	**551**	**897**	**1103**	**1906**	**2086**	**807**	**369**	**621**	**114**
Total	**31572**	**37182**	**42795**	**50704**	**60181**	**69206**	**80406**	**94699**	**112327**	**126302**

Source : Finance Accounts of the Bihar Government for respective years

Chart 3.1 : Trend of Total Expenditure (Revenue and Capital) of Bihar (Rs. crore)

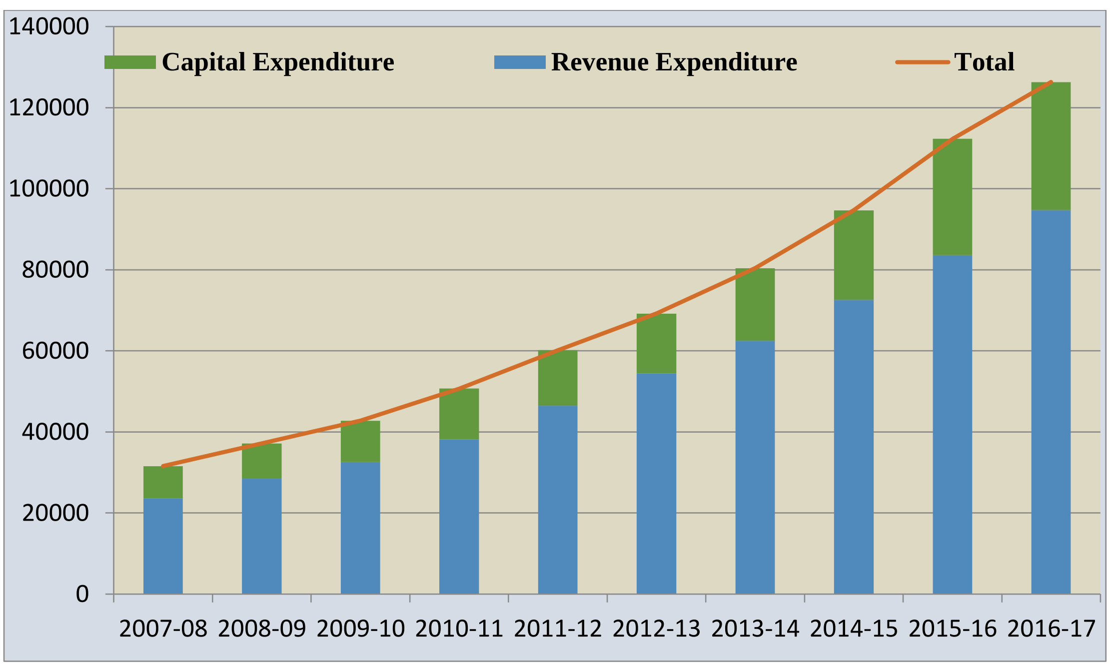


Chart 3.2 : Trend of Revenue Expenditure (Rs crore)

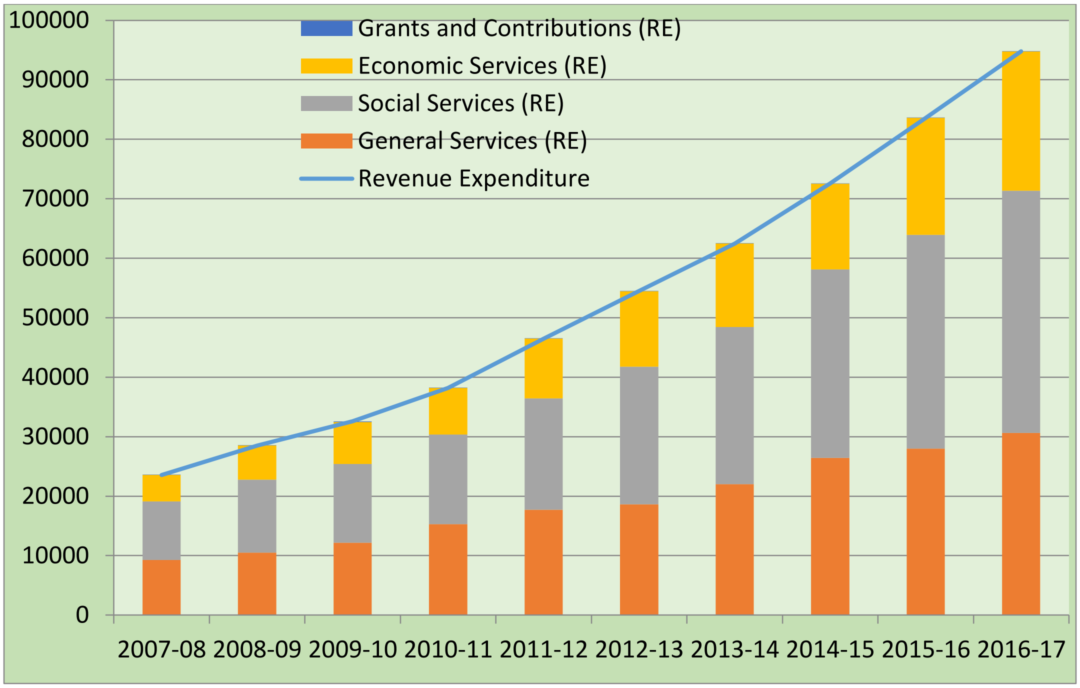


Chart 3.3 : Trend of Capital Expenditure (Rs crore)

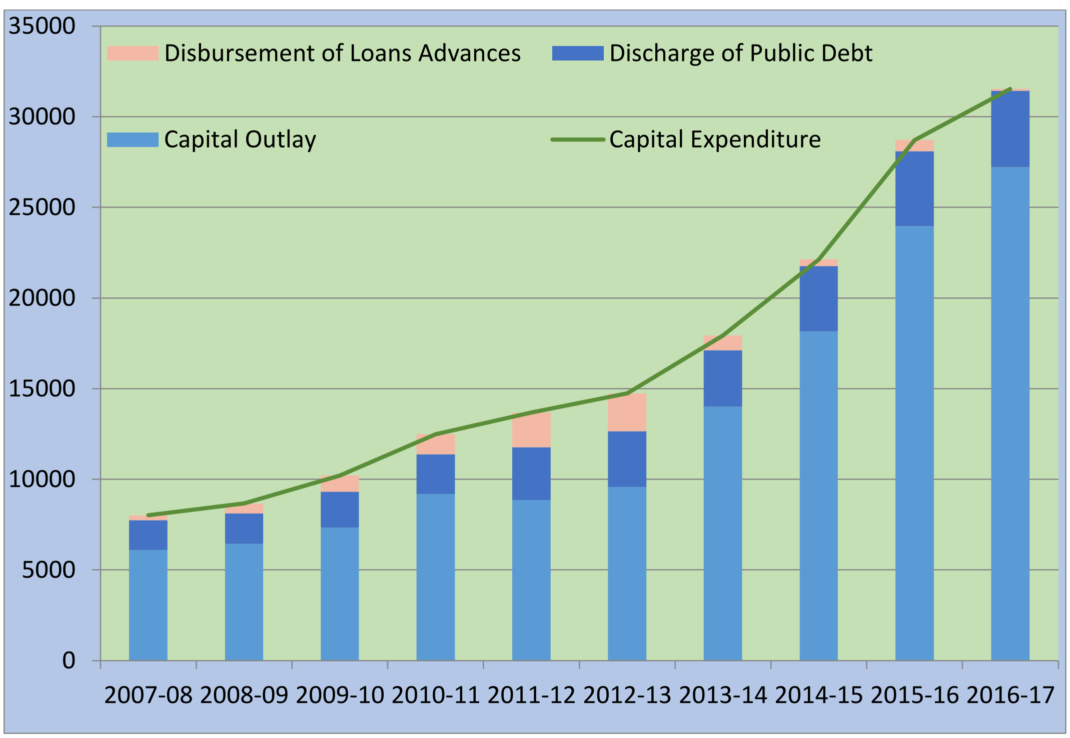


Table 3.2 : Composition of Expenditure of State Government (%)

Expenditure Heads	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Revenue Expenditure	**74.6**	**76.7**	**76.1**	**75.4**	**77.3**	**78.7**	**77.7**	**76.6**	**74.4**	**75.0**
General Services	29.3	28.3	28.5	30.1	29.5	26.9	27.4	27.9	24.9	24.2
Social Services	31.3	33.0	30.8	29.8	31.1	33.4	32.8	33.5	32.0	32.3
Economic Services	14.1	15.4	16.6	15.5	16.7	18.4	17.5	15.3	17.5	18.5
Grants & Contributions	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital Expenditure	**25.4**	**23.3**	**23.9**	**24.6**	**22.7**	**21.3**	**22.3**	**23.4**	**25.6**	**25.0**
Capital Outlay, of which	**19.3**	**17.3**	**17.1**	**18.1**	**14.7**	**13.8**	**17.4**	**19.2**	**21.3**	**21.5**
General Services	0.7	0.6	0.6	0.8	1.0	1.0	1.7	1.8	3.2	1.7
Social Services	2.5	1.7	2.6	2.1	1.3	1.9	2.3	1.8	2.4	2.8
Economic Services	16.1	15.0	13.9	15.2	12.4	10.9	13.4	15.6	15.7	17.0
Discharge of Public Debt	**5.2**	**4.5**	**4.6**	**4.3**	**4.9**	**4.4**	**3.9**	**3.8**	**3.7**	**3.3**
Internal Debt	3.8	3.4	2.7	3.4	4.1	3.7	3.2	3.1	3.0	2.7
Loans and Advances from Centre	1.4	1.2	1.9	0.9	0.8	0.7	0.7	0.7	0.6	0.6
Disbursement of Loans & Advances	**0.9**	**1.5**	**2.1**	**2.2**	**3.2**	**3.0**	**1.0**	**0.4**	**0.6**	**0.1**
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Finance Accounts of the Bihar Government for respective years

Chart 3.4 : Composition of Expenditure (%)

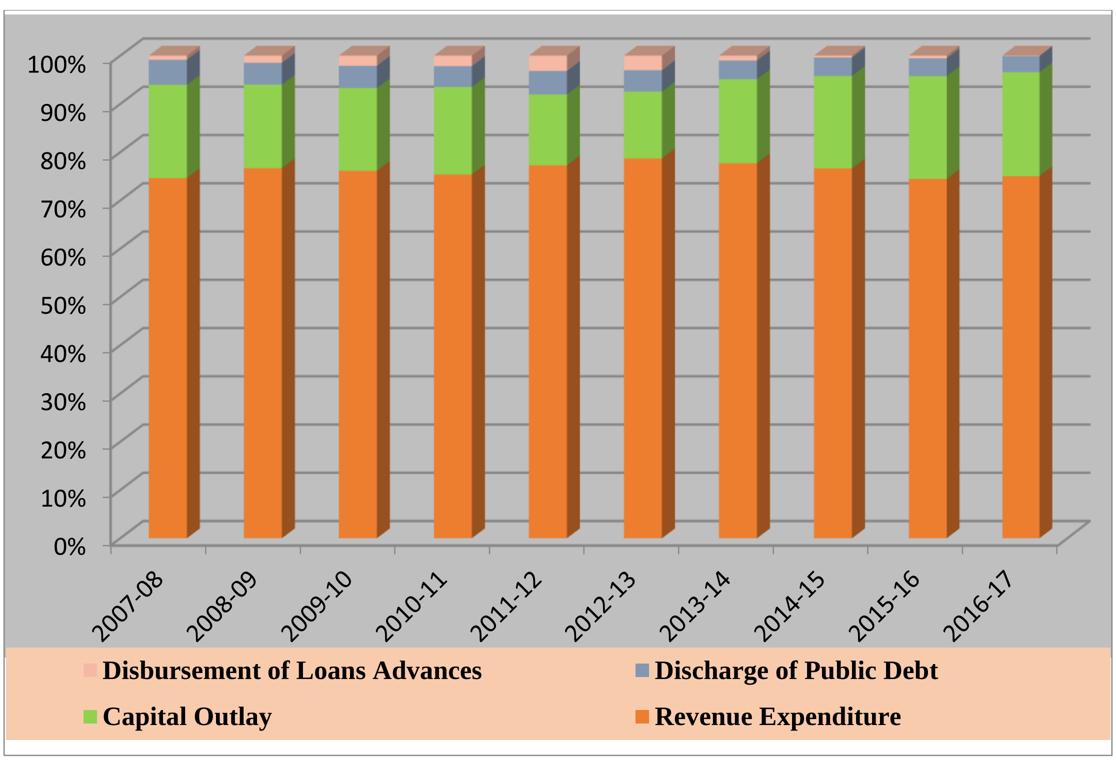


Table 3.3 : Growth of Expenditure of State Government (%)

Expenditure Heads	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR 2007-17
Revenue Expenditure	**21.0**	**14.3**	**17.3**	**21.7**	**17.1**	**14.7**	**16.2**	**15.2**	**13.3**	**16.7**
General Services	13.8	15.9	25.3	16.0	5.2	18.1	19.9	5.9	9.4	14.2
Social Services	24.2	7.6	14.4	24.1	23.4	14.2	20.1	13.3	13.3	17.1
Economic Services	29.0	23.8	10.6	28.1	26.6	10.6	2.7	36.4	18.9	20.3
Grants & Contributions	-20.0	2575.0	-97.2	0.0	33.3	0.0	0.0	0.0	0.0	-2.4
Capital Expenditure	**8.3**	**17.8**	**22.3**	**9.5**	**7.7**	**21.6**	**23.4**	**29.7**	**9.8**	**16.4**
Capital Outlay	**5.5**	**13.9**	**25.4**	**-3.7**	**8.3**	**46.1**	**29.6**	**32.0**	**13.5**	18.1
General Services	-7.2	32.4	44.5	53.5	17.9	85.9	31.2	106.8	-42.2	28.2
Social Services	-19.9	75.5	-4.5	-24.7	64.9	39.6	-9.9	63.7	31.1	18.2
Economic Services	10.0	6.2	30.2	-3.8	1.3	43.5	36.2	19.6	22.2	17.4
Discharge of Public Debt	**3.1**	**17.9**	**10.4**	**33.4**	**5.1**	**1.6**	**15.7**	**14.3**	**2.2**	**11.1**
Internal Debt	4.2	-6.8	47.6	42.4	5.2	-1.0	16.3	15.1	1.1	12.5
Loans & Advances from Centre	0.0	89.7	-42.8	-0.2	4.3	15.7	13.0	10.7	7.4	6.5
Disbursement of Loans & Advances	**101.8**	**62.8**	**23.0**	**72.8**	**9.4**	**-61.3**	**-54.3**	**68.3**	**-81.6**	**-9.2**
Total	**17.8**	**15.1**	**18.5**	**18.7**	**15.0**	**16.2**	**17.8**	**18.6**	**12.4**	**16.7**

Source: Finance Accounts of the Bihar Government for respective years

3.1.1 No Major Structural Shift in Expenditure

Charts 3.5A and 3.5B show the structure of expenditure in 2007-08 and 2010-11 respectively. As already observed, there has been no major structural shift in the expenditure patterns in these two years, except some minor shifts between capital outlay and discharge of public debt. The share of capital outlay has increased from 19 percent to 22 percent during this period while the share of the discharge of public debt has declined from 5 percent to 3 percent of the total expenditure. In the intervening years, however, some adjustments had occurred, especially after the economic downturn of 2010-11 which the state took quite some time to recover from.

Chart 3.5 A : Structure of Expenditure (2007-08)

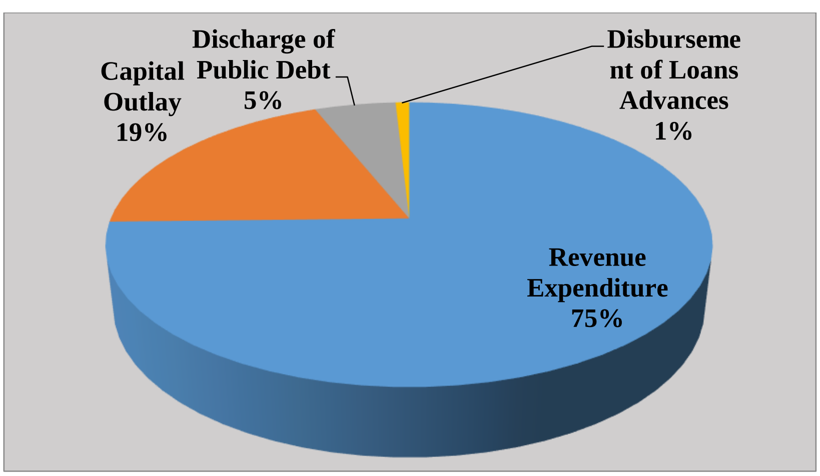
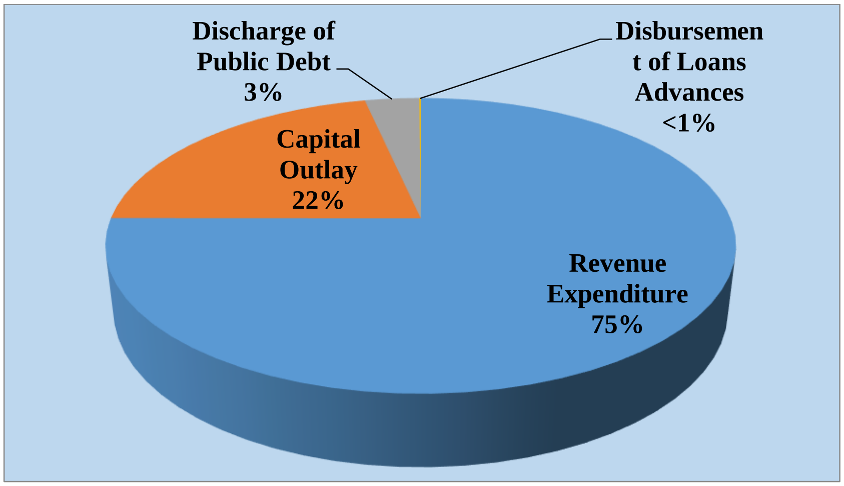


Chart 3.5 B : Structure of Expenditure (2016-17)



3.1.2 Developmental and Non-Developmental Expenditure

Taking into account the total expenditure on social and economic services, we find that the developmental revenue expenditure has increased from 45.4 percent to 50.8 percent over this ten year period, while developmental capital expenditure has increased from 18.6 percent to 19.8 percent over the same period. Thus the total development expenditure now constitutes over 70 percent of the total disbursements of the Government (2016-17), compared to 64 percent in 2007-08. The share of non-developmental expenditure has thus decreased to that extent.

The state government has been able to manage its debt problem quite well by consistently generating substantial surpluses in its revenue account during the last few years. The servicing of debt now takes around 3 percent of the total expenditure (2016-17) compared to around 5 percent in 2007-08. The state government is now much better placed to launch ambitious programmes aimed at creation of quality infrastructure that alone can accelerate the pace of economic growth of the state. The discharge of public debt has grown at a compound annual average rate of 11.1 percent, compared to the capital receipts which has grown at a CAGR of 33.4 percent during this ten-year period. Of course, the discharge of public debt will gather much faster pace in the years to come.

3.1.3 Plan and Non-Plan Expenditure

Though the distinction between plan and non-plan expenditure now stands abolished, the classification was available till the 12th plan period was over in 2016-17, which is covered in our study. Hence we briefly discuss this aspect of expenditure. Table 3.4and Chart 3.6 show the trends of plan and non-plan expenditure in Bihar from 2007-08 to 2016-17. From this, it is observed that the share of non-plan expenditure has been reduced steadily from 65 percent of total expenditure in 2007-083 to 52 percent in 2016-17, with consequent increases in the share of plan expenditure. The expenditure on state plans has constituted the bulk of plan expenditure during the period, ranging from 88 to 91 percent of total expenditure till 2013-14, after which there was wrong booking of expenditure incurred for the centrally sponsored schemes under the state plans (Table 3.5). Plan revenue expenditure was distributed more or less evenly between the revenue and capital accounts, with the share of revenue account ranging from 44 to 60 percent of total plan expenditure during the period, while revenue expenditure accounted for almost the entire non-plan expenditure, being primarily meant for maintenance of the assets; its share ranged from 91 to 93 percent of total non-plan expenditure during the ten year period 2007-17.

Table 3.4 : Distribution of Total expenditure by Plan and Non-Plan Heads

(Rs. crore)

Year	Plan Expenditure			Non-Plan Expenditure					Total Expenditure
	Revenue Account	Capital Account	Total	Revenue Account			Capital Account	Total	
				Interest payments	Other Heads	Total			
2007-08	4804	6142	10946	3707	15052	18759	1867	20626	31571
2008-09	7280	6533	13814	3753	17478	21231	2136	23368	37181
2009-10	8439	7755	16194	3685	20460	24145	2456	26602	42796
2010-11	10900	10011	20911	4319	22997	27316	2478	29794	50705
2011-12	12487	10521	23008	4304	29709	34013	3161	37174	60181
2012-13	16892	11489	28381	4428	33145	37574	3252	40825	69207
2013-14	19096	14581	33678	5459	37922	43381	3347	46728	80405
2014-15	25511	18428	43939	6129	40930	47059	3700	50759	94698
2015-16	29651	24082	53732	7098	46868	53965	4631	58596	112328
2016-17	33576	27264	60840	8191	52999	61189	4273	65462	126302

Source: Finance Accounts of the Bihar Government for respective years

Chart 3.6 : Plan and Non-Plan Expenditure (Rs. Crore)

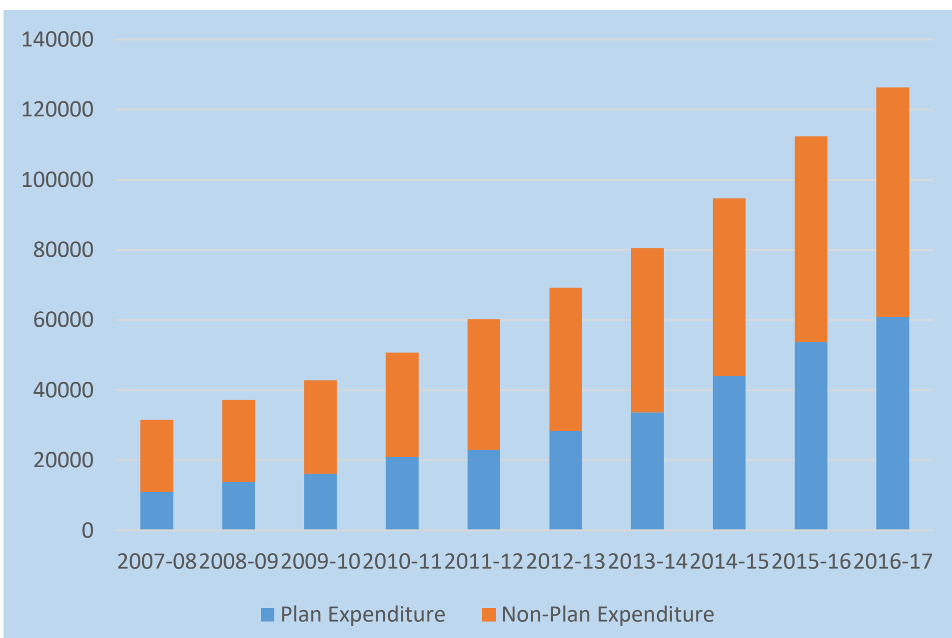


Table 3.5 : Distribution of Plan Expenditure by Type of Plan (Rs. crore)

Year	Types of Plan			Total Plan Expenditure
	State Plan	Centrally Sponsored Schemes	Central Plan	
2007-08	9700	1222	23	10946
2008-09	12336	1376	103	13814
2009-10	13998	2056	140	16194
2010-11	18427	2358	126	20911
2011-12	20322	2578	108	23008
2012-13	25659	2602	120	28381
2013-14	30707	2890	81	33678
2014-15	43932	-38	45	43939
2015-16	53485	-30	277	53732
2016-17	60722	-41	159	60840

Source: Finance Accounts of the Bihar Government for respective years

3.2 Analysis of Revenue Expenditure

Within general services, there are certain expenditure items which cannot be much controlled. These are mostly items of charged expenditure like pension and interest payments which together accounted for 67.6 percent of the total expenditure on general services in 2016-17, little less than their share of 70.2 percent in 2007-08. Table 3.6 shows the trends of revenue expenditure on major components of general, social and economic services. Even though the share of general services in the total revenue expenditure had been going down, in absolute terms, it had grown steadily from Rs. 9252 crore in 2007-08 to Rs. 30607 crore in 2016-17, at an annual compounded average growth rate of 14.7 percent. Compared to this, the expenditure on social services increased from Rs 9868 crore to Rs 40737 crore during this period, at an annual rate of 17.5 percent, and that on economic services increased from Rs 4438 crore to Rs 23417 crore, at an annual rate of 19.3 percent. Among the social services, as with every other state, education claimed the bulk of expenditure, though its share had reduced from 55.7 to 47 percent of total revenue expenditure during the period 2007-17, while the share of health in 2016-17 was practically the same as in 2007-08 at around 11 percent. Among the economic services, rural development claimed the highest share followed by energy; the share of energy increased steadily and significantly from 16.4 percent in 2007-08 to as much as 32.9 percent in 2016-17, while the share of rural development decreased marginally from 37.3 percent to 35.7 percent over this period. But the shares of agriculture and irrigation – sectors which are interlinked in terms of agricultural productivity – had both declined, which should be a cause for serious concern for a state heavily dependent on agriculture. While the share of agriculture declined from 16.6 percent to 9.8 percent, the share of irrigation declined from 12.7 percent to only 4.5 percent. With the state's own revenue meeting a little higher proportion of its revenue expenditure, its dependence on Central devolution has reduced substantially over this ten year period, from 73.1 percent to 63.1 percent. Government expenditure accounted for around 29 percent of the total state income in 2016-17, compared to 27.8 percent in

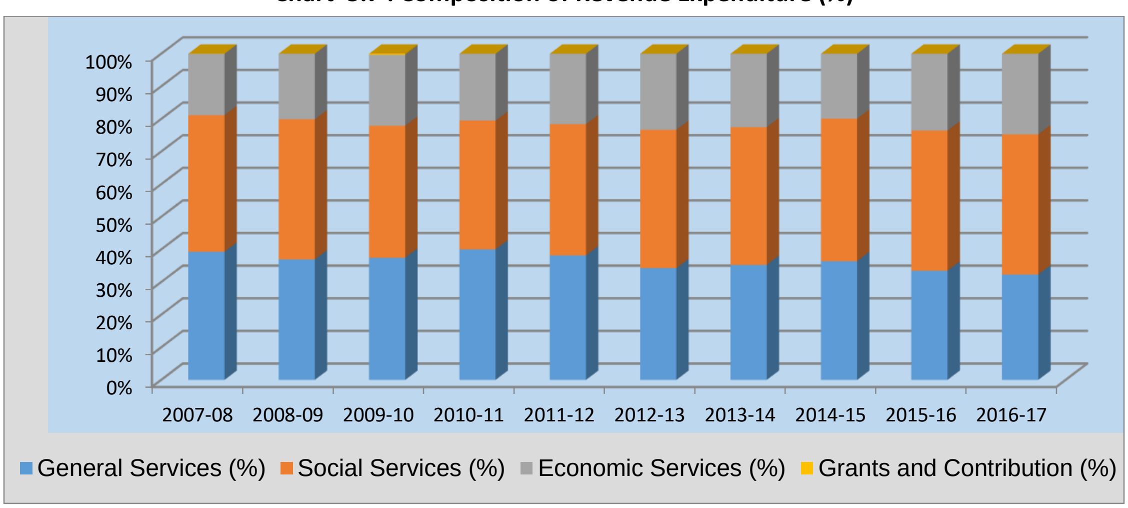
2007-08. As already observed, except for some adjustments between the general and social services in favour of the latter, there was no major structural changes in the revenue expenditure of the state during this ten year period (Chart 3.7).

Table 3.6 : Analysis of Revenue Expenditure

Expenditure Heads	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR
General Services (Rs crore)	**9252**	**10530**	**12202**	**15287**	**17730**	**18645**	**22018**	**26408**	**27972**	**30607**	14.7
Share of Interest payments (%)	40.1	35.6	30.2	28.3	24.3	23.8	24.8	23.2	25.4	26.8	-4.6
Share of Pensions & Misc. General Services (%)	30.1	33.0	35.4	40.2	44.0	44.9	43.1	43.0	42.4	40.9	3.5
Social Services (Rs crore)	**9868**	**12252**	**13186**	**15089**	**18729**	**23107**	**26395**	**31713**	**35943**	**40737**	17.5
Share of Education/ Sports/ Arts/ Culture (%)	55.7	54.7	56.2	53.7	54.2	60.9	54.3	51.3	51.8	47.0	-1.3
Share of Health and Family Welfare (%)	11.6	9.7	10.5	10.0	9.6	8.0	8.0	10.4	9.7	11.4	-0.7
Economic Services (Rs crore)	**4438**	**5726**	**7088**	**7836**	**10038**	**12710**	**14060**	**14445**	**19696**	**23417**	19.3
Share of Agriculture/Allied Activities (%)	16.6	22.2	21.2	25.8	19.1	24.9	22.7	23.8	17.9	9.8	-3.5
Share of Rural Development (%)	37.3	36.8	37.8	25.4	29.0	27.0	28.9	28.2	25.0	35.7	-2.6
Share of Irrigation/ Flood Control (%)	12.7	12.3	12.7	16.7	13.1	7.2	7.4	7.1	5.9	4.5	-11.7
Share of Energy (%)	16.4	12.6	12.2	15.5	21.6	25.2	23.0	26.1	31.2	32.9	11.4
Share of Transport (%)	9.2	8.6	9.7	8.1	7.9	6.5	9.8	6.9	8.7	7.6	-1.8
Expenditure ratios											
Own Revenue / Revenue Expenditure (%)	23.8	25.7	30.0	28.4	29.0	31.9	34.4	30.7	33.1	27.6	-
Gross Central Transfers/ Aggregate Disbursements (%)	73.1	69.4	62.0	68.0	64.2	61.7	59.7	60.0	61.7	64.1	-
Total Expenditure/GSDP (%)	27.8	26.1	26.3	24.9	24.4	24.5	25.4	27.6	29.4	28.8	-

Source: Finance Accounts of the Bihar Government for respective years

Chart 3.7 : Composition of Revenue Expenditure (%)



3.2.1 Committed Expenditure on Salary and Pension

The salary and pension constitute the two most important items of expenditure for all governments. The trends in expenditure on salaries, both under plan and non-plan heads, as well as expenditure on pension are presented in Table 3.7 and Chart 3.8. The salary of the state government employees accounted for 16.7 percent of the total revenue expenditure in 2016-17, significantly less than 27.5 percent in 2007-08; this share had increased to 29.6 percent on account of payment of Pay Commission arrears in 2009-10. The salary expenses constituted 3.6 percent of GSDP in 2016-17, again significantly less than 5.7 percent in 2007-08, as the GSDP expanded phenomenally during the period, despite the increases in the levels of salary after the state government had revised its own pay scales following recommendations of the Sixth Pay Commission for the central government employees in 2009-10. It needs to be mentioned that the State Government has not so far revised the pay scales following the Seventh Pay Commission recommendations for the Central Government employees.

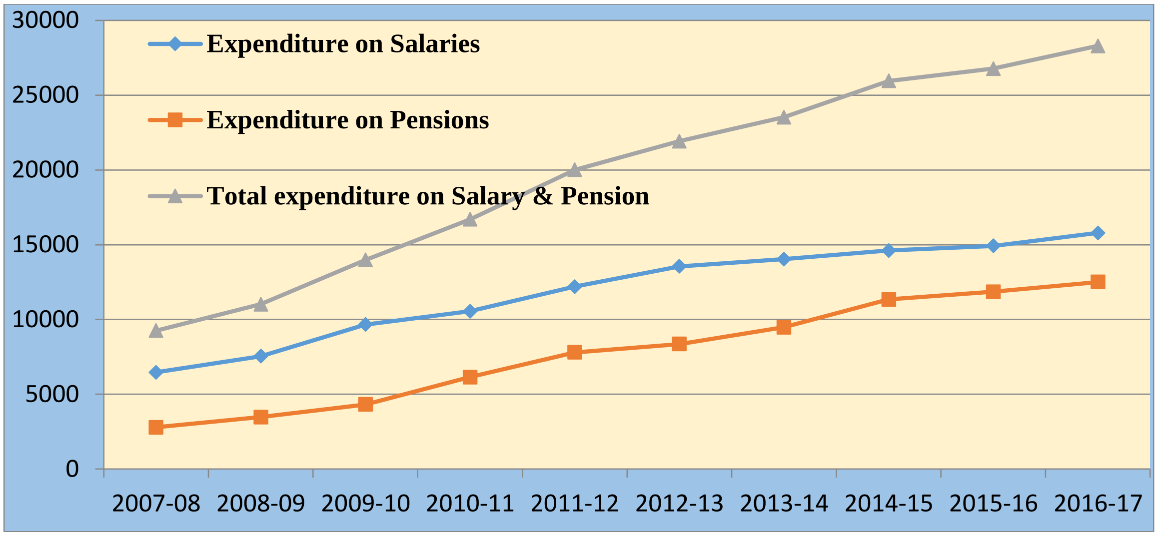
Similarly, pension payments constituted 13.2 percent of revenue expenditure in 2016-17 or 3.1 percent of GSDP. During the period from 2007-08 to 2016-17, expenditure on salary and pension together increased by nearly Rs. 19000 crore over this period - accounting for 29.9 percent of total revenue expenditure of the state and 6.5 percent of its GSDP. The pension payments increased annually at a rate of 18 percent from Rs. 2789 crore in 2007-08 to Rs. 12508 crore in 2016-17, while the salary expenditure increased at an annual rate of 10 percent during this period. The share of pension and salary payments in total revenue expenditure had increased to as much as 43.7 percent in 2010-11 (8.2 percent of GSDP), from which it has come down to only 29.9 percent in 2016-17 (6.5 percent of GSDP). Together they consume around 27 percent of the state's total revenue receipts in 2016-17, but amounted to more than the State's own revenue receipts of Rs. 26145 crore.

Table 3.7 : Expenditure on Salaries and Pensions

Heads	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Expenditure on Salaries (Rs Crore)	**6469**	**7546**	**9659**	**10550**	**12194**	**13558**	**14037**	**14607**	**14924**	**15784**
Non-Plan Head (Rs Crore)	5914	6996	9001	9953	11495	12865	13315	13910	14307	15097
Plan Head (Rs Crore)	555	549	657	596	699	693	721	697	617	687
Salary as percentage of GSDP	5.7	5.3	5.9	5.2	4.9	4.8	4.4	4.3	3.9	3.6
Salary as percentage of RR	22.9	22.9	27.2	23.7	23.8	22.8	20.4	18.6	15.5	14.9
Salary as percentage of RE	27.5	26.5	29.6	27.6	26.2	24.9	22.5	20.1	17.8	16.7
Expenditure on Pensions (Rs Crore)	**2789**	**3479**	**4319**	**6144**	**7808**	**8364**	**9482**	**11345**	**11850**	**12508**
Rate of Growth (%)	-	24.7	24.1	42.3	27.1	7.1	13.4	19.6	4.5	5.5
Pension as percentage of GSDP	2.5	2.4	2.7	3.0	3.2	3.0	3.0	3.3	3.1	2.9
Pension as percentage of RR	9.9	10.5	12.2	13.8	15.2	14.0	13.8	14.5	12.3	11.8
Pension as percentage of RE	11.8	12.2	13.3	16.1	16.8	15.4	15.2	15.6	14.2	13.2
Total expenditure on Salary & Pension (Rs Crore)	**9258**	**11025**	**13977**	**16694**	**20002**	**21921**	**23518**	**25952**	**26774**	**28292**
State's Own Revenue Receipts	7325	9760	10855	13502	17388	21505	22308	27635	26145	7325
Total as percentage of GSDP	8.1	7.7	8.6	8.2	8.1	7.8	7.4	7.6	7.0	6.5
Total as percentage of RR	32.8	33.4	39.3	37.5	39.0	36.8	34.1	33.1	27.9	26.8
Total as percentage of RE	39.3	38.7	42.9	43.7	43.0	40.2	37.6	35.8	32.0	29.9

Source : Finance Accounts of the Bihar Government for respective years

Chart 3.8 : Expenditure on Salary and Pension (Rs Crore)



3.2.2 Expenditure on Subsidies

Table 3.8 shows the details of subsidies given by the state government during the four years from 2012-13 to 2016-17. During this period, the amount of subsidies given by the state government increased two-folds, from Rs 4313 crore to Rs 8633 crore. During 2016-17, Rs 6808 crore, amounting to nearly 79 percent of the total subsidy expenditure of the Bihar Government, was provided to the Bihar State Electricity Board (BSEB) alone for bridging its resource gap. The BSEB has always been the major recipient of subsidy in the state for bridging its non-plan resource gap, despite its dismal performance as discussed earlier. During these four years, BSEB had received 68 to 79 percent of the total subsidies given by the state government. There does not appear to be any system of any need-based targeting and evaluation of the subsidies given by the state government.

Table 3.8 : Subsidies Given by State Government (Rs crore)

Name of the Department Receiving Subsidy	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Animal Husbandry & Fisheries Resources	127	16	137	46	122
Food & Consumer Protection			565	1331	977
Energy (BSEB)	3193	3182	3753	6048	6808
Industry	336	436	411	825	382
Agriculture	657	895	208	593	344
Public Health Engineering	0	118	114		
Total	**4313**	**4646**	**5187**	**8842**	**8633**
Subsidy given to Energy Department (BSEB) (%)	74.0	68.5	72.4	68.4	78.9

Source: Finance Dept. Govt. of Bihar

3.3 Quality of Expenditure: Revenue and Capital

The quality of expenditure incurred by the state government can be judged by the proportion of expenditure devoted to creation of social and physical infrastructure and the quantum of developmental expenditure on social and economic services as opposed to non-developmental expenditure on general services. In this perspective, the important parameters of quality in expenditure are: (1) ratio of capital outlay to total expenditure; (2) the ratio of capital outlay to GSDP and (3) the proportion of revenue expenditure spent on social and economic services and the proportion of non-salary expenditure incurred in these services. The higher these ratios, the better would be the quality of expenditure. Table 3.9 shows these ratios during the ten-year period from 2007-08 to 2016-17.

Table 3.9 : Quality Parameters of Expenditure

Expenditure Heads	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Capital Outlay (Rs. crore)	**6104**	**6436**	**7332**	**9196**	**8852**	**9585**	**14001**	**18150**	**23966**	**27208**
Revenue Expenditure (Rs. crore)	**23563**	**28512**	**32584**	**38216**	**46500**	**54466**	**62477**	**72570**	**83616**	**94765**
Of which Social and Economic Services	14306	17978	20274	22926	28767	35817	40455	46158	55639	64154
(i) Salary Component (Rs. crore)	4378	5194	6920	7027	8171	9033	9072	9176	9108	9349
Percentage of salary component (%)	30.6	28.9	34.1	30.7	28.4	25.2	22.4	19.9	16.4	14.6
(ii) Non salary component (Rs. crore)	9928	12784	13354	15899	20596	26784	31384	36982	46531	54805
Percentage of non-salary component (%)	69.4	71.1	65.9	69.3	71.6	74.8	77.6	80.1	83.6	85.4
Capital Outlay/ Total Expenditure (%)	19.3	17.3	17.1	18.1	14.7	13.8	17.4	19.2	21.3	21.5
Revenue Expenditure / Total Expenditure (%)	74.6	76.7	76.1	75.4	77.3	78.7	77.7	76.6	74.4	75.0
Revenue Expenditure / GSDP (%)	20.7	20.0	20.0	18.8	18.8	19.3	19.7	21.2	21.9	21.6
Capital Outlay /GSDP (%)	5.4	4.5	4.5	4.5	3.6	3.4	4.4	5.3	6.3	6.2

Source: Finance Accounts of the Bihar Government for respective years

Going by all the parameters, it is clear that the quality of expenditure in Bihar had improved over the ten year period from 2007-17. The non-salary component of developmental revenue expenditure had increased substantially from 69.4 to 85.4 percent during this period, while the share of capital outlay in total expenditure increased marginally from 19.3 to 21.5 percent. The shares of revenue expenditure in total expenditure or in GSDP did not practically change over this period, but the share of capital outlay in GSDP has increased from 5.4 percent to 6.2 percent.

3.3.1 Sectoral Expenditure Pattern: Expenditure on Social Services - Revenue and Capital

Providing better access to basic education, health services, safe drinking water, sanitation, housing etc. is essential to foster economic growth. The expenditure on social services is important for judging the overall improvement in the quality of life. Table 3.10 examines the quality of expenditure incurred by the state government in expanding and strengthening of social services during the period from 2007-08 to 2016-17.

Table 3.10 : Expenditure on Social Services (Rs. crore)

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Education, Sports, Arts & Culture										
Total Expenditure	5553	6882	7750	8244	10214	14445	15047	16531	19155	20226
Revenue Expenditure	5496	6706	7416	8101	10157	14080	14344	16267	18605	19152
(a) Salary component (%)	45.0	43.0	48.0	45.0	43.5	44.5	33.7	30.0	24.0	22.8
(b) Non-salary component (%)	55.0	57.0	52.0	55.0	56.5	55.5	66.3	70.0	76.0	77.2
Capital Outlay	57	177	334	144	56	364	704	263	550	1074
Capital Outlay (%)	**1.0**	**2.6**	**4.3**	**1.7**	**0.6**	**2.5**	**4.7**	**1.6**	**2.9**	**5.3**
Health and Family Welfare										
Total Expenditure	1387	1291	1517	1667	2125	2398	2574	3604	4571	5493
Revenue Expenditure	1141	1193	1388	1502	1804	1836	2113	3288	3481	4622
(a) Salary component (%)	53.0	61.0	66.0	73.0	72.9	79.6	74.8	48.6	52.6	48.3
(b) Non-salary component (%)	47.0	39.0	34.0	27.0	27.1	20.4	25.2	51.4	47.4	51.7
Capital Outlay	246	97	129	165	321	563	460	316	1091	870
Capital Outlay (%)	**17.7**	**7.5**	**8.5**	**9.9**	**15.1**	**23.5**	**17.9**	**8.8**	**23.9**	**15.8**
Water Supply, Sanitation, Housing and Urban Development										
Total Expenditure	1053	1600	1903	2327	2045	2587	3605	4542	4518	8786
Revenue Expenditure	713	1413	1438	1698	1713	2304	2967	3639	3694	7463
(a) Salary component (%)	16.0	10.0	11.0	10.0	11.6	8.9	8.0	6.4	6.4	3.1
(b) Non-salary component (%)	84.0	90.0	89.0	90.0	88.4	91.1	92.0	93.6	93.6	96.9
Capital Outlay	339	187	465	630	332	282	638	903	824	1323
Capital Outlay (%)	**32.2**	**11.7**	**24.4**	**27.1**	**16.2**	**10.9**	**17.7**	**19.9**	**18.2**	**15.1**
Total (Social Services)										
Total Expenditure	10667	12892	14309	16161	19536	24438	28253	33386	38684	44329
Revenue Expenditure	9868	12252	13186	15089	18729	23107	26395	31713	35943	40737
(a) Salary component (%)	35.0	32.0	38.0	34.0	33.6	30.7	26.6	22.4	19.2	17.7
(b) Non-salary component (%)	65.0	68.0	62.0	66.0	66.4	69.3	73.4	77.6	80.8	82.3
Capital Outlay	799	640	1123	1072	807	1331	1858	1674	2740	3592
Capital Outlay (%)	**7.5**	**5.0**	**7.8**	**6.6**	**4.1**	**5.4**	**6.6**	**5.0**	**7.1**	**8.1**

Source: Finance Accounts of the Bihar Government for respective years

The total social service expenditure of the State Government had steadily increased from Rs. 10,667 crore in 2007-08 to Rs. 44,329 crore in 2016-17. Capital outlay on the social sector has also increased significantly during this period, from Rs. 799 crore to Rs. 3592 crore. Share of capital outlay in total expenditure was increased significantly in respect of education, sports, art and culture (from 1 percent to 5.3 percent), while there was a marginal reduction in its share in respect of health and family welfare (from 17.7 percent to 15.8 percent). However, in respect of water supply, sanitation, housing and urban development, the share of capital outlay had decreased significantly from 32.2 percent to only 15.1 percent.

The share of non-salary components of the revenue expenditure (the amount spent actually on the maintenance of assets already created) also improved substantially between2007-08 and 2016-17, from 65 percent to 82.3 percent. In respect of education, it increased from 55 percent to 77.2 percent, while in respect of water supply, sanitation etc. it increased from 84 percent to almost 97 percent of total expenditure in these sectors. In respect of health and family welfare, however, the increase in the share of non-salary component was only marginal, from 47 percent to 51.7 percent. The salary component was always the highest in regard to this sector.

The share of salary expenditure has declined after 2009-10 and has been declining ever since. In some sectors, for example health, the decline has been substantial. The revision in the pay scales due to the Sixth Pay Commission recommendations was implemented in Bihar in 2008, and thereafter the arrears and revised salary were paid since 2009-10. Thus the ratio of salary to revenue expenditure shows a peak in 2009-10. The other reason for this decline was the high proportion of vacancies in the government departments against the sanctioned posts, especially in education, health, police, engineers etc. Another reason is the retirement of regular employee at higher end of the scale and filling up these posts by contractual and ad-hoc employees who were paid much lesser amounts either as honorarium or consolidated payment. However, the salary and pension increased in 2017-18 after implementation of 7th Pay Commission recommendations since April 2018 in Bihar.

The expenditure under pension head also follows same trend. The hike of 42 percent on account of pension in 2010-11 was due to the hike in the gratuity which was just doubled from Rs. 5 lakh to 10 lakh.

3.3.2 Sectoral Expenditure Pattern: Expenditure on Economic Services - Revenue and Capital

Table 3.11 shows the analysis of expenditure on economic services, the purpose of which is to create additional productive capacity in the economy. rural development, energy and power, and transport – these three sectors account for more than 82 percent of the total expenditure on economic services, revenue and capital combined, in 2016-17.

About 48 percent of the total expenditure on economic services was made on capital account during 2016-17; rural development, energy and power, and transport together accounted for more than 89 percent of the total capital outlay on economic services. The non-salary component of the revenue expenditure in economic services, as in the case of social services, also remained high throughout the period; it increased from 78 percent in 2007-08 to 91 percent in2016-17.

Table 3.11 : Expenditure on Economic Services (Rs. crore)

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Rural Development										
Total Expenditure	3145	3383	3533	3193	4003	5307	5993	8717	12934	16244
Revenue Expenditure	1653	2109	2680	1989	2915	3432	4060	4070	4921	8352
(a) Salary component (%)	11	13	16	23	16	15	15	15	12	7
(b) Non-salary component (%)	89	87	84	77	84	85	86	85	88	93
Capital Outlay	1492	1274	853	1204	1089	1874	1934	4648	8013	7892
Capital Outlay (%)	47	38	24	38	27	35	32	53	62	49
Energy and Power										
Total Expenditure	841	1123	1244	2223	2270	3374	5133	7948	8945	13437
Revenue Expenditure	726	723	868	1216	2168	3200	3236	3773	6151	7698
(a) Salary component (%)[14]	0	0	0	0	0	0	0	0	0	0
(b) Non-salary component (%)	100	100	100	100	100	100	100	100	100	100
Capital Outlay	115	400	376	1007	102	174	1897	4175	2794	5739
Capital Outlay (%)	14	36	30	45	5	5	37	53	31	43
Transport										
Total Expenditure	2707	2957	3748	4706	4852	4138	5471	5194	6130	7388
Revenue Expenditure	408	493	690	634	789	826	1381	996	1712	1787
(a) Salary component (%)	29	28	23	26	23	25	15	22	14	13
(b) Non-salary component (%)	71	72	77	74	77	75	85	78	86	87
Capital Outlay	2299	2463	3058	4072	4064	3313	4090	4198	4417	5601
Capital Outlay (%)	85	83	82	87	84	80	75	81	72	76
Irrigation and Flood Control										
Total Expenditure	1450	1845	2246	2678	3275	2854	2838	2444	2836	2844
Revenue Expenditure	562	704	897	1311	1311	914	1039	1020	1151	1048
(a) Salary component (%)	63	58	69	53	47	66	56	58	57	57
(b) Non-salary component (%)	37	42	31	47	53	34	44	42	43	43
Capital Outlay	888	1141	1349	1367	1964	1940	1799	1424	1685	1796
Capital Outlay (%)	61	62	60	51	60	68	63	58	59	63
Agriculture and Allied Activities										

[14]Salary expenditure of Energy Dept. was less than Rs 2 crore. Salary expenditure of energy/ power sector is negligible as the employee salaries are paid through the five State power companies (Holding, generation, distribution and transmission companies) and NTPC, BSHPC, BREDA, etc.

Total Expenditure	759	1284	1505	2035	2032	3262	3670	3615	4120	2414
Revenue Expenditure	737	1273	1504	2018	1914	3170	3193	3431	3515	2287
(a) Salary component (%)	31	21	26	20	24	15	15	14	15	23
(b) Non-salary component (%)	69	79	74	80	76	85	85	86	85	77
Capital Outlay	22	11	1	17	117	92	477	185	605	128
Capital Outlay (%)	3	1	0	1	6	3	13	5	15	5
Industry and Minerals										
Total Expenditure (Rs. crore)	398	503	534	335	429	583	1115	564	1230	1116
Revenue Expenditure	233	226	265	326	363	534	580	561	1201	888
(a) Salary component (%)	14	13	17	34	11	16	11	11	5	7
(b) Non-salary component (%)	86	87	83	66	89	84	89	89	95	93
Capital Outlay	165	277	269	9	66	49	535	3	29	228
Capital Outlay (%)	41	55	50	3	15	8	48	1	2	20
Total (Economic Services)										
Total Expenditure	9520	11316	13023	15564	17475	20246	24871	29173	37305	44943
Revenue Expenditure	4438	5726	7088	7836	10038	12710	14060	14445	19696	23417
(a) Salary component (%)	22	22	25	20	19	15	15	14	11	9
(b) Non-salary component (%)	78	78	75	80	81	85	85	86	89	91
Capital Outlay	5082	5590	5935	7728	7437	7536	10811	14728	17609	21526
Capital Outlay (%)	53	49	46	50	43	37	43	50	47	48

Source : Finance Accounts of the Bihar Government for respective years

3.3.3 Per-Capita Expenditure on Different Sectors - Revenue and Capital

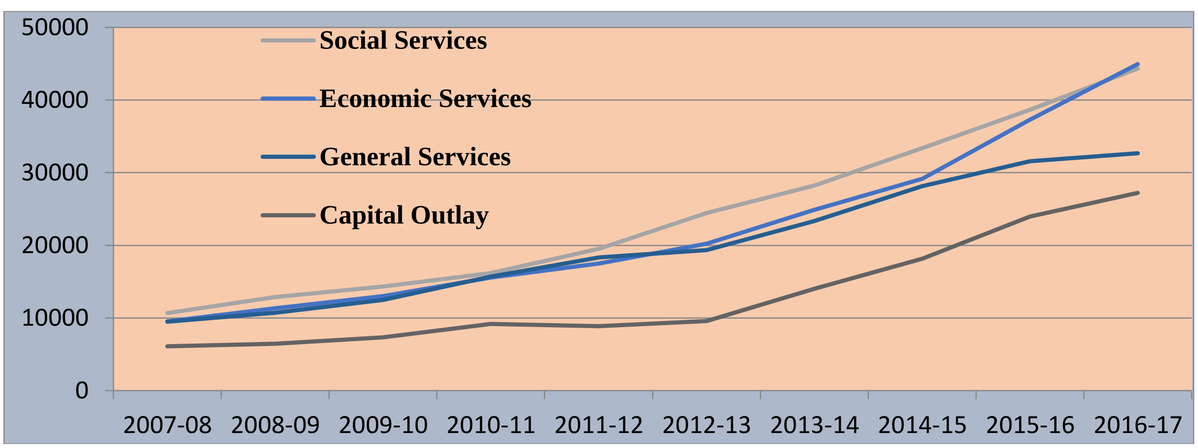
Tables 3.12 shows the per capita expenditure on the three services and also the per capita capital outlay on the state government, computed on the basis of estimated population of Bihar for the years 2007-08 through 2016-17. Per capita expenditure in Bihar increased more than three-folds during the period. The per capita expenditure in respect of economic and social services grew in tandem with each other, and outstripped the growth in per capita capital outlay during the period. The figures for per capita expenditure on the various sectors, however, conceal the immense intra-state disparity in state government expenditure because of structural and historical factors.

Table 3.12 : Per Capita Expenditure on General, Social and Economic Services and on Capital Outlay (Rs. Crore)

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Estimated Population (Crore)	9.5	9.7	9.9	10.2	10.4	10.6	10.9	11.1	11.4	11.6
Total Expenditure	**31571**	**37181**	**42795**	**50705**	**60180**	**69207**	**80405**	**94698**	**112328**	**126302**
Social Services	10667	12892	14309	16161	19536	24438	28253	33386	38684	44329
Education, Sports etc.	5553	6882	7750	8244	10214	14445	15047	16531	19155	20226
Medical and Public Health	1387	1291	1517	1667	2125	2398	2574	3604	4571	5493
Water Supply and Sanitation	1053	1600	1903	2327	2045	2587	3605	4542	4518	8786
Economic Services	9520	11316	13023	15564	17475	20246	24871	29173	37305	44943
General Services	9474	10736	12476	15683	18338	19362	23351	28157	31589	32697
Capital Outlay	6104	6436	7332	9196	8852	9585	14001	18150	23966	27208
Per Capita Expenditure (Rs.)	**3323**	**3833**	**4323**	**4971**	**5787**	**6505**	**7389**	**8507**	**9865**	**10844**
Social Services	1123	1329	1445	1584	1878	2297	2596	2999	3397	3806
Education, Sports etc.	585	710	783	808	982	1358	1383	1485	1682	1737
Medical and Public Health	146	133	153	163	204	225	237	324	401	472
Water Supply and Sanitation	111	165	192	228	197	243	331	408	397	754
Economic Services	1002	1167	1315	1526	1680	1903	2286	2621	3276	3859
General Services	997	1107	1260	1538	1763	1820	2146	2530	2774	2807
Capital Outlay	642	664	741	902	851	901	1287	1631	2105	2336

Source: Finance Accounts of the Bihar Government for respective years

Chart 3.9 : Per Capita Expenditure (Rs Crore)



3.4 Allocative and Technical Efficiency of Expenditure- Revenue and Capital

The allocative efficiency is determined by the government's ability to establish priorities within the budget, to distribute resources on the basis of these priorities. It also means that no area of public expenditure, according to the priority allocated, should be left resource-starved, which may lead either to resources remaining unutilised or diversion of resources from one area to another. The technical efficiency refers to the effective and optimal utilization of the budgetary allocations and reflects on the productivity in public expenditure. To allocate efficiently, government must be strategic and evaluative;

it must both look ahead and define what it wants to accomplish and look back to examine the results. The allocative efficiency will depend on the effectiveness of the budgetary process itself, while technical efficiency will reflect upon the capacity of the government departments to spend the allocated amounts optimally.

For a poor state like Bihar, where resources are always scarce, it must be ensured that the resources are allocated on a realistic basis, depending on the need as well as the capacity of a department to spend the allocate funds productively. In that sense, budgeting should be rigorous exercise, but unfortunately this rigour was not much visible. Budgeting has always been rather a very loose exercise in Bihar. It is based rather on a system of incremental increases/ decreases in allocations under the various heads of expenditure, rather than on a realistic evaluation of the programmes / expenditure during the past years and assessment of their impact on social and economic welfare of the people; but such evaluation is unknown in Bihar. The looseness of the budgetary exercise is apparent from the savings under the various heads of expenditure during the past 3 years (2014-17), as shown in Table 3.13 which includes only those heads of accounts where the savings/ excesses has been more than Rs100 crore in any year. It can be seen that the budget estimates were wide off the mark in respect of many items of expenditure, with considerable savings under most heads and hence underachievement of outcomes.

Table 3.13 : Variation between Budget Estimates and Actual Receipts and Expenditure (Rs. Crore)

	2014-15			**2015-16**			**2016-17**		
	BE	**Actual**	**Variance (%)**[15]	**BE**	**Actual**	**Variance (%)**	**BE**	**Actual**	**Variance (%)**
District Administration	520	334	35.8	528	323	38.8	609	391	35.8
Pensions and other Retirement Benefits	11666	11345	2.8	12980	11850	8.7	16285	12508	23.2
General education	23754	16115	32.2	20905	18430	11.8	21513	18960	11.9
Urban Development	2107	1455	30.9	1737	1649	5.1	2837	2824	0.5
Crop Husbandry	2426	1832	24.5	1967	1704	13.4	2310	930	59.7
Other Rural Dev. Programmes	5187	3152	39.2	5488	3347	39.0	7698	7256	5.7
Power	3053	3753	-22.9	4222	6048	-43.2	5187	7541	-45.4
Revenue Expenditure	**91765**	**72570**	**20.9**	**91208**	**83616**	**8.3**	**109941**	**94765**	**13.8**
Capital Outlay	**21151**	**18150**	**14.2**	**24853**	**23966**	**3.6**	**30107**	**27208**	**9.6**
Consolidated Fund	**116886**	**94698**	**19.0**	**120685**	**112328**	**6.9**	**144696**	**126302**	**12.7**
Capital Outlay									
Other Rural Dev. Programmes	5437	4648	14.5	5934	8013	-35.0	6244	7892	-26.4
Major and Medium Irrigation	670	793	-18.4	877	833	5.0	519	772	-48.7
Flood Control Projects	1009	450	55.4	551	651	-18.1	891	900	-1.0
Power Projects	2890	4175	-44.5	3575	2794	21.8	8583	5739	33.1
Total capital Outlay	**21151**	**18150**	**14.2**	**24853**	**23966**	**3.6**	**30107**	**27208**	**9.6**

[15] Variance = (BE-Actual)/BE*100%

As regards resources, Bihar was not able to spend whatever limited funds it had. During the three years (2014-15, 2015-16 and 2016-17), it could not spend Rs 22,188 crore, Rs 8,357 crore and Rs 18,394 crore respectively from the resources that were approved by the Legislature. It may be pertinent to mention that when departments are unable to utilise the resources placed at their disposal, it does not only mean their inefficiency and the lack of institutional capacity, it also means placing tax or debt burden on the people heavier than was actually required. The departments which were consistently conspicuous by their lack of capacity to spend the funds allocated included Education, Urban Development, Crop Husbandry, Rural Development, Flood Control and District Administration. The departments that overshoot their budget included Power and Major & Medium Irrigation, but sometimes these were also found lacking in their capacity to spend the allocated funds.

3.5 Inter State Comparison of Various Expenditure Parameters

Finally in Table 3.14, some expenditure ratios have been compared among the major general category states, from which it is seen that Bihar compares well with the other states in respect of most of the ratios. Only in respect of a few ratios involving its own revenue, viz., Own Revenue / Revenue Expenditure and Gross Central Transfers/ Aggregate Disbursements, the state compares unfavourably with the other major general category states.

Table 3.14 : Inter-State Comparison of Expenditure Ratios: 2015-16 (%)

State	Revenue Deficit: GFD	Capital Outlay: GFD	Non-Dev. Exp: Agg. Disbursements	Non-Dev. Exp: Revenue Receipts	Interest Payments: Revenue Exp	State's Own Revenue: Revenue Exp.	Gross Transfers: Aggregate Disbursements	Debt Servicing: Gross Transfers
Bihar	-103.7	198.7	24.9	29.1	9.1	33.0	61.7	16.9
Jharkhand	-35.5	70.8	22.0	29.5	9.1	47.4	43.1	23.7
West Bengal	42.2	57.7	30.5	42.3	19.7	37.3	43.3	66.5
Uttar Pradesh	-24.5	110.2	27.1	36.3	13.4	49.0	40.6	37.3
Madhya Pradesh	-40.7	119.5	25.3	29.9	8.1	48.9	46.6	22.3
Rajasthan	9.4	34.8	18.3	30.9	11.3	50.5	28.5	35.1
Maharashtra	18.8	80.3	31.2	37.8	14.7	73.6	20.3	83.5
Gujarat	-7.4	105	26.4	34.3	17.5	76.1	19.6	92.4
Punjab	49.3	17.6	31.3	61.2	19.5	58.6	15.3	255.8
Haryana	37.1	21.9	21.9	40.0	14.4	60.2	13.8	131.7
Karnataka	-9.2	106.1	25.9	31.0	10.1	69.1	27.5	40.7
Andhra Pradesh	33.4	64.8	19.2	32.4	10.8	46.7	29.8	109.7
Kerala	54.1	42.0	43.0	57.9	14.1	60.3	23.8	77.6
Tamil Nadu	36.7	58.2	33.3	43.6	12.6	63.4	24.3	59.4
Chhattisgarh	-43.5	145.9	21.3	24.5	5.4	51.0	45.1	15.1

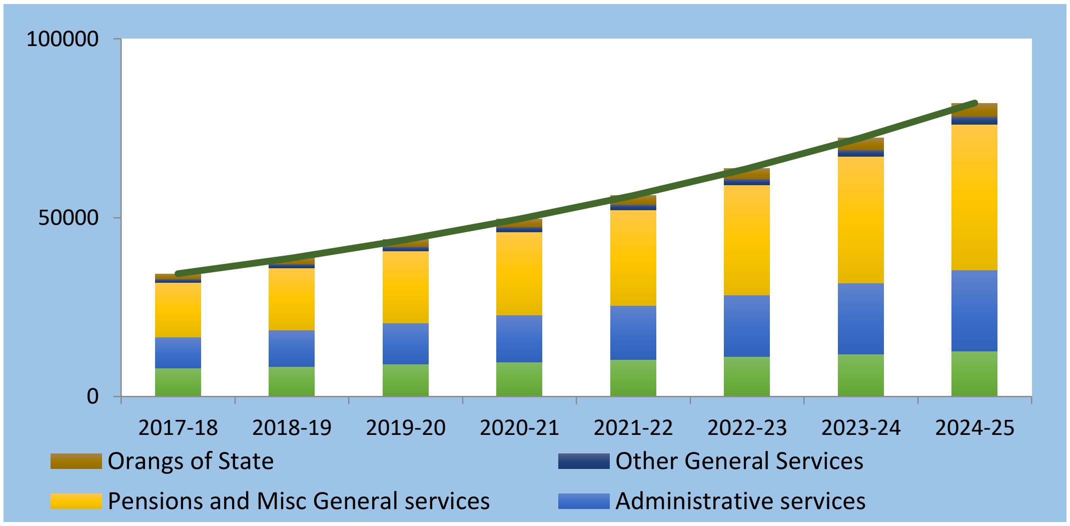
3.6 Estimation of Expenditure: 2017-18 to 2024-25

As in the case of revenue capacities, the expenditure of the State government for the period 2017-18 through 2024-25 were also estimated by using regression analysis using the exponential model which was the best fit, and significant with R^2 values ranging between 92 and 99 percent.[16] The details of analysis are shown in Annexure 3.2. The regression line was fitted by using the data for each minor head of expenditure from 2001-02 to 2016-17, using the semi-log method. The results in respect of expenditure on the three services, total revenue expenditure, estimated revenue deficit and capital outlay are shown respectively in tables 3.15 through 3.19 and the associated charts (Charts 3.10 through 3.14). Table 3.20 shows the State's requirement of funds from devolution from the divisible pool and Central grants. The revenue deficits have been computed on the basis of projected values of revenue receipts derived in the last chapter and the revenue expenditure derived below.

Table 3.15 : Projection of Revenue Expenditure on General Services from 2017-18 to 2024-25 (Rs. Crore)

	Organs of State	Interest Payment &Servicing of Debt	Admin. Services	Pensions &Misc General Services	Other General Services	Total General Services
2017-18	1472	7856	8815	15206	964	34313
2018-19	1686	8417	10089	17502	1083	38777
2019-20	1930	9019	11546	20144	1216	43857
2020-21	2211	9663	13214	23186	1367	49641
2021-22	2531	10354	15124	26687	1535	56231
2022-23	2899	11094	17309	30716	1725	63742
2023-24	3319	11887	19809	35354	1938	72307
2024-25	3801	12737	22672	40692	2177	82077

Chart 3.10 : Projection of Expenditure on General Services (Rs. Crore)



[16] Estimation has been made using the semilog model: lnRi= a + bTi, where Ri is the revenue for the i-th year and Ti the explanatory variable (i-th year). Estimation has been made using the STATA 13 software. The outcome of the regression analysis showing the summary statistics as well as the coefficient table is appended at Annexure 3.2.

Table 3.16 : Projection of Revenue Expenditure on Social Services from 2017-18 to 2024-25 (Rs. Crore)

	Education, Sports, Arts and Culture	Health and family Welfare	Water Supply and Sanitation	Social Welfare and Nutrition	Other social services	Total Social Services
2017-18	24992	4442	8497	11921	5028	54880
2018-19	29011	5124	10937	15070	6331	66473
2019-20	33676	5910	14078	19050	7972	80686
2020-21	39091	6818	18120	24083	10039	98150
2021-22	45377	7864	23323	30444	12641	119649
2022-23	52674	9071	30019	38486	15918	146168
2023-24	61144	10464	38639	48652	20044	178943
2024-25	70976	12070	49734	61503	25240	219523

Chart 3.11 : Projection of Expenditure on Social Services (Rs. Crore)

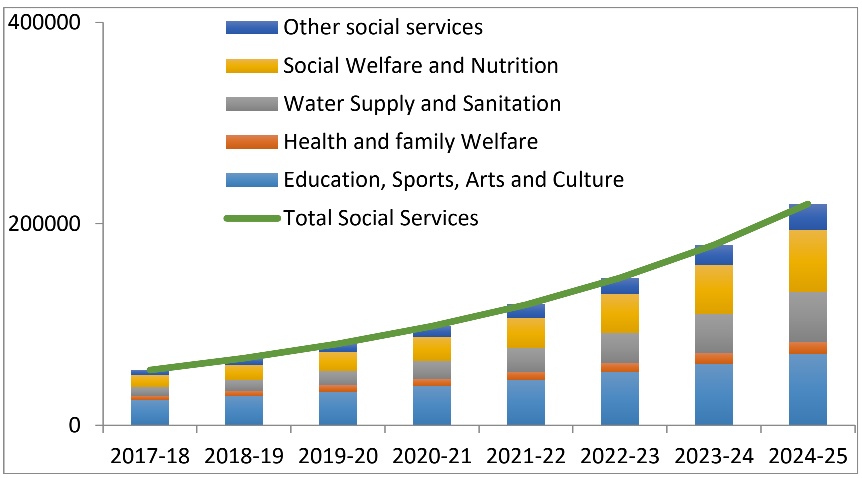


Table 3.17 : Projection of Revenue Expenditure on Economic Services from 2017-18 to 2024-25 (Rs. Crore)

	Rural development	Energy & Power	Others	Total Economic Services
2017-18	8057	8811	12334	29514
2018-19	9538	11254	14684	33779
2019-20	11293	14375	17482	38765
2020-21	13369	18361	20812	44606
2021-22	15828	23453	24778	51463
2022-23	18739	29957	29499	59529
2023-24	22186	38264	35119	69029
2024-25	26266	48874	41810	80234

Chart 3.12 : Projection of Expenditure on Economic Services (Rs. Crore)

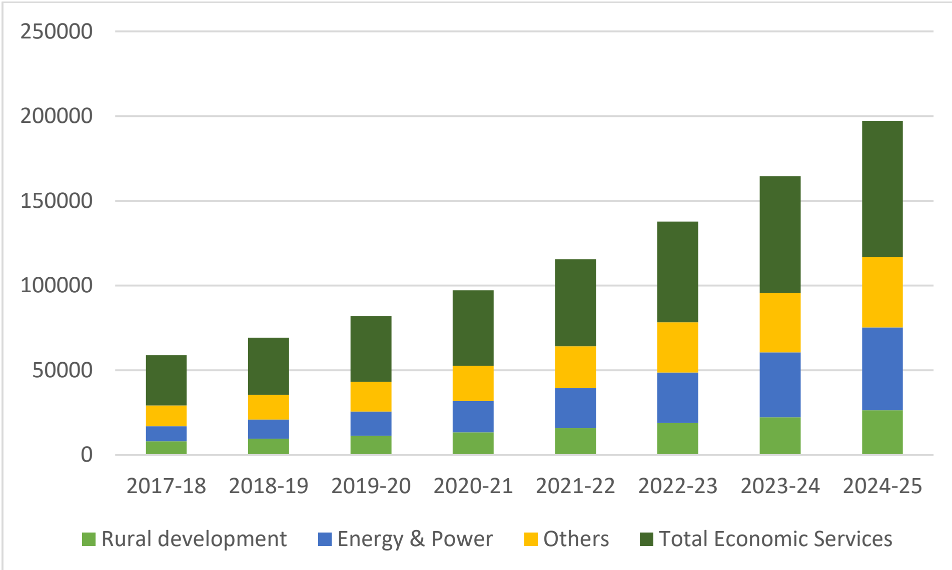


Table 3.18 : Projection of Revenue Deficit from 2017-18 to 2024-25 (Rs. Crore)

	General Services	Social Services	Economic Services	Total Revenue Expenditure	Total Own Revenue	Revenue Deficit
2017-18	34313	54880	29202	118395	41147	77248
2018-19	38777	66473	35477	140726	49341	91385
2019-20	43857	80686	43149	167692	59204	108488
2020-21	49641	98150	52543	200334	71086	129248
2021-22	56231	119649	64059	239939	85407	154532
2022-23	63742	146168	78194	288105	102675	185430
2023-24	72307	178943	95568	346818	123507	223311
2024-25	82077	219523	116950	418551	167272	251279

Chart 3.13 : Estimation of Revenue Deficit based on State's Own Revenues (Rs. Crore)

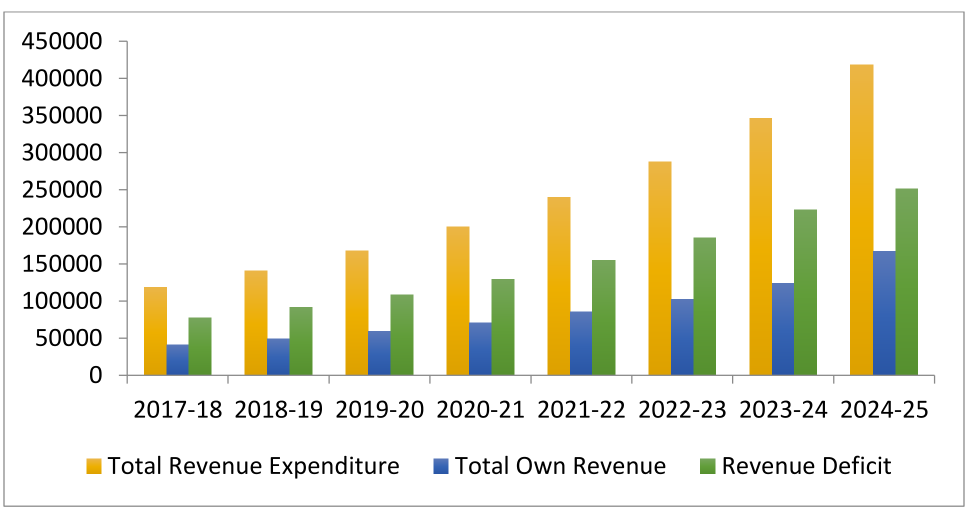
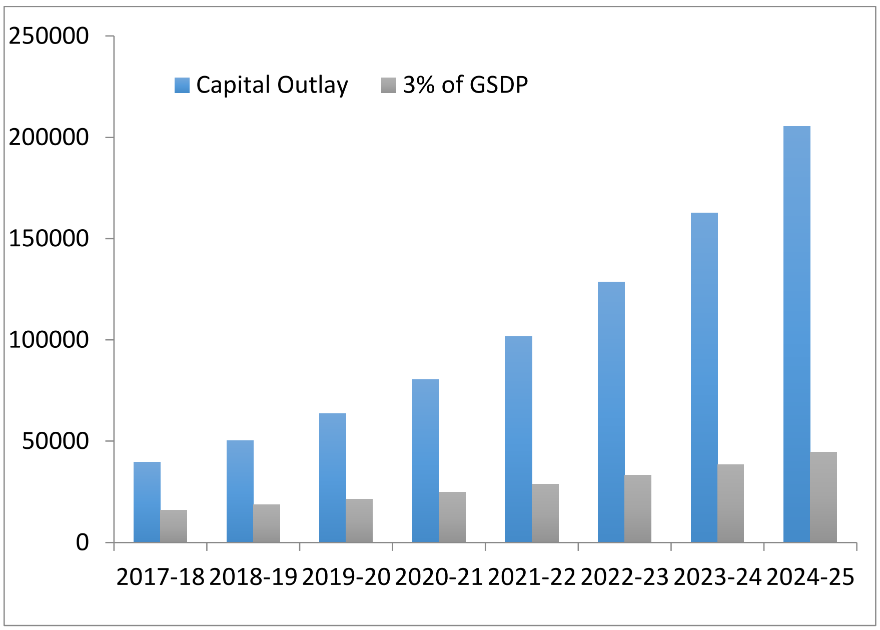


Table 3.19 : Projection Capital Outlay and GDSP of Bihar from 2017-18 to 2024-25 (Rs. Crore)

	Capital Outlay	GSDP	3% of GSDP
2017-18	39775	534746	16042
2018-19	50293	618697	18561
2019-20	63593	715828	21475
2020-21	80411	828208	24846
2021-22	101675	958231	28747
2022-23	128563	1108667	33260
2023-24	162562	1282720	38482
2024-25	205552	1484098	44523

Chart 3.14 : Projection of Capital Outlay vis-à-vis Borrowing Limit as per FRBMA (Rs. Crore)



On the basis of such estimation, two observations can be made. First that for the capital outlay to be sustained at the current levels as suggested by the past trends, there needs to be consistent and high levels of surplus in the revenue account. The borrowing being limited by the FRBMA, the 3 percent limit of FRBMA falls far short of the capital investment requirements. Grants from Centre and devolution should bridge this gap after taking into account the requirements of debt repayments.

3.7 Impact of Public Expenditure

Bihar is one of India's poorest states. Until recently, the economic growth in Bihar was much slower than in rest of the country. It is a state that was not been able to exploit its resources optimally and, as mentioned in the last chapter, about 75 percent of the state government's revenue receipts still come from the central government. Till the end of the last century, the state's economy was almost stagnating with a growth rate of around 2 percent, and much of this stagnation could be attributed to the poor governance in the state. Its public services and infrastructure were almost non-existent and leakages were very substantial. The state was almost dysfunctional; however, it has witnessed a remarkable resurgence in the recent years and is presently one of the fastest growing states in the country. Table 3.20 shows this transition in terms of the socio-economic indicators of development of the state.

Between 2001 and 2011, its income has grown annually by 14.4 percent, compared to about only 2 percent in the preceding decade. However, between 2011 and 2016, the growth rate has slowed down a little – to 11.10 percent, but was enough to almost double the NSDP from Rs. 228,497 crore to Rs. 404,438 crore. During this period, the structure of economy changed very little - the share of primary sector decreased from 26percent of total income to 23percent while the share of manufacturing sector changed only marginally, from 18 percent to 17 percent. The manufacturing could not pick up because lack of infrastructure, especially power. Contribution of Services sector increased from 56 to 60 percent.

Bihar still remains one of the most highly ruralised states of India, with about 89 percent of population living in rural areas as per Census 2011 figures. But during 2011-16, continuing the trends observed in the past decade, it has made significant progress in terms of literacy, expansion of roads, school and health care infrastructure and improving the gross enrolment ratio, infant mortality rate and other socio-economic indicators. However, the financial resources as well as physical infrastructure still remain poor, the credit-deposit ratio among the lowest in the country and industrial scenario marked by small scale sector with singular absence of any large and medium scale industries.

Bihar still needs accelerated progress to catch up with other states, but that does not in any way negate the impressive results that have been achieved so far, which have come mainly because of a series of significant and sustained reforms by the state government in recent years, especially in relation to the financial management of public resources. The results of some of these reforms have been discussed in earlier- without the sustained government expenditure on the social and economic services, these improvements would never have materialised.

The State still faces many challenges which include: (a) low capacity of the to deliver services, (b) poor monitoring of performance, (c) lack of accountability arrangements, and (d) the absence of decentralization. The turnaround in the economy of Bihar came as a result of wide-ranging reforms, initiated since 2004-05, which spanned several sectors, including stabilization of law and order, improvement of the investment climate, financial management, administrative reforms, and enforcing greater accountability and transparency of the system. The reforms have also been initiated in individual sectors like health, education, roads, rural development, agriculture, urban development, and power as well.

Table 3.20 : Socio-Economic Parameters of Bihar

Parameters	2011-12	2016-17
A. State Income		
NSDP (Rs Crore) (At current prices)	228497	404438
Per Capita Income (Rs) (At current prices)	21750	35590
Share of Primary Sector in NSVA(%)[17]	26	23
Share of Secondary Sector in NSVA(%)	18	17
Share of Tertiary Sector in NSVA(%)	56	60
Annual Compound Growth Rate (CAGR) of NSVA	14.4 (2001-11)	11.1 (2011-16)
% of people below poverty line	33.7(2011-12)	NA
Net Irrigated Area to Net Cultivated Area (%)[18]	61.1(2007-08)	58.01 (2010-11)
Infant Mortality rate	44	38[19]
Life Expectancy at Birth	62 (2002-06)	68.7(2012-16)[20]
B. Infrastructure		
i. Education		
No of Primary and Middle Schools	68160	76609 [21]
No of Secondary and Higher Secondary Schools	4503	7627[22]
ii. Health		
No of Govt. Hospitals (Including CHCs)	1717	1436
No of Primary Health Centres and Sub-Centres	10229	11531
iii. Transport		
Total Road Length (km)	130642	206484
Length of Surfaced Roads (Km)	57198	123412
iv. Electricity		
Per capita power Consumption (kwh)	122(2009-10)	242.1 (2016-17)
Availability of Power (million Unit Net)	10772	25131 (2016-17)
Percentage of Villages electrified[23]	77.50	95.50 (2014-15)
v. Financial Inclusion / Banks [24]		
No. of Bank Offices Scheduled Commercial Banks	4323	6445
Credit Deposit Ratio (%)	29.5 (sanction) 31.6 (utilization)	33.4 (sanction) 34.5 (utilization)
C. Industry / Annual Survey of Industries		
No of Registered Small Scale Units	1574	1814(2013-14)[25]
No. of Registered Factories	2805	3623
Value of Output (Rs Crore)	36051	47734
Net Value Added (Rs Crore)	4415	5239
Profits (Rs Crore)	3205	3213
Gross Fixed Capita Formation (Rs Crore)	1130	1392
No. of persons employed in factories	106,213	119,496

[17] 2016 figures represent shares in NSVA (Net State Value Added) at current prices. Data source: CSO.
[18] http://agcensus.nic.in/document/ac1011/reports/air2010-11complete.pdf
[19] Ministry of Health and Family Welfare, GOI
[20] Office of the Registrar General and Census Commissioner, India
[21] Statistical Year Book India 2017, from www.mospi.gov.in
[22] *Ibid*
[23] Niti Aayog , http://niti.gov.in/state-statistics#
[24] RBI Handbook of Statistics on Indian States https://m.rbi.org.in/scripts/AnnualPublications.aspx?head=Handbook%20of%20Statistics%20on%20Indian%20States
[25] http://dcmsme.gov.in/dips/state_wise_profile_16-17/Bihar%20-%20State%20Profile.pdf

3.8 Public Expenditure and Financial Management Reforms

The first set of Public Expenditure and Financial Management (PEFM) reforms encompassed enactment of several path-breaking legislations, most important of which was, of course, the Bihar FRBM Act, 2006. This Act played a very significant role in bringing back financial discipline and fiscal consolidation, generated sustained and significant revenue surpluses, contained borrowing and fiscal deficit within sustainable levels and led to overall improvement in the fiscal situation. Most importantly, it saved the state government from the brink of an impending and vicious debt trap.

As regards expenditure management, the focus was shifted to non-wage development expenditure and improvement of public services, through the leveraging of technology, introducing many administrative innovations, and through empowering – and often path-breaking – enactments like Bihar Right to Public Service Act, 2011 and Bihar Right to Public Grievance Redressal Act, 2015 etc. The road and power infrastructure was remarkably improved within a relatively short time by focusing investments in this area. The list of major programmes, reforms and innovations launched by the State Government since 2010-11 are included in Annexure 3.1.

3.9 Outcome Evaluation of State Finances in the context of recommendations of the 14th Finance Commission

In the last Chapter, we have noted that after recommendations of the Fourteenth Finance Commission increasing the total devolution from the Central divisible pool to states from 32 percent to 42 percent, state's share of Central taxes has predictably increased though this increase has been offset by a stagnation in the Central grants. In this section we evaluate the actual performance of the State vis-à-vis the outcomes assessed and projected by the 14th Finance Commission in their report. Tables 3.21 through 3.25 and Charts 3.15 and 3.17 show the deviations of the State's performance from the expected outcomes.

It can be surmised that the actual revenue receipts fell far short of the assessed ones, by a margin of 20 percent to 38.6 percent in 2015-16 and 2016-17 respectively. The deviation was 33.7 percent in 2017-18, as per the revised estimates, however, the budget estimates pertaining to 2018-19 lacks reliability due to the uncertainties in the budget estimates in respect of GST.

In respect of revenue expenditure, however, there were lesser expenditure than projected, though marginally. During 2015-16 and 2016-17, the deviations from the assessed figures amounted to only 1.3 and 3.9 percent respectively. In the revised estimates for 2017-18, the revenue expenditure exceeded the projections by 16.3 percent, while in the budget estimates for 2018-19, it is expected to exceed the assessed expenditure by 4.2 percent. The combined effect of both is a much higher pre-devolution deficit in the revenue account, of 12 percent and 22.6 percent 2015-16 and 2016-17 respectively, which is poised for steep rise to 48.6 percent in the revised estimates for 2017-18 and 44.8 percent in the budget estimates of 2018-19.

From Tables 3.24 and 3.25, it is seen that the ratio of interest payment to total revenue has been exceeding the projections, but the ratio has been falling slowly and is likely to fall further if this trend sustains. The debt: GSDP ratio exceeded the projections in 2016-17 and the own tax: GSDP ratio has also been short of the projected figures in 2016-17 by more than 2 percent.

Table 3.21 : Assessed Vs Actual Revenue Receipts of Bihar: 2015-16 to 2019-20 (Rs Crore)

	Assessed Own Revenue Receipts			Actual Own Revenue Receipts			Deviation (%)		
	Tax Revenue	Non-Tax Revenue	Total	Tax Revenue	Non-Tax Revenue	Total	Tax Revenue	Non-Tax Revenue	Total
2015-16	31881	2756	34637	25449	2186	27635	20.2	20.7	20.2
2016-17	39607	2973	42580	23742	2403	26145	40.1	19.2	38.6
2017-18[26]	49204	3250	52454	38473	2855	34756	21.8	12.2	33.7
2018-19[27]	58956	3592	62547	32930	4446	20346	44.1	-23.8	67.5
2019-20	68956	4015	72971						

Source: Annexure 7.5, Report of the 14th Finance Commission & Finance Accounts of Bihar Government

Chart 3.15 : Assessed Vs Actual Revenue Receipts (Rs. Crore)

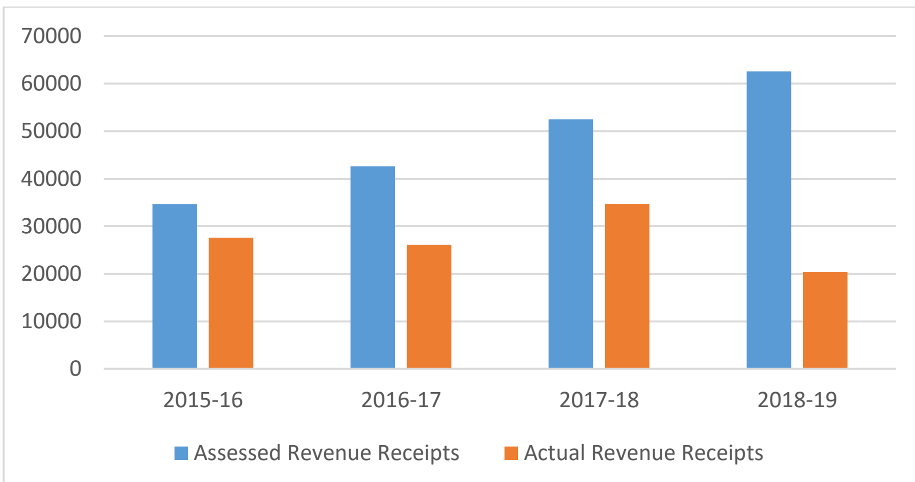


Table 3.22 : Assessed Vs Actual Revenue Expenditure of Bihar: 2015-16 to 2019-20 (Rs Crore)

	Assessed Own Revenue Expenditure			Actual Own Revenue Expenditure			Deviation (%)		
	Total	Interest Payment	Pension	Total	Interest Payment	Pension	Total	Interest Payment	Pension
2015-16	84709	6359	12833	83616	7098	11850	1.3	-11.6	7.7
2016-17	98661	7251	14116	94765	8191	12508	3.9	-13.0	11.4
2017-18[28]	113237	8288	15528	131661	9592	19878	-16.3	-15.7	-28.0
2018-19[29]	131177	9491	17081	136739	10763	15829	-4.2	-13.4	7.3
2019-20	172444	10890	18789						

Source : Annexure 7.5, Report of the 14th Finance Commission & Finance Accounts of Bihar Government

[26] RE figures for actual revenues.
[27] BE figures for actual revenues.
[28] RE figures for actual revenue expenditure.
[29] BE figures for actual revenue expenditure.

Chart 3.16 : Assessed Vs Actual Revenue Expenditure (Rs. Crore)

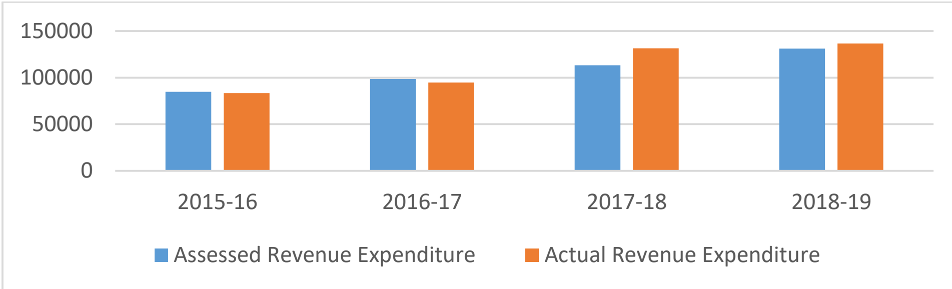


Table 3.23 : GSDP and Pre-Devolution Revenue Deficit of Bihar- Projected Vs Actual (Rs. Crore)

	GSDP			Pre-Devolution Revenue Deficit		
	Projected	Actual	Deviation (%)	Projected	Actual	Deviation (%)
2015-16	455451	381501	19.4	50072	56074	-12.0
2016-17	529025	438030	20.8	56081	68780	-22.6
2017-18	614485	NA	NA	60783	90333	-48.6
2018-19	713749	NA	NA	68630	99364	-44.8
2019-20	829048			99473		

Source: Annexure 7.5, Report of the 14th Finance Commission & CSO Website

Chart 3.17 : Assessed Vs Actual Pre-Devolution Revenue Deficit (Rs. Crore)

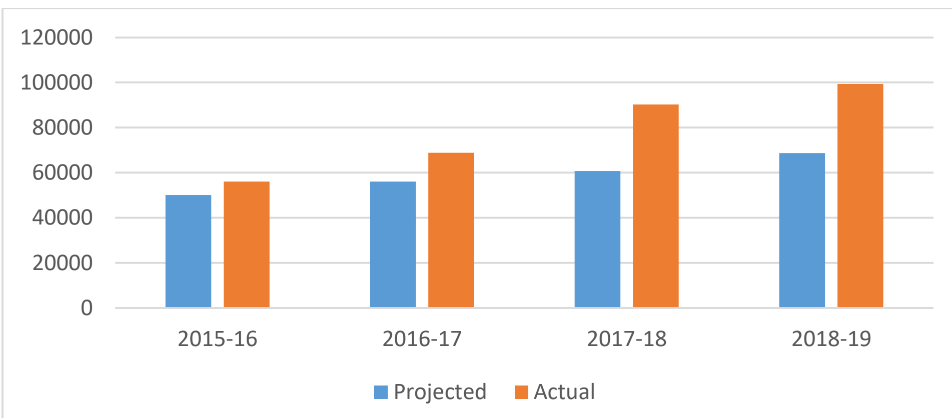


Table 3.24 : Interest Payment: Revenue Receipts of Bihar- Projected Vs Actual (Rs Crore)

	2015-16	2016-17	2017-18 RE	2018-19 BE	2019-20
Interest Payment	7098	8191	9592	10763	
Own Tax Revenues	25356	23583	38473	32930	
Non-Tax Revenue	2186	2403	2855	4446	
Total Own Revenue	27541	25985	41328	37376	
Total Revenue	96123	105585	133111	158051	
Interest Payment/ Own Revenue (Actual %)	25.8	31.5	23.2	28.8	
Interest Payment/ Total Revenue (Actual %)	7.38	7.76	7.21	6.81	
Interest Payment/ Total Revenue (Assessed %)	6.50	6.40	6.23	6.13	6.03
Deviation % (Assessed-Actual)	-0.88	-1.36	-0.98	-0.68	

Source: Annexure 14.1, Report of the 14th Finance Commission & Finance Accounts

Table 3.25 : Debt: GSDP Ratio and GFD: GSDP Ratio of Bihar: Projected Vs Actual (%)

	Debt: GSDP Ratio		GFD: GSDP Ratio		Own Tax: GSDP Ratio		
	Projected	Actual	Projected	Actual	Projected	Actual	Deviation (%)
2015-16	25.02	30.6	3.5	3.2	7.00	6.7	0.30
2016-17	24.79	31.7	3.3	3.8	7.49	5.4	2.09
2017-18	24.84	NA	3.5	NA	8.01	NA	NA
2018-19	24.89	NA	3.5	NA	8.26	NA	NA
2019-20	24.93		3.5		8.32		

Source: Annexures 7.3 & 14.1, Report of the 14th Finance Commission & Finance Accounts

3.10 Suggestions for improving the efficiency of public spending

- The public expenditure of government should be based on certain broad principles, viz. credibility of the budget, comprehensiveness and transparency of the budget cycle which includes the policy basis for budgeting, predictability and control on budget execution, accounting, recording and reporting and finally external scrutiny and auditing. The cost-benefit analysis and examples of best practices in other states should be considered for public spending.[30]
- The extent of systematic and predictable budget implementation is related to the effectiveness and efficiency of expenditure and revenue management and control. The CAG Report No 2 of 2016-17 on the General, Social and Economic Sectors of Bihar provides many examples of absence of proper monitoring and timely solution for problems – e.g. procurement without assessing requirement, non-compliance to the provision of Bihar Financial Rules leading to losses and leakages, deficient internal control systems leading to misappropriation of Government funds, initiation of road construction work by without prior land acquisition and consequent mid-way stoppage leading to unfruitful expenditure of huge amounts of money on incomplete works , besides denial of intended benefits to the beneficiaries as envisaged under the scheme, etc.
- Bihar is in the bottom five states in terms of efficiency in public spending. In this study, an outlays-outcome framework is used to measure the efficiency of government expenditures on Social Sector, especially health and education, among the Indian States. The wide variation in the public expenditure efficiency across the states may be due, at least partly, to the extent of good governance prevailing in the states. It implies that higher budgetary allocations on social sector alone might not necessarily translate into an improvement in their social outcomes. Public policy needs to focus on outcomes and not just on outlays. The quality of governance indeed becomes more crucial in the outlays-outcomes framework.[31]
- The budgeting process which is rather weak in the state must be strengthened and evaluation of budget performance for each programme must be undertaken. For promoting spending efficiency through budgetary management and control, the state government needs to improve disclosure standards and transparency of budgetary documentation; side by side, corporate standards of accountability and transparency in state-owned enterprises must also be improved.

[30]Jena, Pratap Ranjan, *India: Public Expenditure and Financial Accountability, Public Financial Management Performance Assessment Report*, NIPFP, New Delhi, 2010.

[31]Ranjan Kumar Mohanty and N.R. Bhanumurthy (2018), "Assessing Public Expenditure Efficiency of Indian States", National Institute of Public Finance and Policy (New Delhi).

- A 2001 study had suggested some measures for increasing the efficiency of public spending which are still relevant. Improving the presentation aspects of the budget can help improve the quality of legislative control, and monitoring of expenditure. Reduction in the numbers of grants, presentation of profile of debt of the state, classification of state's outstanding debt, contingent liability, explanation of variations in the estimate, consolidated list of works in progress with details of original and revised cost estimates, quantum of devolution to local bodies, data on salary and allowances of employees of government, local bodies and grant-in-aid institutions, pension liability, details of tax concession given, off-budget transaction involving borrowing by state PSUs , performance of the PSUs, their credit rating, flow of funds from Central government are among the significant pointers to be provided.[32]
- Annual budgeting is often influenced by the short-term political considerations which result in the unnecessary spending and distortion of an optimal policy-mix, and avoidable changes in the structure of expenditure. A medium-term framework is better for total government spending, covering three to five years and supported with medium-term objectives for one or more fiscal variables. The state government has a Medium Term Fiscal Plan (MTFP) since 2006, but it needs to dovetail the MTFP targets with the annual budgetary outlays in a more objective and transparent manner.
- Just as the fiscal targets should be as per the MFTP, each individual spending decision should be subjected to a transparent decision process such as a Medium Term Expenditure Framework (MTEF). The terms of a MTEF should be set by the highest authority in the state government through a transparent and participative process. Such an MTEF will indicate targets for expenditure related to the outcome of such expenditure.
- The trend of increasing capital outlay must be continued; but a portion of the increased public spending should be allocated for improving the systems for the control of spending and monitoring its outcomes. The spending plans and objectives should be made transparent to public scrutiny along with reporting of actual outcomes.
- Increases in public spending should be targeted at publicly articulated and growth-oriented policy objectives. These should be subjected to a transparent process of technical assessment, like a cost-benefit analysis, or comparison with best performing states. The spending plans should also be assessed for their macroeconomic consequences.
- Experiences of many countries have highlighted that government spending inefficiency declines when complemented by increases in private economic activities. Hence, increasing the share of private activities in the economy helps reduce the inefficiency of public spending. To encourage private economic activities, the government must formulate appropriate policies and create the necessary infrastructure that would attract private capital or encourage private consumption in the state.
- The Public Sector has been a drag on the finances of most states. Bihar Government has initiated only some half-hearted action (explained later) to wind up some of these enterprises, but no concrete

[32]Vathsala Ramji, S., Suresh, S., & Srinivasan, V. K., A Study on Management of Public Expenditure by State Governments in India, 2001.

results has so far been achieved. Despite its political fallout, a hard decision in this regard cannot indefinitely be put off.

- For improving spending efficiency in health services, recovery of the user charges is essential, for which suggestions have already been given in the last chapter.
- Mechanism like, Expenditure Finance Committee and Public Investment Board, which provide some degree of pre investment scrutiny of feasibility reports, now obtaining at the Centre, need to be introduced in the States. The area which calls for serious attention is the time phasing of investments, with provisions in the budget matching the needs of approved projects.[33]

[33]Vathsala Ramji, S., Suresh, S., & Srinivasan, V. K., A Study on Management of Public Expenditure by State Governments in India, 2001.

Annexure 3.1 : Major Public Expenditure Management Reforms and Innovations Initiated by the State Government

Programme	Features and Achievements
Rural Works Department	
Pradhan Mantri Gram Sadak Yojana (PMGSY); Mukhya Mantri Gram Samark Yojana (MMGSY); Gramin Tola Samark Nischay Yojana (GTSNY); State Scheme for bridges and other roads (NABARD).	All weather connectivity is to be provided to all unconnected habitations having a population of 500 and above in 27 Non-IAP Districts and 250 and above for 11 IAP Districts and 100 and above in identified 47blocks within IAP Districts Under this scheme rural habitations of the State having population of 250-499 are to be connected to all weathered roads. Under this scheme rural habitations of the State having population of 100-249 in all districts are to be connected to all weathered roads. Under this scheme construction of roads/bridges, up gradation, widening & strengthening works are taken, whose objective is to improve rural connectivity, accelerate industrialization of rural areas, increase in production of agricultural products and in getting adequate value for the same. A total of 53678.317 kms of rural road has been constructed, including 446 bridges, with an expenditure of Rs. 26184.61 crore in Bihar during 2010-11 to February 2018.[34]
Creation of Independent Quality Monitoring Cell	Rural Works Department is the statutory authority for designing, planning, monitoring, construction and maintenance of rural road works of the State Government irrespective of the source of funds for the same. The Department also intends to take up works on PPP with financial support from outside agencies. To keep the pace of contemporary requirements, RWD felt the need to set up a Quality Monitoring Cell (QMC) to bring about innovative reforms and the best practices in enhancing the efficiency of the department. In the year 2016 QMC was setup to monitor all the projects being taken up under the state scheme. The QMC envisages a three-tier quality monitoring mechanism for ensuring the quality of roads/bridges construction conforming to department standards, of which the first two tiers constitute inspections by designated authorities at different levels and the third tier comprises periodic inspections of works by Principal Quality Monitor (PQM) appointed by the department for the purpose, who shall generally be retired senior engineers from State/Central organizations. An Independent Quality Monitoring Cell has been set up to function under the administrative control of the Secretary, Rural Works Department and is supported by a team of experienced departmental officials.

[34]**Programme-wise Length and Expenditure of Rural Roads Constructed from 2010-11 to Feb. 2018**

Sl. No.	Name of the Scheme	Road Constructed (In km)	Bridge Constructed (Nos)	Expenditure (Rs in Crore)
1	Pradhan Mantri Gram Sadak Yojana	38000.188	244	15341.16
2	Mukhya Mantri Gram Sampark Yojana	7397.94		5246.39
3	Gramin Tola Sampark Nischay Yojana (GTSNY)	58.589		98.1167
4	State Scheme for bridges and other roads (NABARD	1917.97	188	2062.27
5	Mukhya Mantri Gram Sadak Yojana	4198.37		1952.52
6	Aapki Sarkar Aapk Dwar Yojana (ASAD)	172.521		144.10
7	Minimum Needs Programme (MNP)	1288.678	14	869.86
8	Special Component Programme for Schedule Caste (SCP)	644.061		470.19
	Total	**53678.317**	**446**	**26184.61**

Other Innovations	There are several cost-effective and fast construction technologies in the construction of rural roads, namely:- **1. Waste Plastic Technology** Presently this technology has been introduced in 463 Nos of roads having 827.772 km length in different divisions in the state. In this technology Waste Plastic in place of 8% Bitumen in PMC (Pre Mix Carpet) and MSS (Mix Seal Surfacing) is being used. With this technology, strong, durable and eco-friendly roads can be constructed which will relieve our state from all type of hazardous Plastic waste. **2 Cold Mix Technology** Presently this technology has been introduced in 583 Nos of roads having 1143.758 km length in different divisions in the state. In this technology Cold Mix PMC is being used in place of Hot Mix PMC which was earlier used in construction of rural roads. Liquid modified bitumen emulsion is mixed with stone chips without heating the mix during constructing the surface of road. Roads constructed with this technology are highly durable, eco-friendly and economical in longer run. **3. Cell Filled Technology** Presently this technology has been introduced in 1125 Nos. of roads having 561.853 km length in different divisions in the state. This technology has been introduced for low volume rural roads. In this technology concrete mix in filled in Plastic cell of 100mm width, which results in lowering the use of stone-aggregates and sand and thus reduces the exploitation of natural resources. **4. Panel Concrete Technology** Presently this technology has been introduced in 368 Nos of roads having 327.716 km length in different divisions in the state. This technology has been introduced for low volume rural roads. In this technology 100mm thick concrete mix is laid on and later cut in to small panels, this technology also reduces the use of stone-aggregates and sand and thus reduces the exploitation of natural resources. **5. Use of Fly Ash in Road Embankment** Presently this technology has been introduced in 100 Nos of roads having 47.856 km length in different divisions in the state. This technology uses Fly Ash, a byproduct obtained from burning pulverized coal in electric generation power plants. This Fly Ash can be used in construction of embankment in road construction, thus consumes the waste materials and solves the problem of dumping. **6. Stabilization of Sub Grade** Presently this technology has been introduced in 64 Nos of roads having 66.959 km length in different divisions in the state. CBR of the soil is below 4 in various regions in the state. To improve the strength of soil, cement can be mix to achieve the bearing capacity of the soil, which results in reducing the thickness of GSB layer and thus reduces the exploitation of natural resources. **7. Roller Compacted Concrete Pavement** Presently this technology has been introduced in 209 Nos of roads having 99.527 km length in different divisions in the state. In this technology PCC roads are constructed with compacting the concrete mix with Roller. With help of this technology road can be constructed with faster rate.

	8. Nano Technology Presently this technology has been introduced in 3 Nos of roads having 5.379 km length in different divisions in the state. In this technology water resistive road surface is constructed, which increased the durability of road. Department is keen to incorporate the use of new technologies for a length of fifteen percent (15%) of the annual proposals in the state. Presently 2915 no of roads having 3080.82 km have been sanctioned out of which, 407 roads having 233.784 km have been constructed with new technologies.
Food & Consumer Protection Department	
National Food Security Act 2013 (NFSA 2013)	Subsidized food grains (Rs. 2/- per kg wheat and Rs. 3/- per kg rice) are being made available to the eligible beneficiaries as per their entitlement. Under National Food Security Act 2013 Bihar State Food Commission has been Constituted vide resolution no 388 dated 21.01.2014 to ensure timely availability of Food grains to the beneficiaries. National food security Act is being implemented in the state since 1st Feb 2014. Food calendar had been issued to ensure timely food grains to beneficiaries.
Door Step Delivery Scheme 2016 under the NFSA 2013	Under the scheme food grains are being lifted & transported from FCI depo to FPS dealers shop through hundred percent GPS & load shell enabled vehicles and is monitored by 24 X 7 functional control room at BSFC head quarter. The information of lifting & transportation is also being sent to concerned officials and beneficiaries through SMS. In this way three layered tracking of food grains is being done from FCI to PDS.
End to end computerization	Under supply chain management scheme online allocation of food grains & payment through RTGS are being done. Under the scheme Pos devices are being installed at PDS shops for transparent and effective distribution of food grains.
Re-organization Bihar State Food & Civil Supplies Corporation	During 2017-18 administrative re-organization of the nodal agency, Bihar State Food & Civil Supplies Corporation, was effected. A total of 1281 posts were sanctioned with a total annual expenditure of Rs. 38.15 crore. This re-organization was done to ensure timely availability of subsidized food grains to the beneficiaries.
PDS Online Inspection Management System	Under POIMS (PDS Online Inspection Management System) Online Inspection of PDS shops is being done through android mobile apps. This helps in enhancing the inspection, monitoring and Management of PDS shops.
Revenue & Land Reforms Department	
Creation of a cadre of 'Bihar Revenue Service' officers	Under administrative re-organization since 2010-11, the Department of Revenue and land reforms has Constituted a new Cadre under 'Bihar Revenue Service' in 2010. Under this new Cadre for better administration of Revenue administration of the state, Circle inspector and its equivalent post, Circle officer and its equivalent posts, the post of Deputy collector land reforms and its equivalent posts and additional Collector and its equivalent posts have been created. The designation of Circle officer and its equivalent grade has been re-designated as Revenue Officer in the year 2015 as a gazetted post. To complete the land survey and settlement work in all districts by 2022, implementation of online mutation in all districts of the state, timely land acquisition and settlement a total 711 posts of revenue officers and equivalent grade post has been created.
Other Innovations	• Digitization of Cadastral, Revisional and Consolidation maps and selling it in computerized version online in Bihar Survey Office Gulzarbagh. Efforts are on to introduce the same in all the Sadar Anchals of district headquarters and also in Mumbai and Delhi.

	• Special Survey with Hybrid Method has been adopted in 2012 to overcome the gap between present ground realities and static maps of older period. Maps must correspond to the present reality. Aerial photography and modern surveying techniques have reduced the time. Certainly it would bring the national objectives of achieving uniform Land Information Management System (LIMS) across the states and conclusive title of land possession. • All the Jamabandi Panji (register-II) are being digitized so that it can create a digital platform for online mutation. It will also enable the department to keep the demand register free of any manual intervention and updated. • Online mutation has started in 45 Sadar Anchals & 141 others Anchals are to be notified in next few days. This initiative will sanitize the RoR and continuously keep updating the records through online mutation. • Online Land Rent payment facilities are being introduced for tenants. It has been initiated first in Danapur Anchal and soon whole Bihar will be covered under this service.
Constitution of Bihar Land Tribunal	Bihar Land Tribunal has been constituted for the speedy redressal of land disputes.
Rural Development Department	
MGNREGA	Government of Bihar with support from the World Bank is implementing Bihar integrated Social Protection Strengthening (BISPS) Project. The objective of this project is to strengthen institutional capacity to deliver social protection programme and services. Under this project Bihar Rural Development Society, Rural Development Department Bihar with a mandate to strengthen accounts keeping system of MGNREGA & other RD Schemes in all Districts and Blocks, specific positions have been created at the District level of 38 District Audit Managers and an equal number of District Finance Managers, besides others. Recruitment process for these positions have been completed and selected personnel's have been placed in different districts. This has resulted in strengthening of Financial management system at district level.
National Electronic Fund Management System, under MGNREGA	The National Electronic Fund Management System introduces by MoRD in FY 2016-17 through which the wage component of MGNREGA is being released following the DBT protocol direct to the workers accounts, based on a Fund Transfer Order (FTO) generated by the implementing agencies. This has not only ensured transparency in payment of wage but also resulted in timely payment of wages to MGNREGA Workers. HRMS Software has been introduced by Rural Development Department for HR Management of employees of Bihar Rural Development Society, Rural Development Department Bihar. It's implementation has resulted in quick resolution of all HR issues. Online database of all employees at one platform.
Creation of Bihar Rural Development Service cadre	As per the approval of cabinet of Bihar Government, Bihar Rural Development Service cadre has been approved in 2010 to strengthen Rural Development schemes and implementation of Rural Development program at Block and Panchayat level. Under this cadre 1020 new permanent posts have been created under Rural Development Department, which includes 534 posts of Rural Development Officers and 147 posts of Executive Magistrates, besides 228 Assistant District Development Officers etc.
Bihar Rural Livelihoods Promotion Society (JEEViKA)	Bihar Rural Livelihoods Promotion Society, popularly known as JEEVIiKA, a registered society under the aegis of Rural Development Department, Government of Bihar marks a key chapter in rural development in Bihar. JEEViKA's journey of the last decade has coincided with the changing face of Bihar. Bihar Rural Livelihoods Promotion Society (BRLPS) was constituted by Government of Bihar as a special purpose vehicle to expedite the poverty alleviation interventions in Bihar.In 2013, JEEViKA was notified as a nodal

<table>
<tr><td></td><td>agency for implementation of National Rural Livelihood Mission (NRLM) and National Rural Livelihood Project (NRLP).

Over the last 10 years, JEEViKA has mobilized women from 82.60lakh households into strong, sustainable and self-managed 7.25 lakh Self-Help Groups (SHGs). These collectives have served as the ideal platforms for building the capacities of SHG women to engage in large scale financial intermediation, leverage higher resources from formal financial institutions, access productivity enhancement services in agriculture and livestock through a community based extension system, engage with markets on fair terms by building on economies of scale and improve access to government schemes and entitlements by facilitating awareness and participation. Most importantly, JEEViKA has deeply influenced the Rural and Social Development policy of the state, wherein organization of poor-rural women into strong community institutions is now a central strategy in tackling Bihar's rural poverty.

Key Interventions: Social Inclusion by mobilising of Rural Poor into Self-managed Community Institutions

The project envisages a three-tier institutional structure at the community level i.e. Self-Help Groups (SHG) at hamlet level, Village Organization (VO) at Village level and Cluster Level Federation (CLF) at Cluster level with a prescribed size of SHG (12-15 individual members), VO (12-15 SHGs) and CLF (25-45 VOs). Till date, JEEViKA formed 725,693 SHGs which further federated into 45854 VOs and 663 CLFs. Following strategies are adopted for Social Inclusion,
• Initiating SHG Formation from Hamlets of Scheduled Caste and Scheduled Tribes
• Introduced exclusive Scoping CRPs (Trained Community Resource Persons) and Extending Monetary incentives for inclusion of SC/ST HHs
• Food Security Fund extended to Village Organizations with a coverage of over 50% SC /ST households
• Convergence with Department of Animal Husbandry and Fishery Resource for initiation of Integrated Goat and Sheep Development Scheme for SC and STs covering 8500 HHs.</td></tr>
<tr><td colspan="2">Water Resource Department</td></tr>
<tr><td>Reorganization of Water Resources Department</td><td>Reorganization of Water Resources Department came into effect from 1st Jun 2016. Before Reorganization both irrigation and Flood sector were working together under single administrative control. After reorganization, both Irrigation and Flood Protection and Drainage sector were separated as independent wing working under Independent Engineer in Chief. Due to this, administrative control has become more efficient and transparent. This reorganization has been done keeping its strength unchanged with no additional financial burden. A Voluntary Retirement Scheme (VRS) has also been implemented as per guidelines of General Administrative Department, Government of Bihar.</td></tr>
<tr><td colspan="2">General and Administration Department</td></tr>
<tr><td>Enactment of Bihar Right to Public Service Act, 2011</td><td>The Bihar Right to Public Services Act was passed in 2011 as part of the implementation of the then Government's agenda called 'Sushasan' (Good Governance). Bihar was the State to pioneer end to end information system for monitoring the results of the implementation of the Act. Observing its success other Governments, including foreign countries like Nepal and other States like Karnataka and Orissa, visited Bihar to understand the significance of an integrated MIS cutting across Departments and services.

For the purpose of implementation, monitoring and review, the law mandated the General Administration Department (GAD) as the nodal department. In turn, the GAD</td></tr>
</table>

	designated the Bihar Prashasanik Sudhar Mission Society (BPSMS) as the nodal agency to ensure co-ordination with the notified Departments and create an MIS that would facilitate the monitoring of service delivery of all notified services centrally. To ensure comprehensiveness and uniformity, BPSMS developed an MIS specifically for monitoring the implementation of BRTPS that was called '*Adhikaar*' (Rights). Adhikaar was unique in that it did not interfere or interrupt any of the then existing software utilised by the 10 Departments that had notified about 50 services. For instance, the Registration Department continued to use SCORE and the Transport Department used VAHAN and SARATHI for processing applications received for their respective services. BPSMS ensured that a standard application slip was linked to the statutory or rule based formats that were prescribed for certain services. This ensured that the unique ID generated for an application and acknowledgement was linked to the service specific special IDs. Thus, Adhikaar was able to track the service delivery status of each and every application. Once the services were delivered, delayed or denied by the different Departments, data on service delivery was fed into Adhikaar (in rare cases manually) for the purpose of tracking service delivery as mandated by the Act. Through this seamless integration of front-end and back-end, Adhikaar was able to provide real time data to both applicants and to the Government of Bihar. Thus, applicants could track the status of their applications either online or through sms. Adhikaar could also alert Designated Public Servants and nodal Officers about pending service delivery including those that were overdue. In addition, features were also introduced in Adhikaar to monitor specific data about infrastructure, human resource, status of appeals, etc. A sample format is attached to this note. Adhikaar was an enabling software that, among a number of features, also had the following unique ones: An acknowledgement receipt with unique ID, the photo of the applicant, due date for service delivery and details of the first appellate authority. An automatic SMS delivery system to those applicants who provided their mobile numbers stating that their service was ready to be delivered. It also facilitated online applications especially for caste, income and residence certificates that constituted about 70% of the total number of applications.
Enactment of Bihar Right to Public Grievance Redressal Act, 2015	The Bihar Right to Public Grievance Redressal Act (BRPGRA) 2015 was enacted to ensure a legal right to residents of Bihar have an opportunity for hearing and grievance redressal within a fixed time limit of 60 working days. This legal right completes the three pillars for good governance: right to a) information; b) public services and c) public grievance redressal. Feedback from earlier attempts at grievance redressal including the Janata Darbars suggested that institutions (departments and other government organizations) had a tendency in a minority of issues to 'dispose cases' rather than 'redress grievances'; thus, the same grievances would be raised in later Darbars, that the official documentation suggested had been 'disposed'. Looking at public grievancesfrom the point of the public, the Government of Bihar decided to completely re-engineer the process and not just improve the efficiency of previous systems. The closest to a legal right for public grievance redress that was available was the Rajasthan Right to Hearing Act, 2013. The BRPGRA goes far beyond what is envisaged under right to hearing and is a Best in Class Practice for others to follow. **Key elements of the Innovation are:** • For the first time in the country, redressal of public grievance became a **legal right**; • Every citizen has a right to **time-bound (60 working days) public grievance redressal;**

	• **Complaints can be registered in a variety of media**: by voice through the Call Centre (toll free number), digitally through the web portal, mobile app or by e-mail, and physically at 140 Public Grievance Redressal Centres (that also have a information and facilitation counter); • An **independent administrative structure** of Public Grievance Redressal Officers (PGROs) with quasi-judicial powers would take cognizance of the complaints. This set-up is supported by more than 1000 trained IT staff; • **Public Authorities** responsible for the redressal of the grievance and their superiors can be **summoned** by the PGROs; • Every complaint acknowledged, all data digitized, and complainants given a chance to personally appear for a hearing and place their side of the arguments at par with the public authority; • In case of delay or denial in redressal, reasons in writing to be provided; • There is a three-stage process for appeals and revisions against the orders issued by the PGRO or the First Appellate Authority. Appeals and revision applications are also to be disposed within stipulated time limit; • The solution to problems is ordered by an independent authority (quasi-judicial PGROs), not a party with self-interest; and • Accessibility, Transparency, Accountability, Timeliness and an Independent PGRO are now the foundation for redressal of public grievances. **Results** • Citizens have a 'One-stop Shop' to legally redress their grievances. They do not have to run from one office to another; • Actual grievance redressal, not just disposal, is now time-bound; • The orders by PGROs are in writing and communicated to the complainants as mandated by the Act; • More than 2.63 lakh grievances registered, and more than 2.37 lakh have been disposed of; • Power parity created as complainant at par with Public Authority; and • Departments are receiving an independent view of how the grievances related to their services can be redressed in a time bound manner.
Backward & Extremely Backward Welfare Department	
Scholarships	From 2013-14 to 2016-17, online application form for post matric scholarship has been invited to ensure that complete data base of the applicants and status of delivery of services to them is available to the department on a real time basis. From 2017-18 online application of post matric scholarship is being invited through National Scholarship Portal (NSP). This will make process more transparent and easy. In future payment of scholarship will be done through CFMS & PFMS in DBT mode.

Annexure 3.2 : Technical note related to estimation of expenditure

The methodology used is identical to the one used in respect of revenue as explained in Annexure 2.2 in the last Chapter. The results are shown below.

Projection of Expenditure

Table B 1: Projection of Expenditure on Organs of State

	Time (Number of Years)	Organs of State	Log	Linear Projection	Exponential Projection
2001-02	1	152	5.02	53.15	168.48
2002-03	2	181	5.20	121.26	192.93
2003-04	3	195	5.27	189.36	220.92
2004-05	4	335	5.82	257.47	252.97
2005-06	5	342	5.83	325.57	289.68
2006-07	6	311	5.74	393.68	331.70
2007-08	7	296	5.69	461.78	379.83
2008-09	8	408	6.01	529.89	434.94
2009-10	9	520	6.25	597.99	498.04
2010-11	10	780	6.66	666.09	570.31
2011-12	11	724	6.58	734.20	653.05
2012-13	12	711	6.57	802.30	747.80
2013-14	13	768	6.64	870.41	856.30
2014-15	14	1013	6.92	938.51	980.54
2015-16	15	1234	7.12	1006.62	1122.80
2016-17	16	1053	6.96	1074.72	1285.71
2017-18	17			1142.82	1472.25
2018-19	18			1210.93	1685.86
2019-20	19			1279.03	1930.46
2020-21	20			1347.14	2210.55
2021-22	21			1415.24	2531.27
2022-23	22			1483.35	2898.54
2023-24	23			1551.45	3319.08
2024-25	24			1619.56	3800.64

Output of Linear Model: Expenditure on Organs of State (Di)= -14.95+68.10441*(Ti).

Regression of Expenditure on Organs of State (Linear)						Regression Statistics	
						Number of obs	**16**
						F(1,14)	**134.18**
Source	SS	df	MS			Prob>F	**0.0000**
Model	1576991.71	1	1576991.71			R-squared	**0.9055**
Residual	164535.231	14	11752.5165			Adj R-squared	**0.8988**
Total	1741526.94	15	116101.796			Root MSE	**108.41**
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	68.10441	5.879305	11.58	0.000	55.49456	80.71427	
Cons	-14.95	56.85017	-0.26	0.796	-136.8815	106.9815	

Output of Exponential Model: Expenditure on Organs of State (Di)= 4.99e^0.1354* (Ti)

Regression of Expenditure on Organs of State (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	228.40
Model	6.24086076	1	6.24086076			Prob>F	0.000
Residual	0.382545286	14	0.027324663			R-squared	0.9422
Total	6.62340604	15	0.441560403			Adj R-squared	0.9381
						Root MSE	0.1653
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.1354824	0.008947	15.11	0.000	0.1162549	0.1547098	
Cons	4.991348	0.086685	57.58	0.000	4.805428	5.177269	

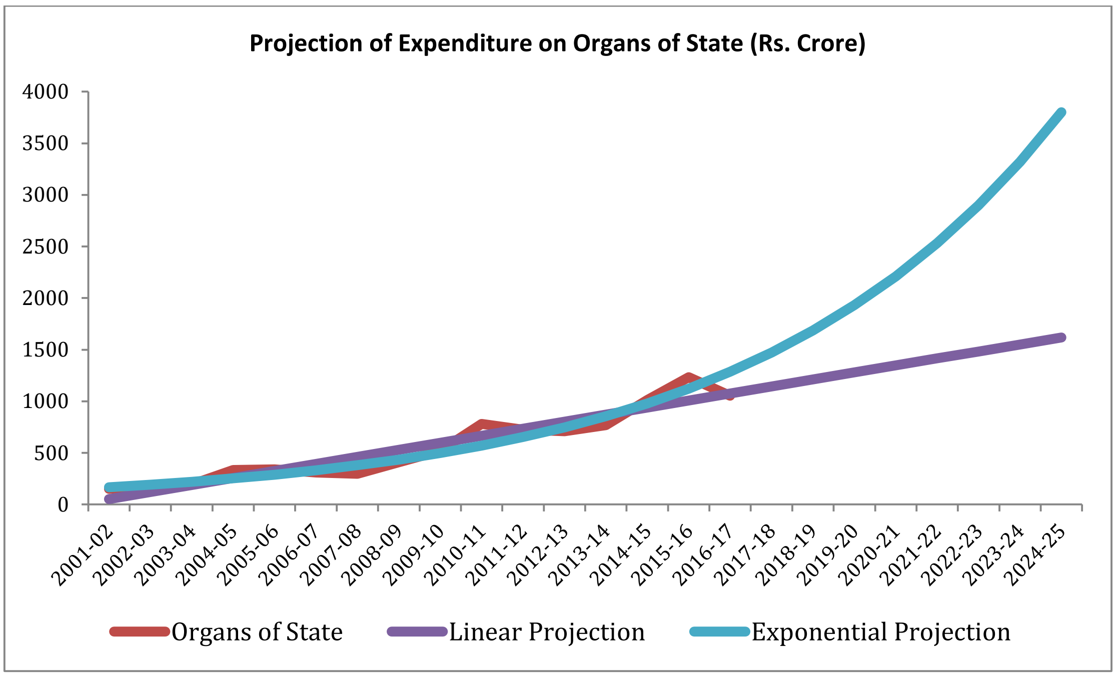


Table B2 : Projection of Interest Payment and Servicing Debt

	Time (Number of Years)	Interest Payment and Servicing Debt	Log	Linear Projection	Exponential Projection
2001-02	1	2629	7.87	2097.31	2602.96
2002-03	2	3022	8.01	2436.14	2789.01
2003-04	3	3343	8.11	2774.98	2988.35
2004-05	4	3474	8.15	3113.81	3201.95
2005-06	5	3649	8.20	3452.64	3430.81
2006-07	6	3416	8.14	3791.48	3676.03
2007-08	7	3707	8.22	4130.31	3938.78
2008-09	8	3893	8.27	4469.15	4220.31
2009-10	9	3825	8.25	4807.98	4521.96
2010-11	10	4673	8.45	5146.81	4845.17
2011-12	11	4540	8.42	5485.65	5191.49
2012-13	12	4683	8.45	5824.48	5562.55
2013-14	13	5895	8.68	6163.31	5960.14
2014-15	14	7104	8.87	6502.15	6386.15
2015-16	15	7590	8.93	6840.98	6842.60
2016-17	16	8774	9.08	7179.82	7331.68
2017-18	17			7518.65	7855.72
2018-19	18			7857.48	8417.22
2019-20	19			8196.32	9018.85
2020-21	20			8535.15	9663.48
2021-22	21			8873.98	10354.19
2022-23	22			9212.82	11094.26
2023-24	23			9551.65	11887.23
2024-25	24			9890.49	12736.89

Output of Linear Model: Interest Payment and Servicing Debt (Di)= 1758.475+338.8338*(Ti).

Regression of Interest Payment and Servicing Debt(Linear)						Regression Statistics	
						Number of obs	16
						F(1,14)	62.86
Source	SS	df	MS			Prob>F	0.000
Model	39034842.4	1	39034842.4			R-squared	0.8179
Residual	8693629.55	14	620973.539			Adj R-squared	0.8048
Total	47728471.9	15	3181898.13			Root MSE	788.02
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	338.8338	42.73632	7.93	0.000	247.1735	430.4941	
Cons	1758.475	413.2405	4.26	0.001	872.1622	2644.788	

Output of Exponential Model: Interest Payment and Servicing Debt (Di)= 7.795367e^0.0690371* (Ti)

Regression of Interest Payment and Servicing Debt (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	128.59
Model	1.62047903	1	1.62047903			Prob>F	0.000
Residual	0.176427039	14	0.012601931			R-squared	0.9018
Total	1.79690607	15	0.119793738			Adj R-squared	0.8948
						Root MSE	0.11226
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.0690371	0.0060881	11.34	0.000	0.0559795	0.0820946	
Cons	7.795367	0.0588688	132.42	0.000	7.669106	7.921628	

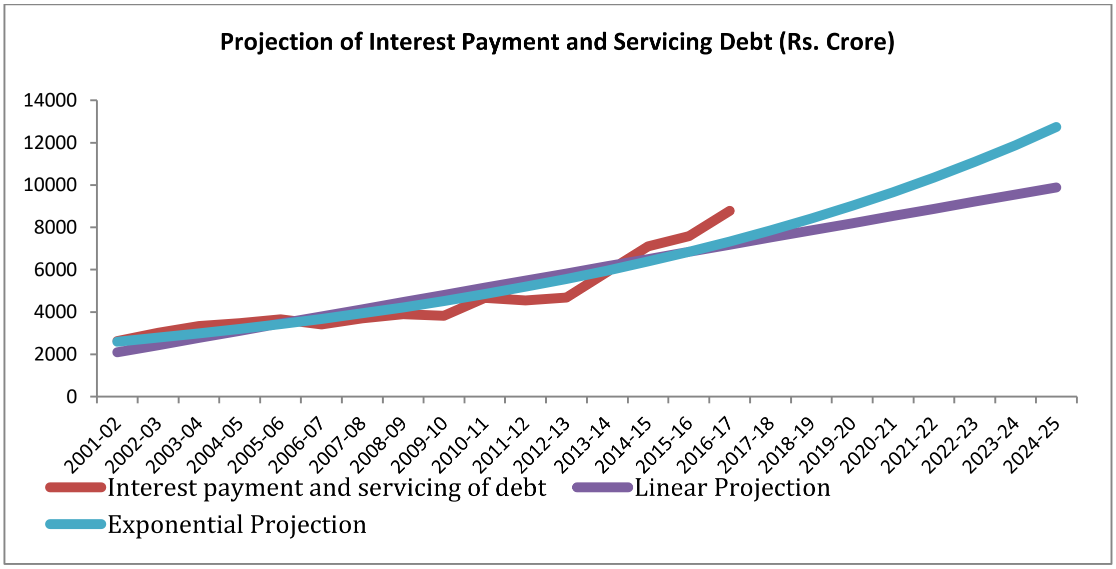


Table B3 : Projection of Expenditure on Administrative Services

	Time (Number of Years)	Administrative Services	Log	Linear Projection	Exponential Projection
2001-02	1	1106	7.01	202.50	1017.39
2002-03	2	1155	7.05	625.88	1164.38
2003-04	3	1185	7.08	1049.25	1332.61
2004-05	4	1471	7.29	1472.63	1525.15
2005-06	5	1869	7.53	1896.01	1745.51
2006-07	6	2171	7.68	2319.38	1997.70
2007-08	7	2156	7.68	2742.76	2286.33
2008-09	8	2437	7.80	3166.13	2616.66
2009-10	9	3073	8.03	3589.51	2994.71
2010-11	10	3413	8.14	4012.89	3427.39
2011-12	11	4107	8.32	4436.26	3922.58
2012-13	12	4289	8.36	4859.64	4489.32
2013-14	13	5198	8.56	5283.01	5137.94
2014-15	14	6248	8.74	5706.39	5880.27
2015-16	15	6629	8.80	6129.77	6729.85
2016-17	16	7537	8.93	6553.14	7702.19
2017-18	17			6976.52	8815.00
2018-19	18			7399.89	10088.60
2019-20	19			7823.27	11546.21
2020-21	20			8246.65	13214.41
2021-22	21			8670.02	15123.63
2022-23	22			9093.40	17308.70
2023-24	23			9516.77	19809.48
2024-25	24			9940.15	22671.56

Output of Linear Model: Expenditure on Administrative Services (Di)= -220.875+423.3676*(Ti).

Regression of Expenditure on Administrative Services (Linear)						Regression Statistics	
						Number of obs	16
						F(1,14)	185.80
Source	SS	df	MS			Prob>F	0.0000
Model	60941656	1	60941656			R-squared	0.9299
Residual	4591843.04	14	327988.789			Adj R-squared	0.9249
Total	65533499	15	4368899.93			Root MSE	572.7
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	423.3676	31.05918	13.63	0.000	356.7523	489.983	
Cons	-220.875	300.328	-0.74	0.474	-865.0145	423.2645	

Output of Exponential Model: Expenditure on Administrative Services (Di)= 6.79e^0.1349509* (Ti)

Regression of Expenditure on Administrative Services (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	1677.29
Model	6.19199293	1	6.19199293			Prob>F	0.0000
Residual	0.051683384	14	0.00369167			R-squared	0.9917
Total	6.2436732	15	0.416245088			Adj R-squared	0.9911
						Root MSE	0.06076
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.1349509	0.0032951	40.95	0.000	0.1278836	0.1420182	
Cons	6.790045	0.0318623	213.11	0.000	6.721707	6.858383	

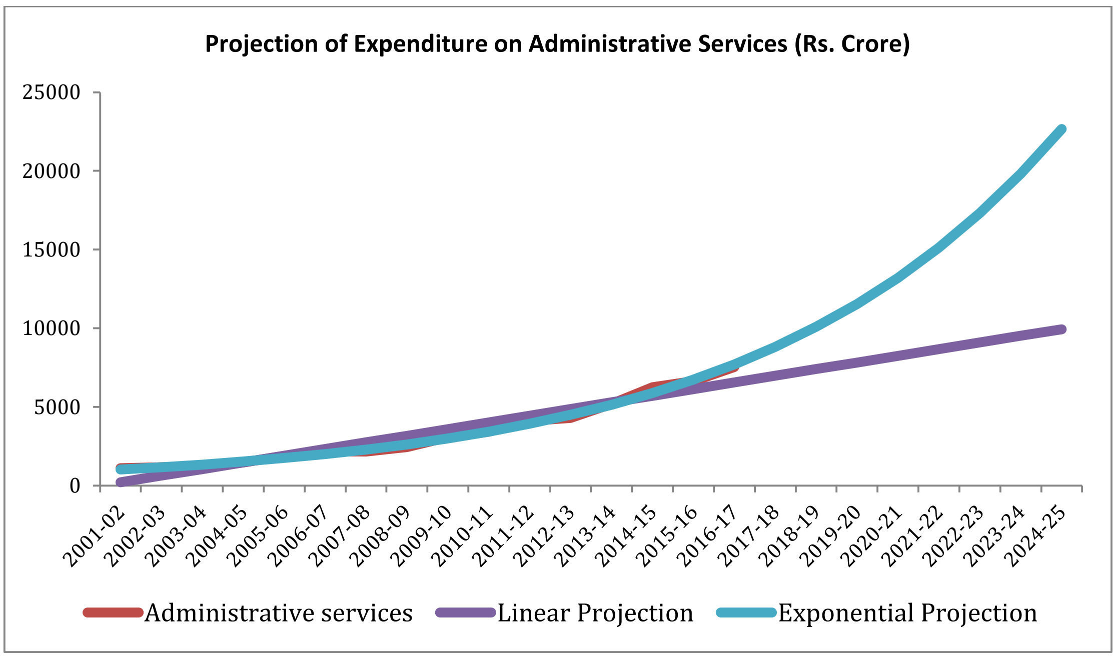


Table B4 : Projection of Expenditure on Pensions and Misc General Services

	Time	Pensions and Misc General services	Log	Linear Projection	Exponential Projection
2001-02	1	2273	7.73	-32.25	1602.83
2002-03	2	2049	7.63	738.43	1844.83
2003-04	3	2269	7.73	1509.10	2123.38
2004-05	4	2325	7.75	2279.78	2443.98
2005-06	5	2456	7.81	3050.45	2812.99
2006-07	6	2497	7.82	3821.13	3237.71
2007-08	7	2789	7.93	4591.80	3726.57
2008-09	8	3479	8.15	5362.48	4289.23
2009-10	9	4319	8.37	6133.15	4936.85
2010-11	10	6144	8.72	6903.83	5682.25
2011-12	11	7808	8.96	7674.50	6540.19
2012-13	12	8372	9.03	8445.18	7527.68
2013-14	13	9482	9.16	9215.85	8664.26
2014-15	14	11345	9.34	9986.53	9972.45
2015-16	15	11850	9.38	10757.20	11478.16
2016-17	16	12508	9.43	11527.88	13211.21
2017-18	17			12298.55	15205.93
2018-19	18			13069.23	17501.82
2019-20	19			13839.90	20144.37
2020-21	20			14610.58	23185.91
2021-22	21			15381.25	26686.68
2022-23	22			16151.93	30716.02
2023-24	23			16922.60	35353.74
2024-25	24			17693.28	40691.69

Output of Linear Model: Expenditure on Pensions and Misc General services (Di)= -802.925+770675*(Ti).

Regression of Expenditure on Pensions and Misc General services (Linear)						Regression Statistics	
						Number of obs	16
						F(1,14)	115.5
Source	SS	df	MS			Prob>F	0.0000
Model	201939585	1	201939585			R-squared	0.8919
Residual	24478319.5	14	1748451.39			Adj R-squared	0.8842
Total	226417904	15	15094527			Root MSE	1322.3
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	770.675	71.71126	10.75	0	616.8697	924.4803	
Cons	-802.925	693.4148	-1.16	0.266	-2290.152	684.3019	

Output of Exponential Model: Expenditure on Pensions and Misc General services (Di)= 7.238904e^0.1406198* (Ti)

Regression of Expenditure on Pensions and Misc General services (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	209.55
Model	6.72313266	1	6.72313266			Prob>F	0.0000
Residual	0.449170118	14	0.03208358			R-squared	0.9374
Total	7.17230277	15	0.478153518			Adj R-squared	0.9329
						Root MSE	0.17912
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.1406198	0.0097141	14.48	0.000	0.1197851	0.1614544	
Cons	7.238904	0.0939307	77.07	0.000	7.037442	7.440365	

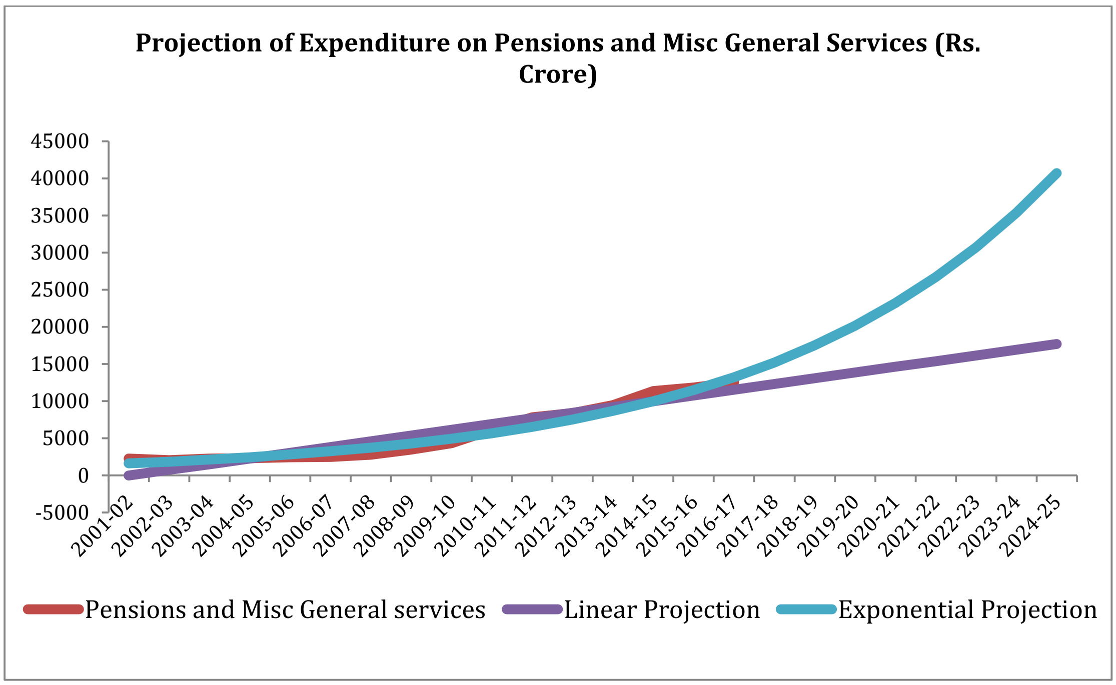


Table B5 : Projection of Expenditure on Other General Services

	Time	Other General Services	Log	Linear Projection	Exponential Projection
2001-02	1	162	5.09	84.31	149.95
2002-03	2	168	5.12	128.14	168.44
2003-04	3	184	5.22	171.98	189.22
2004-05	4	199	5.29	215.81	212.56
2005-06	5	208	5.34	259.64	238.78
2006-07	6	248	5.51	303.48	268.23
2007-08	7	304	5.72	347.31	301.32
2008-09	8	313	5.75	391.15	338.49
2009-10	9	465	6.14	434.98	380.24
2010-11	10	439	6.08	478.81	427.15
2011-12	11	551	6.31	522.65	479.84
2012-13	12	590	6.38	566.48	539.03
2013-14	13	675	6.52	610.31	605.52
2014-15	14	698	6.55	654.15	680.21
2015-16	15	669	6.51	697.98	764.11
2016-17	16	736	6.60	741.82	858.37
2017-18	17			785.65	964.25
2018-19	18			829.48	1083.19
2019-20	19			873.32	1216.80
2020-21	20			917.15	1366.90
2021-22	21			960.99	1535.51
2022-23	22			1004.82	1724.91
2023-24	23			1048.65	1937.69
2024-25	24			1092.49	2176.70

Output of Linear Model: Expenditure on Other General services (Di)= 40.475+43.83382*(Ti).

Regression of Expenditure on Other General services (Linear)						Regression Statistics	
						Number of obs	16
						F(1,14)	280.52
Source	SS	df	MS			Prob>F	0.000
Model	653277.389	1	653277.389			R-squared	0.9525
Residual	32603.5485	14	2328.82489			Adj R-squared	0.9491
Total	685880.938	15	45725.3958			Root MSE	48.258
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	43.83382	2.617152	16.75	0.000	38.22059	49.44706	
Cons	40.475	25.30666	1.60	0.132	-13.80238	94.75238	

Output of Exponential Model: Expenditure on Other General services (Di)= 4.893959e^0.116317* (Ti)

Regression of Expenditure on Other General services (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	389.71
Model	4.60007531	1	4.60007531			Prob>F	0.0000
Residual	0.165253188	14	0.011803799			R-squared	0.9653
Total	4.7653285	15	0.317688566			Adj R-squared	0.9628
						Root MSE	0.10865
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.116317	0.0058921	19.74	0.000	0.1036796	0.1289543	
Cons	4.893959	0.0569741	85.90	0.000	4.771762	5.016156	

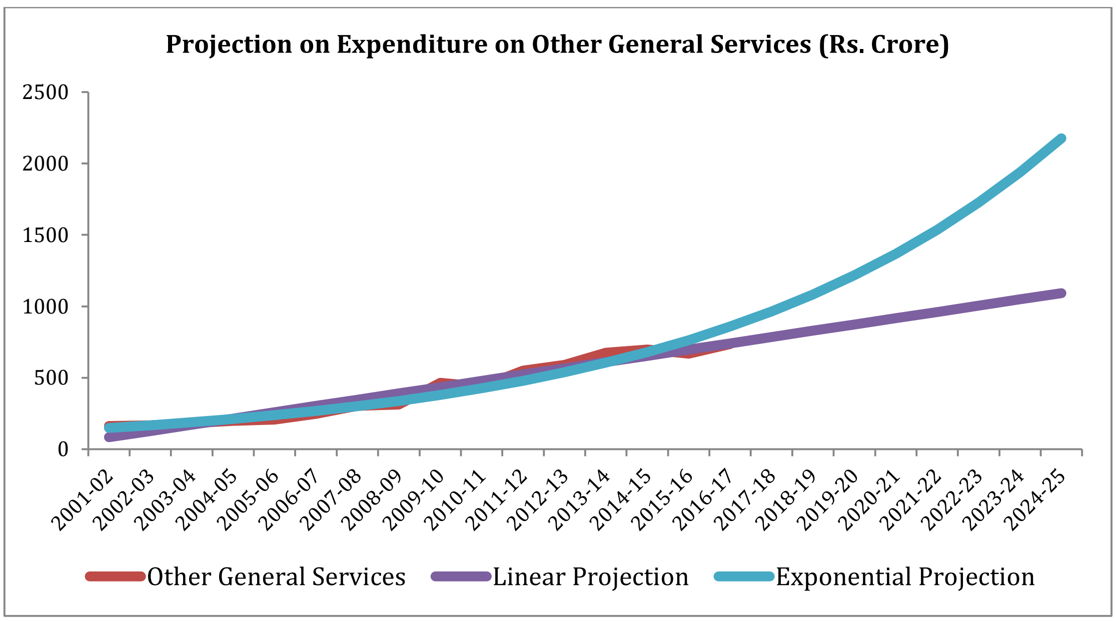


Table B6 : Projection of Expenditure on Education, Sports, Arts and Culture

	Time	Education, Sports, Arts and Culture	Log	Linear Projection	Exponential Projection
2001-02	1	2478	7.82	-74.12	2299.56
2002-03	2	2704	7.90	1111.74	2669.34
2003-04	3	2822	7.95	2297.60	3098.59
2004-05	4	3142	8.05	3483.45	3596.86
2005-06	5	4394	8.39	4669.31	4175.25
2006-07	6	5253	8.57	5855.17	4846.66
2007-08	7	5496	8.61	7041.02	5626.03
2008-09	8	6706	8.81	8226.88	6530.73
2009-10	9	7416	8.91	9412.74	7580.90
2010-11	10	8101	9.00	10598.60	8799.96
2011-12	11	10157	9.23	11784.45	10215.04
2012-13	12	14080	9.55	12970.31	11857.67
2013-14	13	14344	9.57	14156.17	13764.46
2014-15	14	16267	9.70	15342.02	15977.86
2015-16	15	18605	9.83	16527.88	18547.19
2016-17	16	19152	9.86	17713.74	21529.68
2017-18	17			18899.59	24991.78
2018-19	18			20085.45	29010.60
2019-20	19			21271.31	33675.66
2020-21	20			22457.17	39090.90
2021-22	21			23643.02	45376.94
2022-23	22			24828.88	52673.81
2023-24	23			26014.74	61144.05
2024-25	24			27200.59	70976.36

Output of Linear Model: Expenditure onEducation, Sports, Arts and Culture (Di)=-1259.975+1185.857*(Ti).

Regression of Expenditure on Education, Sports, Arts and Culture (Linear)						Regression Statistics	
						Number of obs	16
						F(1,14)	186.16
Source	SS	df	MS			Prob>F	0.0000
Model	478127605	1	478127605			R-squared	0.9301
Residual	35957619.5	14	2568401.39			Adj R-squared	0.9251
Total	514085224	15	34272348.3			Root MSE	1602.6
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	1185.857	86.91445	13.64	0	999.4444	1372.27	
Cons	-1259.975	840.4227	-1.5	0.156	-3062.503	542.5525	

Output of Exponential Model: Expenditure on Education, Sports, Arts and Culture (Di)=7.591356e^0.1491143*(Ti)

Regression of Expenditure on Education, Sports, Arts and Culture (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	1105.88
Model	7.55992207	1	7.55992207			Prob>F	0.0000
Residual	0.095705537	14	0.00683611			R-squared	0.9875
Total	7.65562761	15	0.510375174			Adj R-squared	0.9866
						Root MSE	0.08268
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.1491143	0.004484	33.25	0.000	0.1394971	0.1587315	
Cons	7.591356	0.0433582	175.08	0.000	7.498362	7.68435	

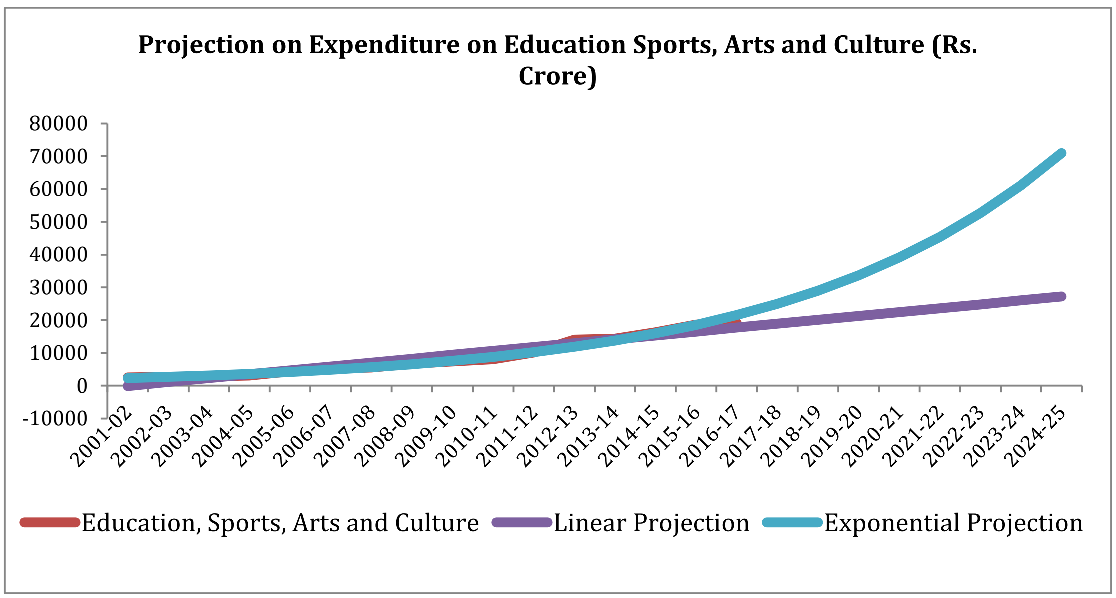


Table B7 : Projection of Expenditure on Health and Family Welfare

	Time	Health and family Welfare	Log	Linear Projection	Exponential Projection
2001-02	1	519	6.25	-62.86	452.18
2002-03	2	553	6.32	165.88	521.59
2003-04	3	534	6.28	394.62	601.65
2004-05	4	607	6.41	623.36	694.00
2005-06	5	877	6.78	852.10	800.53
2006-07	6	985	6.89	1080.84	923.41
2007-08	7	1141	7.04	1309.58	1065.16
2008-09	8	1193	7.08	1538.32	1228.66
2009-10	9	1388	7.24	1767.06	1417.26
2010-11	10	1502	7.31	1995.80	1634.80
2011-12	11	1804	7.50	2224.54	1885.75
2012-13	12	1836	7.52	2453.28	2175.21
2013-14	13	2113	7.66	2682.02	2509.10
2014-15	14	3288	8.10	2910.76	2894.25
2015-16	15	3481	8.15	3139.50	3338.51
2016-17	16	4622	8.44	3368.24	3850.97
2017-18	17			3596.97	4442.10
2018-19	18			3825.71	5123.96
2019-20	19			4054.45	5910.48
2020-21	20			4283.19	6817.74
2021-22	21			4511.93	7864.26
2022-23	22			4740.67	9071.42
2023-24	23			4969.41	10463.88
2024-25	24			5198.15	12070.08

Output of Linear Model: Expenditure on Health and family Welfare (Di)=-291.6+228.7397*(Ti).

Regression of Expenditure on Health and family Welfare (Linear)						Regression Statistics		
						Number of obs		16
						F(1,14)		66.14
Source	SS	df	MS			Prob>F		0.0000
Model	17789430	1	17789430			R-squared		0.8253
Residual	3765631.4	14	268973.672			Adj R-squared		0.8128
Total	21555061.4	15	1437004.1			Root MSE		518.63
Coefficient table								
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]			
Time	228.7397	28.12648	8.13	0	168.4144	289.065		
Cons	-291.6	271.9701	-1.07	0.302	-874.9179	291.7179		

Output of Exponential Model: Expenditure on Health and family Welfare (Di)=5.971273e^0.1428005* (Ti)

Regression of Expenditure on Health and family Welfare (Exponential)						Regression Statistics	
						Number of obs	16
Source	SS	df	MS			F(1,14)	507.24
Model	6.93327838	1	6.93327838			Prob>F	0.0000
Residual	0.191360165	14	0.013668583			R-squared	0.9731
Total	7.12463855	15	0.474975903			Adj R-squared	0.9712
						Root MSE	0.11691
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.1428005	0.0063405	22.52	0	0.1292016	0.1563995	
Cons	5.971273	0.0613095	97.4	0	5.839777	6.102769	

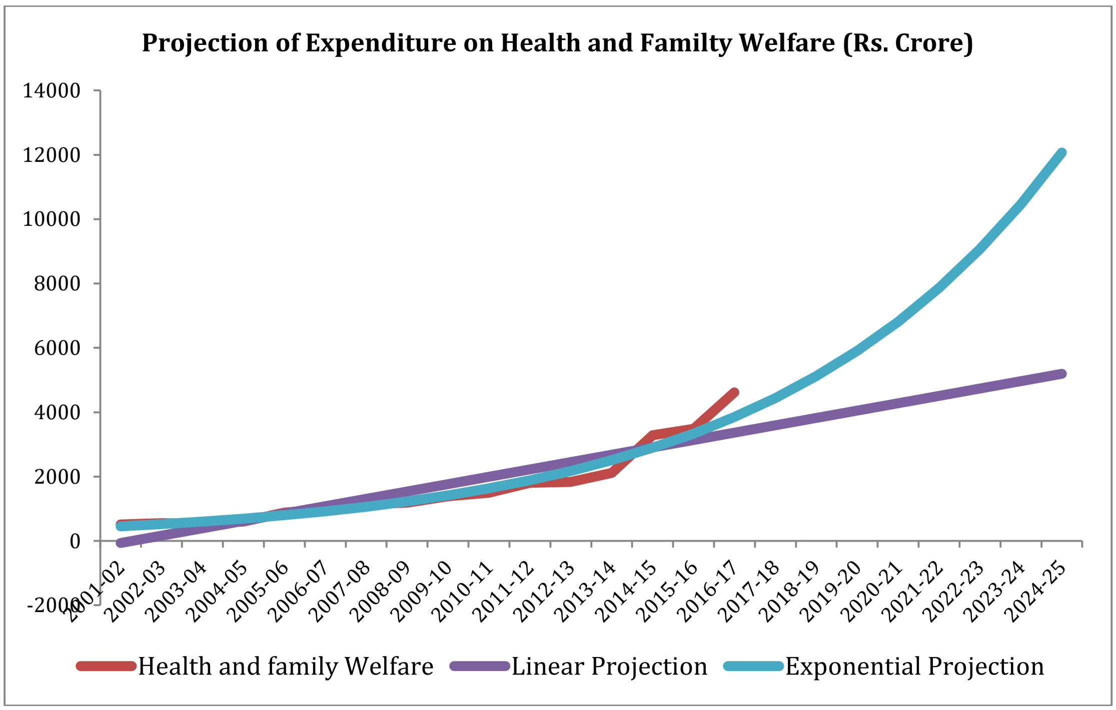


Table B8 : Projection of Expenditure on Water Supply and Sanitation

	Time	Water Supply and Sanitation	Log	Linear Projection	Exponential Projection
2001-02	1	136.32	4.92	-844.66	149.72
2002-03	2	219.11	5.39	-492.30	192.71
2003-04	3	200.49	5.30	-139.94	248.04
2004-05	4	251.08	5.53	212.43	319.26
2005-06	5	407.49	6.01	564.79	410.93
2006-07	6	513.72	6.24	917.15	528.93
2007-08	7	713.39	6.57	1269.52	680.81
2008-09	8	1413.39	7.25	1621.88	876.29
2009-10	9	1438.25	7.27	1974.24	1127.91
2010-11	10	1697.53	7.44	2326.61	1451.77
2011-12	11	1713.33	7.45	2678.97	1868.64
2012-13	12	2304.15	7.74	3031.33	2405.19
2013-14	13	2966.96	8.00	3383.70	3095.82
2014-15	14	3639.47	8.20	3736.06	3984.74
2015-16	15	3694.34	8.21	4088.42	5128.92
2016-17	16	7463.27	8.92	4440.79	6601.62
2017-18	17			4793.15	8497.20
2018-19	18			5145.51	10937.08
2019-20	19			5497.88	14077.53
2020-21	20			5850.24	18119.74
2021-22	21			6202.60	23322.61
2022-23	22			6554.97	30019.43
2023-24	23			6907.33	38639.16
2024-25	24			7259.69	49733.95

Output of Linear Model: Expenditure onWater Supply and Sanitation (Di)=-1197.025+352.3632*(Ti).

Regression of Expenditure on Water Supply and Sanitation (Linear)						Regression Statistics		
						Number of obs		16
						F(1,14)		43.00
Source	SS	df	MS			Prob>F		0.0000
Model	42214348.9	1	42214348.9			R-squared		0.7544
Residual	13742680.1	14	981620.006			Adj R-squared		0.7369
Total	55957028.9	15	3730468.6			Root MSE		990.77
Coefficient table								
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]			
Time	352.3632	53.73191	6.56	0	237.1198		467.6067	
Cons	-1197.025	519.5628	-2.3	0.037	-2311.376		-82.67363	

Output of Exponential Model: Expenditure on Water Supply and Sanitation (Di)=4.756327^0.2524215* (Ti)

Regression of Expenditure on Water Supply and Sanitation (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	517.96
Model	21.6636506	1	21.6636506			Prob>F	0.0000
Residual	0.585548021	14	0.041824859			R-squared	0.9737
Total	22.2491987	15	1.48327991			Adj R-squared	0.9718
						Root MSE	0.20451
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.2524215	0.0110912	22.76	0	0.2286333	0.2762097	
Cons	4.756327	0.1072466	44.35	0	4.526306	4.986348	

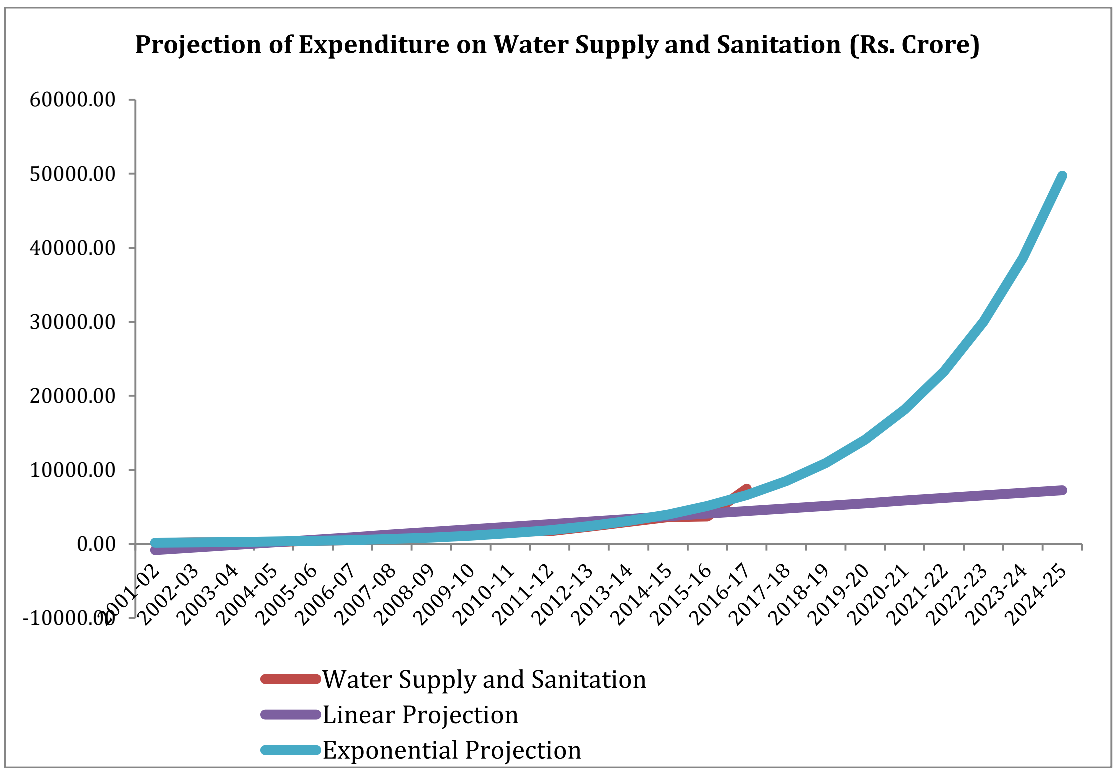


Table B9 : Projection of Expenditure on Social Welfare and Nutrition

	Time	Social Welfare and Nutrition	Log	Linear Projection	Exponential Projection
2001-02	1	258	5.55	-660.64	280.24
2002-03	2	265	5.58	-220.35	354.26
2003-04	3	291	5.67	219.93	447.84
2004-05	4	562	6.33	660.22	566.14
2005-06	5	922	6.83	1100.50	715.68
2006-07	6	606	6.41	1540.79	904.73
2007-08	7	1940	7.57	1981.07	1143.72
2008-09	8	2562	7.85	2421.36	1445.83
2009-10	9	2260	7.72	2861.64	1827.75
2010-11	10	2903	7.97	3301.93	2310.55
2011-12	11	3589	8.19	3742.21	2920.88
2012-13	12	3016	8.01	4182.50	3692.43
2013-14	13	4726	8.46	4622.78	4667.78
2014-15	14	5927	8.69	5063.07	5900.78
2015-16	15	5739	8.66	5503.35	7459.47
2016-17	16	6698	8.81	5943.64	9429.89
2017-18	17			6383.93	11920.80
2018-19	18			6824.21	15069.69
2019-20	19			7264.50	19050.35
2020-21	20			7704.78	24082.51
2021-22	21			8145.07	30443.91
2022-23	22			8585.35	38485.68
2023-24	23			9025.64	48651.68
2024-25	24			9465.92	61503.03

Output of Linear Model: Expenditure onSocial Welfare and Nutrition (Di)=-1100.925+440.2853*(Ti).

Regression of Expenditure on Social Welfare and Nutrition (Linear)							Regression Statistics	
							Number of obs	16
							F(1,14)	173.83
Source	SS	df	MS				Prob>F	0.0000
Model	65909387.7	1	65909387.7				R-squared	0.9255
Residual	5308250.33	14	379160.738				Adj R-squared	0.9201
Total	71217638	15	4747842.53				Root MSE	615.76
Coefficient table								
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]			
Time	440.2853	33.39429	13.18	0	368.6617	511.9089		
Cons	-1100.925	322.9074	-3.41	0.004	-1793.493	-408.3575		

Output of Exponential Model: Expenditure on Social Welfare and Nutrition (Di)=5.401237e^0.2344002* (Ti)

Regression of Expenditure on Social Welfare and Nutrition (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	177.50
Model	18.680773	1	18.680773			Prob>F	0.0000
Residual	1.47344474	14	0.105246053			R-squared	0.9269
Total	20.1542177	15	1.34361451			Adj R-squared	0.9217
						Root MSE	0.31442
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.2344002	0.017594	13.32	0	0.1966649	0.2721355	
Cons	5.401237	0.1701254	31.75	0	5.036355	5.76612	

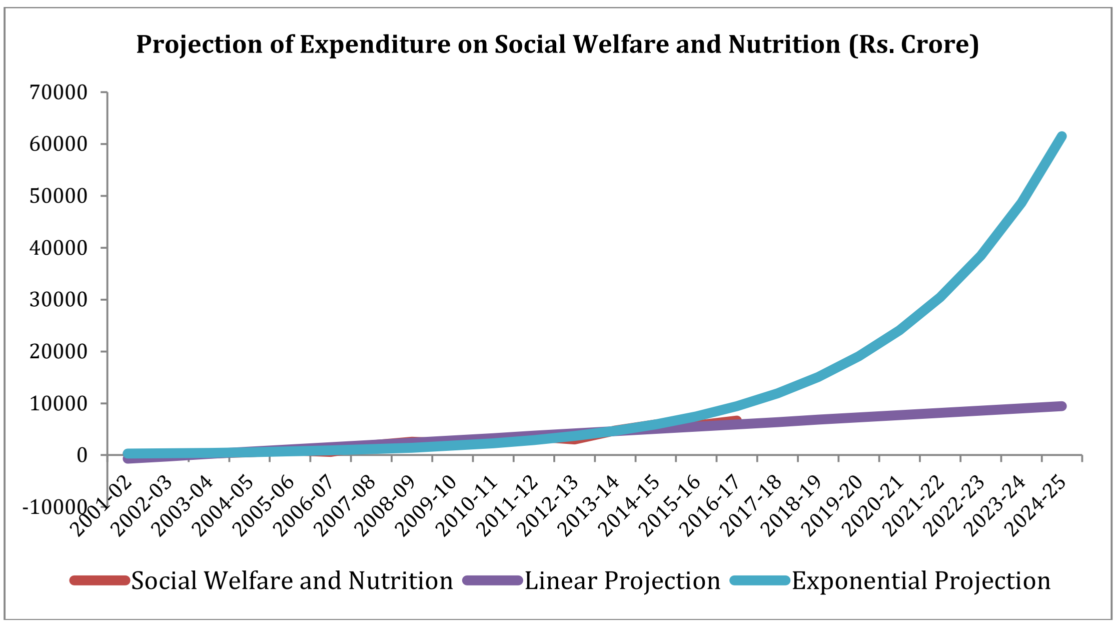


Table B10 : Projection of Expenditure on Other Social Services

	Time	Other social services	Log	Linear Projection	Exponential Projection
2001-02	1	141	4.95	-511.40	125.84
2002-03	2	174	5.16	-280.88	158.46
2003-04	3	186	5.23	-50.36	199.53
2004-05	4	233	5.45	180.16	251.25
2005-06	5	261	5.57	410.68	316.38
2006-07	6	560	6.33	641.20	398.39
2007-08	7	578	6.36	871.72	501.66
2008-09	8	377	5.93	1102.24	631.69
2009-10	9	684	6.53	1332.76	795.43
2010-11	10	887	6.79	1563.28	1001.62
2011-12	11	1466	7.29	1793.80	1261.25
2012-13	12	1872	7.53	2024.32	1588.18
2013-14	13	2245	7.72	2254.84	1999.85
2014-15	14	2591	7.86	2485.36	2518.24
2015-16	15	4424	8.39	2715.88	3170.99
2016-17	16	2801	7.94	2946.40	3992.95
2017-18	17			3176.93	5027.96
2018-19	18			3407.45	6331.27
2019-20	19			3637.97	7972.41
2020-21	20			3868.49	10038.94
2021-22	21			4099.01	12641.15
2022-23	22			4329.53	15917.88
2023-24	23			4560.05	20043.97
2024-25	24			4790.57	25239.59

Output of Linear Model: Expenditure onOther social services (Di)=-741.925+230.5206*(Ti).

Regression of Expenditure on Other social services **(Linear)**						Regression Statistics	
						Number of obs	16
						F(1,14)	47.80
Source	SS	df	MS			Prob>F	0.0000
Model	18067512.1	1	18067512.1			R-squared	0.7735
Residual	5291411.86	14	377957.99			Adj R-squared	0.7573
Total	23358924	15	1557261.6			Root MSE	614.78
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	230.5206	33.34128	6.91	0	159.0106	302.0305	
Cons	-741.925	322.3949	-2.3	0.037	-1433.393	-50.45679	

Output of Exponential Model: Expenditure on Other social services (Di)=4.604517e^0.2304855* (Ti)

Regression of Expenditure on Other Social services (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	312.51
Model	18.0620174	1	18.0620174			Prob>F	0.0000
Residual	0.809150963	14	0.057796497			R-squared	0.9571
Total	18.8711684	15	1.25807789			Adj R-squared	0.9541
						Root MSE	0.24041
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.2304855	0.013038	17.68	0	0.2025218	0.2584493	
Cons	4.604517	0.1260716	36.52	0	4.33412	4.874913	

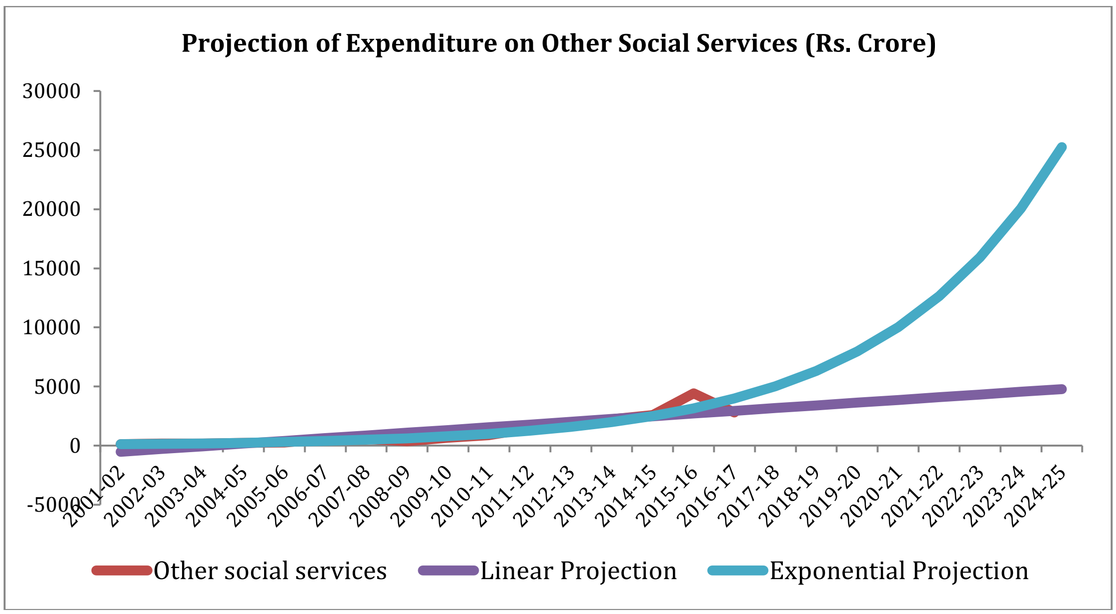


Table B11 : Projection of Expenditure on Rural Development

	Time	Rural development	Log	Linear Projection	Exponential Projection
2001-02	1	481	6.18	-345.61	540.79
2002-03	2	789	6.67	44.30	640.25
2003-04	3	624	6.44	434.22	758.00
2004-05	4	803	6.69	824.13	897.41
2005-06	5	1063	6.97	1214.05	1062.45
2006-07	6	1319	7.18	1603.96	1257.85
2007-08	7	1653	7.41	1993.88	1489.19
2008-09	8	2109	7.65	2383.79	1763.07
2009-10	9	2680	7.89	2773.71	2087.33
2010-11	10	1989	7.60	3163.62	2471.21
2011-12	11	2915	7.98	3553.54	2925.71
2012-13	12	3432	8.14	3943.45	3463.78
2013-14	13	4060	8.31	4333.37	4100.82
2014-15	14	4070	8.31	4723.28	4855.02
2015-16	15	4921	8.50	5113.20	5747.93
2016-17	16	8352	9.03	5503.11	6805.06
2017-18	17			5893.02	8056.60
2018-19	18			6282.94	9538.32
2019-20	19			6672.85	11292.56
2020-21	20			7062.77	13369.42
2021-22	21			7452.68	15828.24
2022-23	22			7842.60	18739.28
2023-24	23			8232.51	22185.70
2024-25	24			8622.43	26265.96

Output of Linear Model: Expenditure onRural development (Di)=-735.525+389.9147*(Ti).

Regression of Expenditure on Rural development **(Linear)**						Regression Statistics		
						Number of obs		16
						F(1,14)		58.92
Source	SS	df	MS			Prob>F		0.0000
Model	51691382.5	1	51691382.5			R-squared		0.8080
Residual	12282494.5	14	877321.038			Adj R-squared		0.7943
Total	63973877	15	4264925.13			Root MSE		936.65
Coefficient table								
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]			
Time	389.9147	50.7972	7.68	0	280.9655	498.8639		
Cons	-735.525	491.1856	-1.5	0.156	-1789.013	317.9633		

Output of Exponential Model: Expenditure on Rural development (Di)=6.124205e^0.168826* (Ti)

Regression of Expenditure on Rural development **(Exponential)**						Regression Statistics	
						Number of obs	16
Source	SS	df	MS			F(1,14)	376.76
Model	9.69074964	1	9.69074964			Prob>F	0.0000
Residual	0.360099625	14	0.025721402			R-squared	0.9642
Total	10.0508493	15	0.670056618			Adj R-squared	0.9616
						Root MSE	0.16038
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.168826	0.0086978	19.41	0	0.1501711	0.1874808	
Cons	6.124205	0.0841034	72.82	0	5.943822	6.304589	

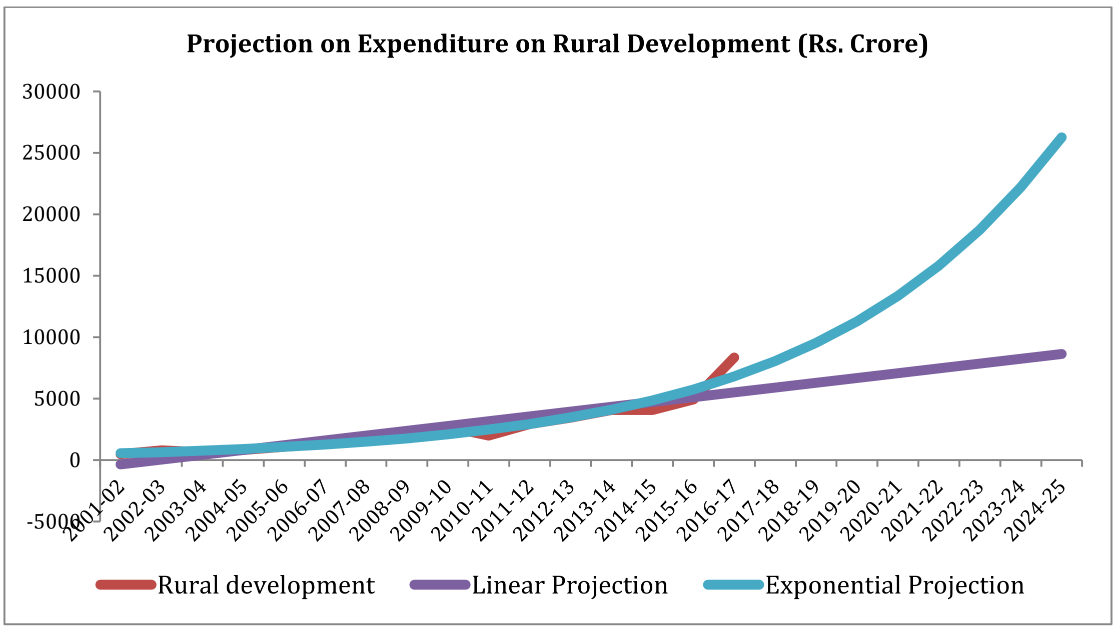


Table B12 : Projection of Expenditure on Energy

	Time	Energy	Log	Linear Projection	Exponential Projection
2006-07	1	1081	6.99	-407.95	596.78
2007-08	2	726	6.59	234.36	762.27
2008-09	3	723	6.58	876.68	973.64
2009-10	4	868	6.77	1519.00	1243.63
2010-11	5	1216	7.10	2161.32	1588.49
2011-12	6	2168	7.68	2803.64	2028.98
2012-13	7	3200	8.07	3445.95	2591.61
2013-14	8	3236	8.08	4088.27	3310.26
2014-15	9	3773	8.24	4730.59	4228.18
2015-16	10	6151	8.72	5372.91	5400.65
2016-17	11	7698	8.95	6015.23	6898.24
2017-18	12			6657.55	8811.12
2018-19	13			7299.86	11254.42
2019-20	14			7942.18	14375.26
2020-21	15			8584.50	18361.49
2021-22	16			9226.82	23453.11
2022-23	17			9869.14	29956.61
2023-24	18			10511.45	38263.53
2024-25	19			11153.77	48873.95

Output of Linear Model: Expenditure onEnergy (Di)=-1050.273+642.3182*(Ti).

Regression of Expenditure on Energy (Linear)						Regression Statistics	
						Number of obs	11
						F(1,14)	43.71
Source	SS	df	MS			Prob>F	0.0000
Model	45382991.1	1	45382991.1			R-squared	0.8293
Residual	9344763.41	9	1038307.05			Adj R-squared	0.8103
Total	54727754.5	10	5472775.45			Root MSE	1019
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	642.3182	97.15531	6.61	0	422.5376	862.0988	
Cons	-1050.273	658.9394	-1.59	0.145	-2540.897	440.3517	

Output of Exponential Model: Expenditure on Energy (Di)=6.146803e^0.2447472* (Ti)

Regression of Expenditure on Energy (Exponential)						Regression Statistics	
						Number of obs	11
Source	SS	df	MS			F(1,14)	80.54
Model	6.58913186	1	6.58913186			Prob>F	0.0000
Residual	0.736321352	9	0.081813484			R-squared	0.8995
Total	7.32545321	10	0.732545321			Adj R-squared	0.8883
						Root MSE	0.28603
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.2447472	0.0272719	8.97	0	0.1830538	0.3064406	
Cons	6.146803	0.1849673	33.23	0	5.728378	6.565228	

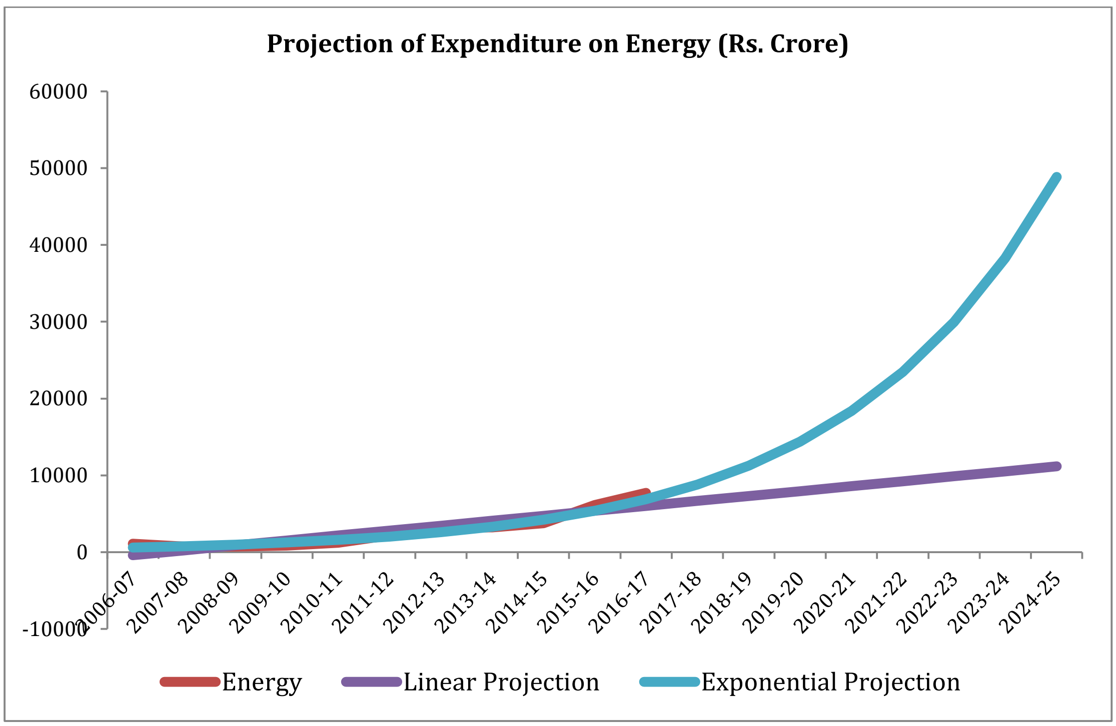


Table B13 : Projection of Expenditure on Other Economic Services

	Time	Other Economic Services	Log	Linear Projection	Exponential Projection
2001-02	1	808	6.69	-308.43	757.28
2002-03	2	937	6.84	235.10	901.56
2003-04	3	873	6.77	778.62	1073.34
2004-05	4	1231	7.12	1322.14	1277.84
2005-06	5	1303	7.17	1865.67	1521.31
2006-07	6	1621	7.39	2409.19	1811.16
2007-08	7	2059	7.63	2952.71	2156.24
2008-09	8	2894	7.97	3496.24	2567.07
2009-10	9	3540	8.17	4039.76	3056.17
2010-11	10	4631	8.44	4583.29	3638.46
2011-12	11	4955	8.51	5126.81	4331.70
2012-13	12	6078	8.71	5670.33	5157.02
2013-14	13	6765	8.82	6213.86	6139.58
2014-15	14	6603	8.80	6757.38	7309.36
2015-16	15	8623	9.06	7300.90	8702.01
2016-17	16	7367	8.90	7844.43	10360.00
2017-18	17			8387.95	12333.89
2018-19	18			8931.47	14683.86
2019-20	19			9475.00	17481.57
2020-21	20			10018.52	20812.33
2021-22	21			10562.04	24777.70
2022-23	22			11105.57	29498.59
2023-24	23			11649.09	35118.95
2024-25	24			12192.61	41810.16

Output of Linear Model: Expenditure onOther Economic Services (Di)= -851.95+543.5235*(Ti).

Regression of Expenditure on Other Economic Services (Linear)						Regression Statistics	
						Number of obs	16
						F(1,14)	212
Source	SS	df	MS			Prob>F	0.0000
Model	100442061	1	100442061			R-squared	0.9383
Residual	6606766.81	14	471911.915			Adj R-squared	0.9339
Total	107048828	15	7136588.53			Root MSE	686.96
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	543.5235	37.25555	14.59	0	463.6183	623.4287	
Cons	-851.95	360.2441	-2.36	0.033	-1624.597	-79.30335	

Output of Exponential Model: Expenditure on Other Economic services (Di)=6.455333e^0.1743984* (Ti)

Regression of Expenditure on Other Economic services (Exponential)						Regression Statistics	
						Number of obs	16
Source	SS	df	MS			F(1,14)	398.12
Model	10.3410281	1	10.3410281			Prob>F	0.0000
Residual	0.36364749	14	0.025974821			R-squared	0.9660
Total	10.7046755	15	0.713645036			Adj R-squared	0.9636
						Root MSE	0.16117
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.1743984	0.0087405	19.95	0	0.1556518	0.1931449	
Cons	6.455333	0.0845167	76.38	0	6.274062	6.636603	

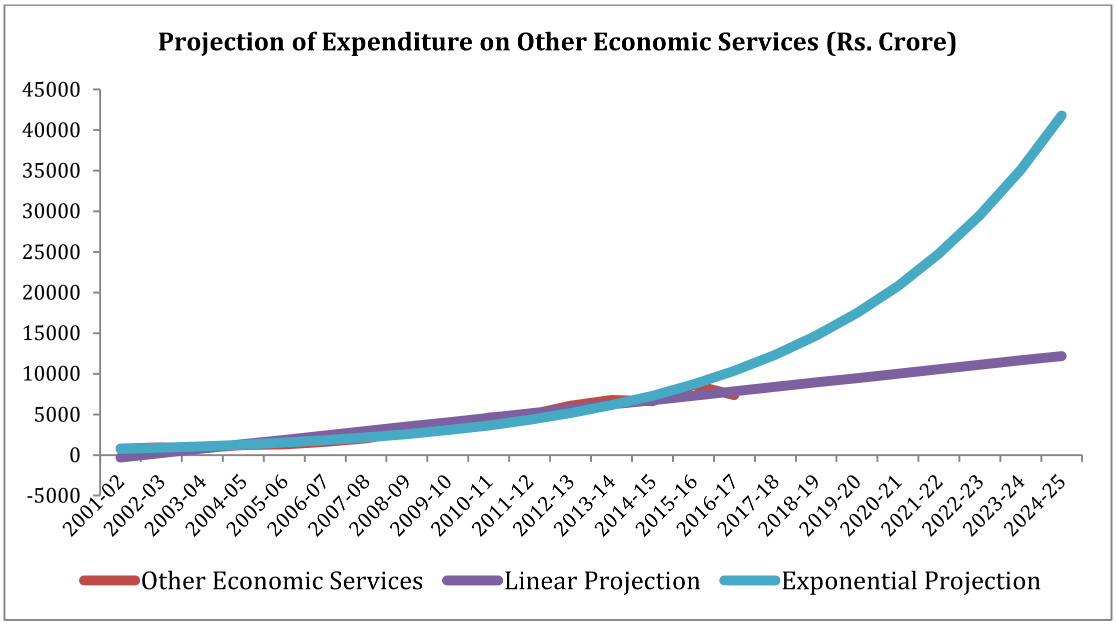


Table B14 : Projection of Capital Outlay

	Time	Capital Outlay	Log	Linear Projection	Exponential Projection
2001-02	1	742	6.61	-2940.24	931.49
2002-03	2	970	6.88	-1359.95	1177.82
2003-04	3	1549	7.35	220.35	1489.30
2004-05	4	1205	7.09	1800.64	1883.15
2005-06	5	2084	7.64	3380.93	2381.14
2006-07	6	5211	8.56	4961.22	3010.84
2007-08	7	6104	8.72	6541.51	3807.06
2008-09	8	6436	8.77	8121.80	4813.84
2009-10	9	7332	8.90	9702.09	6086.86
2010-11	10	9196	9.13	11282.38	7696.53
2011-12	11	8852	9.09	12862.67	9731.88
2012-13	12	9585	9.17	14442.96	12305.49
2013-14	13	14001	9.55	16023.25	15559.68
2014-15	14	18150	9.81	17603.54	19674.44
2015-16	15	23966	10.08	19183.83	24877.36
2016-17	16	27208	10.21	20764.12	31456.19
2017-18	17			22344.41	39774.80
2018-19	18			23924.70	50293.27
2019-20	19			25504.99	63593.36
2020-21	20			27085.28	80410.66
2021-22	21			28665.57	101675.30
2022-23	22			30245.86	128563.39
2023-24	23			31826.15	162562.06
2024-25	24			33406.44	205551.69

Output of Linear Model: Capital Outlay (Di)=-4520.525+1580.29*(Ti).

Regression of Capital Outlay (Linear)						Regression Statistics		
						Number of obs		16
						F(1,14)		82.37
Source	SS	df	MS			Prob>F		0.0000
Model	849087289	1	849087289			R-squared		0.8547
Residual	144321700	14	10308692.9			Adj R-squared		0.8443
Total	993408989	15	66227265.9			Root MSE		3210.7
Coefficient table								
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]			
Time	1580.29	174.1255	9.08	0	1206.828	1953.752		
Cons	-4520.525	1683.713	-2.68	0.018	-8131.731	-909.3191		

Output of Exponential Model: Capital Outlay (Di)=6.602148e^0.2346377*(Ti)

Regression of Expenditure on Capital Outlay (Exponential)						Regression Statistics	
						Number of obs	16
Source	SS	df	MS			F(1,14)	239.50
Model	18.7186451	1	18.7186451			Prob>F	0.0000
Residual	1.09420979	14	0.078157842			R-squared	0.9448
Total	19.8128549	15	1.32085699			Adj R-squared	0.9408
						Root MSE	0.27957
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.2346377	0.0151617	15.48	0	0.2021191	0.2671562	
Cons	6.602148	0.1466063	45.03	0	6.287709	6.916587	

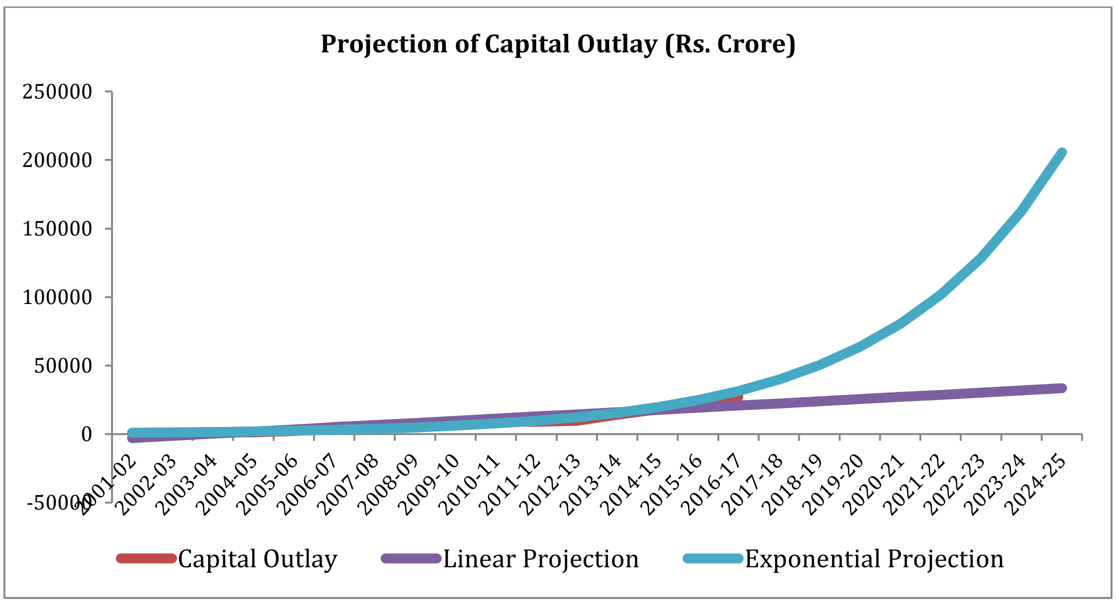


Table B15: Projection of GSDP of Bihar

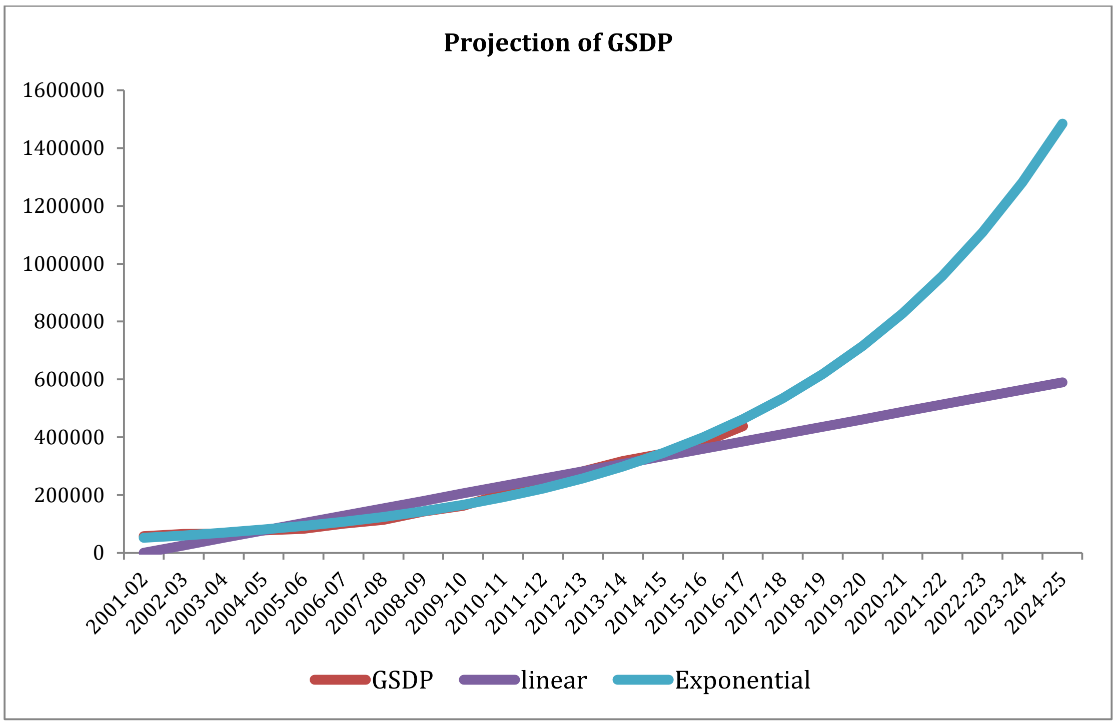
	Time	GSDP	log	Linear	Exponential
2001-02	1	57656	10.96	225	51863
2002-03	2	64965	11.08	25873	60005
2003-04	3	66174	11.10	51521	69425
2004-05	4	77781	11.26	77169	80324
2005-06	5	82490	11.32	102816	92935
2006-07	6	100737	11.52	128464	107525
2007-08	7	113679	11.64	154112	124405
2008-09	8	142279	11.87	179759	143936
2009-10	9	162923	12.00	205407	166533
2010-11	10	203555	12.22	231055	192678
2011-12	11	247143	12.42	256702	222927
2012-13	12	282367	12.55	282350	257925
2013-14	13	317101	12.67	307998	298417
2014-15	14	342951	12.75	333646	345267
2015-16	15	381501	12.85	359293	399471
2016-17	16	438030	12.99	384941	462186
2017-18	17			410589	534746
2018-19	18			436236	618697
2019-20	19			461884	715828
2020-21	20			487532	828208
2021-22	21			513180	958231
2022-23	22			538827	1108667
2023-24	23			564475	1282720
2024-25	24			590123	1484098

Output of Linear Model: GSDP (Di)=-25422.33+25647.71*(Ti).

Regression GSDP (Linear)						Regression Statistics	
						Number of obs	16
						F(1,14)	203.37
Source	SS	df	MS			Prob>F	0.0000
Model	2.24E+11	1	2.24E+11			R-squared	0.9356
Residual	1.54E+10	14	1.10E+09			Adj R-squared	0.9310
Total	2.39E+11	15	1.59E+10			Root MSE	33163
Coefficient table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	25647.71	1798.497	14.26	0	21790.32	29505.11	
Cons	-25422.33	17390.64	-1.46	0.166	-62721.53	11876.88	

Output of Exponential Model: GSDP (Di)= 10.71053e^0.1458245*(Ti)

Regression of GSDP (Exponential)						Regression Statistics	
						Number of obervation	16
Source	SS	df	MS			F(1,14)	1287.00
Model	7.23003111	1	7.23003111			Prob>F	0.0000
Residual	0.078648485	14	0.005617749			R-squared	0.9892
Total	7.3086796	15	0.487245306			Adj R-squared	0.9885
						Root MSE	0.07495
Coefficient Table							
	Coef.	STd. Err.	t	P>|t|	[95% Conf. Interval]		
Time	0.1458245	0.0040648	35.87	0	0.1371064	0.1545427	
Cons	10.71053	0.039305	272.5	0	10.62623	10.79483	



Chapter 4

Gross Fiscal Deficit

Objectives:

To analysis the deficits – Fiscal Deficits and Revenue Deficits
To examine the implementation of FRBM Act and commitment towards targets
To analyse the MTFP of various departments and aggregates

Data Sources:

Finance accounts for data on revenue surpluses, capital outlays and loans and advances made and recovered by the state government during the last 10 years; Budget documents of the state government

Methodology:

Trend and composition analysis; regression analysis for estimation and projection; year wise analysis of achievements FRBM targets; analysis of Mid Term Fiscal Policy (MTFP) targets and achievements.

The deficits represent the excess of expenditure over receipts. The net resource gap of the state government is reflected by the Gross Fiscal Deficit (GFD) which is to be bridged by borrowing of one sort or another. The GFD is calculated as the difference between the total revenue receipts including grants from the Centre and non-debt capital receipts, and the total expenditure of the government, including loans disbursed by it, net of recovery. The GFD less the interest payments is defined as the Primary Deficit which reflects the resource gap created without the interest charges on the past borrowings; in other words, this reflects the deficit created by the current policies of the state government without considering any liability inherited from the past.

4.1 Gross Fiscal Deficit

The GFD is a fairly good indicator of the state's overall financial performance, just as the GSDP is a fairly good proxy for the state's economic development. The GFD arises from three sources (1) deficit in the revenue account, (2) capital outlay which is to be financed generally by borrowing, since a state government would ordinarily not have enough resources for creating capital infrastructure necessary for development and (3) lending by the state government (net of recoveries), which again is to be financed by borrowing. Ideally, the revenue account of a state government should show a surplus that can be used for making up the shortfall in the capital account, and reducing capital account borrowing to that extent. The GFD is financed by three components: (1) net borrowing by the state government (internal debt) and central loans, net of repayments, (2) net accretion to the public account (receipts minus withdrawals) and (3) drawing down of the cash balance of the state (difference between its opening and closing cash balances).

Table 4.1 shows the GFD and its financing in Bihar during the 10 years from 2007-08 to 2016-17. Until the beginning of the last decade, Bihar was among the most highly indebted states in India; its fresh borrowing was entirely being used for discharging its soaring debt servicing obligation and interest payments. Bihar's turnaround came in 2004-05 when, for the first time, it had generated a surplus of Rs 1076 crore in its revenue account. The surplus was almost wiped out in the next year, but then picked up again and reached nearly Rs 4647 crore by 2008-09, before the economic downturn had forced it down to less than Rs 3000 crore in 2009-10. However, it recovered in the very next year and the revenue surplus gradually soared to Rs 12507 crore in 2015-16, in which year it recorded a jump of more than Rs 6600 crore over the previous year due to much higher Central grants for State plan schemes. The surplus in the revenue account stood at Rs 10819 crore in 2016-17.

The revenue surplus helped the state to increase its capital outlay which was stagnating between 2007-08 and 2012-13 from the effects of the slowdown of the national (and global) economy with an uptick in 2009-10, but capital outlay really picked up thereafter in tandem with revenue surpluses. Between 2007-08 and 2012-13, the average compound annual growth rate of capital was 9 percent, compared to 30 percent during the period from 2012-13 to 2016-17; the revenues surplus grew at a CAGR of 2 percent and 21 percent respectively during these periods. Net le3nding by the State plays a relatively insignificant role in the Gross Fiscal Deficit of the State.

Table 4.1 : Gross Fiscal Deficit and Its Financing in Bihar (Rs crore)

	2007-08	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Revenue Deficit	-4647	-4469	-2943	-6316	-4820	-5101	-6441	-5848	-12507	-10819
Capital Outlay	6104	6436	7332	9196	8852	9585	14001	18150	23966	27208
Net Lending	247	540	884	1091	1884	2061	792	-1124	603	91
Gross Fiscal Deficit	1704	2507	5273	3971	5916	6545	8352	11178	12062	16480
Financed By										
Net Public Debt	-20	4246	4151	3842	3706	6484	6788	10309	14258	17362
Net Borrowing from Public Account	352	-81	-675	2238	2469	343	1606	551	-1983	-893
Net Drawal from Cash Balance	1372	-1660	1796	-2110	-333	-281	-42	319	-214	10
Percentage Composition of Gross Fiscal Deficit (%)										
Revenue Deficit	-273	-178	-56	-159	-81	-78	-77	-52	-104	-66
Capital Outlay	358	257	139	232	150	146	168	162	199	165
Net Lending	14	22	17	27	32	31	9	-10	5	1
Gross Fiscal Deficit	100	100	100	100	100	100	100	100	100	100
Financed By										
Net Public Debt	-1	169	79	97	63	99	81	92	118	105
Net Borrowing from Public Account	21	-3	-13	56	42	5	19	5	-16	-5
Net Drawal from Cash Balance	81	-66	34	-53	-6	-4	-1	3	-2	0
GSDP	113680	142279	162923	203555	247144	282368	317101	342951	381501	438030
Interest payments	3707	3753	3685	4319	4304	4428	5459	6129	7098	8191
Primary Deficit	-2003	-1246	1587	-349	1612	2117	2893	5050	4964	8289
GFD: GSDP Ratio (%)	1.50	1.76	3.24	1.95	2.39	2.32	2.63	3.26	3.16	3.76

Source: Finance Accounts of Bihar Government for respective years

Chart 4.1: Gross Fiscal Deficit of Bihar(Rs. Crore)

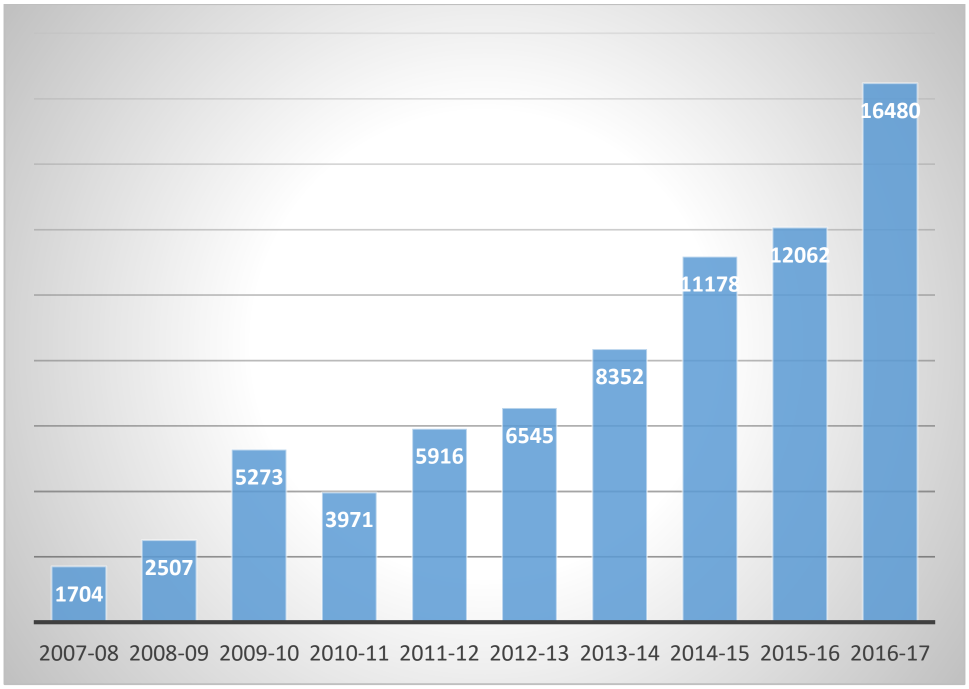
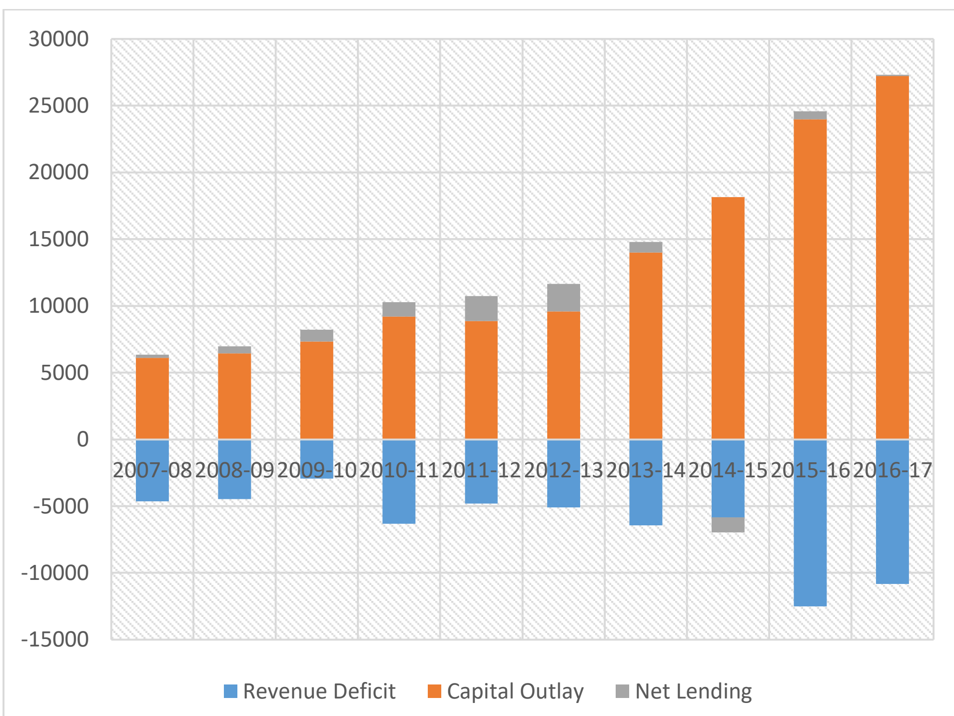
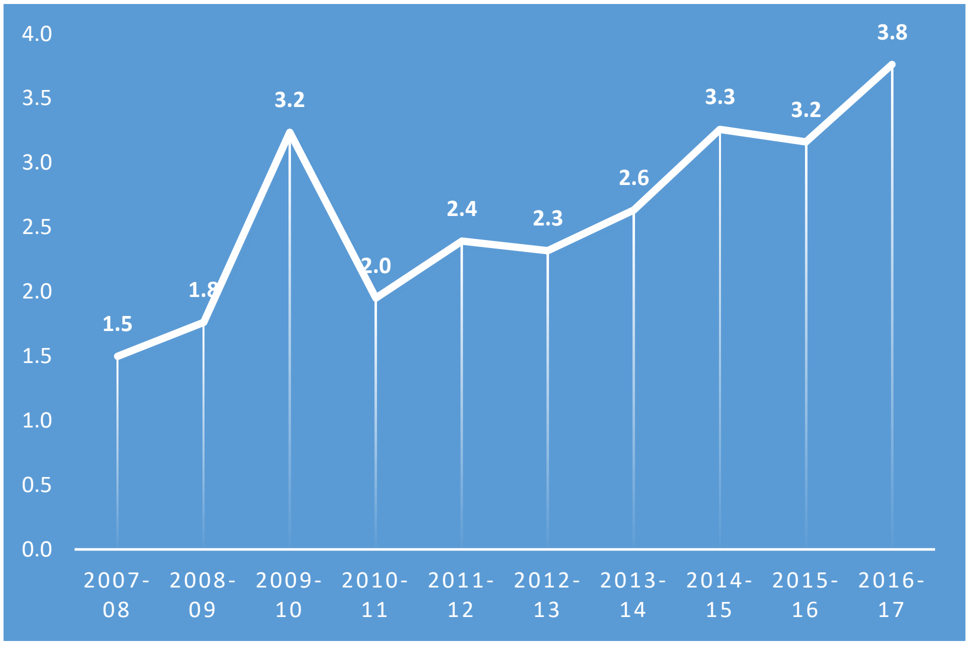


Chart 4.2: Decomposition of Fiscal Deficit (Rs. Crore)



As seen from Table 4.1 and Chart 4.2, the GFD was mainly on account of the increasing levels of capital outlay throughout the period, helped by the significant revenue surpluses, net lending constituting a small part of the GFD. It is also seen that Bihar has a continuous surplus in its primary account since 2007-08.

Chart 4.3: GFD:GSDP Ratio (%)



The State Legislature has passed the Bihar Fiscal Responsibility and Budget Management (FRBM) Act in February 2006, committing itself to take appropriate steps to eliminate the revenue deficit by 2008-09 and build up adequate revenue surpluses thereafter and bring down fiscal deficit to a level of three percent of GSDP by 2008-09 and maintain it thereafter. The revenue deficit was eliminated in 2004-05 itself even before the Act was passed and sufficient amount of revenue surpluses continued to be generated ever since. The GFD: GSDP ratio rose from 1.5 percent in 2007-08to 1.8 percent in 2008-09 and then increased to 3.2 percent in 2009-10 after revenue surplus plummetted by Rs 1500 crore, requiring an amendment to the FRBMA Act to raise the ratio. The amendment was reversed in the very next year as the ratio dropped to a comfortable level 2 percent in 2010-11, but has been above 3 percent limit since 2014-15. In 2016-17, it reached 3.8 percent.

As per the 14th Finance Commission recommendations, the fiscal deficit targets and annual borrowing limits for the States during their award period are to be determined as follows:

- Fiscal deficit of all States will be anchored to an annual limit of 3 per cent of GSDP. The States will be eligible for flexibility of 0.25 per cent over and above this for any given year for which the borrowing limits are to be fixed if their debt-GSDP ratio is less than or equal to 25 per cent in the preceding year.
- States will be further eligible for an additional borrowing limit of 0.25 per cent of GSDP in a given year for which the borrowing limits are to be fixed if the interest payments are less than or equal to 10 per cent of the revenue receipts in the preceding year.
- The two options under these flexibility provisions can be availed of by a State either separately, if any of the above criteria is fulfilled, or simultaneously if both the above stated criteria are fulfilled. Thus, a State can have a maximum fiscal deficit-GSDP limit of 3.5 per cent in any given year.

- The flexibility in availing the additional limit under either of the two options or both will be available to a State only if there is no revenue deficit in the year in which borrowing limits are to be fixed and the immediately preceding year.
- If a State is not able to fully utilise its sanctioned borrowing limit of 3 per cent of GSDP in any particular year during the first four years of our award period (2015-16 to 2018-19), it will have the option of availing this un-utilised borrowing amount only in the following year but within our award period.

Bihar has been a revenue surplus state for years together now, but its debt: GSDP ratios in 2015-16 and 2016-17 were respectively 30.5 percent and 31.6 percent, far above the limit of 25 percent specified by the 14th Finance Commission for relaxation of 0.25 percent above the FRBMA limit of 3 percent. However, the ratio of interest payments to revenue receipt has been well below the limit of 10 percent in both these years (7.4 percent and 7.8 percent respectively, making it eligible for 0.25 percent relaxation that would bring its fiscal deficit of 3.2 percent within the modified FRBMA limit in 2015-16, but not in 2016-17. The ratio of fiscal deficit to GSDP is likely to rise further in future years, if the present trends are followed.[35]This also clearly indicates that the debt problem which has hitherto remained well under the control of the state government, may need to be monitored and managed so as not to slip into the dangerous territory.[36]

4.2.1 Financing of Gross Fiscal Deficit and Over-borrowing by the state

Table 4.1 and Chart 4.4 also show how the GFD was financed during all these years. Though it was financed mostly by net borrowing in the Consolidated Fund of the state government, in some years, the net borrowing from Public Account also contributed significantly to finance the GFD; in the earlier years, GFD had be financed even by drawing down the cash balances. The net borrowing in the Consolidated Fund mainly consisted of internal market borrowings of the state government as well as the Central loans, and the latter now constitutes a small proportion of the total public debt of the state government. The internal market borrowing of the state government now largely finances its GFD, though a part is also contributed by the loans and advances from the Centre. But the financing by public account also brings into focus the problem of surplus borrowing, otherwise avoidable. The problem arises because of the nature of public account, in which availability rather than need determines the borrowing. The public account being a part of the cash balance of the State, the entire balance is available to the State even if does not need the same to finance its fiscal deficit.

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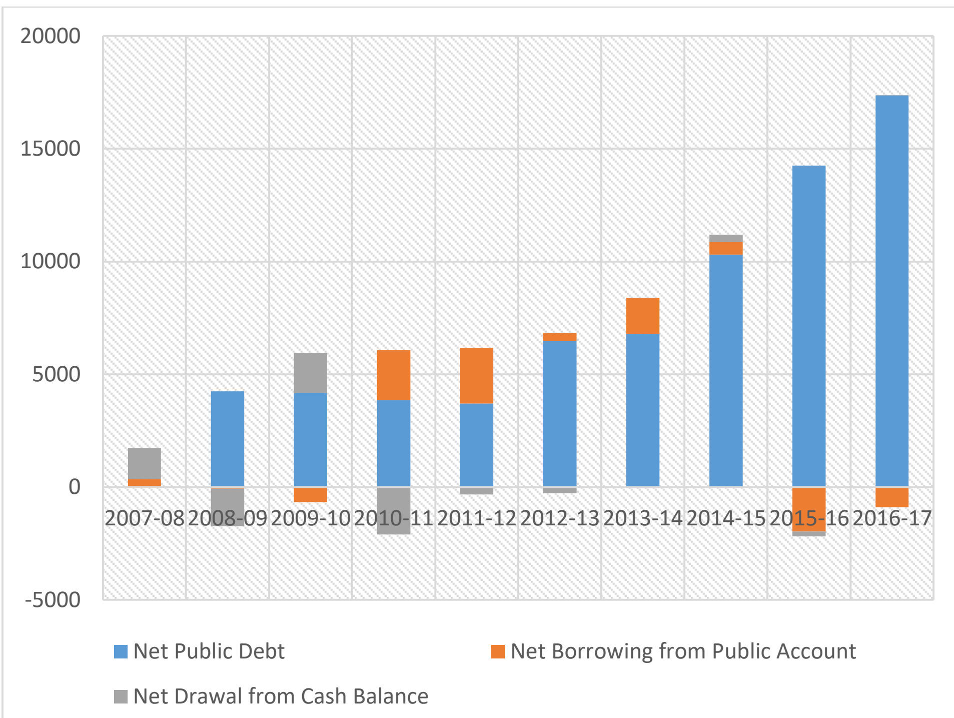
[35] GFD in the Re 2017-18 is projected at nearly Rs 35000 Crore on estimated loss of revenue due to implementation of GST during the year (5.5% of estimated GSDP of Rs 632180 crore). For 2018-19 BE, GFD is estimated at Rs 11186 crore.

[36] State Government, however, has been reckoning a different set of figures of GSDP for this purpose; e.g. the figures used by the Govt. for GSDP in 2014-15, 2015-16 and 2016-17 are Rs 402283 crore, Rs 487316 crore and Rs 540556 crore, using which the GFD: GSDP ratios would be 2.8 percent, 2.5 percent and 3.0 percent respectively in these three years, i.e. within the FRBMA limits. The State Govt. is quoting a Union Ministry of Finance letter No 40(6)/P.F.-1/2009/Vol II dated 16/04/2015, as authority for this, in what is claimed as agreed figures between the State and the Central Govt. for the purpose of FRBMA. These figures of GSDP differ from those shown by the CSO and it is incomprehensible how the figures agreed in 2015 for the GSDP of 2016-17 could be taken as sacrosanct if not for the purpose of legitimizing an otherwise indefensible action.

In 2008-09, and then again in 2015-16 and 2016-17, the net public debt exceeded the fiscal deficit by 69 percent, 18 percent and 5 percent respectively indicating over-borrowing to that extent, which resulted in increasing the cash balance in 2015-16. In fact the cash balance was rendered surplus in other years as well, due to the combined borrowing from Consolidated Fund and Public Account exceeding the Fiscal Deficit requirements. This reflects adversely upon the effectiveness of cash management by the state government, as it does not make much sense to borrow while sitting with idle cash. Thus, even though Public Account receipts from small savings, provident funds, reserve funds, civil deposits, suspense and remittance balances etc. are available to the state government for financing of its GFD, there is a tenancy to resort to additional borrowing, in spite of availability of surplus cash. This can be avoided or minimized if the cash balances are utilised optimally. In 2008-09, the cash balance went up by as much as 66 percent of the GFD and by 53 percent again in 2010-11. From Table 4.1, it is seen that the state government could have reduced its borrowings by substantial amounts (about Rs 1600 crore in 2008-09 and Rs 2000 crore in 2010-11) if it could only utilize the surplus cash available with it. This reflects on poor cash management by the state government.

Chart 4.4: Financing of Gross Fiscal Deficit (Rs. Crore)



4.2 Inter-State Comparison of Deficits

Table 4.2 presents an inter-state comparison of deficit scenarios of the general category states in India in 2016-17. From this, it is seen that Bihar's revenue surplus is among the highest among these states, and its fiscal deficit was among the lowest. Its capital outlay also ranked among the highest. In terms of the ratio of GFD to GSDP, it fared quite well in comparison with the rest of the general category states.

Table 4.2 : Inter-State Comparison of Deficit Scenario, 2016-17

State	Amount in Rs. crore					Ratio in percent			
	Revenue Deficit	Capital Outlay	Net Lending	Gross Fiscal Deficit	Primary Deficit	Gross Fiscal Deficit/ GSDP(%)	Revenue Deficit/ Gross Fiscal Deficit (%)	Capital Outlay / Gross Fiscal Deficit (%)	Primary Deficit / Fiscal Deficit(%)
Andhra Pradesh	7302	14172	-11	21863	11504	3.6	33.4	64.8	52.6
Bihar	-12507	23966	603	12062	4472	3.2	-103.7	198.7	37.1
Chattisgarh	-2367	7945	-132	5447	3098	2.1	-43.5	145.9	56.9
Gujarat	-1704	24169	550	23015	6215	2.2	-7.4	105.0	27.0
Haryana	11679	6908	12922	31509	22963	7.9	37.1	21.9	72.9
Jharkhand	-4086	8159	7449	11522	8202	5.0	-35.5	70.8	71.2
Karnataka	-1789	20713	597	19521	7705	1.9	-9.2	106.1	39.5
Kerala	9657	7500	690	17846	6736	3.2	54.1	42.0	37.7
MP	-5740	16835	2996	14091	6000	2.6	-40.7	119.5	42.6
Maharashtra	5338	22793	250	28381	390	1.4	18.8	80.3	1.4
Orissa	-24265	17090	108	-7067	-10410	-2.1	343.4	-241.9	147.3
Punjab	8557	3059	5750	17366	7585	4.4	49.3	17.6	43.7
Rajasthan	5954	21985	35155	63094	51086	9.4	9.4	34.9	81.0
Tamil Nadu	11985	18995	1648	32628	14885	2.8	36.7	58.2	45.6
UP	-14340	64423	8392	58475	30060	5.2	-24.5	110.2	51.4
West Bengal	9095	12420	28	21544	-1871	2.3	42.2	57.7	-8.7

Source: Budgets of respective State Governments for 2018-19

4.3 Implementation of FRBM Act

The State Legislature has passed the Bihar Fiscal Responsibility and Budget Management (FRBM) Act in 2005-06, committing itself to take appropriate steps:

(1) to eliminate the revenue deficit by 2008-09 and build up adequate revenue surpluses thereafter;

(2) to bring down fiscal deficit to a level of three percent of GSDP by 2008-09 and maintain it at that level thereafter;

(3) to pursue policies to raise non-tax revenue with due regard to cost and equity; and

(4) to lay down norms for prioritization of capital expenditure and pursue expenditure policies that would provide impetus for economic growth, poverty reduction and improvement in human welfare.

While the first two commitments have by and large been adhered to except in 2016-17, as regards the other promises regarding non-tax revenues and prioritization of capital expenditure norms, much remains to be done as yet. Though the non-tax revenue of the state government had registered an impressive annual growth rate of 14.6 percent during the period 2002-12, such increases were more due to the conditional debt relief obtained, as recommended by the 12th Finance Commission, which were taken as Miscellaneous Receipts under the Non-tax Revenues in the state government accounts; there was no cost recovery effort exercised by the state government. The measures taken by the state government to enhance non-tax receipts have been discussed in Chapter 2 earlier, where there was hardly any linkage between the growth of non-tax revenue and policies with regard to increasing the yield of non-tax receipts with regard to cost and equity.

The capital outlay of the state government has, of course, increased substantially over the period, as observed earlier; however, the state government is yet to prescribe the norms for capital expenditure and adopt a set of rules for the purpose of implementing the FRBM provisions in this regard.

Table 4.3 : Deficit Indicators as Percentage of GSDP (Rs. crore)

	2007-08	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Revenue Deficit	-4647	-4469	-2943	-6316	-4820	-5101	-6441	-5847	-12507	-10819
Primary Deficit	-2004	-1246	1587	-349	1611	2117	2893	5050	4964	8289
Gross Fiscal Deficit	1703	2507	5272	3970	5915	6545	8352	11179	12062	16480
GSDP	113680	142279	162923	203555	247144	282368	317101	342951	381501	438030
Outstanding Liability	50794	54781	58495	62663	67616	76308	86744	98860	116382	138526
Capital Outlay	6104	6436	7332	9196	8852	9585	14001	18150	23966	27208
As percentage of GSDP										
Revenue Deficit	-4.1	-3.1	-1.8	-3.1	-2.0	-1.8	-2.0	-1.7	-3.3	-2.5
Primary Deficit	-1.8	-0.9	1.0	-0.2	0.7	0.7	0.9	1.5	1.3	1.9
Gross Fiscal Deficit	1.5	1.8	3.2	2.0	2.4	2.3	2.6	3.3	3.2	3.8
Outstanding Liability	45	39	36	31	27	27	27	29	31	32

Source: Finance Accounts of Bihar Government for respective years

4.3.1 Amendment to FRBM Act, 2010-11

To attain fiscal sustainability, the central government and all state governments have adopted a rule-based fiscal framework through the enactment of Fiscal Responsibility and Budget Management (FRBM) Acts. These Acts provide some fiscal targets to ensure that government finances are managed with a view to achieve equitable and stable growth. The 13thFinance Commission had recommended a roadmap for fiscal correction and consolidation in the medium term. Based on these recommendations, all states had already amended their respective FRBM Acts. Bihar Government had also amended the FRBM Act again in 2010-11 (August 2010) fixing the targets as follows — outstanding liability as percentage of GSDP to be 48.2 percent in 2010-11 and 41.6 percent by 2014-15. These targets are easily achievable as seen from Table 4.3. In fact, as noted earlier, the state government has been able to bring its debt problem under control but now it is threatening to get out of control, and the State needs to be circumspect on this account.

4.3.2 Analysis of Medium Term Fiscal Plan (MTFP)

A Medium Term Fiscal Plan (MTFP) is being prepared by the Department of Finance every year since 2006 under the FRBM Act 2006. However, the state government does not prepare Department-wise targets and achievements in respect of MTFP; it only does so for the state as whole. The targets of fiscal indicators of Bihar for its MTFP during the years 2014-15 to 2020-21, against their actual achievements for the three years 2014-15 through 2016-17 are shown in Table 4.4.

Table 4.4 : Target of Fiscal Indicators of Bihar for MTFP (Rs. Crore)[37]

	MTFP Targets					**As percentage of GSDP**			
	Revenue Surplus	Fiscal Deficit	Public Debt Outstanding	Total Tax Revenue	GSDP	Revenue Surplus	GFD	Public Debt	Tax Revenue
2014-15	10174	11368	77700	67438	383709	2.7	3.0	20.2	17.6
2015-16	11981	13584	89240	81623	455451	2.6	3.0	19.6	17.9
2016-17	14649	16014	106009	88090	558809	2.6	2.9	19.0	15.8
2017-18	14555	18112	125074	97327	632180	2.3	2.9	19.8	15.4
2018-19	21312	11204	137900	107174	515634	4.1	2.2	26.7	20.8
2019-20	22377	17103	155003	118020	570085	3.9	3	27.2	20.7
2020-21	23496	18909	173911	129964	630286	3.7	3	27.6	20.6
	MTFP Achievements					**As percentage of GSDP**			
2014-15	5847	11179	99056	57713	342951	1.7	3.3	28.9	16.8
2015-16	12507	12062	116578	74372	381501	3.3	3.2	30.6	19.5
2016-17	10819	16480	138722	82623	438030	2.5	3.8	31.7	18.9

Source: MTFP Statements submitted along with the Budgets for respective years.

It can be seen from Table 4.4 that while in respect of revenue surplus and tax revenue, the targets have largely been achieved in the three years save one or two instances, there were shortfalls in respect of fiscal deficit and outstanding public debt. The shortfalls in respect of level of outstanding public debt in particular seems alarming, and the suppressed targets seem to have been kept keeping in view the possible relaxation of 0.25 percent available above the 3 percent of FRBMA target for fiscal deficit as per the recommendations of the 14th Finance Commission. The exerciseseems to be rather loose with GSDP figures having little credibility – it suddenly and abruptly goes down in 2018-19 apparently for no plausible reason. The targets are unlikely to be achieved and in all probability, will bear little relation to reality.

[37]Targets have been taken from the MTFP statements submitted along with the respective budgets, e.g. targets for 2014-15 have been taken from the 2014-15 budget. Targets for the years 2018-19 onwards are taken from the MTFP statements submitted along with the 2018-19 budget.

Chapter 5

Debt Position

Objectives

To analyse the level of Debt: GSDP ratio and the use of debt funds;
To analyse the composition of the state's debt, including liabilities in public account and borrowings from Financial Institutions;
To analyse the contingent liabilities of the State;
To prescribe a sustainable debt roadmap for 2020-25, taking into account impact of introduction of GST and other tax/non-tax trend forecasts.

Methodology

Trend and composition analysis of public debt and public account liabilities; analysis of net debt accrued to the state after discharging of liabilities; analysis of maturity profile of the state debts; debt sustainability analysis.

Data Sources

Finance Department for data on GST; Finance accounts for data on public debt and public account liabilities, capital receipts and repayment obligations; National accounts for growth of GSDP.

The total outstanding liability is composed of the liability of the state government on account of public debt which is routed through the Consolidate Fund and other liabilities which pertain to some elements of its Public Account - these are liabilities are on account of Small Savings, Provident Fund and Other Accounts, Deposits and Advances, and Reserve Funds.

5.1 Outstanding Debt

Table 5.1 and Chart 5.1 show the outstanding debt liabilities of the state government (excluding guarantees) from 2007-08 to 2016-17. The total outstanding liabilities of the state government, as can be seen from the table, had accumulated to Rs. 138,526 crore at the end of 2016-17, growing steadily at an annual rate of 11.8 percent during this period. Public Debt constituted nearly 77 percent of the total outstanding liability at the end of 2016-17, as against 69 percent in 2007-08.Loans from Public Account thus constitute 8 percent part of the total liability of the state government, though it is not a debt in the strict sense of the term. These are composed of the state government's liabilities to the Provident Fund, Small Savings and other Accounts, Deposits and Advances and Reserve Funds, details about which will be discussed later. While most of these liabilities are interest bearing, some of these liabilities under the Reserve Funds and Deposits and Advances are also non-interest bearing; here the state government only holds the public money in trust with an obligation to repay.

The Public Debt is composed of Internal Debt of the state government and Loans and Advances from the Centre. After the recommendations of the 12th Finance Commission, the share of central loans in total public debt had sharply declined for all the states; in Bihar, it constituted only 9 percent of the total public debt of the state government at the end of 2016-17, compared to 23.6 percent in 2007-08. The Internal debt had grown at an annual rate of 15.3 percent during the period, compared to only 1.7 percent for Central loans. The Internal debt is raised by the state government by floating Bonds, by issuing special securities to the National Small Savings Fund (NSSF) of the Central government till 2015-16, and from the financial institutions like LIC/GIC, NABARD, NCDC and others. The details of outstanding liabilities of the state government on account of public debt will be discussed later. In contrast, the balances of the Public Account, being part of the Cash Balance of the state government, is automatically available to the state government and here borrowing depends on availability rather than need, and is beyond the control of the state government, thereby leading to surplus and avoidable borrowings as discussed in the last section. This is an aberration in our public financial system, not present anywhere outside the subcontinent. It is to be noted that the interest on interest-bearing public account funds are paid out of the Consolidated Fund of the state government, that is by using taxpayers' money, while the funds themselves are outside the Consolidated Fund and hence lack the usual financial and legislative controls applicable in respect of the latter. The state government also has no role to play in respect of accumulation of money in most of these funds which come from private sources – like the provident fund contributions. The administration of these funds also leaves scope for substantial discretion by state government with the possibility of their likely misuse.

For the treatment of debt liabilities, a new approach was adopted in 2012-13 when, unlike in the past, the net receipts from Small Savings, Provident Fund and other accounts were included in the total debt liabilities of the state government. However, the new Indian Government Accounting Standard (IGAS) 10 has introduced a distinction between the receipts of debt into the Consolidated Fund and the liabilities that accrue to the state government automatically by virtue of its Public Account. Though the standard has not yet been formally adopted and is not free from contradictions, it has redefined the outstanding liabilities of the state government. Earlier, the total debt of the state government comprised its internal debt, loans from the central government, and loans from small savings and provident fund account. While the first two are part of the borrowings against the Consolidated Fund, the small savings and provident fund account share is maintained in its Public Account. As per the new accounting standard, public debt now comprises the borrowings from the Consolidated Fund only, while the three major public account balances constitute the 'Other Liabilities' of the state government, since they all stand merged into the cash balance of the state government. The 'Other Liabilities' include Provident Fund and Other Accounts, Reserve Funds, and Deposits and Advances. The accounts of the state government are already reflecting this new classification of public debt and other liabilities, and the same classification will be followed in the Economic Surveys from now on. It may be mentioned that public accounts create a lot of distortions in the government financial system and there is a need to deal with it at a structural level.

The structure of debt has undergone a significant change since 2002-03. This occurred first by swapping of the high-cost central government loans with low-cost market loans and then, as a result of the recommendations of the Twelfth Finance Commission, by consolidation and rescheduling of all central government loans for payment over a 20-year period at 7.5 percent rate of interest. The Commission also recommended that, if the state governments want to raise loans, they should get it from the market and the central government's help should be limited to only grants. As a result, the proportion of central government loans diminished substantially.

The Small Saving schemes have always been an important component of household savings in India. Following the Report of the Committee on Small Savings in February 1999, a 'National Small Savings Fund' (NSSF) was established in the Public Account of India with effect from April, 1999. All deposits under small savings schemes are credited to NSSF and all withdrawals by the depositors are made out of accumulations in the Fund. The NSSF invests the net collections of small savings in the Special State Government Securities (SSGS), as per the sharing formula decided by the central government. The loans from NSSF outstanding against the state government at the beginning of 2016-17 amounted to Rs 24,932 crore. The Fourteenth Finance Commission had recommended to exclude the states from the operations of the NSSF scheme and recommended that the involvement of the state governments in the NSSF scheme may be limited only for the purpose of discharging the debt obligations already incurred by them until that date. To that effect, the Union Finance ministry had asked all state governments to give their opinions on these recommendations. Bihar has preferred to opt out of the NSSF loans. As a result, no fresh NSSF loans were availed during and since 2015-16. During 2016-17, only Rs 1713 crore were repaid, leaving an outstanding balance of Rs 23,218 crore at the end of the year.

As seen from Table 5.1 and Chart 5.2, the outstanding liability as a percentage of GSDP had decreased significantly from 45 percent in 2007-08to only 32 percent in 2016-17, due mainly to the much higher growth of GSDP at an annual rate of more than 16.2 percent, compared to an annual growth rate of 11.8 percent for outstanding liability during the period. The major factors that contributed to the lower growth of outstanding liability of the state government included the State's enactment of the FRBM Act in 2005-06 and its complete elimination of deficit in the revenue account, enabling it to get the full benefits of debt waiver recommended by the 12th Finance Commission during the period 2005-10. However, the ratio of outstanding liability to GSDP had reached a much lower level of 27 percent in 2011-12 and remained at that level till 2013-14; it has since been rising again which is a matter for concern.

Table 5.1 : Outstanding Liabilities of Bihar Government

(Rs. crore)

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR
Internal Debt	26769	31293	35494	39020	42364	48826	55624	65848	79990	96595	15.3
Central Loans	8277	7998	7949	8264	8625	8649	8638	8722	8838	9596	1.7
Total Public Debt	**35046**	**39292**	**43442**	**47284**	**50990**	**57474**	**64262**	**74570**	**88829**	**106191**	13.1
Other Liabilities	15748	15489	15053	15379	16626	18833	22482	24290	27554	32335	8.3
Total Outstanding Liabilities	**50794**	**54781**	**58495**	**62663**	**67616**	**76308**	**86744**	**98860**	**116382**	**138526**	11.8
GSDP	113680	142279	162923	203555	247144	282368	317101	342951	381501	438030	16.2
Outstanding Liability as % of GSDP	**45**	**39**	**36**	**31**	**27**	**27**	**27**	**29**	**31**	**32**	------

Chart 5.1 : Oustanding Liability of Bihar Government (Rs. Crore)

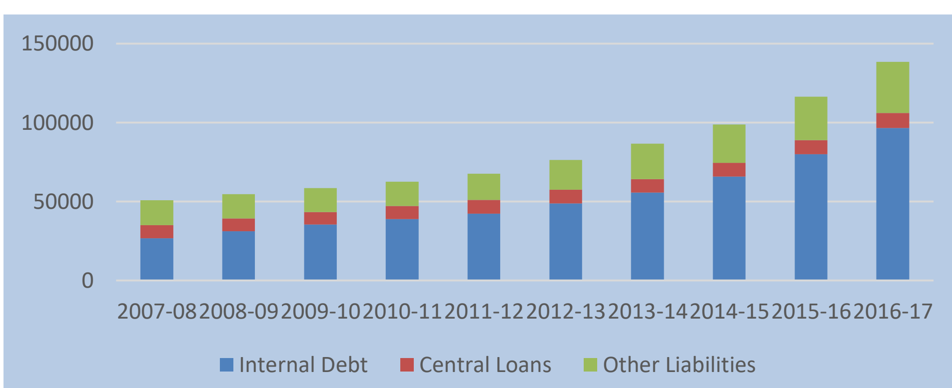
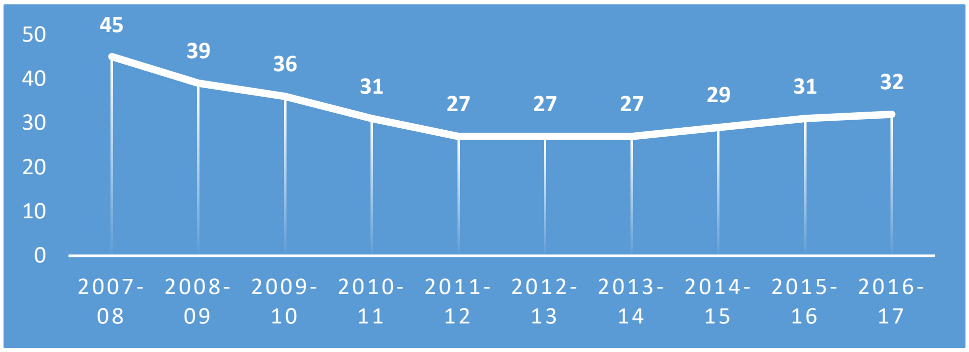


Chart 5.2 : Oustanding Liability as percentage of GSDP (%)



5.2 Use of Debt Funds

The public debt can be a powerful instrument of economic growth, if it is utilised for the creation of productive assets. The ratio of capital outlay to capital receipts reflects the extent to which the debt funds is productively used by the state government. Also, the state government has a debt service obligation to discharge every year that comprises the installments of the principal amounts of past loans as well as the interest due on these. Since interest is to be paid out of revenue account (under General Services), it is expected that the revenue account would generate the necessary resources to pay off the interest. Since Bihar had revenue surplus every year since 2004-05, this assumption was true in Bihar's case.

Table 5.2 and Chart 5.3 show the use of debt funds by the state government. It can be seen from this table that, except in 2007-08, substantial volumes of debt resources were available to the state government for capital investment purposes after discharging its debt service (excluding interest payments) and disbursing of loans and advances, mostly for plan purposes, within the State. The ratio of Capital Outlay to Capital Receipts, which had reached a peak of 379 percent in 2007-08, dropped sharply in 2008-09 when every financial indicator had suffered from the impact of the overall economic downturn, but it had always hovered much above remained well above 100 percent (except in 2012-13 when capital outlay was just a little above capital receipts), indicating that the debt funds were actually being used for capital outlay purposes.

Table 5.2 : Use of Public Debt by Bihar Government (Rs crore)

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Public Debt										
Receipts	1612	5928	6134	6032	6628	9554	9907	13918	18383	21577
Repayments	1632	1682	1983	2190	2922	3070	3120	3609	4125	4215
Availability of Debt Funds	**-20**	**4246**	**4151**	**3842**	**3706**	**6484**	**6787**	**10309**	**14258**	**17362**
Less Net Loans / Advances Disbursed	247	540	884	1091	1884	2061	792	-1124	603	91
Less Net Interest Paid	3536	3448	3332	4081	3730	4261	5190	5784	6514	7251
Net Debt Funds Available	**-3803**	**258**	**-65**	**-1330**	**-1908**	**162**	**805**	**5649**	**7141**	**10020**
Capital Outlay	6104	6436	7332	9196	8852	9585	14001	18150	23966	27208
Net Debt Available / Total Debt Received (%)	-236	4	-1	-22	-29	2	8	41	39	46
Capital Outlay/ Capital Receipts (%)	**379**	**109**	**120**	**152**	**134**	**100**	**141**	**130**	**130**	**126**
Capital Outlay/ Net Debt Available (%)	-161	2495	-11280	-691	-464	5917	1739	321	336	272

Source: Finance Account of Bihar Government for respective years

With the state government's financial health being restored after the reliefs given by the 12th Finance Commission and its increasing revenue surpluses, it was able to generate substantial sums on its own for making capital investments. Thus, from Chart 5.4, we see that its capital outlay was substantially higher than the net debt available during the entire period. The total debt servicing charges including interest have grown much slower than the total debt receipts, leaving substantial sums at the hands of the State Government for making capital investments. In 2016-17, the debt receipts exceeded the total debt servicing charges by more than Rs 10000 crore. This was substantial improvement and reversal of the situation in 2007-08, when the State instead of being in a position to utilise any of the borrowed funds, had to pay Rs 3800 crore out of its own resources just for discharging its debt service liabilities.

Chart 5.3 : Capital Outlay/Capital Receipts (%)

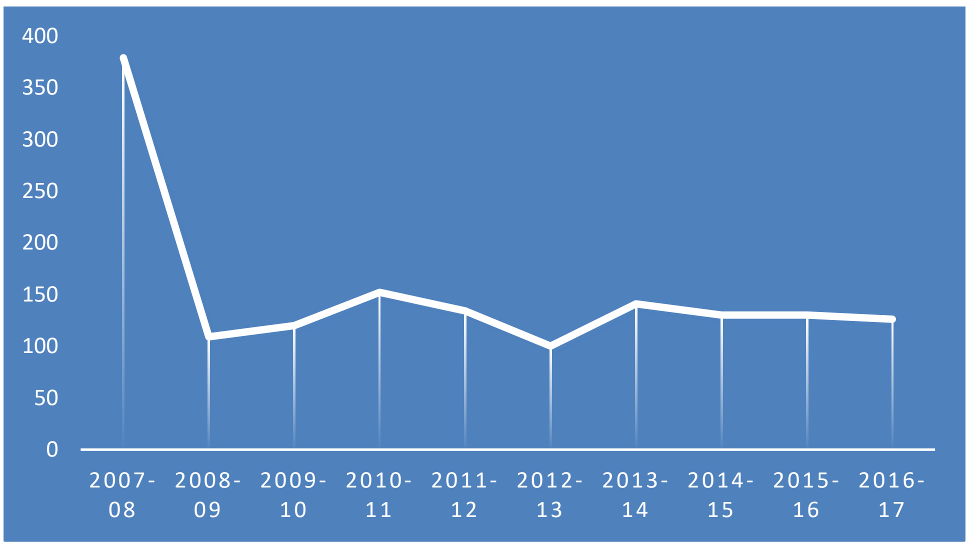


Chart 5.4 : Net Debt Funds Vs Capital Outlay (Rs. Crore)

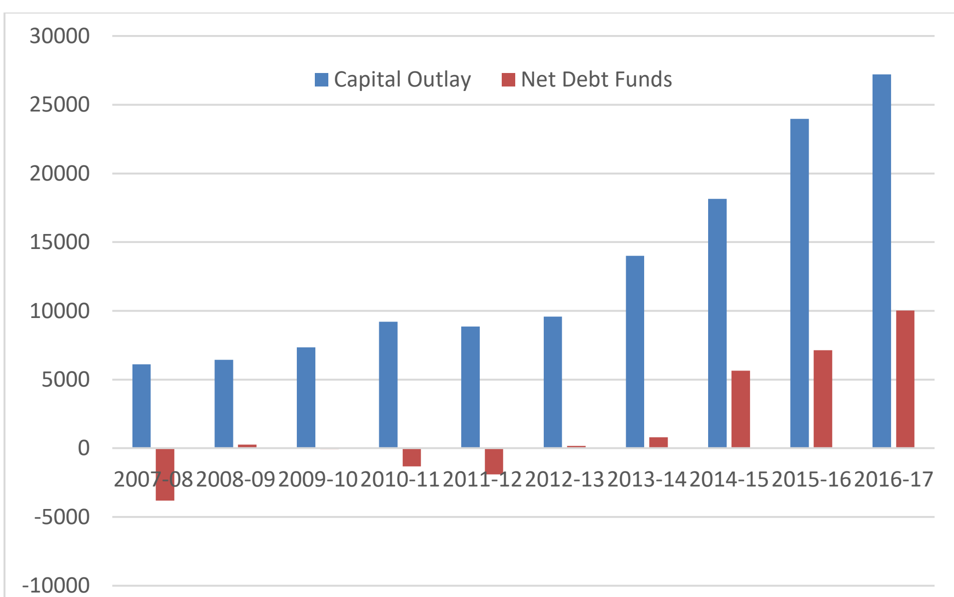
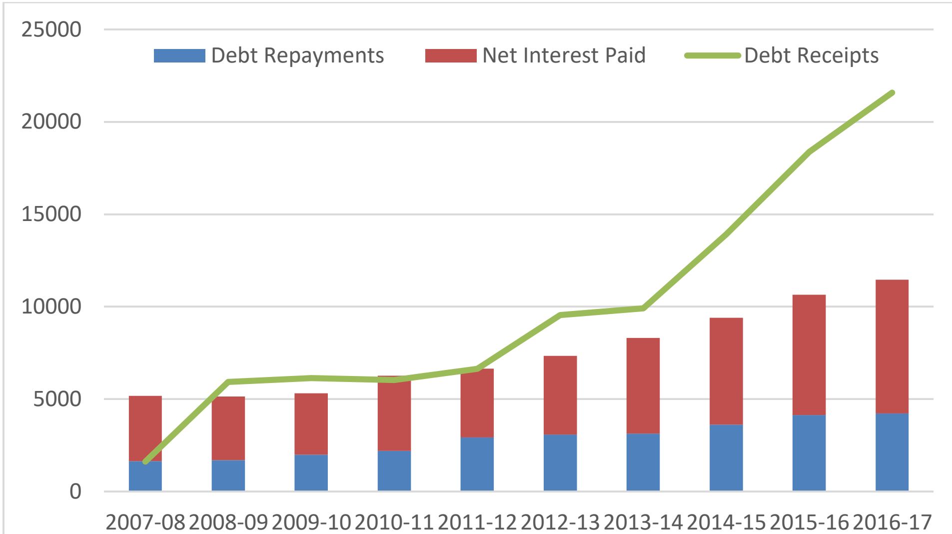


Chart 5.5 : Debt Service vs Debt Receipts (Rs. Crore)



5.3 Composition of Outstanding Public Debt

Table 5.3 also shows the composition of Bihar's outstanding public debt during the period 2007-17. The major part, 91 percent, of this outstanding debt at the end of 2016-17was due to the internal loans raised by the state government and only 9 percent was due to loans from the central government. These figures were in sharp contrast to the corresponding figures of nearly 76 percent and 24 percent respectively in 2007-08. Thus, the composition of outstanding debt has undergone a structural change over the years, with the share of Central loans coming down substantially. As pointed out earlier, this had happened mostly because of the recommendations of the 12thFinance Commission. About a decade later, the Central government loans will probably no longer be a part of the loan portfolio of the state government.

Table 5.3 : Percentage Composition of Outstanding Public Debt of Bihar Government

Nature of Borrowings	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Internal Debt, of which	**76.4**	**79.6**	**81.7**	**82.5**	**83.1**	**85.0**	**86.6**	**88.3**	**90.1**	**91.0**
Market Loans	27.4	34.0	36.5	37.2	39.6	45.1	48.7	50.9	54.2	61.2
Bonds	5.3	3.8	2.9	2.2	1.7	1.1	0.7	0.3	1.8	2.2
Loans from Financial Institutions	1.4	2.9	3.6	4.3	4.9	5.4	6.4	6.4	6.0	5.7
Special Securities Issued to NSSF	42.2	39.0	38.7	38.8	36.9	33.3	30.7	30.7	28.1	21.9
Others	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Loans and Advances from Central Government, of which	**23.6**	**20.4**	**18.3**	**17.5**	**16.9**	**15.0**	**13.4**	**11.7**	**9.9**	**9.0**
Non-Plan loans	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Loans for State Plan Schemes	23.2	20.0	18.0	17.2	16.7	14.9	13.3	11.6	9.8	8.9
Others	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0
Total Public Debt	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Finance Account of Bihar Government for respective years

Table 5.4 shows the break-up of outstanding public debt of the state government and Table 5.5 shows their interest profile as on 31st March 2017. It can be seen that outstanding market loans and dues to NSSF together constituted 83 percent of the total internal debt liability of the state government. Loans from Financial Institutions constituted only 5.7 percent of the total outstanding public debt; of the total loans of Rs 6029 crore, Rs 5885 crore (97.6 percent) were due to NABARD alone. Almost the entire outstanding Central loans were on account of State Plan Schemes only.

Table 5.4 : Details of Outstanding Public Debt as on 31st March 2017

Nature of Borrowings	Outstanding Balance (Rs. Crore)	Percentage Composition
A. Internal Debt, of which	**96,595**	**91.0**
Market Loans	64989	61.2
WMA from the RBI	0	0.0
Compensation and Other Bonds	2351	2.2
Loans from Financial Institutions	6029	5.7
Special Securities Issued to NSSF	23218	21.9
Others	7	0.0
B. Loans and Advances from Central Government, of which	**9596**	**9.0**
Non plan loans	54	0.1
Loans for Central Plan Schemes	1	0.0
Loans for State Plan Schemes	9493	8.9
Loans for Centrally Sponsored Plan Schemes	1	0.0
Other Loans	47	0.0
Total (A+B)	**106,191**	**100.0**

Source: Finance Account of Bihar Government for respective years

From Table 5.5, it is also seen that about 97.8 percent of the state government's outstanding loans were carrying less than 10 percent rate of interest, with 35 percent carrying interest rate less than 8 percent; another 35 percent between 8 and 9 percent and about 28 percent of the outstanding loans carried interest rates between 9 and 10 percent. About 7 percent of the total outstanding loans carried interest less than 6 percent, and 24 percent carried interest between 7 and 8 percent. 66 percent of the outstanding Central loans carried interest below 6 percent and 28 percent of outstanding Central loans carried interest rates between 7 and 8 percent. Among the outstanding internal debt, the securities issued to NSSF carried interest rates between 9 and 11 percent while market loans carried interest between 8 and 9 percent. The weighted average interest on the outstanding public debt works out to about 8.3 percent. The weighted average interest on the outstanding public debt works out to about 8.3 percent. However, when calculated and compared with the average interest rate on the outstanding debt stocks, there is some discrepancy. (Please refer to Annexure 5.1 for a detailed note on this.)

Table 5.5 : Interest Profile of Outstanding Public Debt as on 31st March 2017 (Rs. Crore)

Rate of Interest (%)	Amount Outstanding			
	Internal Debt	Central Loans	Total	Share in Total (%)
Below 6.0	1536	6345	7881	7
6.0 to 6.99	3623	0	3623	3
7.0 to 7.99	23061	2641	25701	24
8.0 to 8.99	37278	0	37278	35
9.0 to 9.99	28819	576	29395	28
10.0 to 10.99	2256	2	2258	2
11.0 to 11.99	0	2	2	0
12.0 to 12.99	0	10	10	0
13.0 to 13.99	0	16	16	0
Others	22	3	25	0
Total	96595	9596	106191	100

Source: Finance Department of Bihar Government

5.4 Liabilities in Public Account

Table 5.6 shows the outstanding liability on Public Account and their respective contribution to total outstanding liability for the period 2007-17. The outstanding liability on Public Account has been growing rather slowly, at an annual rate of 8.3 percent during the period. Small Savings, Provident Fund and Other Accounts together constituted only 27 percent of the total liability on Public Account at the end of 2016-17, compared to 59 percent at the end of 2007-08. The share of Deposits and advances gradually climbed from 36 percent to 70 percent during this ten-years, while the share of Reserve Funds[38] in Other Liabilities decreased from a 6 percent in 2007-08 to 2 percent in 2016-17. Table 5.7 shows the details of outstanding liability on account of Public Account as on 31st March, 2017.

Table 5.6 : Composition of Outstanding Liability on Public Account (Rs. crore)

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Total Outstanding Liabilities	16088	15834	15396	15723	16990	18833	22482	24290	27554	32335
Small savings, Provident Fund and Other Accounts	9430	9574	9311	9564	9562	9346	9048	8865	8792	8891
Deposits and Advances	5726	5035	4901	4952	5885	7669	11353	13589	17327	22721
Reserve Funds	932	1225	1184	1207	1543	1819	2081	1836	1435	723
Percentage Composition										
Small savings, Provident Fund and Other Accounts	59	60	60	61	56	50	40	36	32	27
Deposits and Advances	36	32	32	31	35	41	50	56	63	70
Reserve Funds	6	8	8	8	9	10	9	8	5	2

Source : Finance Account of Bihar Government for respective years

[38]There are six Reserve Funds with the State: State Disaster Response Fund, Sinking Fund, Famine Relief Fund, Development and Welfare Funds, General and other Reserve Fund & Depreciation/Renewal Reserve Funds. The last two carry interest to be paid from the Consolidated Fund.

Table 5.7 : Composition of Outstanding Liability on Public Account, 31st March 2017

	Amount Outstanding (Rs. crore)	Share in Total (%)
I. Provident Funds & Other Accounts		
State Provident Funds	9914.19	30.48
Insurance and Pension funds	-1023.05	-3.14
Total Provident Funds & Other Accounts	**8891.14**	**27.33**
II. Reserve Funds		
Reserve Funds bearing Interests	696.39	2.14
General and other Reserve Funds	26.32	0.08
Total Reserve Funds	**722.71**	**2.22**
III. Deposits		
Deposits bearing interest	**88.05**	**0.27**
Deposits not bearing interest	**22828.79**	**70.18**
Civil Deposits	9633.28	29.61
Deposits of Local Funds	13110.30	40.30
Other deposits	85.21	0.26
Total Deposits	**22916.84**	**70.45**
Total Outstanding Liability on Public Account	**32530.69**	**100.00**

Source: Finance Account of Bihar Government for respective years

5.5 Sustainability of Debt

The debt sustainability is defined as the ability of the state government to maintain a reasonably low Debt-GSDP ratio over a period of time and reflects its ability to service its debt. The high debt ratios are costly and eventually become unsustainable. The fiscal sustainability is also linked to the concept of solvency and liquidity; while solvency refers to the government's ability to service its debt obligations without explicitly defaulting on them, liquidity refers to government's ability to roll-over its maturing liabilities with its liquid assets and available financing. The vulnerability to such problems is related to structure of debt, in terms of short- and long-term debts as well as internal and external debts.

The sustainability of debt refers to the sufficiency of current assets to meet current or committed obligations and the capacity to balance the cost of additional borrowings with returns from such borrowings. Debt sustainability measures the ability of the State to maintain a constant debt-GSDP ratio over a period of time. It indicates the ability of the State to maintain a balance between the costs of additional borrowings with return from such borrowings. It means that rise in fiscal deficit should match with the increase in capacity to service the debt. The borrowings are necessary to bridge the resource gap or fiscal deficit; debt sustainability then implies that increase in fiscal deficit should be accompanied by an enhanced ability to service the additional debt burden. While judging the sustainability of debt, one should be concerned with the inter-temporal budget constraint of the government and the change in public debt ratio over time. The long run debt sustainability condition implies the sufficiency of incremental non-debt receipts of the state government to cover its incremental primary expenditure. The debt sustainability implies that the incremental non-debt receipts can meet the incremental interest burden plus the incremental expenditure.

A necessary condition for stability states that if the rate of growth of economy exceeds the interest rate or cost of public borrowings, the debt-GSDP ratio is likely to be stable, provided there is a sustained primary surplus (at least not a continued substantial deficit in the primary account). This is known as the

'Solvency Condition'. The stock of public debt could increase so long as it does not increase faster than the real interest rate. Given the rate spread (GSDP growth rate – interest rate) and quantum spread (debt stock multiplied by the rate spread), debt sustainability condition states that if quantum spread together with primary balance is zero, Debt-GSDP ratio would be stable and debt would be sustainable. On the other hand, if it is negative, the Debt-GSDP ratio would continue to rise and in case it is positive, Debt-GSDP ratio would eventually fall.

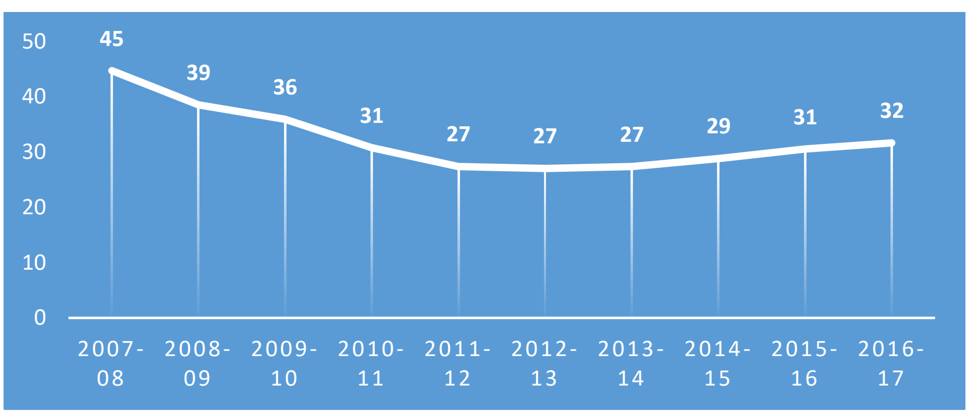
Table 5.8 : Sustainability of Debt (Rs. Crore)

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Weighted Interest Rate on Loans (%)	7.4	7.1	6.5	7.1	6.6	6.2	6.7	6.6	6.6	6.4
GSDP Growth Rate (%)	12.0	25.2	14.5	24.9	21.4	14.3	12.3	8.2	11.2	14.8
Interest Rate Spread (%)	4.6	18.0	8.0	17.8	14.8	8.1	5.6	1.5	4.6	8.4
Outstanding Debt	50794	54781	58495	62663	67616	76308	86744	98860	116382	138526
Quantum Spread	2318	9887	4681	11160	10012	6180	4862	1530	5407	11624
Primary Deficit	2003	1246	-1588	348	-1612	-2117	-2893	-5049	-4964	-8289
Quantum Spread + Primary Balance	4321	11133	3094	11508	8400	4063	1969	-3519	442	3335
Sufficiency of Non-Debt Receipts (Resource Gap)[39]	1703	2507	5272	3970	5915	6545	8352	11178	12062	16480
Availability of Borrowed Funds	-3803	258	-65	-1330	-1908	162	805	5649	7141	10020
Debt: GSDT Ratio (%)	45	39	36	31	27	27	27	29	31	32

Source: Finance Account of Bihar Government for respective years

From Table 5.8, we see that the solvency condition is not satisfied in Bihar's case. Even though the growth rate of its GSDP outstripped the growth rate of its outstanding liability, but there is a deficit in its primary account since 2011-12 which has been continuously increasing. As a result, the ratio of outstanding liabilities to GSDP has been increasing after falling from 45 percent to 27 percent and stood at 32 percent at the end of 2016-17. This trend is likely to continue, putting strain in the servicing of debt in future, since the non-debt receipts would not be sufficient to bridge the resource gap together with the net borrowed funds available. The liabilities might then become unsustainable in the long run if this trend continues unchecked.

Chart 5.6 : Ratio of Outstanding Liability to GSDP (%)



[39] Resource gap is the difference between expenditure less debt repayment minus non-debt receipts.

5.5.1 Maturity Profile of Debt

Table 5.9 shows the maturity profile of the State's outstanding debt as at the end of 2016-17. Before the award period of the 15th Finance Commission, the State would have discharged 17.5 percent of its outstanding debt as on 31st March 2017, but 42.5 percent of its debt will get discharged during the award period of the 15th Finance Commission (2020-25), amounting to Rs 45165 crore. Any debt sustainability roadmap of the State must factor in this maturity profile of the outstanding debt.

Table 5.9 : Maturity Profile of Outstanding Debt (Rs. crore)

Maturity Period	Internal Debt	Loans from Centre	Total	Share in Total (%)
Zero to 1 year (Till 2017-18)	3846	951	4797	4.5
1 to 3 years (Till 2019-20)	12443	1396	13839	13.0
3 to 5 years (Till 2021-22)	12478	1545	14023	13.2
5 to 8 years (Till 2024-25)	28945	2197	31142	29.3
8 to 12 years (Till 2028-29)	34492	1512	36004	33.9
More than 12 years (From 2029-30 onwards)	4389	1929	6318	6.0
Total	**96593**	**9530**	**106123**	**100.0**

Source: Finance Accounts, on the basis of information provided by the State Government[40]

5.6 Contingent Liabilities

Table 5.10 shows the details of outstanding guarantees of the state government at the end of the financial year 2016-17 which constitute its contingent liabilities. The total amount of outstanding guarantees stood at Rs 4460 crore, equivalent to 12.4 percent of total revenue receipts in 2016-17, and interest on outstanding guarantees amounted to Rs 178crore. Of the total amount of outstanding guarantees, Rs 3236 crore (72.6 percent) were due alone to the Bihar State Electricity Board and its subsidiary companies alone, followed by Rs. 164 crore (3.6 percent) to Bihar State Warehousing Corporation and Rs. 158 crore (3.5 percent) to Credit Co-operative Societies. Rs. 127 crore (2.8 percent) were due to the Bihar State Financial Corporation and Rs. 122 crore to (2.7 percent) to Bihar State Milk Co-Operative Federation.

Table 5.10 : Outstanding Guarantees of Bihar Government at the end of 2016-17 (Rs. crore)

Guarantees given to	Outstanding Guarantees	Outstanding Interest
Bihar State Electricity Board/Energy Companies	3235.63	59.96
Credit Co-Operatives	157.89	3.24
Housing Co-Operative	11.72	0
Bihar State Food and Civil Supplies Corporation	500	58.75
Bihar State Financial Corporations	127.47	29.97
Bihar State Housing Board	17.21	3.51
Bihar State Warehousing Corporation	164.04	0
Bihar State Water Board	5.13	2.84
Regional Development Authority	9.68	1.01
Bihar Drugs and Chemicals Ltd	1.25	2.71
Bihar State Agriculture Development Council	0.56	0.02
Bihar State Road Development Corporation Ltd	43.00	0
Bihar State Milk Co-Operative Federation	122.44	6.55
Bihar state Minorities Financial Corporation, Patna	47.25	0.24
Bihar State Backward Class Finance and Development Corporation	16.31	9.24
Grand Total	**4459.58**	**178.04**

Source: Finance Account of Bihar Government for respective years

[40] An amount of Rs 66Crore remain unreconciled in respect of Central loans between this table and the Finance Accounts figures reported in table 5.1.

During 2016-17, guarantees were given to South Bihar Power Distribution Company (Rs. 179.15 Crore), Bihar State Power Generation Company (Rs. 84.64 crore), North Bihar Power Distribution Company (Rs. 44.41 crore) and Bihar State Milk Co-Operative Federation (Rs. 31.67 crore). Bihar State Food and Civil Supplies Corporation paid a Guarantee Fee of Rs. 175 crore during the year.

Table 5.11 shows the guarantees given by the state government during the last 5 years. It will be seen that the maximum amount of guarantees given as percentage of revenue receipts of the State has been increasing sharply over the years, reaching 12.4 percent in 2016-17 compared to only 3.4 percent in 2012-13. Guarantees are contingent liabilities on the Consolidated Fund of the State. In case of default by the borrower for whom the guarantee has been extended, the State Government has an obligation, if and when it arises, to pay the amount defaulted by the borrower. No law under Article293 of the Constitution has been passed by the State legislature laying down the limit within which the Government may give guarantees on the security of the Consolidated Fund of the State.

The state government is yet to establish any Guarantee Redemption Fund, as suggested by the Twelfth Finance Commission to discharge any future liabilities, should they arise. This is a risky area and the state has not yet established any credible mechanism to arrest the risk.

Table 5.11 : Guarantees Given by State Government: 2007-12 (Rs. crore)

	2012-13	2013-14	2014-15	2015-16	2016-17
Maximum amount guaranteed (Principal)	2046	2587	5315	9397	13053
Outstanding amount of guarantees (Principal)	1089	1090	2000	6309	4460
Maximum amount guaranteed as percentage of revenue receipts	3.4	3.8	6.8	9.8	12.4

Source: Finance Account of Bihar Government for respective years

5.7 Management of Cash and Investment from Cash Balances

In Chapter 4 (Section 4.2.1) we have commented on the over-borrowing by the State. Over-borrowing generally results in increase in cash balances which get invested either in the Treasury Bills or in other Government securities with the Reserve bank of India that generally leads to a loss of interest equal to the differential between market rate at which the State borrows funds and the interest earned on investments on cash balances which usually attract lower rates. Table 5.12 shows the state Government's investment from cash balances during the three years 2014-15, 2015-16 and 2016. It can be seen that most of the investments were on Govt. of India securities, except some investment on earmarked funds like sinking fund and the Famine Relief Fund. During 2016-17, the State Government had earned interest of Rs 804.44 crore on its cash balance investments, compared to Rs. 311.77 three years ago.

Table 5.12 : Investment of Cash Balance by the State Government (Rs. Crore)

	2014-15	2015-16	2016-17
Cash Balances as on 31st March	6,337.11	11716.72	17062.20
Investments from Cash Balances	3528.80	8199.24	13001.71
a. GoI Treasury Bills	0.00	0.00	0.00
b. GoI Securities	3524.15	8194.59	12997.06
c. Securities of other State Government	4.65	4.65	4.65
Investment in Earmarked Funds	2343.00	2834.44	582.99
a. Famine Relief Fund	0.10	0.10	0.10
b. Sinking Fund	2342.90	2834.34	582.89
Interest Realised	311.77	453.33	804.44

Source: Finance Account of Bihar Government for respective years

Annexure 5.1 : Weighted interest rate on outstanding debt (Please refer to Section 5.3)

The weighted average interest rates on total year-end outstanding liabilities are shown in table 1 below:

Table 1 : Weighted Average Interest rates on Total Outstanding Liabilities (Rs Crore)

				% of Total	
Particulars	Major/Sub Major Head	2015-16	2016-17	2015-16	2016-17
Intt paid on internal debt, of which	2049-01	5900	7101		
Average Outstanding Internal Debt (=Average of Opening and Closing Balances)		72919	88293	67.76	69.27
Weighted average interest rate on internal debt		8.1	8.0		
Intt paid on Central Loans	2049-04	378	380		
Average Outstanding Central Loans (=Average of Opening and Closing Balances)		8780	9217	8.16	7.23
Weighted average interest rate on Central Loans		4.3	4.1		
Intt paid on Other Liabilities on Public Account	2049-03	801	706		
Average Outstanding Other Liabilities on Public Account (=Average of Opening and Closing Balances)		25922	29945	24.09	23.49
Weighted average interest rate on Other Liabilities on Public Account		3.1	2.4		
Total Intt Paid	2049	7079	8187		
Average Total Outstanding Liabilities (=Average of Opening and Closing Balances)		107621	127454		
Weighted Intt Rate on Total Outstanding Liabilities		6.6	6.4		

However, the Interest Profile of Outstanding Public Debt as on 31st March 2017, shows the following figures as in table 2 below, giving **a weighted interest rate on outstanding loans as 8.3%:**

Table 2 : Interest Profile of Outstanding Public Debt as on 31st March 2017 (Rs Crore)

Rate of Interest (%)	**Internal Debt**	**Central Loans**	**Total**	**Share in Total (%)**
Below 6.0	1536	6345	7881	7
6.0 to 6.99	3623	0	3623	3
7.0 to 7.99	23061	2641	25701	24
8.0 to 8.99	37278	0	37278	35
9.0 to 9.99	28819	576	29395	28
10.0 to 10.99	2256	2	2258	2
Total	**96595**	**9596**	**106191**	**100**

The difference arises because of non-inclusion of other liabilities on Public Accounts in Table 2. Interest is paid on other liabilities from the Revenue Account of the Consolidated Fund, while the Public Debt does not include balances of other liabilities (Small Savings and Provident Fund, Civil Deposits and

Reserve Funds) on Public Account. The Public Account liabilities constituted more than 23% of the total outstanding liabilities the interest-rate wise break up of which is not available in the Finance Accounts. However, since these carry low rates of interest than the internal loans, the weighted average after their inclusion naturally came down. The composition and interest rates of different components of outstanding liabilities as on 2016-17 are shown in Table 3:

Table 3 : Interest rates on different components of outstanding liabilities: 2016-17

	Amount Outstanding (Rs Crore	**Percentage Share in Total Liability**	**Interest Paid (Rs Crore)**	**Average Interest Rate (%)**
Internal Debt, of which	96595	69.7	7101	7.4
Market Loans	64989	46.9	4125	6.3
NSSF	23218	16.7	2389	10.3
Others	8388	6.1	587	7.0
Central Loans	9696	7.0	380	3.9
Public Account	32335	23.3	706	2.2
Total	**138626**	**100.0**	**8187**	**5.9**

However, there is a problem still. Since market loan constitutes the most significant chunk of the entire outstanding balance, we computed the break-up from the Annexure to Statement 17 of the Finance Accounts as shown in Table 4:

Table 4 : Rate wise break up of outstanding Market Loans: 2016-17

Rate of Interest (%)	Amount outstanding (Rs Crore)	Percentage Share
<6.00	0	0
6.0 to 6.99	2750	4.23
7.0 to 7.99	18931	29.13
8.0 to 8.99	17458	26.86
9.0 to 9.99	17850	27.47
10.0 to 10.99	8000	12.31
Total	64989	100.0

This gives a weighted interest rate of 8.6% as against 6.3% calculated in Table 3. The only conclusion that the state government is not fully discharging the interest on its market loans.

Chapter 6

State's Transfer to Local Bodies

Objectives

To analyse the state's transfers to urban and rural local bodies in the State;
To evaluate the major decentralization initiatives.

Methodology

Trend analysis. Analysis of the resources of local bodies; comparison with other comparable states, if feasible. Examination of the results of decentralization initiatives.

Data Sources

Finance and Panchayati Raj Department, State Finance Commission other concerned departments; Audit Reports on Local Bodies.

6.1 Introduction to Local Bodies in Bihar

The Seventy-Third Constitutional Amendment Act, 1992 gave constitutional status to the PRIs and established a system of uniform structure, elections, reservation of seats for Schedule Caste/Tribes and women and devolution of fund, functions and functionaries to PRIs. After the 73rd Amendment and the consequent enactment of Bihar Panchayati Raj Act, 1993, (subsequently replaced by Bihar Panchayati Raj Act, 2006) the formation of a three-tier system of Panchayati Raj Institutions (PRIs) became mandatory but elections to Panchayats could not be held till 2001. Following a judicial intervention, the long overdue elections were finally held after a gap of 23 years in that year. Subsequently, the state government carried out a major change in the structure of PRIs, through the instrumentality of Bihar Panchayati Raj Ordinance, 2006, which introduced a reservation of 50 percent of Gram Panchayat (GP) seats for women and backward communities - scheduled castes, backward castes, and extremely backward castes.

The PRIs aim to promote participation of people and effective implementation of rural development schemes for economic development and social justice in various areas including those in relation to the matters listed in the Eleventh Schedule of the Constitution. As of March 2016, there are 8,969 PRIs in Bihar, having a total of 135725 elected representatives in the State. The last election to the elected bodies of PRIs was held during April-May 2016. This excludes 123589 members (8398 Sarpanchs and 115191 Panchs) of Gram Katcharies.

6.2 Organisational Structure of PRIs

The PRIs in Bihar follow a three-tier structure — Zila Parishad (ZP) at the district level, Panchayat Samiti (PS) at the block level, and Gram Panchayat (GP) at the village level. Besides their elected members, the ZPs have one Adhyaksha and one Upadhyaksha, PSs have Pramukhs and Up-pramukhs, and GPs have Mukhiyas and Up-Mukhiyas. The human base of PRIs consists of both elected and employed functionaries (Table 6.1)

Table 6.1 : Organisational Structure and Number of Elected Members of PRIs

Level	Nos.	No. of Members	Average population served (Lakh)	Elected Functionaries	Employed Functionaries
Zila Parishad	38	115191	24.30	Adhayaksha Upadhyaksha Members	District Development Commissioner/ Project Director, DRDA/ District Panchayati Raj Officers
PanchayatSamiti	534	11035	1.73	Pramukh Up-pramukh Members	Junior Engineer (JE) or Additional JE/ Block Panchayati Raj Officer/ Programme Officer (MNREGS)/ Block Development Officer/ Statistical Officer
Gram Panchayat	8398	1124	0.11	Mukhiya Up-mukhiya Members	Panchayat Sachiv/Gram Rozgar Sevak (MNREGS)/Vikas Mitra/ Nyaya Mitra/ Asha (Under NRHM)/ Anganwadi Worker (ICDS)/ ANM

Source: Report of the Fifth State Finance Commission, Government of Bihar

At each tier of the PRIs, there are various Standing Committees, headed by Adhyaksha/ Upadhyaksha (ZP), Pramukh/Up-pramukh (PS), and Mukhiya (GP). At the GP level, there are 6 Standing Committees for — (i) Planning, Coordination, Finance and Audit (ii) Production, (iii) Social Justice, (iv) Education, (v) Public Health, Family Welfare and Rural Sanitation, and (vi) Public Works. At the PS and ZP levels, there are 7 Standing Committees— 6 of them as for the GPs (mentioned above) and an additional General Standing Committee.

6.3 Powers of the State Government in relation to PRIs

Articles 243G and 243H of the Constitution of India stipulate that a State endow the PRIs with the following powers, authority and responsibilities:

• Preparation of plans for economic development and social justice;

• Implementation of schemes for economic development and social justice as may be entrusted to them including those in relation to the matters listed in the Eleventh Schedule of the Constitution; and

• Powers to impose taxes and constitute funds for crediting all moneys of the panchayats. Besides, Section 22, 47 and 73 of the BPRA, 2006 describe the nature of power and duties to be performed by the GPs, PSs and ZPs respectively.

The Bihar Panchayati Raj Act, 2006 entrusts the State Government with necessary powers to enable it to monitor proper functioning of the PRIs. A brief summary of powers and roles of the State Government in respect of PRIs is given in Table 6.2:

Table 6.2 : Powers of the State Government

Section of the Act	
146	Power to frame rules: The State Government may, by notification in Official Gazette, make rules to carry out functions as specified in BPRA, 2006, subject to approval by the State Legislature.
150, 152 and 153	Power to make model Regulations, Inquiry and Inspection: The State Government may make standard rules for the purposes of the BPRA, 2006 and has the power to inspect any office or records under the control of the PRIs.
167	District Planning Committee: The State Government shall constitute in every district a District Planning Committee to consolidate plans prepared by the Panchayats and the Municipalities in the district and to prepare a Draft Development Plan for the district as a whole.
168	Finance Commission for Panchayats: The State Government shall constitute in every five year, a Finance Commission to review the financial position of PRIs, and to make recommendations for devolution of funds and measures to improve the financial position of PRIs.
27, 55 and 82	Taxation: The PRIs may impose taxes on holdings, professions and levy tolls, fees and rates subject to the maximum rates notified by the State Government.
172	Removal of difficulties: If any difficulty arises in giving effect to the provisions of the Act, the State Government, may by order, do anything necessary to remove the difficulty.
18(5), 44(4) and 70 (5)	Removal from post: The State Government may remove *Mukhiya/Up-Mukhiya, Pramukh/Up-Pramukh and Adhyaksha/Upadhayksha*from their post on the ground of absence from the meeting, lack in performing duties as per BPRA, 2006, misusing their powers and convicted and absconded for more than six months after giving them opportunity to represent themselves.

Source : Report No 4 of 2017 of the Comptroller & Auditor General of India on the Audit of Local Bodies of Bihar Government

6.4 Devolution to PRIs

6.4.1 Devolution of Functions

As prescribed in the Eleventh Schedule of the Constitution, the PRIs at all the three levels have been given the right of self-governance in respect of 29 subjects of 20 Departments, after duly completing the activity mapping.

The PRIs were entrusted 621 types of responsibilities by various departments of State from time to time which include Settlement of Panchayat level estimates, selection of beneficiaries, financial powers, registration works concerning birth/ death/ marriage, issuance of caste certificates, preparation of plans, construction of infrastructure, management of programmes, monitoring works, maintenance of assets like hand-pumps etc. and works relating to rural hygiene and drinking water. PRIs are also entrusted with the responsibilities in relation to: (i) Distribution of job cards by under MNREGS, (ii)

Identification of beneficiaries for all development programmes, including identification of BPL households, (iii) Appointment of teachers/supervisors for MDMS, and constitution of Vidyalaya Shiksha Samiti (VSS), (iv) Distribution of Food Coupons under PDS, (v) Selection of Anganwadi Sevikas and Sahayikas under ICDS, and (vi) Distribution of subsidized diesel to farmers. List of activities transferred to the PRIs are appended at Annexure 6.1. These functions can be categorized as (1) Regulatory Functions: like Issuing Death & Birth Certificate, Trade license and other Regulations, etc. (2) Planning and implementing schemes; (3) Providing Core Civic Services like Water Supply, Sanitation, Drainage, Sewerage, Solid waste Management, Street lighting, Streets and Footpaths, Parks, Playgrounds, Burial and Cremation Grounds, Library, Museum etc. and (4) Agency Functions, i.e Functions assigned under the Central and State Schemes and policies

Under the Bihar Panchayati Raj Act, 2006, the state government has set up an institution at the GP level, called Gram Katchahary, aimed at bringing justice at people's doorsteps. The head of the Gram Katchahary is the Sarpanch, who is elected directly by the people. The elected Sarpanch is assisted by a Nyaya Mitra (law graduates hired on a contract basis) to discharge the judicial responsibilities of the GPs.

It was decided in July 2014 by all the Principal Secretaries/Secretaries of the Government to frame Operational Guidelines for effective devolution of powers to PRIs. In first phase 12 Departments were selected for framing the Operational Guidelines. However, only two departments have so far framed the Operational Guidelines. The Fifth State Finance Commission (Fifth SFC) observed that the progress so far on Department wise and subject wise activity mapping was unsatisfactory and Parastatal Bodies were also carrying the functions of PRIs.

As observed by the Fifth SFC, clarity on the role and responsibilities of the Panchayats of different tiers is provided by Activity Mapping which thus becomes an important step in devolution of functions. This is not a one-time exercise and has to be done continuously while working out locally relevant socio-economic programmes, restructuring organisations and framing subject matter laws.[41]

6.4.2 Devolution of Funds

No taxes were levied and collected by the PRIs as of January 2017 despite recommendation of the Fourth State Finance Commission (Fourth SFC) and provisions of the BPRA, 2006 as the State Government did not notify the rate of taxes.

Untied grants were made available to three levels of PRIs under Fourteenth Finance Commission (FFC), Fifth SFC and Rajeev Gandhi Panchayat Sashaktikaran Yojana (RGPSY) during 2015-16. Backward Region

[41]The first step towards activity mapping is unbundling of each Sector into services, activities and sub-activities to a level of disaggregation that is consistent with devolution. For example: Rural Education, Health, Drinking Water and Sanitation are Sectors. Education would include services such as Primary, Secondary and Tertiary Education and Vocational Training. Services can be further unbundled into activities. For example: Basic education could be unbundled into activities such as: Identifying and recruiting persons with appropriate teaching skills. (Source: Fifth SFC Report)

Grant Fund (BRGF) was delinked from the support of the Central Government from 2015-16. As per Fifth SFC report, funds available to the PRIs from various sources were grossly inadequate for their assigned functions. Further, they were notable to utilise even the allocated funds due to capacity constraints viz., serious deficiencies in skilled manpower, office space, IT facility, equipment etc.

6.4.3 Devolution of Functionaries

The Comptroller & Auditor General of India observed that the ZPs in the State did not have adequate staff to discharge the devolved functions with 79 per cent of sanctioned posts lying vacant as of January 2017. In two ZPs, men-in-position was less than 10 per cent of sanctioned strength. At GP level, 3160 posts of the Panchayat Secretary (38 per cent of the total 8398 posts) were lying vacant as of 31 March 2016. The Fifth SFC while observing the acute shortage of staff at all levels of PRIs, recommended a revised staffing pattern, which was not followed as of December 2016.[42]

6.5 Finances of PRIs

The PRIs are mainly financed by the grants from the Central and State governments (Central/ State Finance Commission grants), other transfers from the central government (e.g. BRGF/ MNREGS), recurring and non-recurring grants from the state government, and their own resources. No taxes are as yet levied and collected by the PRIs. However, untied grants are made available to three levels of PRIs under Fourteenth Finance Commission (FFC), Fifth SFC and Rajeev Gandhi Panchayat Sashaktikaran Yojana (RGPSY) during 2015-16. Backward Region Grant Fund (BRGF) was delinked from the support of the Central Government from 2015-16. As per Fifth SFC report, funds available to the PRIs from various sources were grossly inadequate for their assigned functions. Further, they were not able to utilise even the allocated funds due to capacity constraints viz., serious deficiencies in skilled manpower, office space, IT facility, equipment etc., as shown in table 6.3

Table 6.3 : Budget allocations vis-à-vis expenditure of PRIs

Particulars	Head	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Budgetary Allocations	Revenue	3299.79	3276.75	4074.14	4709.01	5465.11	20824.80
	Capital	250.00	250.00	0.00	100.50	2.00	602.50
	Total	3549.79	3526.75	4074.14	4809.51	5467.11	21427.30
Expenditure	Revenue	2179.80	2591.06	3003.35	2374.78	2893.01	13041.42
	Capital	210.31	0.00	0.00	0.00	0.00	210.31
	Total	2389.53	2591.06	3003.35	2374.78	2893.01	13251.73
Savings		1160.26	935.69	1070.79	2434.73	2574.10	8175.57
Percentage of savings		33	27	26	51	47	38

Source: Appropriation Accounts of Government of Bihar

The grants recommended by 13thFinance Commission and the 4thState Finance Commission to the PRIs are shown in Table 6.4. Status of funds actually received by the PRIs against this is not available.

[42]Source: Report No 4 of 2017 of the Comptroller & Auditor General of India on the Audit of Local Bodies of Bihar Government.

Table 6.4 : Transfers from the 13th FC and the 4th SFC (Rs Crore)

Sl	Years	10-11		11-12		12-13		13-14		14-15		10-15	
	Items	(R)	(A)	(R)	(A)	(R)	(A)	(R)	(A)	(R)	(R.E)	(R)	(R.E)
		13th FC											
1	Basic grant	461	456	535	584	625	657	741	758	877	828	2614	3282
2	Performance grant	0	0	183	268	429	528	506	726	597	168	1286	1691
3	**Total transfer to PRIs**	**461**	**456**	**718**	**852**	**1054**	**1185**	**1247**	**1484**	**1474**	**996**	3900	4973
	The 4th SFC												
4	Divisible pool	6,436	9,377	7,227	12,010	8,114	15,637	9,110		10,226		32999	37025
5	7.5% of Devolution	483	703	542	901	609	1,173	683		767		2475	2777
6	Share of PRIs (70%)	338	492	379	631	426	821	478		537		1732	1944
7	Grants to PRIs	180	180	180	180	180	180	180		180		721	541
	Tied amount for PRIs												
8	(out of devolution)	318	318	318	318	318	318	318		318		1272	954
	Untied amount for PRIs												
9	(out of devolution)	20	174	61	313	108	503	160		219		460	990
10	**Total transfer to PRIs**	**518**	**673**	**560**	**811**	**606**	**1,001**	**659**		**717**		2454	2485
Composite FC Transfers to PRIs (3+10)		979	1,128	1,278	1,663	1,660	2,186	1,906	1,484	2,191	996	6,354	7,458
(R): Recommendations by the FCs , 'A' - As per budget, R.E.: Revised Estimate.													

Source: Report of the Fifth State Finance Commission, Government of Bihar

As per Sections 27, 55 and 82 of BPRA, 2006, the PRIs may impose taxes on holdings, professions and levy tolls, fees and rates subject to a maximum rates notified by the State Government. , PSs and GPs do not have any revenue of their own, as the state government is yet to notify rates of taxes, fees, etc. to be imposed by PS/GP. Of the three level of PRIs, so far only the ZPs have some own non-tax revenue from rent of shops/Inspection Bungalow, leasing of ponds/bus-stand etc., whereas PSs and GPs do not have any revenue from own sources. However, framing of regulations for collection of taxes by PRIs is under process at the State level.

The Fifth State Finance Commission has estimated the receipts and expenditure of the PRIs for the period 2015-20, shown respectively in tables 6.5 and 6.6.

Table 6.5 : Projection of Total Revenue as per 5thSFC (Rs Crore)

Sl.	Items	15-16	16-17	17-18	18-19	19-20	15-20
1	Own Revenue (a+b+c)	157	174	193	213	237	974
a.	GP	47	53	59	66	74	297
b.	PS	18	20	23	25	28	114
c.	ZP	92	102	112	123	135	564
2	14th FC Transfers	2269	3554	4097	4729	6368	21017
3	State Grants	203	223	246	270	297	1149
	Total (1+2+3)	**2629**	**3951**	**4536**	**5212**	**6902**	**23140**

Source: Report of the Fifth State Finance Commission, Government of Bihar, Table 6.12, Vol-I

Table 6.6 : Projection of Total Expenditure as per the 5th SFC for 15-20 (Rs Crore)

Sl.	Item	Ref. Table No.	15-16*	16-17	17-18	18-19	19-20	15-20
1	O & M	6.18	6023	7232	8704	10500	12698	45157
2	Capacity Building	6.24	285	966	935	1606	1585	5377
3	PSBs	6.25		750	750	250	250	2000
4	GK	6.26	344	346	390	351	353	1784
5	DPC	6.27		30	30	30	30	122
Total (1+2+3+4+5)			**6652**	**9324**	**10809**	**12737**	**14916**	**54440**

Source: Report of the Fifth State Finance Commission, Government of Bihar, Table 6.28, Vol-I

Based on the above assessments, the resource gap of the PRIs for the period 2015-20, as shown in Table 6.7. It would be seen that the PRIS may be facing a huge resource gap amounting to Rs 31300 crore during the period 2015-20 itself, even after the 14th Finance Commission transfers.

Table 6.7 : Resource Gap of the PRIs in different scenarios (2015-20) (Rs Crore)

Year	Revenue	Expenditure	Resource Gap
2015-16	2629	6652	4023
2016-17	3951	9324	5373
2017-18	4536	10809	6273
2018-19	5212	12737	7525
2019-20	6902	14916	8014
Total 2015-20	23140	54440	31300

6.5.1 State Finance Commission Recommendations

The Fifth SFC was constituted in December 2013 for the period 2015-20 and submitted its report in February 2016. As per its recommendations, two types of financing, (i) the share of net tax revenue of the State (ii) amount in shape of grants, are to be made available to the PRIs to be spent on water supply, sanitation, smart panchayat, e-governance, Panchayat Sarkar Bhawan etc. The amount was to be distributed among GPs, PSs and ZPs in the ratio of 70:10:20 respectively. State had made provision of Rs. 1822.88 crore to be released to PRIs during 2015-16 which is yet to be released. The major recommendations of the Fifth SFC are appended at Annexure 6.2.

6.5.2 Recommendations of the Central Finance Commissions

Article 280(3)(bb) and 280(3)(c) of the Constitution of India mandate the Finance Commission to recommend measures to augment the Consolidate Fund of a State to supplement the resource of Panchayats and Municipalities.

The 13th FC recommended grants-in-aid to the LBs as a fixed percentage (2.28%) of the previous years' pool of taxes, over and above the share of the States. The State received allotment of Rs 4,810.74 crore for the period 2010-15 and out of this, the PRIs could utilised only Rs 2,676.41 crore (56 per cent) leaving unspent balance of Rs 2,134.33 crore. Performance Grant amounting to Rs 167.75 crore was released by the GoI on 31 March 2015 for the period 2014-15.

As observed by the Fifth State Finance Commission (SFC) in its Report, the recommendations of the 13th marked a paradigm shift in transfers to local bodies (LBs) by earmarking 2.28% of the divisible pool of the Central Taxes as grant for the LBs, in recognition of the fact that the "LBs are not mere agents to receive grants for agency functions but they are self-governments at the local level under the Constitution, eligible to receive a part of the Central divisible pool. Further, performance Grant based on 9conditionalities was a major step towards ensuring Transparency, Accountability, Prudent Financial Management and Institution Building." These conditionalities for resource transfer are yet to be fulfilled by the State as shown below in Table 6.8:

Table 6.8 : Status of fulfillment of 13th Finance Commission Conditionalities for Performance Grants

(i)	Introduction of a supplement to budget documents on LBs;	Done
(ii)	Putting in place audit system in all LBs;	Not Done
(iii)	Establishment of an independent Local Body Ombudsmen	Not Done
(iv)	Electronic transfer of grants to LBs in 5 days;	Not Done
(v)	Prescribing qualifications of SFC members through an Act;	Done
(vi)	Empowering the ULBs to levy property tax without hindrance;	Not Done
(vii)	Constitution of State Property Tax Board;	Not Done
(viii)	Putting in place benchmarks for essential civil services;	Done
(ix)	Putting in place Fire-hazard Response and Mitigation Plan (ULB).	Not Done

Source: Report of the Fifth State Finance Commission, Government of Bihar

The 14th FC made two major departures from the 13thFC in that: (i) The entire PRI grant was given to the GPs since they are directly responsible for delivery of the basic services; and (ii) Performance grant was linked to (a)submission of audited account, and (b) increase in own revenue. Compliance of these conditions is going to be a major challenge to the State Government, as evidenced by the fact that no performance grant has been received by the State during the award period of the 14th FC, as seen in Table 6.9.

Grants were to be released every year in two installments (June and October). In the case of GPs, 90 per cent of the grant would be given as the Basic Grant and the remaining 10 per cent as Performance Grant. Entitlement of Performance Grant may be from the second year of award period i.e., from 2016-17 onwards, depending on the fulfillment of certain conditions by the State Government.

Entitlement of Basic Grant to State for the period 2015-20 was Rs 18916.06 crore and Performance Grant for the period 2016-20 was Rs 2101.78 crore. Against the entitlement of Rs 2269.18 crore of Basic Grant for the period 2015-16, the State received full amount but second instalment was received after a delay of five months. Tables 6.6 shows the total grants and transfers to PRIs under the different heads.

Table 6.9: Grants for PRIs in Bihar by the FC14

(Rs. crore)

Year	Basic Grant		Performance Grant		Total Grant	
	Recommended	Received	Recommended	Received	Recommended	Received
2015-16	2269.18	2269.18	0	0	2269.18	2269.18
2016-17	3142.08	3142.08	412.15	0	3554.23	3142.08
2017-18	3630.39	3630.39	466.41	0	4096.80	3630.39
2018-19	4199.71	-----	529.67	----	4729.38	----
2019-20	5674.70	-----	693.55	----	6367.25	----
Total	**18916.06**	**9041.65**	**2101.78**	**0**	**21017.84**	**9041.65**

Source: Report of the Fifth State Finance Commission, Government of Bihar

The major recommendations of the 14th Finance Commission are summed up below:

In respect of Grants:(i) Total LBs grants to all States should be equivalent to 3.06% of the divisible pool; (ii) Grant are to be spent only on basic services assigned to the LBs under relevant legislations;(iii) Distribution of grants among the States is to be based on 90% weight for 2011 population and10% for area;(iv) PRIs grants should go entirely to the GPs which are directly responsible for delivery of basic services. State Govt. should take care of the needs ofthe other tiers; (v) The basic grant to be distributed among the GPs, using formula prescribed by the respective SFC; and (vi) 10% of the grant to the GPs and 20% of the grants to the Municipalities to be given on compliance of performance conditions;

In respect of SFC: State Governments should strengthen SFCs which would involve timely constitution, proper administrative support and provision of adequate resources and also timely placement of the SFC report before State Legislature with Action Taken Notes.

In respect of augmenting own resources: (i) Existing rules should be reviewed and amplified to facilitate levy of property tax and the granting of exemptions to be minimized. Assessment of properties should be done every 4-5years and the ULBs to introduce system of self-assessment; (ii) 14th FC also recommended for levy of vacant land tax by peri-urban Panchayats, land conversion charges, betterment tax, advertisement tax, entertainment tax, and profession tax; (iii) ULBs should rationalize their service charges to at least recover O&M costs; (iv) Since mining puts a burden on the local environment and infrastructure, some of the income from royalties should be shared with the LB concerned; and (v) The LBs and States should explore issuance of municipal bonds as a source of finance with suitable support from Union Government.

Most of these recommendations remain unimplemented so far. Bihar Tax & Charges (Imposition, Determination & Collection) Rules is reported to be under preparation.

6.6 Major Challenges before the PRIs

As observed by the Fifth State Finance Commission (SFC), the letter and spirit of the 73rd Constitutional amendment is epitomized in the 'Panchayat Sarkar' vision of Govt. of Bihar, physical symbol of which are the 'Panchayat Sarkar Bhawans'. The unique feature of 'Panchayat Sarkar' in Bihar is the Gram Katchahry which is based on a comprehensive legislation. While the basic structure of the Gram Katchahry is in position, it needs to be nurtured by the judiciary and the district administration.

The Fifth SFC identified some of the unfinished agenda as: (i) the Panchayats quite often are unable to function efficiently due to insufficient staffing, office space & infrastructure, (ii) true integrated decentralized planning is yet to happen as mandated in Article- 243ZD of the Constitution; (iii) true devolution of 3Fs is still at a nascent stage, and (iv) the Gram Sabha, which is the soul of the Panchayats is still to institutionalize. Unfortunately, "Active Gram Sabha: For Empowered people and Accountable Panchayat" still remains a mere slogan. Empowering and enabling the Gram Sabha must receive the highest attention if the dreams of 'Gram Swaraj' and 'Power to the People' are to be realized, as the Fifth SFC has intuitively observed.

The Fifth SFC has marked the three broad agenda that need to be pursued by the PRIs towards rapid, planned and people-centric urbanization: (1) Empowerment, through effective devolution of functions and finances, (2) Enablement via capacity building through skilled manpower, IT, office space, etc. and (3) Accountability through Gram Sabha, Social Audit, Ombudsman, etc. Accordingly the requisite institutions, systems, processes etc. should be built and strengthened to make the PRIs vibrant real institutions of 'Smart' self-governance.

6.6.1 Accountability Mechanism

Erecting a proper accountability structure for the PRIs remains a major challenge for the State Government. The inadequacy of the accountability structure was observed by the Comptroller & Auditor General of India(CAG) in its Report No. 4 of 2017 on the Local Bodies of Bihar Government for the year 2015-16. CAG noted that as per Section 152(5) of BPRA 2006, Lok Prahari (Ombudsman) is to be appointed by the State Government for Panchayats and Gram Kutchahary. MGNREGS guidelines also provide appointment of a Lok Prahari (Ombudsman) to ensure transparency and responsibility. However, the Bihar Local Government Ombudsman Rules 2011 for appointment of Lok Prahari (Ombudsman) for Panchayats and Gram Kutchahary is yet to be finalized and Lok Prahari for PRIs is yet to be appointed. However, Lok Prahari (Ombudsman) for MGNREGS, is working in 23 districts and in remaining 15 districts, appointment is under in process.

6.6.2 Submission of Utilisation Certificates

CAG also noted that the time limit for submission of Utilisation Certificates (UCs) for the grants sanctioned for specific purposes is 18 months from the date of allotment of the grants. CAG had noted that the Panchayati Raj Department(PRD) had released grants of Rs. 14,025.96 crore to PRIs during 2007-08 to 2015-16 under recommendations of the Thirteenth and Fourteenth Finance Commissions, Mukhya Mantri Gramodaya Yojana, Fourth State Finance Commission, and under certain other heads like furniture, equipment etc. But, the UCs for only Rs 7,101.25 crore (50.62 per cent) were submitted by the PRIs till July 2016 (Table 6.10). CAG had noted that UCs of Rs. 6,924.71 crore were not submitted for periods ranging from one to eight years and the utilisation percentage ranged between two to seventy nine per cent except for grants under Furniture and Equipment head for which no utilisation was submitted. This indicated weak internal control and possible misutilisation of funds.

Table 6.10 : Submission of Utilisation Certificates by PRIs: 2007-08 to 2015-16

Head	Total Allotment	Period	UCs not submitted	% of UCs submitted
FC 13	4810.74	2010-11 to 2014-15	2134.33	56
MMGY	267.70	2012-13 to 2014-15	224.70	16
Fourth SFC	2118.61	2011-12 to 2014-15	1101.66	48
Allowance to PRIs member	492.46	2008-09 to 2015-16	482.16	2
Furniture &Equipment for Gram *Kutchahary*	14.00	2008-09 to 2015-16	14.00	Nil
RGPSA	83.71	2013-14 to 2014-15	79.00	6
IT cell under BRGF	9.26	2013-14 to 2014-15	3.78	59
BRGF Basic Grant	3960.30	2007-08 to 2014-15	819.84	79
FC 14	2269.18	2015-16	2065.24	8.99
Total	**14025.96**		**6924.71**	

Source: Report No 4 of 2017 of the Comptroller & Auditor General of India on the Audit of Local Bodies of Bihar Govt.

6.6.3 Utilisation of Grants under Major Centrally Sponsored Schemes

Details of utilisation of grants under major Centrally Sponsored Schemes(CSSs) are given in Table 6.11. It can be seen that the State has major capacity constraints at the third tier of rural government and that the utlisation of grants needs to be improved substantially in respect of the Centrally Sponsored Schemes. Only in respect of MNREGS, the utilization has shown some improvement. BRGF in any case has since been discontinued.

Table 6.11: Utilisation of Grants under Major Centrally Sponsored Schemes (Rs. Crore)

Grant /Scheme	Year	Fund Available	Utilisation	Percentage of Utilisation
MGNREGS	2011-12	2566.45	1668.69	65
	2012-13	2377.68	1971.13	83
	2013-14	2344.22	2038.48	87
	2014-15	1374.24	1090.88	79
	2015-16	1897.31	1606.16	85
BRGF	2011-12	1172.08	457.88	39
	2012-13	1179.82	546.34	46
	2013-14	1162.36	786.80	68
	2014-15	740.00	280.23	38
RGPSY	2013-14	8.61	2.30	27
	2014-15	81.43	2.41	3
	2015-16	79.00	Nil	Nil

Source: Report No 4 of 2017 of the Comptroller & Auditor General of India on the Audit of Local Bodies of Bihar Govt.

6.7 Devolution of Functions to Urban Local Bodies

Besides strengthening the PRIs in rural areas, the state government has also undertaken a number of desired steps to enable the Urban Local Bodies (ULB) to function effectively and deliver the services to the urban population. Under the Implementation of decentralization initiatives as envisaged in 74th Constitutional Amendment Act, all but one of the functions (Fire Services) listed in the 12th Schedule to the Act have been transferred to ULBs, as shown in Table 6.12. Annexure 6.3 shows the comparative list of functions assigned to ULBs under the Constitution and under the section 45 of the Bihar Municipal Act, 2007, and Annexure 6.4 shows the important recommendations of the Fifth State Finance Commission in respect of ULBs and the respective status of their acceptance by the State Government

Table 6.12 : Functions listed in 12th Schedule of 74th CAA and Transferred to ULBs

Sl. No.	Section of BMA 2007	Functions listed in 12th Schedule
1.	290	Urban Planning including Town Planning
2.	274A & 275	Regulation of land use and construction of buildings
3.	45	Planning for economic and social development
4.	45	Roads and bridges
5.	45 & 169-192	Water supply for domestic, industrial and commercial purposes
6.	45; 193-203 & 220-230	Public health, sanitation conservancy and solid waste management
7.	45; 250-261 & 262-268	Urban forestry, protection of the environment and promotion of ecological aspects
8.	287	Safeguarding the interests of weaker sections of society, including the handicapped and mentally retarded
9.	287&289	Slum improvement and up-gradation
10.	287	Urban Poverty Alleviation
11.	Chapter XXXII	Provision of urban amenities and facilities such as parks, gardens, playgrounds
12.	45	Promotion of cultural, educational and aesthetic aspects
13.	269-272 & 421	Burials and burial grounds; cremations, cremation grounds and electric crematoriums
14.	249 & 421	Cattle pounds; prevention of cruelty to animals
15.	352-353	Vital statistics including registration of births and deaths
16.	45	Public amenities including street lighting, parking lots, bus stops and public conveniences
17.	245 & 421	Regulation of slaughter houses and tanneries

Source: Report No 4 of 2017 of the Comptroller & Auditor General of India on the Audit of Local Bodies of Bihar Govt.

As seen from Table 6.12, under Section 45 (1) of the BMA,ULBs are required to discharge regulatory functions, planning functions, service providing functions, protection functions and statistical functions as well as agency functions. UnderSection45(1) (a) of BMA,ULBs have to provide Core Civic Services like (a) water-supply for domestic, industrial, and commercial purposes, (b) drainage and sewerage, (c) solid waste management, (d) markets and slaughterhouses, (e) promotion of educational, ports and cultural activities, and (f) aesthetic environment;

Under Sec.45 (v) and (vi), ULBs are responsible for transport and communication within the urban centres including (a) Construction and maintenance of roads, footpaths, pedestrian pathways, transport terminals (both for passengers and goods), bridges, over-bridges, subways, ferries, and inland water transport system, and (b) transport system accessories including traffic engineering schemes, street furniture, street lighting, parking areas, and bus stops. Under Section 46, ULBs are responsible for Agency Functions on behalf the Central or State Government in respect of primary education, curative health, transport, supply of energy, fire safety, and urban poverty alleviation.

ULBs in Bihar are hardly equipped to carry out all these functions. Presently they are only discharging the following functions: Solid Waste Management, Drainage, Sewerage, Water Supply, Planning & Development of Human Settlement, Markets and Slaughterhouses, Street Lighting, Parking, Bus Stops, Slum Upgradation and Basic Services to Urban Poor in slums, including affordable housing, water supply, sewerage, drainage, community toilets and baths etc. Due to the lack of ULB's capacity in Bihar, many ULB functions are being discharged by the Government departments; e.g. (a) Water Supply byPHED except in Patna, (b) Urban Forestry and protection of Environment by Forest & Environment Department, (c) Fire Services by Home Department, (d) Promotion of Arts &Culture Department, (e) Primary Education by Education Department etc.

Being almost entirely dependent on the State government grants and partly from the Central Finance Commission grants which are not adequate for its range of functions and activities, ULBs in Bihar are hardly equipped financially to carry out their assigned functions. Besides, they also lack functional autonomy, as decision on all key issues rests largely with State Government. There does not seem to be any clear and true devolution of functions. No activity mapping also seems to have been done. Government needs to make serious efforts towards empowering and enabling them to become the agents of change in transforming the crumbling urban centres of Bihar.

6.8 Parallel Bodies

Due to poor staffing and technical incapability of the ULBs, a number of Parallel Bodies has been created in Bihar as shown in Table 6.13 for performing various functions. But as the Fifth SFC had observed, the "multiplicity of agencies seems to have led to overlap, ambiguity and wastage of resources. It is imperative that working relationship amongst these PBs and the ULBs be harmonized."

Table 6.13 : Parallel Bodies in Urban Sector

Parallel Body	Functions
BUIDCo (Bihar Urban Infrastructure Dev. Urban Transport Corporation)	Civic Services: Execute infrastructure related project, Affordable Housing, Commercial Market Development, Nodal executing agency of State Government for implementing JNNURM, NGRBA, ADB and World Bank funded urban projects
BUSTL (Bihar Urban Transport Services Ltd.)	Responsible for operation of urban transport
BUDA (Bihar Urban Dev. Authority)	BUDA does technical monitoring of engineering works in the ULBs. Implementation of Central/State Schemes as state level coordinator. Incidentally, BUDA had over Rs. 950 crore undisbursed amount as on 31.3. 2015
BRJP (Bihar Rajya Jal Parshad)	Design, Construction and Maintenance of Water Supply Schemes, Sewage Treatment Plants and Storm water drainage etc.
SPVs	UDD has recently decided to constitute SPVs for Smart Cities and Waste Processing respectively

Source : Report of the Fifth STC, Table 3.4A

BUIDFT (Bihar Urban Infrastructure Development Fund Trust) was set up by the State Government through BUIDCo to develop along term state-led and market-driven sustainable urban infrastructure financing mechanism. Three funds - Urban Loan Fund (ULF), Grant and Credit Enhancement Fund (G&CEF) and Project Development Fund (PDF) -were to be managed by BUIDFT. BUIDFT is to progressively increase external financing of ULB level capital projects in a sustainable manner through (a) catalyzing development of well-structured bankable projects, (b) building capacity in project appraisals and resource mobilization and (c) facilitating/incentivizing State and ULB level reforms to attract further investments. However, so far the impact of BUIDFT has been suboptimal in relation to its objectives.

The Fifth SFC has estimated the revenue and expenditure of the ULBs as shown in tables 6.14 and 6.15 respectively. The resource gap on the basis of this has been worked out in table 6.16, which indicates that even if the revenue projections are realized, there would still be a resource gap of Rs 8505 crore during the period 2015-20 covered by the 14th Finance Commission.

Table 6.14 : Funds likely to become available to the ULBs (2015-20)

	15-16	16-17	17-18	18-19	19-20	Total
1. OTR	**249**	**474**	**585**	**721**	**894**	**2923**
a. Property Tax	189	392	484	598	738	2401
b. Other Tax	11	22	27	34	43	137
2. Non-Tax	50	60	74	90	112	386
3. Assigned Revenue	**278**	**463**	**570**	**704**	**872**	**2887**
a. Stamp Duty	250	310	385	480	600	2025
b. Professions Tax	28	36	47	62	80	254
c. Motor Vehicle Tax		117	138	162	192	608
Total (1+2+3)	**577**	**996**	**1230**	**1515**	**1878**	**6196**
5. 14th FC Performance Grant	257	356	411	475	642	2141
6. 14th FC Basic Grant	-	105	119	135	177	535
Total 14th FC Transfer (5+6)	**257**	**461**	**530**	**610**	**819**	**2676**
7. 5th SFC Devolution	760	1290	1595	1970	2440	8055
8. 5th SFC Grants	235	620	725	1020	1125	3725
Total 5th SFC Transfer (7+8)	**995**	**1910**	**2320**	**2990**	**3565**	**11780**
State Plan (9)	2132	2345	2580	2838	3121	13016
Total (1 to 9)	**3961**	**5712**	**6659**	**7953**	**9383**	**33668**

Source: Report of the Fifth State Finance Commission, Government of Bihar, Table 7.25

Table 6.15 : Projection of ULB Expenditure based on need (5th SFC) Rs. Cr.

Sl. No.	Items	15-16	16-17	17-18	18-19	19-20	15-20
1	**Capacity Building**						
a	Man Power (Exclud. Gr-D)	206	227	249	274	302	1258
b	IT	2	2	2	2	8	
c	Training Program	60	64	69	74	79	346
d	SUPA	5	15	20	25	35	100
e	Infrastructure						
f	Office Space	5	15	75	100	120	315
2	**Civic Services**						
a	Capital Expenditure	4792	5182	5605	6062	6556	28197
b	O & M	200	216	234	253	274	1177
3	**SMART Cities/ AMRUT**	**2156**	**2156**	**2156**	**2156**	**2156**	**10780**
4	**Professional Services**	**20**	**22**	**24**	**26**	**29**	**121**
Total =	**(1+2+3+4)**	**7424**	**7875**	**8408**	**8944**	**9522**	**42173**

Source: Report of the Fifth State Finance Commission, Government of Bihar, Table 7.24

Table 6.16 : Estimate of Resource Gap of ULBs – 2015-20 and the Resource Gap

Year	Revenue	Expenditure	Resource Gap
2015-16	3961	7424	3463
2016-17	5712	7875	2163
2017-18	6659	8408	1749
2018-19	7953	8944	991
2019-20	9383	9522	139
Total 2015-20	**33668**	**42173**	**8505**

Annexure 6.5 shows the statement of receipts and expenditure of the ULBs in Bihar during the period 2012-13 to 2015-16. It can be seen that the ULBs in Bihar had accumulated unspent funds of Rs 929 crore at the end of 2015-16, which testifies to their collective lack of capacity. Initiatives taken so far have yielded little results.

With the objective of transforming urban centres of Bihar, a project called Support Programme for Urban Reforms (SPUR) Project was launched in 2010 with DFID support, in which five key outputs were identified as (a) Urban Governance and Planning, b) Municipal Finance, (c) Municipal Infrastructure, (d) Local Economic Development, (e) Social Development, Poverty Alleviation & Livelihoods. However, even after 6 years of operation of SPUR, there has been very little improvement in the functioning or outcomes of the ULB anywhere in the State, as per the SFC assessments.

Obviously, much remains to be done to empower, enable and transform these ULBs which only then can play a transformational role in changing the urban landscape in Bihar. As the SFC Report had rightly observed, “Breaking out of the web of under-urbanization and under-development is central to Bihar’s urban transition. It will be provided by creation of quality urban infrastructure capital, urban-led growth in areas which hold in comparative terms the maximum potential, urban sector reforms, and developing institutional capacities.”

Annexure 6.1 : Comparative Statement of Functions assigned under the Constitution and BPRA, 2006

(Source: Annexure 2.2 to the Report of the Fifth State Finance Commission)

		Corresponding functions under The Bihar Panchayat Raj Act, 2006		
1	Agriculture, including agricultural extension	Promotion & development of agriculture & horticulture.	(i) Promotion & agriculture development of & horticulture; (ii) Maintenance of agricultural seed farms & horticultural nurseries; (iii) Storage & distribution of insecticides & pesticides; (iii) Propagation improved methods of cultivation; (v) Promotion of cultivation & marketing of vegetables, fruits, herbal plants & flowers; (vi) Training of farmers & extension activities.	(i) Promotion of measures to increase agricultural production & to popularize the use of improved agricultural practices; (ii) Opening & maintenance of agricultural seed farms & commercial farms; (iii) Establishment & maintenance of godowns; (iv) Conducting agricultural fairs & exhibitions; Production Committee shall perform functions relating to agriculture, (v) Management of agricultural & horticultural extension training centres; (vi) Training of farmers;
2	Land improvement, implementation of land reforms, land consolidation & soil conservation	(i) Development of waste lands. (ii) Development & maintenance of grazing lands & preventing their unauthorised alienation & use.	Assisting Govt. & Zila Parishad in implementation of land improvement & soil conservation programmes.	Land Improvement & Soil Conservation.
3	Minor irrigation, water management & watershed development	-------	(i) Assisting & Govt. Zila Parishad in construction & maintenance of minor irrigation works; (ii) Implementation schemes for community & individual irrigation. Minor maintenance of irrigation works.	(i) Construction, renovation & maintenance of minor irrigation works & lift irrigation; (ii) Providing for timely & equitable distribution & full use of water under irrigation schemes under the control of the Zila Parishad; (iii) Development of ground water resources; (iv) Installation of community pump sets; (v) Watershed development programme.
4	Animal husbandly,& dairying poultry.	(i) Improvement of breed of cattle, poultry &other livestock; (ii) Promotion dairy farming, & poultry piggery; (iii) Grassland development.	(i) Maintenance of veterinary & animal husbandry services; (ii) Improvement of breed of cattle, poultry & other livestock; (iii) Promotion farming, dairy, poultry & piggery; (iv) Prevention of epidemics& contagious diseases.	(i) Establishment of Veterinary Hospitals & Dispensaries; (ii) Setting up of mobile diagnostic & clinic laboratories; farms for cows & pigs; (iii) Breeding; (iv) Poultry farms, duck farms & goat farms; (v) Common cold storage facility for dairy, poultry & marine products; (vi) Fodder development programmes; (vii) Promotion of dairy farming, poultry & piggery; (viii) Prevention of epidemics & contagious diseases.

5	Fisheries	Development of fisheries in the village(s).	Promotion of fisheries development.	(i) Fish seed production & distribution. (ii) Development of pisciculture in private & community tanks; (iii) Development of inland fisheries; (iv) Fish curing & drying; fishing; (v) Assistance to traditional occupations; (vi) Organising fish marketing co-operatives; (vii) Welfare schemes for the upliftment & development of fishermen.
6	Social forestry And farm forestry	(i) Planting &preservation of tree on the sides of roads& other public lands under its control. (ii) Promotion farm forestry; (iii) Development of Social Forestry.	(i) Planting & preservation of trees on the sides of roads& other public lands under its control; of farm (ii) Promotion forestry	(i) Organise campaign for tree planting; (ii) Planting & maintenance of trees.
7	Minor forest produce	Do	Do	Do
8	Small scale industries, including food processing industries	-------	-------	(i) Identification of traditional skills in the locality & developing household industries; (ii) Assessment of raw material requirements so as to ensure its timely supply; (iii) Design & production to suit the changing consumer demands; (iv) Organisation of training programmes for craftsmen & artisans; (v) Liaison to tap bank credit for this programme; (vi) Population & marketing of finished products; (vii) Industrial Estates;
9	Khadi, village And cottage industries	(i) Promotion of rural & cottage industries; (ii) Organisation of awareness camps, seminars & training program, agricultural& industrial exhibitions for the benefit of rural areas.	(i) Promotion of rural cottage industries; (ii) Organisation conferences, seminars & training programmes, agricultural &industrial exhibitions.	Organising Khadi, Handloom, Handicraft And Village & Cottage Industries.
10	Rural housing	(i) Distribution of house sites within its jurisdiction. (ii) Maintenance of records relating tohouse sites & other private. Public &properties.	Implementation of housing schemes & distribution of house sites.	(i) Identification of houseless families; (ii) Implementation of house building programme in the district; (iii) Popularising low cost housing.
11	Drinking water	(i) Construction, repair & maintenance of drinking water wells, tanks, ponds & hand pumps; (ii) Prevention &control of water pollution; (iii) Maintenance of rural water supply schemes.	(i) Establishment, repairs & maintenance of rural water supply schemes; (ii) Prevention & control of water pollution; (iii) Implementation of rural sanitation schemes	-------
12	Fuel & fodder	(i) Fuel plantations & fodder development;	(i) Fuel plantation & fodder development;	(i) Promotion of social & farm forestry, fuel plantation & fodder

				development; (ii) Management of minor forest produce of forests raised in community lands. (iii) Development of wasteland
13	Roads, culverts, bridges, ferries, waterways & other means of communication	(i) Construction &maintenance of village roads, drains& culverts; (ii) Maintenance of buildings under its control to it or transferred by Govt. or any public authority; (iii) Maintenance of boats, ferries & waterways	(i) Construction & maintenance of public roads, drains, culverts & other means of communications which are not under the control of any other local authority or the Govt.; (ii) Maintenance building or other property vested in the Panchayat Samity; (iii) Maintenance of boats, ferries & waterways.	(i) Construction & maintenance of roads other than National & State Highways. (ii) Bridges & culverts coming under roads other than National & State Highways. (iii) Construction & maintenance of office building of the Zila Parishad. (iv) Identification of major link roads connecting markets, educational institutes, health centres & link roads; (v) Organising voluntary surrender of lands for new roads & widening of existing roads.
14	Rural electrification Including of Distribution electricity	Rural electrification including distribution of electricity & providing for maintenance of lighting public streets &other places.	Promotion of rural electrification	Rural Electrification
15	Non-conventional energy sources	(i) Promotion &development of non-conventional energy schemes; (ii) Setting up of development &maintenance of community non-conventional energy devices; (iii) Propagation of other energy-efficient devices.	Promotion &development of non-conventional energy sources.	-------
16	Poverty alleviation programme	(i) Promotion of public awareness& participation in poverty alleviation programmes for fuller employment & creation of productive assets; (ii) Selection of beneficiaries under various programmes through Gram Sabhas; (iii) Participation ineffective monitoring of poverty alleviation programmes.	Planning of & implementation poverty alleviation programmes & schemes.	Planning, supervision, monitoring & implementation of poverty alleviation programmes
17	Education, including primary &secondary schools	(i) Promotion of public awareness& participation in primary & secondary education; (ii) Ensuring full enrollment & attendance in primary schools &their management.	(i) Promotion of Primary & secondary Education; (ii) Construction, repair & maintenance of primary school buildings.	(i) Promotion of educational activities including the establishment & maintenance of primary & secondary schools; (ii) Organisation of programmes for mass education & library facilities; (iii) Extension work for propagation of science & technology to rural areas; (iv) Survey & evaluation of educational activities; (v) Establishment & maintenance of general hostels, ashrams, schools &

				orphanages
18	Technical & training vocational education	-------	Promotion of rural artisan & technical & vocational training.	-------
19	Adult & non-formal education	Promotion of mass literacy	Implementation of mass literacy	-------
20	Libraries	Village libraries &reading rooms.	Promotion of libraries	Education Committee shall perform functions relating to education, including primary, secondary, mass & non-formal education, libraries & cultural activities
21	Cultural activities	Education Committee will perform functions relating to education, including primary, secondary & mass education, libraries & cultural activities	Promotion of social, cultural& sports activities.	Do
22	Markets & fairs	Regulation & management of fairs (including cattle fairs) & festivals.	Regulation of fairs & festivals.	(i) Development of regulated markets & marketing yards; (ii) Grading & quality control of agriculture products. (iii)Acquire & maintain village haats & markets
23	Health & sanitation, including hospitals, primary health centres & dispensaries	(i) Maintenance of general sanitation; (ii) Cleaning of public roads, drains, tanks, wells &other public places; (iii) Maintenance& regulation of burning & burial grounds; (iv) Construction& maintenance of public latrines; (v) Disposal of unclaimed corpses& carcasses; (vi) Management& control of washing & bathing ghats; (vii) Upgradation of environment of &prevention its degradation.	(i) Promotion of health & family welfare programmes; (ii)Promotion of immunization & vaccination programmes; (iii) Health & sanitation at fairs& festivals.	(i) Establishment & maintenance of Hospitals, Primary Health Centres & Dispensaries except Medical college Hospitals, T.B. Sanitoriums, Leprosy & Mental Hospitals; (ii) Implementation of immunization & vaccination programmes activities; (iii) Health education (iv) Maternity & child health activities; (v) Family welfare activities; (vi) Organising health camps with Panchayat Samity & Gram Panchayat; (vii) Measures against environment pollution
24	Family welfare	(i) Implementation of family welfare programmes & Public Health Centers; (ii) Prevention & taking remedial measures against epidemics; (iii) Regulation sale of meat, fish & other perishable food articles; (iv) Participation in programmes of human & animal vaccination; (v) Licensing eating & entertainment establishments; (vi) Regulation curing, tanning & dyeing of skins &hides; (vii) Regulation of offensive & dangerous trades	Do	Do
25	Women & child development	(i) Participation in implementation of women & child welfare programmes; (ii) Promotion education, health	(i) Promotion of programmes relating to development of women & children;	-------

		& nutrition programmes.	(ii) Promotion of health & nutrition programmes in the schools; (iii) Promotion participation of voluntary organizations in women & child development programmes.	
26	Social welfare, including the welfare of handicapped &mentally retarded	(i) Participation in implementation of the social welfare programmes, including welfare of physically & mentally persons challenged as well as destitute; (ii) Monitoring of the old-age & widows' pension schemes.	(i) Social welfare programmes including welfare of physically & mentally challenged &destitute; (ii) Monitoring the old age &widows' pensions & pensions for the physically & mentally challenged.	(i) Extension of educational facilities to the SC, ST & BC by giving scholarships, stipends, boarding grants & other grants for the purchase of books & other accessories; (ii) Managing hostels for the benefit of SC & ST. (iii) Organising Nursery Schools, Balwadis, Night schools & libraries to eradicate illiteracy & impart general education; (iv) Conduct of model welfare centers & craft centers to train SCs & STs in cottage & rural industries; (v) Managing residential basic schools for SCs/STs. (vi) Providing facilities for marketing of goods produced by members of the SCs & STs. (vii) Organising co-operative societies of SCs/STs; (viii) Other welfare schemes for the upliftment & development of SCs/STs.
27	Welfare of the weaker & sections, in particular, of SC &ST	(i) Promotion of public awareness regarding welfare of SCs, STs & OBCs (ii) Implementation of specific programmes for weaker sections.	(i) Promotion of welfare of SC, ST & OBCs; (ii) Protecting such & classes from social injustice & exploitation.	Do
28	Public distribution system	(i) Promotion of public awareness with regard to distribution of essential commodities; (ii) Monitoring of public distribution system	Distribution of essential commodities	-------
29	Maintenance of community assets	(i) Maintenance of community assets belonging to the GP (ii) Preservation &maintenance of other community assets	(i) Maintaining all community assets vested in it or transferred by Govt. or local authority or organization; (ii) Preservation &maintenance of other community assets	-------

Annexure 6.2 : Summary of the main Recommendations of the Fifth State Finance Commission
(Source: Report of the Fifth State Finance Commission)

A. Basic premise behind the recommendations

I. It must be stressed that for the LBs to function as 'institutions of self-government' as envisaged in the Constitution and as "Panchayat Sarkars" as envisioned by State Govt., they must be empowered, enabled and made accountable. Good governance, maximization of own revenue, sound planning, budgeting, accounting, audit and expenditure management particularly in the ULBs are preconditions to enabling the cities and towns to provide opportunities to the people arising from urbanization. Similarly, if the villages are to be made more live able and productive, if the Panchayats are to contribute to "Saat Nishchoy" vision of the State Govt., and if the Gram kutchahries are to dispense inexpensive justice at the doorsteps, the PRIs have to be managed professionally.

II. Further, though funds available to the LBs from various sources are grossly inadequate for their assigned functions, they are unable to utilize even that. Such unsatisfactory situation is primarily due to the capacity constraints e.g. serious deficiencies in skilled man-power, office space, IT facility etc. and non-implementation of much needed 'reforms'**.** Full capacity building and 'reforms' in the LBs is, therefore, at the core of recommendations. Grants of Rs. 21,018 Cr. For the GPs, Rs. 2,676 Cr for the ULBs and performance grant conditions of the 14^{th} FC, make it all the more urgent and unavoidable. Besides, major amounts are expected from various Central/State schemes.

B. Devolution and Grants to PRIs and ULBs

III. Distribution of Devolved funds and Grants between the PRIs and ULBs would be in the ratio of 70:30 in 2015-16 and 60:40 in the subsequent 4 years. Inter-se distribution of Devolved funds among the GP: PS: ZP would be in the ratio of 70:10:20. Distribution of Devolved funds among the GPs, PSs and ZPs would be according to a set of criteria involving population, area and under-development index (UDI). Distribution of Devolved funds among the ULBs would be according to a set of criteria involving population, area and no. of BPL families.

IV. Grants would focus on Capacity Building and Reforms and would be utilized for (a) Manpower, Training, e-Governance, Office Space, (b) GK, (c) Preparation of Master Plans/CDPs/DPRs/GIS Maps, (d) Developing Divisional and District Headquarters on the lines of Smart and AMRUT Cities, (e) SPUR Type Professional Services to the ULBs and the PRIs, Promoting PPP, (g) Incentive for ARM and Performance Grants, (h) Regulatory Bodies including Ombudsman, State Property Tax Board, Real Estate Regulatory & Development Authority and Urban Regulator, and (i) DLFA and internal audit.

C. Action points for Finance Department

V. As recommended by the 14th UFC, the future SFCs should be strengthened. This would involve timely constitution, proper administrative support and adequate resources for smooth functioning and also timely placement of the SFC Report before State Legislature, with Action Taken Notes.

VI. Surcharge of 10% on behalf of the LBs on Entertainment Tax should be levied and a reasonable share of the surcharge may be given to the PRIs.

D. Action points for Panchayati Raj Department and the PRIs

VII. For Own Revenue Enhancement in the PRIs - PRD should prepare and circulate a Manual of Panchayat Finance. Necessary Rules and Guidelines for collection of taxes by the PRIs should be framed and circulated. Collection of Own Revenue by the Panchayats should be incentivized. Overall supervision of Panchyat revenue collection should be done by PRD.

a. **For Taxes** (a) Property Tax - GPs should begin levying Property Tax even at a nominal rate. (b)Professions Tax should be assessed comprehensively so that collections are much higher than the present level (c) Tax on advertisement - State Govt. to empower the Panchayats to collect tax on advertisement.
b. **For Non-Tax Revenues** - Revenue source of GP should include Sairat, Mineral, Mobile Tower, NREGA Assets etc. Panchayats should be encouraged to develop income earning natural or man-made assets such as markets, community centres, and bus stands for augmenting their non-tax revenue.
c. **Manpower, Training and Performance Management**: Model Panchayat Cadres as recommended by the 5th SFC be implemented to have requisite professional & technical manpower.
d. **Planning**: District Planning Committees should prepare Integrated District Plan for both the Panchayats and Municipalities as per Art 243ZD
e. **Budgeting**: The PRIs should to prepare outcome based budget timely as per the Manual, which must be consistent with the long and short term plans that promote the strategic priorities of the communities and be uploaded on the website for citizen's feedback.
f. **Accounting**: PRD should have a robust system of supervision and facilitation for maintenance of accounts by the Panchayats.
g. **Auditing**: All Internal, DLFA and AG Audit Reports along with ATR should be uploaded on website.
h. **Accountability and Transparency**: Community should be involved in setting key performance indicators (PIs) and actual performances reported back to community.

E. Action points for Urban Development Department and the ULBs

VIII. The following measures were recommended to:

a. Formulate comprehensive State Urban Policy for rapid and planned urbanization
b. Expedite Activity Mapping for the ULBs and integrate Parallel Bodies functionally with the ULBs.
c. Enable the ULBs to develop Model Cities & Towns and set up SPUR like entity to support this effort.
d. Operationalize Ombudsmen separately for Municipalities to enquire into allegations of corruption, misconduct etc.
e. Create a State-level Urban Regulator for setting user charges, standards for services, performance, etc.
f. Establish Real Estate Regulation Authority for regulation and development of the real estate sector.
g. Create a State Property Tax Board to optimize assessment, collection and recovery of Professional Tax.
h. Ensure accountability through proper functioning of Ward Committees and Standing Committees.
i. Implement Reforms recommended under JNNURM & AMRUT in a Mission Mode in all ULBs

IX. **For Tax Revenues:** To

a. Make a policy to periodically revise property tax, user charges and taxes.
b. Property Tax General Rates, which have not been raised since 1992, be at least doubled effective April 01, 2016 to cover partially inflation of over 440%

c. The existing Property tax system based on computation of Annual Rental Value (ARV) be replaced with "Area Based System" due to its objectivity, transparency, and lower compliance cost.
d. Implement online filing of Self-Assessment and online-payment of Property Tax.
e. GIS data available for 29 ULBs be used for Vacant Land Tax. The remaining ULBs to use "Google Maps" to identify vacant lands and do billing.
f. Newer forms of entertainment such as boat rides, cable television and internet cafes be brought into the Entertainment Tax net and no exemptions be given without compensating the LBs for the loss.
g. The ULBs to take recovery actions under Bihar Communication Towers & Related Structures Rules, 2012 and Recovery Regulations. Also to upload list of such towers with tax paid status on their website.
h. Municipal Corporations to use existing or new SPV to manage Advertisement Tax and Parking Charges. PMC (Grant of Permission for Display of Advertisement & Similar Desires) Regulations, 2012 be followed by all ULBs.
i. Congestion tax (used in London, Singapore, Milan etc) be levied in Patna, Gaya, Bhagalpur etc. which are facing huge traffic problem and high carbon emission. The revenue so generated be used to improve public transport.

X. **For Non-Tax Revenues:** User Charges

a. ULBs must start levying User Charges under section 128 of BMA, 2007 for Water Supply, Sewerage, SWM services, etc. to meet at least the O&M cost of the services. The ULBs to provide good level of civic services, to encourage payment of user charges.
b. All ULBs to prepare a Subsidy Report for each service as mandated under section 83 of BMA, 2007 and include the same in its Budget Estimates.
c. All ULBs to periodically review and update the charges and fees for the services.
d. b). Income from Royalties be shared with the LBs in whose jurisdiction the mining is done, to ameliorate the adverse effects of mining.
e. Surcharge of 2.5% be levied on electricity consumption on behalf of the ULBs to cover electricity charges.
f. Surcharge of 5% be levied on Vehicle Tax and transferred to the ULBs for public transport and maintenance of roads within its jurisdiction.

XI. **Manpower, Training and Performance Management:** Model Municipal Cadres as recommended by the 5th SFC be implemented to have requisite professional & technical manpower.

XII. Budgeting, Accounting and Auditing:

a. ULBs should prepare outcome based budget timely as per the Manuals, which must be consistent with the long and short term plans that promote strategic priorities of the communities and be uploaded on the website for citizen's feedback.
b. All ULBs should migrate to Accrual Based Double Entry Accounting System (DEAS) effective April 01, 2014 and make audited accounts of 14-15 available during first half of 16-17 in order to be eligible for Performance Grant for 16-17.
c. All ULBs should adopt RBI's Municipal Finance Information System (MFIS) along with an Integrated Accounting and Revenue Software.
d. Internal control mechanisms at the ULBs should be strengthened through regular internal audits to ensure compliance of BMAR, 2014.

Annexure 6.3 : **Functions assigned to ULBs under the Constitution and the section 45 of the Bihar Municipal Act, 2007**

(Source: Report of the Fifth State Finance Commission)

Sl. No.	Functions under the Constitution	Corresponding functions under Bihar Municipality Act, 2007
1	Urban planning including town planning.	a. Town planning, urban development and development of commercial infrastructure. b. Planned development of new areas for human settlement. c. Beautification of the municipal area by setting up parks and fountains, providing recreational areas, improving river banks, and landscaping. d. Integration of the development plans and schemes of the municipal area with the district or regional development plan, if any.
2	Regulation of land-use and construction of buildings.	
3	Planning for economic and social development.	a. Preparation of Plans for development and social justice. b. Organization of voluntary labour and co-ordination of activities of voluntary agencies for community welfare. c. Campaigns for dissemination of such information, vital for public welfare. d. The Municipality may plan, build, operate, maintain or manage the infrastructure required for the discharge of its functions, either by itself or by any agency (section 166).
4	Roads and bridges.	a. Communication systems, construction and maintenance of roads, footpaths, pedestrian b. Pathways, transportation terminals, both for passengers and goods, bridges, over-bridges, subways, ferries, and inland water transport system, c. Transport system accessories including traffic engineering schemes, street furniture, street lighting, parking areas, and bus stops.
5	Water supply for domestic, Industrial and commercial purposes.	a. Water- supply for domestic, industrial and commercial purposes, b. Provision for unfiltered water-supply for non- domestic uses,
6	Public health, sanitation conservancy and solid waste management.	a. Community health b. Drainage and sewerage, soil waste management c. Curative health d. Mass inoculation campaigns for eradication of infectious diseases, e. Construction and maintenance of municipal markets and slaughterhouses and regulation of all markets and slaughterhouses, f. Reclamation of unhealthy localities, removal of noxious vegetation and abatement of all nuisances, g. Maintenance of all public tanks and regulating the re-excavation, repair and up-keep of all private tanks, wells and other sources of water-supply on such terms and conditions as the Municipality may deem proper, h. Advancement of civic consciousness of public health and general welfare by organizing discourses, seminars and conferences. i. Measures for eradication of addiction of all kinds including addiction to drugs and liquor; j. Construction or maintenance of, or provision of to, hospitals, dispensaries, asylums, rescue homes, maternity houses, and child welfare centres.
7	Fire services.	a. Fire prevention & fire safety.
8	Urban forestry, protection of the environment and promotion of ecological aspects.	a. Protection of environment including planting and caring of trees on road Sides and elsewhere. b. Reclamation of waste lands, promotion of social forestry and maintenance of open spaces, c. Establishment and maintenance of nurseries for plants, vegetables and trees and promotion of greenery through mass participation, d. Organization of flower-shows and promotion of flower-growing as a civic culture, e. promotion of measures for abatement of all forms of pollution;

9	Safeguarding the Interests of weaker sections Of society, including the Handicapped and mentally retarded.	a. Provision of shelter for the homeless, b. Establishment and maintenance of shelters, in times natural disasters, and relief works, for, destitute persons. c. Implementation programmes for liberation and rehabilitation of scavengers and their families,
10	Slum improvement and up gradation.	
11	Urban poverty alleviation.	a. Urban poverty alleviation.
12	Provision of urban Amenities & facilities such as parks, gardens, playgrounds.	a. Installation of statues, portraits and pictures in appropriate manner, b. Organization, establishment and maintenance of art galleries and botanical or zoological collections, and c. Maintenance of monuments & places of historical, artistic & other importance;
13	Promotion of cultural, educational and aesthetic aspects.	a. Primary education. b. Promotion of educational, sports and cultural activities and aesthetic environment c. Promotion of civic education, adult education, social education and non- formal education, d. Promotion of cultural activities including music, physical education, sports and theatres and infrastructure therefore, e. Organization and management of fairs and exhibitions
14	Burial grounds; and electric crematoriums.	
15	Cattle pounds; prevention of cruelty to animals.	a. Construction and maintenance of cattle pounds,
16	Vital statistics (births and deaths etc.)	a. Collection of statistics and data, significant to the community,
17	Public amenities (street lighting, parking, bus stops, conveniences.	a. Supply of energy.
18	Regulation of slaughter houses and tanneries.	a. Markets and slaughterhouses

Annexure – 6.4

Important recommendations of Fifth SFC in respect of ULBs &their acceptance by the State Government

Sl. No.	Para No. Of Fifth SFC Report	Recommendation	Status of acceptance
1.	8.9.6	Devolution of State Own Tax Revenue (SOTR) to Local Bodies, 8.5 percent in 2015-16 and 9 percent for 2016-17 to 2019-20.	The Government accepted the devolution to Local Bodies at the rate of 8.5 per cent out of SOTR for the period 2015-20.
2.	8.9.8	The total Fund (Devolution + Grant) transferred to the LBs starting with 2.75 percent in 2015-16, 3 percent in 2016-18 and 3.25 percent in 2018-20 out of State Budget.	The Government accepted Fund (Devolution+ Grant) transferred to Local Bodies at a uniform rate of 2.75 per cent of total expenditure (actuals) of previous financial year for 2015-20.
3.	8.10.4	Distribution of Devolved funds and Grants between PRIs and ULBs would be in the ration of 70.30 in 2015-16 and 60:40 in subsequent 4 years.	The Government accepted the distribution at a uniform ration of 70:30 between PRIs and ULBs for 2015-20.
4.	9.5.8	Devolved funds would be given to the Local Bodies (LB) as "Block Fund" purposes given in their priority.	Accepted
5.	9.12	The 2nd installment of the Fifth SFC Grants would be released on submission of utilization of 50 percent of 1st installment, which are at least internally audited.	The Government accepted that before release of second installment of amount to be transferred to Local bodies, submission of accounts of the expenditure of the previous financial year and its internal audit report along with utilization certificate would be mandatory.
6.	9.13.1	Salaries of at least the existing staffs of the ULBs and the ZPs must come from their own revenues. State Government could at best meet the arrears.	State Government accepted the recommendation with minor modification and allowed monthly salary and pensionary payment from Devolution + Grant under Fifth SFC.
7.	9.13.2	Funds earmarked for Manpower is only for sanction of new and filling of the vacant positions as per the Model Panchayat and Municipal Cadres and not for payment of salary etc. to the existing staff.	Accepted
8.	9.6.3	Grants would be utilized for (a) Manpower, Training, e-Governance, Office Space (b) GK (c) Preparation of Master Plans/CDPs/DPRs/GIS Maps (d) Developing Divisional and Headquarters on the lines of Smart and AMRUT Cities (e) SPUR Type Professional Services to the ULBs and the PRIs (f) Promoting PPP (g) Incentive for ARM and Performance Grants (h) Regulatory Bodies including Ombudsman, State Property Tax Board, Read Estate Regulatory & Development Authority and Urban Regulator, and DLFA & internal audit.	Accepted

9.	9.13.3	Funds for e-Governance must be used for operationalizing e-Panchayat and e-Municipality modules in a Mission Mode.	Accepted
10.	9.6.5	Matching Grant for Additional Resource Mobilization (ARM) would be given in the ratio of 1.1 for Municipal Corporations, 1.2 for Nagar Parishads, 1.3 for Nagar Panchayats under the ULBs.	Accepted
11.	9.6.5	Amount of overall performance grant for the ULBs would supplement "Mukhyamantri Panchayat Protsahan Yojana" and be divided among Municipal Corporations, Nagar Parishads and Nagar Panchayats in the ratio of 1:2:3.	Accepted
12.	9.11	Resource gap of the LBs remaining even after the Fifth SFC transfers would be bridged through (a) own additional revenue (tax and non-tax), (b) full utilization of Central and State schemes (c) leveraging PPP, (d) borrowing and (e) sound expenditure management.	

Source: Report No 4 of 2017 of the Comptroller & Auditor General of India on the Audit of Local Bodies of Bihar Govt.

Annexure 6.5 : Statement of Receipt and Expenditure of Urban Local Bodies (Rs Crore)

Sl.No.	Name of ULB	2012-13			2013-14			2014-15			2015-16		
		OB	Rec.	Exp.	OB	Rec.	Exp.	OB	Rec.	Exp.	OB	Rec.	Exp.
1	Patna	64	64	44	85	117	72	129	147	122	193	265	214
2	Danapur	6	6	5	7	5	3	9	27	10	26	20	12
3	Khagaul	1	3	3	1	3	2	2	5	5	3	7	4
4	Phulwarisharif	2	5	3	5	7	3	8	5	2	11	11	8
5	Arrah	11	16	11	16	24	9	31	14	28	18	10	16
6	Begusarai	4	3	1	7	1	0	8	5	4	9	9	15
7	Chhapra	10	11	7	14	4	7	10	24	11	24	8	20
8	Biharsharif	14	14	11	17	23	17	24	22	19	26	28	26
9	Siwan	9	8	4	13	9	9	13	13	12	14	10	14
10	Hajipur	1	7	3	5	6	5	5	33	14	23	6	2
11	Bhagalpur	17	13	10	19	17	12	24	30	22	32	30	47
12	Jamalpur	3	16	8	11	11	15	6	4	5	6	11	5
13	Munger	15	17	21	11	33	11	33	43	39	37	9	25
14	Gaya	21	21	10	32	22	22	32	48	29	52	57	42
15	Aurangabad	3	5	3	6	9	5	10	11	1	19	9	11
16	Bodh Gaya	3	2	2	3	4	2	5	6	2	10	11	8
17	Nawada	6	4	3	7	12	11	7	14	4	17	25	16
18	Sasaram	10	7	6	11	19	15	14	15	11	18	3	4
19	Dehri	6	6	4	7	12	9	10	15	5	20	6	4
20	Kishanganj	14	11	5	20	17	7	30	31	35	26	NA	NA
21	Katihar	20	5	6	19	22	10	31	15	16	30	NA	NA
22	Purnea	NA	NA	NA	NA	NA	NA	57	40	47	50	NA	NA
23	Saharsa	NA	NA	NA	NA	NA	NA	16	23	26	13	NA	NA
24	Muzaffarpur	34	18	12	40	14	12	41	49	31	59	36	34
25	Darbhanga	22	13	7	28	15	12	32	43	25	49	55	28
26	Motihari	8	10	6	12	15	4	23	18	18	23	9	11
27	Bettiah	14	9	7	16	8	6	18	23	28	12	13	5
28	Sitamarhi	15	6	1	20	18	16	13	13	20	14	19	7
	Total	**331**	**301**	**202**	**430**	**444**	**297**	**642**	**735**	**589**	**836**	**667**	**574**

(OB: Opening Balance, Rec. Receipts during the year; Exp. Expenditure during the year)

Source: Report No 4 of 2017 of the Comptroller & Auditor General of India on the Audit of Local Bodies of Bihar Govt.

Chapter 7

State Public Enterprises

Objectives

To analyse the impact of the finances of State Public Enterprises on the State's financial health; To evaluate measures taken to improve their performance or to adopt the alternatives of closure, disinvestment etc.;
To assess the impact of Power Sector Reforms on States' fiscal health.

Methodology

Financial and ratio analysis of the balance sheets of public sector enterprises, especially of those in the power sector; Examination of measures taken by the state for liquidation of loss-making enterprises and the results thereof; Financial analysis of power sector companies; examination of the power situation and receipts from power sector and their impact of state resources.

Data Sources

Financial statements of working public enterprises of the state; Economic Survey of the Government of Bihar; Audit reports of the Comptroller & Auditor General of India; Concerned department of the State Government; Annual reports and accounts of the power generation and distribution companies in the State; Data from Energy Department.

7.1 Government Investment in Public Sector

As of March, 2016, the public sector in Bihar comprised 71 government companies and 3 statutory corporations. However, of the 71 government companies, only 31 were working. The total investment by the state government in public sector units, from March, 2012 to March, 2016, is shown in Table 7.1. Such investments amounted to Rs. 46,694 crore till March 2016 (Rs. 31,394 crore as equity and Rs. 15,299 crore as long term loans). Of these, Rs. 729 crore (Rs. 181 crore as equity and Rs. 548 crore as long term loans) were invested in non-working companies, as shown in Table 7.1 and Chart 7.1.

Table 7.1 : State Government Investment in Public Sector

As on 31st March	No. of Working PSUs	No. of Non-Working PSUs	Statutory Corporations	Public Sector Companies/ Corporations	Equity (Rs crore)	Loans (Rs crore)	Investment (Rs crore)
2012	22	40	4	66	633	11741	12374
2013	28	40	3	71	3743	4579	8322
2014	30	40	3	73	18323	9898	28221
2015	30	40	3	73	21542	12242	33783
2016	31	40	3	74	31394	15299	46694

Source: Audit Report No. 3 of 2016-17 of the Comptroller and Auditor General of India on Public Sector Undertakings of Bihar Govt.

Table 7.1A : Investment in Working and Non-Working Public Sector Companies (March 31, 2016)

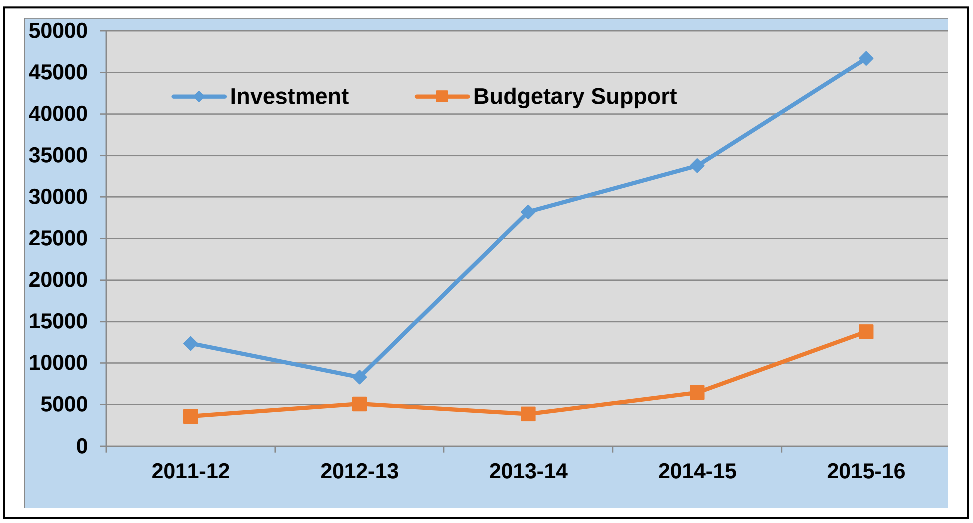
(Rs crore)

Type of Company/ corporation	Government Companies			Statutory Corporations			Grand Total
	Capital	Long Term Loans	Total	Capital	Long Term Loans	Total	
Working	31028	13657	44685	186	1095	1280	45965
Non-Working	181	548	729	-		-	729
Total	31209	14205	45414	186	1095	1280	46694

Source: Audit Report No. 3 of 2016-17 of the Comptroller and Auditor General of India on Public Sector Undertakings of Bihar Govt.

The investments increased significantly only during 2013-14, by almost Rs 20,000 crore; but this was only a notional increase only due to the inclusion of the assets of the erstwhile Bihar State Electricity Board which was unbundled into five separate companies during 2012-13 and the release of the state government's budgetary support to these entities, which were not included in the accounts for 2012-13.

Chart 7.1 : Investment in Public Sector (Rs. crore)



The turnover of the working PSUs increased from Rs 7,811 crore in 2011-12 to Rs 12,880 crore in 2015-16. However, their contribution to the State GDP increased from 2.28 per cent to 2.64 per cent during this period.

7.2 Sectoral Break Up of Public Sector

The sector-wise break-up of the public sector units as at the end of March 2016 is presented in Table 7.2. The majority of the working companies belong to power, infrastructure and financial sectors (total 19 companies). Agriculture, Manufacturing, Services and others accounted for remaining 12 working companies. It can be seen that among the public sector units in Bihar, investment is mainly focused on the power sector, which accounted for nearly 83 percent of the total state government investment in public sector undertakings at the end of 2015-16. The investment in this sector had increased from Rs 8841 crore (79.5 percent of total) in 2011-12 to Rs 38,588 crore in 2015-16.[43] The services sector accounted for 14 percent of the total investment (Rs 6,733 crore); in 2011-12, the total investments in this sector amounted to Rs 1173 crore, with a share was only 9.48 percent in total.

Table 7.2 : Sector-wise Number of Government Companies and Corporations (2015-16)

Sector	Number of Statutory Corporations	Number of Working Companies	Number of Non-Working Companies	Sectoral Investment (Rs Crore)
Agriculture	0	3	12	151.05
Power	0	9	0	38587.70
Infrastructure	0	6	1	106.06
Manufacturing	0	3	12	432.37
Services	2	3	1	6733.09
Finance	1	4	4	597.06
Others	0	3	10	86.22
Total	3	31	40	46693.55

Source: Audit Report No. 3 of 2016-17 of the Comptroller and Auditor General of India on Public Sector Undertakings of Bihar Govt.

7.3 Arrears of Accounts of the Public Sector

As reported in the Audit Report No 3 of the Comptroller & Auditor General of India on PSUs of Bihar for the year ended March 31 2016, out of 34 working PSUs, only three PSUs had finalised their accounts for the year 2015-16 and remaining 31 PSUs had arrears of 202 accounts as of 30 September 2016. The Accounts of 31 PSUs were in arrears for periods ranging from one year to 25 years. Out of 40 PSUs which are not working, five PSUs were in the process of liquidation whose 101 Accounts were in arrears for five to 26 years. Of the remaining 35 PSUs which are not working all PSUs had arrears of Accounts for eight to 39 years as on September 2016. Such heavy arrears in the finalization of accounts increases the risk of fraud and leakage of public money manifolds, apart from violating the provisions of the relevant statutes. Besides, in the absence of proper accounts, neither the contribution of PSUs to State GDP nor their contribution to the State exchequer could be accurately ascertained. The status of accounts of the PSUs in Bihar is shown in table 7.3.

Table 7.3 : Status of Arrears in Accounts of the Working Public Sector Companies in Bihar

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Number of Working PSUs	26	318	33	33	349
Number of Accounts finalised during the year	23	26	31	26	40
Number of Accounts in arrears	191	196	199	206	202
Number of Working PSUs with arrears in Accounts	25	29	29	30	31
Extent of arrears (years)	1 to 22	1 to 22	1 to 23	1 to 24	1 to 25

Source: Audit Report No. 3 of 2016-17 of the Comptroller and Auditor General of India on Public Sector Undertakings of Bihar Govt.

[43] Public sector power companies after the unbundling of BSEB include Bihar State Power (Holding) Company Limited, Bihar State Power Generation Company Limited, Bihar State Power Transmission Company Limited, North Bihar Power Distribution Company Limited and South Bihar Power Distribution Company Limited.

The status of arrears in accounts of the non-working PSUs is even more bizarre; some of these have never prepared the accounts since their inception and many accounts are pending since 1977-78. Five of these PSUs are under the process of liquidation; their accounts are in arrears from five to 26 years. The status of arrears of accounts of the non-working PSUs is shown in table 7.4.

Table 7.4 : Arrears of Accounts of Non-Working Public Sector Companies

Year	No. of PSUs not working	No. of Accounts in arrears	Period for which Accounts were in arrears	No. of years for which Accounts were in arrears
2013-14	36	944	1977-78 to 2013-14	17 to 37
2014-15	35	935	1977-78 to 2014-15	10 to 38
2015-16	35	952	1977-78 to 2015-16	8 to 39

Source: Audit Report No. 3 of 2016-17 of the Comptroller and Auditor General of India on Public Sector Undertakings of Bihar Govt.

7.4 Profit and Loss of Public Sector during 2015-16

During 2015-16, out of 34 working PSUs, 15 had earned profits of Rs 545 crore and 14 incurred losses of Rs 1145 crore. Of the remaining five, three PSUs had nil profit/loss and two PSUs had not finalised their first Accounts as of September, 2016. The major contributors of Profit were Bihar State Beverages Corporation Limited (Rs 133 crore), Bihar Rajya Pul Nirman Nigam Limited (Rs 110 crore), Bihar State Power Transmission Company Limited (Rs 78 crore), Bihar State Educational Infrastructure Development Corporation Limited (Rs 71 crore) and Bihar State Road Development Corporation Limited (Rs 59 crore). The PSUs which incurred heavy losses were South Bihar Power Distribution Company Limited (Rs 748 crore), North Bihar Power Distribution Company Limited (Rs 297 crore) and Bihar State Road Transport Corporation (Rs 59 crore) as per their latest finalised accounts.[44]

Out of 15 profit-earning PSUs, only five companies viz. Bihar State Beverages Corporation Limited, Bihar State Road Development Corporation Limited, Bihar Urban Infrastructure Development Corporation Limited, Bihar State Building Construction Corporation Limited and Bihar Rajya Pul Nirman Nigam Limited proposed a dividend of Rs 5 crore, Rs 5 crore, Rs 3 crore, Rs 2 crore and Rs 52.50 lakh respectively.

7.5 Employment in Public Sector

As of March 2016, the Public Sector Undertakings in Bihar employed 17,349 employees — Working Companies (15,076), Statutory Corporations (923) and Non-Working Companies (1,350). Their total accumulated debt amounted to Rs 15,299 crore at the end of 2015-16, compared to Rs 12,242 crore in 2014-15.

7.6 Performance of Public Sector

Some key parameters of the working PSUs for the years from 2011-12 to 2015-16 are shown in Table 7.5. The return on capital employed by the PSUs decreased from 18.41 per cent in 2012-13 to a negative return of 1.02 per cent in 2015-16. Accumulated losses of the working companies have also decreased

[44]Source: Economic Survey for Bihar Government, 2017-18.

from Rs 9,649 crore in 2011-12 to Rs 3,953 crore in 2015-16. The key performance indicators of all public sector companies are appended at Annexure 7.1.

Table 7.5 : Performance Indicators of Working PSUs

Parameters	2011-12	2012-13	2013-14	2014-15	2015-16
Return on Capital employed (Percent)	---	18.41	1.91	0.44	----
Accumulated Debt (Rs Crore)	11193	4031	9349	11693	14751
Debt/ Turnover ratio	1.43	1.43	1.18	1.01	1.15
Interest Payment (Rs Crore)	1558	79	249	168	334
Overall Profit Earned/ Loss Incurred (Rs Crore)	-2594	1	37	-37	-600
Accumulated Profit /Loss(-) (Rs Crore)	-9649	-1130	-1876	-3138	-3953

Source: Audit Report No. 3 of 2016-17 of the Comptroller and Auditor General of India on Public Sector Undertakings of Bihar Govt.

7.6 Disinvestment, Privatisation and Restructuring of PSUs

Of the 40 non-working companies, 10 are under liquidation process, as their continuance may not serve any useful purpose. The companies which have taken the route of winding up by Court order are under liquidation for the last 15 years. As recommended by the Comptroller & Auditor General of India, the process of voluntary winding up under the Companies Act is much faster and needs to be adopted/ pursued vigorously. The status of liquidation is shown in Table 7.6:

Table No. 7.6 : Closure non-working PSUs

Particulars	Companies
Total No. of Non-Working PSUs	40
Of (1) above, the number under (a) Liquidation by Court (Liquidator appointed)	5[45]
(b) Closure, i.e. closing orders/instructions issued but liquidation process not yet started	5[46]

Source: Audit Report No. 3 of 2016-17 of the Comptroller and Auditor General of India on Public Sector Undertakings of Bihar Govt.

No disinvestment exercise was undertaken by the State Government in respect of any of its PSUs during 2015-16. Restructuring of all the PSUs was to have been taken up after the formation of Jharkhand State. The decision on the division of assets and liabilities as well as of the management of 12 PSUs was taken up in September 2005. The implementation, however, has been done only in the case of five PSUs, viz. Bihar Rajya Beej Nigam Limited, Bihar State Hydroelectric Power Corporation Limited, Bihar State Tourism Development Corporation Limited, Bihar State Warehousing Corporation and Bihar State Mineral Development Corporation Limited.

[45] Kumardhubi Metal Casting and Engineering Limited, Bihar State Leather Industries Development Corporation Limited, Bihar State Finished Leathers Corporation Limited, Bihar State Small Industries Corporation Limited and Bihar State Export Corporation Limited.

[46] Bihar State Pharmaceuticals and Chemicals Development Corporation Limited, Bihar State Textiles Corporation Limited, Bihar State Water Development Corporation Limited, Bihar State Dairy Corporation Limited and Bihar Hill Area Lift Irrigation Corporation Limited.

As the Economic Survey of the Government of Bihar for the year 2017-18 itself admitted, overall, the public sector does not inspire much confidence in Bihar, and lot needs to be done to revamp this sector, which may call for difficult and sometimes politically risky decisions.

7.7 Statutory Corporations

The three statutory corporations of the state government are —Bihar State Financial Corporation (BSFC), Bihar State Road Transport Corporation (BSRTC), and Bihar State Warehousing Corporation (BSWC). All the three corporations are functional. The performance of these corporations have been summarized in Table 7.7.

Table 7.7 : Performance Indicators of Statutory Corporations as on 31st March 2016

Statutory Corporation	Accounts finalised till	Paid-up Capital (Rs Crore)	Outstanding Long Term Loans (Rs Crore)	Turnover (Rs Crore)	Net Profit/ Loss (-) (Rs Crore)	Accumulated Profit/ Loss (-) (Rs Crore)	Return on capital Employed (%)	Manpower
BSFC	2016-17	77.84	228.47	4.30	-15.17	-436.02	4.97	149
BSRTC	2015-16	101.28	866.03	56.33	-59.23	-902.98	----	625
BSWC	2014-15	6.42	0.00	66.94	0.81	5.42	5.14	149
Total		**185.54**	**1094.50**	**127.57**	**-73.59**	**-1333.58**	**2.83**	**923**

Source: Audit Report No. 3 of 2016-17 of the Comptroller and Auditor General of India on Public Sector Undertakings of Bihar Govt.

These three statutory corporations had 923 employees on their payroll as on 31st March 2016, and had accumulated losses to the extent of Rs 1334 crore. Only one of them the Bihar State Warehousing Corporation generated a marginal profit of Rs 81 lakh in 2014-15, the last year when its accounts are available. Their total turnover as per their latest accounts were Rs 128 crore and they had total loans amounting to Rs 1095 crore as on date. Their net worth has been completely eroded by their accumulated losses. The performance is dismal by any standard.

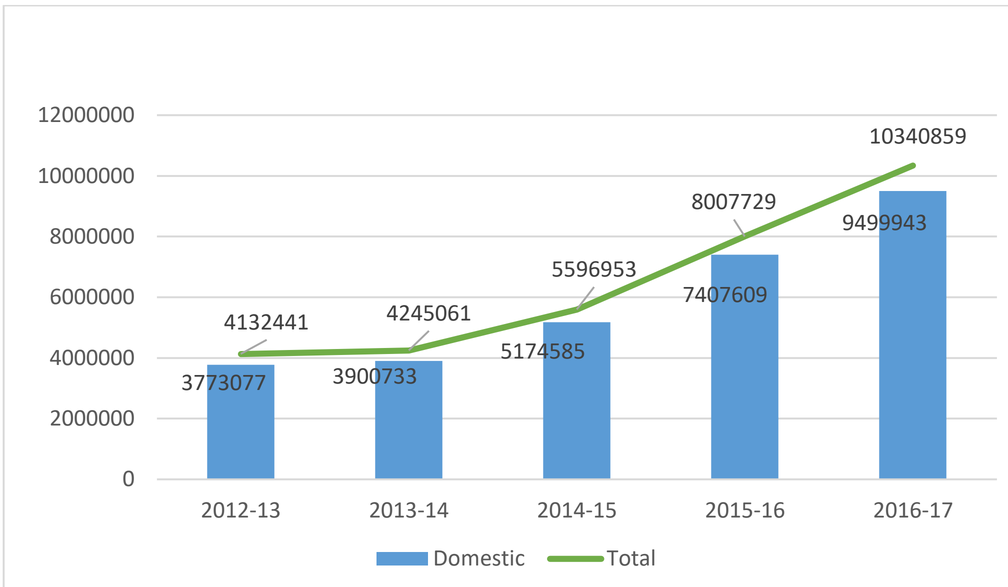
7.8 Power Sector Reforms

Energy is the ultimate driver of all growth and in view of the fast growth of its economy, the state government has accorded the highest priority to the power sector. ‘Har Ghar Bijli’ (Supply of power to all households) forms of the cornerstones of the ‘Saat Nischay’ of the state government, to ensure metered electric connection to all rural and urban households in Bihar by 2018. To attain the objective of universal household electrification, power companies have been able to energize all un-electrified villages within the target date of December 2017. Power companies are now on the road to provide connection to all willing households by their target date of December 2018.The estimated cost of this project is Rs. 1897.50 crore.

7.8.1 Availability of Power

As reported in the Economic Survey of the Govt. of Bihar for the year 2017-18, power availability in Bihar grew by 120 percent in 6 years, from 1712 MW in 2011-12 to 3769 MW in 2016-17, as shown in Table 7.8.The peak deficit in power has been reduced from about 30 percent to almost 14 percent now. Due to increased availability of power from an average of 6-8 hours to 14-16 hours in rural areas and from 10-12 hours to 20-22 hours in urban areas, the consumption in the state has more than doubled during the period along with the number of consumers (Chart 7.2).

Chart 7.2 : Growth in the Number of Consumers



Data Source: Dept. of Energy, Govt. of Bihar

However, there remains wide disparity in power consumption across the districts as seen from the following data: in 2015-16, the top 3 districts in power consumption were Patna (4197 kwh), Gaya (1214 kwh) and Muzaffarpur (916 kwh), while the 3 bottom most districts were Sheikhpura (136 kwh), Arwal (95 kwh) and Sheohar (50 kwh). It remains a challenge to the Government to reduce this disparity.

Table 7.8 : Improvement in Power Scenario in Bihar (2011-12 to 2016-17)

Parameters	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Peak Demand (MW)	2500	2650	3150	3500	4112	4405
Peak Met (MW)	1712	1802	2335	2831	3459	3769
Peak Deficit/ Surplus (MW) (-/+)	-788	-848	-815	-669	-653	-636
Peak Deficit/ Surplus (%) (-/+)	-31.5	-32.0	-25.9	-19.1	-15.6	-14.4
Energy Requirement (MU)	14454	15321	18212	22226	25550	28245
Energy Availability (MU)	12145	13267	15045	18731	21679	23978
Energy Deficit/ Surplus (MU) (-/+)	-2309	-2054	-3464	-3495	-3871	-4267
Energy Deficit/ Surplus (%) (-/+)	-16.0	-13.4	-19.0	-15.7	-15.2	15.10
Consumption (kwh)	134	145	160	203	258	272

Source: Economic Survey of the Govt. of Bihar 2017-18

The expected power demand of Bihar by 2018-19 shall be of the order of 5200 MW, to meet which, after distribution losses and intra-state transmission losses, the energy requirement at the state's periphery should be of the order of 28,069 MU.[47] As against the requirement of 5200 MW, the actual power capacity availability in the state as of March, 2017 was only 3904 MW. In order to meet the demand, the state has already planned for additional capacity of 1659 MW from different sources— its own generating stations, renewable energy sources, central generating stations, and long/medium term Power Purchase Agreements (PPA) through competitive bidding. The source-wise details of this additional capacity is presented in Table 7.9, which will add additional capacity of 1659 MW by 2018-19. The total available capacity for Bihar is expected to be 5563 MW by 2018-19, of which 4593 MW will be from conventional sources and the rest coming non-conventional sources. The estimated availability of power between 2017-18 and 2019-20 is shown in Table 7.10, from which it can be seen that the state is expected to be a surplus power state from 2018-19 onwards.

The separation of Jharkhand from erstwhile Bihar left the BSEB with only three power generation plants: Barauni Thermal Power Station (BTPS), Muzaffarpur Thermal Power Station (MTPS) and Koshi Hydel Power Station (KHPS). Of the 7 units of BTPS, 5 have already exhausted their working life and are unserviceable. Unit 7 has started after completion of renovation and modernization (R&M) work, while R&M work of Unit 6 is in progress. Additionally, the construction works of two new units of 250 MW each is also under progress under the extension programme. MTPS has been taken over by the Kanti Bijlee Utpadan Nigam Ltd. (KBUNL) which is a joint venture of NTPC and BSPGCL, having equity partnership ratio of 65:35. It has two units of 110 MW each. The power production has started in both the units after renovation and modernization two years ago. The construction work of two new units of 195 MW each is going on under the extension programme. The KHPS consists of 4 units of 4.8 MW each. It was commissioned during 1970-78 and was handed over to Bihar State Hydel Power Corporation (BSHPC) in 2003. The renovation work of 3 out of its 4 units has been completed and power generation has started. Annexure 7.2 shows the details of existing and planned generation units in Bihar.

Table 7.9 : Year-Wise and Source-Wise Details of Capacity Expansion (Figures in MW)

Sources	March 2017	Cumulative Projected Capacity	
		2017-18	2018-19
State Sector			
State Thermal	110	220	360
State Small Hydro	55	55	55
Central Generating Stations (CGS)			
CGS Thermal	2596	2596	2596
CGS Hydro	469	469	469
Independent Power Producer (IPP) Projects	260	260	560
Joint Venture/ Partnership (Thermal)	220	534	1077
Non-Conventional / Renewable EnergySources	194	224	446
Total	3904	4358	5563

Source: Economic Survey of the Govt. of Bihar 2017-18

[47]Energy is expressed in Million Units (MU) and Demand/Load is expressed in Megawatts (MW). 1 MW load used for 1000 hours is 1 MU energy consumed.

Table 7.10 : Estimated Availability of Power during 2017-18 to 2019-20

Year	Total Capacity (MW)	Estimated Peak Availability (MW)	Estimated Availability at State Periphery (MU)
2017-18	4358	4134	26384
2018-19	5563	5117	30173
2019-20	6766	5646	35908

Source: Economic Survey of the Govt. of Bihar 2017-18

Other than thermal power, for harnessing the vast potential of hydroelectric power in the State, the Bihar State Hydroelectric Power Corporation Limited (BSHPC) was established in 1982. As on 31 March 2016, the Company had set-up 13 Small Hydroelectric Projects (SHPs) with installed power generation capacity of 54.30 MW while works for establishing 16 projects with power generation capacity of 35.30 MW were in progress. The State also has an agency called the Bihar Renewable Energy Development Agency (BREDA), tasked with the development of non-conventional energy sources for production of electricity. The achievements on both these fronts have been rather modest so far.

7.8.2 Power Sector Reforms in Bihar: Unbundling of Bihar State Electricity Board

The realisation that improving the efficiency of power distribution is the only way to improve the earlier dismal power supply situation came rather late. Prior to November 2012, there were three key organisations in the energy sector in Bihar – Bihar State Electricity Board (BSEB), Bihar State Hydroelectric Power Corporation Limited (BSHPC) and Bihar Renewable Energy Development Agency (BREDA). The Bihar State Electricity Board (BSEB) was originally constituted on 1st April 1958 under Section 5 of the Electricity (Supply) Act, 1948 and was mandated for management of electricity generation, transmission, distribution and related activities in Bihar. Under the new Bihar State Electricity Reforms Transfer Scheme 2012, the BSEB has been unbundled into 5 companies with effect from 1st November, 2012 — Bihar State Power (Holding) Company Limited (holding company), Bihar State Power Transmission Company, Bihar State Power Generation Company, North Bihar Power Distribution Company and South Bihar Power Distribution Company. The roles and responsibilities of the newly formed companies are as follows:

1. **Bihar State Power (Holding) Company Limited (BSHPC):** This is the holding company of the 4 other companies. It is vested with the assets, interest in property, rights and liabilities of erstwhile BSEB. The Company will primarily be an investment company. It will coordinate the activities of 4 other companies, handle disputes and provide all necessary support to them.

2. **Bihar State Power Generating Company (BSPGC) Limited:** It is responsible for coordinating and advising other companies and concerns, including subsidiaries, engaged in the generation of electricity, and on all matters concerning the construction, operation and maintenance of generating stations and associated facilities. It is also responsible for procuring fuel and its transportation to various sites and settling of pending disputes.

3. **Bihar State Power Transmission Company (BSPTC) Limited:** It is responsible for transmission of electricity and they are vested with the transmission assets, interest in property, rights and liabilities of the erstwhile BSEB. They will undertake planning and coordination activities with

regard to intra-state transmission and develop an efficient and economical system of intra-state transmission lines for smooth transmission of electricity from a generating station to load centers.

4. **The North and South Bihar Power Distribution Companies Limited:** They will undertake the activities of distribution to all consumers, trading of electricity, implementation of rural electrification schemes and introduce open access in distribution as per the Electricity Act 2003 and the directions of the regulator. They will also tender, finalise and execute Power Purchase Agreements and other agreements for sale or purchase of electricity.

7.8.3 Losses of Distribution Companies

Faster economic growth and higher population growth have been driving up the demand for electricity in recent years leading to high AT&C (Aggregate Technical and Commercial) losses, which was 40.6 percent in 2016-17, against 43.5 percent a year earlier- in the earlier years, this was even higher. The distribution companies have been trying to address this issue by improving the metering, billing and collection systems. Energy accounting and auditing at feeders and distribution transformers (DT) are essential for reducing these losses, of which actually a small part is due to technical reasons, but arise mostly from unmetered, unbilled, or pilfered connections. Fear of higher losses lead to rationing of power by the Discoms even when power is available, leading to financial losses and unmet demands of consumers.

An experimental survey linking higher supply of power to higher payments covering consumers of both the distribution companies in Bihar conducted during 2014-2015 provided sufficient evidence in favour of a payment linked power supply, which benefits consumers while improving the financial status of Discoms, and is easier to implement, as it only requires monitoring of payments for power at the feeder level.

7.8.4 Outsourcing Rural Revenue Collection

Bihar’s rural revenue collection has improved after implementation of Rural Revenue Franchisees (RRF), which are paid for each activity, as opposed to basing payment on overall collection efficiency on the basis of billing at the distribution transformer level as suggested by the Union Ministry of Power. RRFs are paid Rs 4.50 for each meter reading, Rs 1.50 for each delivered bill, and 3 percent of total revenue collection for collection activities. The scope of RRF is limited to meter reading, bill distribution, and revenue collection; they play no role in managing the network or undertaking capital expenditure. There are 3,500 RRFs currently operational in Bihar, covering about 51 lakh rural consumers of the state — averaging around 1450 consumers for every RRF. While RRFs are mostly non-functional in most states, they form the backbone of rural revenue collection in Bihar.[48]

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[48]Zakaria Siddiqui, “From Gloom to Boom: Bihar’s Electricity Sector”, Working Paper, Mapping Power Project (Centre for Policy Research and Regulatory Assistance Project, 2017.

7.8.5 Central Government Programmes for Electrification and Distribution in Bihar

The important programmes of the Central government for expanding the coverage of electricity supply are — (1) Integrated Power Development Scheme (IPDS), which subsumed the earlier Restructured Accelerated Power Development and Reforms Programme (R-APDRP), (2) Din Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) which subsumed the earlier Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), (3) Ujwal Discom Assurance Yojana (UDAY) and (4) Special Plans under the Backward Regions Grant Fund.

The Integrated Power Development Scheme (IPDS) covers works relating to strengthening of sub-transmission and distribution network, provisioning of solar panels on government buildings, including Net-metering, metering of feeders /distribution transformers /consumers in 133 statutory towns (excluding 6 towns in distribution franchisee area) of Bihar. This will ensure uninterrupted and round-the-clock power supply and reduction in AT&C losses. The total approved cost of the scheme is Rs. 2100.50 crore, of which 60 percent will be provided by the Centre as grants and the remaining 40 percent is by the state government/distribution companies. IPDS has several components — IT enablement of distribution sector, strengthening of distribution network for completion of targets, strengthening of sub-transmission network in urban areas, and metering of distribution transformer/feeders/ consumers in the urban areas. The works are in progress. Under the earlier R-APDRP scheme, capital expenditure of Rs 1109 crore was incurred till March 2017, against an approved outlay of Rs 1447 crore under its different components to provide real-time monitoring and control, minimizing loss, balancing load, and improving voltage profiles.

Under the Deendayal Upadhayay Gram Jyoti Yojana (DDUGJY) of the central Government, launched by the centre with the objectives of electrification of villages, installation of metering system to reduce power losses, feeder separation to separate power supply between farmers and general consumers and improvement of sub-transmission and distribution networks underscoring quality and reliability, work is under progress and the target date for completion is December 2018. The total sanctioned cost of the project is Rs. 5827 crore. Funding pattern is the same as IPDS (60:40), as against 90:10 between Centre and the State under RGGVY.

The Ujwal Discom Assurance Yojana (UDAY) was launched for improvement in operational and financial efficiencies by 2019-20 through (a) Reduction in AT&C Loss to 15 percent, and (b) Reduction in gap between Average Cost of Supply (ACS) and Average Revenue Realized (ARR) to zero. A tripartite agreement among Government of Bihar, Union Ministry of Power, and DISCOMs (NBPDCL and SBPDCL) was signed in February, 2016, providing for taking over 75 percent of DISCOMs' debt by the State Government over 2 years (50 percent in 2015-16 and 25 percent in 2016-17). Out of the total debt of Rs. 3109 crore for both the DISCOMs of Bihar, Rs. 2332 crore has already been taken over by the State Government under this Scheme. Both DISCOMs of Bihar together have reduced AT&C loss from 43.5 percent (2015-16) to 40.60 percent (2016-17) and also reduced ACS-ARR (Gap) from 89 paise per unit (2015-16) to 61 paise per unit (2016-17).

Under the Special Plans fully funded from the BRGF, to bridge the critical gaps in infrastructure and other local requirements, which were not being addressed otherwise, Rs 4188 crore have been spent (till December 2017) against an estimated cost of Rs 6432 crore.

7.8.6 Recent Reforms in the Power Sector[49]

The State Government has initiated a few measures to improve the efficiency of the sector as a whole. Important among them include:

- **V-Wallet**: Ass already mentioned earlier, revenue collection work has also been outsourced to billing and collection agencies including RRF through V-wallet in all rural areas in the state. However, in urban area the collection is being received at companies' own POS counters.
- **Spot Billing,** which has been implemented for all electric consumers of the state through android mobile and blue tooth printer.
- **Tariff Rationalization**: Bihar became the pioneer state in the country to implement "Tariff Rationalization". The tariff order for 2017-18 has been issued on "Zero subsidy" basis to reflect the true cost of supply, upfront subsidy to be provided to consumers and assistance (if any) given to Discoms as a measure to enhance transparency and accountability.
- **Power theft redressal through WhatsApp**: A separate and dedicated mobile number has been introduced for power theft information by consumers throughout the state.
- **Project Monitoring App**: For intensive and real time monitoring of different on-going projects of the power distribution companies in the state, a Mobile App 'DC-Nine' has been developed. Through this app, the latest status of the project and information regarding its inspection can be loaded on the mobile from the spot itself by the field project officers. Officers at headquarters get this information through MIS, resulting in continuous monitoring of project.
- **Toll Free Number 1912**: To resolve the complaints of consumers, one Toll Free number 1912 has been started in the state on 24×7 basis. On lodging complaint on this number, the consumers will get a call and SMS regarding their complaint. Arrangement has been made for time to time interaction of top management with consumers.
- **Remote Meter Reading:** Remote meter reading of High Tension (HT) and Low Tension (LT) industrial consumers is being done from the headquarters.
- **Prepaid Metering:** For better metering in Patna, prepaid metering has been started in the Vidyut Board Colony which will be extended to other consumers in phase-wise manner.
- **New Techniques in Transmission System**: In the new projects of transmission system, most advanced techniques like Sub-station Automation System (SAS), Optical Ground Wire (OPGW), High Temperature Low Sag (HTLS) conductor and Gas Insulated System (GIS) have been introduced.
- **GIS Mapping:** GIS mapping of Power Lines, Power Sub-stations and Grid Sub-stations at 33 KV, 132 KV, 220 KV and 400 KV level has been completed.

7.9 Finances of the Power Sector- Impact of Reforms on the Financial Health of the State

7.9.1 Operational and Financial Results of Distribution Companies

Table 7.11 shows the operational and financial status of the two distribution companies in Bihar. The generation and purchase of power in Bihar has increased from 14,002 MU in 2013-14 to 23,027 MU in

[49] Information for this section is obtained from the Economic Survey of the Govt. of Bihar, 2017-18.

2016-17. With increase in sales, the revenue collection has increased, but so have the losses. The cost coverage has decreased for both the companies over the four years from 2013-14 to 2016-17, and losses have increased consequently. The combined results have been shown in Table 7.12 and Chart 7.3. It can be seen that the overall financial losses have just doubled from 5.6 percent in 2013-14 to 11.2 percent in 2016-17.

Table 7.11 : Financial Status of Power Distribution Companies

Item	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17
	NBPDCL				SBPDCL			
Generation & Purchase (MU)	5381	7029	8929	9647	8621	10388	12748	13380
Sales (MU)	3605	5004	6505	7195	4637	5814	7199	8661
Transmission Losses (%)	33.0	28.8	27.1	25.4	46.2	44.0	43.5	35.3
Average Revenue (Rs./Unit)	4.17	4.19	4.14	4.02	4.86	4.37	4.45	4.58
Sale of Power (Rs. crore)	1504	2095	2696	2891	2255	2540	3202	3971
Total Income (including subsidies) (Rs. crore)	2724	3560	4475	4620	4191	4610	6309	6622
Total Cost (Rs. crore)	2798	3857	4815	5134	4460	5358	7043	7527
Cost Coverage (Total Income/Total cost) (%)	97.4	92.3	92.9	90.0	94.0	86.0	89.6	88.0
Financial Loss (%)	2.6	7.7	7.1	10.0	6.0	14.0	10.4	12.0

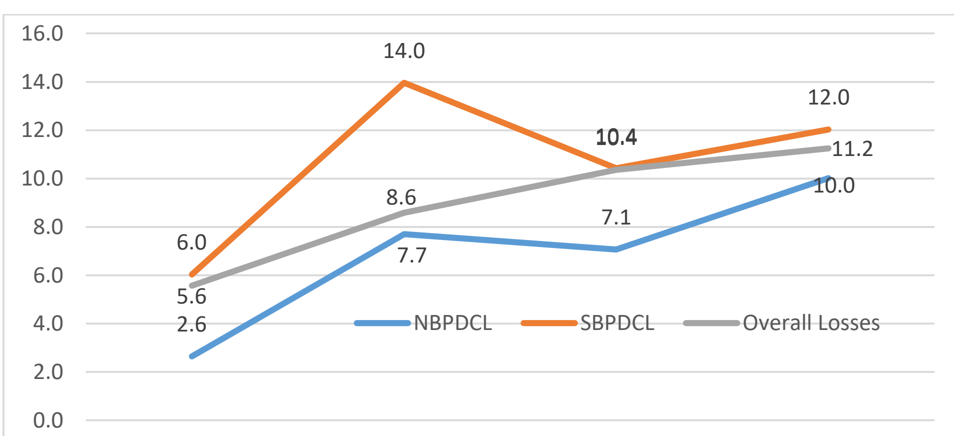
Source: Economic Survey of the Govt. of Bihar 2017-18.

Table 7.12 : Combined Losses of Discoms in Bihar

Item	2013-14	2014-15	2015-16	2016-17
Generation & Purchase (MU)	12410	18576	19009	26128
Sales (MU)	8609	13700	10451	15860
Transmission Losses (%)	30.6	26.2	45.0	39.3
Average Revenue (Rs./Unit)	4.18	4.17	4.08	4.44
Sale of Power (Rs. crore)	3599	5587	4795	7173
Total Income (including subsidies) (Rs. crore)	6284	9095	8801	12931
Total Cost (Rs. crore)	6655	9949	9818	14570
Cost Coverage (Total Income/Total cost) (%)	94.4	91.4	89.6	88.8
Financial Loss (%)	5.6	8.6	10.4	11.2

Source : Table 7.11 above.

Chart 7.3 : Financial Losses of Distribution Companies (%)



The operational results of all the five power companies are shown in Table 7.13, from which it can be seen that only the Bihar State Power Transmission Company has made some marginal profit in 2015-16 with 1.92 percent net return on capital employed. The rest of the companies are in red, with their accumulated profit soaring to more than Rs 3100 crore. If this situation is not remedied urgently, their accumulated losses would erode their total net worth in only a few years' time.

Table 7.13 : Operational Results of power Generating, Transmission and Distribution Companies

Company	Year of Last A/cs	Paid-Up Capital (Rs Crore)	Outstand-ing Loans (Rs Crore)	Turnover (Rs Crore)	Net Profit/ Loss (-) (Rs Crore)	Accumulated Profit / Loss (-) (Rs Crore)	Return on Capital Employed (%)	Staff Strength
BSPHCL	2015-16	1475	70	--	--	--	--	308
BSPGCL	2015-16	344	3169	--	--	--	--	448
BSPTCL	2015-16	3031	333	269	78	54	1.92	1647
NBPDCL	2015-16	3026	1570	3446	-297	-1011	--	4036
SBPDCL	2015-16	494	1829	4349	-748	-2172	--	5584
Total		**8370**	**6971**	**8064**	**-967**	**-3129**	**--**	**12023**

Source: Audit Report No. 3 of 2016-17 of the Comptroller and Auditor General of India on Public Sector Undertakings of Bihar Govt.

7.9.2 Allocation of Funds through Budgetary and Other Supports

The allocation of funds for BSPHCL and its subsidiary companies, Bihar Renewable Energy Development Agency (BREDA) and Bihar State Hydroelectric Power Corporation (BSHPC) etc. increased from Rs. 3111crore in 2013-14 to Rs. 8272crore 2017-18 is, as shown in Table 7.14. The budgetary support to these companies in 2017-18 totalled Rs 5369 crore, more than seven-fold increase in five years - from Rs 697 crore in 2013-14. They also receive funds from the BRGF under Special Plans, and for externally aided projects (EAP) from multilateral funding institutions. The Bihar State Hydel Power Corporation (BSHPC) also receives some RIDF (Rural Infrastructure Development Fund) support from NABARD.

Table 7.14 : Allocation of Funds under BSPHCL (Rs. crore)

Years	BRGF	Budgetary Support						BSHPC (RIDF)	EAP	Har Ghar Bijli	**Total**
		BSPHCL	Genera-tion	Transmi-ssion	Distribu-tion	BREDA	BSHPC				
2013-14	2125	367	25	25	215	50	15	64	225	-	**3111**
2014-15	1650	369	62	661	1099	20	39	70	220	-	**4190**
2015-16	2274	64	181	449	486	60	15	68	66	-	**3663**
2016-17	1329	128	1155	700	3127	150	10	68	261	587	**7515**
2017-18	2600	1576	593	510	1680	250	10	68	235	750	**8272**

Source: Economic Survey of the Govt. of Bihar 2017-18.

7.9.3 Subsidies

Till 2016-17, subsidy in the form of Resource Gap was provided by Govt. of Bihar to the erstwhile Bihar State Electricity Board (BSEB) on account of lower tariff rate fixed for Kutir Jyoti, Domestic (Rural) and Agricultural Consumers as well as for Transmission and Distribution Loss occurred beyond the loss allowed by State Electricity Regulatory Authority. From 2017-18 onward, Govt. of Bihar has been paying subsidy to Bihar State Power (Holding) Co. Ltd. separately for subsidy allowed by Govt. to Kutir Jyoti, Domestic and Agriculture Consumers on the rate fixed State Electricity Regulatory Authority (without subsidy) and Transmission and Distribution Loss occurred beyond the loss allowed by State Electricity Regulatory Authority. The Budgetary Subsidies, direct or indirect, paid/borne by the State Govt. from 2010-11 onward to the Bihar State Electricity Board/ Bihar State Power (Holding) Co. Ltd. are shown in Table 7.15. The subsidies received for the consumers are passed to the consumers by reflecting in their electricity bills as State Govt. Subsidy.

Table 7.15 : Power Sector Subsidy Provided by Bihar Government (Rs. Crore)

FY	Rs. in Crore
2010-11	1080.00
2011-12	2120.24
2012-13	2906.50
2013-14	2655.60
2014-15	2891.87
2015-16	4390.36
2016-17	3834.00

In accordance to the provision of Electricity duty Act, 1948, Electricity Duty is being levied and collected by the Commercial Taxes Department at the rate of 4 paise per unit for electrical energy consumed or sold for purpose of irrigation and at the rate of 6% of the value of energy for electrical energy consumed or sold for purposes other than irrigation.

7.9.4. Suggestions for Enhancing the Efficiency of PSUs

Restructuring of PSUs would be a political decision and we do not think the State Government would undertake any such measure which necessarily would be harsh in an election year. However, the following suggestion are still proffered:

1. The Position showing Government Stake in PSUs, as per the CAG Report, 2016-17, is as shown below:

	Number of PSUs	Amount (RS Crore)
Government stake in non-working PSUs	23	0.23
Non-working PSUs where there is no expenditure at all	38	0.00
Equity, loan and grant/subsidy received during 2015-16 and 2016-17 by non-working PSUs	3	71.61
Outstanding loan to PSUs which have not paid interest on loans for last five years	32	5145.60

Since the chances of repayment of principal by the 32 PSUs who have not even paid interest on loans, are remote, if not non-existent, the State Government should consider converting past loans to equity, and future payments, if any, should be by way of grants in aid only.

2. Consequent to the reorganization of the erstwhile Bihar State into the states of Bihar and Jharkhand w.e.f. 15 November 2000, it was decided (September 2005) to divide the assets and liabilities of the then existing 12 PSUs. This exercise has, however, been completed only in respect of five PSU s as of December 2017. Since almost two decades have passed with the reorganization of the State, the State Government is required to work closely with the Government of Jharkhand for the expeditious division of assets and liabilities of the seven PSUs, where the Government investment as on 15 November 2000 was Rs. 132.36 crore.

   The Interstate Corporations whose Assets and Liabilities are pending include:

   1. Bihar State Scheduled Caste Co-operative Development Corporation.
   2. Bihar State Finance Corporation
   3. Bihar State Credit and Investment Corporation
   4. Bihar State Industries Development Corporation (Presently under Process)
   5. Bihar State Khadi Gramodhuog (Khadi Village Industries) Board
   6. Bihar State Electricity board
   7. Bihar State Agricultural Marketing Council
   8. Bihar State Mineral Development Corporation
   9. Bihar State Food and Civil Supplies Corporation Limited
   10. Bihar State Construction Corporation
   11. Bihar State Housing Board
   12. Bihar State Forest Development Corporation Ltd and Subsidiary Company
   13. Bihar State Road Transport Corporation
   14. National Backward Class Finance and Development Corporation
   15. BHALCO
   16. Bihar State Text Book Publishing Corporation
   17. Bihar State Electronic Development Corporation

3. Land, building etc., available with the non-functioning corporations should be transferred to an SPV which shall dispose these land/buildings as per rule through sale and discharge some of the existing liabilities out of the proceeds of such sale.

As per data available with the Finance Department, the major land holdings of the non-working PSUs are as follows:

Companies	Land in acre
Bihar Rajya Matasya Vikas Nigam Ltd	37.25 (Danapur)/ 40 (Sitamarhi)/42.62 (Madhubani)
Bihar State Agro Industries Development Corporation Ltd	0.35 (Land), 0.09 (Building)
Bihar State Fruit & Vegetables Development Corporation Ltd	10.16 (Land), 0.63 (Building)
Bihar State Handloom and Handicrafts Corporation Ltd	0.87
Bihar State Industrial Development Corporation Ltd	487.12
Bihar State Construction Corporation Ltd	0.07
Bihar State Mineral Development Corporation Ltd	
Bihar State Pharmaceuticals & Chemicals Development Corporation Ltd	105.40 (Land) 9.19 (Building)
Bihar State Textiles Corporation Ltd	3.5

4. The human resource with the non-working PSUs is a tricky issue. Some of them who have been absorbed in the state government and some are on deputation. Employees of the PSUs retiring from the Government will thus impose pension liability on the State. Instead of absorbing more employees, the State must encourage the existing employees of all PSUs, working as well as non-working, to take VRS by negotiating a suitable package with the Centre/ financial institutions. Then there will be better scope for making the leaner organisations more efficient by employing technology where feasible.

5. 70 plus PSUs for a poor state like Bihar is clearly an unmanageable number and this number needs to be reduced drastically. The state Government must appoint a Commission for identifying the sectors the PSUs need to exit and sectors where they should remain. The Commission should then prepare a roadmap for withdrawal of the Government support from the identified PSUs in a phased manner and their eventual privatisation or winding up. Often the winding up is not possible because of absence of accounts for years together for which they lack capacity, and hence their accounts should be prepared within a fixed time frame by appointing Chartered Accountants in consultation with the CAG, on a mission mode. Once accounts are ready, the Government should sell them or wind them up by disposing of their assets and using the proceeds to settle the liabilities.

6. Once the Government decides to withdraw the PSUs from the identified sectors, it should focus on revamping the structure and management of the remaining ones. For this it is imperative to depoliticise these PSUs, professionalise their management by appointing experiences managers - and not politicians or bureaucrats - in their boards and changing their holding structure. Many

countries have insulated their ailing PSUs from politicians and bureaucrats, like Sweden between 1998 and 2001 and Thailand in 2008 and created Directors' Pool from where all Board members including Chairman and Managing Directors were appointed. These PSUs then started operating profitably. Given the situation in Bihar and the political compulsions at dispensing state largesse to ensure political stability of governments, we do not think this can be done in Bihar unless forced upon the state.

7. Holding structure of the PSUs also needs to be reworked. There are models already available for this, like Singapore's Temasek Model. Post-independence in 1965, Singapore pursued economic growth by taking stakes in many companies, including start-ups. A decade later, in 1974, it incorporated holding company Temasek to better manage its assets on a commercial basis. This allowed its Ministry of Finance to focus on policymaking. Some PSUS were corporatized and expanded, while some were privatised. Many of these companies grew and became global brands. However, the appropriate models can be studied and adopted after considering all variables.

8. Malaysia had created a watchdog body, Minority Shareholders Watching Group – a think-tank to monitor breaches and to ensure better corporate governance. Such a body can be created professionals sans the politicians who might create a vested interest.

9. Wherever feasible and where synergies exist, Centrals PSUs may be persuaded to manage the state PSUs which otherwise are likely to remain unviable. A suitable model can then be worked out for this.

10. Odisha has achieved considerable success in managing and professionalising their PSUs during the last decade by initiating a number of steps, like right sizing of manpower as per the requirement of PSUs by introducing Model Voluntary Retirement Scheme/Model Voluntary Separation Scheme for state PSUs. For this purpose, the state government provided financial assistance to the state PSUs. Other initiatives taken for turnaround of the PSUs were financial and debt restructuring, implementation of the Corporate Governance Manual, pursuing clear policy framework by categorising PSUs, induction of independent directors in the board of management of the state PSUs, signing of memorandum of understanding (MoU) by the PSUs with their administrative departments and induction of strategic investors in the loss making units for better functioning. Some of these may be replicated in Bihar also. In Odisha, 35 out of 56 working PSUS earned profits of over Rs 2000 Crore and 15 incurred losses of Rs 500 crore as per the latest data, while in Bihar, out of 34 working PSUs, 15 had earned profits of only Rs 545 crore and 14 incurred losses of Rs 1145 crore.

7.9.5 Summing Up

The State Government is providing budgetary support to the power sector for more than Rs 5300 crore. This is in addition to the liability taken by the State under the UDAY scheme under which, as we have already seen exceeds Rs 2300 crore. Without any tangible return, these are bound to contract the already tight fiscal space of the Government, adversely affecting its other development expenditure.

Added to these are the subsidies on account of power of the order of nearly Rs 4000 crore. Thus the power sector reforms may have increased the availability of power, but resulted in additional expenditure of Rs 9300 crore, apart from a liability of Rs 2300 crore on account of UDAY loans and annual committed expenditure on interest thereon. All these will create strains in the already adverse fiscal situation faced by the state and push up the GFD/GSDP ratio of the State by about 1.5 to 2 percent.

Annexure 7.1 : Summarised Results of Public Sector as per their Latest Accounts (as on 31st March 2018)

Sl. No.	Sector/Name of the Company	Year up to which accounts finalised	Paid up capital as per latest a/c	Loans Out-standing Rs Crore	Turnover Rs Crore	Man-power	Net profit(+) /Loss(-) Rs Crore	Accumul-ated Profit(+) /Loss(-) RsCrore	Return on Capital Employed (%)
	A.WORKING GOVERNMENT COMPANIES								
	AGRICULTURE & ALLIED								
1	Bihar Rajya Beej Nigam Limited	2013-14	3.71	27.93	1.89	59	(-)4.99	(-)58.45	-
2	Bihar Rajya Matasya Vikas Nigam Limited	1996-97	1.75	2.63	-	21	(-)0.22	(-)1.92	-
3.	SCADA Agro Business Company Limited	2015-16	0.05	0.00	-	NA	0.03	(-)1.78	2.63
Sector Wise total			**5.51**	**30.56**	**1.89**	**80**	**0.03**	**(69.15)**	**2.63**
	FINANCE								
4.	Bihar State Credit & Investment Corporation Limited	2016-17	15.12	48.44	2.38	36	(-)3.81	(-)167.78	3.87
5.	Bihar State Backward Classes Finance & Development Corporation	2006-07	3.62	15.75	0.64	18	(-)0.29	0.53	10.10
6.	Bihar State Minorities Finance Corporation Limited	2015-16	28.29	33.51	3.24	29	(-)0.01	(-) 8.49	1.97
7.	Bihar State Film Development & Finance Corporation Limited	2016-17	1.00	0.50	0.00	7	(-)0.07	(-)0.76	0.00
Sector Wise Total			**48.03**	**98.20**	**6.26**	**90**	**(-)4.18**	**(-)176.50**	**2.99**
	INFRASTRUCTURE								
8.	Bihar Police Building Construction Corporation Limited	2016-17	0.10	0.43	9.27	344	10.43	(-) 4.07	0.00
9.	Bihar Rajya Pul Nirman Nigam Limited	2016-17	3.50	0.00	127.86	241	110.17	236.99	28.34
10.	Bihar State Building Construction Corporation Limited	2015-16	5.00	0.00	58.18	91	41.21	33.33	107.51
11.	Bihar State Road Development Corporation Limited	2015-16	20.00	43.00	749.07	107	58.57	225.63	15.80
12.	Bihar Urban Infrastructure Development Corporation Limited	2015-16	5.00	-	194.98	71	13.46	22.00	49.85
13.	Bihar State Educational	2016-17	20.00	-	98.95	230	70.51	181.60	34.98

	Infrastructure Development Corporation Limited								
Sector wise total			**53.60**	**43.43**	**1222.7**	**306.47**	**955.91**	**306.47**	**629.21**
	MANUFATCURING								
14.	Bihar State Electronics Development Corporation Limited	2015-16	5.66	6.00	39.23	68	11.43	41.11	15.60
15.	Bihar State Mineral Development Corporation Limited	2004-05	9.97	-	31.55	1	9.29	7.04	44.92
16.	Bihar State Beverages Corporation Limited	2015-16	5.00	-	3155.31	208	132.87	39.57	264.84
Sector wise total			**20.63**	**6.00**	**3226.09**	**153.59**	**150.10**	**154.52**	**87.72**
	POWER								
17.	Bihar State Hydroelectric Power Corporation Limited	2013-14	99.04	466.43	9.12	160	(-)1.42	(-)28.18	1.61
18.	Bihar State Power (Holding) Company Limited	2015-16	1475.00	70.49	-	308	-	-	-
19.	Bihar State Power Generation Company Limited	2015-16	344.00	3168.89	-	448	-	-	-
20.	Bihar State Power Transmission Company Limited	2015-16	3031.01	332.85	268.56	1647	78.07	54.04	1.92
21.	North Bihar Power Distribution Company Limited	2015-16	3026.17	1569.79	3446.46	4036	(-)296.79)	(-)1011.13	0.00
22.	South Bihar Power Distribution Company Limited	2015-16	494.00	1828.73	4349.09	5584	(-)747.55	(-)2171.62	-
23.	Bihar Grid Company Limited	2016-17	80.61	302.03	-	38	-	-	-
24.	Pirpainti Bijli Company Private Limited	-	-	-	-	-	-	-	-
25.	Lakhisarai Bijli Company Private Limited	-	-	-	-	-	-	-	-
Sector wise total		**-**	**8549.83**	**7739.21**	**8073.23**	**(-)967.69**	**27996.93**	**(-)727.48**	**(-)3156.89**
	SERVICES								
26.	Bihar State Tourism Development Corporation Limited	2016-17	5.00	0.00	11.63	268	5.35	18.43	20.02
27.	Bihar State Food & Civil Supplies Corporation	2012-13	4.46	5739.16	140.14	835	(-)11.18	(-)46.04	-

	Limited								
28.	Bihar Medical Services & Infrastructure Corporation Limited	2013-14	6.74	0.00	0.36	26	2.49	2.31	27.51
Sector Wise Total			**16.20**	**5739.16**	**152.13**	**(-)3.34**	**74.89**	**4.82**	**(-)25.30**
	Miscellaneous								
29.	Bihar State Forest Development Corporation Limited	2005-06	2.29	0.00	22.81	108	0.28	0.32	23.93
30.	Bihar Forestry Development Corporation Limited	2016-17	0.34	-	-	24	(-)0.31	-	-
31.	Bihar State Text Book Publishing Corporation Limited	2016-17	0.48	0.00	31.47	63	(-)3.59	17.75	0.00
Sector wise total		**-**	**3.11**	**0.00**	**54.28**	**(-)3.62**	**19.74**	**4.43**	**18.07**
	Total A (All sector wise working Government companies)	-	8696.91	13656.56	12752.19	15076.00	(-)526.07	(-)2619.57	(-)0.86
	B. WORKING STATUTORY CORPORATION								
	FINANCE								
1.	Bihar State Financial Corporation	2016-17	77.84	228.47	4.30	149	(-)15.17	(-)436.02	4.97
	Sector wise total		77.84	228.47	4.30	149	(-)15.17	(-)436.02	4.97
	SERVICES								
2.	Bihar State Road Transport Corporation	2015-16	101.28	866.03	56.33	625	(-)59.23	(-)902.98	-
3.	Bihar State Warehousing Corporation	2014-15	6.42	0.00	66.94	149	0.81	5.42	5.14
Sector wise total			**107.70**	**866.03**	**123.27**	**(-)58.42**	**(-)693.96**	**(-)21.10**	**(-)897.56**
	Total B (All sector wise working Statutory corporations)		**185.54**	**1094.50**	**127.57**	**923**	**(-)73.59**	**(-)1333.58**	**2.83**
	Grand Total (A + B)		**8882.45**	**14751.06**	**12879.76**	**15999**	**(-)599.66**	**(-)3953.15**	**(-)0.94**
	C. NOT-WORKING GOVERNMENT COMPANIES								
	AGRICULTURE & ALLIED								
1.	Bihar State Water Development Corporation Limited	1997-98	5.00	49.68	-	NA	2.17	11.20	9.06
2.	Bihar State Dairy Corporation Limited	2014-15	6.72	-	-		-	(-)10.57	
3.	Bihar Hill Area Lift Irrigation Corporation Limited	1983-84	5.60	8.55	0.01		(-)0.26	(-)0.86	-
4.	Bihar State Agro Industries	2-15-16	7.63	12.60	-	136	(-)4.33	(-)135.01	-

	Development Corporation Limited								
5.	Bihar State Fruit & Vegetables Development Corporation Limited	2010-11	2.10	1.12	-	7	(-)0.92	(-)7.82	-
6.	Bihar Insecticide Limited	1991-92	0.57	1.54	-	53	(-)1.03	(-)1.03	-
7.	SCADA Agro Business Limited, Khagaul	-	-	N.A.	-	N.A.	-	-	-
8.	SCADA Agro Business Limited, Dehri.	-	-	N.A.	-	N.A.	-	-	-
9.	SCADA Agro Business Limited, Arrah	-	-	N.A.	-	N.A.	-	-	-
10.	SCADA Agro Business Limited, Aurangabad	-	-	N.A.	-	N.A.	-	-	-
11.	SCADA Agro Busines Limited, Mohania	-	-	N.A.	-	N.A.	-	-	-
12.	SCADA Agro Forestry Company Limited, Khagaul	-	-	N.A.	-	N.A.	-	-	-
Sector wise total		**-**	**27.62**	**73.49**	**0.01**	**196**	**(-)4.37**	**(-)144.09**	**9.04**
	FINANCE								
13.	Bihar Panchayati Raj Finance Corporation Limited	1991-92	1.44	-	-	54	(-)0.01	(-)0.03	3.92
14.	Bihar State Handloom and Handicrafts Corporation Limited	1996-97	6.28	1.16	-	NA	(-)0.10	(-)0.44	0.14
15.	Bihar State Small Industries Corporation Limited	2005-06	7.18	12.23	15.22	49	(-)1.42	(-)16.56	-
16.	Bihar State Industrial Development Corporation Limited	2015-16	14.04	66.56	-	768	(-)13.56	(-)133.78	-
Sector Wise Total			**28.94**	**79.95**	**15.22**	**871**	**(-)15.09**	**(-)150.81**	**-**
	INFRASTRUCTURE								
17.	Bihar State Construction Corporation Limited	2016-17	7.00	2.03	15.74	107	(-)1.96	(-)27.51	-
Sector Wise Total			**7.00**	**2.03**	**15.74**	**107**	**(-)1.96**	**(-)27.51**	**-**
	MANUFACTURING								
18.	Bihar Solvent & Chemicals Limited								
19.	Magadh Mineral Limited	-	-	0.47	-	05	-	-	-
20.	Kumardhubi Metal Casting & Engineering Limited	1995-96	2.17	6.63	10.89	NA	(-)2.39	(-)8.16	-
21.	Beltron Video System Limited	1998-99	1.21	4.51	0.75	NA	(-)0.15	(-)0.22	-
22.	Beltron Mining System Limited	2002-03	1.26	-	0.41	NA	(-)0.10	(-)0.49	-

23.	Beltron Informatics Limited	-	-	-	-	NA	-	-	-
24.	Bihar State Sugar Corporation Limited	1996-97	9.97	322.95	-	NA	(-)9.20	(-)72.31	-
25.	Bihar State Cement Corporation Limited	-	-	0.03	-	NA	-	-	-
26.	Bihar State Pharmaceuticals & Chemicals Development Corporation Limited	1992-93	3.62	4.25	-	52	(-)0.17	(-)0.74	-
27.	Bihar Maize Product Limited	1987-88	0.67	0.02	-	NA	(-)0.03	(-)0.06	-
28.	Bihar Drugs and Chemicals Limited	1991-92	0.94	1.28	-	NA	(-)0.03	(-)0.16	-
29.	Bihar State Textiles Corporation Limited	1995-96	4.98	2.27	-	51	(-)0.09	(-)0.32	-
Sector wise total			**25.48**	**343.30**	**12.05**	**108**	**(-)12.48**	**(-)82.78**	
30.	Bihar State Export Corporation Limited	1999-00	2.00	1.22	4.94	23	(-)0.10	(-)0.01	2.69
Sector wise total			**2.00**	**1.22**	**4.94**	**23**	**(-)0.10**	**(-)0.01**	
	MISCELLANEOUS								
31.	Bihar Paper Mills Limited	1997-98	1.56	10.72	-	NA	(-)0.06	(-)0.31	-
32.	Bihar State Glazed Tiles & Ceramics Limited	1997-98	0.16	3.66	-	32	(-)0.08	(-)0.51	-
33.	Vishwamitra Paper Industries Limited	1988-89	0.40	0.81	-	NA	(-)0.01	(-)0.01	-
34.	Jhanjharpur Paper Industries Limited	1991-92	0.42	0.46	-	13	(-)0.01	(-)0.02	-
35.	Bihar State Tannin Extract Limited	1993-94	1.03	2.14	-	NA	(-)0.32	(-)0.67	-
36.	Bihar State Finished Leathers Corporation Limited	1986-87	1.47	9.18	-	NA	(-)1.49	(-)2.13	-
37.	Synthetic Resins (Eastern) Limited	1987-88	0.09	1.05	-	-	(-)0.02	(-)0.01	-
38.	Bhavani Active Carbon Limited	1989-90	0.02	-	-	NA	(-)0.01	(-)0.01	-
39.	Bihar State Leather Industries Development Corporation Limited	2004-05	5.14	14.13	-	NA	(-)0.37	(-)2.92	-
40	Bihar Scooters Limited	-	-	6.09	-	NA	-	-	-
Sector wise total			**10.29**	**48.24**	**0.00**	**45**	**(-)2.37**	**(-)6.59**	**-**
	Total C (All sector wise not working Government companies)		**101.33**	**548.23**	**47.96**	**1350**	**(-)036.37**	**(-)411.79**	**-**
	Grand Total (A + B + C)		**8983.78**	**15299.29**	**12927.72**	**17349**	**(-)636.03**	**(-)4364.94**	**-**

Source: Annexure 1.1 to Audit Report No. 3 of 2016-17 of the Comptroller and Auditor General of India on Public Sector Undertakings of Bihar Govt.

Annexure 7.2: Details of Existing and Planned Generation Units

Thermal Plan	2015-16	2016-17	2017-18 (Under Progress)	2018-19	By 2022 (Upcoming Projects)	Beyond 2022
KANTI TPP (2x110 MW) (2x195 MW)	220 MW	195 MW Unit 3	195 MW Unit 4 Completed.	—	—	—
BARAUNI TPP (2x110 MW) (2x250 MW)		110 MW Unit 7, Nov. 16	500 MW Unit 8, Jan 18 Unit 9, Feb. 18 (250 MW each) Unit 6, Jan. 18 (110 MW)	—	—	—
NABINAGAR TPP (3x660 MW) 1980 MW	—	—		1320 MW Unit 1: May-18 Unit 2: Nov-18 (660 MW each)	660 MW Unit 3: May-19	—
BUXAR TPP (2x660 MW) SJVNL	—	—	—	—	MoU signed on 20.11.15 1320 MW	—
BANKA UMPP (4000 MW)	—	—	—	—	—	4000 MW
Total Installed Capacity	**220MW**	**525MW**	**1330MW**	**2650 MW**	**4630 MW**	**8,630 MW**

Note : Renewal of MOU with NTPC and NHPC for Kajra and Pirpainti Projects is under process

Source: Department of Energy, GOB

Chapter 8

Summing Up

In this chapter which is the concluding chapter of this study, we summarise the major findings and conclusions reported in the earlier chapters. For details, the respective chapters may be referred to. The study was primarily based on analysis of receipt and expenditure data of the state between 2007-08 and 2016-17, for which actual figures are available. The budget estimates of 2018-19 and revised estimates of 2017-18 were not considered as these seem to lack reliability.

8.1 Revenue Capacity

Bihar has come a long way from the years of rising fiscal deficits, unsustainable debt burden and low capital investments which together had stunted the growth of the state for decades. Ever since 2004-05, and especially after the enactment of the FRBM Act in 2005-06, the state had started generating increasing surpluses in its revenue account which it has been utilizing towards creating a viable capital base which in turn accelerated its growth, though its dependence on Central resources continued unabated. The revenue surplus of the state rose to Rs. 12,507 crore in 2015-16, before declining to Rs. 10819 crore in 2016-17 due to the slowing down of growth in respect of almost all important components of tax and non-tax revenues. State excise was hit the hardest as a result of adverse revenue impact of the prohibition policy of the State government. Loss of excise combined with the loss of VAT on alcohol made the state lose about Rs 4500 crore in 2016-17.

The total tax revenues of the state grew by only Rs. 8251 crore in 2016-17 as against the growth of Rs. 16659 crore during the previous year, and non-tax revenue grew by just Rs. 217 crore as against Rs. 628 crore in the previous year. Apart from the impact of prohibition policy, the muted growth both in respect of tax and non-tax revenues is perhaps also indicative of an overall slowing down of the economic activities within the state, partly as a result of demonetization that had hit the real estate and the informal sector, which employ a bulk of the workforce in Bihar, very hard. Stamp duty and registration fees which are related to the real estate sector, in fact, came down from Rs. 3409 crore to Rs. 2982 crore between 2015-16 and 2016-17. This slowing down of the revenue receipts has limited the state government's capital spending to only Rs. 3242 crore in 2016-17 compared to more than Rs. 5800 crore during the previous year. This has also resulted in its Gross Fiscal Deficit rising to 3.8 percent of GSDP, breaching the FRBMA limit of 3 percent of GSDP.

After recommendations of the Fourteenth Finance Commission increasing the total devolution from the Central divisible pool to states from 32 percent to 42 percent, state's share of Central taxes has predictably increased; however, this increase has been offset by a stagnation in the Central grants which had increased only marginally to Rs. 19,566 crore in 2015-16 and to Rs. 20559 crore in 2016-17.

The total tax revenue of the state government has increased from Rs. 28,210 crore in 2007-08 to Rs. 105,585 crore in 2016-17, growing annually at a compound average rate of 15.8 percent. The own tax revenue of the state government grew from Rs. 5,085 crore to Rs. 23742 crore during this period, implying a higher annual growth rate of 18.7 percent; though during the last 5 years this growth was only 10 percent due to the sacrifice of revenues from alcohol. The contribution of the non-tax revenue has been rather subdued, accounting for about barely 2 percent of its total revenue receipts.

Over 80 percent of the non-tax revenues are collected only from two sources: Non-Ferrous Mining and Metallurgical Industries and Interest Receipts.

There is one aspect of the state finances that has remained unchanged over the years, which is the state's dependence on Central transfers. It is only through a sustained growth of its economy and thereby higher own tax revenues that Bihar can lessen this dependence. During the ten year period 2007-17, between 70-80 percent of the total receipts of the state government came from the Central government by way of state's share of divisible pool of Central taxes and Central grants. During 2016-17, Central transfers constituted about 75 percent of total State revenue — 56 percent from the state's share of central taxes and 19 percent from central grants. The state's own resources from tax and non-tax revenues contributed about 25 percent to the total revenue.

Till the introduction of the GST in 2016-17, the major contributors to Bihar's tax revenue were VAT, taxes on goods and passengers, state excise duties on alcohol and medicinal preparations, stamp duty and registration fees and taxes on motor vehicles. These five taxes constituted more than 95 percent of the total own revenues of the state, with VAT alone contributing nearly half the total own revenues, with some fluctuations. The rest came from land revenue, electricity duty and some other minor taxes like entertainment tax, taxes on advertisement, luxury tax from Hotels, tax on Professions, trades and calling etc. which together contributed about 5 percent of the State's own tax receipts.

The Tax: GSDP ratio of Bihar which had increased from only 4.5 percent in 2007-08 to 6.7 percent in 2016-16, declined substantially to 5.4 percent only in 2016-17, not only from the drying up of excise revenues but due to lower growth in almost all major taxes during the year. Bihar's Tax: GSDP ratio is among the lowest in the country, but the measures initiated by the state government to enhance the Tax: GSDP Ratio during the last few years were hardly significant. GST has taken away the powers of the State to increase or decrease tax rates in respect of most important taxes. There were some occasional minor revisions in the rates of the remaining taxes which did not contribute significantly to the tax coffer of the State.

As regards the non-tax revenue, most of the State Government departments do not levy any user charges, and some only levy a minimal amount of user charges unrelated to their costs. There is neither any concept of recovering a certain part of the actual cost, nor a system of raising resources for maintenance of such services. Neither is there any system of linking the user charges with returns on the investments made by the state on creating the assets required for providing these services.

Introduction GST has also adversely impacted the state's own revenues. It has subsumed both VAT and Taxes on Goods and Passengers, two of its most buoyant sources of revenue. The immediate loss of revenue to the State from these two taxes was of the order of Rs. 18000 crore in 2016-17. As against this, the collections from GST during the year 2017-18 (July-March) totalled to less than Rs. 6200 Crore only; including the GST grants from the Centre, the total amount received by the State from GST during the year amounted to Rs. 9200 crore.

During the five year period that the State would be eligible for GST compensation, there would be a potential loss to the state which is the difference between the collections projected at the current rate of growth (17%) and the total compensation receivable by the State, calculated @ 14% over the 2015-16 figures. For the five years, this loss is estimated at Rs. 10140 crore.

We have estimated the revenue capacities, both in respect of tax and non-tax revenues, for the period 2017-18 through 2024-25 by using regression analysis. The total own revenues of the State are projected to grow from Rs. 41,117 crore in 2017-18 to Rs. 167,272 crore in 2024-25, growing at an average annual compound linear rate of 22 percent. For 2017-18, the estimated revenue of Rs. 41,117 crore compares with the State government's revised estimate of 40,328.

The tax administration of the State needs much strengthening. There was Rs 5700 crore of uncollected arrears of revenue as on 31 March 2016 which the Government needs to pursue proactively. Besides, there are huge pending assessments with the Commercial Taxes Department; VAT alone accounted for more than one lakh pending cases at the end of 2015-16.

Evasion of tax remains an endemic problem. In the pre-GST regime, in respect of VAT, less than 30 percent of the registered dealers were paying any VAT. The situation may not be very different now, but the record of the Commercial Taxes Department in checking tax evasion has been far from satisfactory. Clearly the administrative machinery of the state government is not geared adequately to handle the problems as yet.

8.2 Expenditure Patterns

Over the ten year period 2007-17, the total expenditure of the state Government has increased four-folds, from Rs 31572 crore to Rs 126302 crore, growing at a CAGR of 16.7 percent. Revenue expenditure has also increased four-folds, from Rs 23563 crore to Rs 94765 crore during the same period. Capital expenditure has grown a little slower, at a CAGR of 16.4 percent, due to the slower growth in debt repayments; however, within capital expenditure, the growth of capital outlay at a CAGR of 18.1 percent, has been truly remarkable. Capital outlay has grown by nearly 4.5 times during this ten year period. The growth of total expenditure has been more or less uniform over the years, making the forecast of it a viable proposition.

Over these ten years, except during the four years from 2011-12 to 2014-15, the respective shares of revenue and capital expenditure in total expenditure have remained more or less constant with the former claiming around three-fourth of the total expenditure throughout. Within the revenue expenditure, expenditure on Social Services has always claimed the largest share – about 43 percent of the total revenue expenditure. Compared to the expenditure on economic services, the expenditure on general services has claimed a disproportionate share of the total expenditure, mainly on account of salaries. However, the growth of revenue expenditure on economic services has been picking up vis-à-vis the growth of revenue expenditure on general services. Consequently, the share of general services has declined from 39 percent of revenue expenditure to 32 percent over this ten year period, while the share of economic services has risen from 19 percent to 25 percent. Within general services, pension and interest payments together accounted for more than two thirds of the total expenditure in 2016-17.

Within capital outlay, the largest investments were made in economic services whose share ranged between 74 percent and 87 percent over these ten years, followed by social services and general services in that order. There has been no major structural shift in the expenditure patterns over the years, except some minor shifts between capital outlay and discharge of public debt.

Among the social services, education claimed the bulk of expenditure (47 percent), followed by health; the 11 percent share of health in 2016-17 was practically the same as in 2007-08. Among the economic services, rural development claimed the highest share followed by energy; the share of energy increased steadily and significantly from 16 percent in 2007-08 to as much as 33 percent in 2016-17. But the shares of agriculture and irrigation – sectors which are interlinked in terms of agricultural productivity – had both declined, which should be a cause for serious concern for a state whose population is heavily dependent on agriculture for their livelihood.

The salary and pension constitute the two most important items of revenue expenditure. The salary of the state government employees accounted for 17 percent of the total revenue expenditure in 2016-17, significantly less than 28 percent in 2007-08. The salary expenses constituted 3.6 percent of GSDP in 2016-17, despite the fact that the State Government is yet to revise the pay scales of its employees following the Seventh Pay Commission recommendations for the Central Government employees.

Similarly, pension payments constituted 13 percent of revenue expenditure in 2016-17 or 3.1 percent of GSDP. During the period from 2007-08 to 2016-17, expenditure on salary and pension together increased by nearly Rs. 19000 crore - accounting for 30 percent of total revenue expenditure of the state and 6.5 percent of its GSDP. The pension payments increased annually at a rate of 18 percent from Rs. 2789 crore in 2007-08 to Rs. 12508 crore in 2016-17, while the salary expenditure increased at an annual rate of 10 percent during this period. Together they consumed around 27 percent of the state's total revenue receipts in 2016-17, exceeding the State's own revenue receipts of Rs. 26145 crore.

During this period, the amount of subsidies given by the state government increased from Rs 4313 crore to Rs 8633 crore. During 2016-17, nearly 79 percent of the total subsidy expenditure of the Bihar Government was provided to the power sector alone. There does not appear to be any system of need-based targeting and evaluation of the subsidies given by the state government.

The quality of expenditure incurred can be judged by the proportion of expenditure devoted to creation of social and physical infrastructure and the quantum of developmental expenditure on social and economic services as opposed to the non-developmental expenditure on general services bulk of which is paid as salary. Judged by these parameters, the quality of expenditure in Bihar had improved over the ten year period 2007-17. The non-salary component of developmental revenue expenditure had increased substantially from 69 to 85 percent during this period, while the share of capital outlay in total expenditure increased marginally from 19 to 22 percent. Per capita expenditure in Bihar increased more than three-folds during the period; however, this increase conceals the immense intra-state disparity in state government expenditure because of structural and historical factors.

As regards resources, Bihar was not able to spend whatever limited funds it had. During the three years (2014-15, 2015-16 and 2016-17), it could not spend Rs 22,188 crore, Rs 8,357 crore and Rs 18,394 crore respectively from the funds that were approved by the Legislature.

As in the case of revenue capacities, the expenditure of the State government for the period 2017-18 through 2024-25 were also estimated by using regression analysis. On the basis of such estimation, it was noticed that for the capital outlay to be sustained at the current levels as suggested by the past trends, there needs to be consistent and high levels of surplus in the revenue account. The borrowing being limited by the FRBMA, the 3 percent limit of FRBMA falls far short of the capital investment requirements. Grants from Centre and devolution should bridge this gap after taking into account the requirements of debt repayments.

Bihar needs accelerated progress to catch up with other states, but that does not in any way negate the impressive results that have been achieved so far, which have come mainly because of a series of significant and sustained reforms launched by the state government in recent years, especially in relation to the financial management of public resources. It still faces many challenges which include: (a) low capacity to deliver the services, (b) poor monitoring of performance, (c) lack of accountability arrangements, and (d) the absence of sufficient decentralization.

8.3 Gross Fiscal Deficit

The Gross Fiscal Deficit of the State has increased by Rs. 4,418 crore in 2016-17, compared to the increase of only 883 crore in the previous year, reflecting the weakening of state's fiscal position during the year. The debt level increased to 31.6 percent of the GSDP during 2016-17, from 30.5 percent in the previous year.

The State Legislature has passed the Bihar Fiscal Responsibility and Budget Management (FRBM) Act in February 2006, committing itself to take appropriate steps to eliminate the revenue deficit by 2008-09 and build up adequate revenue surpluses thereafter to bring down fiscal deficit to a level of three percent of GSDP by 2008-09 and maintain it thereafter. The revenue deficit was eliminated in 2004-05 itself even before the Act was passed and sufficient amount of revenue surpluses continued to be generated ever since. The GFD: GSDP ratio rose from 1.5 percent in 2007-08 to 1.8 percent in 2008-09 and then increased to 3.2 percent in 2009-10 after revenue surplus plummetted by Rs 1500 crore, requiring an amendment to the FRBMA Act to raise the ratio. The amendment was reversed in the very next year as the ratio dropped to a comfortable level of 2 percent in 2010-11, but has breached the 3 percent limit since 2014-15. In 2016-17, it reached 3.8 percent.

The 14th Finance Commission recommendations allowed relaxation of upto 0.5 percent over and above the 3 percent FRBMA limit depending on the State's fulfilling certain conditions. As per these conditions, Bihar is eligible for 0.25 percent relaxation that would bring its fiscal deficit of 3.2 percent within the modified FRBMA limit in 2015-16, but not in 2016-17. The ratio of fiscal deficit to GSDP is likely to rise further in the coming years, if the present trends continue. This indicates that the debt problem which has hitherto remained reasonably under the control of the state government may need to be monitored and managed so as not to slip into the dangerous territory.

Though the GFD of Bihar was financed mostly by net borrowing in the Consolidated Fund of the state government, in some years, the net borrowing from Public Account also contributed significantly to finance the GFD; in the earlier years, GFD had be financed even by drawing down the cash balances. Financing by public account also brings into focus the problem of surplus borrowing, otherwise avoidable. The problem arises because of the nature of public account, in which availability rather than need determines the borrowing.

In 2008-09, and then again in 2015-16 and 2016-17, the net public debt exceeded the fiscal deficit by 69 percent, 18 percent and 5 percent respectively, indicating over-borrowing to that extent, which resulted in increasing the cash balance in 2015-16. In fact, the cash balance was rendered surplus in other years as well, due to the combined borrowing from Consolidated Fund and Public Account exceeding the

Fiscal Deficit requirements. This reflects adversely upon the effectiveness of cash management by the state government, as it does not make much sense to borrow while sitting with idle cash. This can be avoided or minimized if the cash balances are utilised optimally. In 2008-09, the cash balance went up by as much as 66 percent of the GFD and by 53 percent again in 2010-11. The government could have reduced its borrowings by substantial amounts (about Rs 1600 crore in 2008-09 and Rs 2000 crore in 2010-11) if it could only utilize the surplus cash available with it. Thus there is enough scope for improving the cash management of the state government.

The FRBM Act committed the State itself to take appropriate steps:

(1) to eliminate the revenue deficit by 2008-09 and build up adequate revenue surpluses thereafter;

(2) to bring down fiscal deficit to a level of three percent of GSDP by 2008-09 and maintain it at that level thereafter;

(3) to pursue policies to raise non-tax revenue with due regard to cost and equity; and

(4) to lay down norms for prioritization of capital expenditure and pursue expenditure policies that would provide impetus for economic growth, poverty reduction and improvement in human welfare.

While the first two commitments have by and large been adhered to except in 2016-17, as regards the other promises regarding non-tax revenues and prioritization of capital expenditure norms, much remains to be done as yet. As regards the non-tax revenue, there was no cost recovery effort exercised by the state government.

The capital outlay of the state government has, of course, increased substantially over the period; however, the state government is yet to prescribe the norms for capital expenditure and adopt a set of rules for the purpose of implementing the FRBM provisions in this regard.

8.4 Debt Position

The total outstanding liabilities of the state government had accumulated to Rs. 138,526 crore at the end of 2016-17, growing steadily at an annual rate of 11.8 percent during the ten-year period 2007-17. Public Debt constituted nearly 77 percent of the total outstanding liability at the end of 2016-17. Loans from Public Account constituted 8 percent part of the total liability of the state government, though it is not a debt in the strict sense of the term.

The structure of debt has undergone a significant change since 2002-03. This occurred first by swapping of the high-cost central government loans with low-cost market loans and then, as a result of the recommendations of the Twelfth Finance Commission, by consolidation and rescheduling of all central government loans for payment over a 20-year period at 7.5 percent rate of interest. The Commission also recommended that if the state governments wanted to raise loans, they should raise the loans from the market and the Central government's assistance should only be limited to grants. As a result, 91 percent of outstanding public debt of Bihar at the end of 2016-17 was due to the internal loans raised by the state government and only 9 percent due to loans from the Central government. These figures were in sharp contrast to the corresponding figures of nearly 76 percent and 24 percent respectively in 2007-

08. Thus, the composition of outstanding debt has undergone a structural change over the years, with the share of Central loans coming down substantially.

Bihar's outstanding liability as a percentage of its GSDP had decreased significantly from 45 percent in 2007-08 to 32 percent in 2016-17, due mainly to the much higher growth of GSDP at an annual rate of more than 16.2 percent, compared to an annual growth rate of 11.8 percent for outstanding liability during the period. The major factors that contributed to the lower growth of outstanding liability of the state government included the State's enactment of the FRBM Act in 2005-06 and its complete elimination of deficit in the revenue account, enabling it to get the full benefits of debt waiver recommended by the 12th Finance Commission during the period 2005-10. However, the ratio of outstanding liability to GSDP had reached a much lower level of 27 percent in 2011-12 and remained at that level till 2013-14; it has since been rising again which is a matter for concern.

The outstanding market loans and dues to NSSF together constituted 83 percent of the total internal debt liability of the state government. Loans from Financial Institutions constituted only 6 percent of the total outstanding public debt; of the total loans of Rs 6029 crore, Rs 5885 crore (97.6 percent) were due to NABARD alone. Almost the entire outstanding Central loans were on account of State Plan Schemes only. Following the recommendations of the Fourteenth Finance Commission, Bihar has preferred to opt out of the NSSF loans in 2015-16; as a result, no fresh NSSF loans were availed during and since 2015-16. The loans from NSSF outstanding against the state government at the end of 2016-17 amounted Rs 23,218 crore.

97.8 percent of the state government's outstanding loans were carrying less than 10 percent rate of interest, with 35 percent carrying interest rate less than 8 percent. 66 percent of the outstanding Central loans carried interest below 6 percent. Among the outstanding internal debt, the securities issued to NSSF carried interest rates between 9 and 11 percent while market loans carried interest between 8 and 9 percent. The weighted average interest on the outstanding public debt works out to about 8.3 percent.

Before the award period of the 15th Finance Commission, the State will have discharged 17.5 percent of its outstanding debt as on 31st March 2017, but 42.5 percent of its debt will get discharged during the award period of the 15th Finance Commission (2020-25), amounting to Rs 45165 crore. Any debt sustainability roadmap of the State must factor in this maturity profile of its outstanding debt.

The outstanding liability on Public Account has been growing rather slowly, at an annual rate of 8.3 percent during 2007-17. Small Savings, Provident Fund and Other Accounts together constituted only 27 percent of the total liability on Public Account at the end of 2016-17, compared to 59 percent at the end of 2007-08. The share of Deposits and advances gradually climbed from 36 percent to 70 percent during these ten years, while the share of Reserve Funds in Other Liabilities decreased from 6 percent in 2007-08 to only 2 percent in 2016-17.

As regards the sustainability of debt which indicates the ability of the State to maintain a constant debt-GSDP ratio over a period of time, a necessary condition for stability states that if the rate of growth of economy exceeds the interest rate or cost of public borrowings, the debt-GSDP ratio is likely to be stable, provided there is a sustained primary surplus (at least not a continued substantial deficit in the primary account). This is known as the 'Solvency Condition' which is not satisfied in Bihar's case. Even though the growth rate of its GSDP outstripped the growth rate of its outstanding liability, there has been a continuously increasing deficit in its primary account since 2011-12. As a result, the ratio of outstanding liabilities to GSDP has been increasing after falling from 45 percent to 27 percent (2011-12 to 2013-14) and stood at 32 percent at the end of 2016-17. This trend is likely to continue, putting strain in the servicing of debt in future, since the non-debt receipts would not be sufficient to bridge the resource gap together with the net borrowed funds available. The liabilities might then become unsustainable in the long run if this trend continues unchecked.

8.5 State's Transfer to Local Bodies: PRIs and ULBs

As of March 2016, there were 8,969 PRIs in Bihar with a total of 135725 elected representatives in the State, besides 123589 members (8398 Sarpanchs and 115191 Panchs) of Gram Katcharies. The last election to the elected bodies of PRIs was held during April-May 2016.

Devolution to PRIs and ULBs has three components, Functions, Funds and Functionaries. As regards the devolution of Functions, PRIs at all the three levels have been given the right of self-governance in respect of 29 subjects of 20 Departments. It was decided in July 2014 by all the Principal Secretaries/Secretaries of the Government to frame Operational Guidelines for effective devolution of powers to PRIs. In first phase 12 Departments were selected for framing the Operational Guidelines. However, only two departments have so far framed these Guidelines. The Fifth State Finance Commission (Fifth SFC) observed that the progress so far on Department wise and subject wise activity mapping was unsatisfactory and Parastatal Bodies were also carrying the functions of PRIs.

As regards Funds, no taxes were levied and collected by the PRIs as the State Government did not notify the rates of taxes. Of the three level of PRIs, so far only the ZPs have some own non-tax revenue from rent of shops/Inspection Bungalows, leasing of ponds/bus-stand etc., whereas PSs and GPs do not have any revenue from their own sources.

As regards Functionaries, ZPs in the State did not have adequate staff to discharge the devolved functions - 79 per cent of sanctioned posts were lying vacant as of January 2017. In two ZPs, men-in-position were less than 10 per cent of sanctioned strength. At GP level, 3160 posts of the Panchayat Secretaries (38 per cent of the total 8398 posts) were lying vacant as of 31 March 2016.

PRIs are mainly financed by the grants from the Central and State governments (Central/ State Finance Commission grants), other transfers from the Central government (e.g. BRGF/ MNREGS), recurring and non-recurring grants from the state government, and their own resources. No taxes are as yet levied and collected by the PRIs. However, untied grants are made available to three levels of PRIs under Fourteenth Finance Commission (FFC), Fifth SFC and Rajeev Gandhi Panchayat Sashaktikaran Yojana (RGPSY) during 2015-16. Backward Region Grant Fund (BRGF) was delinked from the support of the Central Government from 2015-16. As per Fifth SFC report, funds available to the PRIs from various sources were grossly inadequate for their assigned functions. Further, they were not able to utilise even the allocated funds due to capacity constraints like serious deficiencies in skilled manpower, office space, IT facility, equipment etc.

The Fifth SFC was constituted in December 2013 for the period 2015-20 and submitted its report in February 2016. As per its recommendations, two types of financing, (i) the share of net tax revenue of the State (ii) amount in shape of grants, are to be made available to the PRIs to be spent on water supply, sanitation, smart panchayat, e-governance, Panchayat Sarkar Bhawan etc. The amount was to be distributed among GPs, PSs and ZPs in the ratio of 70:10:20 respectively. The state had made provision of Rs. 1823 crore to be released to PRIs during 2015-16, which is yet to be released. The Fifth SFC has estimated the receipts and expenditure of the PRIs for the period 2015-20, according to which the resource gap of the PRIs for the period would be of the order of Rs 31300 crore, even after the 14th Finance Commission transfers.

The recommendations of the 13th Finance Commission (13th FC) had marked a paradigm shift in transfers to local bodies (LBs) by earmarking 2.28% of the total divisible pool of the Central Taxes as grants for the Local Bodies, besides additional provision of performance Grant based on 9 conditionalities which are yet to be fulfilled by the state. The 14th FC made two major departures from the 13thFC in that: (i) The entire PRI grant was given to the GPs since they are directly responsible for delivery of the basic services; and (ii) Performance grant was linked to two conditions: submission of audited account and increase in own revenue. Compliance of these conditions is going to be a major challenge to the state, as evidenced by the fact that no performance grant has been received by the state during the award period of the 14th FC. In fact, most of the 14th FC recommendations remain unimplemented in Bihar.

Besides strengthening the PRIs in rural areas, the state government has also undertaken a number of desired steps to enable the Urban Local Bodies (ULBs) to function effectively and deliver the stipulated services to the urban population. Under the section 45 of the Bihar Municipal Act, 2007, ULBs are required to discharge various regulatory functions, planning, service providing, protection and statistical as well as agency functions. ULBs in Bihar are hardly equipped to carry out all these functions. Due to their lack of capacity, many ULB functions are being discharged by the Government departments.

Being almost entirely dependent on the State government grants and partly upon the Central Finance Commission grants which are not adequate for its range of functions and activities, ULBs in Bihar are neither equipped financially nor administratively to carry out their assigned functions. Besides, they also lack functional autonomy, as decision on all key issues rests largely with State Government. There does not seem to be any clear and true devolution of functions. No activity mapping also seems to have been done. Government needs to make serious efforts towards empowering and enabling them to become the effective agents of change.

As per the estimates of the Fifth SFC, the ULBs are likely to face a resource gap of Rs 8505 crore during the period 2015-20 covered by the 14th Finance Commission. They had accumulated unspent funds of Rs 929 crore at the end of 2015-16, which testifies to their collective lack of capacity. Obviously, much remains to be done to empower, enable and transform these ULBs which only then can play a transformational role in changing the urban landscape in Bihar.

8.6 Public Sector in Bihar

As of March, 2016, the public sector in Bihar comprised 71 government companies and 3 statutory corporations. However, of the 71 government companies, only 31 were working. The total investment by the state government in public sector amounted to Rs. 46,694 crore till March 2016 (Rs. 31,394 crore as equity and Rs. 15,299 crore as long term loans). Of these, Rs. 729 crore were invested in non-working companies. The turnover of the working PSUs increased from Rs 7,811 crore in 2011-12 to Rs 12,880 crore in 2015-16. However, their contribution to the State GDP increased from 2.28 per cent to 2.64 per cent during this period. As of March 2016, they employed 17,349 employees, including 1350 employees with non-working companies.

The majority of the working companies belong to power, infrastructure and financial sectors (total 19 companies). Agriculture, Manufacturing, Services and others accounted for remaining 12 working companies. Among the public sector in Bihar, investment is mainly focused on the power sector, which accounted for nearly 83 percent of the total state government investment in public sector undertakings at the end of 2015-16. During 2015-16, out of 34 working PSUs, 15 had earned profits of Rs 545 crore and 14 incurred losses of Rs 1145 crore. Out of 15 profit-earning PSUs, only five companies proposed total dividend for a meagre amount of only Rs 15.5 crore.

As reported by the Comptroller & Auditor General of India, as of March 31, 2016, out of 34 working PSUs, only three PSUs had finalised their accounts for the year 2015-16 and the Accounts of 31 PSUs were in arrears for periods ranging from one year to 25 years. The status of arrears in accounts of the 40 non-working PSUs is even more bizarre; some of these have never prepared the accounts ever since their inception and for many, their accounts are pending since 1977-78.

As regards the performance of the public sector in Bihar, their return on capital employed decreased from 18.41 per cent in 2012-13 to a negative value of 1.02 per cent in 2015-16. Accumulated losses of the working companies have decreased from Rs 9,649 crore in 2011-12 to Rs 3,953 crore in 2015-16.

Of the 40 non-working companies, 10 are under liquidation process, as their continuance may not serve any useful purpose; five of are under the process of liquidation for the last 15 years. Overall, the public sector does not inspire much confidence in Bihar, and lot needs to be done to revamp this sector, which may call for difficult and sometimes politically risky decisions.

8.7 Power Sector Reforms in Bihar

The realisation that improving the efficiency of power distribution was the only way to improve the dismal power supply situation came rather late. Prior to November 2012, there were three key organisations in the energy sector in Bihar – Bihar State Electricity Board (BSEB), Bihar State Hydroelectric Power Corporation Limited (BSHPC) and Bihar Renewable Energy Development Agency (BREDA). The Bihar State Electricity Board (BSEB) was mandated for management of electricity generation, transmission, distribution and related activities in Bihar. Under the new Bihar State Electricity Reforms Transfer Scheme 2012, the BSEB has been unbundled into 5 companies with effect from 1st November, 2012 — Bihar State Power (Holding) Company Limited (holding company), Bihar State Power Transmission Company, Bihar State Power Generation Company, North Bihar Power Distribution Company and South Bihar Power Distribution Company.

Faster economic growth and higher population growth have been driving up the demand for electricity in recent years leading to high AT&C (Aggregate Technical and Commercial) losses, which stood at 40.6 percent in 2016-17. The distribution companies have been trying to address the issue of high AT&C losses by improving the metering, billing and collection systems, but this remains a major challenge to which an answer is yet to be found.

Bihar's rural revenue collection has improved after implementation of Rural Revenue Franchisees (RRF), which are paid for each activity, as opposed to payment on overall collection efficiency on the basis of billing at the distribution transformer level as suggested by the Union Ministry of Power. There are 3,500 RRFs currently operational in Bihar, covering about 51 lakh rural consumers of the state—averaging around 1450 consumers for every RRF.

The important programmes of the Central government for expanding the coverage of electricity supply in the state are — (1) Integrated Power Development Scheme (IPDS), which subsumed the earlier Restructured Accelerated Power Development and Reforms Programme (R-APDRP), (2) Din Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) which subsumed the earlier Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), (3) Ujwal Discom Assurance Yojana (UDAY) and (4) Special Plans under the Backward Regions Grant Fund.

The operational results of all the five power companies indicates that only the Bihar State Power Transmission Company has made some marginal profit in 2015-16 with 1.92 percent net return on capital employed. The rest of the companies are in red, with their accumulated profit soaring to more than Rs 3100 crore. If this situation is not remedied urgently, their accumulated losses would erode their total net worth in only a few years' time.

The State Government is providing annual budgetary support to the power sector for more than Rs 5300 crore. This is in addition to the liability taken by the State under the UDAY scheme which exceeds Rs 2300 crore. Without any tangible return, these are bound to contract the already tight fiscal space of the Government, adversely affecting its other development commitments. Added to these are the subsidies on account of power of the order of nearly Rs 4000 crore.

The power sector reforms in Bihar may have increased the availability of power, but resulted in additional expenditure of Rs 9300 crore, apart from a liability of Rs 2300 crore on account of UDAY loans and annual committed expenditure on interest thereon. All these will create strains in the already adverse fiscal situation faced by the state which are likely push up the GFD/GSDP ratio of the State by about 1.5 to 2 percent.