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HARYANA STATE FINANCES
A REPORT

Prepared for 15th Finance Commission, Government of India

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List of Terms of Reference (TOR) covered in various Chapters

No.	Terms of Reference	Chapter
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.	**2**
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 commercial enterprises	**2**
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.	**3**
iv	Analysis of Deficits – Fiscal and Revenue	**4**
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	**5**
vi	Implementation of FRBM Act and commitment towards targets. Analysis of MTFP of various departments and aggregate	**6**
vii	Analysis of the state's transfers to urban and rural local bodies in the State. Major decentralization initiatives.	**7**
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.	**8**
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	**9**
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Executive Summary

Background of the Study

The state of Haryana is a relatively smaller state of India with a geographical size of 1.3% of India. It has 2.09% of India's population as per Census of 2011. Only 35% of the state is urbanized. This indicates that various governments at the state level tried to focus on infrastructure to modernize the rural areas as well as the urban areas.

Haryana's poverty ratio (based on headcount ratio) declined to 16.6% in 2011-12 from 35.9% in 1993-94. Rural poverty headcount ratio has declined from 40% in 1993-94 to 21.5% in 2011-12 which is lower than country's average but more than states some states. Urban poverty ratio is 10.1% and rural poverty ratio is 21.5% as per 2011 census data.

The state of Haryana contributes almost 3.5% to India's GDP. The Gross State Domestic Product at current prices is estimated at Rs 6.87 lakh crores (Advanced Estimates) for 2018-19 and in 2017-18 (Advanced estimates) it has touched the level of Rs 6.08 lakh crores. GSDP at constant prices (2011-12 prices) is Rs 4.77 lakh crores in 2017-18. The growth rate of GSDP had always been higher than the Indian GDP growth rate except in the decade of 1990s. It fluctuated more sharply. Average growth rate of 8.5% prevailed from 2005-06 to 2016-17. In 2017-18 the growth rate of GSDP is 8% better than the All India average of 6.6%

Fourteenth Finance Commission recommendations, which were approved by the Government of India in 2015, had enhanced devolved share of states in central taxes to 42% from 32%. In the process, it was also recommended to withdraw Central Government grants in some centrally sponsored schemes (CSS). Though the 14th Commission identified 30 such CSS but the delinking of central support was approved in eight such schemes. Fiscal consolidation roadmap suggested by 14th Finance Commission included a ceiling of Fiscal deficit to 3% of GSDP from 2016-17 onwards.

Moreover the states' share of pooled Union grants was decided on population (1971 census); demographic changes in population since 1971; income distance calculated by difference between the three year GSDP average for each state with respect to the state having highest per capita GSDP; Forest cover as an opportunity cost for areas not available for other activities; and area of the states. The highest weight was given to Population and lowest weight to forest cover in the devolution formulae. The emphasis was given on the States' greater Fiscal responsibilities. There was scope for Revenue compensation due to GST implementation for states, which would undergo revenue losses due to uniform GST across states. Under such a framework it would be interesting to study the impact of Fourteenth Finance Commission on State Finances of Haryana with respect to 4the different parameters of revenue, expenditure and the deficits of the states.

Accordingly the 14th Finance Commission has only recommended 1.084% of tax devolution based on the above formula. Haryana was not recognized as a Revenue Deficit state in the Fourteenth Finance Commission. A Revenue deficit state was endowed with separate Grant-in-aid by the Commission. It is pertinent to study the impact of such devolution on State's finances of Haryana and also to understand impact of FRBM on this state. With the implementation of GST in 2017-18, this study would explore whether Haryana has

implemented GST in an efficient manner and to what extent GST has added to the revenue receipts of the state.

The Fourteenth Finance Commission also suggested to amend Electricity Act of 2003 for each state to incorporate any levy of penalty for delayed subsidy payments by the States. Under UDAY scheme following Power sector reforms, the likely implication of the fiscal deficits of the state and what would be the likely impact on fiscal health of the state are also subject matters of this study, which also explores the policy and impact of power subsidy. The study also proposes a Fiscal Roadmap for the State of Haryana till 2025.

Objectives of the study:

General Objective:

- Critical evaluation of the Haryana's State finances over the ten-year period with reference to the Terms of Reference (TOR) of the Fifteenth Finance Commission.
- To suggest ways for improved fiscal performance of Haryana state.

Specific Objectives:

1. To analyze and estimate the trend and patterns of revenue capacities, non-tax revenues and expenditure patterns of major components in both Revenue and Capital account separately for the state of Haryana (TOR i, ii, iii)
2. To analyze the measures to improve the tax-GSDP ratio during last five years and suggest further measures to enhance the revenue productivity of the tax system in Haryana. (TOR i)
3. To analyze and study the GST collection of Haryana in the year 2017-18. (TOR i)
4. To suggest ways for enhancing revenues from user charges and profits from departmental enterprises and dividends from non-departmental commercial enterprises in Haryana (TOR ii)
5. To analyze the measures to enhance allocative and technical efficiency in expenditures during the last 5 years and to suggest on improving efficiency in public spending in Haryana. (TOR iii)
6. To analyze Fiscal, Revenue and Primary deficit/surplus in Haryana (TOR iv)
7. To analyze and estimate Debt-GSDP ratio (TOR v)
8. To analyze the use and composition of debt of the Haryana 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. (TOR v)

9. To analyze the implementation of FRBM Act and commitment towards targets and MTFP at the aggregate level and at various departments levels in Haryana (TOR vi)

10. To analyze the state's transfers to urban and rural local bodies in the state and major decentralization initiatives. (TOR vii)

11. To study the impact of State Public Enterprises finances on the State's fiscal health and measures taken to improve their performance and/or alternatives of closure, disinvestment etc. (TOR viii)

12. To study the impact of Power Sector Reforms on States' fiscal health. In case reforms have not been implemented, the likely outcome on the States' finances. (TOR ix)

13. To analyze contingent liabilities of Haryana. (TOR x)

14. To analyze the trend of Haryana's state subsidies, its targeting and evaluation. (TOR xi)

15. To evaluate the outcomes of State Finances in the context of recommendations of the 14th Finance Commission and identify the gap areas. (TOR xii)

16. To determine a sustainable debt roadmap for 2020-25, taking into account impact of introduction of GST and other tax/non-tax trend forecasts. (TOR xiii)

Research Methodology

- **Literature Survey** – A thorough Literature survey from various sources was undertaken to understand the State Finances of Haryana
- **Data collection from secondary sources**
- **Sources of Secondary Data**
  - State Finances – A study of Budgets, yearly release by RBI
  - Budget Documents of Ministry of Finance, Haryana Government
  - Financial Reports of State of Haryana, CAG and AG reports of State Finances
  - Economic Survey of Haryana, Ministry of Finance, Haryana Government
  - White Paper on State Finances, Part 1 and 2, 2015, Ministry of Finance, Haryana Government
  - EPW Research Foundation Data on State finances, Macroeconomic indicators, State
  - Data.gov, Ministry of Statistics, Programme and Implementation (MOSPI).
  - Data from NITI AAYOG on poverty level and other social indicators
  - Indian Public Finance Statistics, yearly publication of Department of Economic Affairs, Ministry of Finance
  - Public Finance data by MOSPI
  - Indiastat.com data on Haryana State Finances
  - CMIE data of Haryana
  - Reports of Haryana Public Finances from NIPFP, New Delhi

- **Data Analysis Tools:** Macroeconomic data are annual time series data, which have been analyzed through Graphical representations, Descriptive Statistical Analysis, Time Series trend analysis and forecasting tools.
- **Details of Methodology used:**
  - **a.** Trend graphs of growth rates of fiscal parameters have been used
  - **b.** Tax buoyancy and Tax-GSDP ratio are used for understanding taxable capacity with respect to own tax revenue of the state of Haryana and also with respect to total tax revenue including the share of the state in central taxes.
  - **c.** Composition in percentages and absolute numbers of sources of tax and non-tax revenues have been analyzed
  - **d.** Estimation of long run tax buoyancy and short run tax buoyancy have been done.

e. For Non-tax revenue and Expenditure analysis various fiscal ratios and fiscal indices were measured

f. Estimation of Non-tax revenue growth rate based on GSDP growth rate has been done

g. User fee has been analyzed based on the Non-tax revenue earned in social and economic services separately using Margit (2014). In this study, Non-plan revenue expenditure on social services and economic services have been used as proxy for cost of providing these services. Then a Revenue-Cost analysis has been conducted to check whether user fees are adequate to meet the cost of providing such services and by how much they are falling short of planned social and economic expenditure incurred by State government.

h. Composition of expenditure and allocation ratios of expenditure between capital and revenue expenditure and development and non-development expenditure and investment (capital expenditure) in social and economic services have been measured.

i. Fiscal Deficit, Revenue Deficit and Primary deficit to GSDP ratios have been measured and compared with various other fiscal variables such as State's own tax revenue, total tax revenue, non-tax revenue, revenue expenditure, capital outlay and total expenditure. The study period performance have been compared with the same measures for previous decade and also compared with six high income states.

j. Debt-GSDP ratio has been used as the major indicator for Debt-sustainability. Effective interest rates have been compared with GSDP growth rates to understand sustainability of Debt. Apart from Debt-GSDP ratio, Debt-trap scenario of the state is checked through a measure of resource gap as suggested by Eleventh Finance Commission. It recommended that debt of a state would only reduce if incremental non-debt receipts are enough to meet incremental primary expenditure and incremental interest liabilities. So if the resource gap to meet primary expenditure after servicing debt is positive debt is sustainable, otherwise it is unsustainable if resource gap is negative. (Goel, et al, 2014)

k. Assessment made by FRBM and Fourteenth Finance Commission have been analyzed based on a comparison of actual and targets.

l. Following Margit (2014), we have used Fiscal performance indicators for outcome evaluation of State Finances of Haryana. The following Table shows the various Fiscal indicators defined and measured in the study:

Individual Indices and the Indicator Variables

Indices	Indicator Variable Used
Own Tax Earnings Performance Index	Own Tax Revenue/GSDP
Own Tax Spending Performance Index	Own Tax Revenue/Total Revenue Expenditure
Development Expenditure Performance Index	Development Expenditure/Non Development Expenditure
Commitment Capacity Performance Index	1 − (Committed Expenditure/Total Revenue Receipt)
Committed Expenditure Performance Index	1 − (Committed Expenditure/Total Revenue Expenditure)

The above indices have been used to compare Haryana's fiscal performance vis a vis six other high income states (ranked based on per capita income). However, Overall Fiscal Performance Index was measured only for state of Haryana.

m. **Forecasting For Sustainable Debt Road Map:** Trend forecasting and simulation exercises based on various scenarios on fiscal parameters were conducted to estimate Debt-GSDP ration for sustainable road map. Compounded Annual Growth Rates (CAGR) of different parameters were also used for the purpose.

- **Data and Time frame used for analysis:**

  - Yearly data from 2005-06 to 2018-19(BE). Forecasting has been done for the years 2018-19 to 2024-25.
  - For Comparison purposes with past data trend, we have used data for the years, 1980-81, 1984-85,1990-91, 1994-95, 2000-2001.
  - For long run estimation we have used long run time series data from 1980-81 to 2016-17
  - We collected revised estimates of 2017-18 and budget estimates of 2018-19 from the State budget documents.

- **Statistical Software Tools to be used:** Excel and E-View

Major Findings and Recommendations

Revenue Analysis

- Though Own-Tax GSDP ratio had been above 7.5% before 2007-08 but it varied between 6% and 7% till 2016-17 indicating good fiscal health. In 2017-18 the revised estimate of Own-Tax GSDP ratio is 5.29% without SGST. Including SGST it was above 6%.
- The monthly data of SGST shows high volatility during the period July 2017 to August 2018.
- Long run tax buoyancy with respect to GSDP is slightly less than 1, but in the short run it is even lower. Short run tax buoyancy was very volatile. This implies that although in short run tax collection does not always keep pace with GDP but with time it converges.

- Sales tax being the most important State's own tax revenue component, buoyancy with GSDP is higher than unity implying good growth in tax efforts. Most of the Sales Tax has been merged with GST indicating that future SGST collection of the State would is likely to have higher tax buoyancy.

- Non-Tax revenue as a share of Total Revenue Receipts are low but growth rate of Non-Tax Revenue vis a vis growth rate of GSDP is quite high indicating that there is a scope of increasing non-tax revenue of the state.

- As far as user fee is concerned, there is scope of increasing it for economic services. Transportation user fee collection is the most important component. There is potential improve user fee collection from Power sector in a state where 100% rural electrification is achieved. To improve power sector tariff collection, the bill collection can be outsourced.

Expenditure Analysis

- Revenue expenditure as a share of GSDP remained between 10 to 12% in the study period from 2005-06 to 2016-17. Economic expenditure, social expenditure and general services expenditure were, more or less, equal in proportion in the total revenue expenditure. Each component is around 4% of GSDP

- Share of Revenue expenditure in total expenditure had been around 80% and while Capital Expenditure remained below 20% for most years. In 2014-15 and 2015-16 Revenue expenditure' share was below 80% and capital expenditure share was above 20% indicating some improvement in allocation for capital formation.

- Revenue expenditure as a percentage of Total Revenue receipts had gone up and it had been in between 100-120% during the study period which has added revenue deficits

- Ratio of capital outlay to Total Revenue Receipts remained constant at around 20% in this the study period.

- A higher proportion of social investment was made on water, sanitation, housing and urban development, but education and health remained neglected sectors. Given a low HDI rank of the state, investment on these sectors need to be enhanced.

- Though gross enrolment in secondary and upper secondary ratio has been higher in Haryana, but it is lagging behind high income states like Kerala, Punjab, Tamil Nadu and Maharashtra. Kerala and Punjab's spending on Education is higher than that of Haryana. This shows that Haryana needs to enhance its spending more in Education.

- A close look at State comparison on Health sector spending reveals that states including UP, West Bengal, Tamil Nadu, Punjab, Maharashtra and Assam are spending a higher percentage on health as compared to Haryana. Haryana's Infant mortality is higher than Tamil Nadu, Punjab, West Bengal, and Maharashtra

- Higher investment was made on transportation and energy sectors, although there had been a lot of fluctuations in public investment in all the components of economic expenditure.

- Expenditure is still more biased towards revenue expenditure indicating smaller capital outlay in proportion. Development of infrastructure and social sectors needs more capital expenditure in the state.

Analysis of Deficits and Debt

- The analysis of the deficit for the state of Haryana indicates that its performance in the past decade of 2006-2016 has improved relative to the previous decade of 1995 to 2005. However, Haryana's relative ranking has worsened compared to other high income states. This means that the other states have been more successful in improving its fiscal

performance relative to Haryana. So, one could conclude that the potential exists but it needs to be realized.

- The fiscal deficit almost doubled for 2015-16 and 2016-17 due to UDAY scheme. Debt with respect to GSDP have been increasing, this is more pronounced during the implementation period of UDAY scheme. However, this may be a temporary phenomenon.

- For the state of Haryana, the GFD has generally been managed well but periodically it deteriorated. UDAY has contributed to it in last two years and the GFD situation is likely to improve by this year.

- However, the RD situation has not been managed very well as there has been very few years with surplus or zero balance in the revenue account. This has been one of the reasons for less resources being available for capital expenditure in the state.

- The high levels of losses of state electricity discoms have been one of the major contributory factors to revenue deficit. It is expected that with reforms initiated in the power sector (with UDAY and UJJWALA) the losses of the power sector to come down with time. The power sector has seen some improvements in the last 2 years which is a positive development.

- Debt and liabilities with respect to GSDP have been increasing, this is more pronounced during the implementation period of UDAY scheme. However Debt-GSDP ratio is well within the target of 25% as recommended by Fourteenth Finance Commission.

- Burden of debt servicing has been going up indicating that debt sustainability may become an issue in few years.

- Resource gap analysis or sufficiency of non-debt receipts for debt servicing reveals that debt is becoming less sustainable for most of the years. Average annual resource gap was negative, however there was high fluctuations with high standard deviation indicating no clear pattern as such.

- Debt as a percentage of Non-debt receipts was too high and needs to be kept under check.

- Moreover Effective Interest Rates are lower than both Nominal and Real GSDP growth rates throughout the study period indicating that Debt may be sustainable.

FRBM Implementation and Outcome Evaluation of Fourteenth Finance Commission's targets

- FRBM medium term review indicates that most of the targets of budget get realized in the second half of the year. Below 90% targets are met in revenue receipts but actual expenditure exceeeded targets slightly.

- Fourteenth Finance Commission targets were slightly overestimated for Revenues, GSDP but underestimated for expenditure and interest payments. Debt-GSDP ratio was below the target of 20% and fiscal deficit-GSDP ratio was below the target of 3.25% in 2014-15

and 2015-16, but both exceeded target in 2016-17, 2017-18 (RE) and 2018-19 (BE) due to introduction of UDAY scheme.

- Interest payments/TRR ratio exceeded targets of the Fourteenth Finance Commission for all the years since 2014-15 onwards. According to the latest budget of the Haryana state it is expected to narrow for 2017-18 and 2018-19

Budgetary Transfers to Local Bodies

- The share of Central grants was maintained at 65:35 ratio among Panchayati Raj Institutions (PRIs) and Urban Local Bodies (ULBs). The budgetary transfers were made based on recommendations of Fourteenth Finance Commission and Fourth State Finance Commission.

- It was observed the actual transfers of grants were based on actual needs. Central plus State grants were quite adequate. However due to partial devolution of power to ULBs own revenue deficit went out of proportion for ULBs from 2004-05 to 2013-14. The rates of taxes collected by ULBs are not decided by themselves and they are unable to meet their own expenditure needs and it leads to rising deficits.

- Separate financial audits and income and expenditure statements should be implemented. Some states like Gujarat and Maharashtra have separate Financial statements of Local Bodies. The annual statement provided by the Directorate of ULB, Government of Haryana is an updated and accounted till 2015-16. Thus this proves that there is a substantial delay in the accounting procedures of Urban Local Bodies.
- Land registration, Birth and death registration have improved in the state by implementing online service portals. However Financial auditing of Urban Local Bodies and Panchayati Raj Institutions are lagging behind and needs to be improved

Performance of State PSEs

The Public Sector Enterprises play a very vital role in the growth and development of an economy. These are created to undertake commercial activities and other functions as assigned by the State Government from time to time. To facilitate faster decision making these entities were allowed to raise their own resources and spend the same to achieve the objectives for which they were established.

Performance of Haryana Roadways

Efficient and affordable public transportation is an important ingredient of human mobility.
The public transport system also helps in containing pollution and traffic congestion which has become a serious hazard in most cities. These negative externalities not just act as a major impediment to productivity of our workforce but also are becoming a serious health issue and it is getting worse with rising number of private vehicles. Children and senior citizen are major victims of this as they are more sensitive and vulnerable. This is partly because of dwindling public transport. The obsession with closing most of the PSUs has become a serious policy hazard as more and more of these utilities are starved of funds.

Haryana Roadways (HR) have been having consistent quality and punctuality of its operations and it has earned it a name. It has a fleet of approx. 4068 buses and it plies on an average 1.11

million Km every day and carries 1.12 million passengers daily on 1116 Intra-State and 446 Inter-State routes.

However, due to the rising financial losses of HR, despite improved physical performance, the policymakers are tempted to raise fares and are considering privatization of the service. The issue and challenge for the state government in coming months and years will be facing is to whether to serve larger public interest and enhance public bus fleet which has the potential to help mitigate air pollution as well as road congestion and associated health costs or be worried only about public exchequer. If Haryana Government is more creative and imaginative then it may be able to serve public interest by strengthening public transport to stem the growth of private vehicles. The important challenge is to make sure that the efficiency of public system is improved and buses are available easily. Internet technology (GPS) and PPP model such as in Delhi (DIMTS) may help reduce the losses as well as improve the accessibility of buses for masses.

Aggregative Perspective of Haryana's PSEs

- Out of a total of 42 State Public Enterprises in Haryana, 23 are registered under the Companies Act, 1956 and the remaining 19 are registered under the Co-operative Societies Act, 1984. Of the 42 PSUs, 31 are working PSUs. The Haryana State Government has substantial financial stake in these PSUs. This stake is of mainly three types: Share Capital and Loans; Special Financial Support (budgetary support-grants and subsidies) and Guarantees.
- ***Performance of PSEs in Agriculture and Allied Sector***: These PSEs improved their performance from 2008-09 to 2016-17. The 'turnover' rose by about 5.3 times (at 22.7% per annum). Profits also went up by about 8.4% per annum in these years. This helped improve the turnover per employee (by around 250 percent) as well as profits per employee (by 100 percent).
- ***Performance of PSEs in the Cooperative Sector:*** Performance of PSEs in the Cooperative Sector shows good promise. The turnover of these PSEs improved and it grew by about 171 percent (around 11.7% per annum). Despite this though the profits fell and turned into losses due to which the accumulated losses have piled up. These could create fiscal challenges in future unless reigned-in in a timely manner.

- ***Performance of PSEs in the Industrial & Infrastructure Sector:*** The PSEs in this segment have been profitable but the profits have been declining and since 2013-14 they are down by about 90%. Turnover has risen by 2.7 times (at 15.7% per annum) but the Debt has risen at more than twice this rate and reached 14 times the level in 2008-09.

- The performance per employee is rather mixed. The 'turnover per employee has risen at about 7.6% per annum whereas 'profit per employee' fell a bit. Expenditure per employee has risen at a high rate with 21.3% annually. As a result of these the Debt-equity ratio of these PSE has jumped from 2.39 in 2008-09 to 45.4 by 2016-17 which is around 18 times. This is worrisome development as it will have wider fiscal implications in near future.

Reforms and Performance of Power Sector

- Electricity is an important universal input to most of the economic activity. Availability of affordable quality power is a necessary condition for the rapid growth and balanced regional development. The Haryana state has improved its performance significantly and has moved to the top position in terms of the per capita power availability. Its ranking moved from being at number three in 2004-05 to number one by 2015-16.
- However, the power sector in Haryana as across most Indian states has been financially stressed. The main reason for this has been high T& D losses and high cost of debt servicing which have made the SEBs heavily dependent on the state exchequer to sustain their operations to meet the needs state's economy. After implementation of UDAY there has been some improvement but still more needs to be done. There has been no progress in AT&C losses as per the UDAY targets in UHVNL and DHBVNL State distribution companies.
- *Generation Companies*: The Haryana Power Generation Corporation Limited financial situation has worsened in the recent years and in five out of last six years the company has made losses. However, the turnover per employee of the company has improved by around 79% between 2008-09 and 2016 -17.
- *Transmission Companies*: Haryana Vidyut Prasaran Nigam Limited financial situation has been better and the company has been profitable for six out of last nine years for which the data is available. The turnover per employee has improved by about 30% between 2008-09 and 2016 -17.
- *Distribution Companies*: Uttar Haryana Bijli Vitran Nigam Limited and Dakshin Haryana Bijli Vitran Nigam Limited have had difficult financial situation and suffered losses for seven out of last eight years. However, the turnover per employee of both the company has improved significantly and it rose and became more than double between 2008-09 and 2016 -17.
- Although UDAY did raise the GFD-to-GSDP ratio as also the Debt-to-GSDP ratio (by about 3 percent) but it also contributed to better metering and spread of energy efficiency initiatives envisaged in the reform programme. However, the progress has been mixed and more time may be needed to implement the targets set in the reform agenda.
- The State could achieve 100% electricity connection to households in December 2018 under Deen Dayal Upadhyaya and Saubhagya rural electrification schemes.

Analysis of Contingent liabilities

- The total outstanding guarantees as a proportion of the total liabilities fell from 32.79% in 2014-15 to 13.44% in 2015-16 and further declined to 5.72% in 2016-17; its lowest level since 2001-02.
- Major chunk of the contingent liabilities of outstanding guarantees for the state were on account of the power sector (nearly 75%). The financial distress of the power DISCOMS rose further and the level of outstanding guarantees to the power sector rose to 90% in 2013-14 and stood at 93% in 2014-15. This pushed the state government towards adoption of the UDAY scheme to revive the Power sector. This helped the state government's guarantees to the power sector lessen from 85% in 2015-16 to 67% in 2016-17.

Analysis of Subsidies

- Haryana has been fiscally prudent state and has had relatively low expenditure on subsidies and these have been falling over the 2005-06 to 2016-17 period, as expected. There are broadly two types of subsidies – Social and Economic. The share of 'Economic Services' is almost 98.7% in total subsidies whereas social services share is mere 1.3, on average, for the period. For most of the years it is less than 1% from 2005-06 to 2016-17. The power sector is the biggest recipient of subsidies from the State Budget in this period.
- The socio-economic indicators of highest Female illiteracy, lowest life expectancy, highest infant mortality rate (44 per thousand), and a worst gender ratio of 879 relative to other high income states implies that subsidies must be re-oriented towards social sector, health and education in particular.
- It is hoped that with fall in power sector subsidy due to the restructuring under the UDAY scheme more resources will potentially become available to the state for undertaking these social responsibilities.

Sustainable Fiscal Roadmap Recommendations

Table 1 summarizes the results for various fiscal indicators along with the Debt-to-GSDP ratio.

- On the revenue side, the State's 'own tax revenue' has been growing at healthy rate of 14.2% whereas the 'State's Share in Central Taxes' has been rising at even higher rate of 17.6% and 'Central Grants' by around 15% between 2005-06 and 2016-17. However, the state's non-tax revenue has been rising at a bit rather slower pace of around 13.3%. SGST is likely to rise by at least 14% for the initial five years as per the Centre's assurance. All put together, it is estimated that the State's 'non-debt capital receipts' grew by about 15.1% in this period of analysis.

We assume it is likely to grow, at least, at this rate. The GSDP in nominal terms is likely to grow at 15.4% given the past performance.

Table 1: Forecasts based on Trend Regression for the Period 2005-06 to 2017-18 (Rs in crores)

Items	Trend ROG	2017	2018	2019	2020	2021	2022	2023	2024	2025
OTR	**0.1258**	446.9	503.1	566.4	637.7	717.9	808.3	910.0	1024.5	1153.4
ONTR	**0.0701**	109.8	117.5	125.8	134.6	144.0	154.1	164.9	176.5	188.9
SGST	**0.1400**	125.2	142.7	162.7	185.5	211.5	241.1	274.8	313.3	357.1
SCT	**0.1558**	83.7	96.8	111.8	129.2	149.4	172.7	199.6	230.6	266.6
CG	**0.1508**	60.4	69.5	80.0	92.0	105.9	121.9	140.3	161.4	185.8
TRE	**0.1478**	783.1	898.8	1032	1184	1359.0	1559.8	1790.2	2054.7	2358.3
Interest Payment	**0.1552**	**118.9**	**137.3**	**158.6**	**183.3**	**211.7**	**244.6**	**282.5**	**326.4**	**377.0**
TE	**0.1485**	936.9	1076	1236	1419	1629.7	1871.7	2149.5	2468.6	2835.0
Non Debt Receipts	**0.1108**	764.1	848.7	942.8	1047	1163.3	1292.2	1435.4	1594.5	1771.1
Public Debt	**0.1792**	**1418**	**1672**	**1972**	**2325**	**2742**	**3233**	**3812**	**4495**	**5301**
(Public Debt) – (Power Sector Debt)	**0.1715**	**1158.4**	**1357**	**1590**	**1862**	**2182**	**2556**	**2994**	**3507**	**4108**
GFD = Total Exp – Non Debt Receipts		172.8	227.2	292.9	371.8	466.43	579.45	714.10	874.13	1063.90
GSDP	**0.1444**	**6085**	**6963**	**7968**	**9118**	**10435**	**11941**	**13665**	**15637**	**17895**

(Public Debt)/GSDP (%)	**Pessimistic**	**23.30**	**24.01**	**24.74**	**25.50**	**26.27**	**27.07**	**27.90**	**28.75**	**29.62**
(Public Debt - Power Bonds)/GDP –(%)	**Optimistic**	**19.04**	**19.49**	**19.95**	**20.42**	**20.91**	**21.40**	**21.91**	**22.43**	**22.96**
Interest Payment/TExp	**Percent**	12.7	12.8	12.8	12.9	13.0	13.1	13.1	13.2	13.3
Interest Payments /Non Debt Receipts	**Percent**	**15.6**	**16.2**	**16.8**	**17.5**	**18.2**	**18.9**	**19.7**	**20.5**	**21.3**
Interest Payment /GSDP	**Percent**	1.95	1.97	1.99	2.01	2.03	2.05	2.07	2.09	2.11
GFD/GSDP	**Percent**	2.84	3.26	3.68	4.08	4.47	4.85	5.23	5.59	5.95
Interest Payment /Public Debt	**Percent**	**8.4**	**8.2**	**8.0**	**7.9**	**7.7**	**7.6**	**7.4**	**7.3**	**7.1**

- However, on the expenditure side we notice that the 'total revenue expenditure' as well as 'total expenditure' has been rising at 16.4% and 'total expenditure' at a bit higher of 16.9% in this period.

So, using the trend growth of revenue and expenditure, we estimated that the 'gross fiscal deficit' will gradually rise and may cross the 4% mark by 2022-23 and could cross 4.5% by 2024-25 and thereafter.

As far as public debt is concerned, it is expected to rise too.

First, Optimistic Scenario analyzes the 'public debt-to-GSDP without the Power Sector Debt'.

This is on the surmise that the Centre and state government are taking special care to nudge the economic agents to take care of fiscal implications in the aftermath of the UDAY scheme which has pushed up the state's fiscal deficit as well as the Debt-GSDP ratio.

Our optimistic analysis indicates that the Debt-GSDP ratio (without Power Sector Debt) will be within prescribed limits by 2025-26 and reach a high of 25%.

Second, the Pessimistic scenario looks at the 'public debt-to-GSDP' ratio with Power Sector Debt;

If it is not done then the state debt situation is likely to worsen. As one can see in the Table 1, the pessimistic scenario shows that the Public Debt-to-GSDP ratio for the state might reach above 31% by 2025-26. Haryana has been among the fiscally better managed state and it is likely to retain its reputation and remain fiscally prudent.

The interest payments are likely to rise as well as the debt level rises. It is forecasted to go up to 16% of the 'non-debt receipts' by 2025-26. This is going to be challenging and better fiscal management of the state exchequer would be called for.

This could have repercussions for the state's fiscal deficits and may reduce the fiscal flexibility of the government and will need Finance Commission and Centre to take the corrective measures to improve state finances in the years to come.

The interest payments as a percent of 'total expenditure' is likely to rise at a slower rate and will go up from 12.7% in 2017-18 to about 11.6% by 2025-26. The government's debt repayment could become a potential problem and would need adequate attention.

The states as well as the country's fiscals are facing a major challenge in the aftermath of the GST implementation and demonetization. These policy interventions seems to have enhanced the growth of organized sector of the economy but the unorganized sector have suffered a serious jolt and there has been adverse implications for employment and the incomes in this sector. The unorganized sector employs relatively poorer sections and as their incomes decline the 'aggregate demand' in the economy has been subdued. That is partly the reason that the private investments are not picking up and growth is requiring a push by public investment which central government is trying as best as it can. It is a challenge for the policymakers to ensure that the incomes at the bottom ends grow as that will ensure growing demand and a virtuous cycle of growth. This could also help in reducing the incidence of poverty in the state which has high 'head count ratio' of poor despite very high per capita income level.
This indicates that the inequalities are high in the state over the three decade whereas all the poorer states have had the opposite experience in this period (Tendulkar Report, 2014).

As mentioned earlier, the state of Haryana also has very low rank in the social indicators and by improving social infrastructure it could not just stimulate the economy but also improve the welfare of its population. The policymakers in the state have to realize that the economy and the society need to go hand in hand to improve the overall situation of the state. The time is ripe for the state to create and improve infrastructure to enhance not just economic outcomes but also social outcomes as is done by its Southern and Western counterparts.

Conclusions and Recommendations

1) Haryana has been able to maintain its fiscal health and discipline overall. However there is a recent trend of rising Public debts in the state owing to dismal performance of State Public Sector Enterprises.
2) Public Investment on Social Sector and Infrastructure should be enhanced and Revenue Expenditure should be reduced, particularly in Power Sector.
3) Power Sector Reforms: Given the state's T & D losses (see chapter 9 for a detailed analysis) and associated financial losses it is a feasible option for the state to rein in the losses of the power sector PSEs. One doable solution will be to outsource the bill collection system to a reputed company as it is a common best practice in many infrastructure sectors industries (e.g. toll roads, metro networks, telecom etc). This will gradually reduce the leakage in the revenue collection system and will save good amount of resources for the state and partly could address debt overhang.
4) State government could attempt to raise its revenue receipts to improve its finances. One option is to restructure its public sector enterprises and make sure that they are financially viable by improving their physical performance. Power sector, as mentioned above, has a great potential to take care of its finances by reducing T & D losses which are among the highest in all high income states.
5) To restructure the PSEs the state need to engage professional experts to turn them around and make an attempt to understand what would work. Each PSE is unique so the solution to their viability may vary. Empowering workers and managers in these enterprises and taking into account their views could help PSEs turn around much faster. This is because

they are the main stakeholders in these PSEs and if they close down their future will be at stake. There is an important lesson to be learnt from the biggest foreign investor country in the state – Japan – which has used the shopfloor workers creative genius to not just enhance its productivity but also become more profitable and globally competitive.

6) Strengthen the public transportation and Haryana Roadways to enhance connectivity and reduce traffic congestion and pollution levels. It will help to wean people off the private vehicles by improving the productivity and availability of buses to public. Many creative models could be explored to help the finances and improve the rising pollution and traffic congestion in the cities of the state. Using GPS and other IT technologies along with the PPP models adopted by BMTC and Delhi (DIMTS) could improve the financial as well as physical performance of state bus company.
7) Also, one needs to keep in mind that most of the PSEs work in the infrastructure sector which is generally a 'universal input' to all other sectors. So, if the infrastructure sector is efficient, affordable and viable then there is no reason that it will not improve the overall development performance of the state by creating employment, growth as well as development.

CHAPTER I

Introduction: State of Haryana

The state of Haryana is a relatively smaller state of India with a geographical size of 1.3% of India. It has 2.09% of India's population as per Census of 2011. Only 35% of the state is urbanized. This indicates that various governments at the state level tried to focus on infrastructure to modernize the rural areas. Haryana's head count ratio of poverty has declined to 16.6% in 2011-12 from 35.9% in 1993-94. Rural poverty headcount ratio also declined from around 40% in 1993-94 to 21.5% in 2011-12 which is lower than country's average but more than states like Rajasthan, Tamil Nadu, Kerala, and Karnataka among others. Urban poverty headcount ratio stood at 10.1% in Haryana.

State of the Haryana Economy

The state of Haryana contributes almost 3.5% to India's GDP. The Gross State Domestic Product at current prices is estimated at Rs 6.87 lakh crores (Advanced Estimates) for 2018-19 and in 2017-18 it has touched the level of Rs 6.08 lakh crores. GSDP at constant prices (2011-12 prices) is Rs 4.77 lakh crores in 2017-18. The growth rate of GSDP had always been higher than the Indian GDP growth rate except in the decade of 1990s. It fluctuated more sharply. Average growth rate of 8.5% prevailed from 2005-06 to 2013-14. In 2017-18 the growth rate of GSDP is 8% better than the All India average of 6.6%

Table 1.1: Growth Rate of GSDP and GSVA

(Percent)

Sector	Haryana					All India
	2013-14	2014-15 (P)	2015-16 (P)	2016-17 (Q)	2017-18 (A)	2017-18 (A)
Agriculture & Allied	2.8	-2.3	3.8	10.4	2.4	3.0
Industry	7.4	4.6	10.5	5.9	7.7	4.8
Services	10.1	10.4	9.3	8.8	9.4	8.3
GSVA	7.6	5.9	8.7	8.2	7.6	6.4
GSDP	8.3	6.6	10.3	8.2	8.0	6.6

P: Provisional Estimates, Q: Quick Estimates, A: Advance Estimates
Source: Department of Economic and Statistical Analysis, Haryana.

Haryana, a relatively smaller state in India has seen rapidly growing service sector over the years. The share of service sector increased to 51.71% of GSDP in 2016-17 from around 26.67% in 1995-2000. On the other hand, share of agricultural sector has declined to just 17.8% in 2016-17 from around 39% in 1995-2000. Shares of industrial sector also declined but not as much as that of agricultural sector. It fell to 30.5% in 2016-17 from around 34.4% in 1995-2000. Share of agriculture has become half and share of service sector has

become almost double in the last two decades. Compared to other high income states such as Gujarat, Punjab, Tamil Nadu, Karnataka, Kerala, Maharashtra share of agriculture in Haryana is higher but share of industry and service sector is lower. Relative to All India sectoral shares; Haryana's share of industrial and agricultural sector is higher than most states average share but the same is lower for service sector. In 2016-17 aggregate all major states average share of service sector was 61.68% while for Haryana was 51.71%. Haryana's service sector has been growing at the rate of around 10% barring for 2016-17 which is higher than high income states and country's aggregate average growth rate. On the other hand, agricultural and industrial sector growth has been lower than country's average in 2016-17.

Table 1.2: Haryana - Per Capita Income (at Current & Constant Prices)

Year	Per Capita Income of Haryana (₹)		Per Capita Income of All India (₹)	
	At Current Prices	At Constant (2011-12) Prices	At Current Prices	At Constant (2011-12) Prices
2011-12	106085	106085	63462	63462
2012-13	121269	111780	70983	65538
2013-14	137770	119791	79118	68572
2014-15(P)	147313	124986	86647	72805
2015-16(P)	161828	136423	94731	77826
2016-17(Q)	178890	145163	103870	82229
2017-18 (A)	196982	154587	111782	86660

P: Provisional Estimates, Q: Quick Estimates, A: Advance Estimates
Source: Department of Economic and Statistical Analysis, Haryana.

From the Table 1.2 it is evident that per capita income of the state is very high. It is much higher than Indian average per capita income. Haryana is one of the high income states of India in terms of per capita income.

Though Haryana is economically in a sound position in terms of growth rate and per capita income but the State has not been doing well in terms of social indicators. The State is facing challenges to maintain fiscal balance on one hand to achieve high growth and social sector development agenda on the other.

Education and Literacy

Literacy rate is 76%, slightly higher than the Indian average literacy rate of 74%. However Male literacy rate is 84% and Female literacy rate is only 66%. This implies that one pertinent issue of state of Haryana is low literacy and lack of education among women.

Female literacy rate of Haryana is increasing but it is a laggard compared to other high income states like Kerala, Tamil Nadu, and Punjab. Female Literacy rate of Haryana (66%) is almost same as country's average of 65% according to census 2011. Gross enrolment ratio in primary and upper primary education in Haryana is showing a declining trend from year 2012-13. It was 101.6 in year 2012-13 which came down to 91.41 in 2015-16. Surprisingly, this ration is much better in low income states like Bihar, Assam, Rajasthan.

It is important to note that gross enrolment ratio in Haryana is second lowest (after Andhra Pradesh) in all major states of India.

Table 1.3: Literacy Rate (Census Based)

	Total					Female			
State	**1981**	**1991**	**2001**	**2011**		**1981**	**1991**	**2001**	**2011**
Andhra Pradesh	35	44	60	67		29	39	53	65
Assam	-	52	63	73		-	43	54	67
Bihar	32	38	47	63		16	22	33	53
Gujarat	52	61	69	79		38	48	57	70
Haryana	**43**	**55**	**67**	**76**		**26**	**40**	**55**	**66**
Karnataka	46	56	66	75		33	44	56	68
Kerala	81	89	90	93		75	86	87	91
Madhya Pradesh	34	44	63	70		19	28	50	60
Maharashtra	55	64	76	82		41	52	67	75
Odisha	40	49	63	73		25	34	50	64
Punjab	48	58	69	76		39	50	63	71
Rajasthan	30	38	60	67		14	20	43	52
Tamil Nadu	54	62	73	80		40	51	64	73
Uttar Pradesh	33	41	56	69		17	25	42	59
West Bengal	48	57	68	77		36	46	59	71
India	**43**	**52**	**64**	**74**		29	39	53	65

Source: Census data

Table 1.4: PRIMARY EDUCATION

States	**GROSS ENROLLMENT RATIO**									
	PRIMARY					**UPPER PRIMARY**				
	2005-10	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2005-10**	**2012-13**	**2013-14**	**2014-15**	**2015-16**
Andhra Pradesh	98.868	101.34	96.74	88.21	84.48	77.806	80.42	83.57	79.47	81.33
Assam	121.382	109.56	113.43	114.96	106.11	68.86	86.68	93.13	95.86	93.05
Bihar	118.476	91.36	97.96	101.09	107.67	42.104	60.53	87.24	98.07	107.89
Gujarat	105.926	102.28	101.13	98.72	97.24	55.492	88.14	90.86	93.56	95.73
Haryana	**77.616**	**101.6**	**98.39**	**97.57**	**91.41**	**60.408**	**88.98**	**94.17**	**96.03**	**92.39**
Karnataka	104.728	102.85	100.96	101.86	102.98	66.564	88.67	91.81	93.18	93.37
Kerala	77.336	97.45	95.42	95.11	95.44	82.61	97.13	98.34	96.89	95.39
Madhya Pradesh	140.262	120.59	111.49	101.11	94.47	85.952	99.09	100.67	96.63	94.02
Maharashtra	101.562	105.61	99.81	98.95	97.74	85.322	92.27	96.69	98.82	99.24
Punjab	72.384	111.18	105.61	105.11	101.70	66.754	96.71	95.34	96.77	98.38
Rajasthan	116.324	106.36	101.53	98.64	100.43	72.658	79.33	84.58	85.79	91.34
Tamil Nadu	118.544	110.1	102.56	103.11	103.89	113.65	100.25	98.27	94.58	94.03
Uttar Pradesh	108.938	105.78	96.41	95.00	92.15	50.198	68.35	73.17	74.54	75.08
West Bengal	116.642	118.74	104	102.33	103.68	74.472	90.17	99.64	103.17	105.00
India	**111.902**	**105.98**	**101.36**	**100.08**	**99.21**	**68.662**	**82.5**	**89.33**	**91.24**	**92.81**

Source: Data on States from Ministry of Health and Family Welfare and Data on India from Ministry of HRD

Haryana has been performing better in gross enrolment in secondary and upper secondary education when compared to India's average but it is lagging behind high income states like Kerala, Punjab, Tamil Nadu, Maharashtra, etc. In terms of enrolment ratio in upper secondary education in Haryana has declined in 2015-16 to 59.59 as compared to 69.55 in 2013-14.

Health

Comparing total infant mortality rate (IMR) of Haryana with other states, it is high as compared to high income states like Kerala, Maharashtra, Tamil Nadu and lower when compared to lower income states like Bihar, Odisha, Uttar Pradesh, Rajasthan. Infant mortality rate is declining in all states of India, In Haryana it has come down to 33 per 1000 in 2016 from 101 per 1000 in 1981. As compared to aggregate India's IMR in recent years it is nearly same for Haryana.

Urban infant mortality rate of Haryana doesn't show any significant change as compared to total IMR. Urban IMR is Highest for Uttar Pradesh and lowest for Kerala in recent years. Odisha and Assam has shown a great improvement in urban IMR.

Table 1.5: Secondary Education

	Secondary					Upper Secondary				
	Gross Enrolment Ratios									
	2010-11	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2010-11**	**2012-13**	**2013-14**	**2014-15**	**2015-16**
Andhra Pradesh	102.89	69	75.2	72.4	75.51	21.57	48.82	60.3	51.63	60.16
Assam	92.11	61.64	71.21	74.78	77.59	18.84	23.88	32.94	33.97	38.81
Bihar	40.54	45.7	60.08	69.09	78.37	2.66	13.5	23.7	31.79	35.62
Gujarat	105.39	64.63	74.5	74.34	74.13	35.01	41.27	48.51	44.93	43.43
Haryana	**71.67**	**82.46**	**86.21**	**84.25**	**84.22**	**54.14**	**60.97**	**69.55**	**65.78**	**59.59**
Karnataka	116.05	74.59	77.49	81.8	83.22	0	16.99	18.39	32.96	39.86
Kerala	125.65	93.72	102.51	103.24	102.44	48.29	67.19	87.58	76.87	77.56
Madhya Pradesh	63.63	67.07	83.35	80.18	80.49	29.27	30.16	44.76	45.48	45.25
Maharashtra	123.22	82.14	85.58	89.31	89.95	45.16	52.62	58.77	62.2	67.81
Punjab	69.36	88.8	86.39	85.59	87.06	47.91	65.48	71.79	69.39	70.19
Rajasthan	86.17	69.75	78.68	76.16	76.06	40.07	42.09	53.03	56.46	59.31
Tamil Nadu	108.74	90.15	92.5	91.89	93.92	68.48	65.48	75.87	77.52	82.03
Uttar Pradesh	55.49	57.51	66.18	67.79	67.75	31.15	44.2	61.27	63.75	60.78
West Bengal	63.26	66.78	74.82	78.17	83.56	34.44	41.07	48.13	49.95	51.54
India	81.94	68.13	76.64	78.51	80.01	31.06	40.76	52.21	54.21	56.16

Source: Data on States from Ministry of Health and Family Welfare and Data on India from Ministry of HRD

When compared with India's aggregate Haryana's urban IMR is higher in recent years which were low earlier years. Rural infant mortality rate of Haryana is higher than urban infant mortality rate like in the most of the states. Rural IMR for Haryana is even higher that the aggregate India's rural IMR. Assam, Bihar, Rajasthan, Madhya Pradesh, Uttar Pradesh are the worst performer in Rural IMR while Kerala's rural IMR is only 10 per thousand in 2016.

Table 1.6: INFANT MORTALITY RATE

States	1981-1990	1991-2000	2001-2010	2011	2012	2013	2014	2015	2016
Andhra Pradesh	80	67	56	43	41	39	39	37	34
Assam	99	78	66	55	55	54	49	47	44
Bihar	100	69	58	44	43	42	42	42	38
Gujarat	99	63	53	41	38	36	35	33	30
Haryana	**88**	**69**	**57**	**44**	**42**	**41**	**36**	**36**	**33**
Karnataka	72	62	48	35	32	31	29	28	24
Kerala	28	15	12	12	12	12	12	12	10
Madhya Pradesh	123	99	75	59	56	54	52	50	47
Maharashtra	69	52	36	25	25	24	22	21	19
Odisha	127	104	75	57	53	51	49	46	44
Punjab	69	53	44	30	28	26	24	23	21
Rajasthan	104	83	68	52	49	47	46	43	41
Tamil Nadu	78	55	37	22	21	21	20	19	17
Uttar Pradesh	135	89	71	57	53	50	48	46	43
West Bengal	77	58	40	32	32	31	28	26	25
India	**98**	**73**	**57**	**44**	**42**	**40**	**39**	**37**	**34**

Source: Ministry of Home Affairs, GOI & Office of the Registrar and Census Commissioner, India

Total life expectancy at birth for Haryana has risen slightly over the years and it stood at 68.6 in years 2010-14. It is almost same as All India's average life expectancy at birth. Comparing to other states it las been lower than high income states like Kerala, Maharashtra, Tamil Nadu, Punjab and higher than Madhya Pradesh, Uttar Pradesh, Assam.

Table 1.7: LIFE EXPECTANCY (AT BIRTH)

State	2006-10	2007-11	2008-12	2009-13	2010-14
1) Andhra Pradesh	65.8	66.3	67.03	67.89	68.46
2) Assam	61.9	62.2	62.74	63.31	63.92
3) Bihar	65.8	66.3	67.17	67.69	68.09
4) Gujarat	66.8	67.3	67.71	68.15	68.69
5) Haryana	**67**	**67.3**	**67.58**	**68.16**	**68.60**
6) Karnataka	67.2	67.5	67.97	68.51	68.83
7) Kerala	74.2	74.4	74.66	74.84	74.94
8) Madhya Pradesh	62.4	62.8	63.33	63.80	64.16
9) Maharashtra	69.9	70.3	70.75	71.33	71.64
10) Odisha	63	63.7	64.29	64.82	65.83
11) Punjab	69.3	69.8	70.33	71.13	71.60
12) Rajasthan	66.5	66.8	67.18	67.54	67.72
13) Tamil Nadu	68.9	69.4	69.83	70.20	70.61
14) Uttar Pradesh	62.7	63.0	63.48	63.82	64.14
15) West Bengal	69	69.4	69.67	69.92	70.16
India	**66.1**	**66.5**	**66.99**	**67.47**	**67.91**

Source: Office of the Registrar and Census Commissioner, India

Life expectancy of males at birth in Haryana has declined slightly over the years and now it is almost same as All India's average (Surprisingly, it is less than even low income states like Bihar). Life expectancy of females at birth in Haryana has increased over the years and it is also higher than the All India female life expectancy at birth. Fertility rate in Haryana has declined from 4 in 1981 to 2.3 in 2016 (same as All India average). As compared to other states it is higher than some high income states like Kerala, Karnataka, and Punjab, and lower than some states like Bihar, Uttar Pradesh.

Birth and Death registration in the state of Haryana has improved as per the Report of Vital Statistics, Civil Service Registration, Government of India. The entire process of Birth and Death registration has been computerized through registration centres that issue them. Within 21 days of the event of birth or death the registration needs to be filed. This has improved the registration of non-institutional deliveries as well. 100% of the estimated birth and death events are registered in Haryana as per the latest data of 2016, provided by the Report of Vital Statistics. It is among the thirteenth states to report gender-wise vital statistics. The Local Rural Area Level Registrar is the In-charge Medical Officer of the Primary Health Centre. At the district level the District Registrar (Surgeon) and Additional District Registrar (Health Officer) are responsible for reporting the number of registrations.

This study now on focuses on the State Finances of Haryana with terms of references (TORs) as put forward by Fifteenth Finance Commission to look into the challenges of the State's fiscal capacity and debt-sustainability issues. The remaining chapters of the study are based on (TORs) of the Fifteenth Finance Commission.

CHAPTER 2

Estimation of the Revenue Capacity of State

Revenue Receipts are the single most important resources for any State Government to fund its expenditure towards fulfillment of its social and development responsibilities.

Tax revenues of state of Haryana had increased many fold in absolute terms from 1980-81 to 2017-18 (Table 2.1). During the study period of 2006-07 till 2018-19, Non-Tax revenue had increased over time but had declined in few years particularly from 2008-09 and 2009-10. Both Tax and Non-Tax revenue show increasing trends between 2006-07 and 2017-18 with little volatility. From 2006-07 to 2016-17, the own tax revenue grew at CAGR of 12.03% with wide fluctuations. Own Non-tax revenue declined sharply from 2008-09 to 2010-11, it grew in 2011-12 and remained more or less around Rs 4700 crores till 2015-16, but again grew to 6196 crores in 2016-17. The revised estimate of 2017-18 the figure was around Rs 11000 crores and budgeted estimate of 2018-19 show it is slightly higher at Rs 11300. The CAGR of Own Non-Tax Revenue has been rather low at 3.05% from 2006-07 to 2016-17.

Table 2.1: Revenue Receipts of Haryana (Rs in Crore)

	Own Non-tax Revenue	Own Tax Revenue	Own Total Revenue	Share in Central Taxes	Central grants	State GST	Tax Revenue	Non-Tax Revenue	Total Revenue Receipts
1980-81	119	233.9	353.2	61.2	45.5		295.1	164.8	460
1985-86	258	501.7	759.8	85.5	115		587.2	373	960
1990-91	510	1070	1580	185.9	146.9		1255.9	657	1913
1995-96	2190	2170	4360	360.5	298.5		2530.5	2489	5015
2000-01	1440	4310	5750	344.9	478		4654.9	1918	6574
2005-06	2460	9080	11540	1201	1115		10281	3575	13853
2006-07	4590	10930	15520	1296	1138		12226	5728	17952
2007-08	5100	11620	16720	1634	1402		13254	6502	19751
2008-09	3240	11660	14900	1725	1834		13385	5074	18452
2009-10	2740	13220	15960	1774	3257		14994	5997	20993
2010-11	3420	16790	20210	2302	3051		19092	6471	25564
2011-12	4720	20400	25120	2682	2755		23082	7475	30558
2012-13	4670	23560	28230	3062	2340		26622	7010	33634
2013-14	4980	25570	30550	3343	4127		28913	9107	38012
2014-15	4613	27635	32248	3548	5003		31183	9616	40799
2015-16	4752	30929	40284	5496	6379		36425	11131	47557
2016-17	6196	34025	40221	6597	5677		40622	11873	52496
2017-18(RE)	10984	32169	43153	8371	6038	12520	53060	17022	70085
2018-19(BE)	11303	25371	36674	9300	7198	23760	58431	18501	76933
CAGR	**3.05**	**12.03**	**9.99**	**17.67**	**17.44**	**-**	**12.76**	**7.56**	**11.33**

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted
*N.B. *TRR stands for Total Revenue Receipts of States, RE is Revised Estimate BE is Budget Estimate, CAGR (in %) 2006-07 and 2016-17*

Own Tax Revenue as a percentage of Total Revenue Receipts (TRR) remained above 60% between 2006-07 and 2016-17. The revised estimate though shows a decline to around 46% in 2017-18, but Own Tax Revenue does not include State GST collections. The budgeted estimate for 2018-19 is likely to be even lower at 33% due to consolidation of many taxes in GST. However SGST is 18% of TRR in 2017-18 (RE) and projected to be 31% in the budget of 2018-19. Haryana's SGST collection in 2017-18 has been the fifth highest state collection in the country. Together, Own Tax revenue and SGST, constitutes 63.8% of TRR. As compared to pre-GST year 2016-17, the implementation of SGST has improved State's own tax collection as a percent of TRR. As SGST was only implemented from July 2017 and thus a clearer picture would emerge once all implementation issues are resolved.

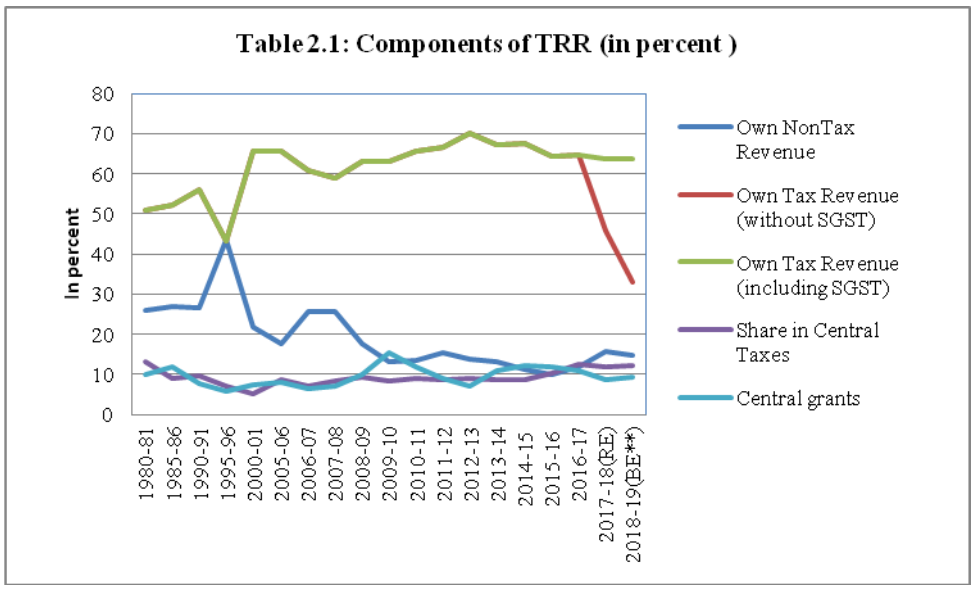
Table 2.2: Components of Revenue Receipts as % of TRR*

Year	Own NonTax Revenue	Own Tax Revenue (without SGST)	Own Tax Revenue (including SGST)	Share in Central Taxes	Central grants
1980-81	25.94	50.85	50.85	13.31	9.89
1985-86	26.89	52.26	52.26	8.91	11.98
1990-91	26.66	55.93	55.93	9.72	7.68
1995-96	43.67	43.27	43.27	7.19	5.95
2000-01	21.9	65.56	65.56	5.25	7.27
2005-06	17.76	65.55	65.55	8.67	8.05
2006-07	25.57	60.88	60.88	7.22	6.34
2007-08	25.82	58.83	58.83	8.27	7.1
2008-09	17.56	63.19	63.19	9.35	9.94
2009-10	13.05	62.97	62.97	8.45	15.51
2010-11	13.38	65.68	65.68	9	11.93
2011-12	15.45	66.76	66.76	8.78	9.02
2012-13	13.88	70.05	70.05	9.1	6.96
2013-14	13.1	67.27	67.27	8.79	10.86
2014-15	11.31	67.73	67.73	8.7	12.26
2015-16	9.87	64.5	64.5	10.15	11.78
2016-17	11.8	64.81	64.81	12.57	10.81
2017-18(RE)	15.67	45.9	63.76	11.94	8.62
2018-19(BE)**	14.69	32.98	63.86	12.09	9.36

Source: Authors' calculations based on data provided in Table 1

*N.B. *TRR stands for Total Revenue Receipts of States, RE is Revised Estimate, BE is Budget Estimate,*
***The figure does not include State GST.*

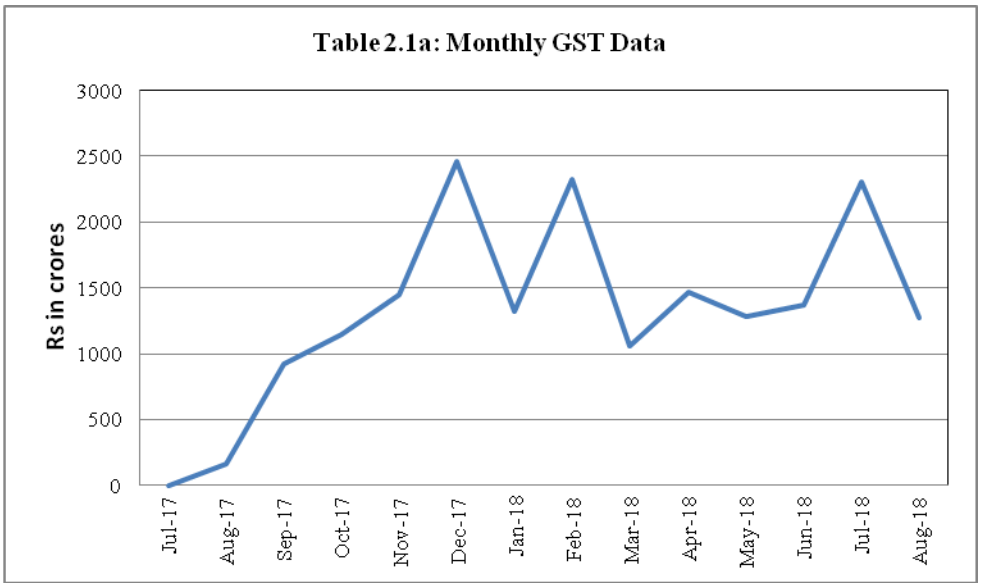
For Non-tax revenue as a percentage of TRR, there is a marked decline from 25.82% in 2007-08 to 9.87% in 2015-16. In 2017-18 it had increased to 15.67%. Since implementation of Fourteenth Finance Commission, there is an increase in the share of Central taxes from 8.7% in 2014-15 to above 10.5% from 2015-16 to 2017-18. It is expected to be 12.09% in 2018-19 as budgeted by the State Government. From 2013-14 to 2016-17 the Central grants composition in TRR went up from 6.96% in 2012-13 to 10.8% in 2013-14 to 12.26% in 2014-15. However revised Central grants estimate is only 8.62% of TRR in 2017-18. The budget estimate of Central grants is kept at 9.36% of TRR in 2018-19.



Source: Based on Table 2.2

N.B. Some earlier year's data before 2005-06 have been taken for comparison and they are discrete years in the decades of 1980s and 1990s. That explains sudden spike in the data

Figure 2.2a shows monthly fluctuations in SGST without showing any clear trend and therefore it will be difficult to conclude anything on the growth rate with just one year data.



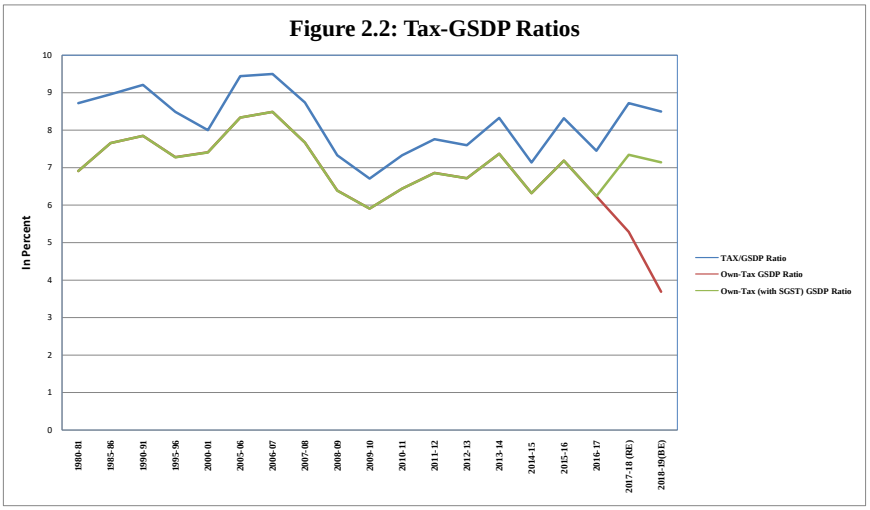
Source: CAG Monthly unaudited Accounts reports of states

Tax effort is measured by Tax-GSDP ratio, which is provided in Appendix Table 2.1. From 1980-81 to 2017-18 the State has maintained a Tax-GSDP ratio ranging from 6.5% to 9.5%. The highest tax-GSDP ratio is 9.5% in 2006-07 but since 2007-08 it started declining and it went down to 6.71% in 2009-10. It started increasing after that with a slight decline in 2014-15. For last three years after implementation of Fourteenth Finance Commission the tax-GSDP ratio was above 8%. With introduction of GST, Total tax GSDP ratio improved significantly to 8.72% in

2017-18(RE). Own tax revenue-GSDP ratio has reached its peak level of 8.49% in 2006-07 and declined thereafter below 7%. In 2013-14 it improved above 7% but it deteriorated further in 2016-17 and 2017-18. In 2017-18 own tax revenue had fallen due to implementation of GST as Sales tax and other taxes like goods and passenger taxes got merged into GST for majority of the commodities except fuel, liquor and electricity. SGST is not included in own tax revenue. The revised estimate and budget estimate of 2017-18 and 2018-19 show that there is an expectation of high SGST collection in the state. Tax-GSDP ratio which included GST in 2017-18 is expected to improve as the revised data incorporates the fact that SGST collection has been quite high in the State. Tax-GSDP ratio has also gone down after the peak rate of 9.5% in 2006-07. It went down to 6.71% in 2009-10 and went up to 8.33% in 2013-14. There was a slight variation of Tax-GSDP ratio between 7.14% and 8.33% from 2013-14 to 2017-18.

Overall Tax efforts have not improved significantly in the State; however average Tax-GSDP ratio of 8% and average Own-Tax GSDP ratio of 6.86% indicate that the state has reasonably good fiscal health.

Figure 2.2: Tax-GSDP Ratios

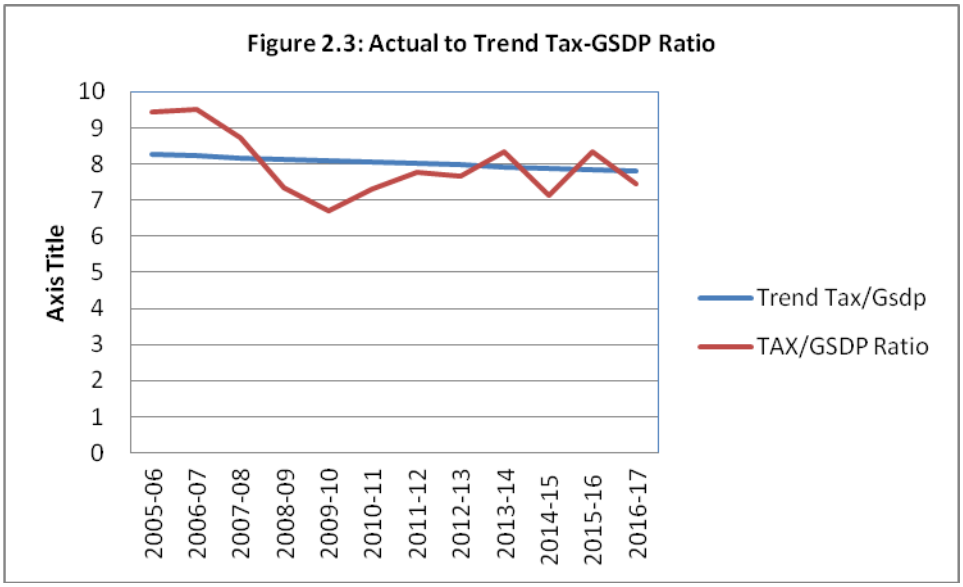


Source: Based on Appendix Table 2.1

For analyzing tax efforts, we estimated Tax-GSDP ratio through a long run trend regression taking data from 1980-81 to 2016-17. The long run trend curve of Tax-GSDP shows slightly declining trend. The statistically significant estimated trend equation is:

(Tax-GSDP Ratio) = 9.35 - 0.042(Time Trend)

The trend estimation results are presented in details in Appendix Table 2. The declining trend is a matter of concern about the tax efforts of the state. Actual Tax-GSDP ratio was higher than the trend equation till 2006-07 but since 2007-08 the Actual ratio is below the trend ratio and the gap was prominent in 2008-09. Since 2013-14 the difference between Actual ratio and Trend ratio has narrowed significantly. However, the Tax-GSDP ratio though showed an increasing trend, did not show significant improvement since 2008-09.



Source: Based on the Estimation of the equation of Tax-GSDP ratio

From Table 2.3, it is evident that Haryana's Tax Revenue as ratio of Total Non-special category states has been around 3% from 2014-15 to 2016-17 and that of Own-Tax Revenue has been around 4%.

Table 2.3: Tax Revenue as a percentage of General Category States

Tax Revenue as percentage of Total Non-special Category States

(per cent)

State	Tax Revenue			Own Tax Revenue			Share in Central Taxes		
	2014-15 (Accounts)	2015-16 (RE)	2016-17 (BE)	2014-15 (Accounts)	2015-16 (RE)	2016-17 (BE)	2014-15 (Accounts)	2015-16 (RE)	2016-17 (BE)
1	2	3	4	5	6	7	8	9	10
Gujarat	6.8	6.1	6.1	8.2	7.4	7.4	3.4	3.5	3.6
Haryana	3.0	3.1	3.1	3.7	4.1	4.2	1.2	1.2	1.2
Karnataka	8.1	7.6	7.5	9.4	8.9	8.7	4.8	5.2	5.2
Kerala	4.1	4.0	4.2	4.7	4.7	4.9	2.6	2.9	2.8
Maharashtra	12.6	12.1	11.9	15.4	15.3	14.9	5.8	6.1	6.2
Punjab	2.9	2.8	2.7	3.4	3.4	3.2	1.5	1.7	1.7
Tamil Nadu	9.1	8.2	7.7	10.6	10.2	9.4	5.5	4.6	4.5

Only six high income states have been compared for comparison

Source : RBI STATE Finances which have taken from Budget documents of the state governments,

This implies that Haryana in the category of Non-special states is ranked low in terms of Tax receipts as compared to other high income states like Gujarat, Kerala, Karnataka, Maharashtra and Tamil Nadu. Size and Population of states did matter here. However as compared to Punjab, Haryana is better ranked.

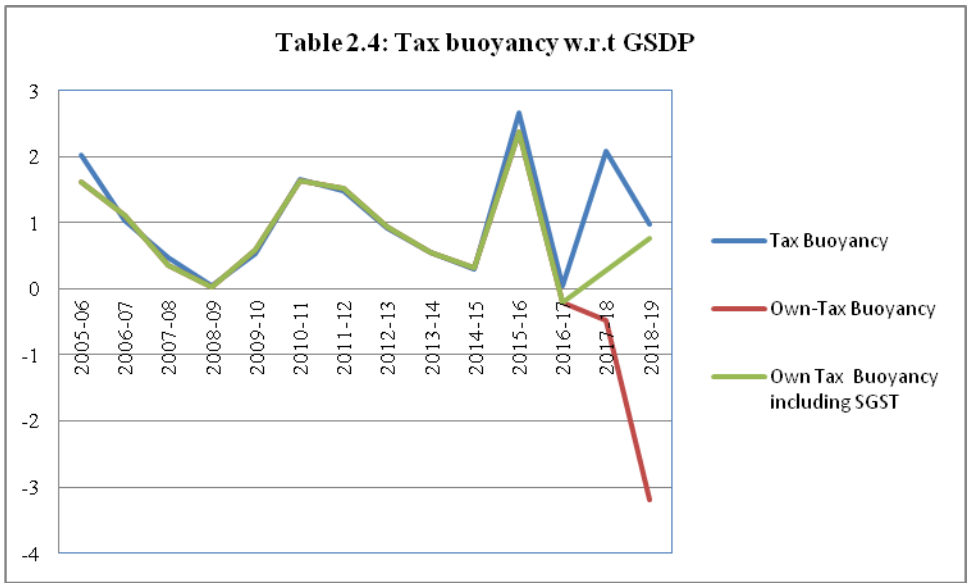
Tax Buoyancy is defined as (Rate of growth of Tax collections)/(Rate of Growth of GSDP). From Figure 2.4, it is observed that both Tax and Own-Tax Buoyancy moved in the same

direction, showing high volatility throughout. After a peak of 2.017, Tax buoyancy of the State in 2005-06 started declining and fell to 0.05 in 2008-09. It picked up, however in most of the years it was less than one indicating taxes to be less buoyant. Own taxes also showed a similar trend from 2005-06 to 2016-17. This indicates that the central taxes' contribution has been relatively stable, however, same is not the case with the states' own tax revenue collection.

Table 2.4 shows that 'standard deviation', which is a standard measure of volatility, is quite high in both Own-Tax and Tax buoyancy explaining volatility. From 2014-15 to 2016-17, high volatility may be explained by macroeconomic changes in the state due to implementation of 14th Finance Commission Report, Haryana 4th State Finance Commission, change in government, and demonetization. Due to implementation of GST, it is likely to remain volatile for the next couple of years.

In 2016-17, 'own tax revenue' growth rate was negative however tax revenue growth rate was positive but low. This indicates that indirect state tax collection suffered but demonetization helped in high direct taxes of Central Government. This showed that even if sales possibly went down but disclosures of income and property taxes improved in the state.
In order to understand the long run tax buoyancy of the state, which is an indicator of the trend in tax-buoyancy after adjusting for fluctuations, we estimated the following equation:

Log (Tax collection) = a + b * Log (Taxable Capacity) + error term



Source: Plotted based on Author's calculation of Tax-buoyancy

Here the slope coefficient 'b' indicates long term tax buoyancy. We have used Nominal GSDP at factor cost as proxy for 'Taxable Capacity' and Own Tax Revenue (OTR) as dependent variables for Tax collection. We had run this equation for a long run data from 1980-81 to 2018-19(BE). Table 2.4 shows the coefficient for tax buoyancy which is statistically significant with presence of autocorrelation and short run tax buoyancy for the period 2006-07 to 2016-17, which is statistically insignificant (autocorrelation corrected). This indicates short run volatility is quite high. The details of the estimation are given in the Appendix Table 2.4 and 2.5. Long run tax

buoyancy equation is more appropriate to understand the trend as short run tax buoyancy shows fluctuations and may not be useful for forecasting purposes.

Table 2.4: Showing Estimation results of Tax-buoyancies

	1980-81 to 2018-19		2006-07 to 2016-17	
	Tax Buoyancy	**t-statistic**	**Tax Buoyancy**	**t-statistic**
Haryana	0.94*	73.99	0.02	0.71

Source: Estimated based on EPWRF data and Data extracted from Budget documents

*NB *Indicates significance at 1% l.s.*

Estimation of long run tax-buoyancy is 0.94 which is close to one indicating the fact that growth rates of GSDP and own tax collection are almost equal showing healthy fiscal situation, however, in the short run there has been high volatility of tax buoyancy between 2005-06 and 2017-18 for the state.

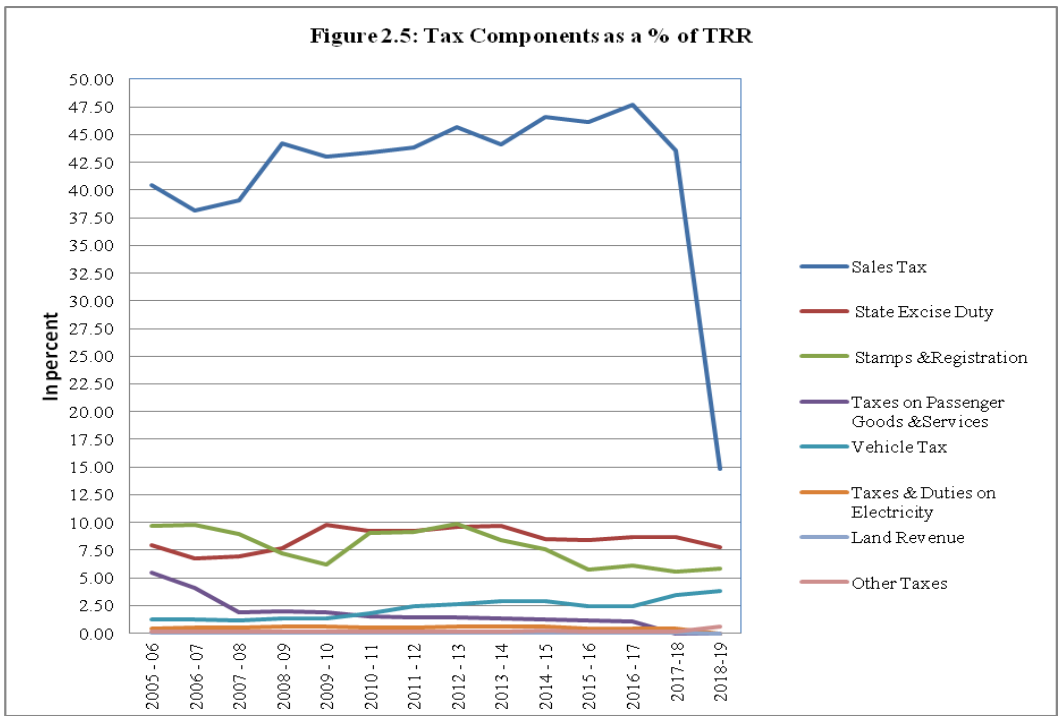
Table 2.5: Components of Own Tax Revenue (in billion rupees)

Year	Land Revenue (1)	Stamps Reg. (2)	Taxes on Property (1+2)	Taxes on Commodities & Services (3+4+5+6+7+8)	Sales Tax (3)	State Excise (4)	Taxes on Vehicles (5)	Taxes on Goods & Passengers (6)	Taxes and Duties on Electricity (7)	All other taxes on commodities & services (8)
2005 - 2006	0.13	13.40	13.53	77.26	56.04	11.07	1.72	7.58	0.62	0.23
2006 - 2007	0.13	17.65	17.78	91.50	68.53	12.17	2.24	7.38	0.98	0.19
2007 - 2008	0.09	17.63	17.73	98.45	77.21	13.79	2.34	3.79	1.07	0.25
2008 - 2009	0.09	13.26	13.35	103.20	81.55	14.19	2.39	3.70	1.06	0.31
2009 - 2010	0.09	12.94	13.03	119.17	90.32	20.59	2.77	3.91	1.20	0.37
2010 - 2011	0.10	23.19	23.29	144.61	110.82	23.66	4.57	3.87	1.30	0.38
2011 - 2012	0.11	27.93	28.04	175.96	133.84	28.32	7.40	4.29	1.66	0.44
2012 - 2013	0.13	33.26	33.39	202.20	153.77	32.36	8.87	4.71	1.92	0.57
2013 - 2014	0.12	32.02	32.15	223.52	167.74	36.97	10.95	4.97	2.19	0.69
2014 - 2015	0.15	31.09	31.24	245.11	189.93	34.70	11.92	5.27	2.40	0.89
2015 - 2016	0.15	31.91	31.13	318.26	210.60	43.71	14.00	5.54	2.56	0.93
2016 - 2017	0.16	32.82	32.98	364.81	234.88	46.13	15.83	5.94	2.75	1.72
2017-18 (R.E.)	0.24	40.00	40.24	0	173.80	55.00	25.00	23.50	3.00	1.15
2018-19 (B.E.)	0.26	45.00	45.26	0	114.40	60.00	29.50	0.00	3.30	1.25
CAGR (%)	**2.11**	**6.40**	**6.37**	**14.83**	**13.11**	**14.25**	**21.62**	**-2.15**	**10.84**	**24.58**

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

**TRR stands for Total Revenue Receipts of States RE is Revised Estimate BE is Budget Estimate*
CAGR (in percent) calculated based on the beginning period to be 2006-07 and end year 2016-17

From Table 2.5 it is evident that out of the own tax revenue, Sales taxes had been a major component of State's own tax revenue. From 2006-07 to 2016-17, the CAGR of Sales Tax had been as high as 13.11% and that of State Excise duty had been 14.25%. But highest CAGR of 21% has been that of 'Taxes on vehicles'.



Plotted based on Appendix Table 2.6

Table 2.6: Tax Components- GSDP Ratio (in percentage)

Year	Sales Tax	State Excise	Stamps & Registration	Taxes on Vehicles & Goods and Passengers Tax	Taxes on electricity & duties	Land Revenue
2005 - 06	5.15	1.02	1.23	0.85	0.06	0.01
2006 - 07	5.32	0.95	1.37	0.75	0.08	0.01
2007 - 08	5.09	0.91	1.16	0.40	0.07	0.01
2008 - 09	4.47	0.78	0.73	0.33	0.06	0.00
2009 - 10	4.04	0.92	0.58	0.30	0.05	0.00
2010 - 11	4.25	0.91	0.89	0.32	0.05	0.00
2011 - 12	4.50	0.95	0.94	0.39	0.06	0.00
2012 - 13	4.43	0.93	0.96	0.39	0.06	0.00
2013 - 14	4.19	0.92	0.80	0.40	0.05	0.00
2014 - 15	4.35	0.79	0.71	0.39	0.05	0.00
2015 - 16	4.33	0.90	0.66	0.40	0.05	0.00
2016 - 17	4.31	0.85	0.60	0.40	0.05	0.00
2017-18 (R.E.)	2.86	0.90	0.66	0.80	0.05	0.00

Sources: Calculated based on EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

From Figure 2.5 and Appendix Table 2.6 it is understood that though Vehicle Tax's CAGR is the highest, but its share in TRR had been very low at around 2.5% between 2011-12 and 2016-17, the time period when it steadily increased as a percentage of Total Revenue Receipts (TRR). Prior to 2011-12 this ratio had been less than 2%. Share of sales Tax has been the highest in TRR, which steadily increased and was around 48% in 2016-17. Sales Tax-GSDP ratio had been around 5% in the period 2005-06 to 2007-08, it has gone down below 5% since then, however, it has remained around 4.3% till 2016-17.

Long run and short run Sales tax buoyancy are estimated and provided in Table 2.7. Long Run Sales Buoyancy is quite high indicating that there has been a significant growth in Sales Tax Revenue of the state in the long run. In short run for the period 2006-07 to 2016-17 the Sales tax buoyancy is quite low. This implies that Optimism about significant growth of SGST may be true in the long run given the fact that most of the Sales Tax got merged into GST.

Table 2.7: Estimation of Sales Tax buoyancy

1980-81 to 2018-19		2006-07 to 2016-17	
Sales Tax Buoyancy	**t-statistic**	**Sales Tax Buoyancy**	**t-statistic**
1.022*	52.64	0.03**	1.86

Source: Estimated based on EPWRF data and Data extracted from Budget documents
*NB *Indicates significance at 1% level of significances.*
***Indicates significance at 10% level of significances.*

Non Tax Revenue

Non-Tax Revenue (NTR) is the second major component of State Own Revenue sources.

Table 2.9 Own Non-Tax Revenue as percentage of GSDP and TRR

Year	As a % of GSDP	As a % of TRR
2005 - 2006	2.26	17.76
2006 - 2007	3.57	25.57
2007 - 2008	3.36	25.82
2008 - 2009	1.77	17.56
2009 - 2010	1.23	13.05
2010 - 2011	1.31	13.38
2011 - 2012	1.59	15.45
2012 - 2013	1.35	13.88
2013 - 2014	1.24	13.10
2014 - 2015	1.06	11.31
2015 - 2016	0.98	9.87
2016 - 2017	1.14	11.80
2017-18 (RE)	1.81	15.67
2018-19 (BE)	1.88	14.69

Sources: Author's Calculation based on EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

**TRR stands for Total Revenue Receipts of States RE is Revised Estimate BE is Budget Estimate*

From Table 2.9 it is evident that Own NTR constitutes used to contribute around 26% of Total Revenue Receipts (TRR) in the decade of 1980s. It contributed around 43% in 1995-96. However this ratio fell to 17.76% in 2005-06, improved in 2006-07 and 2007-08 to above 25.5%, but declined sharply after that from 2009-10 to 2013-14 to about 13% of TRR. It declined further below 10% in 2015-16 and remained below 12% in 2016-17. The revised estimate of 2017-18

and Budget estimate of 2018-19 is set around 15%. The Non-Tax GSDP ratio which used to around 2.2 to 3.5% in 2005-06 to 2007-08, came down significantly to around 1 to 2% since 2008-09 till 2017-18(RE). From Table 2.1 it is evident that State's Non-Tax Revenue had a CAGR of just 3.05% between 2006-07 to 2016-17, which leaves much scope for improvement in this category of State's own resources.

We have run a trend regression equation of Non-Tax GSDP ratio to estimate the compounded growth rate. The equation derived is as follows:

Log (NonTax-GSDP Ratio) = 1.79 - 0.037 (Time)

It has a negative trend growth for the period under consideration. The detailed estimation results are in Appendix Table 2.9. This indicates that Non-Tax Revenue has grown at a slower rate than the growth in GSDP.

A ratio of Non-Tax growth rate and GSDP growth rate was estimated to be 0.75, which is statistically significant, but there is presence of autocorrelation. A short run estimation of the same index is negative and close to zero. Its quite volatile and, therefore, it is not statistically significant. The Figure 2.5 clearly shows that growth rates of Non-Taxes have seen wide fluctuations in between 2006-07 and 2016-17. From a peak of Rs. 5100 crores in 2006-07, the Own Non Tax Revenue fell to Rs 27. It started to increase thereafter and reached a new peak of Rs 61.96 billion in 2016-17(Table 2.1).

Table 2.10: Estimation of Ratio of growth rate of Non-Tax and growth rate of GSDP

1980-81 to 2018-19		**2006-07 to 2016-17**	
Ratio of Non-tax revenue and GSDP growth rates	**t-statistic**	**Ratio of Non-tax and GSDP growth rates**	**t-statistic**
0.75	17.29*	-0.007	-0.28

Decomposition of Non-Tax Revenues shows that Interest Receipts had a high CAGR of 13.54% in between 2006-07 and 2016-17 followed by CAGR of 8.45% in Economic Services Receipts. Dividends and Profits' CAGR during same period is as low as 0.47%. CAGR of General Services is also quite low. Quite expectedly, the Social Services receipt has a negative CAGR in between 2006-07 and 2016-17.

Table 2.11 Composition of Non-Tax Revenue State's Own Non-Tax Revenue (Rs Crore)

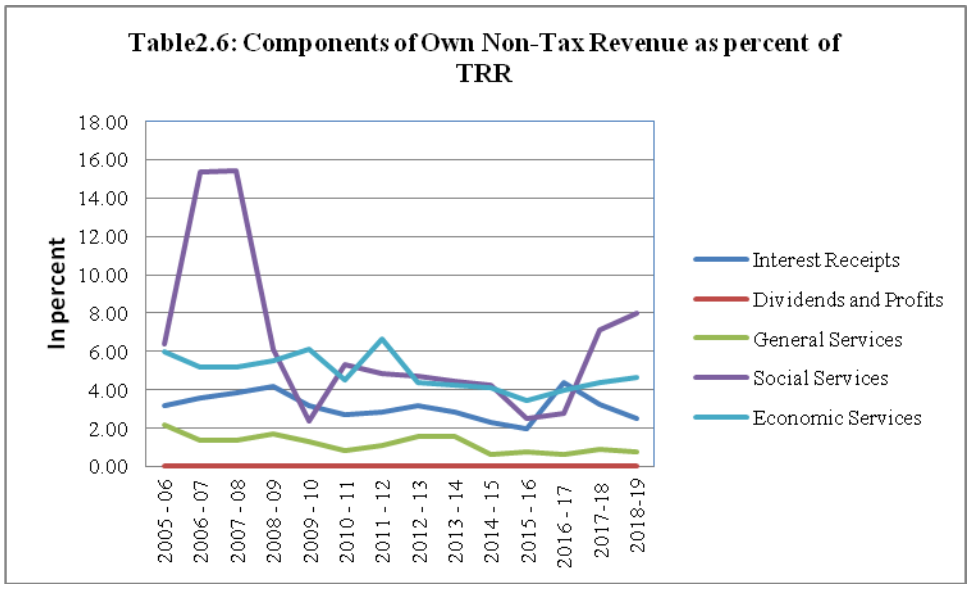
Year	Total Own Non-Tax Revenue	Interest Receipts	Dividends and Profits	General Services	Social Services	Economic Services
2005 - 06	2458.56	442.48	1.92	297.45	885.99	830.72
2006 - 07	4590.77	648.63	5.62	243.31	2757.82	935.39
2007 - 08	5097.08	757.20	6.05	269.00	3044.77	1020.06

2008 - 09	3238.44	776.28	8.27	310.81	1124.78	1018.29
2009 - 10	2741.40	667.88	9.60	271.80	502.31	1289.80
2010 - 11	3420.93	689.34	2.48	216.34	1363.56	1149.22
2011 - 12	4721.65	864.96	1.64	336.02	1483.53	2035.50
2012 - 13	4673.16	1058.21	7.05	535.15	1591.20	1481.55
2013 - 14	4975.06	1090.71	6.49	585.50	1687.66	1604.70
2014 - 15	4613.11	933.59	5.80	257.35	1730.18	1686.19
2015 - 16	4752.00	1087.00	16.00	403.00	1371.00	1874.00
2016 - 17	6196.00	2309.00	5.89	318.00	1455.00	2106.00
2017-18 (RE)	10984.00	2293.00	9.00	615.90	4980.00	3086.00
2018-19 (BE)	11302.00	1906.00	9.00	517.00	5606.00	3263.00
CAGR	**3.04**	**13.54**	**0.47**	**2.71**	**-6.19**	**8.45**

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

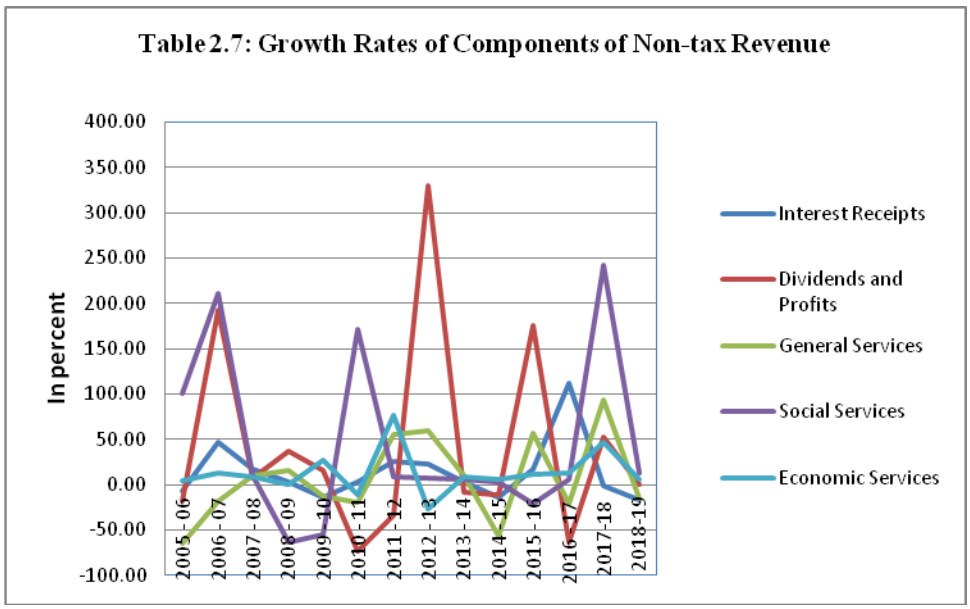
**TRR stands for Total Revenue Receipts of States RE is Revised Estimate BE is Budget Estimate*

From the graph in Figure 2.6, Dividends and Profits and General Services as a % of Total Revenue Receipts (TRR) remained low through the study period of 2006-07 to 2016-17. Economic Services as a % of TRR remained stable at around 5%. Receipts from Social Services as a % of TRR picked up from 2005-06, reached its peak around 15% in two consecutive years of 2007-08 and 2008-09 but then declined since then. It remained around 5% of TRR. Thus it is clear from the graph that Social and Economic Services receipts have room for improvement.

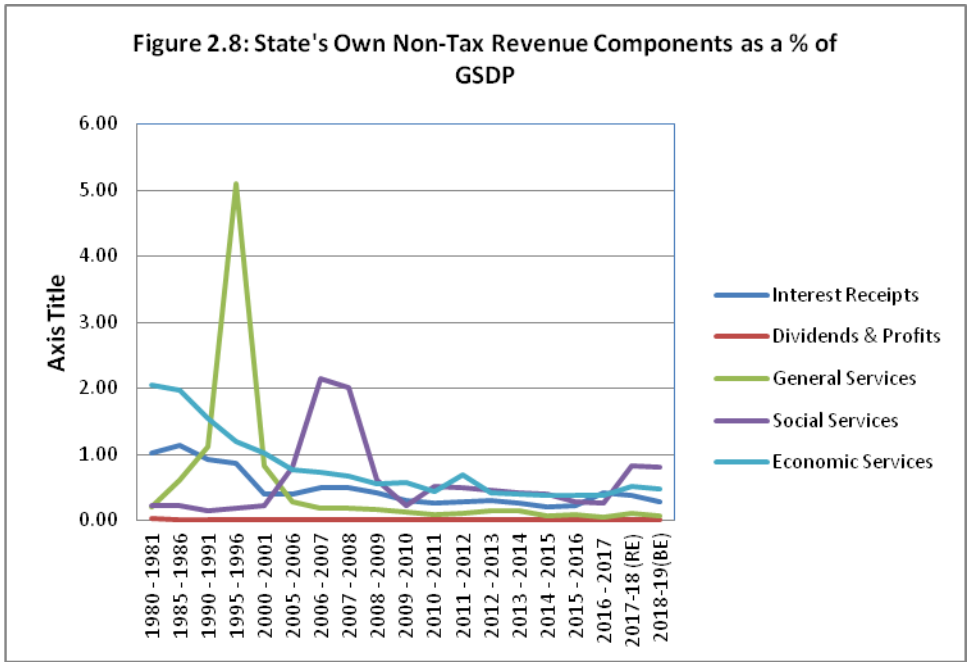


Source: Plotted based on Appendix Table 2.12

Graph in Figure 2.7 shows that growth rate of Dividend and Social Services Receipts had been extremely volatile in the period 2005-06 to 2017-18. Fluctuations in Economic Services, General Services and Interest Receipts growth rates are less pronounced. However from 2014-15 to 2017-18 growth of all components of Non-Tax Revenue had undergone fluctuations. Graph in Figure 2.7 shows that ratios of all components of Non-Tax Revenue to GSDP has remained more or less between 0 to 0.5%, indicating that Non-Tax Revenue has not been able to generate enough revenue from User Fee for the State Government.



Source: Plotted based on Appendix Table 2.12



Source: Plotted based on Appendix Table 2.13

This tempted us to further probe into the reason behind such growth trajectory of Non-Tax revenue components. In a separate chapter it is shown that how State Government's enterprises and PSEs are running under losses, indebted even for their working capital requirements, especially in Power Sector. Unless these PSEs are restructured Government would not be able to generate adequate surpluses from these PSEs. On other hand, following the study of West Bengal Finances by Margit (2012) for 14th Finance Commission, we estimated how far Revenue from User Fee had been able to cover the costs of providing such services. We have estimated the following Revenue to Cost ratios:

1. Revenue(RR)/Non Plan Expenditure (NPE) in Social Services (SS)

2. Revenue (RR)/Total Expenditure (TE) in Social Services (SS)
3. Revenue (RR)/Non Plan Expenditure (NPE) in Economic Services (ES)
4. Revenue(RR)/Total Expenditure (TE) in Economic Services (ES)

Margit (2012) pointed out that Non Plan Expenditure is a close proxy to cost of providing services. On the other hand Total Expenditure in Social Services and Economic Services would indicate what percentage of Total Expenditure could be covered by State's own User fees. We have used the following formulae to calculate the above ratios

1. Non Plan Expenditure = Non-Plan Revenue Expenditure + Non-Plan Capital Expenditure (Incurred separately for Economic Services and Social Services)
2. Total Expenditure = Total Revenue Expenditure +Total Capital Expenditure (Incurred separately for Economic Services and Social Services)

These were calculated for the time period 2005-06 to 2016-17 based on Actual data. The calculations are presented in Table 2.12

Table 2.12: User fee to Cost Ratios (Percent)

	Ratio of (Non-Tax Revenue Receipts/Non-Plan Expenditure) from		Ratio of (Non-Tax Revenue Receipts /Total Expenditure) from	
Year	**Social Services**	**Economic Services**	**Social Services**	**Economic Services**
2005 - 06	327.44	268.95	22.06	16.93
2006 - 07	910.03	163.07	59.10	11.25
2007 - 08	863.39	191.90	52.65	11.92
2008 - 09	244.70	160.46	15.34	9.95
2009 - 10	85.32	186.58	5.06	11.22
2010 - 11	207.40	181.64	12.45	10.84
2011 - 12	209.17	257.87	11.73	15.87
2012 - 13	207.56	139.76	10.92	9.48
2013 - 14	206.63	182.49	10.90	11.01
2014 - 15	188.07	182.62	9.03	11.54
2015 - 16	134.77	157.38	6.29	7.94
2016 - 17	122.63	163.87	5.61	8.18

Sources: Authors' Calculation based on EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

Interestingly, User fee for Economic and Social Services are able to cover most of its costs. It had been around 900% of NPE for Social Services in 2006-07 and 2007-08 but fell thereafter. However it was more than 100% for all years except in 2009-10. Similarly User Fee to NPE was more than 139% for all years indicating that User fees are able to cover costs of these services.

However, User fees would not be adequate to cover Total Expenditure incurred on Each Service. For Social Services, ratio of User fee to Total Expenditure reached its peak in 2006-07 and fell thereafter. It was more than 10% till 2013-14 but fell below the level of 10% thereafter. The ratio of User fee to TE never touched 16%. For the last two years in this period it fell below 10%. This suggests that though User fees are enough to cover Non-Plan Expenditure but it needs to be raised such that it could cover Plan-Expenditure.

Table 2.13 shows that User fee from Road transportation is the main source of economic services receipts. Haryana has 100% electrification in all its villages. Yet the revenue from Power is low. Agricultural tariffs are highly subsidized followed by Power provided to Industry and Commerce. On the other hand, Domestic Power tariffs are quite high. Discom PSEs are running under losses. So there is a scope for improving User fee in Power Sector. For the state of Haryana, the Transmission and Distribution losses are highest for the high income states. This needs to improve to enhance the state's revenue receipts and make the sector viable. One option maybe to outsource the billing and collection of electricity dues to a professional reputed company as is being done by few other Discoms in the different parts of the country.

Table 2.13 Main Components of Non-tax revenue under three categories (In Crore Rupees)

	General Services		Social Services				Economic Services									
Year	Total General Services Receipts	State Lotteries	Total Social Services Receipts	Education, Sports,Art & Culture	Medical and Public Health	Urban Development	Total Economic Services	Agriculture & Allied	Rural Development	Irrigation and Flood Control	Energy		Industry and Minerals		Transport and Communications	Science, Technology and Environment
											Total	Power	Village and Small Industries	Industries		
1990 - 1991	151.8	0.1	20.5	8.9	6.4	0.7	649.2	158.1	69.2	149.0	36.4	36.0	10.7	5.0	208.4	1.9
1995 - 1996	1521.0	1487	52.3	13.5	10.3	7.2	1197.2	231.2	54.4	272.9	211.0	210.0	23.3	8.8	372.9	4.3
2000 - 2001	479.7	295.5	132.6	21.8	23.6	44.6	1542.8	358.2	89.2	325.4	140.8	140.2	5.6	19.8	578.2	3.7
2005 - 2006	297.5	188.3	886.0	92.1	30.5	714.1	3814.8	536.9	281.1	496.8	1418.0	1413.8	84.5	34.6	915.4	8.9
2006 - 2007	243.3	0.4	2757.8	111.6	31.6	2562.3	6626.9	624.9	325.4	552.0	3762.4	3758.2	132.2	29.4	1155.7	8.4
2007 - 2008	269.0	0.1	3044.8	117.7	64.9	2805.2	6221.9	1075.0	585.2	707.6	2570.7	2562.3	37.5	29.9	1154.1	7.7
2008 - 2009	310.8	0.0	1124.8	156.1	30.9	884.5	7035.8	939.6	843.7	755.5	3012.1	3001.1	27.1	46.1	1277.2	9.5
2009 - 2010	271.8	0.0	502.3	285.1	30.2	133.7	7529.9	1122.3	869.1	858.5	2787.9	2774.5	29.6	40.2	1481.5	35.1
2010 - 2011	216.3	0.9	1363.6	270.4	47.1	974.5	7996.7	1360.7	967.9	900.7	2955.8	2943.4	39.5	49.9	1506.0	15.2
2011 - 2012	336.0	4.4	1483.5	295.7	54.8	1039.4	9054.0	1421.1	1097.2	997.2	3591.2	3580.1	47.1	42.1	1592.9	12.0
2012 - 2013	535.2	0.0	1591.2	385.4	78.0	990.7	11556.7	1705.6	1290.0	1059.5	5140.3	5132.5	43.9	43.0	2110.0	26.0
2013 - 2014	585.5	0.0	1687.7	318.9	148.1	1104.5	12740.2	1846.5	1727.4	1161.8	5212.1	5204.2	45.2	51.9	2380.0	29.8
2014 - 2015	257.4	0.0	1730.2	564.5	145.5	861.1	13088.0	2011.9	1843.4	1159.1	5244.7	5238.2	72.8	72.9	2567.0	21.7
2015 - 2016	403.7	0.0	1762.8	865.0	144.1	600.0	20590.7	2768.4	2522.0	1648.3	10363.5	10319.2	81.6	89.4	2810.8	35.6
2016 - 2017	318.5	0.0	2220.3	1109.7	195.8	750.0	23482.2	3483.4	2854.2	1927.1	10716.8	10695.5	558.8	245.0	3180.4	33.5

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

**TRR stands for Total Revenue Receipts of States RE is Revised Estimate BE is Budget Estimate*
CAGR (in percent) calculated based on the beginning period to be 2006-07 and end year 2016-17

Main source of Social Services revenue has been 'Urban Development & Housing' followed by Education, Sports, Arts and Culture. Medical Receipts are expectedly low. In any economy government must keep user fee low in Health and Education and other Social Services to

promote social development. Therefore, scope of raising the User fee lies more in the Economic and General Services than in the Social sector and health.

Grants from the Centre

Grants from the Centre are determined by the Central Government based on Finance Commission's report. Haryana's share in grants remained below 2% of the total Grants of the Centre. However it is one of the major components of Revenue resource. As compared to 2006-07 this share of Grants in TRR (Refer Table 2.1 and 2.2) had increased and it was around 11% in 2016-17. However, Central Taxes share went up after 14th FC recommendations of enhanced share of states in Central Taxes. Also with the closing down of Planning Commission, the plan support for states has dried up.

Table 2.14: Grants from the Centre

Year	All States	Haryana	Share of Haryana in total grants	RoG of share of Haryana grants	Ratio of grants to GSDP
	(In Crore Rs)		(%)	(%)	(%)
1980 - 1981	2622.57	45.49	1.73	-7.30	1.34
1985 - 1986	6322.61	115.00	1.82	12.45	1.76
1990 - 1991	12643.29	146.88	1.16	1.78	1.08
1995 - 1996	20873.48	298.49	1.43	39.57	1.00
2000 - 2001	37288.76	478.14	1.28	-16.75	0.82
2005 - 2006	76750.15	1115.13	1.45	50.11	1.02
2006 - 2007	94451.12	1138.26	1.21	-17.06	0.88
2007 - 2008	108621.84	1401.48	1.29	7.06	0.92
2008 - 2009	129923.42	1833.96	1.41	9.40	1.00
2009 - 2010	150972.30	3257.30	2.16	52.85	1.46
2010 - 2011	163496.72	3050.62	1.87	-13.52	1.17
2011 - 2012	186416.46	2754.93	1.48	-20.80	0.92
2012 - 2013	188681.77	2339.26	1.24	-16.11	0.67
2013 - 2014	205952.01	4127.18	2.00	61.64	1.04
2014 - 2015	330804.68	5002.88	1.51	-24.53	1.15
2015 - 2016	386825.47	6378.76	1.65	43.36	1.31
2016 - 2017	377674.54	5678.00	1.50	-18.45	1.04
2017-18 (RE)	442872.84	7017.64	1.58	-18.45	1.29
2018-19 (BE)	481342.86	7198.62	1.50	-18.45	1.32

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

**TRR stands for Total Revenue Receipts of States RE is Revised Estimate BE is Budget Estimate*
CAGR (in percent) calculated based on the beginning period to be 2006-07 and end year 2016-17

So, this is likely to lead to reduction in share of Central Grants to the states. Under 14th FC special grants are given to special category states. Since Haryana falls under General Category state, there has not been any significant increase in Grants. However, the CAGR of Central Grants to the State has been quite high at 17.44% for the period 2006-07 to 2016-17.

Forecasting Revenue Receipts

Forecasting of all Fiscal parameters and Sustainable-Debt road-map has been framed in last Chapter, based on growth rates (CAGR) as there was short run fluctuations in trend forecasting with ten years data. Revenue Forecasting outcome has been presented in Table 2.15. The Own tax revenue grew at 14.2% and Own Non-Tax Revenue grew at 13.28%. Since the SGST collection per capita in the state secured the top rank, the assumption of 14% growth rate in SGST has been made. The yearly forecasted data is presented for the years from 2018-2025.

Table 2.15: Revenue Forecasting Outcome of State of Haryana

		T-ROG	2017	2018	2019	2020	2021	2022	2023	2024	2025
446.89	**Own Tax Revenue (OTR)**	**14.20%**	446.89	510.4	582.8	665.6	760.2	868.1	991.4	1132.2	1293.0
109.84	**Own Non-Tax Revenue (ONTR)**	**13.28%**	109.84	124.4	140.9	159.7	180.9	204.9	232.1	262.9	297.8
125.20	**State's GST**	**14.00%***	125.20	142.7	162.7	185.5	211.5	241.1	274.8	313.3	357.1
83.71	**State's Share in Central Taxes (SCT)**	**17.56%**	83.71	98.4	115.7	136.0	159.9	188.0	221.0	259.8	305.5
60.38	**Central Grants (CG)**	**15.11%**	60.38	69.5	80.0	92.1	106.0	122.1	140.5	161.7	186.2

Author's calculations. **Based on GST Council and Finance Ministry Commitments.*

Findings and Recommendations on Revenue Capacity of Haryana

- Though Own-Tax GSDP ratio had been above 7.5% before 2007-08 but it varied between 6% and 7% till 2016-17 indicating good fiscal health. In 2017-18 the revised estimate of Own-Tax GSDP ratio is 5.29% without SGST. Including SGST it was above 6%.
- The monthly data of SGST shows high volatility during the period July 2017 to August 2018.
- Long run tax buoyancy with respect to GSDP is slightly less than 1, but in the short run it is even lower. Short run tax buoyancy was very volatile. This implies that although in short run tax collection does not always keep pace with GDP but with time it converges.
- Sales tax being the most important State's own tax revenue component, buoyancy with GSDP is higher than unity implying good growth in tax efforts. Most of the Sales Tax has been merged with GST indicating that future SGST collection of the State would is likely to have higher tax buoyancy.
- Non-Tax revenue as a share of Total Revenue Receipts are low but growth rate of Non-Tax Revenue vis a vis growth rate of GSDP is quite high indicating that there is a scope of increasing non-tax revenue of the state.
- As far as user fee is concerned, there is scope of increasing it for economic services. Transportation user fee collection is the most important component. There is potential improve user fee collection from Power sector in a state where 100% rural electrification is achieved. To improve power sector tariff collection, the bill collection can be outsourced.

Chapter 3

Expenditure Patterns of State of Haryana

Public Budget Expenditure consists of Revenue Expenditure and Capital Expenditure. Revenue Expenditure are regular and recurring expenses of the Government whereas Capital Expenditure refers to Capital outflows of the government. This includes Capital investments or outlays and loans disbursed and repaid. Capital Outlay forms the basis of expansion of economic activities thereby enhancing future economic growth. Revenue Expenditure on the other hand is an important source of public spending that brings in macroeconomic stability in an economy. However, if Revenue Expenditure goes out of proportion and increases to a great extent then fiscal deficit would be very high in the economy and both Revenue and Fiscal deficits would exceed the FRBM targets of state. In this study we have also analyzed another categorization of Public Expenditure: Plan and Non-Plan Expenditure

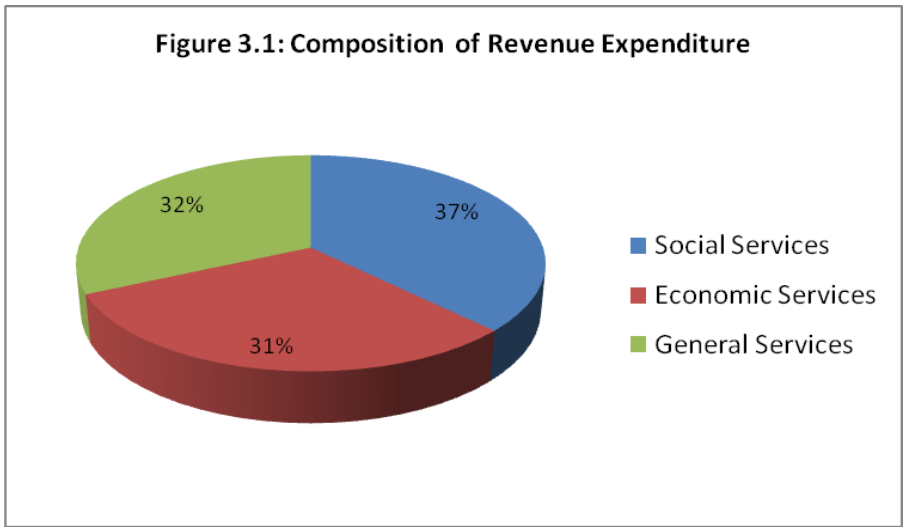
Revenue Expenditure

Revenue Expenditure rose at CAGR of 15.38% between the study periods of 2006-07 to 2016-17. Revenue Expenditure can be divided into two categories

1. Development Expenditure comprises Economic Services Expenditure and Social Services Expenditure
2. Non-Development Expenditure consists of General Services

Development Expenditure

Development Services constitutes around 65% of Total Revenue Expenditure (Figure 3.1). in Table 3.1 examines the composition of the three categories of State Government Expenditure under Development and Non-Development Expenditure for the year 2016-17. There does not seem to be any significant change in the composition between Development and Non-Development Expenditure over last decade. The Figure 3.1 for 2016-17 represent the pattern for the rest of the years quite well.



Source: Based on the data for the year 2016-17 (Actual)

Social Services Expenditure's share in Total Revenue Expenditure had almost equal share with Economic Services Expenditure in 2005-06. But this share has improved since 2009-10. On the other hand for Economic Services, the share in Total Revenue fell from 2009-10.

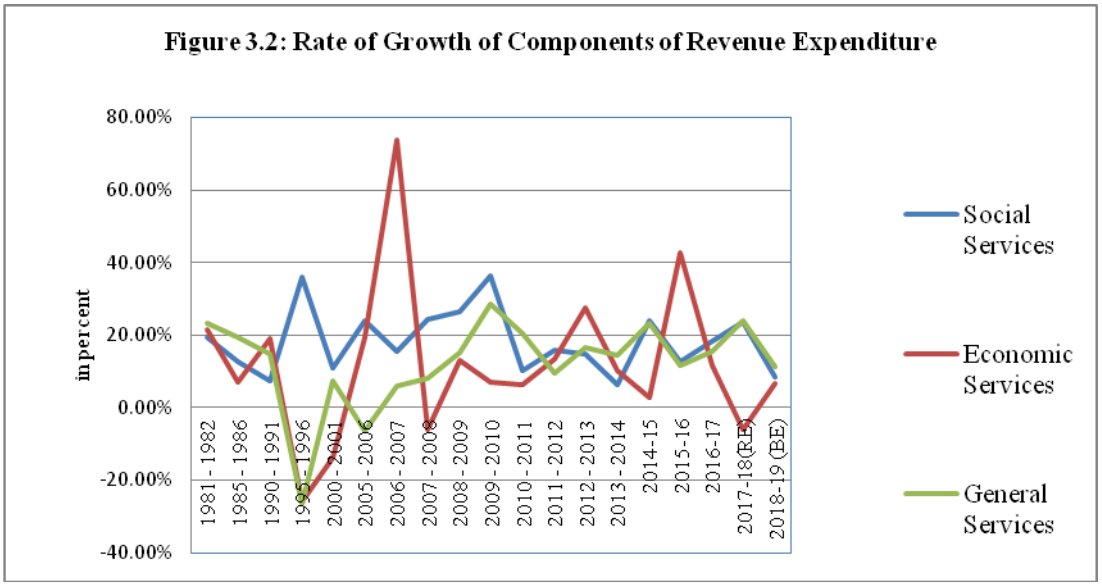
Table 3.1 Components of Revenue Expenditure (As a % of Total Revenue Expenditure and GSDP)

	As a % of Total Revenue Expenditure			As a % of GSDP			
Year	**Social Services**	**Economic Services**	**General Services**	**Social Services**	**Economic Services**	**General Services**	**Total Revenue Expenditure**
2005 -06	31.61	30.18	36.23	3.67	3.50	4.21	11.61
2006 -07	28.21	40.50	29.61	3.59	5.15	3.76	12.71
2007 -08	32.74	35.50	29.84	3.79	4.10	3.45	11.56
2008 -09	35.35	34.26	29.34	3.98	3.85	3.30	11.25
2009 -10	39.21	29.81	30.71	4.43	3.37	3.47	11.30
2010 -11	38.52	28.25	32.95	4.18	3.07	3.58	10.86
2011 -12	39.49	28.28	31.92	4.20	3.01	3.40	10.64
2012 -13	38.13	30.36	31.25	4.14	3.30	3.40	10.87
2013 -14	36.80	30.42	32.46	3.89	3.22	3.44	10.58
2014-15	38.93	26.65	34.13	4.39	3.01	3.85	11.28
2015-16	36.36	31.55	31.59	4.43	3.85	3.85	12.19
2016-17	37.24	30.52	31.62	4.67	3.83	3.97	12.54
2017-18(RE)	40.25	25.01	34.24	5.18	3.22	4.41	12.87
2018-19(BE)	40.12	24.55	34.97	4.97	3.04	4.33	12.39

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted RE is Revised Estimate BE is Budget Estimate

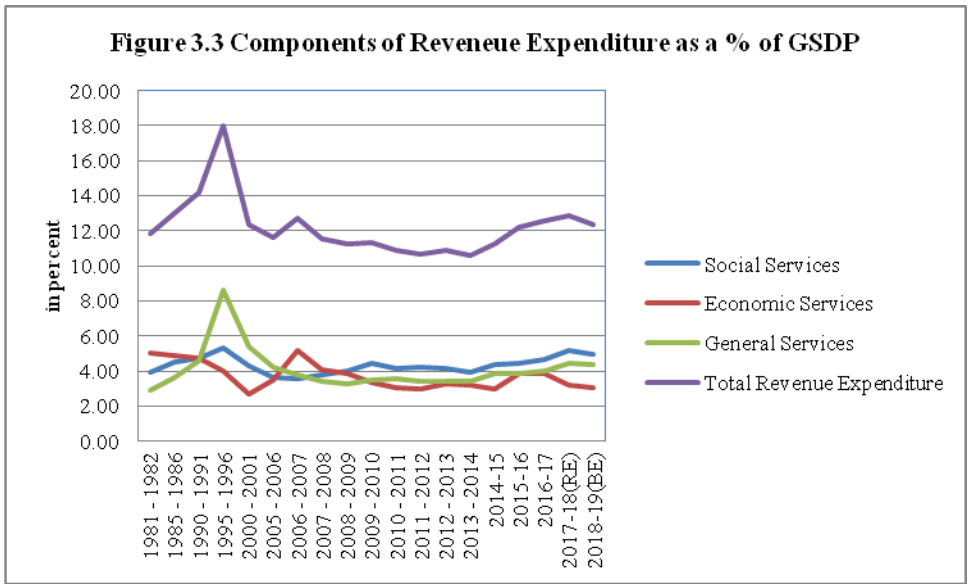
From Appendix Table 3.1 it is evident that CAGR of Expenditure on Economic Services had been a little over 12%, whereas Social Services Expenditure's CAGR had been 18.63%. Figure 3.2 shows rate of growth trend of these three components of Revenue Expenditure. Sharp fluctuations could be observed in case of economic services. There is volatility in Social and General Services expenditure as well, but less than that of Economic Services. The growth rate of Economic Expenditure went up to 73% and also was negative in 2007-08.

Figure 3.2: Rate of Growth of Components of Revenue Expenditure



Source: Based on Appendix Table 3.1

Social Expenditure as a percentage of GSDP varied around 4% to 5%. Expenditure on social services as a proportion of GSDP has been increasing since 2005-06 from 3.67% to 4.20% in 2011-12 to 5.16% in 2016-17. Expenditure on general services as a proportion of GSDP has remained more of less constant for the period. Ratio of Economic Expenditure to GSDP went down below 4% since 2008-09. It was 3.5% of GSDP in 2005-06 and rose to 5.15% in 2006-07. But it has been declining since and fell to 4.10% in 2007-08 and to 3.37% in 2009-10 and further dropped to 3.01% in 2011-12. But some recovery can be found as the expenditure on economic services as a proportion of GSDP has risen to 3.85% in 2015-16 and then to 4.15% in 2016-17. Total Revenue Expenditure as a percentage of GSDP had been varying from 10.5% to 12% during the study period of 2006-07 to 2016-17. But it started rising thereafter reaching the level of 13.3 in 2016-17.



Source: Based on Table 3.1

Components of Development Expenditure on Economic Services

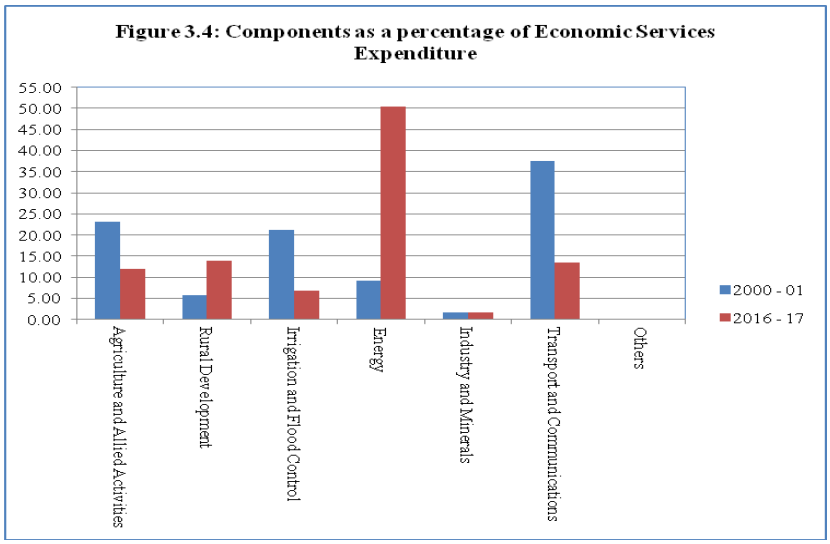
Expenditure on Economics Services comprises of Grants, Subsidies and Administrative costs for providing services to broad categories of Economic activities in Agriculture and allied sector, Irrigation, Rural Development, Energy, Industry and Mining, and Transportation.

In the decades of 1980s and 1990s revenue expenditure pattern was tilted more towards, transportation, agriculture and irrigation out of the total economic development expenditure. However since 2005-06 we see a change in composition and the pattern now is tilted more towards Energy while the expenditure in irrigation, rural development and agriculture went down. This is due to the Power Sector reforms where States are supposed to provide subsidies and grants to the Power industry. Figure 3.4 shows the change in pattern of Economic Services Expenditure.

Table 3.2 Components of Revenue Expenditure on Economic Services

Year	Development Expenditure (DE)	Economic Service Exp (ESE)	Agriculture and Allied Activities	Rural Development	Irrigation and Flood Control	Energy	Industry and Minerals	Transport and Communication	Science, Technology and Environment
	(As a % of TRE)	**(As a % DE)**	**(As a % of ESE)**						
2005 - 06	61.79	48.84	14.07	7.37	13.02	37.06	3.12	24	0.23
2006 - 07	68.71	58.95	9.43	4.91	8.33	56.71	2.44	17.44	0.13
2007 - 08	68.24	52.02	17.28	9.41	11.37	41.18	1.08	18.55	0.12
2008 - 09	69.61	49.22	13.35	11.99	10.74	42.65	1.04	18.15	0.14
2009 - 10	69.02	43.2	14.9	11.54	11.4	36.85	0.93	19.68	0.47
2010 - 11	66.76	42.31	17.02	12.1	11.26	36.81	1.12	18.83	0.19
2011 - 12	67.77	41.73	15.7	12.12	11.01	39.54	0.98	17.59	0.13
2012 - 13	68.48	44.32	14.76	11.16	9.17	44.41	0.75	18.26	0.23
2013 - 14	67.21	45.25	14.49	13.56	9.12	40.85	0.76	18.68	0.23
2014 - 15	65.57	40.64	15.37	14.08	8.86	40.02	1.11	19.61	0.17
2015 - 16	70.59	44.97	13.44	12.25	8	50.12	0.83	13.65	0.17
2016 - 17	67.76	45.04	12.07	13.85	6.76	50.37	1.68	13.51	0.13
2017-18 (RE)	65.25	38.32	16.07	17.75	10.13	39.11	1.8	14.71	0.16
2018-19 (BE)	64.67	37.97	21.77	20.23	8.2	31.49	2.55	15.16	0.2

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted, RE is Revised Estimate, BE is Budget Estimate



Based on Table 3.2

Components of Social Expenditure

Haryana is one of the richest states of India in terms of per capita income, but its performance in terms of human development index has been not up to the mark. For this reason State has been

emphasizing more on Education, Sports and Art and Culture to improve the social sector indicators of the State.

Government revenue spending on Education is the highest among all Social Expenditure. It has been between 51-56% of Social Expenditure. Health sector received less attention of the government as compared to what it was in 1980s as a proportion to Total Social Expenditure (Table 3.3). The proportion of Heath Expenditure remained more or less stable between 9 to 12% between 2005-06 to 2017-18 (RE).

Table 3.3 Components of Social Expenditure

Year	Social Expenditure (SOE)	Education, Sports, Art and Culture	Welfare expenditure on Social Security, Labour and SC/ST/OBC	Medical, Public Health and Family Welfare	Urban Development
	% of DE	**% of SOE**	**% of SOE**	**% of SOE**	**% of SOE**
2005 - 2006	51.16	49.30	21.69	11.24	2.88
2006 - 2007	41.05	49.66	21.27	10.11	3.13
2007 - 2008	47.98	47.98	18.74	9.22	6.46
2008 - 2009	50.78	53.10	16.75	9.99	6.90
2009 - 2010	56.80	52.58	21.65	10.32	3.37
2010 - 2011	57.69	54.08	20.88	9.80	2.95
2011 - 2012	58.27	49.74	19.62	9.48	7.55
2012 - 2013	55.68	48.38	18.84	11.00	11.04
2013 - 2014	54.75	47.84	18.83	11.05	10.56
2014 - 2015	59.36	48.60	21.25	11.37	8.58
2015 - 2016	55.03	44.89	21.22	11.20	11.90
2016 - 2017	55.60	36.27	18.70	9.52	9.37
2017-18 (RE)	56.94	39.71	21.92	10.67	17.64
2018-19(BE)	62.03	40.97	23.36	11.85	12.66

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted,

RE is Revised Estimate, BE is Budget Estimate

A State-wise comparison on Revenue expenditure on Education Sector (Table 3.3a), reveals that though as a percentage of state government expenditure, Haryana spending on Education is not too low, but it is lower than most general category states (like Assam, Bihar, Karnataka, Madhya Pradesh, Punjab, Rajasthan, UP and West Bengal). Haryana has lower gross enrolment ratio than many low income states like Assam, Bihar and Rajasthan (Ref. Chapter 1, Table 1.4). Though gross enrolment in secondary and upper secondary ratio has been higher in Haryana (Ref. Chapter 1, Table 1.5), but it is lagging behind high income states like Kerala, Punjab, Tamil Nadu and Maharashtra. Kerala and Punjab's spending on Education is higher than that of Haryana. This shows that Haryana needs to enhance its spending more in Education.

A close look at State comparison on Health sector spending reveals that states including UP, West Bengal, Tamil Nadu, Punjab, Maharashtra and Assam are spending a higher percentage on health as compared to Haryana. Haryana's Infant mortality is higher than Tamil Nadu, Punjab, West Bengal, and Maharashtra (Ref. Table 1.6, Chapter 1).

Table 3.3a: State-wise Percentage of Social Expenditure on Revenue Account spent on Education

States	2005 - 06	2006 - 07	2007 - 08	2008 - 09	2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	2016 - 17	2017 - 18	2018 - 19
Andhra Pradesh	43.90	39.27	35.39	28.67	32.76	38.78	39.28	39.39	41.11	38.57	35.73	34.27	30.58	32.48
Assam	63.09	61.44	61.47	58.96	51.85	63.30	59.67	61.41	63.08	61.72	60.37	55.81	50.99	53.69
Bihar	64.03	66.34	55.70	54.73	56.24	53.68	54.23	60.93	54.34	51.30	51.76	47.01	40.84	48.19
Gujrat	50.31	44.95	46.04	38.98	40.57	46.36	47.70	44.29	44.74	44.73	42.68	41.31	41.35	40.40
Karnataka	54.36	52.15	51.90	53.50	44.86	48.81	48.63	48.07	49.55	45.88	40.44	36.82	33.20	35.98
Kerala	58.63	60.47	58.14	57.71	57.13	56.54	58.09	55.79	55.81	53.93	51.15	50.53	50.50	51.50
Maharashtra	43.64	48.49	46.26	48.24	48.36	47.77	48.33	44.70	49.33	50.59	39.99	44.10	40.68	42.85
Madhya Pradesh	54.03	52.28	50.95	52.97	54.16	55.80	54.51	54.57	53.95	51.58	52.08	50.24	47.25	47.80
Odisha	49.42	47.40	50.81	54.29	56.32	53.89	47.49	48.50	44.24	46.85	44.86	42.79	45.22	43.76
Punjab	63.51	56.49	61.70	55.91	58.63	56.28	57.21	59.24	56.74	54.42	57.38	56.24	55.77	52.61
Rajasthan	58.19	55.04	53.17	54.46	55.85	56.90	52.84	51.21	48.62	51.29	48.67	49.62	49.66	52.32
Tamil Nadu	44.29	46.53	43.53	41.20	46.66	46.58	45.90	45.73	46.73	48.15	45.64	47.08	47.10	47.37
Telengana	NA	NA	NA	NA	NA	NA	NA	NA	NA	36.29	34.36	33.88	24.87	22.63
Uttar Pradesh	56.31	55.61	50.58	45.35	50.47	52.96	54.81	55.13	51.72	55.74	54.65	56.85	46.86	49.85
West Bengal	56.68	54.96	52.41	48.51	50.05	52.37	50.36	49.66	47.30	51.32	44.14	41.13	40.73	47.15
Haryana	**49.30**	**49.66**	**47.98**	**53.10**	**52.58**	**54.08**	**49.74**	**48.38**	**47.84**	**48.60**	**44.89**	**36.27**	**39.71**	**40.97**

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted RE is Revised Estimate BE is Budget Estimate

Life expectancy in Haryana is at par with Indian average but out of the states which are spending more than Haryana, life expectancy is higher in Punjab, Maharashtra and Tamil Nadu. This shows though Haryana is better off than most of the states in its health performance but it is spending less on Health sector prevents it from doing better in terms of Health Indices.

Table 3.3 b: State-wise Percentage of Social Expenditure on Revenue Account spent on Health

	2005 - 06	**2006 - 07**	**2007 - 08**	**2008 - 09**	**2009 - 10**	**2010 - 11**	**2011 - 12**	**2012 - 13**	**2013 - 14**	**2014 - 15**	**2015 - 16**	**2016 - 17**	**2017 - 18**	**2018 - 19**
Andhra Pradesh	13.30	12.06	13.07	11.58	12.58	12.79	13.22	12.85	12.85	11.37	10.65	12.03	9.87	10.41
Assam	10.01	12.69	13.18	15.61	18.05	14.91	14.22	13.50	12.74	10.56	16.10	13.95	16.38	14.62
Bihar	12.78	12.44	11.57	9.74	10.52	9.96	9.63	7.95	8.01	10.37	9.68	11.35	10.84	9.65
Gujrat	12.61	10.38	10.89	9.57	10.18	10.55	10.83	11.40	10.67	11.98	12.41	13.89	13.12	13.82
Karnataka	11.28	9.47	9.69	9.49	8.50	9.25	10.29	10.32	11.00	11.26	9.44	10.10	10.28	10.49
Kerala	15.96	17.10	15.94	16.32	15.79	16.22	17.14	16.49	16.72	17.01	16.49	16.97	17.16	17.51
Maharashtra	13.89	13.33	13.98	12.89	12.21	11.76	11.98	12.83	11.83	14.10	12.26	11.21	10.31	11.15
Madhya Pradesh	10.66	9.57	10.07	10.00	9.01	9.27	9.13	9.57	9.62	11.04	11.37	11.21	11.98	9.85
Odisha	9.63	11.02	11.32	11.13	11.65	10.43	9.24	11.23	9.68	13.23	12.80	14.71	13.45	13.62
Punjab	19.31	16.79	17.46	15.12	15.77	16.39	16.77	16.03	16.67	17.22	17.48	18.30	17.70	16.73
Rajasthan	14.22	13.94	14.01	14.42	14.09	14.11	14.92	14.54	14.02	15.82	16.57	15.67	17.53	18.37
Tamil Nadu	12.31	11.91	11.05	10.71	13.14	14.10	12.69	12.91	11.99	13.71	14.17	14.38	16.83	15.16
Telengana	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.22	12.00	13.01	12.03	11.60
Uttar Pradesh	16.63	14.65	13.44	12.97	14.91	13.76	12.18	14.11	13.16	16.54	13.57	14.00	16.65	17.07
West Bengal	15.35	14.16	13.18	12.33	12.61	12.12	11.40	11.43	11.18	13.22	12.70	12.30	12.23	12.35
Haryana	**11.24**	**10.11**	**9.22**	**9.99**	**10.32**	**9.80**	**9.48**	**11.00**	**11.05**	**11.37**	**11.20**	**9.52**	**10.67**	**11.85**

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted RE is Revised Estimate BE is Budget Estimate

Non- Development Expenditure (General Services)

Non-Development Expenditure is almost one-third of Total Revenue Expenditure. The three most important components of Non-Development Expenditure are Interest Payments, Admin Services and Pensions. Interest Payments had been more than 40% of Total General Services Expenditure, whereas pensions and admin services were above 20%. Non-Development

Expenditure has been relatively stable, however, one-third of the expenditure in general services is pretty high and, therefore, there is a scope for improvement here.

Table 3.4 Components of Non-Developmental Expenditure (General Services)

	General Services (GSE)	Fiscal Services	Interest Payments	Debt Servicing	Admin Services	Pensions	Grants in aid & contribution	Organ of State
Year	**As a % of TRE**	**As a % of GSE**						
2005 - 06	36.232	2.48	45.85	0.91	20.71	22.56	5.46	2.79
2006 - 07	29.611	2.76	46.75	1.05	22.22	24.22	5.67	2.83
2007 - 08	29.838	2.77	44.85	0.96	23.45	24.81	6.44	3.12
2008 - 09	29.338	3.16	38.82	0.79	26.55	26.79	3.58	3.87
2009 - 10	30.705	2.99	35.29	0.93	26.13	30.82	0.90	3.83
2010 - 11	32.950	2.68	35.58	1.13	23.49	33.17	0.87	3.94
2011 - 12	31.922	2.39	39.15	1.48	21.30	31.35	0.97	4.33
2012 - 13	31.248	2.27	39.88	1.77	21.27	30.56	0.86	4.19
2013 - 14	32.462	2.11	43.02	0.00	20.07	30.66	1.00	4.12
2014 - 15	34.132	2.00	41.33	0.00	20.87	27.45	0.86	4.46
2015 - 16	28.935	2.17	44.12	1.40	20.28	27.60	1.64	4.27
2016 - 17	31.622	1.81	48.74	0.00	19.32	26.16	1.96	3.78
2017-18 (RE)	34.235	1.76	44.34	0.00	18.46	31.33	1.49	4.05
2018-19 (BE)	34.968	1.85	47.12	0.00	18.52	27.87	1.03	3.79

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted, RE is Revised Estimate, BE is Budget Estimate

Capital Expenditure

Capital Expenditure forms the main backbone of an Economy's development as it leads to productive investment to enhance growth of output and employment.

Table 3.6: Revenue and Capital Expenditure as percentages

Year	Capital Expenditure (CE)	Revenue Expenditure	Capital Outlay	Capital Outlay	Capital Outlay	Revenue Expenditure
	As a % of Aggregate Expenditure (TE)		As a % of CE	As a % of TE	As a % of TRR	
2005 - 2006	12.40	87.60	0.90	0.11	11.64	9124.31
2006 - 2007	13.77	86.23	0.93	0.13	13.52	9114.39
2007 - 2008	17.48	82.52	0.92	0.16	17.35	8873.92
2008 - 2009	19.05	80.95	0.93	0.18	24.40	11128.55
2009 - 2010	19.32	80.68	0.86	0.17	24.86	12031.52
2010 - 2011	14.38	85.62	0.85	0.12	15.77	11074.38
2011 - 2012	15.78	84.22	0.90	0.14	17.58	10476.90
2012 - 2013	14.17	85.83	0.92	0.13	17.13	11319.57
2013 - 2014	10.11	89.89	0.84	0.08	10.35	11019.42
2014 - 2015	8.49	91.51	0.82	0.07	9.11	12039.09
2015 - 2016	23.71	76.29	0.34	0.08	12.75	11974.10
2016 - 2017	14.26	85.74	0.60	0.09	13.07	13030.22
2017-18 (RE)	16.41	83.59	0.90	0.15	19.65	11173.74
2018-19 (BE)	17.08	82.92	0.90	0.15	20.51	11072.82

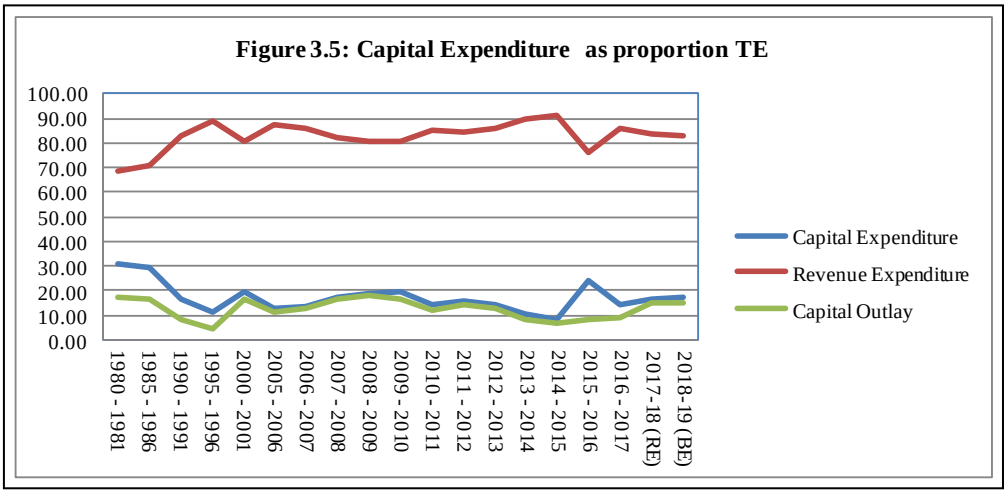
Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted
**TRR stands for Total Revenue Receipts of States, RE is Revised Estimate, BE is Budget Estimate*

However, relative to Revenue Expenditure proportion of Capital Expenditure to Total Expenditure in the government spending has been quite low for the India as well as for the most States. Haryana has been no exception to this rule. From Appendix Table 2 it is evident that CAGR of Capital Outlay is almost 11% in the study period of 2006-07 to 2016-17, much less than CAGR of Revenue Expenditure. Moreover non-development capital outlays CAGR had been around 16% but development capital outlay remained low. CAGR of Loans and Advances disbursed by the State Government was as high as 37.66% due to a sudden jump in 2015-16. It

declined in 2016-17 but still remained high. A sudden jump in Loan disbursement may be due to all the pending releases which were held up due to 2014 State and Central Elections. This led to overall capital expenditures CAGR to be slightly higher than that of Revenue Expenditure.

Capital Expenditure and Capital Outlay have fluctuated between 10% to 20% during the period 2006-07 to 2016-17. Revenue expenditure as a percentage to Total Expenditure remained high at more than 80%. In fact, in 2014-15 Revenue expenditure as percentage of Total expenditure was above 90% and Capital Expenditure as a percentage of Total Expenditure fell to 8.49% in 2014-15. This indicates that States' inefficient allocation of funds biased towards current consumption. The revised estimates of 2017-18 and budget estimates of 2018-19 indicate that there is no change in this pattern (Figure 3.5).

Figure 3.5: Capital Expenditure as proportion TE



Source: Based on Table 3.6

From table 3.6 the ratio of Capital Expenditure to Total Revenue Receipts remained below 20% but Revenue expenditure to Revenue receipts exceeded 100% indicating that the entire revenue receipts are going for payments of Revenue Expenditure and borrowings by the government are for covering entire capital expenditure and part of revenue expenditure as well. If revenue expenditure could be lowered then that would lead to reduced Revenue deficits of the states as well help enhance capital expenditure. The patterns of these ratios are depicted in Figure 3.6.

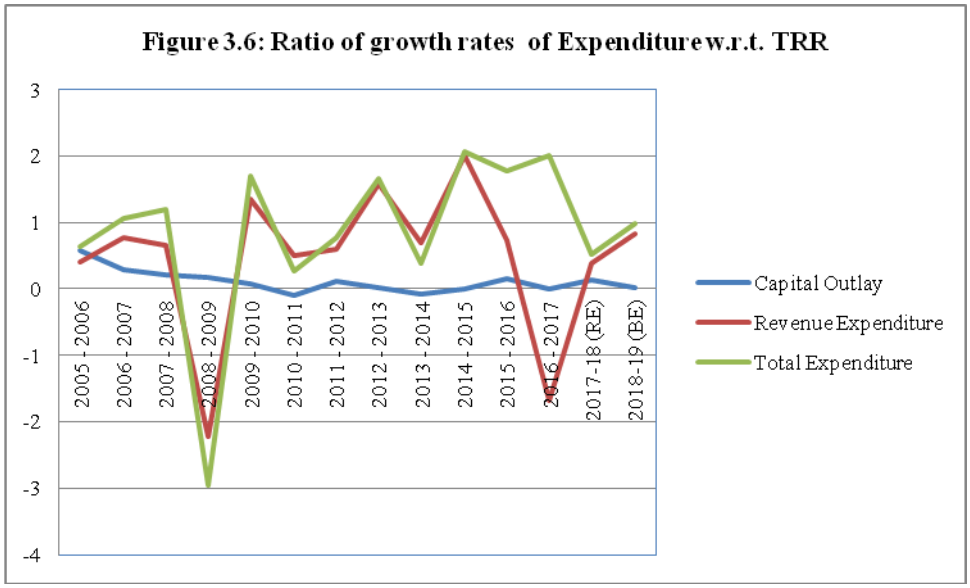
From Table 3.7, it is evident that ratio of growth rate capital outlay with respect to Total Revenue Receipts and Own Revenue Receipts had gone down significantly from 2005-06 to 2018-19(BE). Similar trend is seen in ratio of growth rate of Capital outlay with respect to GSDP. In 2005-06 it was as high as 5.84 and it was above 2 in 2006-07 and 2007-08 went down to a low of -1.37 in 2010-11. It was negative in 2013-14, 2014-15 and 2016-17. In the year 2015-16, it was high at 7.41 possibly due to demonetization.

Ratio of growth rates of Revenue Expenditure on the other hand with respect to ORR and TRR were either close to 1 or more. Figure 3.6 showed that while growth of capital outlay decelerated, Revenue expenditure and total expenditure growth rates showed significant fluctuations with respect to growth rates of Total Revenue Receipts. In 2016-17 these ratios were negative indicating less spending of the government in the year of demonetization.

Table 3.7: Ratio of growth rates of Expenditure

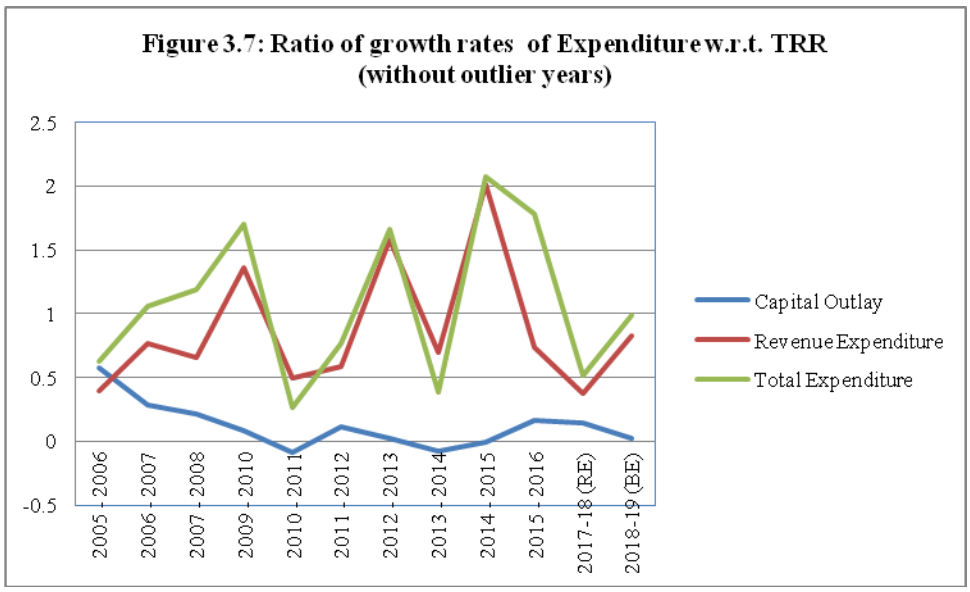
Year	Ratio of growth rates of Capital Outlay with respect to growth rates of			Ratio of growth rates of Revenue Expenditure with respect to growth rates of			Ratio of growth rates of Total Expenditure with respect to growth rates of		
	TRR	ORR	GSDP	TRR	ORR	GSDP	TRR	ORR	GSDP
2005 - 2006	0.58	0.88	5.84	0.40	0.44	0.71	0.63	0.69	1.12
2006 - 2007	0.28	0.46	2.77	0.77	1.12	1.25	1.06	1.55	1.73
2007 - 2008	0.21	0.35	2.32	0.66	1.05	0.37	1.19	1.89	0.67
2008 - 2009	0.17	0.27	1.54	-2.23	42.55	0.72	-2.96	56.49	0.95
2009 - 2010	0.08	0.12	0.71	1.36	1.40	0.83	1.70	1.75	1.04
2010 - 2011	-0.09	-0.14	-1.37	0.50	0.40	0.65	0.26	0.21	0.34
2011 - 2012	0.11	0.16	2.16	0.59	0.54	0.75	0.77	0.70	0.97
2012 - 2013	0.02	0.03	0.44	1.58	1.03	0.96	1.66	1.08	1.01
2013 - 2014	-0.08	-0.12	-2.45	0.70	1.07	0.70	0.39	0.59	0.39
2014 - 2015	-0.01	-0.02	-0.56	2.01	1.82	1.47	2.07	1.88	1.52
2015 - 2016	0.16	0.25	7.41	0.74	0.92	2.09	1.78	2.21	5.03
2016 - 2017	0.00	0.00	-0.05	-1.68	-1.98	0.42	2.00	2.35	-0.50
2017-18 (RE)	0.14	0.23	8.69	0.38	0.40	1.09	0.52	0.56	1.50
2018-19 (BE)	0.02	0.03	1.12	0.83	0.81	0.62	0.99	0.97	0.74

Source: Authors' calculation *ORR: State's Own Revenue Receipts, TRR: Total Revenue Receipts of State*



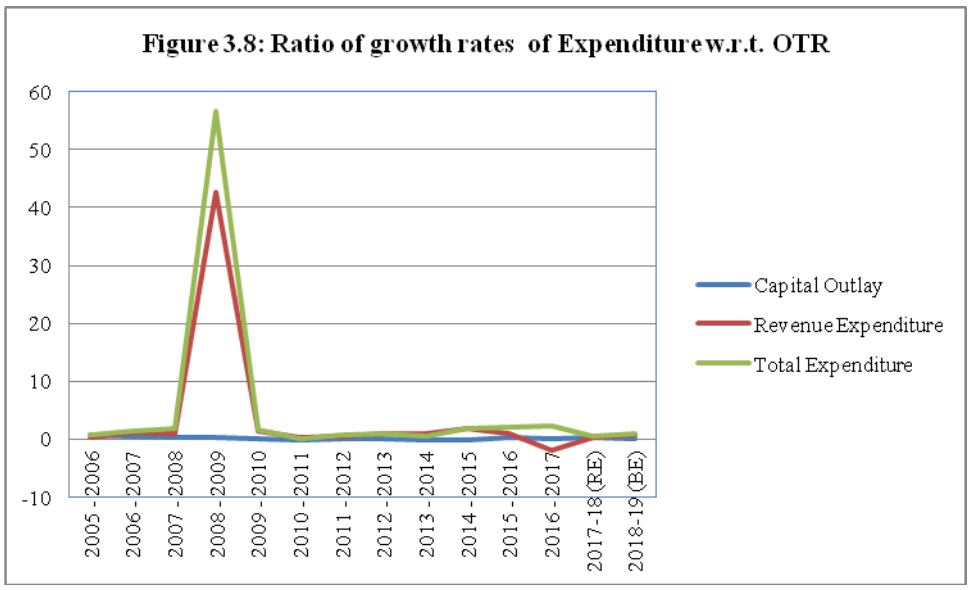
Source: Based on Table 3.7

In the years 2008-09 and 2016-17 these ratios were not only very low and negative, the pattern of these ratios are erratic. To understand the pattern better we took out these outlier years and found growth rate of capital outlay vis a vis growth of total revenue receipts showed a declining trend, whereas the growth rates of revenue expenditure and hence total expenditure vis a vis growth rate of total revenue receipts were positive but the ratios fluctuated a lot between zero and two, indicating no clear trend. This is depicted in Figure 3.7



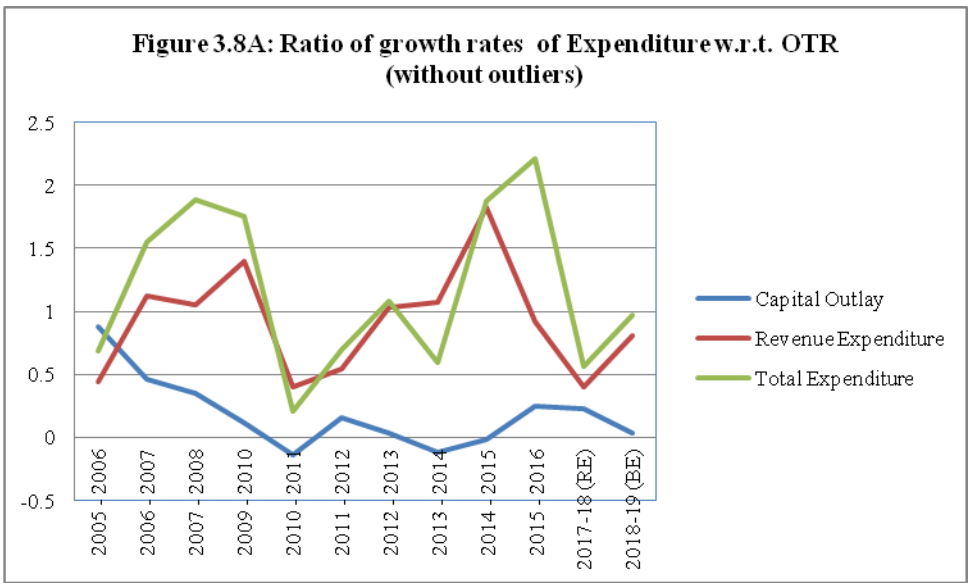
Source: Based on Table 3.7

In 2008 the Ratio of growth rate of Revenue Expenditure and Total Expenditure with respect to Own Tax Revenue suddenly went up significantly to as high as 42.5 and 56.5 respectively. This is evident in Figure 3.8. The steep rise in Revenue Expenditure *vis-a-vis* increase in State's Own Revenue receipts explains such a high ratio. This was the year of global financial crisis which also had impact on Indian economy. This was also election year and government was also trying to stimulate the economy besides containing the downside risk of financial crisis.



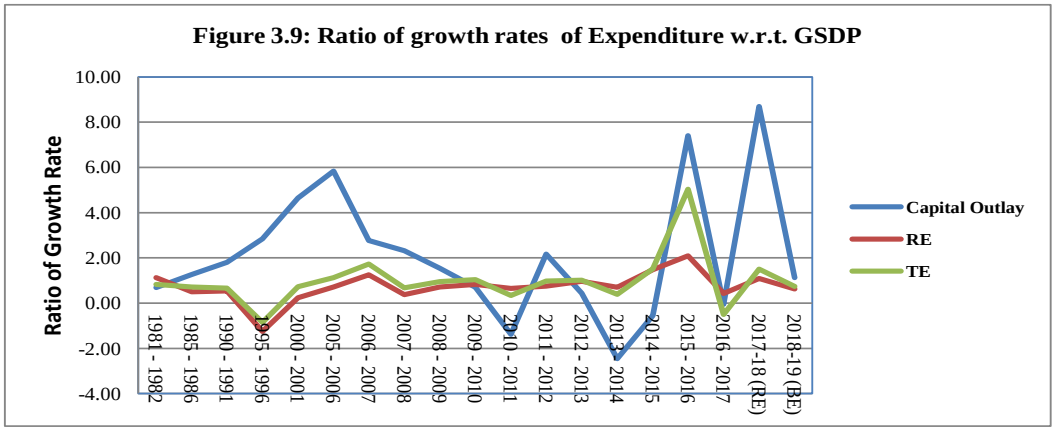
Source: Based on Table 3.7

Due to outlier year of 2008-09 the pattern of these ratios were not visible properly, that is why we removed two outlier years: 2008-09 (Sudden spike in the ratio of growth rates of Revenue and Total expenditure vis a vis growth rate of Own Revenue receipts); and 2016-17 (sudden fall in the ratio of growth rate of Revenue expenditure vis a vis growth rate of Own Revenue receipts).



Source: Based on Table 3.7

Figure 3.8a depicts that there had been fluctuations of these ratios of Revenue Expenditure and Total expenditure but a clear pattern of fluctuation emerges. From 2005-06 to 2009-10 these ratios went up, but fell since then till 2011-12, and then went up till 2014-15 for Revenue expenditure and till 2015-16 for Total expenditure but fell in recent year of 2017-18. Ratio of growth rate of Capital outlay *vis a vis* growth rate of Own Revenue Receipts though showed a negative trend just as it showed *vis a vis* growth rate of Total Revenue Receipts.

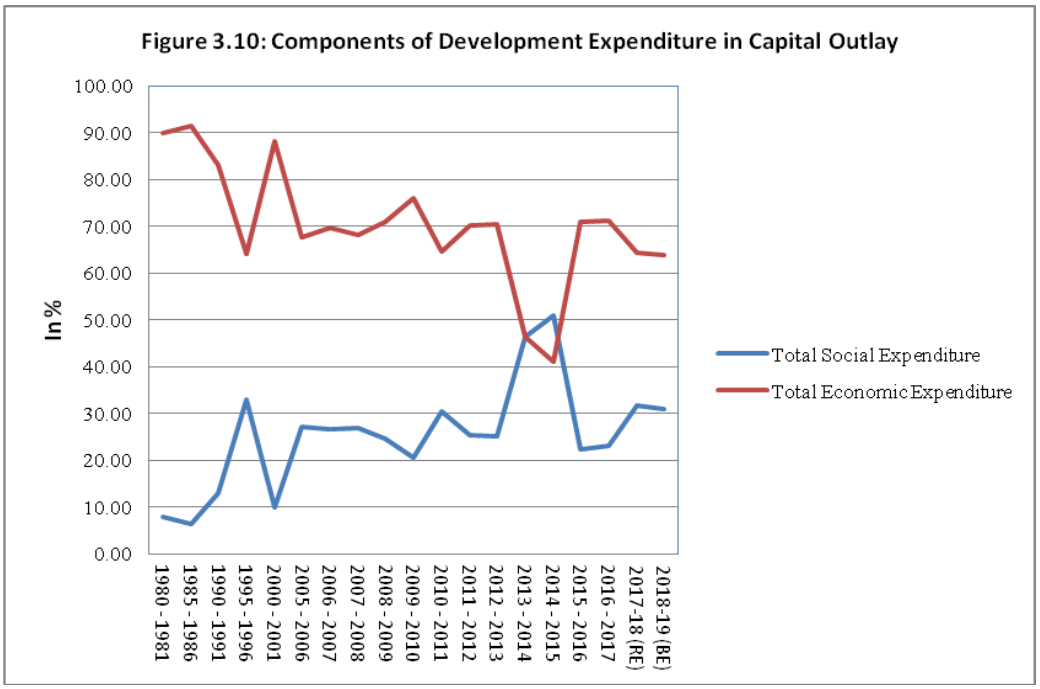


Source: Based on Table 3.7

From Figure 3.9 we observe that Ratio of growth rate of Revenue Expenditure with respect to GSDP was lower than unity in most of the years. In 2014-15 and 2015-16 Ratio of growth rate of Revenue Expenditure to GSDP was above 1. This ratio remained below 2 throughout the study period. On the other hand Ratio of growth rate of Capital Outlay and Total Expenditure with respect to GSDP fluctuated a lot, particularly it was more pronounced from 2010-11 to 2018-19 (BE).

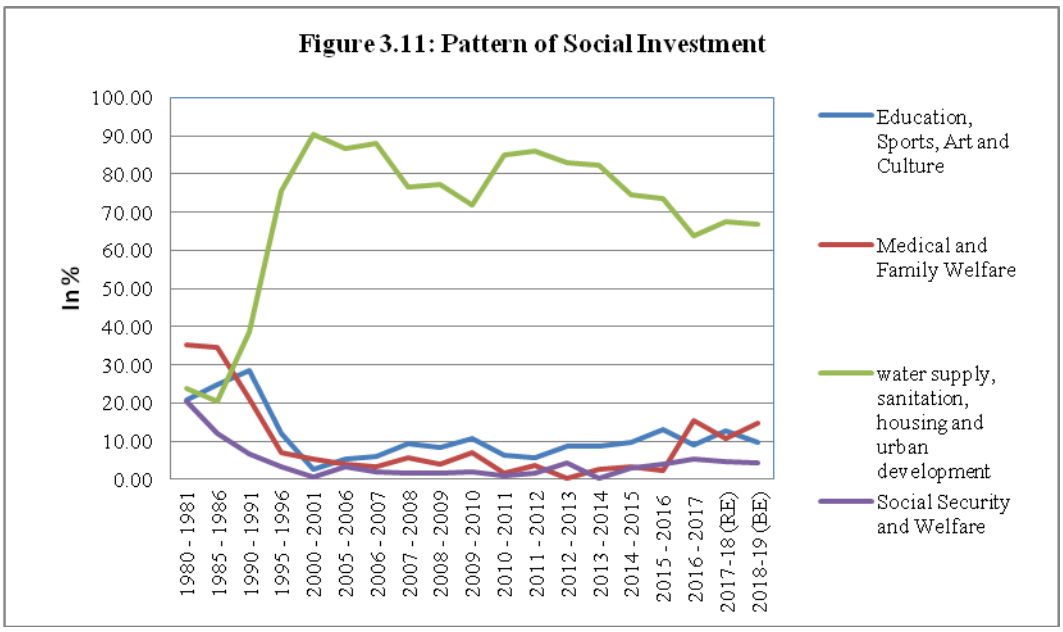
Development Expenditure in Capital Outlay

Development Expenditure constitutes Capital outlay in Economic Expenditure and Social Expenditure. Appendix Table 3.3 shows that CAGR in Social Expenditure was 9.34% but that of Economic Expenditure it was 11.19%. Long run data of Appendix Table 3.4 shows that there has been a significant pattern change in the investment that the State has made on Economic Infrastructure and Social Infrastructure. In the decades of 1980s and 1990s the share in Economic infrastructure investment has been much higher than that of the share of Social Expenditure in Capital Outlay. The ratio of allocation of capital outlay between social and economic expenditure remained more or less stable around 30:70 from 2005-06 to 2012-13. From 2012-13 to 2014-15 we see a reverse trend and it was such that share of economic Expenditure was less than that of Social Expenditure in 2014-15. This reverse pattern may be due to State and Centre elections that more emphasis was laid on Social Expenditure. Since 2014-15, the share of social expenditure again declined and that of Economic Expenditure had gone up once again.



Source: Based on Authors' calculations on data provided in Appendix Table 3.4

The three major components of Social sector, Education, Health and Combined sector that includes water, sanitation, housing and urban development had received equal importance in their allocation in capital outlay. However over the years and in the entire decade of 2000 major emphasis on spending was provided on the combined sector of urban development with water, sanitation and housing while shares of Education and Health went down.



Source: Based on Authors' calculations on data provided in Appendix Table 3.4

The pattern of Social Investment is shown in Figure 3.11 as components of social expenditure in capital outlay as a percentage of total social expenditure. This raises a fundamental question of economic development whether disproportionate bias towards providing drinking water, sanitation, affordable housing is a sufficient condition for uplifting people's economic wellbeing without adequate provisioning for education and health infrastructure.

Some states such as Bihar, Gujarat, Punjab, Kerala have invested higher proportion of Social Capital on Education sector as compared to Haryana. Haryana has a scope to improve their gross enrolment ratios in primary and secondary education as compared to low income states like Bihar or high income states like Kerala and Punjab.

Table 3.8a: State-wise Social Capital Outlay on Education (In percentage)

	2005 - 06	2006 - 07	2007 - 08	2008 - 09	2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	2016 - 17	2017 - 18	2018 - 19
Andhra Pradesh	21.14	47.54	44.47	24.42	6.62	8.80	14.53	25.91	16.48	23.21	15.50	5.90	8.54	14.30
Assam	7.14	1.13	0.44	0.13	0.11	0.01	0.11	1.14	0.00	0.00	0.00	0.00	6.76	19.09
Bihar	8.87	17.86	7.17	27.58	29.75	13.41	6.99	27.39	37.87	15.74	20.06	29.91	39.01	22.38
Gujrat	8.10	16.34	15.03	12.34	17.76	15.83	24.26	15.48	17.75	18.49	19.96	18.77	16.98	19.36
Karnataka	4.77	4.25	5.62	7.80	8.14	16.14	12.04	12.39	12.71	7.59	13.51	16.07	13.72	12.14
Kerala	30.63	31.21	25.44	10.69	13.61	17.86	13.37	24.60	32.29	35.11	42.49	26.69	30.96	20.38
Maharashtra	6.62	9.39	12.82	19.04	19.54	17.70	10.74	9.07	6.93	15.55	25.07	22.43	17.95	24.18
Madhya Pradesh	0.99	12.89	20.18	18.75	11.96	11.28	7.38	9.10	4.50	4.89	4.42	1.60	6.78	5.02
Odisha	1.91	1.93	0.90	0.36	2.33	23.92	15.24	3.34	9.00	15.77	17.13	12.00	21.44	18.62
Punjab	5.43	4.78	10.98	16.03	25.21	38.21	36.86	26.10	38.34	19.35	29.33	20.24	14.20	16.26
Rajasthan	2.44	2.33	2.55	1.83	2.66	2.97	3.92	4.23	1.39	0.97	2.59	1.92	7.08	8.84
Tamil Nadu	23.23	15.81	17.94	6.96	16.81	8.69	7.76	4.04	5.44	14.13	19.51	16.38	11.46	9.28
Telengana	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.91	6.22	7.79	5.61	8.19
Uttar Pradesh	27.80	13.64	30.88	30.12	11.20	14.81	6.38	9.31	10.93	10.86	9.66	11.77	10.33	9.24
West Bengal	2.72	2.72	4.08	4.93	8.05	15.82	11.38	20.33	22.84	13.53	13.18	8.75	15.70	14.23
Haryana	**5.24**	**5.85**	**9.18**	**8.16**	**10.63**	**6.15**	**5.54**	**8.51**	**8.72**	**9.81**	**13.13**	**8.94**	**12.68**	**9.65**

Source: Based on EPWRF data on State Finances

Haryana's investment in health sector has improved in the 2016-17 and 2017-18 (RE). Accordingly a higher proportion is budgeted in 2018(BE). As compared to Kerala, Gujrat, Maharashtra, Bihar, Uttar Pradesh, West Bengal, Odisha, capital outlay in Haryana has been

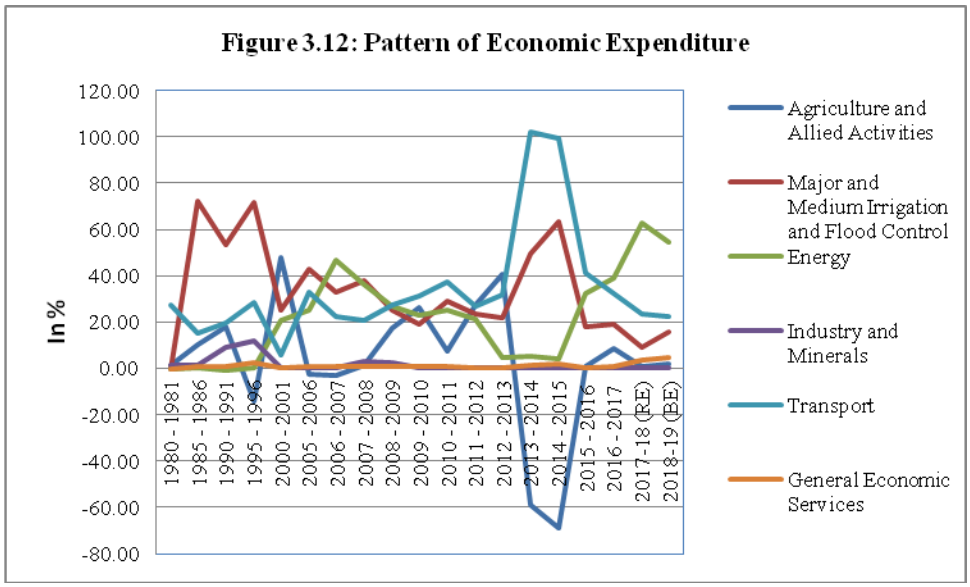
lower during the study period. Punjab has also not been investing enough in Health sector. This shows that Health indices can be improved through more investment in Health sector.

Table 3.8b: State-wise Social Capital Outlay on Health (In percentage)

	2005 - 06	2006 - 07	2007 - 08	2008 - 09	2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	2016 - 17	2017 - 18	2018 - 19
Andhra Pradesh	3.52	4.04	15.16	9.10	6.23	2.86	8.84	7.62	11.74	28.98	10.85	16.20	6.61	10.05
Assam	26.23	2.38	1.45	0.31	0.93	2.99	6.10	6.93	6.79	2.31	1.06	2.23	11.92	12.47
Bihar	41.99	28.22	30.74	15.19	10.74	15.39	39.78	42.27	24.77	18.87	39.80	24.23	9.80	21.40
Gujrat	1.46	3.44	4.63	8.56	14.21	18.96	19.00	20.62	24.16	26.98	29.29	23.16	20.77	21.89
Karnataka	0.70	11.06	16.49	11.77	12.11	16.70	13.32	12.39	14.43	18.91	15.43	10.78	13.66	12.91
Kerala	43.69	25.88	34.81	15.40	17.23	20.62	19.78	23.25	21.12	22.07	21.22	19.84	25.40	14.52
Maharashtra	10.13	18.70	9.73	5.27	6.67	7.50	8.85	10.91	8.74	11.62	7.47	17.19	30.87	18.05
Madhya Pradesh	7.26	8.74	11.87	16.47	14.58	14.71	19.32	25.25	24.32	23.98	25.18	18.44	27.74	31.63
Odisha	13.75	14.89	3.17	1.61	4.37	3.64	5.62	6.95	8.37	18.08	17.96	22.26	18.25	19.00
Punjab	0.86	2.60	0.98	2.10	1.55	6.06	11.95	15.27	8.89	0.01	0.25	2.06	1.04	10.68
Rajasthan	3.78	2.83	3.42	0.78	1.11	1.97	4.79	7.53	7.41	8.30	9.60	8.28	11.02	10.36
Tamil Nadu	21.96	10.47	7.73	13.47	21.12	7.90	4.16	5.90	8.78	13.42	10.25	11.38	7.76	7.13
Telengana	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.92	4.82	11.07	3.56	16.40
Uttar Pradesh	40.72	67.97	50.85	41.78	26.88	21.52	18.17	14.69	19.50	14.90	19.27	17.04	14.00	12.29
West Bengal	25.18	17.69	14.74	12.87	23.89	39.30	49.67	7.79	21.20	25.22	39.74	27.97	12.78	10.82
Haryana	**4.06**	**3.27**	**5.49**	**3.98**	**6.97**	**1.51**	**3.66**	**0.28**	**2.73**	**3.42**	**2.29**	**15.39**	**10.67**	**14.75**

Source: Based on EPWRF data on State Finances

A major share of Economic investment goes to Irrigation & Flood Control and Transport. Capital outlay in Energy had declined from 2006-07 till 2014-15, however with new initiatives in Power sector share of Energy Investment in Economic Services had increased sharply after 2014-15. Industrial infrastructure received no attention from the government. Agricultural share in economic investment had been fluctuating and from 2012-13 it declined sharply such that the investment itself became negative from 2013-14 to 2015-16. It was close to zero since 2015-16.



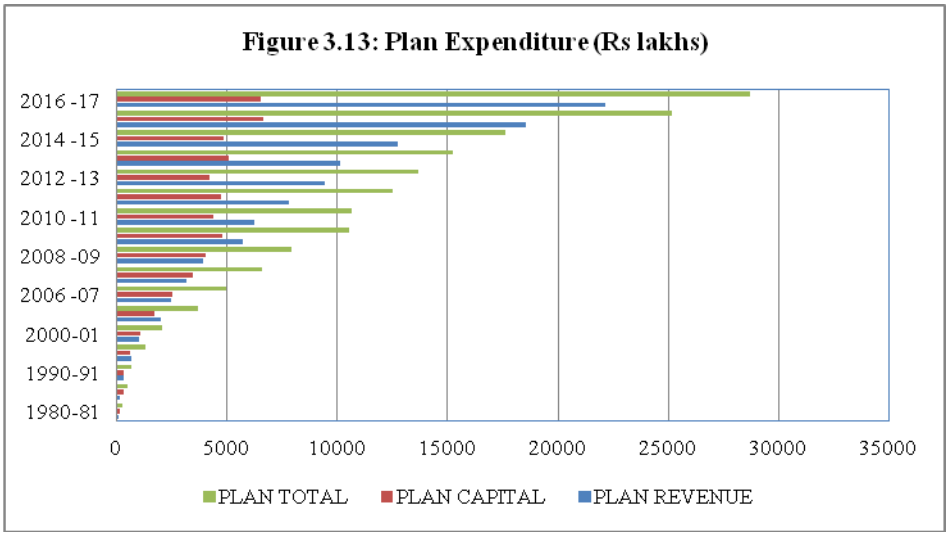
Source: Based on Authors' calculations on data provided in Appendix Table 3.4

Infrastructure investment in aggregate of Energy, Transport and Irrigation, indicates there has been a substantial emphasis on investment in infrastructure. This investment sometimes exceeded the total economic investment as in those years there had been some disinvestments happening in Agriculture.

Plan and Non-Plan Expenditure

Total Expenditure can be divided into two categories – Plan and Non-Plan expenditure. Plan expenditure forms the major part of both revenue and capital outlay. Plan expenditure depends on the expenditure mainly to carry out the developmental activities of the economy as per what had been envisaged in five-year plans. With the absence of Plans at present, we would analyze the plan expenditure pattern of the state in between 2005-06 to 2016-17.

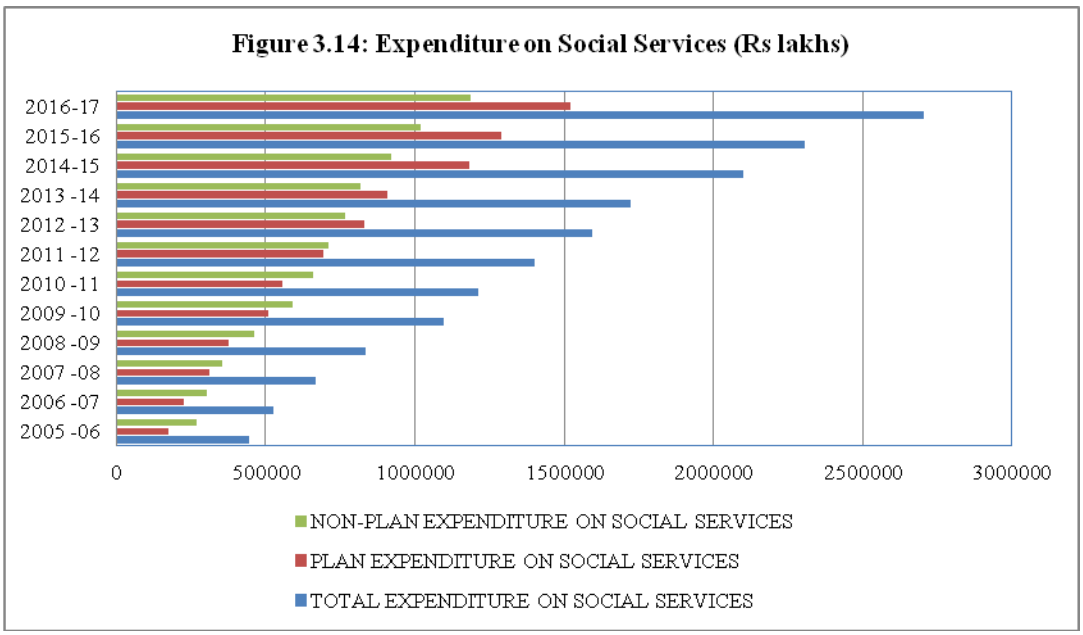
Since 2005-06 up to 2009-10, Plan expenditure had been undertaken with equal weightage being given to revenue and capital expenditures. However, 2010-11 onward, the proportion which goes to revenue expenditure has been on the rise. In 2011-12, revenue expenditure accounted for about 62% of the total Plan expenditure and in 2012-13 this value went up to 69%. For the year 2014-15, revenue expenditure accounted for nearly 72% and in 2016-17 it was 77% of the total Plan expenditure.



Source: Plotted based on Appendix Table 3.5

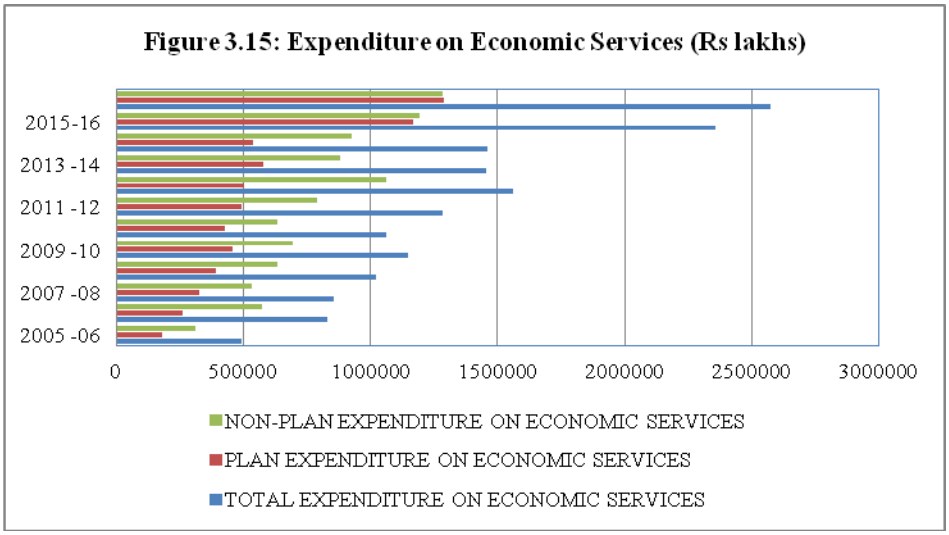
If we look at Plan and Non-Plan expenditure separately for Social, we observe that non-plan expenditure was higher than plan expenditure in 2005-06 and continued in the same way till 2011-12. In 2012-13 we observe almost equal proportion of Plan and Non-Plan expenditure in Social services. From 2014-15 we observe the reverse trend of Plan expenditure is higher than Non-Plan expenditure in Social Services.

As it is evident from Social Investment analysis the capital outlay for social expenditure had started going up since 2014-15. As far as Economic services are concerned division between Plan and Non-Plan expenditure has also gone through a change in trend.



Source: Plotted on data based on EPWRF and financial statement of Haryana accounts 2018

Plan Expenditure was always less than Non-Plan expenditure in Economic Services, but in 2015-16 and 2016-17 the Plan and Non-Plan expenditure had equal shares in total economic expenditure. Power sector reforms (UDAY scheme) had played an important role to change this trend. However with no UDAY since 2018-19 the Non-Plan share would be again higher than the Plan expenditure on Economic Services



Source: Plotted on data based on EPWRF and financial statement of Haryana accounts 2018

Forecasting Expenditure

The CAGR of Total Expenditure is as high as 16.87%, Revenue Expenditure growth rate has been 16.41% during the study period

Table 3.9: Forecasted Outcome of Revenue

	T-ROG	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Revenue Expenditure	**16.41%**	783.1	911.7	1061.3	1235.5	1438.3	1674.4	1949.2	2269.2	2641.7
Total Expenditure	**16.87%**	936.9	1094.9	1279.6	1495.5	1747.8	2042.6	2387.2	2789.9	3260.6

Findings and Recommendations:

- Revenue expenditure as a share of GSDP remained between 10 to 12% in the study period from 2005-06 to 2016-17. Economic expenditure, social expenditure and general services expenditure were, more or less, equal in proportion in the total revenue expenditure. Each component is around 4% of GSDP
- Share of Revenue expenditure in total expenditure had been around 80% and while Capital Expenditure remained below 20% for most years. In 2014-15 and 2015-16 Revenue expenditure' share was below 80% and capital expenditure share was above 20% indicating some improvement in allocation for capital formation.
- Revenue expenditure as a percentage of Total Revenue receipts had gone up and it had been in between 100-120% during the study period which has added revenue deficits
- Ratio of capital outlay to Total Revenue Receipts remained constant at around 20% in this the study period.
- A higher proportion of social investment was made on water, sanitation, housing and urban development, but education and health remained neglected sectors. Given a low HDI rank of the state, investment on these sectors need to be enhanced.
- Higher investment was made on transportation and energy sectors, although there had been a lot of fluctuations in public investment in all the components of economic expenditure.
- Expenditure is still more biased towards revenue expenditure indicating smaller capital outlay in proportion. Development of infrastructure and social sectors needs more capital expenditure in the state.

CHAPTER 4

Analysis of Deficits for Haryana

There are three notions of deficit associated with government budget. These are as follows:

(i) Gross Fiscal Deficit (GFD);

(ii) Revenue Deficit (RD); and

(iii) Primary Deficit (PD).

The Gross Fiscal Deficit (GFD) is the difference between aggregate disbursements (net of debt repayments) and recovery of loans and revenue receipts and non-debt creating capital receipts. Revenue Deficit is the difference between revenue expenditure and revenue receipts. Primary Deficit (PD) is defined as the gross fiscal deficit (GFD) net of interest payments.

In the present study, we have considered these deficit indicators (i.e. GFD, RD, and PD) of Haryana state as ratio of (i) gross state domestic product (GSDP), (ii) total expenditure (TE) and (iii) total revenue (TR) for the period under consideration and they have been compared with the figures of similar states which include high income states of Punjab, Kerala, Karnataka, Gujarat and Maharashtra.

One can examine from the Table 4.1 that GFD as a proportion of GSDP has been coming down across all states. The Haryana state has been fiscally better managed relative to other states for most of the years over the years. In the last decade the GFD crossed 3 percent level in only four years and of these four years last two years were because of 'UDAY' scheme. In the 2017-18 it stands at 2.82 percent and is expected to remain at the same level in the present year

However, Haryana relative position has worsened among these states from 1995-2005 to 2006-07 to 2018-19. Haryana has had the second lowest GFD to GSDP ratio but now its rank has slipped to fourth. In terms of RD to GSDP ratio the picture is quite similar with one difference: three of the six states have now surplus in the revenue account. Haryana has RD along with Punjab and Kerala. This needs a bit closer examination as power sector losses account for a major part of the RD. It is expected that with UDAY scheme the situation will improve.

With respect to PD to GSDP ratio the situation is marginally different. All the six states have PD which varies between 0.29 for Maharashtra and highest for 1.2 for Kerala.

Average Fiscal deficit to GSDP ratio of the period from 1990-91 to 2005-06 was above 3%, but since 2005-06 the average has gone down to 3.35% in the study period following FRBM Act. Overall average fiscal deficit –GSDP ratio is as low as 2.88 for the entire period.

Table 4.1: Haryana – Fiscal Deficit To GSDP Ratio (%)

States → Years ↓	Gujarat	Haryana	Karnataka	Kerala	Maharashtra	Punjab	Tamil Nadu
1990-91	6.42	2.83	2.40	5.67	2.50	6.58	3.59
1995-96	2.43	3.31	2.59	3.36	2.63	3.53	1.61
1999-00	6.18	4.15	4.22	6.56	4.72	4.76	4.01
2000-01	7.19	3.89	3.89	5.34	3.56	5.23	3.46
2005-06	2.56	0.26	1.88	3.06	3.62	2.44	0.87
2006-07	1.99	-0.92	2.06	2.49	1.98	3.45	1.27
2007-08	1.45	0.83	1.97	3.48	-0.41	3.02	1.05
2008-09	2.84	3.59	2.81	2.19	1.86	3.84	2.13
2009-10	3.51	4.51	3.22	3.39	3.06	3.12	2.46
2010-11	2.89	2.79	2.60	2.93	1.80	3.16	2.85
2011-12	1.79	2.38	2.04	3.52	1.57	3.18	2.30
2012-13	2.28	2.96	2.10	3.64	0.95	3.14	1.93
2013-14	2.28	2.10	2.09	3.64	1.58	2.63	2.12
2014-15	2.05	2.85	2.12	3.54	1.78	2.95	2.49
2015-16	2.23	6.26	1.87	3.01	1.90	3.12	2.67
2016-17(A)	-1.42	4.82	2.40	4.29	1.70	12.18	2.88
2017-18(RE)	-1.69	2.83	2.35	3.37	1.82	4.36	2.88
2018-19(BE)	-1.71	2.82	2.09	3.10	1.81	3.81	2.79
Average*	**2.97**	**2.88**	**2.83**	**3.96**	**2.62**	**4.51**	**2.67**
Average**	**4.67**	**3.35**	**3.46**	**4.84**	**3.90**	**4.99**	**3.11**
Average***	**1.50**	**2.72**	**2.26**	**3.26**	**1.79**	**3.89**	**2.19**

Source: EPWRF database

** Overall Average, **Average for the period 1990-91 to 2005-06, ***Average for the period 2006-07 to 2018-19*

Table 4.2: Haryana – Revenue Deficit To GSDP Ratio (%)

States → Years ↓	Gujarat	Haryana	Karnataka	Kerala	Maharashtra	Punjab	Tamil Nadu
1990-91	2.51	0.14	0.34	2.99	0.08	2.88	1.77
1995-96	0.31	1.16	-0.11	1.04	0.39	1.17	0.40
1999-00	3.29	2.31	2.30	5.24	1.72	4.06	3.28
2000-01	5.67	1.04	1.72	4.33	3.11	3.13	2.34
2005-06	0.16	-1.11	-1.18	2.29	0.79	1.14	-0.76
2006-07	-0.62	-1.24	-1.83	1.72	-0.14	1.38	-0.85
2007-08	-0.65	-1.47	-1.40	2.16	-2.16	2.51	-1.30
2008-09	0.02	1.14	-0.53	1.83	-0.74	2.22	-0.36
2009-10	1.62	1.91	-0.48	2.17	0.94	2.66	0.74
2010-11	0.97	1.05	-1.02	1.39	0.06	2.34	0.47
2011-12	-0.52	0.48	-0.78	2.21	0.18	2.55	-0.18
2012-13	-0.77	1.27	-0.27	2.27	-0.29	2.49	-0.21
2013-14	-0.58	0.98	-0.04	2.43	0.31	1.95	0.18
2014-15	-0.60	1.88	-0.06	2.62	0.68	2.06	-0.42
2015-16	-0.37	2.20	-0.17	1.84	0.46	1.93	-0.59
2016-17(A)	-0.51	2.92	-0.12	2.51	0.38	1.69	0.97
2017-18(RE)	-0.46	1.35	-0.03	1.94	0.59	3.00	1.26
2018-19(BE)	-0.40	1.20	-0.01	1.66	0.55	2.42	1.10
Average*	**0.96**	**1.00**	**0.17**	**2.46**	**0.79**	**2.70**	**1.03**
Average**	**2.60**	**1.51**	**1.11**	**3.29**	**2.03**	**3.60**	**1.76**
Average***	**-0.19**	**0.90**	**-0.56**	**2.07**	**0.11**	**2.17**	**0.00**

*SOURCE: EPWRF; * Overall Average, **Average for the period 1990-91 to 2005-06, ***Average for the period 2006-07 to 2018-19*

Average Revenue deficit to GSDP ratio of the period from 1990-91 to 2005-06 was 1.51%, but since 2005-06 the average ratio has gone down to 0.9%. Overall average revenue deficit – GSDP ratio is as low as 1% for the entire period indicating good overall fiscal health for the state finances.

Table 4.3: Haryana - Primary Deficit To GSDP Ratio (%)

States	Gujarat	HARYANA	Karnataka	Kerala	Maharashtra	Punjab	Tamil Nadu
1990-91	4.53	1.06	0.53	3.25	1.13	4.82	2.14
1995-96	0.58	1.44	0.73	0.98	1.33	-0.32	-0.05
1999-00	3.63	1.51	2.24	3.74	2.75	0.83	1.99
2000-01	4.37	1.33	1.69	2.23	1.49	2.09	1.33
2005-06	0.05	-1.67	-0.04	0.28	1.70	-0.98	-0.90
2006-07	-0.45	-2.68	0.20	-0.24	-0.02	0.18	-0.50
2007-08	-0.82	-0.71	0.30	1.01	-2.19	0.05	-0.68
2008-09	0.69	2.31	1.35	-0.11	0.23	1.03	0.64
2009-10	1.52	3.31	1.68	1.11	1.41	0.59	1.07
2010-11	1.05	1.52	1.24	0.77	0.30	0.73	1.50
2011-12	0.02	1.05	1.03	1.79	0.19	0.82	1.11
2012-13	0.59	1.62	1.11	2.28	-0.37	0.86	0.74
2013-14	0.63	0.61	1.14	2.27	0.29	0.30	0.84
2014-15	0.38	1.28	1.10	1.69	0.44	0.51	1.15
2015-16	0.58	4.55	0.94	1.16	0.59	0.63	1.22
2016-17(A)	-0.11	2.89	1.06	2.32	0.44	9.50	1.50
2017-18(RE)	0.22	0.88	1.46	1.37	0.50	1.18	NA
2018-19(RE)	0.36	0.78	NA	1.17	0.58	0.67	NA
Average*	**1.13**	**0.97**	**1.15**	**1.52**	**0.98**	**1.43**	**0.96**
Average**	**2.00**	**1.00**	**1.27**	**1.93**	**1.97**	**1.09**	**1.03**
Average***	**0.34**	**1.12**	**0.97**	**1.20**	**0.29**	**1.15**	**0.64**
Diff 95 2005	**-1.66**	**0.13**	**-0.31**	**-0.73**	**-1.68**	**0.06**	**-0.39**

*SOURCE: EPWRF; * Overall Average, **Average for the period 1990-91 to 2005-06, ***Average for the period 2006-07 to 2018-19*

Average Primary deficit did not vary much between the first period from 1990-2005 vis a vis the study period from 2006-2018. This indicates that the state government has been consistent in managing its finances without compromising its fiscal balance.

Deficits and the Fiscal Situation

The ratios of GFD with respect to fiscal indicators for Haryana show a fluctuating trend. The decade from 1995 to 2005 saw fall in these ratios but since 2006 these started going up. In the recent years, these ratios rose once again very sharply, possibly due to the writing off of loans to power sector under the UDAY scheme, and are expected to reach moderate level in the current year as per the budget estimates. The numbers indicate that the fiscal deficit is quite close to the 'capital expenditure in the state. This implies that the fiscal deficit is largely financing the capital expenditure. This means that if the state is able to reduce its losses from the power sector (mainly through reducing T& D losses) it could generate reasonable resources for higher level of expenditure, especially for health and educational infrastructure, to create better expanded base for sustainable future growth and resolving simmering social conflicts by generating productive skills and employment for the young population. Some of it could also potentially become available for the state government for infrastructure development which is under serious strain.

Figure 4.1: Haryana - Ratio of Fiscal Deficit to Fiscal Indicators in %

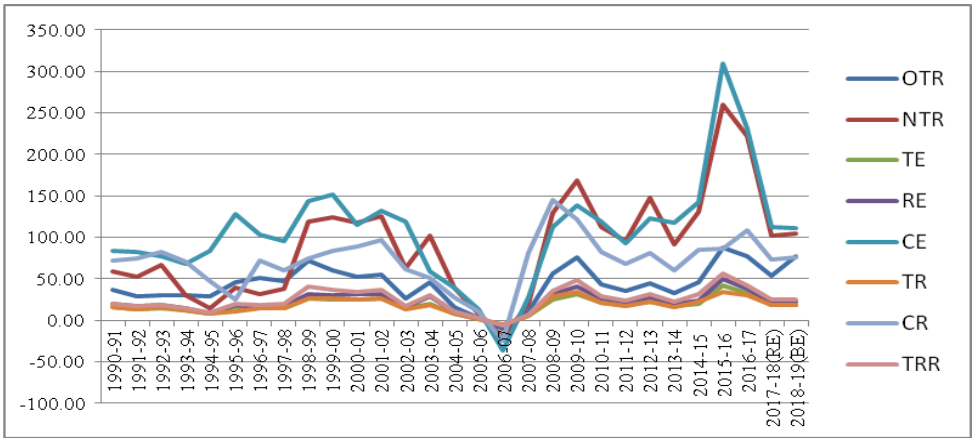
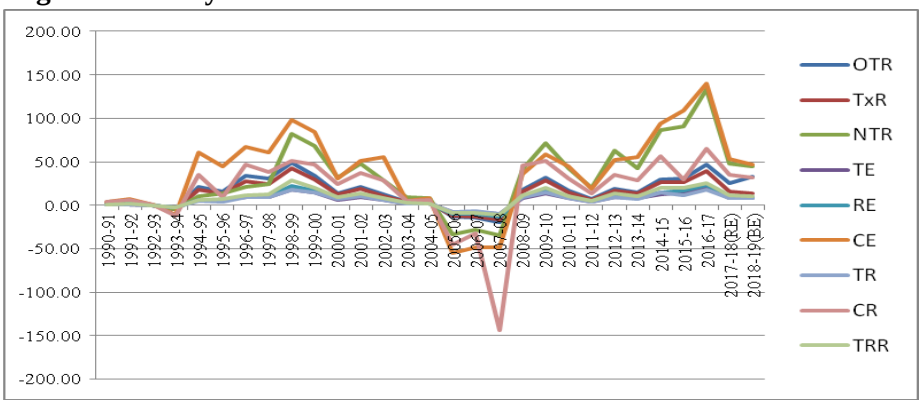
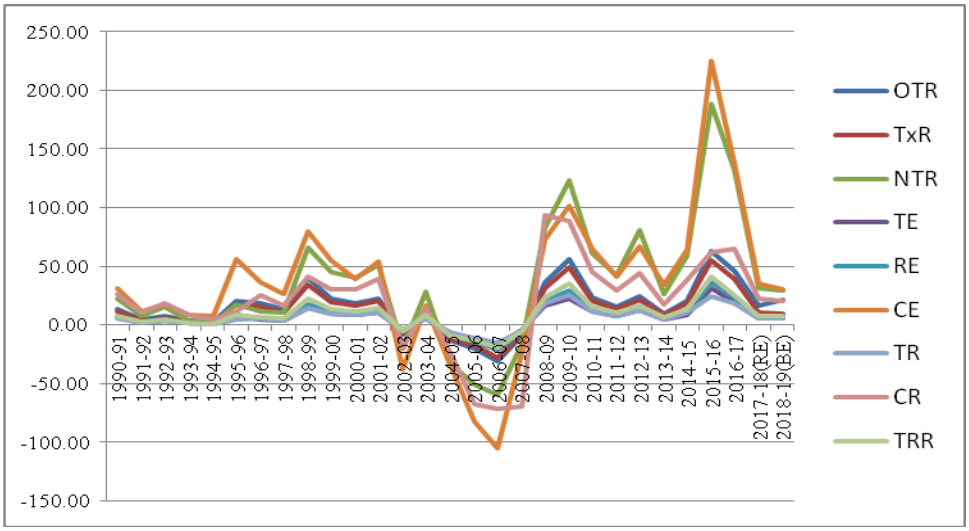


Figure 4.2: Haryana - Ratio of Revenue Deficit to Fiscal Indicators in %



So the analysis of the deficit for the state of Haryana indicates that its performance in the past decade of 2006-2016 has improved relative to the previous decade of 1995 to 2005. However, Haryana's relative ranking has worsened compared to other high income states. This means that the state is not being as successful in improving its fiscal performance as compared to other states. So, one could conclude that the potential exists but it needs to be realized.

Figure 4.3: Haryana - Ratio of Primary Deficit to Fiscal Indicators in %



Impact of UDAY Scheme on the Fiscal Deficit

UDAY Scheme as we saw in the Power Sector section has tried to reform the power sector at the state level. This meant that the state governments are being nudged to improve the balance sheets of DISCOMs. This has led to additional capital expenditure for the states to take care of the accumulated debts of the SEBs mainly in the distribution sector. On this account the fiscal performance has visibly suffered and this has raised the fiscal deficit of the Haryana state by about 3.6% and 2.6% of the GSDP in the subsequent years. The UDAY scheme was launched in November 2015. The fiscal deficit almost doubled for 2015-16 and 2016-17. The Total Liabilities as a percent of GSDP also went up by about 3.5% in 2015-16 and 4.9% in 2016-17 as well.

Conclusion:

For the state of Haryana, the GFD has generally been managed well but periodically it deteriorated. UDAY has contributed to it in last two years and the GFD situation is likely to improve by this year.

However, the RD situation has not been managed very well as there has been very few years with surplus or zero balance in the revenue account. This has been one of the reasons for less resources being available for capital expenditure in the state.

The high levels of losses of state electricity discoms have been one of the major contributory factors to revenue deficit. It is expected that with reforms initiated in the power sector (with UDAY and UJJWALA) the losses of the power sector to come down with time. The power sector has seen some improvements in the last 2 years which is a positive development.

Chapter 5

Analysis of Debt

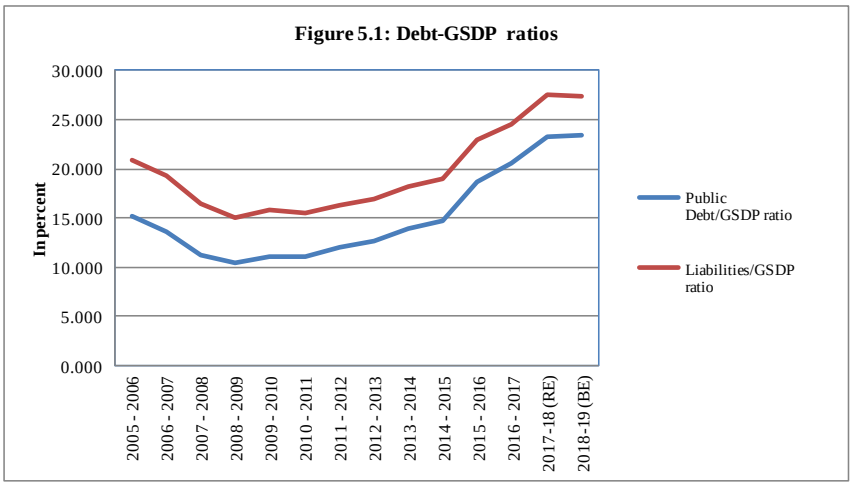
Total debt and liabilities of any economy is an important macroeconomic parameter to determine whether the government finances are sustainable (or whether an economy would be able to absorb the debt). The chapter reviews various aspects of Debt and its sustainability issues. Debt-Sustainability is defined by a States' ability to repay the loan taken by the government and its ability to bear the burden of cost of Debt servicing. From the Solow growth model perspective, Debt-Sustainability is defined in the following mathematical manner:

$$\Delta b = b\,(r-y) - z$$

where b is Debt/GSDP ratio, Δ indicates changes in b, r is the interest rate, y is the real GSDP growth rate and z is the primary surplus.

This implies Debt/GSDP ratio can go down when there is primary surplus implying Debt is sustainable and can be paid out of State's own resources. But in presence of primary deficit it may go up indicating it may become non-sustainable. The second perspective is irrespective of a State having primary deficit/surplus, Debt-GSDP ratio could be brought down if interest rate<Real GSDP growth rate. There are several parameters based on which we have assessed debt-sustainability, namely, Interest liabilities and effective interest rates, GSDP growth rates, Total revenue and total expenditure, states' own revenue, total debt and liabilities of a state.

A state's total debt is defined by the Total outstanding liabilities for the State Government of Haryana, which amounted to Rs 1,67,682 crores at the end of March 2018 (RE). It is expected to go up to Rs 1,88,502 crores by 2018-19 according to the latest Budget proposals (Appendix Table 5.1). As per Working Group (2005) definition of liabilities for Computation and Methodology of State Government Liabilities, the total outstanding liabilities of state government are divided into two categories: Public Debt and Public Accounts.



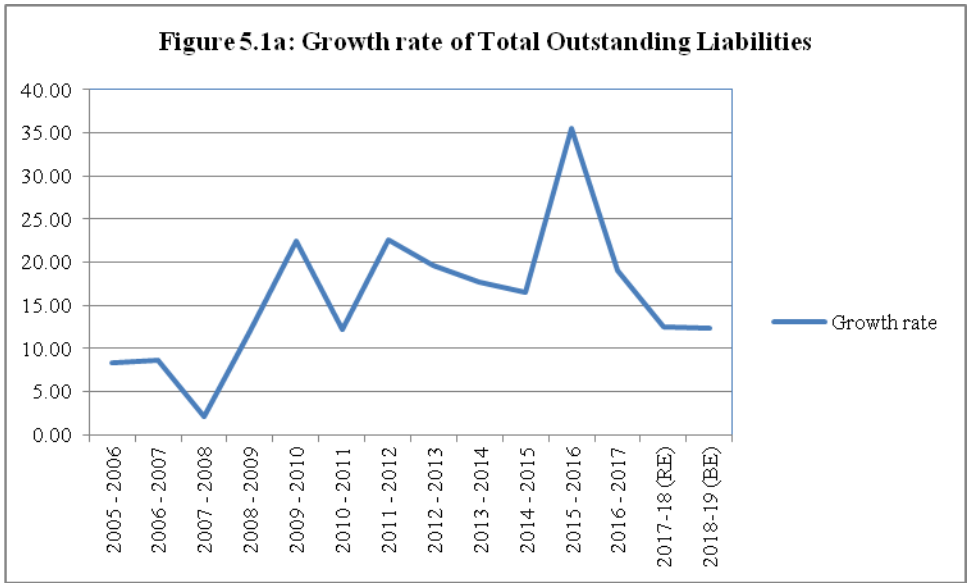
Source: EPWRF data till 2015-16 and CAG reports of 2017-18 and Haryana Financial Statement of 2018-19

Figure 5.1 shows that during the study period of 2006-07 to 2016-17 the outstanding liabilities - GSDP ratio ranged between 15% to 20% from 2006-07 to 2010-11 but thereafter it steadily

increased to 27.56%. This is evident from table 5.1 that Public Debt-to-GSDP ratio fluctuated between 14 to 24% in this period.

Legacy Debt

Though the Debt-GSDP ratio came down since 2005-06 due to good growth in GSDP and less growth in outstanding liabilities till 2007-08, but it started rising since 2008-09. Rise in Debt-GSDP ratio was from 10.36% in 2008-09 to 14.63% in 2014-15 indicating the legacy debt emerging from the previous government. However the Debt-GSDP ratio since 2015-16 saw a sharp rise and crossed 20% in 2016-17 due to UDAY scheme.



Source: Plotted based on the data in Table 5.1

Although, the growth rate of total outstanding liabilities during the time of the previous State government rule led to a sharp rise since 2008-09 and the average growth rate was 17.66% from 2008-09 to 2013-14, but the average growth rate of debt with the present government since 2014-15 till 2018-19 (BE) has been even as high as 19.17%. Due to UDAY scheme growth rate of debt touched 35.52%. The growth rate of debt is likely to stabilize to little above 12% as estimated for 2017-18 (RE) and 2018-19 (BE) indicating no threat of legacy debt in future.

Table 5.1: Public Debt & Public Liabilities

	Public Debt	Public Liabilities	Public Debt	Public Liabilities
Year	**Rs Crores**		**% of GSDP**	
2005 - 2006	26969	19517	15.161	20.95
2006 - 2007	29297	20488	13.515	19.33
2007 - 2008	29901	20489	11.225	16.38
2008 - 2009	33486	23185	10.369	14.98
2009 - 2010	41000	28940	11.104	15.73
2010 - 2011	46010	32940	11.071	15.46
2011 - 2012	56420	41440	11.941	16.26
2012 - 2013	67480	50880	12.699	16.84
2013 - 2014	79400	60550	13.857	18.17
2014 - 2015	92460	71080	14.631	19.03
2015 - 2016	125302	101952.02	18.696	22.98
2016 - 2017	149044	124602.74	20.478	24.49

2017-18 (RE)	167682	141791.63	23.303	27.56
2018-19 (BE)	188502	161158.61	23.439	27.42

Source: based on EPWRF data till 2015-16 and CAG reports of 2017-18 and Haryana Financial Statement of 2018-19

Composition of Public Debt of Haryana

The following are the components of Public Debt for the State of Haryana:

a. Market Borrowings that includes Power bonds, NSSF Securities and other bonds
b. Loans from Financial Institutions that includes NABARD, SBI and LIC are the major lenders
c. Loans from Central Bank

The total debt, according to the Haryana Budget of 2018-19, has been projected at Rs 1,61,158.31 crores which is 23.44% of GSDP. In the entire study period the debt-GSDP ratio has been less than 25% as per the recommendations of Fourteenth Finance Commission. Initially in 2005-06 it was 15% of GSDP it went down to 10% by 2008-09 but had gone up to 23% in 2017-18. From 2014-15 the rise in this ratio has been steep due to Power bonds (due to the the UDAY scheme). (Refer Table 5.1 and Figure 5.1)

Composition of Public Accounts: Liabilities of the State government as a banker are Provident funds, Small Savings, other Reserves and Deposits.

Table 5.2: Broad categories of Public Debt and Public Accounts Debt

(In percent of outstanding liabilities)

Year	Market Borrowings	Financial Institution	Central Government	Provident Fund	Reserve Funds & Deposits	Total Debt
2005 - 2006	61.08	3.05	8.24	20.74	6.89	144.29
2006 - 2007	59.05	3.62	7.26	20.34	9.73	189.74
2007 - 2008	56.50	5.06	6.96	20.93	10.55	212.39
2008 - 2009	57.39	5.78	6.07	19.74	11.03	253.69
2009 - 2010	56.66	8.93	5.00	18.22	11.20	313.06
2010 - 2011	60.90	5.82	4.87	17.87	10.54	330.63
2011 - 2012	59.36	10.24	3.85	15.85	10.71	380.14
2012 - 2013	61.90	10.39	3.11	13.93	10.67	443.56
2013 - 2014	65.89	7.46	2.91	12.75	10.99	465.97
2014 - 2015	70.40	4.00	2.48	12.07	11.05	536.76
2015 - 2016	76.91	2.31	2.14	9.98	8.66	793.94
2016 - 2017	80.13	2.14	1.33	8.94	7.46	797.81
2017-18 (RE)	81.24	2.01	1.31	8.54	6.90	936.86
2018-19 (BE)	81.86	2.24	1.39	8.16	6.35	1027.33

Source: based on EPWRF data till 2015-16 and CAG reports of 2017-18 and Haryana Financial Statement of 2018-19

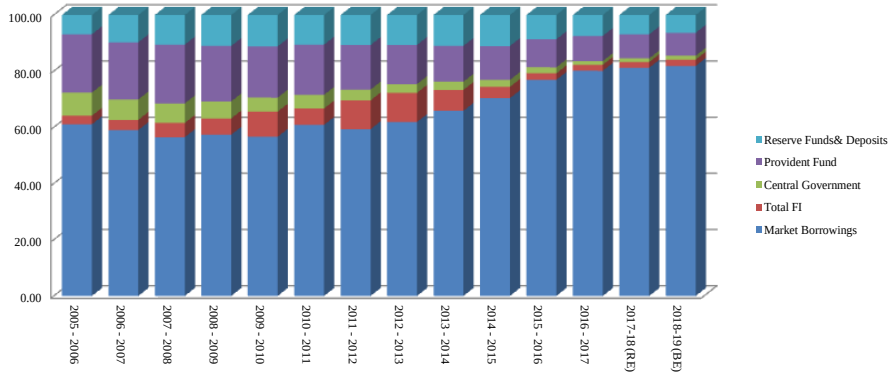
Among all the sub categories, Open Market debts (mainly Market Borrowings) are most important. Figure 5.2 shows that these have increased significantly in the period between 2006-07 to 2018-19 and now constitutes around 80% of the total debt of Haryana. NSSF securities used to be one of the major components of Market borrowings at the beginning of this period in 2005-06 but from 2015-16 with the introduction of UDAY scheme the proportion of Power

bonds in Market borrowings rose steeply and it became the major component of the market borrowings.

A further decomposition of the Market Borrowings as presented in Table 5.2a shows that National Small Savings Funds (NSSF) as a percentage of Total debt had been decreasing over the years due to high interest or coupon rates while State remained more reliable on Open market borrowings as open market borrowings became cheaper over the years. With demonetization open market borrowing became even more cost effective option.

While Open Market borrowing was only 19.07% of the total debt in 2005-06, but it went up substantially since 2012-13. NSSF as a percentage of Total Debt was as high as 34.52 came down over the study period to 8.26% in 2016-17. The Fourteenth Finance Commission recommended exclusion of states from NSSF borrowing. This was implemented in April 2016 except few states that could borrow 505 or 100% based on their collection of Small Savings in the states. Haryana was excluded from borrowing through NSSF and the borrowings in 2017-18 and 2018-19 showed zero capital receipts under NSSF category. The Commission also recommended that any NSSF Debt would be completely paid off by 2038.

Figure 5.2: Components of Liabilities as a percentage of Total Liabilities



Source: Calculated based on EPWRF Table 5.2

The share of Provident funds in total liabilities had gone down significantly from 20.74% in 2005-06 to 8.94% in 2016-17 and expected to go further down to 8.14% in 2018-19. The share of debt to Financial Institutions ranged between 5 and 8% during the years 2005-06 to 2013-14, but it went below 5% thereafter. Central Government's share in Haryana's debt has been coming down during this period.

Public debt went up significantly due to UDAY scheme and unless and until the Power PSEs are revived along with many other loss making PSEs in other sectors it would be difficult to to keep debt at sustainable levels for the State government, as dividend earnings from PSE and other own revenue receipts and non-debt capital receipts are not sufficient to meet the escalating interest payments.

Table 5.2a: Components of Total Liabilities of Haryana (As a percentage of Total Debt)

Year	Open Market	Power Bonds	NSSF	LIC	GIC	NABARD	SBI and other Banks	NCDC	All Other Institutions Loans	Total FI loans	Loans & Advances from Centre	Reserve Funds& Deposits
2005 - 06	19.07	7.50	34.52	0.09	0.07	2.18	0.00	0.27	0.44	3.05	8.24	6.89
2006 - 07	17.05	6.21	35.79	0.08	0.05	2.36	0.00	0.30	0.83	3.62	7.26	9.73
2007 -08	15.86	5.41	35.24	0.06	0.05	2.72	0.00	0.27	1.96	5.06	6.96	10.55
2008 -09	21.64	4.53	31.22	0.05	0.04	2.90	0.00	0.32	2.47	5.78	6.07	11.03
2009 - 10	26.66	3.20	26.80	0.02	0.02	2.71	3.12	0.24	2.80	8.93	5.00	11.20
2010 - 11	32.80	2.20	25.91	0.02	0.02	2.52	0.00	0.02	3.24	5.82	4.87	10.54
2011 - 12	37.36	1.44	20.56	0.02	0.02	2.20	5.26	0.02	2.73	10.24	3.85	10.71
2012 - 13	43.95	0.90	17.04	0.00	0.00	1.99	6.09	0.13	2.18	10.39	3.11	10.67
2013 - 14	50.73	0.64	14.52	0.00	0.00	1.89	3.36	0.20	2.00	7.46	2.91	10.99
2014 - 15	56.94	0.22	13.24	0.00	0.00	1.81	0.49	0.18	1.52	4.00	2.48	11.05
2015 - 16	52.53	13.81	10.58	0.00	0.00	1.37	-0.28	0.19	1.03	2.31	2.14	8.66
2016 - 17	54.47	17.41	8.26	0.00	0.00	1.31	0.02	0.15	0.66	2.14	1.33	7.46
2017-18 (RE)	58.99	15.48	6.77	0.00	0.00	1.35	0.02	0.13	0.52	2.01	1.31	6.90
2018-19 (BE)	62.57	13.77	5.52	0.00	0.00	1.72	0.01	0.10	0.41	2.24	1.39	6.35

Source: Authors' calculations based on EPWRF data on State Finances

Interest Payments and Debt Servicing

This is one of the major components of Revenue Expenditure. It is subtracted from Fiscal deficit to arrive at primary deficit of an economy.

We also calculate Primary Expenditure by deducting Interest Payments from Revenue Expenditure. Debt constrains the public expenditure decision of future democratically elected governments by imposing interest payments on future budgets as committed liabilities. Therefore it should be on the watch-list of governments in their budgetary process as well as the Finance Commissions to ensure norms to keep it within sustainable limits.

Table 5.3: Interest Payments

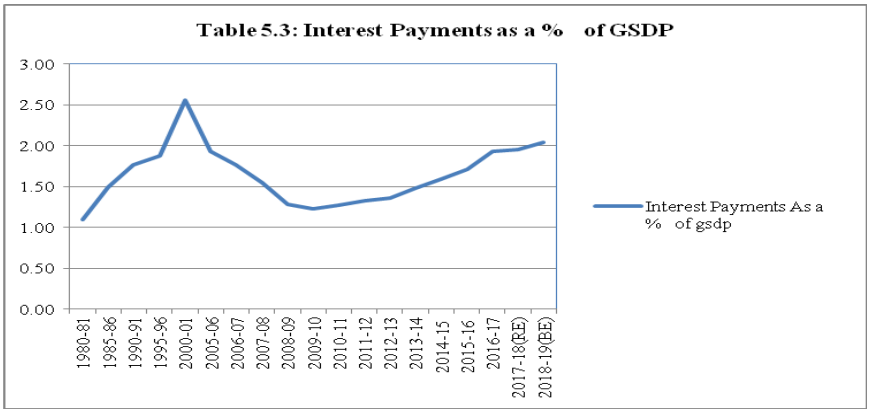
YEAR	(In crores)	As a % of GSDP	As a % of TRE	As a % of TRR
1980-81	37	1.09	9.23	8.04
1985-86	97.90	1.49	11.46	10.20
1990-91	240.00	1.76	12.42	12.55
1995-96	560.00	1.88	10.44	11.17
2000-01	1490.00	2.56	20.75	22.67
2005-06	2100.00	1.93	16.61	15.16
2006-07	2270.00	1.76	13.87	12.64
2007-08	2350.00	1.55	13.41	11.90
2008-09	2340.00	1.28	11.40	12.68
2009-10	2740.00	1.23	10.85	13.05
2010-11	3320.00	1.27	11.73	12.99
2011-12	4000.00	1.33	12.50	13.09
2012-13	4744.00	1.35	12.46	14.10
2013-14	5850.00	1.48	13.97	15.39
2014-15	6928.00	1.59	14.10	16.98
2015-16	8284.00	1.71	13.98	15.29
2016-17	10541.00	1.93	15.41	17.47
2017-18(RE)	11887.00	1.95	15.18	16.96
2018-19 (BE)	14037.00	2.04	16.48	18.25

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

**TRR stands for Total Revenue Receipts of States, RE is Revised Estimate, BE is Budget Estimate*

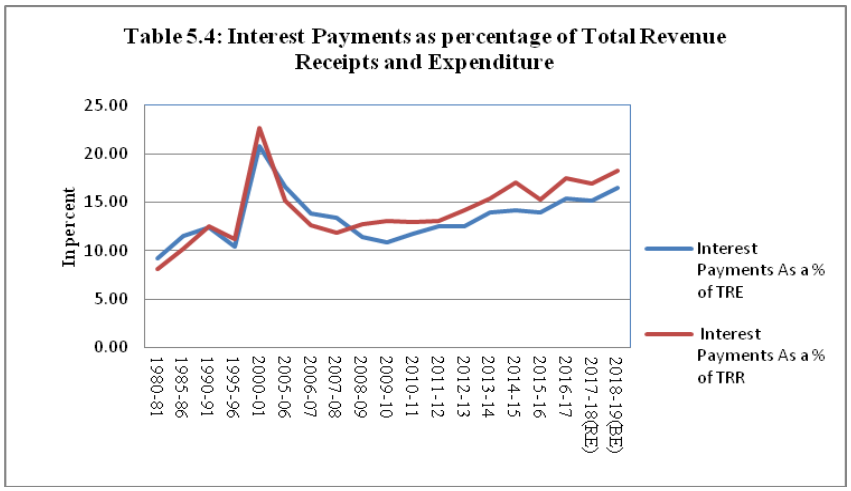
Higher Interest Payments could escalate the Revenue Expenditure even when the Primary Expenditure may be low. In Haryana we observe from Table 5.3, that Interest Payments were as high as 20% of Total Revenue Expenditure in 2000-01. By 2005-06 it came down to 16.6% and fell further in 2006-07 and it fluctuated around 11% and 14% thereafter. In 2016-17 it went up to 15.41%, possibly due to increasing debts of the State Government. We also calculated Interest Payments as a percentage of Total Revenue Receipts (TRR) to understand what percentage of TRR is required for Debt-Servicing. This ratio had been as high as 22% in 2000-2001, but it came down by 2006-07 to below 15% and by 2012-13 implying that though the Interest Payments Expenditure went up but on the other hand TRR rose faster than Interest Payments. However after 2013-14 more than 15% of Haryana's Revenue have been going to meet Interest Payments.

Figure 5.3 shows Interest payments to GSDP ratio. Though we had seen a decline in it from 2000-01, but it showed an increasing trend since 2008-09. It is expected to reach 2.04% in the current year (Budget 2018-19).



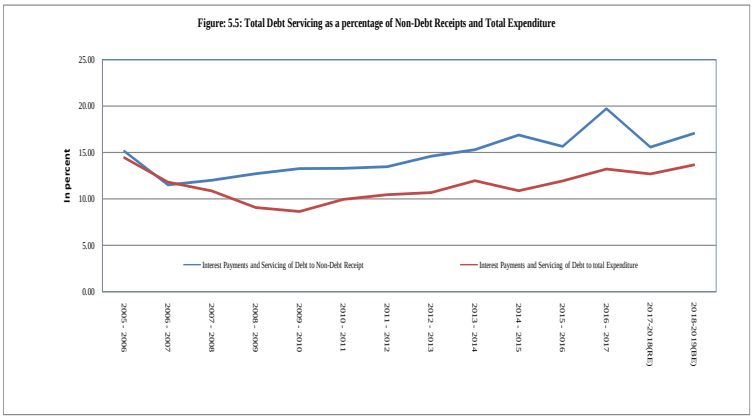
Source: Plotted based on Table 5.3

Figure 5.4 shows that Interest payments as a percentage of both Total Revenue Expenditure (TRE) and Total Revenue Receipts exhibit a decreasing trend from 2005-06 to 2008-09 but reversed to an increasing trend thereafter.



Source: Plotted based on Table 5.3

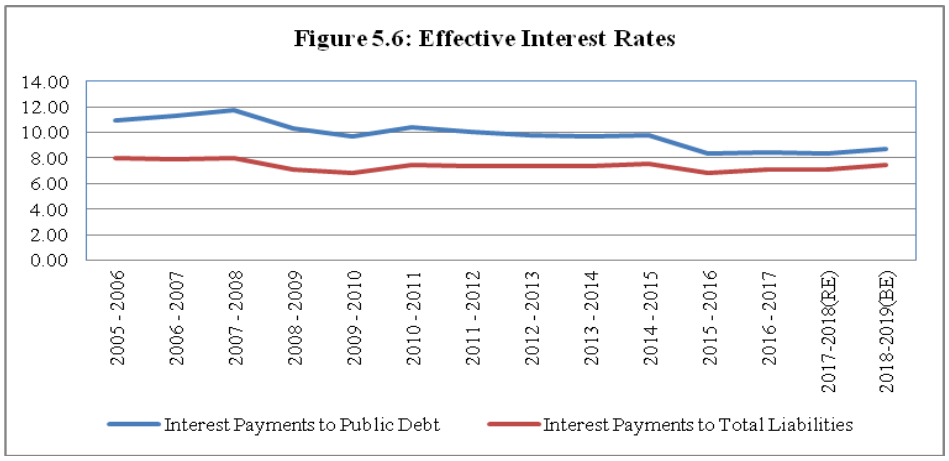
To understand the extent of interest and sustainability of debt liabilities, we have also analyzed Interest Payments along with Debt Servicing as a ratio of Non-Debt Receipts that include Revenue Expenditure and Non-Debt Capital receipts. Interest Payments and Debt Servicing as a ratio of Total Expenditure (Capital and Revenue Expenditure) is plotted in Figure 5.5. It was observed that both these ratios have exhibited increasing trends in this period. In 2005-06 and 2006-07 there can be hardly any difference, but later on the gap increased with Total debt servicing as a percentage of Non Debt receipts exceeding Total servicing as a percentage of Total Expenditure indicating that the costs of debt servicing in comparison to State's total receipts are increasing making Debt servicing a challenge for successive state governments.



Source: Based on Appendix Table 5.2

Interest Payments with respect to Total Liabilities: Effective Interest Payments

Any debt or liabilities would lead to interest payments for the government. Ratio of interst payments to liabilities could be used as a proxy variable for Effective Interest rates.



Source: Calculated based on Table 5.6

One of the parameters of the Debt-sustainability theory says that effective interest rates would be lower than the GSDP growth rate. In Table 5.4 we have presented the effective interest rate calculations with respect to Public debt and liabilities. However effective interest rates with respect to Total liablities would give us the clear picture of effective interest rates.

Figure 5.6 depicts that effective interests came down during the study period of 2005-06 to 2018-19 (BE). This implies though the costs of Debt and liabilities are increasing as a proportion of GSDP, debt and liabilities are also increasing faster than GSDP, but effective interest payments had been less than Nominal GSDP growth rate.

Table 5.4: Effective Interest Rates and GSDP growth rate

Year	Interest Payments to Public Debt	Interest Payments to Total Liabilities	Nominal GSDP Growth rate	Real GDP growth rate (spliced to 2011-12 series)
2005 - 2006	10.97	7.94	13.66	9.20
2006 - 2007	11.30	7.91	18.23	11.22
2007 - 2008	11.69	8.01	17.76	8.45
2008 - 2009	10.29	7.13	20.4	8.17
2009 - 2010	9.70	6.85	22.51	11.72
2010 - 2011	10.40	7.44	16.56	-
2011 - 2012	10.02	7.36	14.17	-
2012 - 2013	9.74	7.34	16.63	7.74
2013 - 2014	9.66	7.37	15.45	8.18
2014 - 2015	9.75	7.49	25.91	5.72
2015 - 2016	8.38	6.82	11.18	9.00
2016 - 2017	8.46	7.07	12.25	8.75
2017-2018(RE)	8.38	7.09	11.58	-
2018-2019(BE)	8.71	7.45	11.58	-

Source: Authors' calculations

Real GSDP had been less than the effective interest rates during the period 2005-06 to 2008-09 and also in 2014-15, but it was higher than effective interest rates in other years of the study period. Two years of 2010-11 and 2011-12 the data splicing to 2011-12 series could not be done on Real GDP data due to lack of information on the same series. Increasing Debt and liabilities could become a matter of serious concern for state government in future, but currently there is no such concerns.

Total liabilities in comparison with Revenue and Expenditure of the State

To understand the Sustainability of debt we have analyzed the growth rate of Liabilities vis a vis growth rates of Total Revenue (TRR), Own Total Revenue (OTRR), Capital Expenditure (CE) and Revenue Expenditure (TRE) (Table 5.5). Ratio of growth rate of liabilities with respect to growth rate of total revenue receipts was initially less than one till 2007-08 but later on from the year 2011-12 the buoyancy was more than one.

White Paper (Volume2) of State Finance Ministry (2014) pointed out that a huge debt of PSEs was financed by government through equities and loans and most of them were working capital loans. Also there was step-up in infrastructure investments in Power Sector and some other industries as well from 2011-12. In the later years the increase in power bonds was one of the reasons for rise in Total Liabilities-TRR ratio. The growth of liabilities with respect to growth rate of 'Own total revenue' was even higher indicating that State's capacity to fund debt through own revenues is going down. In 2016-17 there was a fall in both TRR and OTRR possibly indicating demonetization impact and the Debt buoyancy with respect to revenues went up significantly.

Table 5.5: Ratio of growth rates of Total liabilities vis a vis Growth Rates of other fiscal variables

Year	TRR	OTRR	CE	TRE
2005 - 2006	0.34	0.53	2.34	0.11
2006 - 2007	0.29	0.25	0.19	0.29
2007 - 2008	0.21	0.27	0.05	0.29
2008 - 2009	-1.82	-1.10	0.40	0.70
2009 - 2010	1.63	3.15	0.89	0.98
2010 - 2011	0.56	0.46	-0.57	1.01
2011 - 2012	1.16	0.93	0.86	1.73
2012 - 2013	1.95	1.58	4.13	1.04
2013 - 2014	1.36	2.15	-0.71	1.76
2014 - 2015	2.24	2.96	-5.10	0.95
2015 - 2016	1.08	1.43	0.10	1.11
2016 - 2017	-6.14	-120.38	-0.44	3.47
2017-18 (RE)	6.75	-0.65	0.36	0.86
2018-19 (BE)	1.27	-0.83	0.88	1.41

Source: Calculated based on EPWRF data till 2014-15/2015-16 and various CAG and budget documents for later years
N.B.TRR=Total Revenue Receipts; OTRR=Own Total Revenue Receipts, CE=Capital Expenditure, TRE=Total Revenue Expenditure

Ratio of growth rate of Total liability with respect to growth rate of capital expenditure was less than one except in 2012-13. In the same year most of the debt was used up for Working Capital loan requirements of the loss making units PSEs. With respect to growth of Total Revenue Expenditure (TRE), the ratio of growth of liabilities had gone up more than one in the same year. The ratio with respect to TRE was higher in most of the years than one indicating that Liability growth rate was much faster than increase in revenue expenditure.

Debt-Sustainability

A thorough literature survey on Debt sustainability helped us identify the major indicators of Debt sustainability. Debt sustainability is defined as the ability of the state to service its debt effectively. Apart from outstanding liabilities, there are many more indicators. From various studies (Punjab State Finances report for 14th FC, Haryana State Finances report for 14th FC,

West Bengal report for 14th FC and CAG report of Gujrat State Finances 2015) and more literature survey we chose the following indicators as follows:

1. Outstanding liabilities
2. Public Debt-GSDP ratio and Outstanding GSDP ratio
3. Debt and Outstanding liabilities as ratios of Non-Debt Capital Receipts
4. Debt and Outstanding liabilities as ratios of Total Expenditure
5. Interest payments and debt servicing as a ratio of Total Expenditure
6. Interest payments and debt servicing as a ratio of Total Revenue Receipts
7. Resource gap or adequacy of resources to service debt

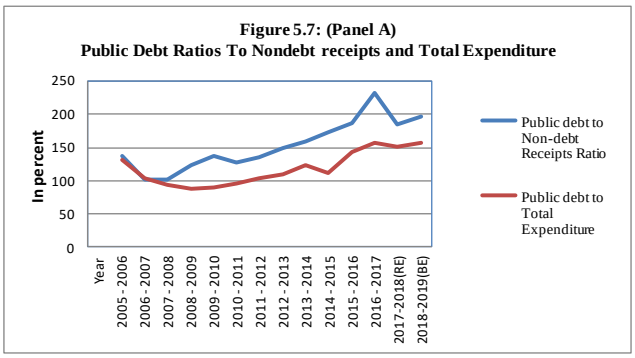
The trends of the above indicators from 2005-06 to 2018-19 are listed in Table 5.6.

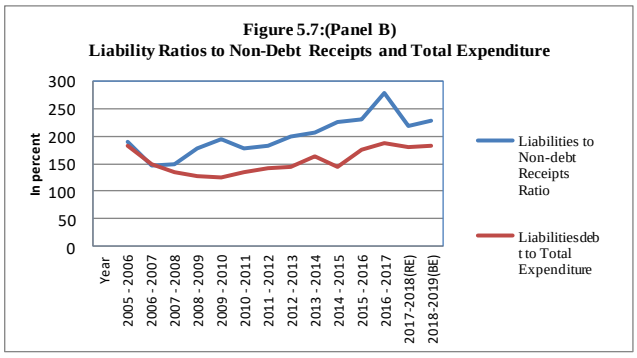
Table 5.6: Indicators of Debt Sustainability

	Burden Of Interest Payment	Public Debt Ratio				Liabilities Ratios		Interest Payments+ Debt Servicing	
Year	INT/TRR	GSDP	TRR	NDR	TE	NDR	TE	NDR	TE
2005 - 2006	15.16	17.92	140.88	138.00	131.60	86.80	181.85	15.14	14.44
2006 - 2007	12.62	15.92	114.13	101.67	104.33	70.31	149.19	11.49	11.79
2007 - 2008	11.88	13.52	103.74	102.63	92.80	64.65	135.43	12.00	10.85
2008 - 2009	12.68	12.70	125.64	123.29	87.92	81.04	126.99	12.69	9.05
2009 - 2010	13.04	12.95	137.91	136.52	88.91	97.89	125.91	13.25	8.63
2010 - 2011	12.98	12.64	128.85	127.69	95.66	112.90	133.62	13.27	9.94
2011 - 2012	13.09	13.78	135.61	134.32	104.25	130.73	141.93	13.46	10.44
2012 - 2013	14.11	14.52	151.28	149.72	109.39	120.40	145.08	14.58	10.65
2013 - 2014	15.39	15.30	159.29	158.20	123.75	115.51	162.28	15.28	11.96
2014 - 2015	16.98	16.09	174.22	173.06	111.46	135.21	144.99	16.87	10.86
2015 - 2016	15.29	20.99	188.22	186.64	142.24	138.79	174.82	15.64	11.92
2016 - 2017	16.66	22.85	197.92	233.03	156.18	130.83	186.82	19.72	13.21
2017-2018 (RE)	16.96	23.30	202.31	185.57	151.35	127.01	178.98	15.56	12.69
2018-2019 (BE)	18.25	23.44	209.48	195.83	156.87	120.24	183.49	17.06	13.66

Source: Calculated based on the data provided in various chapters

Whether Haryana's debt is sustainable, we have analyzed this both in terms of Public Debt as well as total liabilities. We compared the trends of Debt-Non-debt receipts ratio of government with Debt-Total Expenditure ratio of the government. As observed from figure 5.7, Debt to Non-Debt receipts had been around 150% and Public debt to Total Expenditure ratio was also on a rise and converged with public debt to non debt receipts ratio in 2006-07.

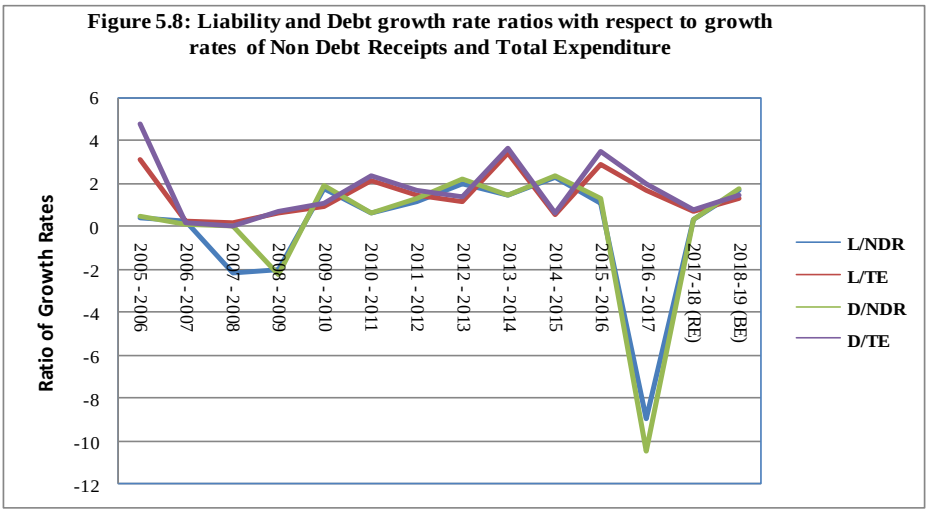




Source: Based on Table 5.6

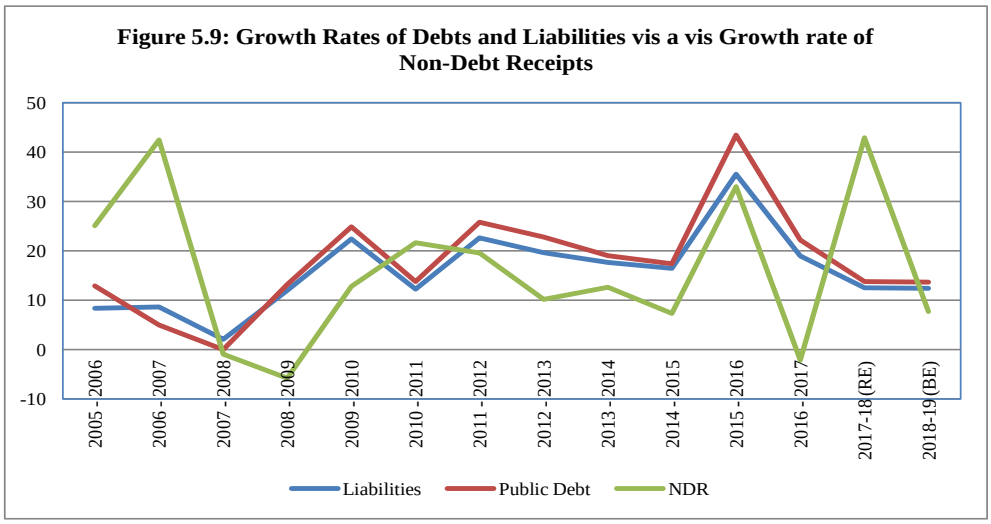
Public debt to Non-debt receipts went up significantly from 2007-08, but public debt to expenditure ratio went down and started increasing from 2009-10. Though the gap was pronounced between the two ratios in 2015-16 but slowly they are converging. If we take into consideration, total liabilities of the state, then the Liability ratios have exhibited the same pattern as the debt ratios.

Ratio of growth rates of Liability and Debt with respect to growth rates of Total non-debt receipts of the state government have been mostly greater than one for most of the years. In 2016-17 growth rate ratios were very high and negative indicating a fall in non-debt receipts. This is not a good sign for debt sustainability. Debt and liabilities growth ratios with respect to Total expenditure increased from values around zero in 2006-07 to 2 by 2010-11 and almost around 4 by 2013-14. Since 2015-16 it has come again down.



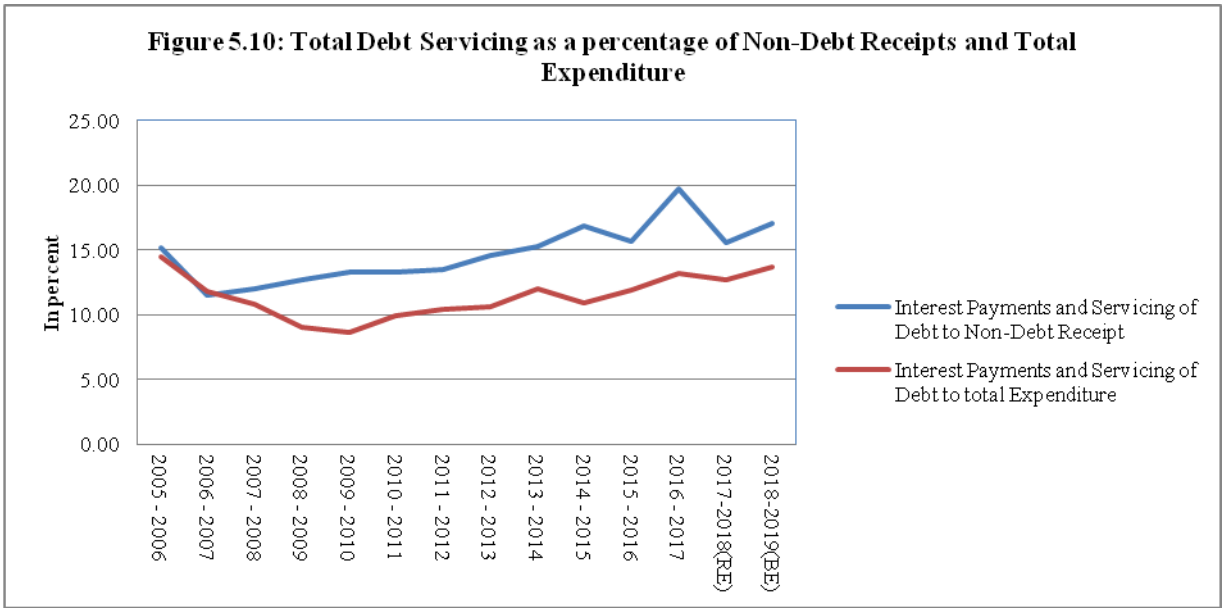
Source: Based on authors' calculation of tax buoyancy
N.B. L=LIability, D= Public Debt, NDR=Non-debt Receipts, TE= Total Expenditure

It is clearly evident from the graph that ratios of debt and liabilities with respect to Non-debt receipts are negative and the maginitude of these growth ratios are very high in 2016-17. To understand why this pattern emerged we plotted the growth rates separately in Figure 5.9



Source: Based on authors' calculation of growth rates, NDR=Non-debt Receipts

It is clearly evident from Figure 5.9 Non-debt receipts had not only seen a decrease in growth rate along with Liablities and debt but the growth rates has been negative in 2016-17.
Interest payments and debt servicing as a percent of Non-Debt receipts have gone up in the study period. It was more pronounced in the years of UDAY impelmentation but came down by 2017-18.



Source: Based on Table 5.8

Looking at the trends from figure 5.10, we can conclude that debt servicing has been rising very fast and may reach unsustainable levels over the next few years unless adequate safeguards are initiated.

Debt trap measurement

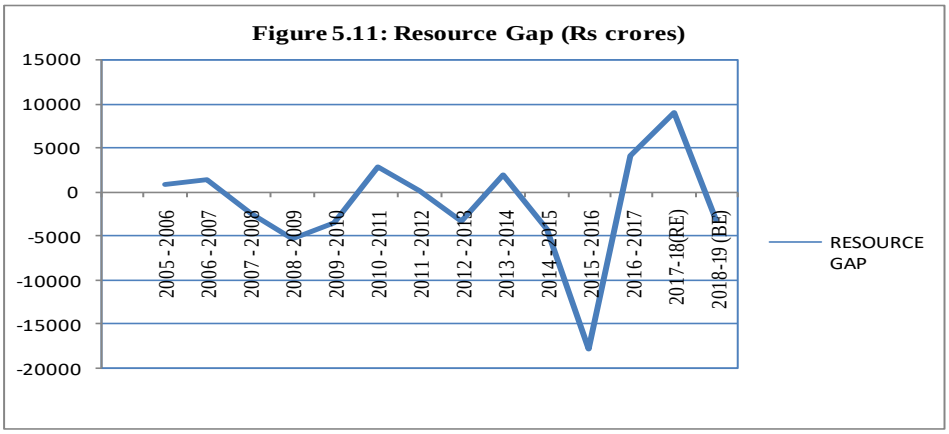
Verma et al (2013) study for the State Finances of Haryana for Fourteenth Finance Commission uses Debt-trap measurement to assess the sustainability of debt for the state. We also use the same measure to assess debt sustainability. As Eleventh Finance Commission has suggested that if Incremental Non-Debt Receipts are high enough to absorb incremental primary expenditure and incremental Interest liabilities then debt burden would reduce.

Table 5.7: Debt and Debt Sustainability (In Rupees crore)

Year	Incremental Non-Debt Receipts	Incremental Primary Expenditure	Incremental Receipts Available For Interest Payment (1-2)	Incremental Interest Payment	Resource Gap (3-4)
	1	2	3	4	5
2005 - 2006	2837	2051	786	-135	920
2006 - 2007	6010	4380	1630	1 65	14 64
2007 - 2008	-189	2183	-23 72	0 81	-24 53
2008 - 2009	-1160	4137	-52 97	-0 07	-52 91
2009 - 2010	2401	5539	-31 38	3 98	-35 35
2010 - 2011	4591	1176	34 16	5 82	28 34
2011 - 2012	5055	4269	7 86	6 82	1 04
2012 - 2013	3131	5598	-24 66	7 44	-32 10
2013 - 2014	4291	1136	31 55	11 05	20 49
2014 - 2015	2798	6000	-32 03	10 79	-42 81
2015 - 2016	13553	29990	-164 37	13 53	-177 90
2016 - 2017	-1155	-7499	63 44	22 61	40 83
2017-18(RE)	22937	12559	103 78	13 45	90 33
2018-19 (BE)	5886	6897	-10 11	21 50	-31 61

Source: Calculated based on EPWRF data till 2015-16 and CAG reports of 2017-18 and Haryana Financial Statement of 2018-19 and interest data from RBI State Finances

Table 5.7 shows that between 2007-08 & 2009-10 and 2014-15 & 2015-16 debt was unsustainable. In 2018-19 it is likely that debt would remain unsustainable. Annual Average Resource gap has been -1374 crores indicating debt has been unsustaianble in the study period. Standard deviation of resource gap have been as high as Rs 6131.07 crores indicating high volatility. Figure 5.11 shows clearly that debt was unsustainable in most of the years. It also shows high volatility in resource gap.



Source: Based on Table 5.7

Findings and Recommendations:

1. Debt and liabilities with respect to GSDP have been increasing, this is more pronounced during the implementation period of UDAY scheme. However Debt-GSDP ratio is well within the target of 25% as recommended by Fourteenth Finance Commission.
2. Debt and liability growth rate ratios with respect to GSDP, Non-Debt recipts and Total expenditure were greater than one in most of the years.
3. Burden of debt servicing has been going up indicating that debt sustainability may become an issue in few years.
4. Resource gap analysis or sufficiency of non-debt receipts for debt servicing reveals that debt is becoming less sustainable for most of the years. Average annual resource gap was negative, however there was high fluctuations with high standard deviation indicating no clear pattern as such.
5. Debt as a percentage of Non-debt receipts was too high and needs to be kept under check.
6. Moreover Effective Interest Rates are lower than both Nominal and Real GSDP growth rates throughout the study period indicating that Debt may be sustainable.

Chapter 6

Evaluation of State Finances in the light of implementation of FRBM Act and recommendations of Fourteenth Finance Commission

This chapter examines the impact of FRBM Act and the Recommendation of Fourteenth Finance Commission on State Finances.

FRBM Act and Medium Term Fiscal Policy

The Indian Parliament, in August 2003, passed the Fiscal Responsibility and Budget Management (FRBM) Act, which imposes stringent fiscal discipline on the central government as well as on the state governments in their overall fiscal and macroeconomic management operations. The primary objectives behind having an FRBM, as highlighted by the Act, were (a) to maintain transparency in fiscal management systems in the country, (b) to bring inter-generational equity in debt management and (c) to bring long term fiscal stability in the economy. The main purpose was to eliminate revenue deficit of the country, building revenue surplus thereafter and bring down the fiscal deficit to a 3 per cent of the GDP by March 2008. Accordingly, the act provided for three statements to be presented by the government namely; (a) the Medium Term Fiscal Policy statement, (b) Fiscal Policy Strategy Statement and (c) Macro Economic Framework statement.

The Haryana Fiscal Responsibility and Budget Management Act, 2005, is an act to provide for the responsibility of the State Government to ensure caution in fiscal management and fiscal stability by progressive elimination of revenue deficit, careful debt management consistent with fiscal sustainability, greater transparency in fiscal operations of the Government and conduct of fiscal policy in a medium term framework.

Through the State FRBM Act there is a move towards a fiscal deficit of 3% of GSDP and zero percent of GSDP as revenue deficit. This target is particularly set for states with fiscal deficit. FRBM Statement of the budget of 2017-18 states that 14th FC has recommended for Haryana a fiscal deficit at 3.25% of GSDP from 2015-20. This was based on the assumption that Haryana is a revenue surplus state, while Ministry of Finance, Government of India had stipulated the target to be 3%, based on State's experience of revenue deficits instead of revenue surplus. However amendment required in Haryana FRBM Act to incorporate the recommendations of 14th FC had not been finalized by Government of India yet and therefore implementation has not happened till date. So the target of fiscal deficit still remains at 3% of GSDP.

Apart from FRBM targets the state governments have their own budget targets slightly varying depending on the macroeconomic scenario of the states. As a part of its commitment to FRBM Act, the government publishes Medium Term Policy statement each year based on a five year projected targets set at the beginning of five years. The latest Medium Term Policy Statement is dependent on five year targets of 2005-20.

Haryana Government's effort has been to move towards the target of zero Revenue deficits. Accordingly The Revenue Deficit has been projected at Rs 8226.17 crore in 2017-18(RE). The Revenue Deficit as percentage to GSDP is expected at 1.35 % in 2017-18 (RE). In BE 2018-19, it is projected at Rs 8253.51 crore. The Revenue Deficit as percentage to GSDP is expected to

about 1.20 % in 2018-19. The Fiscal Deficit as percentage to GSDP is projected in RE 2017-18 at 2.83 % and likely to be 2.82 % in BE 2018-19. From Table 6.1 it is evident that the Actual fiscal deficit of budget had always been higher than the budget. With introduction of UDAY scheme the budgeted and actual were quite different but FRBM had not incorporated the targets more than zero percent for revenue deficit and more than 3% for Fiscal deficit with UDAY. Thus the state seemed to be deviating away from the targets for three years starting from 2015-16 to 2017-18. In two years prior to 2014-15, the fiscal deficit FRBM targets of 3% had been met. Thus without the UDAY power bonds in 2018-19 State is hopeful to achieve its fiscal targets of FRBM and would be close to Budget (Budget document 2018-19).

Table 6.1: Showing Budget and Actual/Revised Fiscal and Revenue deficit target achievements

	Actual without UDAY		**Budgeted without UDAY**		**Actual with UDAY**		**Budgeted with UDAY**	
	Ratio as a % of GSDP							
YEAR	**GFD**	**RD**	**GFD**	**RD**	**GFD**	**RD**	**GFD**	**RD**
2012-13	2.99	1.28	2.10	0.66	-	-	-	-
2013-14	2.07	0.97	2.20	0.59	-	-	-	-
2014-15	2.88	1.90	2.50	1.12	-	-	-	-
2015-16	2.92	1.62	3.10	1.83	6.26	2.20	-	-
2016-17	3.22	NA	2.47	1.1	4.82	2.92	4.3	2.09
2017-18(RE)	NA	NA	2.61	0.94	2.83	1.35	2.84	1.8
2018-19(BE)	-	-	2.82	1.20	-	-	-	-

Source: FRBM statements, budget documents and CAG reports

Table 6.2 presents how far the State was able to achieve the target in the years 2016-17 and 2015-16. The variation of for revenue deficits from the targets of FRBM Act, Budget targets and Medium Term Fiscal Policy targets had been very high and went out of proportions without UDAY. Fiscal deficit targets were also higher without UDAY. This Debt-GSDP ratio was pretty close to the targets with UDAY but againa high deviation is observed without UDAY. states that the State's fiscal health was not completely sound. The rising debts due to loss making public sector and increase in committed expenditure may be an issue. The fiscal policy targets in 2015-16 were more than 100% where as Debt GSDP ratio was almost 30%.

In 2014-15 also we see a large variation in Revenue deficit as high as 65.95% from both Budget targets and MTFP targets. The FRBM target for Revenue deficit was zero. Debt GSDP ratio and fiscal deficits were well within the FRBM targets but fiscal deficit were higher than the Budget targets and MTFP targets with a large variation in revenue targets. In 2018-19 though the budget targets are different but FRBM targets a revenue surplus and 3% fiscal deficits. With the increasing debts in the state how far this is going to be achieved is a question. However expectation of a higher GSDP growth rate this year would certainly help in attaining the targets to some extent. However the targets are subject to realization.

Table 6.2: Haryana - Impact of UDAY on Fiscal Performance

Fiscal Variation	2014-15			2015-16			2016-17				
	%age Variation of actual over targets			%age Variation of actual over				%age Variation of actual over			
	FRBM Act	Budget	5 year Fiscal plan/ MTFP	FRBM Act	Budget	5 year Fiscal plan/ MTFP	UDAY	FRBM Act	Budget	5 year Fiscal plan/ MTFP
Revenue Deficit (-)/ Surplus (+) (In Rs. Crore)	-	(-) 3306 (65.95 %)	(-) 3306 (65.95 %)	29.51	(-) 2121.48 (22.20 %)	24.56 (34.37 %)	Including UDAY	39.23	(-) 3626 (29.53 %)	30.30 (55.30 %)
							Excluding UDAY	99.09	(-) 5572 (86.50 %)	22.89 (123.75%)
Fiscal Deficit/GSDP (In Percent)	(-) 3.66	15.60	13.78	103.5	103.50	103.5	Including UDAY	12.41	12.41	12.41
							Excluding UDAY	30.36	30.36	30.36
Ratio of total outstanding debt to GSDP (In Percent)	(-) 28.86	(-)10.69	(-)10.69	29.56	29.56	29.56	Including UDAY	11.6	11.6	11.6
							Excluding UDAY	12.53	12.53	12.53

Source: CAG Reports (2014-15, 2015-16, and 2016-17)

Table 6.3: Half Yearly Review of Trends in Receipts and Expenditure - 2015-16 TO 2017-18

(Percentage of Actual Receipts and Expenditure to Revised and Budget Estimates)													
Item	2015-16						2016-17						2017-18
	Full Year		1st Half Year		2nd Half Year		Full Year		1st Half Year		2nd Half Year		1st Half Year
	% to RE	% to BE	% to RE	% to BE	% to RE	% to BE	% to RE.	% to BE	% to BE	%age to RE	% to BE	%age to RE	%age to BE
Revenue Receipts	87.80	90.91	40.43	41.86	47.37	49.05	87.02	83.39	36.72	38.32	46.67	48.70	42.53
State Tax Revenue	88.52	93.02	43.47	45.68	45.05	47.35	89.92	84.64	41.92	44.53	42.72	45.38	48.11
State Non-Tax Revenue	88.92	69.02	36.35	28.22	52.57	40.81	84.44	74.58	22.08	25.00	52.49	59.44	35.98
Share in Central Taxes	100.00	96.76	44.34	42.90	55.66	53.86	91.05	106.60	42.86	36.61	63.74	54.45	37.46
Grants-in-Aid	76.06	98.18	27.81	35.90	48.25	62.27	71.85	68.75	21.52	22.50	47.22	49.36	23.48
Expenditure	93.36	114.83	30.27	37.24	63.09	77.60	94.83	89.86	35.86	37.85	54.00	56.98	36.37
Revenue Expenditure	91.33	95.74	37.59	39.41	53.74	56.33	94.29	90.92	37.26	38.64	53.66	55.65	38.33
Capital Expenditure	99.91	277.26	6.76	18.75	93.15	258.51	98.23	83.99	28.12	32.89	55.87	65.34	26.64

Source: FRBM document of Budgets 2017 and 2018

Half-yearly Review of various departments consolidated revenue and expenditure targets and their achievements are produced in Table 6.3 for three years 2015-16 to 2017-18 to understand how much the state government departments are able to achieve in the first half and second half of the years and how much targets they are able to achieve in terms of budgeted ones. Though revenue targets are more or less achieved but the plan and non-plan expenditure went out of proportion in 2015-16 particularly in the second half.

In 2016-17 and 2017-18 in the first half the departments more or less met the targets. Revenue targets in all these years are below 90% and there is a room for improvement in increasing revenue.

State Finances in the light of the Fourteenth Finance Commission's recommendations

Fourteenth Finance Commission came up with various recommendations and norms for the distribution of Central taxes and grants to the states. The implementation period for Fourteenth Finance Commission was from 2015-20. The first and foremost recommendation was devolution of 42% share in Central taxes. This helped Haryana to improve its Total Tax Revenue receipts to increase by some extent there was no significant growth in own tax revenue of the state. Central tax share was below 10% before 2014-15 but it went up slightly above 10% since 2014-15. (Refer Table 2.2 of Chapter 2).

Secondly devolution of grants were based on various criteria like Population, Area, Per capita income, Population distance of 2011 from 1971 level, income distance and forest cover. Also the area weightage of small states was put at 2% to. Accordingly, the shares of Central Grants in Haryana's revenue receipts have gone up from 2015-16.

Table 6.4: Percentage of actual to assessed own revenue receipts and revenue expenditure

		2015-16	2016-17	2017-18	2018-19
A	**GSDP**	93.77	90.95	87.69	85.62
B	**Own revenue receipts**	95.55	78.35	69.76	49.75
1	Own Tax revenue	91.83	72.36	56.13	37.99
2	Own Non-Tax Revenue	130.01	143.83	241.73	212.86
C	**Revenue Expenditure *of which***	133.07	135.90	137.61	132.40
1	Interest Payment	109.26	118.00	113.22	114.03
2	Pension	109.35	103.93	140.23	126.00
E	**Post-Devolution Revenue**	-198.02	-192.77	-61.71	-48.70

Source: 14th Finance Commission Report

There were also assessments on GSDP growth rates, Own Tax and Non-Tax revenue receipts, revenue expenditure, interest payments and pensions. Table 6.4 presents what percentage of assessed figures have been achieved as actual or revised or budgeted. Though the actual GSDP figures are more than 85% of projected by Fourteenth Finance Commission, but Fourteenth Finance Commission had overestimated the GSDP growth rate of the state.

The actual figures of Own Tax and Non- tax Revenue in 2015-16 and 2016-17 show that though they have overestimated tax revenues but had underestimated non-tax revenues of the State. State of Haryana outweighed the Revenue expenditure projections of the Commission as the ratio of actual and assessed Revenue Expenditure figures is more than 132%. Similarly, for interest payments and pensions, we observe that the ratio of actual to projected is higher than 109% for interest payments and 103% for pensions. Post-devolution Revenue surplus was assessed to be

negative by the Commission but actual post-devolution the state has revenue deficits which were quite large.

Fourteenth Finance Commission had put forward Fiscal deficit norm to be at 3.25% based on the assumption of Revenue surplus state. As stated at the beginning of the chapter that the State FRBM Act of 2005 could not be amended in absence of Central Government approval. However it would be interesting to see how much of the Finance Commission targets were actually achieved in reality. In 2014-15 the actual fiscal deficit-GSDP ratio was below the target but with UDAY scheme the targets were not achieved in 2015-16, 2016-17, but expected to be below 3.25% in 2017-18 and 2018-19 without UDAY. The fiscal deficits without UDAY were around 3% for 2016-17 and 2015-16. Thus the State has been more or less fiscally sound in matching the Fourteenth Commission's recommendations.

Table 6.5: Comparison of Actual/Revised/Budget Estimates of Fiscal Indicators with Fourteenth Finance Commission's Projection

	2014-15		2015-16		2016-17		2017-18		2018-19		2019-20
HARYANA	**Actual**	**14th FC**	**Actual**	**14th FC**	**Actual**	**14th FC**	**RE**	**14th FC**	**BE**	**14th FC**	**14th FC**
Debt-GSDP Ratio	14.63	18.55	18.70	19.28	20.48	19.91	23.30	20.45	23.44	20.92	21.33
Fiscal Deficit-GSDP Ratio	2.85	3.25	6.26	3.25	4.82	3.25	2.83	3.25	2.82	3.25	3.25
Interest Payment/ TRR	16.98	14.75	15.29	14.72	20.08	15.61	16.96	16.45	18.25	17.24	17.99

Source: Fourteenth Finance Commission report, Various CAG and budget sources,
N.B. Interest/TRR data based on author's calculations for Actual/RE/BE

However as far as the Debt-GSDP ratio is concerned the targets of Fourteenth Commission to keep the ratio below 20% was achieved in 2014-15 and 2015-16. However, from 2016-17 the ratio has jumped up due to the provisioning for the losses of power sector under UDAY. This is expected to come down from next year as the losses of power sector have been significantly contained.

Interest payments targets were breached for all the years since 2014-15 onwards than the actual interest payments stipulated by the 14th Finance Commission. According to the latest budget of the Haryana state it is expected to narrow for 2017-18 and 2018-19.

Major Findings and Conclusions

- FRBM medium term review indicates that most of the targets of budget get realized in the second half of the year. Below 90% targets are met in revenue receipts but actual expenditure exceeeded targets slightly.

- Fourteenth Finance Commission targets were slightly overestimated for Revenues, GSDP but underestimated for expenditure and interest payments. Debt-GSDP ratio was below the target of 20% and fiscal deficit-GSDP ratio was below the target of 3.25% in 2014-15 and 2015-16, but both exceeded target in 2016-17, 2017-18 (RE) and 2018-19 (BE) due to introduction of UDAY scheme.

Chapter 7

Budgetary transfers to Local Bodies

Introduction

Since the Tenth Finance Commission, all Finance Commissions have been recommending enhanced grants for local bodies. The Terms of References of the last three Commissions required them to recommend "the measures needed to augment the Consolidated Fund of a State to supplement the resources of the Panchayats and Municipalities in the state, on the basis of the recommendations made by the Finance Commission of the State". However, the Eleventh FC made their own assessment in the matter where State Finance Commissions (SFCs) reports were not available. Since the Eleventh FC, the Commissions realized that they were required to base their recommendations on the report of individual SFCs. But different approaches were adopted by the SFCs, difference in the periods covered by individual SFCs and non-synchronization of the reference period of SFC report period with the Finance Commission report period made the Commission's job difficult to use recommendations of the SFC reports. Instead, the previous Finance Commissions recommended ad-hoc grants and, in addition, indicated the steps that the States could take to augment their Consolidated Funds to supplement the resources of the local bodies. The Twelfth FC provided a grant of Rs. 25,000 crore and allocated the grants to the local bodies in the ratio of 80:20 between panchayats and municipalities. The Thirteenth FC recommended 1.93 per cent of the divisible pool of 2010-15, as estimated by it, for local bodies after converting it into grant in-aid under Article 275 of the Constitution. This grant was estimated at Rs. 87,519 crore, of which the grant to panchayats was Rs. 63,051 crore and the grant to municipalities was Rs. 23,111 crore. Total 2.8% divisible pool was granted as general grants and special grants.

Criteria for Determination of grants to Panchayats and Municipalities.

In the past, Finance Commissions have used two types of criteria for determining grants to States for local bodies:

1. The need for resources related to the extent of devolution – Population and area were the two parameters used to determine the need.
2. Decentralization to local bodies by the States.

The Thirteenth FC recognized the need to support the local bodies through a predictable and buoyant source of revenue. It considered the demand by the States and local bodies for giving a share from the divisible pool to the latter. However it was inconsistent with the provisions of the Constitution, and the Thirteenth FC Commission recommended that the local bodies be transferred a percentage of the divisible pool which is 1.93% of from 2010-15 resources in the form of grants-in-aid under, consistent with the Constitution. It had estimated this amount to be Rs. 87,519 crore for five years from 2010 to 2015.

Fourteenth FC did not come up with an index or indices themselves as they perceived there were several practical difficulties in considering an appropriate index or indices for devolution. They did not use any index or indices of devolution or decentralisation for the purpose of transfer of

resources to States for panchayats and municipalities. However, as mentioned FC have used Population and Area as the parameters for the purpose

Fourteenth FC has recommended grants in two parts –

1. A basic grant
2. A performance grant for duly constituted gram panchayats and municipalities.

In the case of gram panchayats, 90 percent of the grant will be the basic grant and 10 per cent will be the performance grant. In the case of municipalities, the division between basic and performance grant will be on 80:20 basis.

Basic grants: The grants that were recommended are supposed to go to Gram Panchayats, which are directly responsible for the delivery of basic services, without any share for other levels. The earmarked basic grants for Gram Panchayats would be distributed based on a formula prescribed by the respective SFCs for the distribution of resources. Similarly, the basic grant for urban local bodies would be divided into tier-wise shares and distributed across each tier, namely the municipal corporations, municipalities (the tier II urban local bodies) and the Nagar Panchayats (the tier III local bodies) using the formula given by the respective SFCs. The State Governments should apply the distribution formula of the most recent SFC. For Haryana the latest State Finance Commission would be that of Fourth SFC.

Performance Grants: This is based on submission of audited accounts preceding two years in which the gram panchayats seeks to claim the performance grant. The grants would be finally given based on an increase in the own revenues of the local body. Performance grants to urban local bodies are based on the State Government's design subject to certain eligibility criteria. The same eligibility conditions are applied for Urban performance grants based on audited reports and increase in own revenue taxes. Additionally they need to show their performance benchmarks.

As per Fourteenth CFC report, 90% would be basic grants and 10% would be performance grants.

Fourth State Finance Commission came up with their final report in 2014 for the years 2011-12 to 2015-16. It observed that there is a one year lag between Central FC and Haryana State FCs for the year coverage. For example 14th CFC's yearly coverage was 2015-16 to 2019-20 whereas for 5th SFC the coverage will be from 2016-17 to 2020-21. 5th FC is yet to come up with their report. Before 4th SFC submitted the report, for the years 2011-12 and 2012-13 4th SFC would maintain the 13th CFC recommendation of considering own Tax Revenue as divisible pool, for continuity of their work. Accordingly, funds released for PRIs and ULBs are depicted in the following table 7.1.

Table 7.1: Funds transferred to Local Bodies (Rs. Crore)

Local Bodies	2011-12	2012-13
PRIs	**231**	**265**
ULBs	**124**	**142**
Total	**355**	**408**

Source: 4th SFC Report

In their interim report, they also followed the 13th FC recommendations of respective shares of PRIs and ULBs as 65:35 in conformity with the rural urban population ratio as per 2011 census for 2013-14 and 2014-15 as well, but suggested to follow recommendations of 14th FC for the year 2015-16. Accordingly, they suggested devolution of 2.5% of the divisible pool to be shared by Local Bodies with 65:35 share ratios among PRIs and ULBs. Table 7.2 shows the devolution.

Table 7.2: Final Devolution to Local Bodies (Rs Crore)

Local Bodies	2011-12	2012-13	2013-14
Divisible Pool (SOTR)	20595	23395	27213
Share of Local Bodies	514	585	681
PRIs (65%)	334	38	442
ULBs (35%)	18	204	238

Source: 4th SFC Report

Parameters of Population, Area, Literacy rates, Gender Ratio and Antodaya Anya Yojna population are considered for the final report of 4th SFC with an additional division of gram panchayats: panchayat samities: zilla parishad's share to be 75:15:5 at the district level. The final devolution is presented in Table 7.3

Table 7.3a: Financial Devolution to Local Bodies (In Rs Crore) recommended in 4th FC

Local Bodies	2011-12	2012-13	2013-14	2014-15	2015-16
Share of Local Bodies (2.5%)	499	595	705	819	953
PRIs (65%)	325	386	458	532	619
ULBs(35%)	175	208	246	286	333

Source: 4th SFC Report

Table 7.3b: Actual Financial Devolution to Local Bodies (In Rs Crore) under Budgets as per SFC

Local Bodies	2015-16 (Actual)	2016-17 (BE)	2016-17 (RE)	2017-18 (BE)
Share of Local Bodies	413.45	633.77	860.22	675.00
PRIs	223.49	392.45	638.72	425.00
ULBs	189.96	241.32	221.50	250.00

Source: Budget Document: 2017-18

For the year 2015-16 the 4th SFC had suggested 7% of devolution under Step 2 of their recommendations along with abolition of non-SFC tax sharing of State Excise and VAT. The share of these non-SFC taxes were biased in favour of ULBs. So, the share of PRIs and ULBs in 7% of devolution has been fixed as 50:50 for the entire period of 2015-20.

Table 7.4: Total Fund released as Grant in Aid (Rs Crore)

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Panchayati Raj Institution						
Zila Parishad	797	962	3822	1192	1261	2263
Percentage in Total Grants	18.47	19.32	68.10	19.52	11.71	17.89
Urban Local Bodies						
Municipalities	923	1125	1136	744	1045	1585
Percentage in Total Grants	21.40	22.59	20.24	12.18	9.71	12.53
Total (Grants)*	4314	4979	5612	6106	10765	12647
** This includes grants to PSUs and autonomous bodies*						

Source: CAG Report 2016-17

Actual funds released by the State government as Grants in Aid is presented in Table 7.4 which shows that the release of funds was not based on the norms of 13th FC or 4th SFC for the years 2011-12 to 2014-15. These recommendations were followed only for the year 2013-14. The recommendations of 50:50 share was also not maintained more for 2015-16 and 2016-17.

In the latest financial report available from the Financial Budget Statement of 2018-19 it is evident that as per 14th CFC recommendations the actual expenditure depends on the actual date when the grants are received. That is why the shares of the ULBs and PRIs may vary. This is shown in Table 7.5.

Table 7.5: Grant in Aid to Local Bodies (Rs Crore) as per recommendation of Central FC

Local Bodies	Actual Expenditure (2015-16)	Budget Estimates (2016-17)	Revised Estimates (2016-17)	Budget Estimates (2017-18)
PRIs	419280	656720	656720	756980
ULBs	135047	357960	427960**	409039
Grand total (14th FC)	554327	1014680	1084680	1166019
GIA for fire services on the recommendation of 13th FC	25000	0	0	
(*) In case of Rural local bodies, 14th Finance commission (14th FC) has recommended grants from Gram Panchayats only.				
(**) pending fund of 2015-16 amounting to 97.93 crore were received during 2016-17				

Source: Financial Statement 2017-18 (Haryana Accounts)

The total transfers of funds to the PRIs and ULBs by the State Government in the form of total grants and loans are presented in Table 7.7. Actual funds released may be based on actual needs and demands of the local bodies. It depends on the performance as well. It also depend on the revenue generated in the form of decentralized taxes such as entry fee and some more such taxes earned by the local bodies. Depending on the revenue and surplus generated the funds are also transferred as loans and grants. Moreover, the non-SFC grants are also there in the transfers. So, the total transfers of the state government to local bodies are quite high relative to the fund released as grants-in-aid.

Table 7.6: Transfer To Panchayati Raj Institution And Urban Local Bodies (Rs Crore)

	MAJOR HEAD	PANCHAYATI RAJ INSTITUTION	URBAN LOCAL BODIES	GRAND TOTAL
2013-14	**Grant**	741	1641	2382
	Loan	94	0	94
	Total	835	1641	2476
2014-15	**Grant**	735	1718	2453
	Loan	0	0	0
	Total	735	1718	2453
2015-16	**Grant**	962	1859	2821
	Loan	1	0	1
	Total	963	1859	2822
2016-17	**Grant**	1685	2357	4042
	Loan	0	0	0
	Total	1685	2357	4042
2017-18(RE)	**Grant**	1723	4528	6251
	Loan	1	0	1
	Total	1724	4528	6252
2018-19(BE)	**Grant**	1882	2959	4841
	Loan	2	0	2
	Total	1884	2959	4843

Source: Haryana annual financial statement 2018-19

General Services Expenditure under Revenue Expenditure category includes compensation and assignment to local bodies. This data is presented in Table 7.7.

Table 7.7: Compensation to Local Bodies

YEAR	Compensation and Assignment to Local Bodies and Panchayati Raj Institutions	Total General Services under Revenue Expenditure	Compensation and Assignments as % of GS
2005-06	2.5	45.8	5.46
2006-07	2.75	48.45	5.67
2007-08	3.37	52.3	6.44
2008-09	2.16	60.24	3.58
2009-10	0.7	77.55	0.9
2010-11	0.81	93.28	0.87
2011-12	0.99	102.2	0.97
2012-13	1.02	118.97	0.86
2013-14	1.36	135.97	1
2014-15	1.45	167.65	0.86
2015-16	3.08	187.13	1.64
2016-17	2.48	216.31	1.14

Source: EPWRF

Functional Devolution to Urban Local Bodies:

There are eighteen areas of interventions of stipulated for ULB, however as per the Fourth Commission's report on 12 such areas of functions have been given to ULBs. These 18 areas are:

i) Urban planning including town planning
ii) Regulation of land use and construction of buildings
iii) Planning for economic and social development
iv) Roads and bridges
v) Water supply for domestic, industrial and commercial purposes
vi) Public health, sanitation, conservation and solid waste management
vii) Fire services
viii) Urban forestry, protection of the environment and promotion of ecological aspects
ix) Safeguarding the interests of weaker sections of society including the handicapped and mentally retarded
x) Slum improvement and up-gradation
xi) Urban poverty alleviation
xii) Provision of urban amenities and facilities such as parks, gardens, playgrounds;
xiii) Promotion of cultural education and aesthetic aspects;
xiv) Burial grounds, cremations, cremation grounds and electric crematoriums;
xv) Cattle ponds, prevention of cruelty to animals;
xvi) Vital statistics including registration of births and deaths ;
xvii) Public amenities including street lighting, parking lots, bus stops and public conveniences;
xviii) Regulation of slaughter houses and tanneries.

The ones marked in yellow are the six areas, pointed out by Fourth State Finance Commission, that the state had not devolved these functions to ULBs.

Most of the services provided by ULBs have been online. Land Record, Birth and Death registration, application for marriage registration, building plan approval, issuance of occupation certificate, approval of fire fighting scheme, NOCs, Water and Sewer Connection. Land registration or deed transfers take one working day implying efficiency in the level of work. Registration fee and Stamp duty are being charged at the time of property registration on Jamabandi Website. A minimum of Rs 100 and a maximum of Rs 15000 is charged as registration fee depending on the value of the property (Ref. Jamabandi Website). Similarly a stamp duty rate of 3%-5% is charged on various deeds.

White Paper of Finance Ministry of Haryana (2014) stated that following 74th Constitutional Amendment, the State Government initiated the Haryana Municipal (Amendment) Act, 1994, which empowered the ULBs to raise revenues. The ULBs are supposed to generate their own income through the following taxes and fees:

i) Property Tax
ii) Stamp Duty on property transactions in municipal areas
iii) Taxes on vehicles
iv) Electricity Tax
v) Development fee
vi) Excise Duty share
vii) Trade Tax
viii) Advertisement Tax
ix) Rent from municipal properties
x) Sale of land
xi) Others

Although these fees and taxes are collected by ULBs or by the State on behalf of the ULBs, but the Urban Local Bodies do not have the freedom to decide on the rates for these levies.

As far as the share is concerned in the second category, it has been done away with by State's 4th FC. White Paper has also stated that unless they have the freedom to levy their own rates they continue to be in deficits in terms of their revenue generated and resource needs. Table 7.8 shows how due to partial devolution power to ULBs the revenue deficit went out of proportion for ULBs from 2004-05 to 2013-14.

Table 7.8: Details of Revenue Receipts & Expenditure of Urban local Bodies (In Rs Crore)

Year	Own Tax and Non-Tax Revenue	Revenue Expenditure	Surplus Gap (2-3)
2004-05	126.7	173.11	-46.41
2005-06	1442	175.78	1266.22
2006-07	193.93	225.73	-31.8
2007-08	147.79	222	-74.21
2008-09	164.36	276.03	-111.67
2009-10	347.17	290.92	56.25
2010-11	345.38	680.85	-335.47
2011-12	609.27	970.51	-361.24
2012-13	703.52	1020.83	-317.31
2013-14	907.39	1445.14	-537.75
Note : Data for 2013-14 is pre-actual			

Source: Based on the White Paper of Finance Ministry, Haryana, Volume 2, 2014 (Available upto 2013-14)

Table 7.8a: Details of Income and Total Expenditure of Local Bodies for recent years

S. No	Items	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	**Taxes on Income**	1.28	4.29	6.01	2.62	3.55	8.93
2	**Taxes on Commodity & Services of which**	57.8	95.15	115.94	295.11	106.33	86.69
a	**Vehicle tax**	11.04	11.66	12.84	12.45	14.38	12.81
b	**Water tax**	12	14.42	15.8	87.46	18.15	21.59
c	**Public safety**	12.46	13.82	21.01	25.27	9.77	10.87
3	**Taxes on Property and Capital of which**	163.42	198.42	400.44	531.2	264.44	578.86
a	**Taxes on buildings and land**	73.12	106.77	207.08	339.9	116.85	496.81
b	**Rents of lands and buildings**	83.57	85.21	186.26	176.19	141.83	70.01
4	**Education**	0.31	0.27	0.5	4.16	6.91	0.64
5	**Medical**	0.13	0.08	0.88	0.9	17.4	1.3
6	**Public Health**	90.06	85.67	117.89	6.16	60.52	5.23
7	**Revenue grants and contributions**	84.26	98.72	121.32	72.01	106.3	162.72
8	**Capital transfers**	218.61	239.88	386.52	452.9	366.25	367.07
9	**Other receipts of which**	826.89	1057.07	1375.34	1542.25	93.93	114.29
a	**Stamp duty**	362.21	419.96	536.76	333.17	1893.66	2256.83
	Total Income	1490.29	1828.62	2585.46	2916.55	2919.29	3582.56
	Total Expenditure	933.19	987.81	1367.76	1610.79	1501.68	1576.8

Source: Various Statistical abstracts of Haryana

Table 7.8a shows that devolution of functions to 'Local Bodies' have increased their own tax and non-tax revenue substantially, but still they have to depend on capital receipts and grants to meet up their revenue expenditure.

Table 7.9: Gross Fixed Capital Formation by the various Governments in Haryana

Type of Institution	2004-05	2005-06	2011-12	2013-14	2014-15	2015-16
Public Administration	1996.71	2168.99	7160.25	9957.76	11456.07	12686.46
Central Government	366.62	290.4	2099.03	2272.78	2343.26	2570.56
State Government	889.55	1152.46	3150	4670.19	4464.97	5779.38
Local Bodies	740.54	726.13	1911.22	3014.79	4647.84	4336.52

Source: Statistical abstract of Haryana, 2017-18, various issues.

Table 7.9 shows how Urban Local bodies created substantial share in Capital Formation in the state over the years at almost the same pasce with the central and state governments.

Functional Devolution of PRIs

As per the Haryana Panchayati Raj Act 1994, the following 29 items come under PRIs as per the Eleventh Schedule of the Act.

1. Agriculture, including agriculture extension.
2. Land improvement, implementation of land reforms, land consolidation and soil conservation.
3. Minor irrigation, water management and watershed development.
4. Animal husbandry, dairying and poultry.
5. Fisheries.
6. Social forestry and farm forestry.
7. Minor forest produce.
8. Small scale industries, including food processing industries.

9. Khadi, village and cottage industries.
10. Rural housing.
11. Drinking water.
12. Fuel and fodder.
13. Roads, culverts, bridges, ferries, waterways and other means of communication.
14. Rural electrification, including distribution of electricity.
15. Non-conventional energy sources.
16. Poverty alleviation programme.
17. Education, including primary and secondary schools.
18. Technical training and vocational education.
19. Adult and non-formal education.
20. Libraries.
21. Cultural activities.
22. Markets and fairs.
23. Health and sanitation, including hospitals, primary health centres and dispensaries.
24. Family welfare.
25. Women and child development.
26. Social welfare, including welfare of the handicapped and mentally retarded.
27. Welfare of the weaker sections, and in particular, of the Scheduled Castes and the Scheduled Tribes.
28. Public distribution system.
29. Maintenance of community assets.

The Fourth State Finance Commission reports that there had been new initiatives of the State Government reports that to empower each Gram Panchayats, Panchayats and Zila Parishad in 2012 by enhancing the amount budgeted for each work under these three rural local bodies. Gram Panchayats were empowered to appoint workers for cleanliness. PRIs participated in implementing Centrally Sponsored Schemes such as Sampoorna Gramin Yojana, Indira Awas Yojana, Drinking Water and Rural Sanitation, National Rural Employment Guarantee Scheme and other national level schemes. Model Villages scheme was launched to provide city like urban amenities in designated rural areas. Gram Panchayats were endowed with the responsibilities to maintain the rural schemes of Pavement of streets, Drainage for disposal of waste water, Pipelines for supply of drinking water, Street lights, Construction of retaining walls and other facilities. Haryana Rural Development Authority (HRDA) was set up for housing, environmental and other civic infrastructural needs of the rural areas.

Other schemes that are running currently are

- Chaupal subsidy scheme
- Surcharge on VAT for PRIs
- Swach Bharat Mission
- Special Development works in Rural areas
- State Puraskar scheme for Sanitation Incentive
- Rural Health and Sanitation Programme

As per the latest data of 2016-17 available, the number of rural local bodies has increased manifold (Table 7.10)

Table 7.10: Rural Local Bodies till 2016-17

Number of Gram Panchayats	**6186**
Number of Panches	**60436**
Number of Block Samities	**140**
Number of Zila Parishads	**22**

Source: Statistical Abstract of Haryana, 2016-17

Salaries and Compensation has increased substantially as compared to 2016-17, given to PRIs. In the same year share in excise duty increased substantially.

Table 7.11: Some components of Financing schemes of Local Bodies

Year	2015-16 (Actual)	2016-17 (BE)	2016-17 (RE)	2017-18 (BE)
Excise duty share to Local bodies				
PRI	109.99	107	216.07	175
ULB	182.74	140.12	283.5	225
TOTAL	292.74	247.12	499.57	400
Salaries and Honorarium paid to PRIs				
Total	23.48	32	32	31.4
Contribution from the proceeds of Stamp duty to ULBs				
Total	427.49	726	726	798.68

Source: Budget 2018-19

ULB and PRI performance audits

The following list of performance audits have been conducted by Local Body Wings of Audit department in the last five seven years. No separate CAG audited reports are published for Local Bodies. Scheme-wise reports fall under Social Sector audit reports.

Table 7.12: List of Audits conducted for Local Bodies

List of Performance Audit conducted during last five years			
S. No.	**Name of Scheme**	**Department**	**Year**
1.	Mahatma Gandhi National Rural Employment Guarantee Scheme	Rural Development	2011-12
2.	Indira Awaas Yojana	Rural Development	2012-13
	Working of Urban Local Bodies	Urban Local Bodies	2012-13
3.	Total Sanitation Campaign (Centre review)	Development and Panchayat Department	2013-14

4.	Integrated Housing and Slum Development Programme	Urban Local Bodies	2014-15
List of Thematic Audit conducted during last five years			
Sr.No.	Name of scheme	Department	Year
1.	Total Sanitation Campaign	Development and Panchayat	2013-14
	Leasing of Municipal Land (ATIR)	Urban Local Bodies	
2.	Backward Region Grant Fund (BRGF)	Rural Development	2014-15
	Compliance Audit of "Audit of Scheme Rules 2011" (Social Audit)		
3.	Management of own fund by Municipal Boards including collection of Revenue	Urban Local Bodies	2015-16
	Development of SC Bastis		
4.	Construction of Toilet under Swachh Bharat Mission (SBM)	Urban Local Bodies and Development and Panchayat Department	2016-17 (Audit Report on Social, General and Economic Sectors (Non-PSUs))

Source: AG Haryana Website, http://aghr.cag.gov.in/lb.asp

Separate financial audits and income and expenditure statements should be implemented. Some states like Gujarat and Maharashtra have separate Financial statements of Local Bodies. The annual statement provided by the Directorate of ULB, Government of Haryana is an updated and accounted till 2015-16. Thus this proves that there is a substantial delay in the accounting procedures of Urban Local Bodies.

Findings and Recommendations

The share of Central grants was maintained at 65:35 ratio among Panchayati Raj Institutions (PRIs) and Urban Local Bodies (ULBs). The budgetary transfers were made based on recommendations of Fourteenth Finance Commission and Fourth State Finance Commission.

It was observed the actual transfers of grants were based on actual needs. Central plus State grants were quite adequate. However due to partial devolution of power to ULBs the revenue deficit went out of proportion for ULBs from 2004-05 to 2013-14. The rates of taxes collected by ULBs are not decided by themselves and they are unable to meet their own expenditure needs

and it leads to rising deficits, though the total income exceeds total expenditure by means of grants, capital transfers and loans by the Local bodies

Land registration, Birth and death registration have improved in the state by implementing online service portals. However Financial auditing of Urban Local Bodies and Panchayati Raj Institutions are lagging behind and needs to be improved.

Chapter 8

Performance of the State PSE of Haryana

The Public Sector Enterprises play a very vital role in the growth and development of an economy. These are created to undertake commercial activities and other functions as assigned by the State Government from time to time. To facilitate faster decision making these entities were allowed to raise their own resources and spend the same to achieve the objectives for which they were established.

This chapter attempts to provide an overview of the financial health of the Public Sector Enterprises (PSEs) in the state of Haryana. The data presented here will be useful in understanding the functioning of these enterprises which in turn would help one formulate measures for reform and improvement. It contains the analysis of the performance of the State PSEs based on their physical and financial parameters.

Out of a total of 42 State Public Enterprises in Haryana, 23 are registered under the Companies Act, 1956 and the remaining 19 are registered under the Co-operative Societies Act, 1984. Of the 42 PSUs, 31 are working PSUs.

Government Stake and Investment by the State Of Haryana

The Government of Haryana has substantial financial stake in these PSUs. This stake is of mainly three types: Share Capital and Loans; Special Financial Support (budgetary support-grants and subsidies) and Guarantees.

As per latest finalised accounts of the PSUs as on 30 September 2017, of the total investment in State PSUs, 99.40% was in working PSUs and the remaining 0.60% in non-working PSUs.

Table 8.1 Total Investment in PSUs (Paid-up capital, Free Reserves and Long-term loans)

Working PSEs (in Rs crores)	44,361.19
Non Working PSEs (in Rs crores)	25.47
TOTAL (in Rs crores)	44,361.19

Source: Report of the CAG of India on the PSE, 2017

The PSEs are broadly classified in four groups:

1) Agricultural & Allied Sector PSEs
2) Cooperative Sector PSEs
3) Industrial and Infrastructure PSEs
4) Electricity Sector PSEs

We will analyse these in details next, except for the electricity sector units which are examined separately in the next chapter, i.e. Chapter 9.

1) Performance of PSEs in Agriculture and Allied Sector

There are four PSEs under the sub group of Agriculture and Allied Sector. These are:

i) Haryana Agro Industries Corporation Limited - Its main objective is to formulate agro-based industries, carry on activities such as the sale of seeds, fertilizers and agricultural implements through a network of 17 farmer service centers. In addition, it undertakes procurement activities under the Minimum Support Price (MSP) regime

ii) Haryana Seeds Development Corporation Limited - the objective of organizing production and distribution of certified seeds to the farmers of the State at reasonable rates. Its market share is only about 15-20 percent of the total seed distribution in the State.

iii) Haryana Land Reclamation and Development Corporation Limited - Its mandate includes sale of agriculture inputs, production of seeds and reclamation of degrading soil. The company is an instrumentality of the State for the distribution of agriculture inputs like gypsum, urea, zinc sulphate, etc. Over the years the company has diversified its activities, running three gas agencies and petrol pumps, which is not the original mandate of the corporation. It also has income from rental of shops.

iv) Haryana State Warehousing Corporation Limited - Its principle mandate is to build go-downs and warehouses at suitable places, to decrease wastage and losses in storage and to promote scientific storage facilities.

The PSEs under this grouping saw their performance improve from 2008-09 to 2016-17. The 'turnover' has shown an impressive growth of about 5.3 times (at CAGR of 22.7%). Profits have also improved at a CAGR of about 8.4% at a more modest rate than turnover (Table 2). This also resulted in improvement in turnover per employee as well as profits per employee (Table 3).

Table 8.2: Financial Performance of PSEs in Agriculture and Allied Sector (Rs crores)

Years	Total Debt	Turnover	Profit / Loss (PAIT)	Accumulated Profits/Losses
2008-09	78969.3	87977.5	1186.0	31893.5
2009-10	170148.7	126950.9	2698.5	33922.1
2010-11	57925.9	178164.1	2981.0	33058.1
2011-12	128155.3	152708	2454.4	34907.5
2012-13	193440.4	215195	17813.3	25343.1
2013-14	110574.3	309011.3	2672.7	27254.3
2014-15	60311.1	426715.2	-5482.8	18261.0
2015-16	57540.6	499936.2	2433.8	16879.7
2016-17	55790.7	553072.7	2454.5	20306.0
Growth	**-29.4**	**528.7**	**107.0**	**-36.3**
CAGR	***-3.8***	***22.7***	***8.4***	***-4.9***

Source: Profile Of Public Sector Enterprises By The Department Of Finance, State Of Haryana (Various Years)

Overall this has helped in reducing the Total Debt of these PSEs by about 29% in the period 2008-09 to 2016-17 which contributed to reduction in the Debt-equity ratio which also fell from 47.4 in 2008-09 to 32.2 by 2016-17.

However, profits have been hovering Rs 2400 – 3000 crores in last 9 years, however, there were losses of over 5400 crores in one year and high profits in 2012-13.

The accumulated profits in this period come down from Rs 30000-35000 crores range to 20000-25000 crores range (Figure 2) This requires more detailed analysis about the different PSEs under this segment to examine the issue in detail. It is out of scope for the present study.

Table 8.3: Financial Performance of PSEs in Agriculture and Allied Sector

Years	Turnover per Employee (Rs crores)	Expenditure per Employee (Rs crores)	Profit per Employee (Rs crores)	Accumulated Profit per Employee (Rs crores)	Gross Profit Margin	Debt Equity Ratio	Current Ratio
2008-09	83.2	0	0.4	13	0	47.4	4.2
2009-10	128.7	91.5	0.9	13.1	0.1	102.5	4.7
2010-11	195	6.9	1	10.6	0.1	34.4	2.7
2011-12	197.5	4.8	1.1	11.8	0	76.6	3.5
2012-13	316.5	5.8	-11	10.1	-0.3	116.8	5.8
2013-14	534.5	1.4	0.7	10.4	0.1	66.4	3.7
2014-15	279.4	7	-6.1	1.9	0	35.9	1.2
2015-16	285.8	-3	1	3.1	0	33.8	1.2
2016-17	292.1	-5.3	0.8	7.8	0	32.2	1.2
Growth	**251.3**	**35133.3**	**96.5**	**-39.8**	**-127.8**	**-32.1**	**-72.3**
CAGR	**15**	**91.9**	**7.8**	**-5.5**	**-186.7**	**-4.2**	**-13.3**

Source: Profile of Public Sector Enterprises by The Department Of Finance, State Of Haryana (Various Years)

The performance in terms of productivity tells us that turnover per employee has improved by about 3.5 times (at about CAGR of 15%) in this period. We also can notice that the expenditure per employee has been falling. Profit per employee has been fluctuating and it does not show any discernible pattern although overall it improved slightly in this period. All these helped improve the Debt-equity ratio from 47.4 in 2008-09 to 32.2 by 2016-17.

Performance of PSEs in the Cooperative Sector

Cooperative Sector PSEs include the following enterprises:

- The Haryana State Federation of Cooperative Sugar Mills Limited and its 10 Sugar Mills.
- The Haryana State Cooperative Apex Bank Limited.
- Haryana State Cooperative Agriculture and Rural Development Bank Limited. (HSCARDB)
- The Haryana State Cooperative Supply and Marketing Federation Limited (HAFED).
- Haryana State Federation of Consumers Cooperative Wholesale Stores Ltd. (CONFED).
- The Haryana Dairy Development Cooperative Federation Limited.
- The Haryana State Cooperative Housing Federation Limited.
- The Haryana State Cooperative Labour & Construction Federation Limited.

In the Cooperative sector the turnover of the PSEs has improved by about 171 percent which means the compound annual growth rate (CAGR) of 11.7%. Despite this the profits have fallen and turned into losses as also the accumulated profits have piled up by close to 20 times and reached around Rs 1940 crores. These could create fiscal challenges soon if not reigned in time.

Table 8.4: Financial Performance of PSEs in the Cooperatives Sector (Rs crores)

Year	Total Debt	Turnover	Profit / Loss (PAIT)	Accumulated P/L
2008-09	999571.6	432769.2	6792.9	-2031.5
2009-10	1063411.1	584080.2	4321.3	-4571.7
2010-11	2491109.5	1514937.4	11221	-1847.1
2011-12	2955924.8	1405045.2	12776.4	-2483.8
2012-13	3077230.4	1826743.7	2355.8	62926.3
2013-14	2349053.8	2286409.7	-4576.4	46477.8
2014-15	1890528.7	1102763.8	-62677.3	-150630.5
2015-16	2011781.5	1098199.8	-32970.6	-188507.3
2016-17	1243803.7	1174236.6	-6366.4	-193994.7
Growth	**24.4**	**171.3**	**-193.7**	**9449.3**
CAGR	**2.5**	**11.7**	**-199.3**	**66.0**

Source: Profile Of Public Sector Enterprises By The Department Of Finance, State Of Haryana (Various Years)

Regarding the performance of these PSEs per employee, the 'turnover per employee' went up from 59.3 lakh in 2008-09 to 179.8 lakh in 2016-17(CAGR of 13.1%). The 'expenditure per employee' rose at a similar rate of 13% in this period. The profit per employee rose at a healthy rate of 27.8 by almost 8 times in this period. However, most of the increase in profits came in last 2 years before that the PSEs in this group had started incurring losses and performance between 2008-10 and 2014-15 had been worsening. All these helped in reducing the Debt-Equity ratio from 27.2 in 2008-19 to 20.35 by 2016-17.

Table 8.5: Financial Performance of PSEs in Cooperatives Sector(Rs Crores)

Years	Turnover per Employee	Expenditure per Employee	Profit per Employee	Accumulated Profit per Employee	Gross Profit Margin	Debt Equity Ratio	Current Ratio
2008-09	59.3	2.24	1.18	1.5	0.11	27.2	1.5
2009-10	83.96	3.22	0.87	0.15	0.09	27.55	1.75
2010-11	115.66	4.17	0.82	2.27	-0.01	31.57	1.75
2011-12	114.95	4.48	0.36	0.81	0.09	31.79	1.74
2012-13	154.74	4.37	-1.66	1.79	-0.01	28.93	2.41
2013-14	205.19	5.02	-2.71	-2.88	-0.02	21.18	2.19
2014-15	141.91	5.38	-2.24	-7.51	-0.03	22.5	1.85
2015-16	139.21	5.55	0.2	-8.98	0.01	22.11	2.22
2016-17	179.82	6.71	10.76	2.31	-0.18	20.35	2.52
Growth	**203.2**	**199.6**	**811.9**	**54.0**	**-263.6**	**-25.2**	**68.0**
CAGR	**13.1**	**13.0**	**27.8**	**4.9**	**-205.6**	**-3.2**	**5.9**

Source: Profile of Public Sector Enterprises by The Department Of Finance, State Of Haryana (Various Years)

Performance of PSEs in the Industrial & Infrastructure Sector

Industries And Infrastructure Sector PSEsIncludes Haryana State Roads and Bridges Development Corporation Ltd, Haryana Financial Corporation, Haryana State Industrial and Infrastructure Development Corporation Ltd. and Haryana Roadways Engineering Corporation Ltd.

The PSEs in this segment have been profitable but the profits have been declining and since 2013-14 they are down by about 90%. Turnover has risen by 2.7 times at CAGR of 15.7% but the Debt has risen at more than twice this rate and reached 14 times the level in 2008-09 (Table 6).

Table 8.6: Financial Performance of PSEs in the Industrial and Infrastructure Sector (Rs Crores)

Year	Total Debt	Turnover	Profit / Loss (PAIT)	Accumulated P/L
2008-09	58927.0	30034.8	6860.2	-9963.5
2009-10	43372.7	28894.4	6763.7	9266.3
2010-11	34923.5	29507.1	9314.8	4178.0
2011-12	86119.1	41357.3	12428.6	13188.6
2012-13	336234.1	45762.7	8950.8	31368.0
2013-14	440695.1	558817.0	59101.2	87390.6
2014-15	466275.0	127888.6	26729.1	106927.8
2015-16	573043.0	98837.0	8863.0	118628.2
2016-17	887218.0	112006.9	6151.1	125541.7
Growth	**1405.6**	**272.9**	**-10.3**	**1254.8***
CAGR	**35.2**	**15.7**	**-1.2**	**38.5***

*SOURCE: PROFILE OF PUBLIC SECTOR ENTERPRISES BY THE DEPARTMENT OF FINANCE, STATE OF HARYANA (various years) Note - * shows the Growth and CAGR since 2009-10.*

The performance per employee is mixed. The 'turnover per employee has risen at a CAGR of about 7.6% whereas 'profit per employee' has reduced a bit. Expenditure per employee has risen at a high rate with CAGR of 21.3%. As a result of these the Debt-equity ratio of these PSE has jumped from 2.39 in 2008-09 to 45.4 by 2016-17 which is around 18 times. This is worrisome situation as it will have fiscal implications sooner than later.

Table 8.7: Financial Performance of PSEs in the Industrial and Infrastructure Sector(Rs Crores)

	Turnover per Employee	Expenditure per Employee	Profit per Employee	Accumulated Profit per Employee	Gross Profit Margin	Debt Equity Ratio	Current Ratio
2008-09	37.83	1.64	4.51	-40	0.14	2.39	1.93
2009-10	43.68	2.35	9.45	15.8	0.08	1.28	3.49
2010-11	41.78	3.5	7.82	-19.44	0.26	0.76	1.42
2011-12	64.44	4.28	15.11	-9.18	-0.21	2.73	1.67
2012-13	81.97	5.22	4.06	10.88	0.15	16.89	1.2
2013-14	309.28	4.6	25.78	35.92	0.09	22.38	1.01
2014-15	139.25	6.12	43.14	27.16	0.34	23.87	0.94
2015-16	81.17	6.26	13.09	44.51	0.24	29.33	1.06
2016-17	73.12	9.29	4.22	52.02	-0.08	45.41	1.08
Growth	**93.3**	**466.5**	**-6.4**	**-230.1**	**-157.1**	**1800.0**	**-44.0**
CAGR	***7.6***	***21.3***	***-0.7***	***-203.0***	***-194.0***	***38.7***	***-6.2***

Source: Profile of Public Sector Enterprises by the Department Of Finance, State Of Haryana (Various Years)

Summary & Conclusions

The PSEs financial performance in Haryana has been fluctuating a lot. This calls for a thorough evaluation of their performance as these could create serious fiscal challenges in future for the state government. Evaluating their economic and social impact for the objectives they were created needs closer scrutiny of their physical and financial performance.

Performance of PSEs in Agriculture and Allied Sector has improved their performance from 2008-09 to 2016-17. The 'turnover' rose by about 5.3 times (at CAGR of 22.7%). Profits also went up by about 8.4% per annum in these years. This helped improve the turnover per employee (around 250 percent) as well as profits per employee (by 100 percent).

Performance of PSEs in the Cooperative Sector shows promise. The turnover of these PSEs improved and it grew by about 171 percent (around 11.7% per annum). Despite this though the profits fell and turned into losses due to which the accumulated losses have piled up.

PSEs in the Industrial & Infrastructure Sector have been profitable but the profits have been declining and since 2013-14 they are down by about 90%. Turnover has risen by 2.7 times (at CAGR of 15.7%) but the Debt has risen at more than twice this rate and reached 14 times the level in 2008-09.

The performance per employee is rather mixed. The 'turnover per employee has risen at about 7.6% per annum whereas 'profit per employee' fell a bit. Expenditure per employee has risen at a high rate with 21.3% annually. As a result of these the Debt-equity ratio of these PSE has jumped from 2.39 in 2008-09 to 45.4 by 2016-17 which is around 18 times. This is worrisome development as it will have wider fiscal implications sooner than later.

The overall PSEs financial performance in Haryana has been mixed in this period. These could create fiscal challenges in future unless reigned-in in a timely manner. To improve their performance, the state government could consider listing these by divesting their state to 74% and, then, after a few years evaluating their performance.

Special Section to Chapter 8 on PSEs - Public Bus Transportation

Performance of Haryana Roadways

Efficient and affordable public transportation is an important ingredient of human mobility to help people reach their workplace and offices from their places of residences.

The public transport system also helps in containing pollution and traffic congestion which has become a serious hazard of today's life in most cities. These negative externalities not just act as a major impediment to productivity of our force but also are becoming a serious health issue. This is clearly visible in rising number of private cars and two-wheelers in most states of India and Haryana is no exception to this. Children and senior citizen are major victims of this as they are more sensitive and vulnerable.

This is partly because of the inadequate augmentation of the public transportation facilities. The obsession with closing down of public undertakings which are making losses is a serious policy hazard for general public. The result is that the quality of these utility services has been worsening with time.

Many policymakers have forgotten the reasons for crating the public transport and infrastructure entities in government. A fallout of faltering public transportation has been the rise in the fuel bill which not just makes the individuals to spend more on energy but also country to import more fossil fuel by spending precious foreign exchange. In fact, for India oil has become the single biggest import. Efficient public transport systems can help save the foreign exchange. This could help improve the precarious BOP problem country faces from time to time.

Due to these benefits most countries/cities provide support in various forms to ensure that the people use more and more public transportation and rely less on private vehicles. This also helps these countries to reduce number of accidents as public transport systems are less accident prone than private vehicles.

Following these trends let us examine how the public transportation is doing in Haryana.

Haryana Roadways – The Public Bus Network

Haryana Roadways (HR) has been the main Public Transport unit of the Government of Haryana. Haryana Roadways is a Major Part of Haryana Transport Department and is the principal public transport service provider for passengers in the state for intra state and interstate movement. The consistent quality and punctuality of the service provider have earned it a name in all neighbouring states and have become the first choice of the passengers, especially from middle and lower income class population.

Introduction & History

In 1966, when Haryana was carved out of Punjab, a need of separate public transport entity was felt which would connect every part of the state with other parts effective and efficient manner. So, HRTL was established, with 2-Regional Transport Authorities (RTA) in 1966. On 1

December 1987, three more RTAs were added (at Ambala, Hisar and Faridabad). On 16 January 1991, three more RTAs were created at Rohtak, Karnal and Rewari. Now, each district headquarters has its own Regional Transport Office (RTO) and it is headed by Regional Transport Secretary. Vehicle registration and driving licenses can also be obtained from each district headquarters (i.e. the RTA office) and Tehsil.

Office of the Director General State Transport is responsible for providing well-coordinated, economical, safe and efficient transport action services to the public of the State. Haryana Roadways, a State Government Undertaking, is the principal service provider for passenger bus transportation in the State. Over the years Haryana Roadways has earned a name for itself for the range and quality of services provided by it. In tune with the emerging requirements of the travelling public, Haryana Roadways has undertaken a series of new initiatives to provide better services to its clients. New Volvo AC bus services 'Saarthi' have been introduced on Chandigarh-Delhi-Gurgaon, and Chandigarh-Delhi-Faridabad routes. Some of the trips are also touching the Indira Gandhi International (IGI) Airport and the Domestic Airport Delhi. 'Haryana Gaurav' Bus with Deluxe Facilities at Ordinary Fare - A new Bus service was introduced, popularly known as ‘Aam Adami Ki Khas Bus’, which provides the latest facilities like Deluxe type 2x2 seats, FM Radio, Mobile Charger, Pneumatically Operated Door, tinted Glass & Curtains etc at ordinary bus fare. This bus over time is expected to become the main stay of Haryana Roadways for its distinct inter-city operations. About 200 buses are already in operation on different routes. 'Haryana Uday', fueled by CNG, bus services were launched in the National Capital Region of Delhi. 300 buses are already in operation on different routes within the NCR of the state.

Fleet of Buses

Haryana Roadways has a fleet of approx. 4068 buses being operated by 24 depots, each headed by a General Manager, and 17 sub-depots functioning under the depot concerned. These services are being provided to every part of the State as well as to important destinations in the neighbouring States. Haryana Roadways plies on an average 1.11 million Km every day and carries 1.12 million passengers daily on 1116 Intra-State and 446 Inter-State routes. The state has decided to augment its fleet by 4,068 by the end of year 2017. New Volvo AC bus services 'Saarthi' was introduced on certain routes. Some of the trips are connected with the Indira Gandhi International (IGI) Airport and the Domestic Airport Delhi.

Haryana Roadways Engineering Corporation (HREC)

Haryana Roadways Engineering Corporation Ltd. is a subsidiary of Haryana Roadways. It was incorporated on 27 November 1987 in Gurgaon. It was established to fabricate bus bodies mainly for Haryana Roadways. It fabricated 503 bodies in 2010-2011 alone. It is a profit making organisation which registered a profit of ₹5.86 crores in year 2010-2011. More details about HREC are covered in the main part of the chapter on PSEs.

The performance of the Haryana Roadways (HR) has been reasonable good in the recent years. The physical productivity indicators such as Kilometers operated have improved by about 20%from 2009-10 to 2016-17. The number of buses rose by about 29% in this period. Fleet utilization has come down slightly possibly due to rising traffic congestion due to rising private vehicles in the state. The mileage, however, has remained relatively stable though it fell from

around 4.7 and to 4.67 despite this challenge. Ridership has risen by 10% whereas the staff strength rose by little over 9%. Staff productivity went up by 23.1% which is really a plus. Despite rising traffic congestion the HR staff has managed another important achievement and that is the reduction in number of accidents by 26% from 0.08 per lakh kilometers to 0.059 by 2017-18, possibly the lowest among all the STUs.

On the financial performance side, one could note that the 'Total Receipts' rose by a respectable 79% whereas the 'Receipts per Km' went up by 50.6% in this period. However, due to rising oil prices and other input cost the 'Total Expenditure' in this period rose by 98%. However, on a per kilometer basis, a more relevant indicator, the 'Expenditure Per Km' rose by 59%. Quite expectedly when expenditures are rising at faster pace than the receipts then the net losses will also rise. These rose by 150% in this period.

Due to the rising losses of public bus company, despite improved performance, the policymakers are tempted to raise fares or consider outright privatization of the service. The issue and challenge for the state government in coming months and years will be facing is to whether to serve larger public interest and enhance public bus fleet which has the potential to help mitigate air pollution as well as road congestion and associated health costs or be worried only about public exchequer.

According to the welfare economics the losses of public transport are not undesirable if they help correct the problem of negative externalities If that does not happen then the society will collectively pay the price for this as it is happening all over the countries and environment pollution has become a global problem.

If Haryana Government is more imaginative then it may be in the interest of everyone that public bus system is strengthened so that people move to public transport and move away from private vehicles. The important challenge is to make sure that the efficiency of public system is improved and buses are available to all easily. Internet technology and PPP model such as in Delhi may help reduce the losses as well as improve the accessibility of buses for masses.

Haryana Roadways - Physical Performance												
S No.	**Particulars**	**Unit**	**2009-2010**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18** (Apr-Oct)	**Growth (%)**
1	Avg. fleet held	(No.)	3203	3249	3402	3755	3816	4083	4170	4145	4068	29.4
2	Fleet Utilisation	(%age)	95	95	93	93	89	91	90	91	90	-4.2
3	Effective KMs Operated	(Lac KMs)	3832	3797	3768	4226	4213	4666	4589	4602	2529	20.1
4	Effective KMs/day	(Lac KMs)	10.5	10.4	10.32	11.58	11.54	12.79	12.54	12.61	11.82	20.1
5	Load Factor/Occupancy	(%age)	74.7	70.9	74.3	79.06	71.86	72.49	75.29	68.76	71.58	-7.9
6	Vehicle Utilization	(Km/Bus/Day)	328	320	304	314	303	313	301	304	291	-7.2
7	Fuel Efficiency - KMPL	(Km/ Litre)	4.7	4.69	4.73	4.68	4.63	4.67	4.66	4.68	4.67	-0.4
8	Ridership - Passengers Carried	(Lacs)	4053	4183	4028	4527	4466	4683	4554	4459	2322	10.0
9	Passengers Carried per day	(Lacs)	11.1	11.46	11.03	12.4	12.24	12.83	12.44	12.22	10.85	10.1
10	E. Total Staff	(No.)	16689	18321	17452	16536	16619	18970	18634	18259	17900	9.4
11	Staff Productivity	(Effective Kms/Person/Day)	61.32	64.06	63.28	62.2	63.2	71.25	72.25	75.51	73.13	23.1
12	No. of Accidents	(No.)	321	296	259	295	241	259	263	284	152	-12
13	No. of Accidents/ per Lac Kms		0.0822	0.0766	0.0675	0.0685	0.0561	0.0545	0.0564	0.0607	0.0591	-26

Source: Statistical Abstract, various issues.

Haryana Roadways - Financial Performance												
Sr. No	**Particulars**	**Unit**	**2009-2010**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18 (Apr-Oct)**	**% Growth**
1	Total Receipt	Rs. Lac	69957	76166	85499	100077	109900	125554	123531	125401	73277.	79.3
2	Receipt Per Km	Paise (Ps)	1826	2005.9	2268	2368	2608	2732	2732	2749	2897.	50.6
3	Total Expenditure	Rs. Lac	93972	103899	107092	128558	150579	173802	174062	186286	111174	98.2
4	Total Expenditure/ Km	Ps/KM	2542.5	2736.3	2842	3042	3574	3722	3793	4048	4395	59.2
5	Net Profit/ Loss	Rs. Lac	-24015	-27734	-21593	-28481	-40679	-50270	-48661	-59773	-37897	149
6	Total resources to State	Rs. Lac	-9130	-11073	-3613	-8083	-19032	-26023	-23545	33685	-23708.9	-468.9
7	Total resources to State/Km	Ps/ KM	-238.28	-291.6	-95.88	-191.3	-452	-557	-513	-732	-937	207

Source: Statistical Abstract, various issues.

Chapter 9

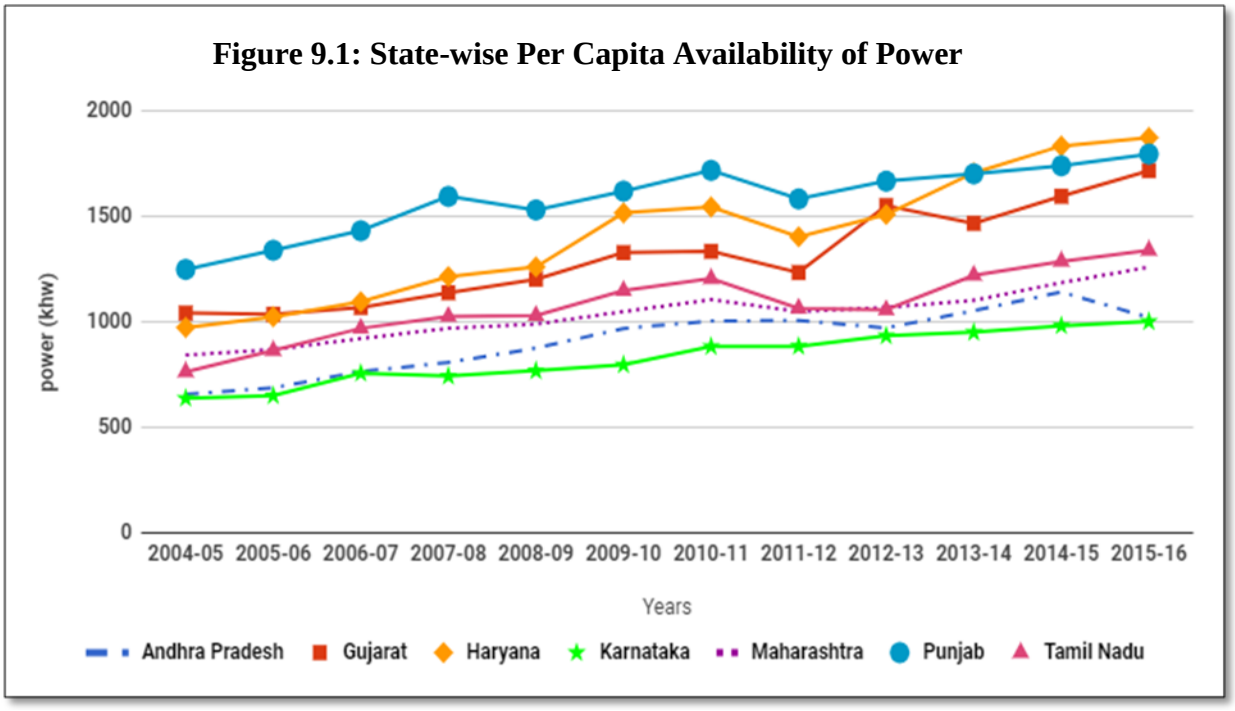
Power Sector in Haryana – Reforms & Restructuring Issues

Introduction

Electricity is an important universal input to most of the economic activity of a nation. Availability of affordable quality power is a necessary condition for the rapid growth and balanced regional development of the economy. This makes industry as well as agricultural activities more viable as well as internationally competitive. So, the role of this crucial infrastructure input in enhancing employment potential and creating incomes and tax potential is very significant.

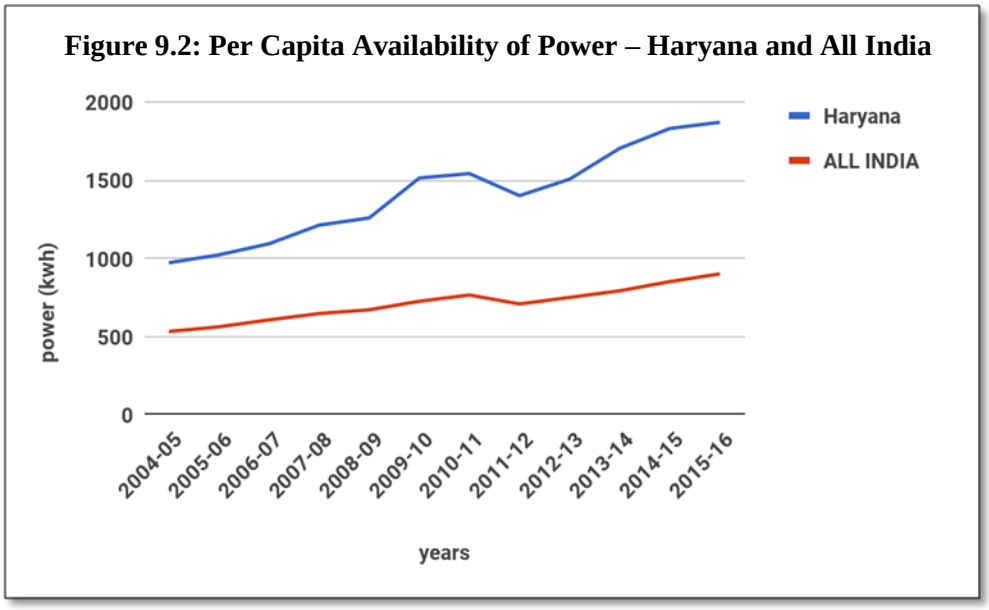
Haryana has become the top state in terms of the per capita power availability across all the states. The state improved its performance significantly and has moved to the top position after 2013-14. Its ranking moved from number three in 2004-05 to number two by 2013-14 (Figure 9.1). So, undoubtedly the state has made good progress relative to its counterparts in terms of power availability. Even in terms of national average, Haryana is way ahead and has about twice the per capita power availability relative to national average (Figure 9.2). However, the power sector across most Indian states has been financially stressed due to various reasons as we will see later in this chapter.

Figure 9.1: State-wise Per Capita Availability of Power



Source: India Energy Portal, NITI Aayog

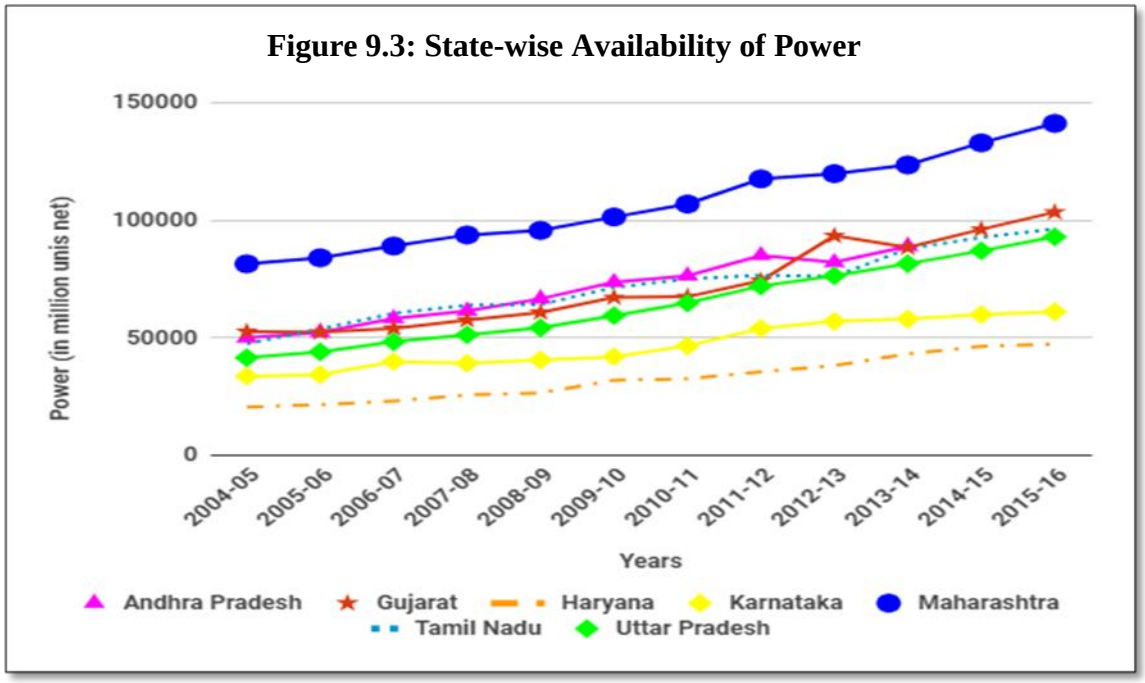
Figure 9.2: Per Capita Availability of Power – Haryana and All India



Source: India Energy Portal, NITI Aayog

However, Haryana's ranks seventh spot in terms of aggregate power availability or power consumption in the country and this ranking has not changed since 2004-05. This is because it is a relatively small state in terms of geography and population. Maharashtra and Gujarat top the list as they are bigger in size and have much larger population (Figure 9.3).

Figure 9.3: State-wise Availability of Power



Source: India Energy Portal, NITI Aayog

In the 1990s, the Government of India introduced various reforms in the power sector to improve its working and enhance its efficiency. In 1994, the National Development Council (NDC), in association with international funding agencies such as IBRD and ADB initiated power sector reforms. The focus was on unbundling of the electricity sector. The process was initiated to

create separate entities for generation, transmission and distribution companies for improving the overall efficiency of the sector. The reforms also opened the sector for the private sector participation and regulatory institutions were set up for effective regulation.

Prior to these reforms the power sector was mainly in the hands of state government owned public sector companies which were largely vertically integrated. The generation, transmission as well as distribution of electricity all activities were in the hands of the SEBs. Due to various reasons the SEBs were in red and were suffering from huge losses[1]. This was becoming a serious problem for the state public finances and creating ever rising levels of debt which had to be underwritten by the state governments. One of main causes for the losses has been the high and rising levels of 'transmission and distribution losses (T&D losses). The low power tariffs for the agricultural sector have further compounded the problem as they tend to be highly subsidized.

Due to the huge accumulated losses these SEBs have become completely dependent on the state budgets for support to be able to run their operations to meet the needs of the consumers.

To tackle these challenges the State Government of Haryana undertook major power sector reforms. The objectives of the reforms in Haryana has been to improve reliability and creditworthiness of the power industry and to create an atmosphere which is conducive to private investment, and promotes competition especially for distribution which is likely to enhance efficiency and facilitate sustainable development of the power sector in the state. Haryana Government was the second state in India to undertake these reforms in the late 1990s[2].

Power Sector Reforms In Haryana

The power sector being a main driver of economic activity in any state, however, power sector in most Indian states have been in distressed financial state with adverse repercussions for the state finances over the years.

Haryana's requirement for power has been increasing every year and generation in the state was not able to meet the demand. Haryana made major thrust on reforms in the power sector in the late 1990s to make this sector viable.

For fast growth and progress of the state economy, the policymakers felt the need of increasing investments, healthy environment, expanding power generation capacity, increasing distribution infrastructure facilities, increasing efficiency. Government tried to rationalize subsidies to contain the losses. Restructuring programme was intended to reestablish sustainable power sector in the state.

In order to achieve sustainable development, the State Assembly initiated major reforms and enacted 'The Haryana Electricity Reform Bill, 1997'.The Haryana Electricity Reform Act, 1997 became effective from August 14, 1998. The Act envisaged establishment of Haryana Electricity Regulatory Commission for guiding, of generation, transmission, distribution, trading and usage of electricity. As an outcome, Haryana Electricity Regulatory Commission got established. It was set up to guide the electricity sector in all aspects such as areas validation of electricity in-

[1] 14th Finance Commission Background Report on Haryana.
[2] 14th Finance Commission Background Report on Haryana.

charges, ensuring clear policies regarding subsidies, encouragement of efficient and environmentally friendly policies. The Act also provided opportunity for the involvement of private players in the power sector in the state.

Unbundling of Power Sector and Privatization

The state government unbundled the erstwhile Haryana State Electricity Board (HSEB) in August 1998 into separate functional entities[3] as below:

Haryana Electricity Regulatory Commission (HERC)

HERC was established on August 17, 1998 as a statutory body consequent to Haryana Electricity Reform Act, 1997. It has been assigned the power to determine the tariff for generation, transmission and supply of electricity in bulk and in retail.

Functions of HERC

Main functions of the HERC are as under:-

- To determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, within the State.

- To regulate the power purchase and procurement process of supply licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State.
    - To facilitate intra-state transmission and wheeling of electricity.
    - To Issue the licenses to persons looking for transmission licenses, distribution licenses and electricity traders with respect to their operations within the State.
    - To promote generation and co-generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also to specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution license.
- To adjudicate upon the disputes between the licensees and generating companies and to refer any dispute for settlement.
    - To levy fee for the purposes of this Act.
    - To specify State Grid Code consistent with the Grid Code specified under clause (h) of sub-section (1) of section
    - To specify or enforce standards with respect to quality, continuity and reliability of service by licensees.

[3] As a part of the reorganization of HSEB, all property, interest in property, rights and liabilities of the Board were vested with the state government on 14th August, 1998. The state Government, in turn, transferred the same on the same day through the First Transfer Scheme to two new companies incorporated under the Companies Act, 1956. HPGCL assumed the generation functions while transmission, distribution and system operation functions of HSEB were transferred to HVPNL. Thus, HSEB ceased to exist from August 14, 1998.

- To fix the trading margin in the intra-state trading of electricity, if necessary. • To discharge such other functions as may be assigned to it under this Act.43

Haryana Power Generation Corporation Limited (HPGCL)

HPGCL was established for generation of power on March 17, 1997. It was assigned the responsibility of working projects run by the state, maintaining them and also setting up new power generation projects[4].

Over the years, Haryana Power Generation Corporation Limited (HPGCL) established itself as a dynamic, growth oriented, World Class Company. Even now the corporation has not sufficient generation capacity which can bridge the gap between demand and supply.[5]

Haryana Vidyut Prasaran Nigam Limited (HVPNL)

On August 19, 1997, HVPNL was set up and the functioning of HSEB for distribution and transmission of power in the state was shifted to HVPNL on August 14, 1998. It was assigned responsibility of transmission and distribution of electricity and was accorded license for transmission[67]. It has been working towards providing quality service and to reduce transmission losses.

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[4] It gives a new standard in operating existing projects and even establishing new projects and tried to become global and competitive, for its power stations. It also put pollution control equipment to all its power stations. It also tried to minimize the impact of fly ash on the environment. It has also developed "Green Belt" in the plants and surrounding areas to generate eco-friendly power in the state. Objectives Of HPGCL:

- To provide cost effective, uninterrupted quality power at optimum efficiency.
- To make Haryana a power surplus State by maximizing generation from existing plants and by planning and implementing new generation projects.
- To explore all possible alternate sources of power generation.
- To minimize the impact of fly ash on the environment and to develop green belt.
- To monitor stack emission, ambient air quality, noise level, effluents etc.
- To minimize damage to men, material and machinery

[5] Power Generating Units Of HPGCL: The following thermal units are engaged in the generation of power in the state :

- Thermal Stations: Panipat Thermal Power Station, Deen Bandhu Chhotu Ram Thermal Power Project, Yamuna Nagar, Rajiv Gandhi Thermal Power Project, Khedar, Hisar & Indra Gandhi Super Thermal Power Project, Jhajjar is also contributing in generation of power on generation sharing basis. In addition,
- Hydro Stations: WYC Hydro Electric Station, Yamuna Nagar and Kakroi Micro Hydel Project, Kakroi, Sonepat, are also generating power on small scale as hydro power projects.

[6] Objectives of HVPNL

- Planning, design, construction, erection and maintenance of transmission lines, sub-stations of voltage level 66KV & above and communication facilities and appurtenant works.
- Maintaining an integrated and efficient power transmission system network.
- Wheeling of power in accordance with the policies, guidelines laid down by the State Government and Haryana Electricity Regulatory Commission (HERC) from time to time.
- Monitoring and maintaining Grid discipline and resolve Grid issues.
- Resourcing funds for Plan implementation. Augmenting and strengthening Power Transmission capability consistent with requirements.
- Acting as State Transmission Utility. • Ensuring adequate, safe and economical transmission of electricity with regard to quality, availability and reliability of services.

[7] The Company has also been entrusted with the ownership concern in two projects: BBMB and Indraprasth Power Station (Delhi Vidyut Board). HVPNL was organized to maintain an integrated and efficient power transmission system network related to Planning, designing, construction, manufacturing and maintenance of transmission lines, sub-stations of voltage level 66KV and above.

The Haryana Government implemented a Second Transfer Scheme on July 1, 1999 to transfer distribution system assets and liabilities from HVPNL to two distribution subsidiaries, Uttri Haryana Bijli Vitaran Nigam Limited (UHBVNL) and Dakshin Haryana Bijli Vitaran Nigam Limited (DHBVNL).

Haryana Power Distribution Sector

Two Discoms: Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) & Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) were established for distributing of power state-wise as mentioned above. The two Discoms work together with joint forum company called "Haryana Power Purchase Center (HPPC)" to procure power on their behalf which they are assigned to sell at the retail level. It is registered under the companies Act 1956 and purely a government of Haryana undertaking. On July 1, 1999 it commenced its operations and is regulated by Haryana Electricity Regulatory Commission.

Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL)

UHBVNL distributes retail power supply in the northern region of Haryana and it holds the license of electricity supply issued by Haryana Electricity Regulatory Commission (HERC) on November 4, 2004 and maintaining adequacy in supply of electricity in efficient and economic manner.[8]

Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL)

DHBVNL is also a government undertaking which look after the retail electricity supply in the southern region of Haryana. It also started its operations in July, 1999. This Nigam also tried to achieve targets and standard in its working. Safe and sound power supply was the main aim of this Nigam.[9] Through this it tried to encourage development in the region by reducing line

[8] Main Objectives of UHBVNL

- To arrange for the supply of electricity that may be required within the jurisdiction of UHBVN in an efficient & economical manner, with particular reference to the areas, which are not for the time being supplied or adequately supplied with electricity.
- To supply electricity as soon as practicable to a licensee/other person requiring such supply.
- To exercise such control in relation to the generation, distribution & utilization of electricity within the area of jurisdiction of UHBVN.
- To collect data on the demand for, and the use of, electricity & to formulate perspective plans in co-ordination with the Generating Company.
- To prepare and carry out schemes for transmission, distribution & generally for promoting the use of electricity within the State.
- To maintain uninterrupted supply to consumers within limits of following declared voltage.

[9] Main objectives of DHBVNL

- To serve masses by extending reliable, quality, uninterrupted, safe and clean power to consumers at affordable tariff to boost agricultural, industrial and economic development in Haryana.
- To improve the collection efficiency of consistently achieving high growth and financial viability and to bring down line losses.
- To impart honesty, integrity and transparency in actions to achieve higher level of consumer satisfaction.
- To encourage and support energy savings activities and demand side management optimizing the use of electricity.

losses. It tried to become modern through e-billing, e–tendering, network mapping, data logging, remote meter reading and electricity distribution automation etc.

Recent initiatives by the State Governments

HERC in 2015 recommended to the state government to merge the two discoms for improving operational efficiency in delivery of electricity service and ensuring quality supply of electricity to consumers at a reasonable rate, citing the small size of the state. The power sector regulator had cited improved cost control, reduction in supply cost, saving in transmission cost due to synergy in planning and operations, benefits of maintenance coordination, maximisation of transmission system utilisation, rationalisation and redeployment of staff, reduction in working capital borrowings and enhanced managerial efficiency in support of its suggestion.

DHBVN MD agrees with this perspective and argued that the basic work of UHBVN and DHBVN is similar[10]. The two power utilities have been in dire straits for a long time due to their continued inefficiencies and mounting losses, despite being bailed out twice. In the smaller states, smaller power entities could bring efficiency through competition. Their performance has shown improvement, though not to the desired level. DHBVN has been doing better than the utility supplying electricity to northern parts of the state. DHBVN[11] has lower distribution losses and outstanding receivables than the other utility.[12]

Besides merger, the government needs to bring pricing reforms and tariff rationalisation to encourage conservation by bringing in differential tariff, time of the day pricing, to reward efficiency and paying customers instead.

Emerging Challenges

These reforms helped to some extent, but the resistance from the vested interest groups and powerful consumer lobbies besides some staff members, have led to some unhealthy developments.

These reforms involved reducing the T & D losses and raising the tariff whenever costs go up. The tariffs have been going up over the years but the T & D losses remain high. They came down in some years but have shot up again in the recent years. The Figure 4, shows the T & D losses for states. One can notice that performance of Haryana has been deteriorated in last decade and 2014-15 it was at the highest level (in 2004-05 it was number five). This means all the other

- To inculcate modernization of management and to bring about cost effectiveness and efficiency in functioning. To take initiatives in view of new technology for improving efficiency, accounting and information level and consumer satisfaction.

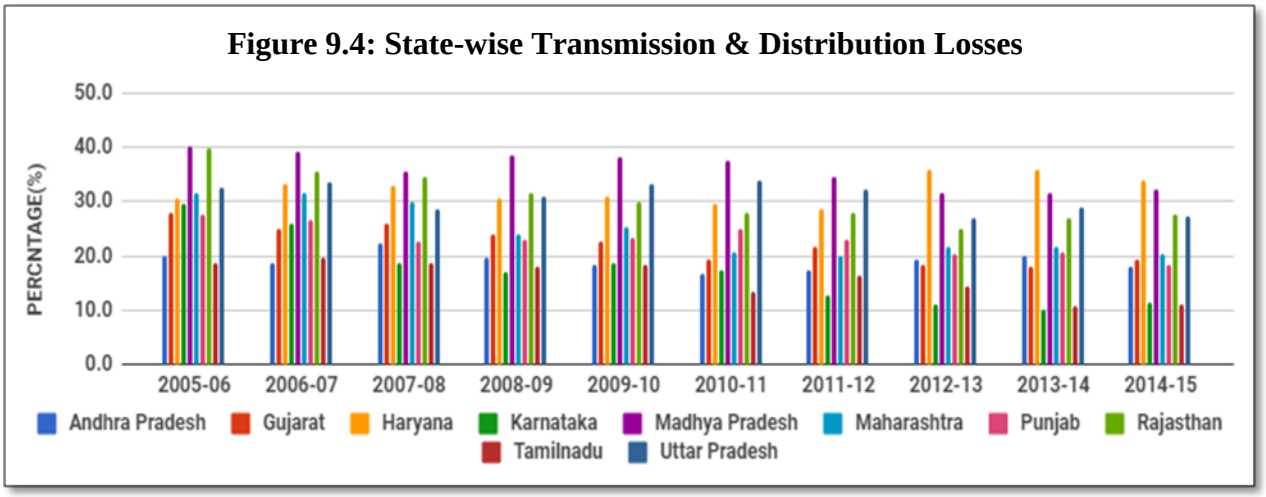
[10] The two discoms have set up a committee of chief engineers to work out the implications of merging of their various cadres into one cadre.

[11] DHBVN supplies electricity to Gurgaon, Faridabad, Mewat, Sirsa, Fatehabad, Hisar, Bhiwani, Jind, Palwal, Rewari, Narnaul and Mewat. Jind district, considered a difficult area due to high losses, was initially part of UHBVN, but later transferred to DHBVN for level playing field. UHBVN supplies power to Kurukshetra, Yamunanagar, Ambala, Karnal, Kaithal, Rohtak, Sonepat, Panipat, Jhajjar and Panchkula districts.

[12] Hindustan Times, 2016 available at https://www.hindustantimes.com/india-news/haryana-to-start-process-for-merger-of-power-discoms/story-31lf1TdnqwbAj8zX54lrWK.html

states have been able to contain the T & D losses better than Haryana. The losses have gone well above 30% for the state in 2014-15.

Figure 9.4: State-wise Transmission & Distribution Losses



Source: India Energy Portal, NITI Aayog

INSTALLED CAPACITY (IN MW) OF POWER UTILITIES IN THE STATES/UTS LOCATED IN NORTHERN REGION INCLUDING ALLOCATED SHARES IN JOINT & CENTRAL SECTOR UTILITIES

(As on 30.04.2016)

State	Ownership/ Sector	Modewise breakup							Grand Total
		Thermal				Nuclear	Hydro (Renewable)	RES (MNRE)	
		Coal	Gas	Diesel	Total				
Delhi	State	135.00	2050.40	0.00	2185.40	0.00	0.00	0.00	2185.40
	Private	445.50	108.00	0.00	553.50	0.00	0.00	30.28	583.78
	Central	4421.37	207.61	0.00	4628.98	122.08	822.05	0.00	5573.11
	Sub-Total	**5001.87**	**2366.01**	**0.00**	**7367.88**	**122.08**	**822.05**	**30.28**	**8342.29**
Haryana	State	2720.00	25.00	0.00	2745.00	0.00	884.51	59.30	3688.81
	Private	2165.50	0.00	0.00	2165.50	0.00	0.00	74.89	2240.39
	Central	1202.03	535.29	0.00	1737.32	109.16	572.32	0.00	2418.80
	Sub-Total	**6087.53**	**560.29**	**0.00**	**6647.82**	**109.16**	**1456.83**	**134.19**	**8348.00**
Himachal Pradesh	State	0.00	0.00	0.00	0.00	0.00	393.60	256.11	649.71
	Private	0.00	0.00	0.00	0.00	0.00	1748.00	537.40	2285.40
	Central*	152.02	61.88	0.00	213.90	34.08	1279.91	0.00	1527.89
	Sub-Total	**152.02**	**61.88**	**0.00**	**213.90**	**34.08**	**3421.51**	**793.51**	**4463.00**
Jammu & Kashmir	State	0.00	175.00	0.00	175.00	0.00	1230.00	106.53	1511.53
	Private	0.00	0.00	0.00	0.00	0.00	0.00	51.00	51.00
	Central	329.32	129.14	0.00	458.46	77.00	1025.21	0.00	1560.67
	Sub-Total	**329.32**	**304.14**	**0.00**	**633.46**	**77.00**	**2255.21**	**157.53**	**3123.20**
Punjab	State	2630.00	25.00	0.00	2655.00	0.00	2230.23	127.80	5013.03
	Private	5014.00	0.00	0.00	5014.00	0.00	0.00	613.91	5627.91
	Central	660.88	263.92	0.00	924.80	208.04	914.90	0.00	2047.74
	Sub-Total	**8304.88**	**288.92**	**0.00**	**8593.80**	**208.04**	**3145.13**	**741.71**	**12688.68**
Rajasthan	State	5190.00	603.80	0.00	5793.80	0.00	987.96	23.85	6805.61
	Private	3196.00	0.00	0.00	3196.00	0.00	0.00	5372.18	8568.18
	Central	1014.72	221.23	0.00	1235.95	573.00	731.34	0.00	2540.29
	Sub-Total	**9400.72**	**825.03**	**0.00**	**10225.75**	**573.00**	**1719.30**	**5396.03**	**17914.08**
Uttar Pradesh	State	5923.00	0.00	0.00	5923.00	0.00	524.10	25.10	6472.20
	Private	6346.00	0.00	0.00	6346.00	0.00	0.00	1018.50	7364.50
	Central	2909.96	549.97	0.00	3459.92	335.72	1644.20	0.00	5439.84
	Sub-Total	**15178.96**	**549.97**	**0.00**	**15728.92**	**335.72**	**2168.30**	**1043.60**	**19276.54**
Uttrakhnad	State	0.00	0.00	0.00	0.00	0.00	1252.15	62.87	1315.02
	Private	99.00	0.00	0.00	99.00	0.00	730.00	263.60	1092.60
	Central	300.50	69.35	0.00	369.85	22.28	459.67	0.00	851.80
	Sub-Total	**399.50**	**69.35**	**0.00**	**468.85**	**22.28**	**2441.82**	**326.47**	**3259.42**
Chandigarh	State	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Private	0.00	0.00	0.00	0.00	0.00	0.00	6.81	6.81
	Central	32.54	15.32	0.00	47.86	8.84	62.32	0.00	119.02
	Sub-Total	**32.54**	**15.32**	**0.00**	**47.86**	**8.84**	**62.32**	**6.81**	**125.83**
Central - Unallocated		977.19	290.35	0.00	1267.54	129.80	754.30	0.00	2151.64
Total (Northern Region)	State	16598.00	2879.20	0.00	19477.20	0.00	7502.55	661.56	27641.31
	Private	17266.00	108.00	0.00	17374.00	0.00	2478.00	7968.57	27820.57
	Central	12000.50	2344.06	0.00	14344.56	1620.00	8266.22	0.00	24230.78
	Grand Total	**45864.50**	**5331.26**	**0.00**	**51195.76**	**1620.00**	**18246.77**	**8630.13**	**79692.66**

Source: CEA, Annual Report, 2017

Role of Private Sector in Haryana's Power Sector:

If we look at the share of private companies in generation sector then we find that the role of private sector has increased in last decade. From no private players a decade back the share of private sector has gone up to around 27 in the 'installed capacity' of the state by March, 2016 as per the CEA Report. This seems to be a new development which needs to be closely analyzed for its implications.

However, if one does closer examination of the performance of thermal power plants of HPGCL's there is a serious problem going on. Almost all the major plants are experiencing a steep fall in the capacity utilization as measured by the 'plant load factor' (PLF). HPGCL's PLF has fallen from 82.9% in 2009-10 to 49.1% in 2014-15 (HPGCL website). This is because most of the power plants of HPGCL are very old, inefficient and costly to run. The discoms prefer to buy power from outside the state than HPGCL as cost of power is far higher as compared to other sources.

This is leading to falling efficiency of the Company which needs to embark on a mission to invest in new power plants with support from state government or using PPP mode. Another option is to bring in the open auction route to sign long term power purchase agreements with reputed players. This will help in ensuring competitive price to procure the power for the state for future.

Performance at a Glance of Thermal and Hydel Power Stations Of HPGCL since 2009-10 to 2014-15

Description	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
HPGCL THERMAL						
Generation (MU)	14866.51	13161.8	18533.3	14887.5	13052.2	13639.9
Plant Load Factor (%)	82.93	76.28	66.6	53.65	47.04	49.15
Coal Consumption (gm/kwh)	706	747	766	739	705	695
Oil Consumption (ml/kwh)	1.61	3.08	2.47	1.78	0.85	0.85
WYC HYDEL (62.4 MW)						
Generation (MU)	235.419	272.7	285.3	247.2	204.25	178.08
HPGCL (Thermal+Hydel = 2140.2 MW)						
Generation (MU)	15101.9	13434.5	18818.6	15134.7	13256.5	13818

Source: HPGCL web site: 2018http://hpgcl.gov.in/personal_18.hp accessed on July 17, 2018

Next we examine the performance of the power sector companies of Haryana in recent years.

Performance of the Power Sector PSEs

i) **Generation segment** - Haryana Power Generation Corporation Ltd,
   - Expenditure per employee has gone up from 7.79 to 10.58 lakh
   - Profits turned into losses
   - Turnover per employee improved from 83.4 to 148.94
   - Debt-equity ratio came down from 2.04 to 1.23

ii) **Transmission segment** - Haryana Vidyut Prasaran Nigam Ltd,
   - Expenditure per employee has come down from 8.55 to 6.9 lakhs
   - Turnover per employee has gone up from 20.68 to 27.69 lakhs
   - Profits per employee has gone down from 1.36 lakhs to 0.99 lakhs
   - Debt-equity ratio has come down to 2.24

iii) **Distribution Segment** - UHBVN

- Expenditure per employee has gone up from 4.9 to 8.4 lakhs
- Turnover per employee has gone up from 43.7 to 100.96 lakhs
- Losses per employee has gone down slightly to 1.6 lakhs
- Debt-equity ratio has come down from 7.6 to 4.25

iv) **Distribution Segment** - DHBVN

- Expenditure per employee has gone up from 4.9 to 7.4 lakhs
- Turnover per employee has gone up from 46 to 105.96 lakhs
- Losses per employee has gone down from -2.65 to profit of 0.8 lakhs
- Debt-equity ratio has gone up from 2.52 to 4.04

Table 9.1a: Haryana Power Generation Corporation Limited(Rs Crores)

YEAR	DEBT	GRANT IN AID	TURNOVER	Profit / Loss (PAIT)	Accumulated P/L
2008-09	490210.9	0.0	379282.0	3191.1	-10811.6
2009-10	598639.4	0.0	434091.9	3573.7	-14002.7
2010-11	726529.6	0.0	492757.1	458.4	-10353.2
2011-12	995304.0	0.0	701544.5	-16049.0	-26402.1
2012-13	763805.8	10.6	669456.3	-14811.8	-36022.8
2013-14	515700.7	0.0	607844.0	-2631.4	-38654.2
2014-15	552818.3	0.0	652253.5	10476.9	-33368.4
2015-16	530037.0	0.0	537819.9	-19049.9	-14502.7
2016-17	358482.6	0.0	488823.5	-13369.2	-27988.1

Table 9.1b: Haryana Power Generation Corporation Limited (Rs Crores)

YEAR	Expenditure per Employee	Accumulated Profit per Employee	Profit per Employee	Turnover per Employee	Gross Profit Margin	Debt Equity Ratio	Current Ratio
2008-09	7.79	-2.37	0.7	83.14	0.01	2.04	0.96
2009-10	6.11	-3.11	0.79	96.44	0.01	2.36	1.29
2010-11	3.77	-2.39	0.11	113.72	0	2.75	2.1
2011-12	4.8	-6.31	-3.83	167.63	-0.02	3.53	3.55
2012-13	7.89	-9.33	-3.84	173.48	-0.02	3.82	0.9
2013-14	9.58	-10.61	-0.72	166.81	0	1.79	0.87
2014-15	13.49	-9.33	2.93	182.35	0.02	1.92	0.86
2015-16	11.47	-4.35	-5.71	161.31	-0.04	1.83	1.33
2016-17	*10.58*	*-8.53*	*-4.07*	*148.94*	*-0.03*	*1.23*	*0.71*

Source: Profile of Public Sector Enterprises By The Department Of Finance, State Of Haryana (Various Years)

Table 9.2a: Haryana Vidyut Prasaran Nigam Ltd. (Rs Crores)

YEAR	DEBT	GRANT IN AID	TURNOVER	Profit / Loss (PAIT)	Accumulated P/L
2008-09	279056.7	0.0	97290.0	6408.9	-2209.0
2009-10	364539.6	0.0	100693.1	10566.2	8357.0
2010-11	408952.0	0.0	119887.1	18761.4	27118.5
2011-12	445563.5	0.0	111259.4	14006.9	26655.9
2012-13	516810.6	3563.9	91321.0	-3768.5	19122.2
2013-14	563201.5	3563.9	105651.5	-17513.9	1608.3
2014-15	626914.2	0.0	148928.8	-842.0	18925.3
2015-16	597949.0	0.0	186968.5	15398.6	18807.3
2016-17	527132.5	0.0	192974.0	6925.7	22677.9

Table 9.2b: Haryana Vidyut Prasaran Nigam Ltd. (Rs Crores)

YEAR	Expenditure per Employee	Accumulated Profit per Employee	Profit per Employee	Turnover per Employee	Gross Profit Margin	Debt Equity Ratio	Current Ratio
2008-09	8.55	-0.47	1.36	20.68	0.07	2.76	0.54
2009-10	8.48	1.82	2.31	21.97	0.1	2.89	1.01
2010-11	8.23	5.25	3.63	23.2	0.16	3.24	1.12
2011-12	6.75	5.35	2.81	22.33	0.13	3.53	1.46
2012-13	9.15	3.87	-0.76	18.49	-0.04	2.67	0.29
2013-14	10.74	0.36	-3.89	23.44	-0.17	2.91	0.42
2014-15	8.07	2.81	-0.12	22.1	-0.01	3.24	0.31
2015-16	6.76	2.76	2.26	27.42	0.08	2.78	0.78
2016-17	6.9	3.25	0.99	27.69	0.04	2.24	0.58

Source: Profile of Public Sector Enterprises by The Department Of Finance, State Of Haryana (various years)

Table 9.3a: Uttar Haryana Bijli Vitran Nigam Ltd (Rs Crores)

YEAR	DEBT	GRANT IN AID	TURNOVER	Profit / Loss (PAIT)	Accumulated P/L
2008-09	798114.6	0.0	491356.4	-110753.5	-277832.5
2009-10	480550.3	0.0	667822.1	-88422.3	-369062.5
2010-11	1019451.4	12962.5	707853.8	995.2	-381985.6
2011-12	1068545.7	12962.5	590714.7	-382197.4	-1242346.2
2012-13	1451470.9	12962.5	854326.9	-229685.0	-1472046.4
2013-14	1775480.0	12962.5	1061907.4	-135884.0	-1607930.4
2014-15	1938309.3	49617.5	1067773.8	-148057.3	-1630977.6
2015-16	1749320.8	247591.3	1236605.9	-33637.3	-1587305.9
2016-17	1437443.3	396531.6	1289464.6	-20500.7	-1607806.7

Table 9.3b: Uttar Haryana Bijli Vitran Nigam Ltd (Rs crores)

YEAR	Expenditure per Employee	Accumulated Profit per Employee	Profit per Employee	Turnover per Employee	Gross Profit Margin	Debt Equity Ratio	Current Ratio
2008-09	4.87	-24.71	-9.85	43.7	-0.23	7.63	2
2009-10	6.31	-31.21	-7.48	56.48	-0.13	3.62	1.93
2010-11	4.36	-32.85	0.09	60.87	0	7.16	1.96
2011-12	6.42	-112.99	-34.76	53.73	-0.65	6.69	0.32
2012-13	6.36	-122.43	-19.1	71.05	-0.27	8.9	0.41
2013-14	8.3	-163.87	-13.85	108.23	-0.13	10.89	0.5
2014-15	4.05	-123.23	-11.19	80.68	-0.14	11.89	0.43
2015-16	5.96	-123.04	-2.61	95.85	-0.03	10.55	0.3
2016-17	8.37	-125.89	-1.61	100.96	-0.02	4.25	0.53

Source: Profile Of Public Sector Enterprises By The Department Of Finance, State Of Haryana (Various Years)

Table 9.4a: Dakshin Haryana Bijli Vitran Nigam Ltd. (Rs Crores)

YEAR	DEBT	GRANT IN AID	TURNOVER	Profit / Loss (PAIT)	Accumulated P/L
2008-09	238348.8	53577.9	463429.2	-26526.9	-126098.2
2009-10	385736.7	59094.3	526394.7	-63316.8	-189415.0
2010-11	482176.2	66166.7	621135.1	-79194.4	-268608.3
2011-12	534718.7	78052.7	706699.9	-459944.1	-728553.4
2012-13	805587.0	88416.8	840739.4	-135240.5	-863793.9
2013-14	1028667.6	97845.9	1145406.4	-208864.0	-1072659.1
2014-15	1400218.9	107827.8	1340087.0	-63616.6	-1271903.0
2015-16	1243207.7	113656.8	1516974.3	-47158.0	-1319061.0
2016-17	1026837.4	137072.0	1562857.3	1196.2	-1395173.8

Table 9.4b: Dakshin Haryana Bijli Vitran Nigam Ltd. (Rs Crores)

YEAR	Expenditure per Employee	Accumulated Profit per Employee	Profit per Employee	Turnover per Employee	Gross Profit Margin	Debt Equity Ratio	Current Ratio
2008-09	4.89	-12.58	-2.65	46.24	-0.06	2.52	1.38
2009-10	9.32	-19.78	-6.61	54.96	-0.12	3.27	1.56
2010-11	4.98	-26.89	-7.93	62.18	-0.13	3.83	1.43
2011-12	5.16	-69.33	-43.77	67.25	-0.65	3.8	0.41
2012-13	5.59	-82.35	-12.89	80.15	-0.16	5.6	0.52
2013-14	6.47	-101.06	-19.68	107.91	-0.18	7.15	0.57
2014-15	6.18	-88.22	-4.41	92.95	-0.05	9.73	0.81
2015-16	6.77	-86.69	-3.1	99.7	-0.03	8.44	0.91
2016-17	7.38	-94.5	0.08	105.86	0	4.04	0.52

Source: Profile of Public Sector Enterprises by the Department Of Finance, State Of Haryana (Various Years)

Against this background of worsening situation in the power sector for most states the Central Government initiated another reform programme called the **Ujwal DISCOM Assurance Yojana (UDAY)** scheme in 2015 to restructure the debts of SEBs to tackle this problem. The Ministry of Power, Government of India, launched the scheme which was approved by the Union Cabinet on 5th November, 2015.

The later part of the Report discusses this in more detail.

The UDAY scheme has been designed for the financial turnaround and revival of the electricity distribution companies (DISCOMs). This policy has been initiated by the Central Government with the intent to find a solution to the financial difficulties of the power distribution sector is in the states. It allows state governments, which own the DISCOMs, to take over 75 percent of their debt as of September 30, 2015, and pay back lenders by selling bonds. DISCOMs are expected to issue bonds for the remaining 25 percent of their debt. This is expected to correct the balance sheet of the companies and make them more viable.
The scheme envisages:

- Financial Turnaround of the SEBs
- Operational improvement in the performance of SEBs
- Reduction in cost of generation of power
- Development of Renewable Energy sources
- Energy efficiency & conservation

In addition to the restructuring of the balance sheet of power sector companies, there were other incentives provided. Some of these perceived benefits are as follows:

Benefits to Participating States:

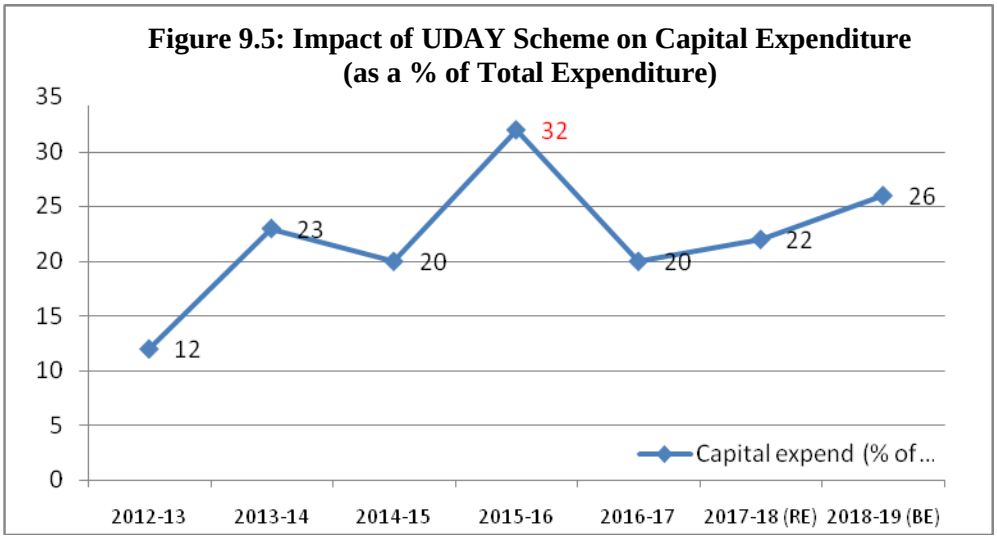
- Increased supply of domestic coal
- Reduction in Cost of power through Central Support
- Allocation of coal linkages at notified prices
- Coal price rationalization
- Coal linkage rationalization & allowing coal swaps
- Supply of washed & crushed coal
- Additional coal at notified prices
- Faster completion of Interstate Transmission lines
- Power purchase through transparent competitive bidding process

The state of Haryana has been an active participant in the UDAY scheme and has committed budgetary support to the Power Utilities in the form of equity and Rural Electrification (RE) subsidy to the electricity distribution companies. The Total budgetary support of Rs. 12571.19 crore has been provided to the Power sector in the budgetary estimate 2017-18 including the provision of Rs. 6230.20 crore for RE subsidy.

Under the UDAY scheme, the Haryana Government took over three fourth of the outstanding debts (of about Rs. 34600 crore) of the DISCOMS in the period 2015-16 to 2016-17. This amounted to Rs. 25950 crore and it was has been taken over in two years (₹ 17300 crore in 2015-16 and ₹ 8650 crore in 2016-17) in the shape of Grants, Equity and Loan.

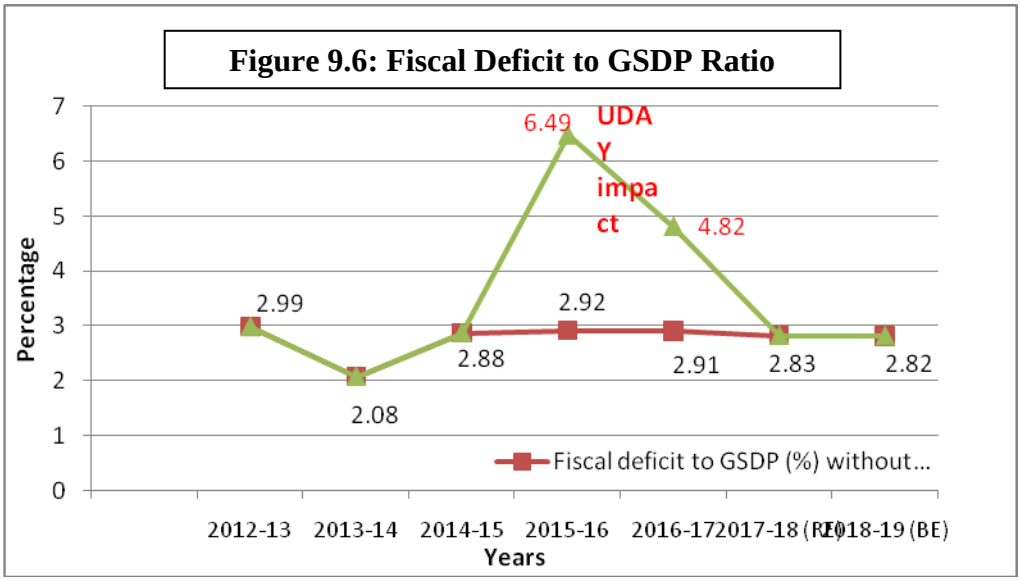
The Figure 9.5 to 9.9 shows the impact of UDAY on the finances of the state of Haryana.

Figure 9.5: Impact of UDAY Scheme on Capital Expenditure (as a % of Total Expenditure)



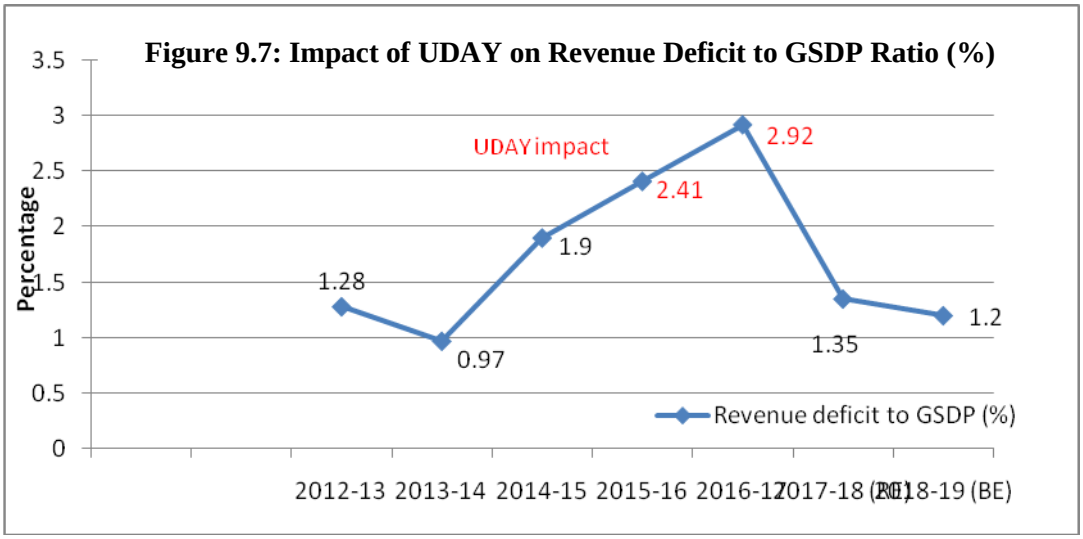
Source: Budget at A Glance 2018-19, Government of Haryana

With the implementation of the UDAY scheme, the capital expenditure undertaken by the state government shot up to 32% of the total budget allocation in 2015-16 as it involved significant capital expenditure. Post UDAY, the overall capital expenditure came back to the previous level and after that is it show an upward trend. According to the 2017-18 (RE), the capital expenditure touched 22%, and for the current year 2018-19 the state budget envisages capital expenditure to be around 26% of the total outlay.



Source: Budget at a Glance 2018-19, Government Of Haryana

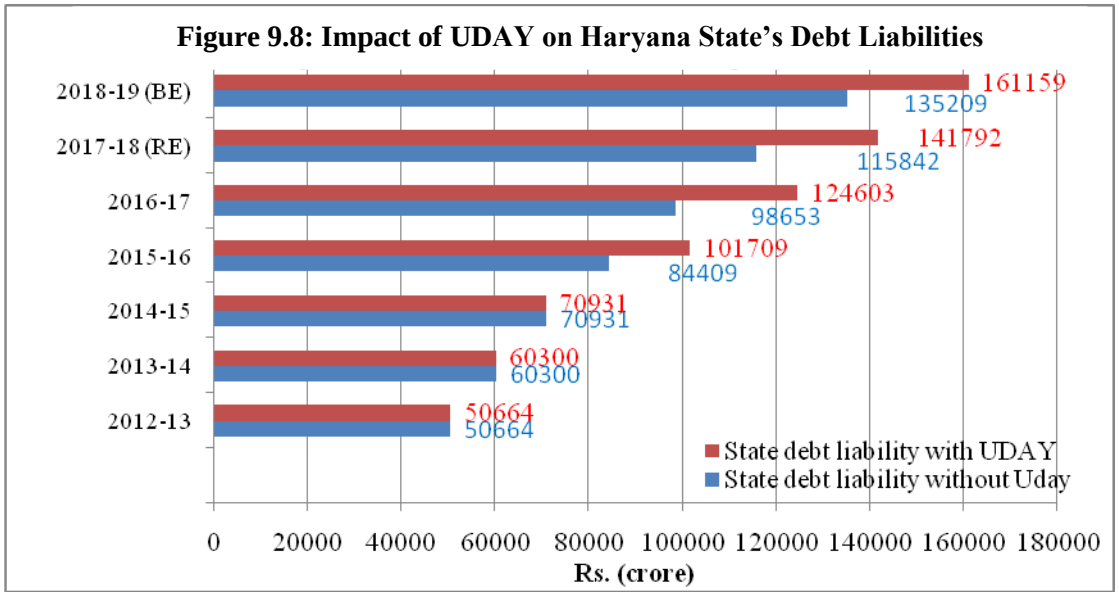
Before implementation of the UDAY scheme the Fiscal Deficit to GSDP ratio for Haryana was on an average is 2.7% for the period 2012-13 to 2014-15. With the UDAY scheme the ratio shot up to 6.49% in 2015-16 and 4.82% in 2016-17. But it has come down to the level of 2.82% in 2017-18 and is expected to be at the same level in current year (i.e. 2018-19) according to budget estimates which is similar to the level earlier before the implementation of the UDAY scheme. This has had a onetime impact. Due to this the revenue deficit also went up in the post-UDAY period in 2015-16 and 2016-17.



Source: Budget at a Glance 2018-19, Government Of Haryana

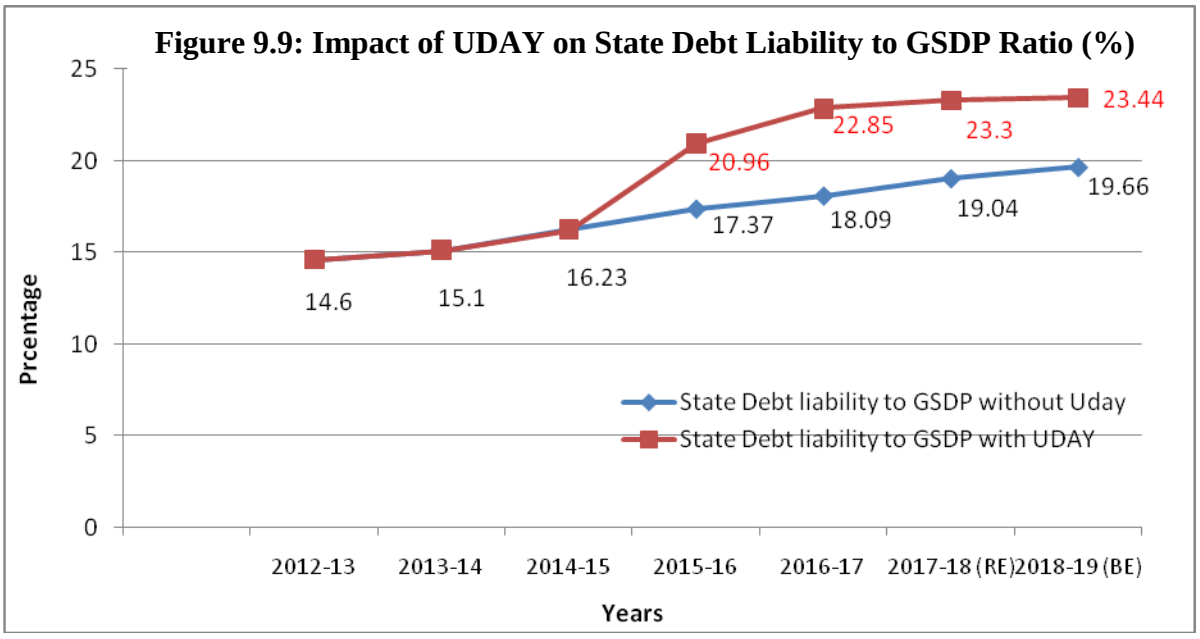
As far as the impact on the 'Revenue Deficit' is concerned it rose by about 1 percent point (from about 1.9% in 2014-15 to 2.92 % in 2016-17). The actual Revenue deficit is higher by 39.23% than FRBM targets (Chapter 6, Table 6.2)

However, in 2017-18 the Revenue Deficit situation improved and in the current year (2018-19) as well it is expected to moderate further. It fell to 1.35% in 2017-18 and is expected to reach 1.2% in the current year.



Source: Budget at a Glance 2018-19, Government Of Haryana

Without UDAY scheme the debt liability of Haryana state was increasing at an average rate of 15% every financial year. With the UDAY scheme the debt liability of the state shot up by 30% in 2015-16 and 18% in 2016-17, but for the subsequent years it has come down by 12.12% for 2017-18 and 12.01% for 2018-19, which is less than the average of 15%, when UDAY scheme is not accounted for.



Source: Budget at a Glance 2018-19, Government Of Haryana

The overall debt level has reached much higher level of Rs. 161159 crores. This is likely to raise the debt servicing costs for the future as also put constraints on the other expenditure which state would have wanted to undertake. This raises the issue of how the state government should be able to mop up more revenue to service the extra debt due to the UDAY scheme. This is evident from the Figure 9.9 which shows the State Debt-GSDP ratio has climbed by 3.78% with UDAY scheme, to 23.44%. However Debt-GSDP ratio in these years of UDAY Scheme implementation has been well within the FRBM targets even with UDAY schemes (Table 9.5)

Table 9.5: Showing FRBM Targets

	2016-17 (Actual)	2017-18 (BE)	2017-18 (RE)	2018-19 (BE)	2019-20 (Target)	2020-21 (Target)
Revenue Deficit (as % of TRR)	30.3	16.17	11.74	10.73	Revenue Surplus	Revenue Surplus
Fiscal Deficit (as % of GSDP)	4.82	2.84	2.83	2.82	3	3
Debt- GSDP ratio (in percent)	22.85	22.93	23.3	23.44	25	25

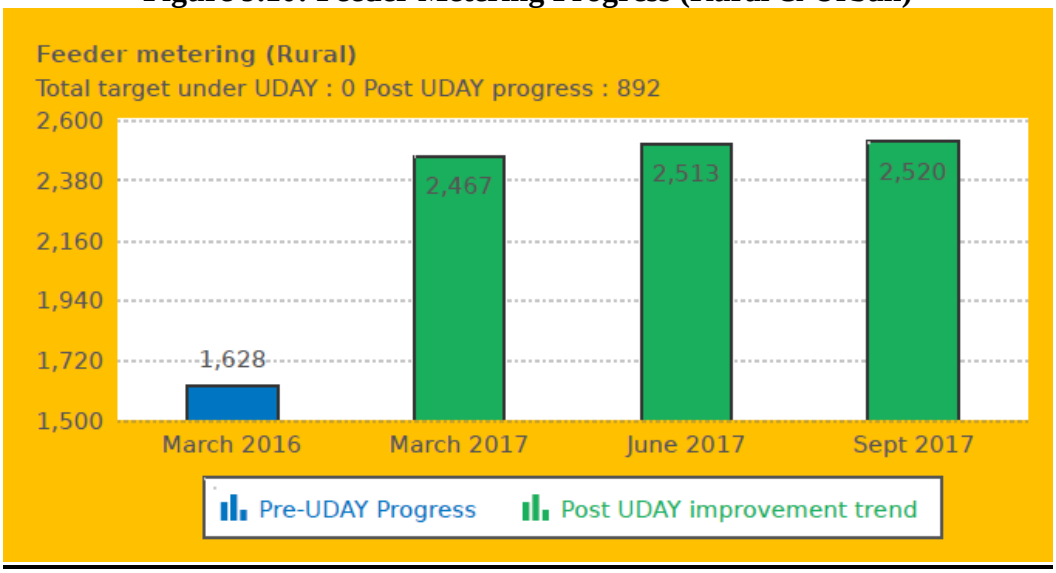
Source: FRBM Budget Statement 2018-19

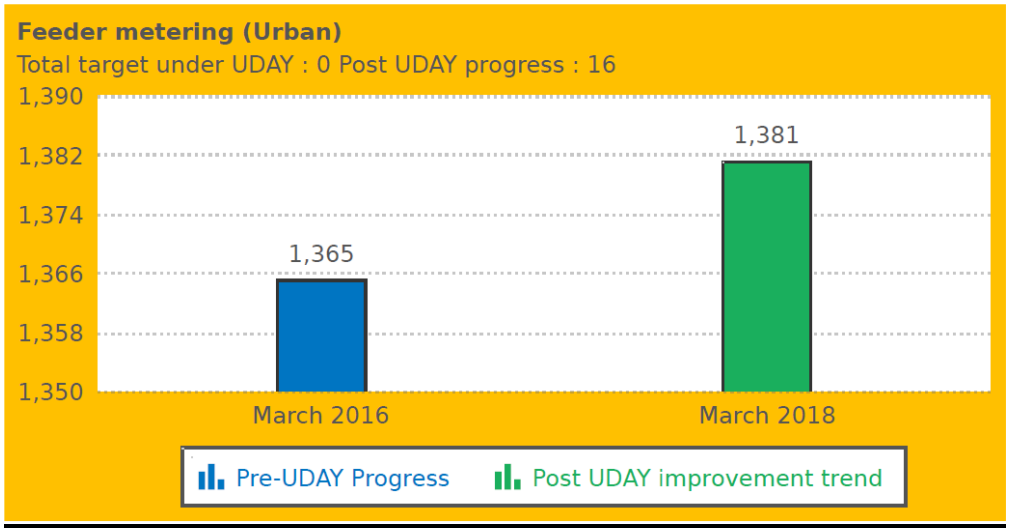
However (Table 6.2, Chapter 6) actual Debt-GSDP ratio was 11.6% higher over FRBM, Budget and Medium Term Fiscal Policy (5 year) targets with UDAY scheme. Without UDAY actual Debt-GSDP is even higher by 12.53% than the FRBM, Budget and Medium Term Fiscal Policy (5 year) targets. The ratio of the state's debt liability to GSDP, without taking in consideration the impact of the UDAY scheme, has been growing at an average rate of 6.15%. With the UDAY scheme, the ratio shot up from 16.23% in 2014-15 to 20.96% in 2015-16.

However, the rate of growth of the state debt liability to GSDP is rising but at a slower rate post the UDAY scheme. The ratio increased from 20.96% in 2015-16 to 22.85% in 2016-17 (rate of growth of 8.27%); then to 23.3% in 2017-18 (rate of growth of 1.93%) and it is expected to grow only 0.59% and is expected to touch 23.44% in 2018-19 according to the Budget documents.

Post UDAY Haryana Power Sector Improvement Trend

Figure 9.10: Feeder Metering Progress (Rural & Urban)

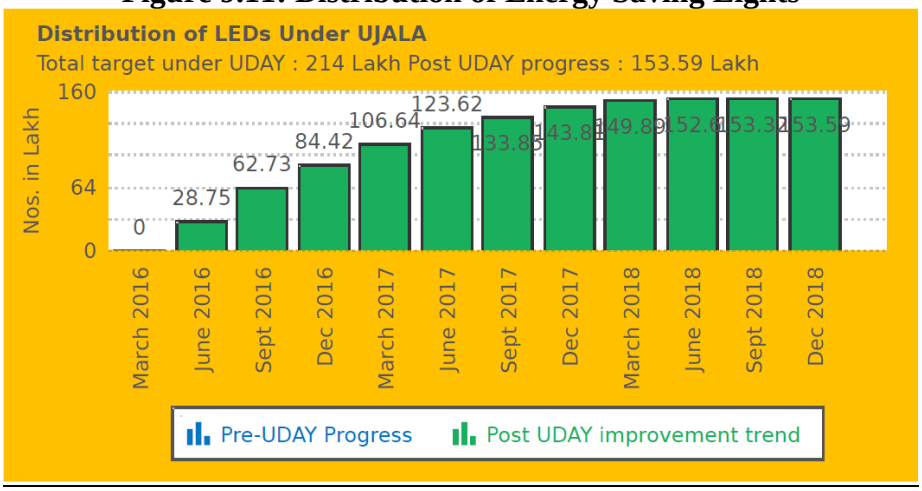




Source: UDAY State Dashboard, Ministry Of Power, https://www.uday.gov.in/health-card-state.php?id=6 latest accessed on 9th December 2018

The post UDAY performance with respect to Feeder Metering both urban and rural is pretty impressive in terms of both pre UDAY performance and also the targets that were laid out the time of implementing the UDAY scheme. An improvement in the feeder metering will ensure effective power supply and is expected to help the DISCOMS in reducing AT&C losses. However, the improvement in March to September 2017 period has been marginal in the rural areas. Progress against target is claimed to be 100% in both rural and urban feeder metering by the state[13] AT &C losses have been brought down at 23.11%. The State distribution companies' progress on AT&C losses as against UDAY target shows zero improvement in this State Report card.

Figure 9.11: Distribution of Energy Saving Lights

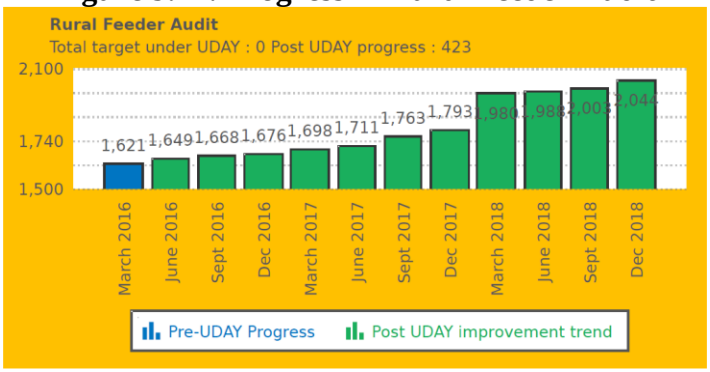


Source: UDAY State Dashboard, Ministry Of Power, https://www.uday.gov.in/health-card-state.php?id=6

[13] Reference: Performance report given on UDAY Haryana Dash Board, https://www.uday.gov.in/state.php?id=6

Another progress trend can be found from the above graph. UJALA, an acronym for Unnat Jyoti by Affordable LEDs for All, is being implemented by Energy Efficiency Services Limited (EESL). Under this scheme, superior quality energy efficient LED bulbs are distributed to domestic consumers at INR 75 to 95, which is 80% less than the market price of INR 350-450. The main idea of the scheme has been to promote energy conservation and creating awareness about energy saving technologies. The distribution of LEDs under the government scheme is likely to ensure efficient use of electricity and reduce wastages and reduce carbon emissions has been showing great progress (figure 9.11)[14]. 72% of the target has been achieved.

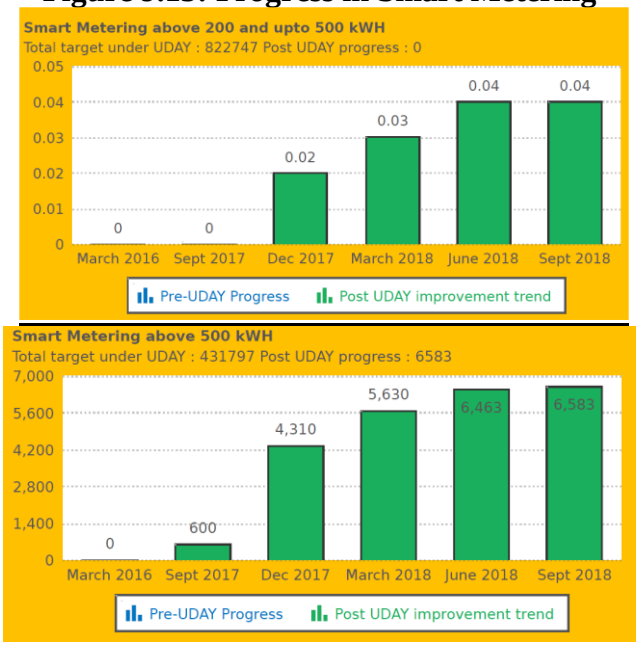
Figure 9.12: Progress in Rural Feeder Audit



Source: UDAY State Dashboard, Ministry Of Power, https://www.uday.gov.in/health-card-state.php?id=6

Rural feeder audit helps in identifying the utilities/ feeders making losses and helps in taking necessary actions to improve their health. Also, the audit locates the areas that require immediate attention thereby improving efficiency. There is great improvement in terms of the Rural Feeder Audit data. Since December 2018, post UDAY there has been a good progress of additional 423 feeders with 100% target fulfillment.

Figure 9.13: Progress in Smart Metering

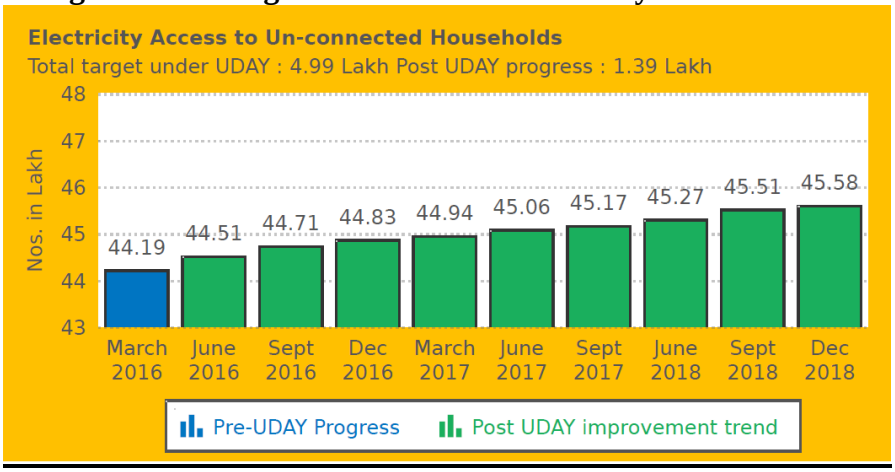


[14] The UDAY scheme has helped boost the UJALA scheme and within 2 years about 70% of the targets have been met. However, the progress in last 6 months has been limited.

Source: UDAY State Dashboard, Ministry Of Power, https://www.uday.gov.in/health-card-state.php?id=6

Installations of Smart Meters help in recording energy consumption in intervals of an hour or less and communicate the same to State utilities for effective monitoring and billing. With respect to Smart Metering, there hasn't been much of an improvement. For smart metering above 500 KWh, only about 2% of the target has been met March 2016-June 2018. For smart metering above 200 and upto 500 KWh post UDAY there has had been virtually no progress. Target had been laid out for 822747 meters, but only about 329 meters (0.04%,) have been installed till September 2018.

Figure 9.14: Progress in Access to Electricity to Households



Source: UDAY State Dashboard, Ministry Of Power, https://www.uday.gov.in/health-card-state.php?id=6

Under UDAY, the total target for providing electricity access to un-connected households was 4.99 lakh but till December 2018 about 1.39 lakh households have been covered; only about 28% of the target has been met. Even though the States have not been able to achieve their targets, a pre and post UDAY analysis shows improvement in electricity access to household's vis-à-vis prior to UDAY. However Haryana State has reported 100% Household Electricity access in December 2018 (Reference: Table 9.6). This is due to Rural electrification schemes like Deen Dayal Upadhyaya Gram Jyoti Yojna and Saubhagya yojana of Government of India. Saubhagya scheme was implemented on 11th October 2017 which led to completion of rapid rural electrification projects of providing electricity to all households in most of the states. The table shows that the completion work of household electricity connection was made at a rapid pace.

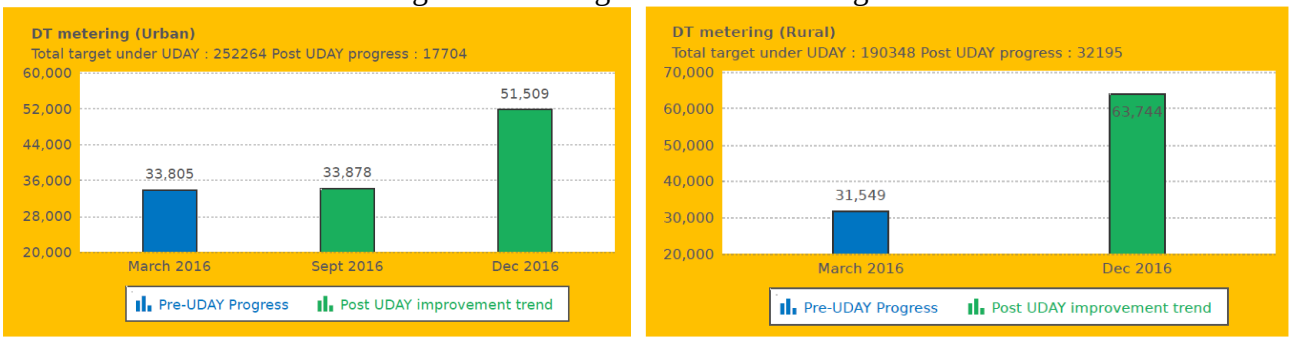
Table 9.6: Status of Household Electricity Access of Selected States

State	Percentage Rural Households Electrified till 31st March 2017	Percentage Rural Households Electrified till December 10th, 2018
Andhra Pradesh	100.00	100.00
Gujarat	100.00	100.00
Haryana	79.37	100.00
Karnataka	87.40	98.00
Kerala	99.86	100.00
Maharashtra	84.74	99.99
Punjab	100.00	100.00
India	**74.60**	100.00

Source: India Energy Portal, Niti Aayog and Saubhagya and DDUGJY Dashboards, Ministry of Power, GOI

The Distribution Transformer Metering (DTM) helps in improving the energy distribution system and reduces the losses caused by thefts. This helps in load balancing and monitoring the quality of power. Also, it provides real time input and output data of the units consumed for better records. Given the targets, for DT metering (urban) about 7% of the target was met in March 2016-December 2016 and for DT metering (rural) about 17% of the target was met in the same period. This is a reasonable progress and shows and improving trend. However, more recent data is not available so difficult to say what has happened since then. Pre- UDAY and Post-UDAY comparison of State Distribution companies show that DHBVNL had been making good progress in urban (100%) and rural (29%) as against UDAY targets, whereas UHBVNL had only met 6% of the target in urban areas. No latest data has been available on DT metering showing zero progress in the UDAY report card of the state.

Figure 9.15: Progress in DT Metering



Source: UDAY State Dashboard, Ministry Of Power, https://www.uday.gov.in/health-card-state.php?id=6

Overall there has been a significant improvement in UDAY scheme implementation in the State. Haryana ranks eight in UDAY State/Discom Quarterly Performance. Around 75% bonds have been issued till date. As stated earlier AT&C losses are now 23.11%.

The Performance of Power Sector PSEs

- Generation Companies: The HPGC Limited's financial situation has deteriorated in the recent years and in five out of last six years the company has made losses. However, the turnover per employee of the company has improved by around 79% between 2008-09 and 2016 -17. This has been on account of downsizing and reduction in the output. Most of the power plants of the company are very old and expensive to run so a major turnaround strategy is need of the hour. The main performance indictor, the PLF, has fallen significantly over the last decade.

- Transmission Companies: HVPN Limited's financial situation has been better and the company has been profitable for six out of last nine years for which the data is available. The turnover per employee has improved by about 30% between 2008-09 and 2016 -17, mainly on account of downsizing the workforce.

- Distribution Companies: UHBVN Limited and DHBVN Limited have had difficult financial situation and suffered losses for seven out of last eight years. However, the turnover per employee of both the company has improved significantly (it rose and became more than double between 2008-09 and 2016 -17). Reducing the staff strength and automating the processes has been the main strategy used by the company to improve staff productivity.

These power dicoms are struggling with high T & D losses and need to find way to reduce it to reasonable level of 10-15% to become financially viable.

Summary & Conclusions

Electricity is an important universal input to most of the economic activity. Availability of affordable quality power is a necessary condition for the rapid growth and balanced regional development. The Haryana state has improved its performance significantly and has moved to the top position in terms of the per capita power availability. The state has made good progress relative to other high income states in terms of per capita power availability and tops the list.

However, the power sector in Haryana as across most Indian states has been financially stressed due to various reasons. The main reason for this has been high T& D losses and high cost of debt servicing which have made the Discoms heavily dependent on the state exchequer to sustain their operations to meet the needs of the consumers.

Haryana has become among the top ranked state since 2012-13 in terms of T & D losses in the power sector in the country. The state is generally considered to be fiscally responsible state but due to the mounting losses in power sector it has been slipping. The state in the past have shown lots of improvement which means it has the potential to turn around things.

The state government could the following measures t improve the performance of this sector:

a) Explore outsourcing the billing and recovery to reputed IT companies and to improve the metering. This could help the state to significantly improve the viability of its power sector. The consumers unwilling to pay should be removed from power connections as is done in many other states. This is important as it means that not just the power discoms bleed but also all the consumers who are paying their bills honestly. This also raises the cost of power for all the economic activities. This raises the cost of running all business which impacts adversely the growth of the state economy and corresponding tax potential. Due to this cost of production and employment suffers and part of the demand of state spillovers to other states.

b) Explore long term PPA at affordable rates as many of the power generation companies are operating at well below capacity.

c) Enhance the renewable (micro hydel, biomass, solar etc.) power capacity of the state to meet the growing demand of power in coming years. This will help in reducing power costs as well as reduce pollution considering its adverse implications.

d) Consider listing of the power sector entities with part divestment of equity as has been done in the case of NTPC etc. This could further enhance the public accountability of these companies.

Although UDAY did raise the GFD-to-GSDP ratio as also the Debt-to-GSDP ratio (by about 3 percent) but it has also contributed to improved metering and spread of energy efficiency initiatives envisaged in the reform programme. However, the progress has been mixed and more time may be needed to implement the targets set in the reform agenda.

With the launching of the UDAY scheme there has been some improvements in the performance of the power sector companies and as more information and data becomes available one would be able to ascertain its full impact in coming years..

Chapter 10

Contingent Liabilities

Apart from the confirmed liabilities, there are also contingent liabilities of the state governments that may arise on account of guarantees issued to facilitate the borrowings of PSUs. Although contingent liabilities do not form a part of the debt burden of the states, in the event of defaults by the borrowing entity, the states will be required to meet the debt service obligations. It implies that fiscal risk of the state government guarantees may turn out to be very high in case these enterprises fail to generate adequate own revenues to meet their repayment obligations.

Table 10.1: Contingent Liabilities In Haryana (In Lakhs)

Year	Outstanding Liabilities	Total Outstanding Guarantees	Guarantees / Total Liability (%)	ROG Of The Guarantees
1	2	3	4	5
2001-02	17726	8606	48.55	..
2002-03	19948	7690	38.55	-0.12
2003-04	22450	5907	26.31	-0.30
2004-05	24900	4249	17.06	-0.39
2005-06	26979	5644	20.92	0.25
2006-07	28451	5704	20.05	0.01
2007-08	29118	4402	15.12	-0.30
2008-09	33495	4575	13.66	0.04
2009-10	41020	4536	11.06	-0.01
2010-11	46300	4528	9.78	0.00
2011-12	56690	5608	9.89	0.19
2012-13	56690	20732	36.57	0.73
2013-14	79610	27308	34.30	0.24
2014-15	92670	30388	32.79	0.10
2015-16	125520	16876	13.44	-0.80
2016-17	144190	8244	5.72	-1.05

Source: CAG Finance Reports Haryana Volume 1 & 2, Across Years.

Table 10.1, above shows the magnitude of contingent liabilities of the state of Haryana was quite high in 2001-02 (about 48% of the total outstanding liabilities). The situation improved there after and there has been a steady decline in the proportion of the contingent liabilities and it reached about 10% of the total outstanding liabilities by 2011. But since 2012-13 the situation again deteriorated and reached an alarming proportion. The share of 'outstanding guarantees' rose sharply, from 9.9% in 2011-12 to 36.57% in 2012-13, and 34.30% in 2013-14 and stood at 32.79 percent in 2014-15.

Major chunk of the outstanding guarantee has been due to the losses of the power sector (Table 10.2); in 2012-13 nearly 75% of the total guarantees were undertaken by the Haryana state

government due to the losses being incurred by the power sector. The financial distress of the power DISCOMS rose further and the level of outstanding guarantees to the power sector rose to 90% in 2013-14 and stood at 93% in 2014-15. This paved the way for the adoption of the UDAY scheme by the Haryana government for the revival of the Power DISCOMS. As an outcome of the UDAY scheme the guarantees to the power sector fell from 85% in 2015-16 to 67% in 2016-17. In fact, this restructuring of the power sector has been very helpful in reducing the burden of the outstanding guarantees. The total outstanding guarantees as a proportion of the total liabilities fell from 32.79% in 2014-15 to 13.44% in 2015-16 and further declined to 5.72% in 2016-17; its lowest level since 2001-02.

Table 10.2: Share of Different Sectors in Guarantees (%) in Haryana

Year	Power	Cooperatives	Urban Development And Planning	Other Infrastructure	Roads And Transport	State Financial Corporation And Other Statutory Corporations
2009-10	35.98%	40.15%	..	15.70%	..	8.13%
2010-11	31.52%	43.15%	..	21.47%	..	3.80%
2011-12	37.04%	35.75%	6.72%	..	9.99%	10.50%
2012-13	75.65%	13.22%	1.86%	6.06%	2.70%	0.51%
2013-14	90.00%	5.77%	1.38%	0.41%	2.05%	0.38%
2014-15	93.31%	4.52%	1.52%	0.65%	..	..
2015-16	85.75%	7.41%	3.99%	2.83%	..	..
2016-17	67.48%	12.69%	9.00%	10.82%	..	..

Source: CAG Finance Report Haryana Volume 1 & 2, various years.

Summary and Conclusions

Major chunk of the outstanding guarantees for the Haryana state was on account of the power companies (nearly 75%). The financial distress of the power DISCOMS rose further and the level of outstanding guarantees to the power sector rose to 90% in 2013-14 and stood at 93% in 2014-15. This pushed the state government towards adoption of the UDAY scheme to revive the Power sector. This helped the guarantees to the power sector come down from 85% in 2015-16 to 67% in 2016-17.

In fact, this restructuring of the power sector has been very helpful in reducing the burden of the outstanding guarantees. The total outstanding guarantees as a proportion of the total liabilities fell from 32.79% in 2014-15 to 13.44% in 2015-16 and further declined to 5.72% in 2016-17; its lowest level since 2001-02.

As things stand today, the Guarantees cease to be an overriding critical concern for the state government after UDAY.

Chapter 11

Analysis of the Subsidies for the Haryana State

The Government generally provides subsidy to those sectors which has strong positive spillover effects and close linkage to the economy and/or to improve the standards of living of the deprived sections of the society. In other words, the goods and services which involve significant positive externality need the state support. The State also takes up the responsibility of subsidizing the loss making enterprises engaged in these activities so that they are able to run at their efficient level. However, subsidy needs to be financed from the budgetary resources: that is either through taxation or borrowings.

High taxation could lead to deadweight loss which reduces social welfare. Financing these expenditures by borrowings curtails the autonomy of the government in future as it involves issue of debt sustainability. This means that the subsidies should be well targeted so as to optimize their impact on tax and/or public borrowings.

Table 11.1: Subsidies in the Haryana State

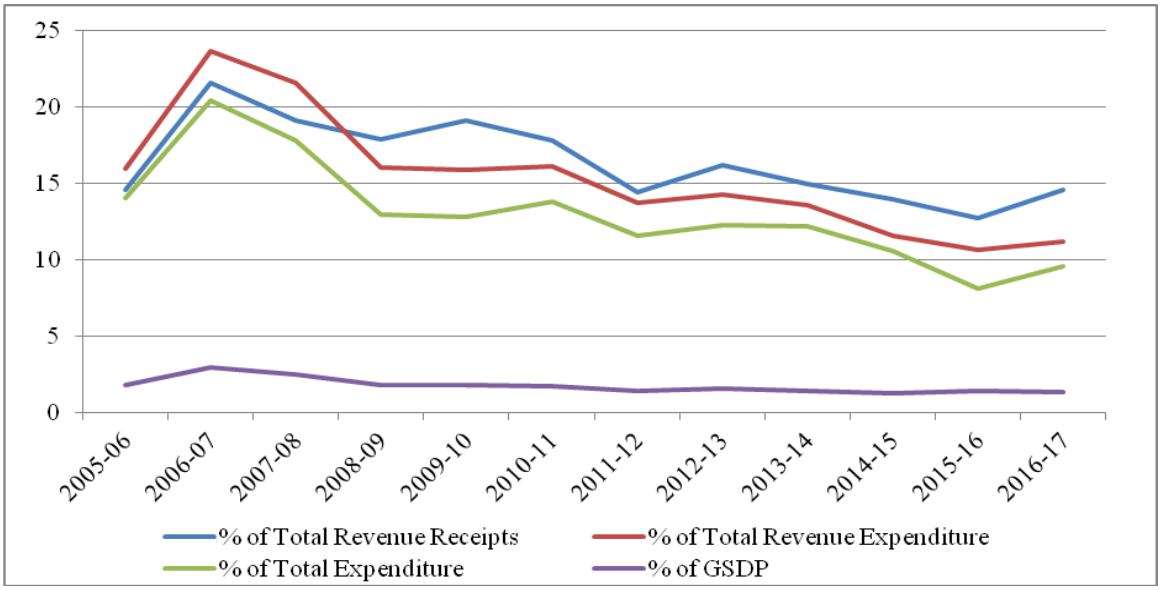
Years	Total Subsidies (Rs Lakhs)	% of Total Revenue Receipts	% of Total Revenue Expenditure	% of Total Expenditure	% of GSDP
2005-06	202295	14.60	16.00	14.0	1.86
2006-07	387626	21.59	23.69	20.4	3.01
2007-08	378047	19.14	21.57	17.8	2.49
2008-09	329779	17.87	16.06	13.0	1.81
2009-10	401644	19.13	15.90	12.8	1.80
2010-11	456283	17.85	16.12	13.8	1.75
2011-12	440799	14.43	13.77	11.6	1.48
2012-13	545353	16.21	14.32	12.3	1.57
2013-14	568113	14.95	13.56	12.2	1.42
2014-15	569335	13.95	11.59	10.6	1.30
2015-16	689881	12.74	10.64	8.1	1.42
2016-17	765358	14.58	11.19	9.6	1.40
Average	**477876.08**	**16.42**	**15.37**	**13.02**	**1.78**

Source: CAG Finance Account Of Haryana Vol.2, Across Various Years

- The total subsidies as a proportion of the total revenue expenditure have been declining gradually over the years. It has fallen from the high of 20.4% in 2006-07 to 9.6% in 2016-17, i.e. by more than half.
- As a proportion of the total revenue receipts, the total subsidy accounts for about 16.4% on average for the period 2005-6 to 2016-17. It varied between 12.7% and 21.6% in this period. It fluctuates and seems to have an election cycle associated with it.

- The subsidies accounted for about 1.78% of the GSDP on an average in this period. Here too the trend has been negative for the subsidies as their share has fallen from around 3% in 2006-07 to 1.4% in 2016-17.

Figure 11.1: Total Subsidies As A Proportion Of Revenue, Expenditure And GSDP



Source: CAG Finance Account of Haryana Vol.2, Various Issues.

Haryana has been fiscally prudent state and has had relatively low expenditure on subsidies and these too have been declining over the 2005-06 to 2016-17 period.

Let us examine next the subsidies given by the state using the information available from CAG Finance Accounts of the Haryana State and Haryana Government's budget documents

Composition of Subsidies

The situation was not much different for the earlier period.[15] The Subsides are broadly grouped in two categories– Social and Economic.

The share of 'Economic Services' is almost 98.7% in total subsidies whereas social services share is mere 1.3, on average, for the period. For most of the years it is less than 1% from 2005-06 to 2016-17.

We notice from the available data that the power sector has been, as expected, the main recipient of subsidies from the State Budget in this period. This is not surprising and it has been pointed out by many previous studies and even earlier Finance Commission Reports as well.

This is possibly one of the important reasons that state endures high level of the regional inequality in the State as also relatively high level of incidence of poverty and adverse social indicators relative to its per capita income level.

[15] 14th FC Report on Haryana

- Female illiteracy is highest in the state relative to other high income states used for analysis (Table 1.1).
- The life expectancy is lowest in Haryana among all the high income states.
- The state has the worst gender ratio of 879.
- The state has highest infant mortality rate (44 per thousand) among all the top 6 high income states of the country.

These adverse social indicators drag the state HDI ranking relative to the national average at a rather low level which is not too different from many backward and low income states.

It is high time that the state government redirects its expenditure towards social sector (i.e. health and education sector) which will not only improve overall welfare but also enhance the sustainability of the growth process which is facing lots of challenges in recent years in terms of social unrest.

Table 11.2: Composition of Subsidies – Level and Proportions

YEARS	Total Subsidy (Rs lakhs)	Energy Subsidy (Rs lakhs)	Energy Subsidy as % of Total	Social Services Subsidy (Rs lakhs)	Social Services Subsidy as % of Total	Economic Services Subsidy	Economic Service Subsidy as % of Total
2005-06	202295	139210	68.82	2665	1.32	199630	98.68
2006-07	387626	375934	96.98	2381	0.61	385245	99.39
2007-08	378047	256836	67.94	3799	1.00	374248	99.00
2008-09	329779	299865	90.93	3312	1.00	326467	99.00
2009-10	401644	277028	68.97	22693	5.65	378951	94.35
2010-11	456283	294863	64.62	4190	0.92	452093	99.08
2011-12	440799	358474	81.32	2928	0.66	437871	99.34
2012-13	545353	513222	94.11	5092	0.93	540261	99.07
2013-14	568113	520584	91.63	5291	0.93	562822	99.07
2014-15	569335	523851	92.01	4121	0.72	565214	99.28
2015-16	689881	632416	91.67	1945	0.28	687936	99.72
2016-17	765358	661870	86.48	14874	1.94	750484	98.06
Average	**477876**	**404512.8**	**82.96**	**6107.6**	**1.3**	**471768.50**	**98.7**

Source: CAG Finance Account Of Haryana Vol.2, across various years.

Many of the other states also face this challenge and Central Government has been trying out various reform packages to rectify the situation and the UDAY scheme launched in 2015 has been the latest such initiative.

It is hoped that with fall in power sector subsidy due to the restructuring under the UDAY scheme more resources will become available to the state for undertaking these social responsibilities (see chapter 9 for more details).

- Most of the subsidy in the state budget goes to economic subsidies (Table 11.2) - almost 98% and, by default, the share of the social services is just around 1.3%. This trend can

be noticed consistently for the entire period under consideration, except for the year 2009-10 when social services share went up to 5.65%, possibly due to the elections.

- In fact, out of the total subsidy as well as the economic subsidy, most of it goes to the electricity sector. On an average, the energy subsidy has been getting 83% of the total subsidy outlay.
- The share of subsidies other than energy sector has been less than 16% for most years. These include agriculture, industry and minerals and others.

Figure 11.3: Composition of the Economic Subsidy

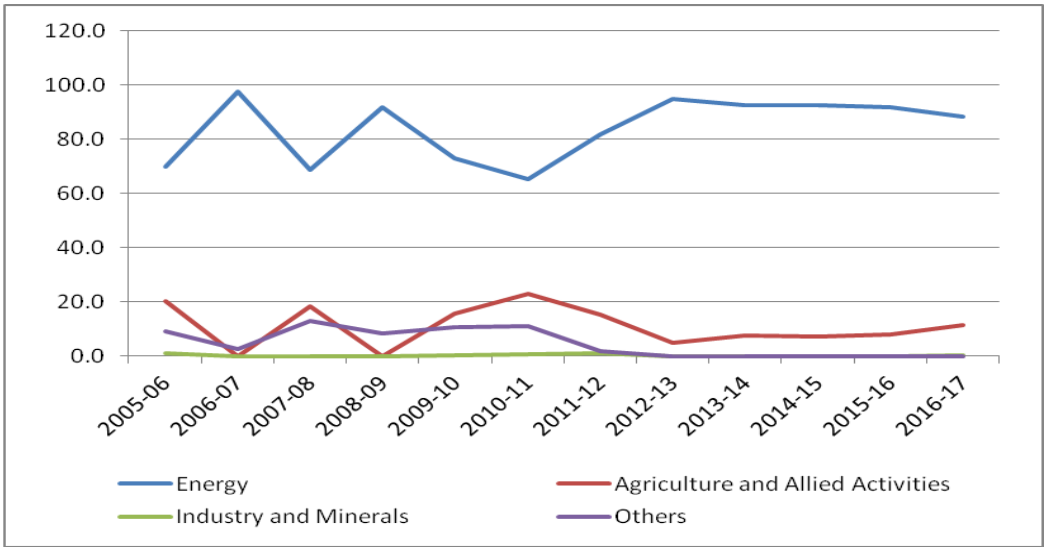


Table 11.3: Sectoral Composition of Subsidies (% share)

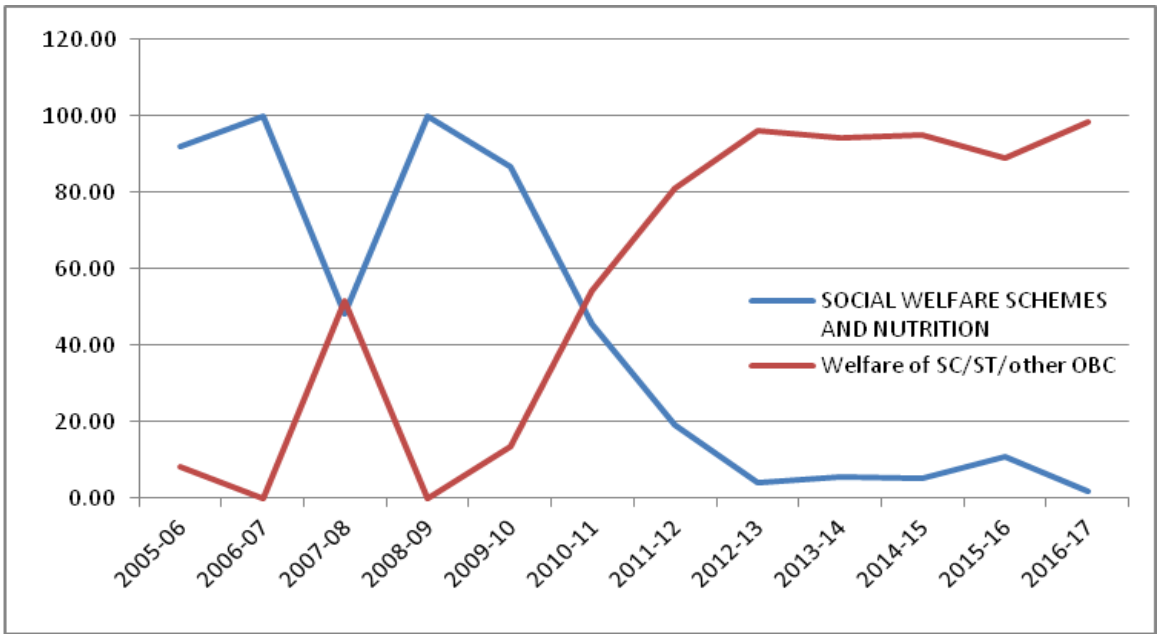
YEARS	Energy (%)	Agriculture & Allied Activities (%)	Industry and Minerals (%)	Others (%)	Economic (Rs Lakhs)
2005-06	69.7	20.2	0.97	9.1	**199630**
2006-07	97.6	0.0	0.00	2.4	**385245**
2007-08	68.6	18.4	0.00	13.0	**374248**
2008-09	91.9	0.0	0.00	8.1	**326467**
2009-10	73.1	15.8	0.40	10.7	**378951**
2010-11	65.2	23.1	0.80	10.9	**452093**
2011-12	81.9	15.3	0.91	1.9	**437871**
2012-13	95.0	5.0	0.00	0.0	**540261**
2013-14	92.5	7.5	0.00	0.0	**562822**
2014-15	92.7	7.3	0.00	0.0	**565214**
2015-16	91.9	8.1	0.00	0.0	**687936**
2016-17	88.2	11.5	0.32	0.0	**750484**
Average	**84.0**	**11.0**	**0.28**	**4.7**	**471769**

Source: CAG Finance Account Of Haryana Vol.2, Across Various Years

As we saw that the share of social subsidies is meager in the state and account for less than 1.5% of the total subsidy bill. However, when one examines the data for the social services in detail we can see that the composition of subsidies has changed significantly in the period from 2005-

06 to 2016-17. Since 2008-09 there has been major slide in the share of 'Social Welfare Scheme and Nutrition' subsidies and steep rise in the subsidies going to Welfare of the socially deprived communities. Possibly it is time that the state should consider increasing the social sector subsidy by reducing the economic subsidies.

Figure 11.4: Composition of The Social Subsidy



Source: CAG Finance Account Of Haryana Vol.2, across various years

To increase the social subsides a simple option could be to raise the budgetary allocation for these categories of social expenditure. With the power sector reforms under the UDAY scheme and wiping clean the balance sheet of the power companies the potential for larger spending on the social sector is likely to be more feasible in the future.

In addition to these, the recommendations of the 14th Finance Commission have further enhanced the fiscal space by raising the share of states in central tax revenue.

So from this analysis it emerges that the potential for more subsidies has been created and now it is the prerogative of the state government how it wants to use this fiscal cushion. We have seen that the state of Haryana has rather adverse social indicators relative to its per capita income and level of poverty incidence has been quite high which needs to an important priority of any democratic government to enhance its legitimacy.

Table 11.4: Social Sector Subsidies

Years	Social Welfare Schemes & Nutrition (%)	Welfare of SC/ST/other OBC (%)	Social Service Subsidy (Rs Lakhs)
2005-06	91.89	8.1	2665
2006-07	100.00	0.0	2381
2007-08	48.43	51.6	3799
2008-09	100.00	0.0	3312
2009-10	86.62	13.4	22693
2010-11	45.75	54.2	4190
2011-12	19.09	80.9	2928
2012-13	3.93	96.1	5092
2013-14	5.67	94.3	5291
2014-15	5.10	94.9	4121
2015-16	10.80	89.2	1945
2016-17	1.68	98.3	14874
Average	**43.2**	**56.7**	**6107.6**

Source: CAG Finance Account Of Haryana Vol.2, across various years

Summary and Recommendations

Haryana has been fiscally prudent state and has relatively low expenditure on subsidies and these have been falling over the 2005-06 to 2016-17 period. There are broadly two types of subsidies – Social and Economic. The share of 'Economic Services' is almost 98.7% in total subsidies whereas social services share is mere 1.3, on average, for the period. For most of the years it is less than 1% from 2005-06 to 2016-17. The power sector is the biggest recipient of subsidies from the State Budget in this period. However, the situation was not much different for the earlier period.[16]

This is not surprising and it has been pointed out by many previous studies and even earlier Finance Commission Reports as well.

This is possibly one of the important reasons that state endures high level of the regional inequality in the State as also relatively high level of incidence of poverty and adverse social indicators relative to its per capita income level.

- Female illiteracy is highest in the state relative to other high income states used for analysis (Table 1.1).
- The life expectancy is lowest in Haryana among all the high income states.
- The state has the worst gender ratio of 879.
- The state has highest infant mortality rate (44 per thousand) among all the top 6 high income states of the country.

These indicators drag the state to the national average which is skewed to the low levels due to the backward and low income states.

[16] 14th FC Report on Haryana

This analysis indicates that the state government needs to rethink and reorient a larger proportion of subsidies towards the social sector (mainly health, and education sector) which will not only improve overall welfare but also enhance the sustainability of the growth process which is facing lots of challenges in recent years in terms of social unrest. This is against the background that the 14th Finance Commission increased the share of state governments in the central pool by a good measure.

Share of SC/ST/OBC welfare has increased in the social sector subsidies whereas the share of social welfare schemes has dropped. However, the overall spending on this head has not been able to keep pace with inflation and has been falling in real terms.

It is hoped that with fall in power sector subsidy due to the restructuring under the UDAY scheme more resources will potentially become available to the state for undertaking these social responsibilities.

Chapter 12

Fiscal Performance of Haryana and the Future Roadmap for Sustainable Debt

This chapter tried to explore the fiscal performance of the Haryana state government relative to other big and high income states using Margit (2013) methodology to estimate the fiscal performance index. Based on these performance indices we assessed the performance of the six high income states and the Haryana state's stacks up over the study period from 2006-7 to 2016-17. In this chapter we also examine the issue of debt sustainability for Haryana and forecasts for the years 2020-21 to 2025-26 using trend rate of growth approach about its debt sustainability. The sample period used is 2005-06 to 2016-17 for the purpose of forecasting.

Fiscal Performance Index

Six performance indices have been combined to compute this composite fiscal performance index. The individual indices are namely Own Tax Earnings Performance Index, Own Tax Spending Performance Index, Development Expenditure Performance Index, Commitment Capacity Performance Index and Committed Expenditure Performance Index.

It is important to note that out of the five individual indicators, three have positive characteristic and two have negative features. Any indicator is meant to be positive when increasing value represents better performance and negative if it happens to be the opposite. Accordingly, the three positive indices are namely **Own Tax Earnings Performance Index, Own Tax Spending Performance Index** and **Development Expenditure Performance Index.** The remaining two indices are negative. Irrespective of the dimension of the individual indices, we intend to develop the composite index as positively directed with higher value representative of better performance and vice versa. To do this, all negative individual indices are to be converted into positive by taking inverse of the indicator variable by which the individual index is composed of. These indicator variables for each and every index are summarized below. Finally, the simple arithmetic mean of these five indices gives us the composite index of fiscal performance, i.e. 'Fiscal Performance Index'.

Table 12.1: Individual Indices and the Indicator Variables

Indices	Indicator Variable Used
Own Tax Earnings Performance Index	Own Tax Revenue/GSDP
Own Tax Spending Performance Index	Own Tax Revenue/Total Revenue Expenditure
Development Expenditure Performance Index	Development Expenditure/Non Development Expenditure
Commitment Capacity Performance Index	1 − (Committed Expenditure/Total Revenue Receipt)
Committed Expenditure Performance Index	1 − (Committed Expenditure/Total Revenue Expenditure)

Method to Construct Individual Fiscal Performance Indices:

$$FPI_i = x_{ijt} - min(x_{it}) / max(x_{it}) - min(x_{it})$$

i stands for individual indices, *j* stands for state and *t* stands for time point.
x_{ijt} = Value of i^{th} indicator variable for j^{th} state at time point t.
$mi(x_{it})$ = Minimum value of i^{th} indicator across all states at time t.
$ma(x_{it})$ = Maximum value of i^{th} indicator across all states at time t.

We multiplied each index by 100 to represent each in the form of comparable percentages which are presented in tables 12.2 to 12.7.

Table 12.2: Own Tax Earnings Performance Index (In percent)

Year	Gujarat	Karnataka	Kerala	Maharashtra	Punjab	Tamil Nadu	Haryana
2005 – 2006	6.41	8.34	9.51	7.15	6.89	8.27	9.05
2006 – 2007	6.51	8.49	10.25	7.77	6.86	7.09	8.94
2007 – 2008	6.65	7.66	9.6	7.8	6.94	6.5	8.44
2008 – 2009	6.4	6.39	8.91	7.89	6.9	6.41	8.39
2009 – 2010	6.2	5.91	9.06	7.60	6.91	6.10	7.62
2010 – 2011	6.97	6.44	9.37	8.23	7.15	7.44	8.17
2011 – 2012	7.19	6.78	7.70	7.06	6.88	8.94	7.92
2012 – 2013	7.44	6.72	7.77	7.29	7.14	7.59	8.33
2013 – 2014	6.98	6.46	7.65	6.88	6.59	7.19	7.59
2014 – 2015	6.85	6.25	7.61	6.70	6.42	6.95	7.20
2015 – 2016	6.37	7.19	7.36	6.78	6.52	7.28	7.14
2016 – 2017	6.16	7.37	7.51	7.72	6.36	7.04	6.77

Source: Authors' calculations

If we first just look at the performance of Haryana alone with respect to its Own Tax Earnings Performance Index, the performance for the state has been deteriorating in this period. The index was a little over 9% in 2005-06 which fell to 8% in 2007-08 and stayed at that level till 2013-14. In 2014-15 the index fell further to 7%. Relative to the state of Punjab and Gujarat, Haryana's performance has been better. Among the high income states, Maharashtra is the top performer followed by Kerala and Karnataka, and then comes Haryana.

Table 12.3: Own Tax Spending Performance Index

Year	Gujarat	Karnataka	Kerala	Maharashtra	Punjab	Tamil Nadu	Haryana
2005 - 06	61.64	71.83	66.44	53.08	64.16	49.37	72.87
2006 - 07	63.17	66.79	69.69	57.34	65.32	48.63	72.58
2007 - 08	65.25	66.29	69.53	54.91	73.37	42.93	68.92
2008 - 09	60.81	56.76	66.36	56.65	68.74	45.38	62.86
2009 - 10	54.98	52.34	64.33	56.61	62.27	43.93	61.55
2010 - 11	63.26	59.31	71.2	62.66	70.47	51.15	65.53
2011 - 12	74.07	63.72	71.38	55.86	70.91	72.15	70.99
2012 - 13	77.37	61.88	70.46	56.23	74.57	57.24	73.41
2013 - 14	74.9	61.04	70.19	52.9	70.11	57.83	67.12
2014 - 15	70.79	56.26	67.73	49.11	64.81	54.86	61.06
2015 - 16	62.85	53.87	64.74	48.73	62.85	53.63	58.56
2016 - 17	63.09	53.43	64.39	48.74	64.23	52.52	55.29

Source: Authors' calculations

Haryana's own tax spending performance index was the highest among the top 7 high income states in 2005-06 but it then started to decline over the years and reached a level of 62% in 2009-10. The index started to improve 2010 onwards and reached 71% in 2011-12 followed by 73% in 2012-13. However, this index started falling again in 2013 onward and has become as low as 55%. Compared to the other states, Haryana falls behind Kerala, Punjab and Gujarat in term of performance with respect to their own tax spending. Karnataka, Maharashtra and Tamil Nadu's performance has been more of less similar and they remained at lower level relative to Haryana for the period.

Table 12.4: Development Expenditure Performance Index

Year	Gujarat	Karnataka	Kerala	Maharashtra	Punjab	Tamil Nadu	Haryana
2005 - 2006	124.64	170.54	167.86	110.42	134.73	69.59	132.57
2006 - 2007	140.09	232.04	205.16	94.52	140.45	76.19	138.87
2007 - 2008	144.55	228.71	226.06	87.07	167.78	76.11	145.68
2008 - 2009	188.18	237.27	220.03	104.93	180.05	72.88	167.04
2009 - 2010	186.59	224.78	253.09	105.54	191.38	73.66	172.83
2010 - 2011	188.58	202.62	263.25	106.81	179.2	73.45	158.67
2011 - 2012	177.2	212.29	269.53	110.13	185.94	92.39	163.79
2012 - 2013	188.03	219.16	258.14	117.11	187.95	109.53	177.72
2013 - 2014	179.39	207.05	237.29	108.66	183.16	103.6	181.7
2014 - 2015	187.02	192.12	245.31	107.9	189.53	99.67	185.31
2015 - 2016	202.82	243.97	262.08	108.13	195.26	114.52	188.82
2016 - 2017	172.51	239.26	254.83	108.53	181.46	112.02	183.78

Source: Authors' calculations

Since 2005-06 Haryana's development expenditure performance index has been improving consistently implying a faster growth in the amount of developmental expenditure being undertaken by the state relative to its peers. If compared with the states of Punjab and Gujarat, Haryana has been doing poorly in comparison. In 2008-09, the development expenditure performance index was 167 for Haryana but the same stood at 187 and 180 for Gujarat and Punjab respectively. This index for the year 2010-11 stood at 159 for Haryana whereas it was 189 and 179 for Gujarat and Punjab respectively. In 2015-16 though Haryana has improved its performance with respect to development expenditure index and the index rose to 189 but it still falls behind Punjab (195) and Gujarat (203). Of the seven high income states, Karnataka and Kerala are the exceptional and top performers followed by Punjab and Gujarat and then come Haryana which is followed by Maharashtra and Tamil Nadu.

Table 12.5: Committed Expenditure Performance Index

Year	Gujarat	Karnataka	Kerala	Maharashtra	Punjab	Tamil Nadu	Haryana
2005 - 2006	57.05	74.52	48.91	64.3	58.38	65.85	70.23
2006 - 2007	62.75	76.96	52.19	66.96	53	66.02	74.57
2007 - 2008	63.61	75.55	48.12	71.78	53.11	67.89	75.09
2008 - 2009	66.73	73.78	53.74	69.72	51.38	68.14	69.65
2009 - 2010	61.31	76.2	53.02	66.35	50.27	65.91	65.58
2010 - 2011	64.03	77.84	55.85	66.72	48.91	65.2	65.93
2011 - 2012	67.49	78.34	53.12	67.13	39.56	68.25	68.81
2012 - 2013	69.51	76.32	56.57	69.04	45.1	69.82	66.93
2013 - 2014	68.1	75.41	56.12	66.77	45.16	68.71	66.46
2014 - 2015	69.1	75.97	57.26	66.63	43.81	67.92	63.16
2015 - 2016	70.03	75.98	60.36	68.03	49.64	67.7	67.64
2016 - 2017	70.15	74.96	60.76	67.68	49.82	66.18	67.63

Source: Authors' calculations

Haryana's committed expenditure performance index has been relatively stable between 70-73% for the period. In fact among the top income states in India, Haryana occupies the second position in terms of the committed expenditure performance index. Karnataka tops the list. In 2006-07, the index for Haryana stood at 74.57 while it was 53 for Punjab, 62.75 for Gujarat, 52.19 for Kerala, 67 for Maharashtra and 66 for Tamil Nadu. In 2009-10, Haryana index was 71, Punjab was at 50.27, Gujarat was 61.3, and Kerala at 53, Maharashtra is 66.35 and Tamil Nadu at 65.9. The index of all the states have been more or less the same with a little incremental change in this period but Punjab's performance index worsened to 43.8 by 53 in 2014-15. Punjab has been the poorest performer among high income states and in 2016-17 stands at 49.8.

Table 12.6: Commitment Capacity Performance Index

Year	Gujarat	Karnataka	Kerala	Maharashtra	Punjab	Tamil Nadu	Haryana
2005 - 2006	57.72	72.42	57.59	66.92	61.22	63.77	67.38
2006 - 2007	60.49	74.09	58.25	66.53	57.43	63.67	72.09
2007 - 2008	61.28	73.08	56.01	65.33	60.88	64.5	71.93
2008 - 2009	66.79	72.76	59.83	67.49	59.01	67.28	72.73
2009 - 2010	66.86	75.39	60.6	69.19	59.79	67.94	71.39
2010 - 2011	67.21	76.13	60.53	66.91	57.12	66.5	69.23
2011 - 2012	65.75	76.78	61.3	67.74	52.01	67.73	70.23
2012 - 2013	67.07	75.73	64.16	68.1	55.41	69.27	70.79
2013 - 2014	66.1	75.31	64.32	67.86	53.77	69.22	69.56
2014 - 2015	67.2	75.85	65.48	68.91	52.96	69.52	72.63
2015 - 2016	68.94	75.77	65.6	69.46	56.8	69.77	71.67
2016 - 2017	69.29	74.86	66.01	68.21	56.71	69.45	70.21

Source: Author's calculations

Haryana's commitment capacity performance index slightly improved. The index was 67.4 in 2005-06 it rose to around 72 in 2006-07 then it fell to 69 by 2010-11. The performance index improved slightly to 70.21 by 2016-17.

In comparison to the other states, Haryana's performance index is similar to that of Gujarat, Maharashtra, Tamil Nadu and Kerala. Karnataka continues to be one of the best performing states and Punjab has been the worst performer among the seven high income states.

Table 12.7: Individual Fiscal Performance Index of Each Indices For Haryana

Year	Development Expenditure Performance Index	Own Tax Earning Performance Index	Own Tax Spending Performance Index	Commitment Capacity Index	Committed Expenditure Index	Fiscal Performance Index Of Haryana
2005 - 2006	62.38	85.03	100	83.27	66.01	79.34
2006 - 2007	40.22	65	100	90.35	87.37	76.59
2007 - 2008	45.59	60.77	85.39	98.33	93.28	76.67
2008 - 2009	57.28	79.41	74.81	81.55	99.8	78.57
2009 - 2010	55.27	49.6	86.4	59.04	72.97	64.66
2010 - 2011	44.9	59.04	71.71	58.82	63.72	59.64
2011 - 2012	59.55	100	83.1	75.41	73.54	78.32
2012 - 2013	45.88	100	81.24	69.94	75.68	74.55
2013 - 2014	75.49	94.72	64.64	70.43	73.32	75.72
2014 - 2015	58.81	69.53	55.11	60.19	85.97	65.92
2015 - 2016	52.41	77.64	61.37	68.33	78.36	67.62
2016 - 2017	51.43	45.55	41.83	70.83	74.36	56.8

Authors' calculations

Table 12.7 shows that the overall Fiscal performance index (FPI) for Haryana has deteriorated over the years from 2005-06 to 2016-17. We observe Haryana's FPI decline has been mainly on account of worsening Development Performance Index and Own-Tax Spending Index. Own-Tax Earning Performance Index went up to 100% in 2011-12 and 2012-13 but declined thereafter and has reached 45.5 in 2016-17. Committed Capacity Index and Committed Expenditure Index fluctuated over this ten year period. So, although the State maintained a reasonably good fiscal health relative to other States, but there has been a steady decline in fiscal performance between 2005-06 and 2016-17.

Forecasting For Sustainable Debt Road Map

Table 12.8 summarizes the results for various fiscal indicators along with the Debt-to-GSDP ratio. As one could notice, on the revenue side, the State's 'own tax revenue' has been growing at healthy rate of 14.2%. The State's share in Central Taxes is rising at 17.6% and Central Grants by more than 15% between 2005-06 and 2016-17. However, the state's non-tax revenue has been rising at a bit rather slower pace of around 13.3%. SGST is likely to rise by at least 14% for the initial five years as per the Centre's assurance. All put together, it is estimated that the State's 'non-debt capital receipts' grew by about 15.1% in this period of analysis. We assume it is likely to grow, at least, at this rate. The GSDP in nominal terms is likely to grow at 15.4% given past trends.

Table 12.8: Forecasts based on Trend Regression for the Period 2005-06 to 2017-18
(Rs in crores)

Items	Trend ROG	2017	2018	2019	2020	2021	2022	2023	2024	2025
OTR	0.1258	446.9	503.1	566.4	637.7	717.9	808.3	910.0	1024.5	1153.4
ONTR	0.0701	109.8	117.5	125.8	134.6	144.0	154.1	164.9	176.5	188.9
SGST	0.1400	125.2	142.7	162.7	185.5	211.5	241.1	274.8	313.3	357.1
SCT	0.1558	83.7	96.8	111.8	129.2	149.4	172.7	199.6	230.6	266.6
CG	0.1508	60.4	69.5	80.0	92.0	105.9	121.9	140.3	161.4	185.8
TRE	0.1478	783.1	898.8	1032	1184	1359.0	1559.8	1790.2	2054.7	2358.3
Interest Payment	0.1552	118.9	137.3	158.6	183.3	211.7	244.6	282.5	326.4	377.0
TE	0.1485	936.9	1076	1236	1419	1629.7	1871.7	2149.5	2468.6	2835.0
Non Debt Receipts	0.1108	764.1	848.7	942.8	1047	1163.3	1292.2	1435.4	1594.5	1771.1
Public Debt	0.1792	1418	1672	1972	2325	2742	3233	3812	4495	5301
(Public Debt) – (Power Sector Debt)	0.1715	1158.4	1357	1590	1862	2182	2556	2994	3507	4108
GFD = Total Exp – Non Debt Receipts		172.8	227.2	292.9	371.8	466.43	579.45	714.10	874.13	1063.90
GSDP	0.1444	6085	6963	7968	9118	10435	11941	13665	15637	17895
(Public Debt)/GSDP (%)	Pessimistic	23.30	24.01	24.74	25.50	26.27	27.07	27.90	28.75	29.62
(Public Debt - Power Bonds)/GDP –(%)	Optimistic	19.04	19.49	19.95	20.42	20.91	21.40	21.91	22.43	22.96
Interest Payment/TExp	Percent	12.7	12.8	12.8	12.9	13.0	13.1	13.1	13.2	13.3
Interest Payments /Non Debt Receipts	Percent	15.6	16.2	16.8	17.5	18.2	18.9	19.7	20.5	21.3
Interest Payment /GSDP	Percent	1.95	1.97	1.99	2.01	2.03	2.05	2.07	2.09	2.11
GFD/GSDP	Percent	2.84	3.26	3.68	4.08	4.47	4.85	5.23	5.59	5.95
Interest Payment /Public Debt	Percent	8.4	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.1

However, on the expenditure side we notice that the 'total revenue expenditure' as well as 'total expenditure' has been rising at 16.4% and 'total expenditure' at a bit higher of 16.9% in this period.

So, using the trend growth of revenue and expenditure, we estimated that the 'gross fiscal deficit' will gradually rise and may cross the 4% mark by 2022-23 and could cross 4.5% by 2024-25 and thereafter.

As far as public debt is concerned, it is expected to rise too. First, the Pessimistic scenario looks at the 'public debt-to-GSDP' ratio with Power Sector Debt; and, the Second, Optimistic Scenario analyzes the 'public debt-to-GSDP without the Power Sector Debt'. This is on the surmise that the Centre and state government are likely to take special care to nudge the economic agents to take care of fiscal implications in the after math of the UDAY scheme which has pushed up the state's fiscal deficit as well as the Debt-GSDP ratio.

Our optimistic analysis indicates that the Debt-GSDP ratio (without Power Sector Debt) will be within prescribed limits by 2025-26 and reach a high of 25%.

If it is not done then the state debt situation is likely to worsen. As one can see in the Table 12.8, the pessimistic scenario shows that the Public Debt-to-GSDP ratio for the state might reach above 31% by 2025-26. Haryana has been among the better fiscally managed state and there is no reason to expect that the state will not keep its reputation and be able to remain fiscally prudent.

Besides the Debt, the related issue of interest payments needs to be examined as well. The interest payments are likely to rise as well as the debt level rises. It is forecasted to go up to 16% of the 'non-debt receipts' by 2025-26. This is not a healthy development and needs better fiscal management of the state exchequer. This will have direct repercussions for the state's fiscal deficits as mentioned above. This will reduce the fiscal flexibility of the successive government and will need Finance Commission and Centre to take the corrective measures so that the state finances are in good shape for the years to come.

The interest payments as a percent of 'total expenditure' is likely to rise at a slower rate and will go up from 12.7% in 2017-18 to about 11.6% by 2025-26. This is unlikely to create a serious issue for the government but the debt repayment could be a potential problem and would need adequate attention.

The states as well as the country are facing a major challenge in the aftermath of the GST implementation and demonetization. These policy interventions seems to have enhanced the growth of organized sector of the economy but the unorganized sector have suffered a serious jolt and there has been adverse implications for employment and the incomes in this sector. The unorganized sector employs relatively poorer sections and as their incomes decline the 'aggregate demand' in the economy has been subdued. That is partly the reason that the private investments are not picking up and growth is requiring a push by public investment which central government is trying as best as it can. It is a challenge for the policymakers to ensure that the incomes at the bottom ends grow as that will ensure growing demand and a virtuous cycle of growth. This could also help in reducing the incidence of poverty in the state which has high 'head count ratio' despite very high per capita income level.

This indicates that the inequalities have risen in the state over the last decade whereas all the poorer states have had the opposite experience in this period (Tendulkar Report, 2014).

As mentioned earlier, the state of Haryana also has very low rank in the social indicators and by improving social infrastructure it could not just stimulate the economy but also improve the welfare of its population. The policymakers in the state have to realize that the economy and the society need to go hand in hand to improve the overall situation of the state. The time is ripe for the state to create and improve infrastructure to enhance not just economic outcomes but also social outcomes as is done by its Southern and Western counterparts.

What is the way out for the State government?

There are many options:

8) Power Sector Reforms: Given the state's T & D losses (see chapter 9 for a detailed analysis) and associated financial losses it is a feasible option for the state to rein in the losses of the power sector PSEs. One doable solution will be to outsource the bill collection system to a reputed company as it is a common best practice in many infrastructure sectors industries (e.g. toll roads, metro networks, telecom etc). This will gradually reduce the leakage in the revenue collection system and will save good amount of resources for the state and partly will take care of the debt overhang of the sector.
9) State government could attempts to raise its revenue receipts to improve its finances. One option is to restructure its public sector enterprises and make sure that they are financially viable by improving their physical performance. Power sector, as mentioned above, has a great potential to take care of its finances by reducing T & D losses which are among the highest in all high income states.
10) To restructure the PSEs the state need to engage professional experts to turn them around and make an attempt to understand what would work. Each PSE is unique so the solution to their viability may vary. Empowering workers and managers in these enterprises and taking into account their views could help PSEs turn around much faster. This is because they are the main stakeholders in these PSEs and if they close down their future will be at stake. There is an important lesson to be learnt from the biggest foreign investor country in the state – Japan – which has used the shop-floor workers creative genius to not just enhance its productivity but also become more profitable and globally competitive.
11) Also, one needs to keep in mind that most of the PSEs work in the infrastructure sector which is generally a 'universal input' to all other sectors. So, if the infrastructure sector is efficient, affordable and viable then there is no reason that it will not improve the overall development performance of the state by creating employment, growth as well as development.

Done right, these steps could also add to budget revenues and reduce future expenditure of the state government. These steps could make the state once again fiscally responsible as well as socially move ahead.

Appendix Table 1.1 Sectoral Shares in GSDP and Growth Rates

	AGRICULTURE		INDUSTRY		SERVICES	
	SHARE	GROWTH	SHARE	GROWTH	SHARE	GROWTH
1995-96 to 1999-2000						
HARYANA	38.96	1.17	34.36	6.9	26.66	10.17
HIS*	28.77	1.57	34.92	6.46	36.31	8.88
INDIA	30.69	3.13	23.05	6.32	46.26	8.88
2000-01 to 2004-05						
HARYANA	32.72	3.05	34.67	6.22	32.6	10.28
HIS*	23.1	-0.38	33.69	4.48	43.21	8.17
INDIA	26.2	1.72	22.37	5.63	51.43	7.35
2005-06 to 2009-10						
HARYANA	26.92	3.61	33.64	7.84	39.43	13.8
HIS*	17.99	3.54	35.11	10.11	46.9	10.51
INDIA	21.18	3.19	22.8	8.98	56.02	10.19
2010-11						
HARYANA	23.52	5.21	32.46	5.6	44.02	9.15
HIS*	15.99	12.4	35.62	10.83	48.39	9.94
INDIA	18.8	8.59	22.89	8.25	58.31	9.18
2011-12						
HARYANA	23.54	7.86	31.6	4.88	44.86	9.81
HIS*	15.44	1.48	34.79	2.65	49.77	8.1
INDIA	18.53	5.01	22.91	6.69	58.56	7.06
2012-13						
HARYANA	21.54	-1.97	32.22	9.19	46.24	10.45
HIS*	13.83	-5.06	34.95	6.48	51.22	9.1
INDIA	17.84	1.48	22.71	4.49	59.45	7.02
2013-14						
HARYANA	20.58	2.78	32.15	7.35	47.27	9.92
HIS*	14.41	11.79	33.9	4.09	51.69	8.28
INDIA	17.75	5.57	22.32	4.23	59.93	6.89
2014-15						
HARYANA	19.19	-1.91	31.23	2.24	49.58	10.31
HIS*	13.3	-1.96	33.87	6.07	52.83	8.55
INDIA	16.53	-0.19	22.61	8.58	60.86	8.29
2015-16						
HARYANA	18.21	2.89	31.08	7.85	50.71	10.9
HIS*	12.01	-3.13	34.56	9.45	53.43	8.43
INDIA	15.42	0.68	23.08	10.2	61.5	9.06
2016-17						
HARYANA	17.84	6.39	30.45	5.62	51.71	4.88
HIS*	11.74	6.43	34.22	6.96	54.04	7
INDIA	15.16	10.8	23.16	9.25	61.68	6.92

Source: Computed from the Data from RBI, State finances Report

HIS*= High Income States (these include Gujarat, Punjab, Tamil Nadu, Karnataka, Kerala, Maharashtra)

APPENDIX 2

Appendix Table 2.1: Tax-GSDP Ratio of Haryana

Year	Nominal GSDP (In Rs Crore)	TAX-to-GSDP Ratio	Own-Tax GSDP Ratio
1980-81	3386	8.72	6.91
1985-86	6552	8.96	7.66
1990-91	13636	9.21	7.85
1995-96	29789	8.49	7.28
2000-01	58183	8	7.41
2005-06	108885	9.44	8.34
2006-07	128732	9.5	8.49
2007-08	151596	8.74	7.67
2008-09	182522	7.33	6.39
2009-10	223600	6.71	5.91
2010-11	260621	7.33	6.44
2011-12	297538	7.76	6.86
2012-13	347032	7.6	6.72
2013-14	400662	8.33	7.37
2014-15	436961	7.14	6.32
2015-16	485824	8.32	7.19
2016-17	545322	7.45	6.24
2017-18(RE)	608470	8.72	5.29
2018-19(BE)	687572	8.50	3.69

Source: Authors' calculations based on EPWRF data, Budget Documents of Haryana 2017 and 2018
Nominal GSDP data till 2010 from EPWRF, Statistical Abstract of Haryana, 2016-17 from 2011-12 and 2017-18.
A stands for Advanced Estimate Q stands for Quick Estimate P stands for Provisional Estimate
Tax revenue data for 2017-18 is based on Revised Estimate.

Appendix Table 2.2.Results of Trend Regression–

Dependent Variable: TAX_GSDP Ratio

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.353	.221		42.335	.000
	Time	-.042	.010	-.583	-4.365	.000

Appendix Table 2.3: Tax Buoyancy

Year	Tax Growth rate	GSDP growth rate	Tax Buoyancy	Own-Tax growth rate	Own-Tax Buoyancy
1981-82	21.519	15.505	1.388	24.244	1.564
1985-86	17.689	21.739	0.814	23.754	1.093
1990-91	18.01	22.329	0.807	17.567	0.787
1995-96	14.649	13.504	1.085	14.815	1.097
2000-01	15.07	13.252	1.137	22.443	1.694
2005-06	27.563	13.665	2.017	22.043	1.613
2006-07	18.919	18.227	1.038	20.374	1.118
2007-08	8.408	17.761	0.473	6.313	0.355
2008-09	0.988	20.4	0.048	0.344	0.017
2009-10	12.021	22.506	0.534	13.379	0.594
2010-11	27.331	16.557	1.651	27.005	1.631
2011-12	20.899	14.165	1.475	21.501	1.518
2012-13	15.337	16.635	0.922	15.49	0.931
2013-14	8.606	15.454	0.557	8.531	0.552
2014-15	7.85	25.914	0.303	8.074	0.312
2015-16	29.675	11.182	2.654	26.435	2.364
2016-17	0.46	12.25	0.04	-2.62	-0.21
2017-18(RE)	24.05	11.58	2.08	-5.45	-0.47
2018-19(BE)	12.66	13.00	0.97	-41.46	-3.19

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted
**TRR stands for Total Revenue Receipts of States RE is Revised Estimate BE is Budget Estimate*

Appendix Table 2.4 showing Long Run Tax Buoyancy estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.320491	0.082111	-28.26033	0.0000
LOG(GSDP_N)	0.947512	0.012805	73.99387	0.0000

R-squared	0.993287	Mean dependent var	3.558610
Adjusted R-squared	0.993106	S.D. dependent var	1.558464
S.E. of regression	0.129399	Akaike info criterion	-1.201914
Sum squared resid	0.619530	Schwarz criterion	-1.116603
Log likelihood	25.43733	Hannan-Quinn criter.	-1.171305
F-statistic	5475.092	Durbin-Watson stat	0.584027
Prob(F-statistic)	0.000000		

Appendix Table 2.5 showing short run estimation of tax buoyancy

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.66399	24.10627	0.566823	0.5847
D(GSDP_N)	0.022717	0.058210	0.390262	0.7054
R-squared	0.016641	Mean dependent var		22.67727
Adjusted R-squared	-0.092621	S.D. dependent var		21.91632
S.E. of regression	22.90881	Akaike info criterion		9.263885
Sum squared resid	4723.321	Schwarz criterion		9.336230
Log likelihood	-48.95137	Hannan-Quinn criter.		9.218282
F-statistic	0.152304	Durbin-Watson stat		2.259499
Prob(F-statistic)	0.705419			

Appendix Table 2.6 Components of tax as a percentage of TRR and growth rates

Year	Sales Tax		State Excise Duty		Stamps & Registration		Taxes on Passenger Goods &Services		Vehicle Tax		Taxes & Duties on Electricity		Land Revenue		Other Taxes	
	As a % TRR	R.O.G	As a % TRR	R.O.G	As a % TRR	R.O.G	As a % TRR	R.O.G	As a % TRR	R.O.G	As a % TRR	R.O.G	As a % TRR	R.O.G	As a % TRR	R.O.G
1981 - 82	25.8	12.03	9.7	3.81	4.73	18.65	7.4	3.3	2.01	-5.18	2.37	-22.4	0.68	-20.5	1.52	18
1985 - 86	24.4	5.02	11.6	0.99	3.89	-4.03	6.9	-0.58	1.56	-12.7	2.33	5.77	0.39	-20.9	1.21	12.4
1990 - 91	25.9	0.09	15	1.63	5.31	-7.87	5.3	-15	1.87	40.52	1.8	-1.92	0.05	8.17	0.72	-12.7
1995 - 96	21.1	39.07	11	22.52	4.88	75.16	4	21.1	1.05	35.92	0.93	13.53	0.03	14.66	0.28	11.86
2000 - 01	39.1	14.75	12.8	-3.66	6.38	18.67	5.6	-0.68	1.3	-11.3	0.01	-98.7	0.18	139.9	0.19	-30.7
2005 - 06	40.5	-5.26	7.99	-12.1	9.67	48.4	5.5	-13.5	1.24	-1.34	0.44	-19.8	0.09	-9.75	0.17	-8.21
2006 - 07	38.2	-5.64	6.78	-15.2	9.83	1.66	4.1	-24.8	1.25	0.27	0.55	23.26	0.07	-23.6	0.11	-36.5
2007 - 08	39.1	2.4	6.98	2.97	8.93	-9.2	1.9	-53.3	1.18	-4.99	0.54	-0.63	0.05	-34.4	0.13	17.68
2008 - 09	44.2	13.05	7.69	10.12	7.19	-19.5	2	4.47	1.3	9.56	0.58	5.9	0.05	-2.09	0.17	34.87
2009 - 10	43	-2.64	9.81	27.59	6.16	-14.3	1.9	-7.08	1.32	1.77	0.57	-1.13	0.04	-3.39	0.18	4.43
2010 - 11	43.4	0.75	9.25	-5.65	9.07	47.23	1.5	-18.8	1.79	35.55	0.51	-10.5	0.04	-12.7	0.15	-14.6
2011 - 12	43.8	1.03	9.27	0.14	9.14	0.74	1.4	-7.23	2.42	35.38	0.54	6.88	0.04	-8.58	0.14	-4.28
2012 - 13	45.7	4.38	9.62	3.83	9.89	8.2	1.4	-0.38	2.64	8.92	0.57	4.8	0.04	7.7	0.17	17.02
2013 - 14	44.1	-3.48	9.73	1.08	8.42	-14.8	1.3	-6.5	2.88	9.18	0.58	1.03	0.03	-15.3	0.18	6.91
2014 - 15	46.6	5.49	8.51	-12.6	7.62	-9.56	1.3	-1.28	2.92	1.39	0.59	1.9	0.04	14.62	0.22	20.45
2015 - 16	46.2	-0.86	8.43	-0.87	5.72	-25	1.1	-14.3	2.43	-16.8	0.46	-21.5	0.03	-18.7	0.17	-20.9
2016 - 17	47.7	3.26	8.71	3.24	6.13	7.28	1.1	-1.23	2.4	-1.23	0.45	-3.03	0.03	-1.23	0.17	-1.23
2017-18 (RE)	43.5	-8.68	8.7	-0.02	5.56	-9.27	NA	NA	3.42	42.71	0.43	-4.32	0.03	-13.9	0.16	-3.24
2018-19 (BE)	14.9	-65.8	7.8	-10.4	5.85	5.11	NA	NA	3.83	11.98	NA	NA	NA	NA	0.63	281

Appendix Table 2.7: Estimating Long Run Sales Tax Buoyancy

Dependent Variable: D(SALES_TAX)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.740463	6.473869	0.732246	0.4827
D(GSDP_N)	0.029029	0.015633	1.856972	0.0963

R-squared	0.277012	Mean dependent var	16.25818
Adjusted R-squared	0.196680	S.D. dependent var	6.864236
S.E. of regression	6.152285	Akaike info criterion	6.634490
Sum squared resid	340.6555	Schwarz criterion	6.706834
Log likelihood	-34.48969	Hannan-Quinn criter.	6.588887
F-statistic	3.448344	Durbin-Watson stat	1.588634
Prob(F-statistic)	0.096277		

Appendix Table 2.8 Estimating Long Run Sales Tax Buoyancy

Dependent Variable: LOG(SALES_TAX)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.381506	0.124545	-27.15085	0.0000
LOG(GSDP_N)	1.022486	0.019423	52.64346	0.0000

R-squared	0.986825	Mean dependent var	2.962794
Adjusted R-squared	0.986469	S.D. dependent var	1.687280
S.E. of regression	0.196270	Akaike info criterion	-0.368728
Sum squared resid	1.425315	Schwarz criterion	-0.283417
Log likelihood	9.190196	Hannan-Quinn criter.	-0.338119
F-statistic	2771.334	Durbin-Watson stat	0.421636
Prob(F-statistic)	0.000000		

Appendix Table 2.9: Estimation of Long Run Trend growth of Non-Tax_GSDP Ratio

Dependent Variable: LOG(NONTAX_GSDPRATIO)
Method: Least Squares
Sample (adjusted): 1980 2017
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.799646	0.146379	12.29440	0.0000
TIME	-0.037690	0.006543	-5.760355	0.0000

R-squared	0.479631	Mean dependent var	1.064690
Adjusted R-squared	0.465176	S.D. dependent var	0.604793
S.E. of regression	0.442295	Akaike info criterion	1.257517
Sum squared resid	7.042496	Schwarz criterion	1.343706
Log likelihood	-21.89282	Hannan-Quinn criter.	1.288182
F-statistic	33.18169	Durbin-Watson stat	0.520793
Prob(F-statistic)	0.000001		

Source: Authors' estimation

Appendix Table 2.10: Estimation of Long Run Non-Tax Buoyancy

Dependent Variable: LOG(ONTR)
Method: Least Squares
Sample (adjusted): 1980 2018
Included observations: 39 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.975760	0.276643	-7.141904	0.0000
LOG(GSDP_N)	0.745989	0.043143	17.29122	0.0000

R-squared	0.889876	Mean dependent var	2.652933
Adjusted R-squared	0.886900	S.D. dependent var	1.296334
S.E. of regression	0.435961	Akaike info criterion	1.227394
Sum squared resid	7.032306	Schwarz criterion	1.312705
Log likelihood	-21.93419	Hannan-Quinn criter.	1.258003
F-statistic	298.9863	Durbin-Watson stat	0.520902
Prob(F-statistic)	0.000000		

Source: Authors' estimation

Appendix Table 2.11: Estimation of Long Run Non-Tax Buoyancy

Dependent Variable: D(ONTR)
Method: Least Squares
Sample: 2006 2016
Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.460289	11.52228	0.560678	0.5887
D(GSDP_N)	-0.007722	0.027823	-0.277551	0.7876

R-squared	0.008487	Mean dependent var	3.396364
Adjusted R-squared	-0.101681	S.D. dependent var	10.43237
S.E. of regression	10.94992	Akaike info criterion	7.787507
Sum squared resid	1079.107	Schwarz criterion	7.859852
Log likelihood	-40.83129	Hannan-Quinn criter.	7.741904
F-statistic	0.077034	Durbin-Watson stat	1.436249
Prob(F-statistic)	0.787627		

Source: Authors' estimation

Appendix Table 2.12: Components of State's Own Non-Tax Revenue (As a % of TRR) and growth rate)

Year	Interest Receipts		Dividends and Profits		General Services		Social Services		Economic Services	
	As a % of Own TRR	ROG	As a % of Own TRR	ROG	As a % of Own TRR	ROG	As a % of Own TRR	ROG	As a % of Own TRR	ROG
1981-82	7.44	15.46	0.20	-3.57	1.72	34.94	1.10	-20.33	15.28	17.97
1985 - 86	7.69	8.73	0.05	53.33	4.21	53.96	1.51	14.67	13.43	20.06
1990 - 91	6.64	11.27	0.02	-35.00	7.93	24.45	1.07	-2.24	11.05	12.30
1995 - 96	5.12	-46.03	0.06	-55.27	30.33	-41.48	1.04	26.42	7.05	1.02
2000 - 01	3.59	16.81	0.03	-76.74	7.30	21.19	2.02	-5.91	8.96	14.98
2005 - 06	3.19	-6.34	0.01	-18.30	2.15	-64.50	6.40	101.31	6.00	4.96
2006 - 07	3.61	46.59	0.03	192.71	1.36	-18.20	15.36	211.27	5.21	12.60
2007 - 08	3.83	16.74	0.03	7.65	1.36	10.56	15.42	10.40	5.16	9.05
2008 - 09	4.21	2.52	0.04	36.69	1.68	15.54	6.10	-63.06	5.52	-0.17
2009 - 10	3.18	-13.96	0.05	16.08	1.29	-12.55	2.39	-55.34	6.14	26.66
2010 - 11	2.70	3.21	0.01	-74.17	0.85	-20.40	5.33	171.46	4.50	-10.90
2011 - 12	2.83	25.48	0.01	-33.87	1.10	55.32	4.85	8.80	6.66	77.12
2012 - 13	3.15	22.34	0.02	329.88	1.59	59.26	4.73	7.26	4.40	-27.21
2013 - 14	2.87	3.07	0.02	-7.94	1.54	9.41	4.44	6.06	4.22	8.31
2014 - 15	2.29	-14.41	0.01	-10.63	0.63	-56.05	4.24	2.52	4.13	5.08
2015 - 16	2.01	16.43	0.03	175.86	0.74	56.60	2.53	-20.76	3.46	11.14
2016 - 17	4.40	112.42	0.01	-63.19	0.61	-21.09	2.77	6.13	4.01	12.38
2017-18(RE)	3.27	-0.69	0.01	52.80	0.88	93.68	7.11	242.27	4.40	46.53
2018-19(BE)	2.48	-16.88	0.01	0.00	0.74	-16.06	8.00	12.57	4.66	5.74

Sources: Calculated based on EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

**TRR stands for Total Revenue Receipts of States RE is Revised Estimate BE is Budget Estimate*

CAGR (in percent) calculated based on the beginning period to be 2006-07 and end year 2016-17

Appendix Table 2.13: State's Own Non-Tax Revenue Components as a % of GSDP

Year	Interest Receipts	Dividends & Profits	General Services	Social Services	Economic Services
1980 – 1981	1.02	0.03	0.20	0.22	2.05
1985 – 1986	1.13	0.01	0.62	0.22	1.97
1990 – 1991	0.93	0.00	1.11	0.15	1.55
1995 – 1996	0.86	0.01	5.11	0.18	1.19
2000 – 2001	0.41	0.00	0.82	0.23	1.01
2005 – 2006	0.41	0.00	0.27	0.81	0.76
2006 – 2007	0.50	0.00	0.19	2.14	0.73
2007 – 2008	0.50	0.00	0.18	2.01	0.67
2008 – 2009	0.43	0.00	0.17	0.62	0.56
2009 – 2010	0.30	0.00	0.12	0.22	0.58
2010 – 2011	0.26	0.00	0.08	0.52	0.44
2011 – 2012	0.29	0.00	0.11	0.50	0.68
2012 – 2013	0.30	0.00	0.15	0.46	0.43
2013 – 2014	0.27	0.00	0.15	0.42	0.40
2014 – 2015	0.21	0.00	0.06	0.40	0.39
2015 – 2016	0.22	0.00	0.08	0.28	0.39
2016 - 2017	0.42	0.00	0.06	0.27	0.39
2017-18 (RE)	0.38	0.00	0.10	0.82	0.51
2018-19 (BE)	0.28	0.00	0.08	0.82	0.47

Sources: Calculated based on EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

*TRR stands for Total Revenue Receipts of States RE is Revised Estimate BE is Budget Estimate

APPENDIX 3

Appendix Table 3.1 Revenue Expenditure and its broad categories (In Crore Rs)

Year	Revenue Expenditure	Social Services Haryana		Economic Services Haryana		General Services Haryana	
	(Rs Crore)	(Rs Crore)	R.O.G.	(Rs Crore)	R.O.G.	(Rs Crore)	R.O.G.
1981 - 1982	485.53	158.16	19.41%	206.14	21.39%	120.86	23.33%
1985 - 1986	854.22	297.21	12.70%	318.57	7.06%	238.02	19.49%
1990 - 1991	1933.07	646.43	7.25%	649.24	18.86%	627.51	14.67%
1995 - 1996	5361.55	1590.03	36.13%	1197.21	-25.80%	2565.40	-26.38%
2000 - 2001	7181.37	2506.30	11.04%	1542.81	-13.88%	3117.33	7.39%
2005 - 2006	12639.90	3995.60	24.16%	3814.77	19.25%	4579.67	-6.50%
2006 - 2007	16362.16	4615.40	15.51%	6626.89	73.72%	4845.05	5.79%
2007 - 2008	17526.87	5738.67	24.34%	6221.88	-6.11%	5229.68	7.94%
2008 - 2009	20534.73	7258.73	26.49%	7035.75	13.08%	6024.47	15.20%
2009 - 2010	25257.38	9902.22	36.42%	7529.91	7.02%	7755.35	28.73%
2010 - 2011	28310.18	10904.08	10.12%	7996.73	6.20%	9328.14	20.28%
2011 - 2012	32014.89	12641.67	15.94%	9053.97	13.22%	10219.83	9.56%
2012 - 2013	38071.72	14516.35	14.83%	11556.73	27.64%	11896.75	16.41%
2013 - 2014	41887.10	15413.41	6.18%	12740.19	10.24%	13597.31	14.29%
2014-15	49117.87	19120.56	24.05%	13088.00	2.73%	16764.73	23.29%
2015-16	47500.00	21538.87	12.65%	18690.36	42.81%	18713.32	11.62%
2016-17	68403.43	25473.49	18.27%	20875.21	11.69%	21630.79	15.59%
2017-18(RE)	78311.30	31516.57	23.72%	19583.83	-6.19%	26810.20	23.94%
2018-19 (BE)	85186.53	34176.48	8.44%	20916.05	6.80%	29788.27	11.11%
CAGR	**15.38**	**18.63**	**-**	**12.16**	**-**	**16.14**	**-**

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted RE is Revised Estimate BE is Budget Estimate
CAGR (in percent) calculated based on the beginning period to be 2006-07 and end year 2016-17

Appendix Table 3.2 Capital Expenditure (In billion Rs)

Year	Capital Outlay (In Rs Billion)			Loans and Advances disbursed	Total Capital Expenditure	Revenue Expenditure	Total Expenditure
	Total	Dev	Non-Dev	In Rs Crore			
1980 - 1981	1.02	1.00	0.02	79.15	181.41	400.72	582.13
1985 - 1986	2.02	1.97	0.04	150.66	352.38	854.22	1206.60
1990 - 1991	1.86	1.79	0.07	203.38	389.54	1933.07	2322.61
1995 - 1996	2.86	2.78	0.08	382.07	667.95	5361.55	6029.50
2000 - 2001	14.45	14.15	0.30	282.07	1727.23	7181.37	8908.60
2005 - 2006	16.12	15.30	0.82	176.67	1788.98	12639.90	14428.88
2006 - 2007	24.28	23.38	0.90	184.72	2612.32	16362.16	18974.48
2007 - 2008	34.26	32.55	1.71	285.50	3711.65	17526.87	21238.52
2008 - 2009	45.02	43.07	1.95	332.31	4833.97	20534.73	25368.70
2009 - 2010	52.18	50.31	1.87	829.69	6048.17	25257.38	31305.55
2010 - 2011	40.31	38.32	1.99	721.87	4752.97	28310.18	33063.15
2011 - 2012	53.72	51.37	2.35	627.07	5999.41	32014.89	38014.30
2012 - 2013	57.62	55.11	2.51	521.99	6283.83	38071.72	44355.55
2013 - 2014	39.35	36.52	2.82	775.61	4710.21	41887.10	46597.31
2014 - 2015	37.16	34.25	2.91	842.87	4558.40	49117.88	53676.28
2015 - 2016	69.08	64.48	4.61	13250.29	20158.62	64860.50	85019.12
2016 - 2017	68.63	64.64	3.99	4514.91	11378.01	68403.43	79781.44
2017-18 (RE)	137.70	132.40	530.81	1603.84	15374.22	78311.30	93685.52
2018-19 (BE)	157.80	149.46	83.38	1766.42	17546.01	85186.53	102732.54
CAGR	**10.95**	**10.71**	**16.08**	**37.66**	**15.85**	**15.38**	**15.44**

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted RE is Revised Estimate BE is Budget Estimate
CAGR (in percent) calculated based on the beginning period to be 2006-07 and end year 2016-17

Appendix Table 3.3 Components of Capital Outlay in Development Expenditure

	Capital Outlay	Development Expenditure	Total Social Expenditure	Education, Sports, Art and Culture	Medical and Family Welfare	water supply, sanitation, housing and urban development	Social Security and Welfare	Others	Economic Expenditure	Agriculture and Allied Activities	Major and Medium Irrigation and Flood Control	Energy	Industry and Minerals	Transport	General Economic Services
Year	In billion rupees														
1980 - 1981	1.02	1.00	0.08	0.02	0.03	0.02	0.02	0.00	0.92	0.01	0.00	0.00	0.01	0.25	0.00
1985 - 1986	2.02	1.97	0.13	0.03	0.04	0.03	0.02	0.01	1.84	0.19	1.33	0.01	0.03	0.28	0.01
1990 - 1991	1.86	1.79	0.24	0.07	0.05	0.09	0.02	0.01	1.55	0.27	0.82	-0.01	0.14	0.30	0.02
1995 - 1996	2.86	2.78	0.94	0.11	0.07	0.71	0.03	0.02	1.84	-0.26	1.31	0.01	0.22	0.52	0.04
2000 - 2001	14.45	14.15	1.43	0.04	0.07	1.29	0.01	0.01	12.72	6.08	3.22	2.65	0.04	0.71	0.02
2005 - 2006	16.12	15.30	4.39	0.23	0.18	3.81	0.15	0.03	10.91	-0.30	4.69	2.75	0.06	3.61	0.10
2006 - 2007	24.28	23.38	6.49	0.38	0.21	5.72	0.12	0.06	16.88	-0.53	5.56	7.86	0.04	3.79	0.16
2007 - 2008	34.26	32.55	9.22	0.85	0.51	7.07	0.16	0.64	23.33	0.34	8.87	8.49	0.66	4.82	0.15
2008 - 2009	45.02	43.07	11.09	0.91	0.44	8.56	0.18	1.01	31.98	5.49	8.11	8.56	0.83	8.79	0.19
2009 - 2010	52.18	50.31	10.70	1.14	0.75	7.69	0.20	0.92	39.61	10.31	7.56	8.99	0.02	12.47	0.26
2010 - 2011	40.31	38.32	12.30	0.76	0.19	10.47	0.10	0.78	26.02	1.97	7.61	6.54	0.01	9.72	0.18
2011 - 2012	53.72	51.37	13.67	0.76	0.50	11.75	0.22	0.44	37.70	10.32	8.87	8.02	0.20	10.09	0.20
2012 - 2013	57.62	55.11	14.46	1.23	0.04	11.99	0.60	0.61	40.65	16.60	8.87	1.99	0.02	12.95	0.22
2013 - 2014	39.35	36.52	18.24	1.59	0.50	15.01	0.03	1.11	18.29	-10.76	9.08	1.00	0.06	18.69	0.20
2014 - 2015	37.16	34.25	18.98	1.86	0.65	14.18	0.58	1.70	15.27	-10.53	9.65	0.67	0.01	15.17	0.30
2015 - 2016	69.08	64.48	15.40	2.02	0.35	11.34	0.60	1.09	49.08	0.40	8.76	15.98	0.00	20.11	0.22
2016 - 2017	68.63	64.64	15.86	1.42	2.44	10.10	0.82	1.08	48.77	4.13	9.26	18.95	0.02	15.88	0.39
2017-18 (RE	137.70	132.40	43.61	5.53	4.65	29.47	2.06	1.39	88.79	0.93	7.95	56.00	0.02	20.64	3.25
2018-19 (BE	157.80	149.46	48.69	4.70	7.18	32.61	2.13	1.58	100.77	2.06	16.07	54.90	0.15	22.74	4.58
CAGR	10.95	10.71	9.34						11.19						

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

RE is Revised Estimate BE is Budget Estimate CAGR (in percent) calculated based on the beginning period to be 2006-07 and end year 2016-17

Appendix Table 3.4: Components of Development Expenditure (In percentage)

	Total Social Expenditure	Education, Sports, Art and Culture	Medical and Family Welfare	water supply, sanitation, housing and urban development	Social Security and Welfare	Total Economic Expenditure	Agriculture and Allied Activities	Major and Medium Irrigation and Flood Control	Energy	Industry and Minerals	Transport	General Economic Services
Year	As a % of Capital Outlay	As a % of Total Social Expenditure				As a % of Capital Outlay	As a % of Total Economic Expenditure					
1980 - 1981	7.97	20.61	35.21	23.68	20.49	89.79	1.23	0.00	0.00	1.36	27.52	0.00
1985 - 1986	6.35	24.77	34.45	20.47	11.88	91.45	10.08	72.24	0.32	1.57	15.03	0.76
1990 - 1991	13.12	28.58	21.21	38.62	6.51	83.13	17.72	53.27	-0.94	9.28	19.57	1.11
1995 - 1996	32.94	11.89	7.04	75.65	3.22	64.19	-14.38	71.54	0.35	11.81	28.44	2.25
2000 - 2001	9.87	2.70	5.16	90.52	0.62	88.05	47.76	25.34	20.81	0.35	5.58	0.16
2005 - 2006	27.23	5.24	4.06	86.70	3.31	67.67	-2.72	43.00	25.25	0.51	33.04	0.92
2006 - 2007	26.75	5.85	3.27	88.07	1.83	69.55	-3.13	32.96	46.54	0.24	22.45	0.95
2007 - 2008	26.92	9.18	5.49	76.62	1.77	68.10	1.47	38.03	36.38	2.82	20.64	0.65
2008 - 2009	24.64	8.16	3.98	77.15	1.60	71.03	17.18	25.38	26.76	2.60	27.48	0.60
2009 - 2010	20.50	10.63	6.97	71.90	1.91	75.91	26.03	19.09	22.69	0.04	31.49	0.66
2010 - 2011	30.51	6.15	1.51	85.12	0.85	64.56	7.56	29.23	25.13	0.03	37.36	0.70
2011 - 2012	25.45	5.54	3.66	85.95	1.62	70.17	27.37	23.54	21.26	0.54	26.76	0.53
2012 - 2013	25.10	8.51	0.28	82.89	4.13	70.55	40.82	21.83	4.89	0.05	31.87	0.54
2013 - 2014	46.36	8.72	2.73	82.27	0.17	46.47	-58.83	49.67	5.47	0.33	102.24	1.11
2014 - 2015	51.07	9.81	3.42	74.74	3.06	41.11	-68.95	63.21	4.38	0.08	99.35	1.93
2015 - 2016	22.29	13.13	2.29	73.61	3.88	71.04	0.82	17.85	32.55	0.00	40.98	0.45
2016 - 2017	23.12	8.94	15.39	63.66	5.20	71.07	8.47	18.99	38.85	0.05	32.57	0.79
2017-18 (RE	31.67	12.68	10.67	67.58	4.73	64.48	1.05	8.95	63.07	0.03	23.25	3.66
2018-19 (BE	30.86	9.65	14.75	66.96	4.37	63.86	2.05	15.95	54.48	0.15	22.57	4.54

Sources: EPWRF data till 2014-15 and Budget Documents of Haryana 2017 and 2018 for the years 2015-16, 2016-17 Actual, 2017-18 Revised and 2018-19 Budgeted

**TRR stands for Total Revenue Receipts of States RE is Revised Estimate BE is Budget Estimate*

CAGR (in percent) calculated based on the beginning period to be 2006-07 and end year 2016-17

Appendix Table 3.5: Plan Expenditure (Rs Crores)

YEAR	PLAN EXPENDITURE			TOTAL NON PLAN EXPENDITURE			TOTAL EXPENDITURE
	REVENUE	CAPITAL	TOTAL	REVENUE	CAPITAL	TOTAL	
1980-81	66.36	174.96	241.32	334.36	6.45	340.81	582.13
1985-86	169.35	317.53	486.88	684.87	34.85	719.72	1206.60
1990-91	346.78	346.83	693.61	1586.29	42.71	1629.00	2322.61
1995-96	667.14	638.56	1305.70	4694.41	29.39	4723.80	6029.50
2000-01	991.69	1090.53	2082.22	6189.68	636.70	6826.38	8908.60
2005-06	2014.80	1692.17	3706.97	10625.09	96.81	10721.90	14428.87
2006 -07	2454.12	2521.30	4975.42	13908.04	91.02	13999.06	18974.48
2007 -08	3175.51	3436.64	6612.15	14351.36	275.01	14626.37	21238.52
2008 -09	3917.91	4010.29	7928.20	16616.81	823.68	17440.49	25368.69
2009 -10	5714.77	4819.05	10533.82	19542.62	1229.12	20771.74	31305.56
2010 -11	6251.50	4383.54	10635.04	22058.68	369.44	22428.12	33063.16
2011 -12	7791.98	4718.37	12510.35	24222.91	1281.03	25503.94	38014.29
2012 -13	9455.99	4191.00	13646.99	28616.00	1571.00	30187.00	43833.99
2013 -14	10152.00	5067.00	15219.00	31735.00	-1132.00	30603.00	45822.00
2014 -15	12760.00	4837.00	17597.00	36358.00	-1121.00	35237.00	52834.00
2015 -16	18561.00	6624.00	25185.00	40675.00	284.00	40959.00	66144.00
2016 -17	22119.00	6559.00	28678.00	46284.00	304.00	46588.00	75266.00

Source: CAG Report On State Finances Of Haryana 2017 And EPWRF.

APPENDIX 4

Appendix Table 4.1 Fiscal Indicators

Item	2015-16 (Actual)		2016-17 (Revised Estimates)			
	With UDAY	Without UDAY	With UDAY	without UDAY	2016-17 (Actual)	2017-18 (Revised Estimates)
Gross Fiscal Deficit as Percentage of GSDP	6.49	2.92	4.27	2.49	4.82	2.83
Revenue Deficit as Percentage of Gross Fiscal Deficit	37.10	54.91	52.34	53.29	60.52	47.71
Revenue Deficit as Percentage of GSDP	2.41	1.60	2.23	1.33	2.92	1.35
Revenue Deficit as Percentage of TRR	24.56	16.37	20.26	12.04	30.30	11.74
Total Liabilities -GSDP Ratio (%)	25.48	21.91	27.20	22.46	27.36	27.58
Total Liabilities - Total Revenue Receipts (%)	259.94	223.56	246.80	203.78	284.26	239.46
Total Liabilities –State's Own Revenue Receipts (%)	346.45	297.96	329.54	272.10	371.01	301.44
State's Own Revenue Receipts to Revenue Expenditure (%)	80.28	85.93	83.15	89.25	58.80	71.09
Capital Outlay as Percentage of Gross Fiscal Deficit	21.95	39.57	29.99	41.84	26.11	79.87
Interest Payment as Percentage of Revenue Receipts	17.42	17.42	15.94	14.18	20.08	16.96
Salary expenditure as Percentage of Revenue Receipts	29.40	29.40	28.32	28.32	31.38	26.16
Pension expenditure as Percentage of Revenue Receipts	11.38	11.38	9.96	9.96	10.78	11.99
Non-developmental expenditure as Percentage of aggregate disbursements	31.59	31.59	29.58	29.58	8.33	10.75
Gross Transfers from the Centre as Percentage of Aggregate Disbursements	10.77	10.77	10.89	10.89	8.30	7.71
Non-tax Revenue as Percentage of TRR	23.41	23.41	25.26	25.26	22.62	24.29

Source: Haryana State Budget 2018-19

Appendix Table 4.2 Ratio of Fiscal Deficit to Fiscal Indicators (in percent)

Year	To Own Tax Revenue	To Tax Revenue	To Non-Tax Revenue	To Agg. Exp.	To Revenue Exp.	To Capital Exp.	To Agg. Receipts	To Revenue Receipts
1990-91	36.07	30.73	58.76	16.10	19.97	83.19	15.74	20.18
1991-92	28.85	24.68	51.65	13.75	16.49	82.78	13.68	16.73
1992-93	30.62	25.94	66.41	15.02	18.66	76.95	15.23	18.67
1993-94	30.19	25.63	29.82	11.68	14.11	67.80	11.53	13.79
1994-95	28.31	24.24	14.56	7.74	8.53	83.72	7.63	9.10
1995-96	45.44	38.97	39.62	16.08	18.39	128.05	11.01	19.66
1996-97	51.36	42.73	31.67	14.03	16.24	103.29	14.52	18.17
1997-98	47.59	38.77	37.74	14.45	17.05	94.95	14.50	19.13
1998-99	71.79	62.22	119.08	26.10	31.91	143.41	26.33	40.88
1999-00	60.60	52.73	123.67	25.52	30.68	151.60	25.62	36.99
2000-01	52.55	48.66	118.08	24.73	31.54	114.51	24.85	34.45
2001-02	55.13	50.56	125.51	25.54	31.65	132.24	26.30	36.05
2002-03	26.50	23.32	62.52	13.90	15.75	118.63	13.29	16.99
2003-04	46.19	42.20	101.43	19.40	28.99	58.60	18.78	29.80
2004-05	16.21	14.96	39.09	8.35	10.57	39.74	7.74	10.82
2005-06	3.15	2.78	8.00	1.93	2.26	13.06	1.73	2.06
2006-07	-10.79	-9.64	-20.58	-6.00	-7.21	-35.99	-5.18	-6.57
2007-08	10.88	9.54	19.44	5.72	7.21	27.76	5.93	6.40
2008-09	56.24	49.00	129.25	24.87	31.94	112.42	28.54	35.54
2009-10	76.32	67.29	168.25	30.99	39.95	138.13	34.44	48.06
2010-11	43.24	38.03	112.19	21.08	25.64	118.55	21.12	28.40
2011-12	35.05	30.98	95.65	17.99	22.33	92.42	17.37	23.40
2012-13	43.97	38.92	147.79	22.27	27.21	122.75	22.30	30.80
2013-14	32.50	28.74	91.25	16.98	19.84	118.01	16.04	21.86
2014-15	45.56	40.38	130.93	19.74	22.92	142.21	22.66	30.86
2015-16	86.98	75.16	259.22	42.40	49.12	309.94	33.91	56.10
2016-17	77.25	64.71	221.38	32.95	38.43	231.02	30.11	41.75
2017-18(RE)	53.59	32.49	101.28	18.40	22.01	112.14	18.40	24.60
2018-19(BE)	76.46	33.20	104.85	18.88	22.77	110.56	18.88	25.22

SOURCE: EPWRF

Table 4.3 Ratio of Revenue Deficit to Fiscal Indicators (in percent)

Year	To Own Tax Rev	To Tax Revenue	To Non-Tax Revenue	To Agg. Exp	To Revenue Exp.	To Capital Exp.	To Agg. Receipts	To Capital Receipts	To Revenue Receipts
1990-91	1.84	1.56	2.99	0.82	1.02	4.23	0.80	3.64	1.03
1991-92	2.48	2.12	4.44	1.18	1.42	7.11	1.18	6.45	1.44
1992-93	0.12	0.10	0.25	0.06	0.07	0.29	0.06	0.32	0.07
1993-94	-5.06	-4.30	-5.00	-1.96	-2.37	-11.36	-1.93	-11.80	-2.31
1994-95	20.66	17.69	10.63	5.65	6.23	61.11	5.57	34.62	6.64
1995-96	15.98	13.71	13.94	5.66	6.47	45.04	3.87	8.81	6.92
1996-97	33.58	27.94	20.71	9.18	10.62	67.54	9.49	47.19	11.88
1997-98	30.35	24.73	24.07	9.22	10.87	60.56	9.25	38.23	12.20
1998-99	49.37	42.78	81.88	17.95	21.94	98.60	18.10	50.83	28.11
1999-00	33.67	29.30	68.72	14.18	17.05	84.24	14.24	46.34	20.55
2000-01	14.09	13.05	31.67	6.63	8.46	30.71	6.66	23.90	9.24
2001-02	21.25	19.49	48.37	9.84	12.20	50.96	10.14	37.48	13.89
2002-03	12.34	10.86	29.12	6.47	7.33	55.25	6.19	28.38	7.91
2003-04	4.31	3.94	9.47	1.81	2.71	5.47	1.75	4.74	2.78
2004-05	3.47	3.20	8.36	1.79	2.26	8.50	1.66	5.82	2.31
2005-06	-13.4	-11.80	-33.94	-8.18	-9.60	-55.41	-7.34	-45.38	-8.76
2006-07	-14.6	-13.01	-27.76	-8.10	-9.72	-48.54	-6.98	-32.97	-8.86
2007-08	-19.1	-16.78	-34.20	-10.1	-12.69	-48.84	-10.44	-143.47	-11.26
2008-09	17.86	15.56	41.04	7.90	10.14	35.70	9.06	46.02	11.29
2009-10	32.26	28.44	71.11	13.10	16.89	58.38	14.56	51.37	20.32
2010-11	16.36	14.39	42.44	7.98	9.70	44.85	7.99	31.19	10.74
2011-12	7.14	6.31	19.50	3.67	4.55	18.84	3.54	13.74	4.77
2012-13	18.84	16.67	63.31	9.54	11.66	52.58	9.56	34.63	13.20
2013-14	15.15	13.40	42.55	7.92	9.25	55.03	7.48	28.12	10.19
2014-15	30.10	26.68	86.51	13.05	15.15	93.97	14.97	56.37	20.39
2015-16	30.60	26.44	91.21	14.92	17.28	109.06	11.93	30.16	19.74
2016-17	46.75	39.16	133.97	19.94	23.25	139.80	18.22	65.32	25.27
2017-18(RE)	25.57	15.50	48.33	8.78	10.50	53.51	8.78	34.86	11.74
2018-19(BE)	32.53	14.13	44.61	8.03	9.69	47.04	8.03	31.99	10.73

SOURCE: EPWRF

Table 4.4 Ratio of Primary Deficit to Fiscal Indicators (in percent)

Year	To Own Tax	To Tax Revenue	To Non-Tax Revenue	To Agg. Exp.	To Revenue Exp.	To Capital Exp.	To Agg. Receipts	To Capital Receipts	To Revenue Receipts
1990-91	13.46	11.47	21.92	6.01	7.45	31.03	5.87	26.67	7.53
1991-92	4.08	3.49	7.30	1.94	2.33	11.70	1.93	10.60	2.36
1992-93	6.97	5.90	15.11	3.42	4.25	17.50	3.46	18.81	4.25
1993-94	3.65	3.10	3.60	1.41	1.71	8.19	1.39	8.50	1.67
1994-95	2.54	2.17	1.31	0.69	0.77	7.51	0.68	4.26	0.82
1995-96	19.82	16.99	17.28	7.01	8.02	55.84	4.80	10.92	8.57
1996-97	17.94	14.93	11.06	4.90	5.67	36.09	5.07	25.21	6.35
1997-98	12.95	10.55	10.27	3.93	4.64	25.84	3.95	16.31	5.21
1998-99	39.84	34.53	66.08	14.49	17.71	79.58	14.61	41.02	22.69
1999-00	22.02	19.16	44.93	9.27	11.15	55.08	9.31	30.30	13.44
2000-01	17.94	16.61	40.30	8.44	10.76	39.08	8.48	30.41	11.76
2001-02	22.43	20.58	51.08	10.39	12.88	53.81	10.70	39.58	14.67
2002-03	-8.56	-7.53	-20.19	-4.49	-5.08	-38.31	-4.29	-19.68	-5.49
2003-04	12.91	11.80	28.36	5.42	8.11	16.38	5.25	14.21	8.33
2004-05	-13.83	-12.77	-33.35	-7.13	-9.02	-33.90	-6.60	-23.19	-9.23
2005-06	-19.98	-17.64	-50.74	-12.23	-14.35	-82.83	-10.98	-67.84	-13.09
2006-07	-31.51	-28.17	-60.13	-17.54	-21.05	-105.13	-15.12	-71.39	-19.18
2007-08	-9.31	-8.16	-16.64	-4.90	-6.17	-23.76	-5.08	-69.81	-5.48
2008-09	36.18	31.52	83.15	16.00	20.55	72.32	18.36	93.23	22.86
2009-10	55.90	49.29	123.23	22.70	29.26	101.17	25.23	89.01	35.20
2010-11	23.59	20.74	61.20	11.50	13.99	64.66	11.52	44.97	15.49
2011-12	15.44	13.65	42.14	7.92	9.84	40.72	7.65	29.70	10.31
2012-13	24.02	21.26	80.74	12.17	14.87	67.06	12.19	44.17	16.83
2013-14	9.43	8.34	26.46	4.93	5.75	34.23	4.65	17.49	6.34
2014-15	20.48	18.15	58.86	8.88	10.31	63.93	10.19	38.35	13.87
2015-16	63.28	54.68	188.60	30.85	35.74	225.49	24.67	62.36	40.82
2016-17	46.27	38.75	132.59	19.73	23.01	138.36	18.03	64.65	25.01
2017-18(RE)	16.64	10.09	31.45	5.71	6.84	34.82	5.71	22.68	7.64
2018-19(BE)	21.13	9.18	28.98	5.22	6.29	30.56	5.22	20.78	6.97

Source: Calculated based on EPWRF data till 2015-16 and CAG reports of 2017-18 and Haryana Financial Statement of 2018-19

APPENDIX 5

Appendix Table 5.1: Components of Total Liabilities of Haryana (Rs Crore)

	Market Borrowing			Loans fom Financial Institutions							Loans and Advances from Centre	Provident Funds, etc.	Reserve Funds	Deposit and Advances (Net Balances)
Year	Open Market	Power Bonds	NSSF	LIC	GIC	NABARD	SBI & other Banks	NCDC	Other Institutions	Other Loans				
2005 - 2006	5142	2022	9309	25	18	587	0	74	118	0	2222	5593	850	1009
2006 - 2007	4994	1820	10485	22	16	691	0	89	243	0	2128	5958	1082	1769
2007 - 2008	4741	1618	10536	19	14	814	0	80	587	0	2080	6257	1232	1923
2008 - 2009	7246	1517	10456	16	12	971	0	108	828	0	2031	6609	1519	2173
2009 - 2010	10930	1310	10990	10	10	1110	1280	100	1150	0	2050	7470	1840	2750
2010 - 2011	15090	1010	11920	10	10	1160	0	10	1490	0	2240	8220	1790	3060
2011 - 2012	21080	810	11600	10	10	1240	2970	10	1540	0	2170	8940	2150	3890
2012 - 2013	29660	610	11500	0	0	1340	4110	90	1470	0	2100	9400	2710	4490
2013 - 2014	40280	510	11530	0	0	1500	2670	160	1590	0	2310	10120	3160	5570
2014 - 2015	52650	200	12240	0	0	1670	450	170	1410	0	2290	11160	4170	6050
2015 - 2016	65821	17300	13251	0	0	1720	-350	239	1290	0	2680	12500	4250	6600
2016 - 2017	81180	25950	12304	0.25	3.11	1947	27.9	225	978.65	0	1986	13321	4707	6413
2017-18 (RE)	98920	25950	11350	0.11	1.99	2262	27.9	212	867.92	0	2199	14326	5051	6513
2018-19 (BE)	117954	25950	10396	-0.04	1.07	3237	27.9	193	770.75	0	2629	15381	5349	6613
CAGR	32.16	30.44	1.61	-36	-15.1	10.9	NA	9.75	14.95	NA	-0.69	8.38	15.84	13.74

Source: Calculated based on EPWRF data till 2015-16 and CAG reports of 2017-18 and Haryana Financial Statement of 2018-19

APPENDIX 6

Appendix Table 6.1: Assessed Revenue Receipts and Revenue Expenditure By 14th Finance Commission For Haryana (Rs billion)

		2015-16	2016-17	2017-18	2018-19	2019-20
A	**GSDP**	5181.14	5995.93	6938.85	8030.06	9292.87
B	**Own revenue receipts**	421.6	513.32	618.59	715.93	829.15
1	Own Tax revenue	380.49	470.24	573.15	667.79	778.06
2	Own Non-Tax Revenue	41.11	43.08	45.44	48.14	51.09
C	**Revenue Expenditure *of which***	445.14	503.34	569.09	643.4	727.39
1	Interest Payment	75.82	89.34	104.99	123.1	144.06
2	Pension	49.5	54.45	59.9	65.88	72.47
D	**Pre-Devolution Revenue Deficit(+)/ Surplus(-)**	**23.54**	**-9.98**	**-49.5**	**-72.53**	**-101.76**
E	**Post-Devolution Revenue Deficit(+)/ Surplus(-)**	-39.32	-82.52	-133.31	-169.49	-21406

Source: 14th Finance Commission Report

Appendix Table 6.2: Actual Revenue Receipts And Revenue Expenditure (Rs billion)

		2015-16	2016-17	2017-18	2018-19
A	**GSDP**	4858.24	5453.23	6084.71	6875.72
B	**Own revenue receipts**	402.84	402.21	431.53	356.18
1	Own Tax revenue	349.40	340.25	321.69	253.71
2	Own Non-Tax Revenue	53.45	61.96	109.84	102.47
C	**Revenue Expenditure *of which***	592.36	684.03	783.11	851.86
1	Interest Payment	82.84	105.42	118.87	140.37
2	Pension	54.13	56.59	84.00	83.01
D	**Post-Devolution Revenue**	**77.86**	**159.07**	**82.26**	**82.54**
	Deficit(+)/ Surplus(-)				

Source: Various CAG reports and budget documents

APPENDIX 7

NO APPENDIX TABLES FOR CHAPTER 7

APPENDIX 8

NO APPENDIX TABLES FOR CHAPTER 8

APPENDIX 9

Appendix Table 9.1

Transmission & Distribution Losses (%)											
State	2005- 06	2006- 07	2007- 08	2008- 09	2009- 10	2010- 11	2011- 12	2012- 13	2013- 14	2014- 15	**Average**
Andhra Pradesh	20.1	18.7	22.4	19.6	18.4	16.6	17.5	19.3	20.1	17.9	**19.0**
Assam	40.3	33.7	38.6	37.6	32.8	34.2	33.5	30.7	31.1	27.6	**34.0**
Bihar	44.0	50.7	48.8	46.4	43.6	50.8	50.9	49.4	47.3	46.3	**47.8**
Gujarat	27.9	24.9	26.1	24.1	22.8	19.2	21.8	18.5	18.1	19.3	**22.3**
Haryana	30.5	33.4	32.8	30.7	31.0	29.7	28.6	36.0	35.8	34.1	**32.3**
Karnataka	29.8	25.9	18.9	17.0	18.8	17.3	12.7	11.1	10.2	11.5	**17.3**
Kerala	23.5	19.1	17.8	13.2	19.6	18.3	17.2	17.7	15.0	15.4	**17.7**
Madhya Pradesh	40.1	39.2	35.6	38.5	38.3	37.6	34.5	31.5	31.5	32.3	**35.9**
Maharashtra	31.6	31.6	29.8	23.9	25.2	20.7	20.0	21.8	21.8	20.4	**24.7**
Odisha	45.6	43.3	39.4	42.7	37.0	42.5	44.6	39.8	38.9	42.0	**41.6**
Punjab	27.6	26.6	22.8	23.1	23.4	25.1	23.1	20.3	20.7	18.5	**23.1**
Rajasthan	39.9	35.6	34.7	31.5	30.0	27.9	27.9	24.9	26.9	27.5	**30.7**
Tamil Nadu	18.7	19.5	18.7	18.1	18.4	13.5	16.3	14.5	10.8	11.1	**16.0**
Uttar Pradesh	32.6	33.5	28.6	30.9	33.2	34.0	32.4	26.9	29.1	27.2	**30.8**
West Bengal	24.8	23.6	21.3	16.8	18.3	22.4	23.2	24.1	24.1	24.7	**22.3**

Source: India Energy Portal, NITI Aayog

Appendix Table 9.2: Power Sector in Haryana and All India

	ALL INDIA					HARYANA			
Year	Energy Requirement GWH	% Deficit in Energy Requirement	Peak Demand (MW)	% Deficit		Energy Requirement (GWH)	% Deficit in Energy Requirement	Peak Demand (MW)	% Deficit In Demand
FY06			93255	12.29%				4333	9.28%
FY07			100715	13.80%				4837	13.15%
FY08	1114696	29.03%	108866	16.60%		29353	12.61%	4956	2.72%
FY09	1069211	36.39%	109809	11.86%		29085	8.46%	5511	13.06%
FY10	1002253	24.75%	119166	12.72%		33441	4.24%	6133	7.42%
FY11	998115	24.98%	122287	9.84%		34552	5.57%	6142	9.25%
FY12	937199	24.75%	130006	10.63%		36874	3.62%	6533	4.19%
FY13	861591	25.00%	135453	8.98%		41407	7.72%	7432	9.51%
FY14	830594	21.94%	135918	4.49%		43463	0.58%	8114	0.00%
FY15	776932	25.00%	148166	4.73%		46615	0.39%	9152	0.00%
FY16	739343	25.00%	153366	3.20%		47506	0.15%	9113	0.00%

Source: India Energy Dashboard, India Energy By Niti Aayog

Appendix Table 9.3: Power Sector

GENERATION GWh							TRANSMISSION AND DISTRIBUTION LOSSES				
	OWNERSHIP						HARYANA				ALL INDIA
Year	State	Central	Captive	Private	Total Generation	Purchases (Availability - Generation)	Availability GWh	Consumption GWh	T&D Losses GWh	T&D Loss (%)	T&D Loss (%)
2006	9221	2953	1006	0	13180	9019	22199	15426	6773	30.51	29.62
2007	10781	2831	1158	0	14770	10199	24969	16643	8326	33.35	27.92
2008	10960	2642	1177	0	14779	12406	27185	18261	8925	32.83	26.80
2009	13787	2381	1142	0	17310	10544	27854	19291	8562	30.74	24.96
2010	15178	3212	1684	0	20074	12984	33058	22809	10249	31.00	24.77
2011	15568	3287	1241	0	20096	14048	34144	24015	10129	29.66	23.33
2012	18391	5489	1062	166	25108	13559	38667	27614	11053	28.59	23.10
2013	14858	7483	879	3075	26295	14703	40998	26258	14740	35.95	22.72
2014	13052	7114	946	6208	27320	18003	45323	29083	16241	35.83	22.60
2015	13617	8594	980	6537	29728	19090	48818	32197	16621	34.05	22.77
2016	10396	6899	-	4952	22247	..	..	..	..	..	..

Appendix Table 9.4: Power Sector Performance

GENERATION GWh – Rate of Growth							TRANSMISSION AND DISTRIBUTION LOSSES				
	OWNERSHIP						HARYANA				ALL INDIA
Year	State	Central	Captive	Private	Total Generation	Purchases (Availability - Generation)	Availability	Consumption	T&D Losses	T&D Loss	T&D Loss
							GWh			(%)	
2006											
2007	16.9	-4.1	15.1		12.1	13.1	12.5	7.9	22.9	9.3	-5.7
2008	1.7	-6.7	1.6		0.1	21.6	8.9	9.7	7.2	-1.6	-4.0
2009	25.8	-9.9	-3.0		17.1	-15.0	2.5	5.6	-4.1	-6.4	-6.9
2010	10.1	34.9	47.5		16.0	23.1	18.7	18.2	19.7	0.8	-0.8
2011	2.6	2.3	-26.3		0.1	8.2	3.3	5.3	-1.2	-4.3	-5.8
2012	18.1	67.0	-14.4		24.9	-3.5	13.2	15.0	9.1	-3.6	-1.0
2013	-19.2	36.3	-17.2	1752.4	4.7	8.4	6.0	-4.9	33.4	25.7	-1.6
2014	-12.2	-4.9	7.6	101.9	3.9	22.4	10.5	10.8	10.2	-0.3	-0.5
2015	4.3	20.8	3.6	5.3	8.8	6.0	7.7	10.7	2.3	-5.0	0.8
2016	-23.7	-19.7		-24.2	-25.2						

Source: India Energy Dashboard, India Energy By Niti Aayog

Appendix Table 9.5

GENERATION							TRANSMISSION AND DISTRIBUTION LOSSES				
	OWNERSHIP (% Share)						HARYANA				ALL INDIA
Year	State	Central	Captive	Private	Total Generation	Purchases (Availability - Generation)	Availability (%)	Consumption (%)	T&D Losses	T&D Loss	T&D Loss
										(%)	
2006	69.96	22.41	7.63	0.00	100.00	68.43	168.43		51.39	30.51	29.62
2007	72.99	19.17	7.84	0.00	100.00	69.05	169.05		56.37	33.35	27.92
2008	74.16	17.88	7.96	0.00	100.00	83.94	183.94		60.39	32.83	26.80
2009	79.65	13.76	6.60	0.00	100.00	60.91	160.91		49.46	30.74	24.96
2010	75.61	16.00	8.39	0.00	100.00	64.68	164.68		51.06	31.00	24.77
2011	77.47	16.36	6.18	0.00	100.00	69.90	169.90		50.40	29.66	23.33
2012	73.25	21.86	4.23	0.66	100.00	54.00	154.00		44.02	28.59	23.1
2013	56.51	28.46	3.34	11.69	100.00	55.92	155.92		56.06	35.95	22.72
2014	47.77	26.04	3.46	22.72	100.00	65.90	165.90		59.45	35.83	22.60
2015	45.81	28.91	3.30	21.99	100.00	64.22	164.22		55.91	34.05	22.77
2016	46.73	31.01	0.00	22.26	100.00						

Appendix Table 9.6: Working Capital Borrowing by DISCOMs (in crore)

Years	DHBVNL				UHBVNL		
	Permitted by the HERC	Actual drawn by the Company	Excess over permitted		Permitted by the HERC	Actual drawn by the Company	Excess over permitted
2008-09	176	1506.2	1330.2		277	3675.1	3398.1
2009-10	375	2865.7	2490.7		350	6003.2	5653.2
2010-11	686.5	3416	2729.5		1089.6	7706.6	6617.1
2011-12	666.7	3907.3	3240.6		972.9	7573.6	7000.7
2012-13	1367.5	6578.6	5211		3097.5	11630.4	8532.8
2013-14	1112.8	8629.6	7516.8		1064.3	14668.1	13603.8
TOTAL	**4384.5**	**26903.3**	**22518.9**		**6851.3**	**51257**	**44805.7**

Source: White Paper Vol.2, State Of Haryana March 2015

Appendix Table 9.7 Details of Equity Infusion by State Government in Power Companies

(Rs. in crore)

Year	HVPNL	HPGCL	UHBVNL	DHBVNL	Total
2004-05	26	155	24	22	227
2005-06	57	179	20	19	275
2006-07	171	460	68	87	786
2007-08	73	496	147	133	849
2008-09	135	471	110	140	856
2009-10	250	132	282	234	899
2010-11	375	183	56	40	654
2011-12	300	183	173	146	802
2012-13	75	58	33	33	199
2013-14	100	0	0	0	100
Total	**1562.49**	**2316.88**	**913.3**	**853.63**	**5646.3**

Source: White Paper Vol.2, State Of Haryana March 2015

APPENDIX 10

No Appendix tables in chapter 10

APPENDIX 11

Appendix Table. 11.1 Components of Economic Subsidies (Rs Lakhs)

Years	Economic	Energy	Agriculture and Allied Activities	Industry and Minerals	Others
2005-06	**199630**	139210	40372	1946	18102
2006-07	**385245**	375934			9311
2007-08	**374248**	256836	68755		48657
2008-09	**326467**	299865			26602
2009-10	**378951**	277028	59818	1518	40587
2010-11	**452093**	294863	104373	3622	49235
2011-12	**437871**	358474	67134	3989	8274
2012-13	**540261**	513222	27039		
2013-14	**562822**	520584	42238		
2014-15	**565214**	523851	41363		
2015-16	**687936**	632416	55520		
2016-17	**750484**	661870	86216	2398.01	

Source: CAG Finance Account Of Haryana Vol.2, Across Various Years.

Appendix Table 11.2: Components of Social Subsidies (Rs Lakhs)

Year	Social Service Subsidy	Social Welfare Schemes And Nutrition	Welfare of SC/ST/other OBC
2005-06	2665	2449	216
2006-07	2381	2381	
2007-08	3799	1840	1959
2008-09	3312	3312	
2009-10	22693	19656	3037
2010-11	4190	1917	2273
2011-12	2928	559	2369
2012-13	5092	200	4892.02
2013-14	5291	300	4989.84
2014-15	4121	210	3910.64
2015-16	1945	210	1734.63
2016-17	14874	250	14624.35

Source: CAG Finance Account Of Haryana Vol.2, (various years).

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