

ECONOMIC SURVEY

2006-07



Government of Bihar
Department of Finance

ECONOMIC SURVEY 2006-2007

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Glossary of Technical Terms and Abbreviations

APMB	Agricultural Produce Marketing Board
APMC	Agricultural Produce Marketing Cooperative
ATMA	Agricultural Technology Management Agency
BHEL	Bharat Heavy Electricals Limited
BISCICO	Bihar State Credit and Investment Corporation
BSFC	Bihar State Financial Corporation
CBR	Crude Birth Rate
CDR	Crude Death Rate
CEA	Central Electrical Authority
GDDP	Gross District Domestic Product
GSDP	Gross State Domestic Product
GFD	Gross Fiscal Deficit
HDI	Human Development Indicator
IADA	Industrial Area Development Authority
ICICI	Industrial Credit and investment Corporation of India
IDBI	Industrial Development Bank of India
IFCI	Infrastructure Finance Corporation of India
KCC	<i>Kisan Credit Cards</i>
KSY	<i>Kisan Samman Yojna</i>
KVK	Krishi Vigyan Kendra
IWAI	Inland Waterways Authority of India
MMR	Maternal Mortality Rate
MSEL	Magadh Stock Exchange Limited
NABARD	National Bank of Agricultural and Rural Development
NHM	National Horticulture Mission
NSSO	National Sample Survey Organisation
NTPC	National Thermal Power Corporation
PMRY	Prime Minister's <i>Rozgar Yojana</i>
QE	Quick Estimates
RRB	Regional Rural Bank
RSVY	<i>Rashtriya Sam Vikas Yojna</i>
SIDBI	Small Industries Development Bank of India
SSI	Small Scale Industry
TV	Television
UNDP	United Nations' Development Programme

Sushil Kumar Modi
Deputy Chief Minister,
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Patna

PREFACE

After coming to power fifteen months back, the Government has taken several initiatives for improving the Financial Management of the State. A white paper on the finances of the State has been published. Powers have been delegated to departments for effective implementation of development schemes and a Financial Responsibility and Budget Management Act has been enacted. We have taken another new step towards financial good governance by bringing out this Economic Survey.

This is the first time that Bihar Government has prepared Economic Survey of the State giving a broad picture of the financial resources and possibilities. The survey contains a macro overview of the State's economy. Besides, it gives a detailed description of six major sectors viz. agriculture, industry, infrastructure, social sector, financial sector and public finances. You will find a very useful compilation of information on the State's economy and status of its development in this publication.

I feel that the Economic Survey would facilitate proper appreciation of the Government's development related priorities reflected in the budget proposals of 2007-08. The purpose of this document is not only to provide factual information regarding the State's economy but also to pave the way for a public dialogue for attainment of the goal of good governance.

(Sushil Kumar Modi)

EXECUTIVE SUMMARY

I. MACRO OVERVIEW

1. The latest estimate of Gross State Domestic Product (GSDP) for Bihar at 1993-94 prices, relating to 2004-05, stands at Rs. 39332.10 crore. The annual growth rate of GSDP varies widely over the years, reflecting enormous dependence of the State economy on its uncertainty prone agricultural sector. The average annual growth rate of GSDP for the last decade was 5.08 percent.
2. The sectoral growth rates in Bihar also vary considerably. Since 2000-01, the annual growth rates for the entire Bihar economy has been between 5 to 6 percent. As regards the primary sector, its growth rate has been between 3.5 to 4.5 percent. The secondary sector has witnessed a decline in its growth rate from 6.59 percent in 2000-01 to 4.17 percent in 2004-05. Finally, the tertiary sector has grown at a consistently high rate between 6.5 to 7.5 percent.
3. Due to uneven growth rates across the sectors, the sectoral composition of Bihar economy has undergone major changes in the last decade. The share of primary sector has fallen from 48.8 percent to 42.0 percent; that of secondary sector has remained nearly unaltered at 9.0 percent; finally, the share of tertiary sector has increased from 41.3 to 49.0 percent. Thus, the economy is witnessing a process of tertiarisation, much before a process of industrialization.
4. A highly disadvantaged economy is a general phenomenon of Bihar, but this disadvantage is not equally present in all the districts. The per capita Income varies widely between Rs. 6958 (Patna) to Rs. 2219 (Sheohar).
5. Bihar had a population of 83.0 million in 2001 which now stands at 90.2 million. Of its total population, 89.6 percent live in rural areas, making it the least urbanized among all the major states in India. The sex ratio in Bihar at 921 females per thousand males is slightly lower than the national ratio at 932, but the juvenile sex

ratio in Bihar is higher than the national average. As regards the age distribution, Bihar has larger percentage of population at lower age-groups, because of high birth rates in the State.

6. Because of a larger rural agricultural sector, the structure of Bihar's economy is substantially different from the national economy. Consequently, the livelihood patterns are also different. Both for males and females, the Work Participation Rates (WPR) is lower in Bihar as the traditional economy offers less opportunities for economic work. The sectoral distribution of main workers is again very different in Bihar. The proportion of cultivators is nearly the same in Bihar and India, 29.3 and 31.7 percent respectively; but because of a much smaller urban industrial economy in Bihar, no less than 48.0 percent of its main workers are agricultural labourers; for India as a whole, agricultural labourers constitute only 25.6 percent of main workers.
7. As Bihar's economy has lagged behind the national average in terms of various growth indices, the present government has initiated a number of measures as part of the process of economic reform initiatives. First, a number of Commissions have been formed to identify the major reform needs in crucial areas. The second set of initiatives has been in the form of fiscal management policies to honour the provisions of the Fiscal Responsibility and Budget Management (FRBM) Act. The third range of activities include a series of incentives to promote economic growth. Strengthening of the delivery system mechanisms in health, education and welfare programmes constitute the fourth pillar of interventions. Finally, the government has undertaken to streamline the administration in terms of greater autonomy, simplified procedures and resource support.

II. AGRICULTURE

1. Nearly 90 percent of the total population lives in rural areas in Bihar. Agriculture as the primary feeder of the rural economy continues to be the mainstay of the population but its productivity is among the lowest in the country. Without

- increasing productivity in this sector, development in Bihar cannot pick up momentum.
2. Agriculture in Bihar is crucially dependent on the monsoon. Although around 57 percent of the gross cultivated area is irrigated, irrigation itself is dependent on the use of surface water resulting from the monsoons.
 3. Insufficient rainfall in kharif 2006 has adversely affected area under cultivation. Area under paddy in the State for kharif 2006 was 31.30 lakh hectares against the target of 37.00 lakh hectares. Similarly, area under wheat for rabi 2006 stood at 20.34 lakh hectares, falling short of a target of 24.00 lakh hectares. Thus, foodgrain output is expected to register a fall over the figures for 2005-06. Effect of falling acreage on production of foodgrains has, however, been moderated by an increase in yield.
 4. Total flood prone area in the State is 73.06 percent of its total geographical area and 17.2 percent of the total flood prone area in the country. Flood situation is most severe in the northern plains of Bihar. While a long term solution to this problem can be achieved by constructing dams at upper catchments of Kosi, Gandak, Bagmati, Mahananda rivers, in the short run, Bihar has to depend on construction and maintenance of embankments along the rivers.
 5. Tubewells account for 63 per cent of total created irrigation capacity in the State. Canal irrigation accounts for 30 per cent of total irrigated area. Thus major and medium sources of irrigation together account for 93 per cent of existing irrigation capacity, with other sources (minor and micro irrigation) accounting for only about 7 percent of irrigation. A very high dependence of irrigation by tubewells and operation of diesel tubewells due to lack of power infrastructure in the rural areas translate into high cost and inefficient irrigation.
 6. At present, seed replacement rate for cereals is about 10-12 percent, for gram it is 7.5 percent and for rapeseed and mustard, it is 30 percent. These rates have

7. Fertiliser consumption in the State has steadily increased over the years. The consumption of fertilizers has increased from 85 kgs/hectare to 110 kgs/hectare in 2005-06. However, fertilizer consumption per hectare in the State is lower than the national average.
8. Agriculture's share in bank credit has fallen over the last 5 years. While its share was at 24 percent in 2000-01, it fell to 20 percent in 2003-04. There has been a drop in coverage of farmers under crop insurance in 2005-06 as compared to 2004-05.
9. There is a gap between the technology available in the agricultural universities/institutions and those on the ground. Efforts are being made to transfer the available technology to the farmers in the field.
10. A new Agricultural Policy was drafted by the State government in 2006, to build upon the natural advantages that the State has in agriculture. Food security, increase in farmer's income, increase in crop productivity and environmental conservation have been fixed as the four targets of new agricultural policy regime. ATMAs have been constituted in 23 districts of the State which did not have ATMA coverage under the centrally sponsored programme. A megaproject for establishment of soil testing laboratories in all 534 blocks of the State has been sanctioned, to take soil testing facilities right to the door of the farmers. 31 new seed testing laboratories are to be established in the State to give each district its own seed testing laboratory. Chief Minister Horticulture Mission has been started in 19 districts of the State which were not covered under National Horticulture Mission, thereby universalizing the programme in the State. Micro-nutrient testing laboratories have been established in 3 districts of the State. Research and Educational infrastructure of the Rajendra Agricultural University, which happens to be the only agricultural university of the State, has been strengthened. Agricultural Produce Marketing Board has been abolished. Bihar State Seed

Corporation has been revived, and seed production has been started on 45 State agricultural farms which were lying inoperative. A Farmers' Commission and a Land Reforms Commission have been established.

III. INDUSTRY

1. During the Tenth Plan period, the industry sector in Bihar recorded a growth rate of 9.80 percent. The size of industrial sector in Bihar in terms of income is only 3.2 percent of GSDP as against the national average of 20.1 percent. The overall industrial sector in the State is predominated by the unregistered units, which account for more than half of its total income.
2. An examination of the Annual Survey of Industries (ASI) (2002-03) data reveals that 1460 industrial units in the State cover a range of products, but in terms of net value added, it is food, beverages, tobacco and petroleum products which account for more than 85 percent of the total industrial income. The total fixed capital involved was Rs. 3032 crore and the total working capital was Rs. 1378 crore with a total invested capital of Rs. 5172 crore. However, outstanding loans against these factories worked out to Rs. 3875 crore. The aggregate value of output of these factories were Rs. 8877 crore and the Net Value Added worked out to Rs. 614 crore. The net income amounted to Rs. 512 crore.
3. The number of large and medium industries in the State, as compiled by the Department of Industries, is only 259, of which the highest concentration (38.2 percent) is in Patna Division, followed by Tirhut (21.6 percent) and Magadh (9.7 percent) in that order. Out of 38 districts spread over in 9 Divisions, 10 districts do not have any large/ medium industrial unit. In another 11 districts in the State, there are less than 5 units in each.
4. As on December 2006, there were 1.43 thousand, 95.10 thousand and 64.32 thousand registered units under SSI, tiny and artisan sectors respectively with a total investment of Rs. 4598 lakh, providing employment to over 5.3 lakh persons. However, as per the third all-India Census of SSI units (2001-02), there are only

- 72632 permanently registered small-scale units in Bihar, out of which 52107 units are working. The percentage of tiny units among SSI was 99.95 percent. Their output and employment potential are much lower. While the small/medium/ large scale industrial units are geographically concentrated, tiny and artisan based industries are spread all over.
5. Bihar suffers from the problem of a sizeable number of units falling sick. As on December 2006, there were 259 large and medium units in the state, out of which 18 units were declared sick by BIFR of which rehabilitation package was approved for 3 and 17 were decided to be wound up.
 6. The highest sickness in Bihar is due to inadequate infrastructure facilities. The lack of working capital, non-availability of raw material, inadequacy of roads network and communication services coupled with poor and uncertain power position and weak research support led to poor industrial scenario in the State. Besides, unsatisfactory credit availability, abnormally high interest rate, delay in granting term loans and rigid attitude of banks and other financial institutions in the state are also some of the key inhibiting factors retarding the progress.
 7. Based on a rough estimate, Bihar has the potential to produce about 5-6 percent of the total agro-based industrial products in India, and this will enable the industrial sector in the State to become one and a half times of its present size. Tea and dairy have been two recent successes in the industrial sector of the State. Other potential industries are sugar, makhana, leather, textile and handloom.
 8. In 2006, the State government came out with a new Industrial Incentive Policy and identified three crucial elements for development of industries viz. infrastructure development, sectoral preferences and incentive structures. The Policy envisaged establishment of Infrastructure Development Council to address the issues of land, transportation network, power and telecommunications. Considering the investment requirements for sizeable infrastructural development, the policy emphasizes the need for private participation. The Policy recognises the potential of agro-based industries, including sugar, tourism, entertainment and

information technology. The Policy includes separate promotive measures for the tiny and artisan sectors. It also underlines some specific measures for revitalization of sick units in the State. The Policy envisages substantial tax benefits for new industrial units including measures in the form of marketing and other support for the existing or prospective industrial units. This has already yielded results with 72 new investment proposals sanctioned in the last one year.

IV. PHYSICAL INFRASTRUCTURE

1. Power : After bifurcation, 70 percent of the generation capacity of erstwhile Bihar has fallen within the jurisdiction of Jharkhand, but 70 percent of the load is left with present Bihar. Bihar's installed capacity in Barauni and Muzaffarpur of 540 MW has been in a decrepit state and in need of a complete renovation. Bihar State Electricity Board (BSEB) organizes supply of electricity in Bihar under seven areas. There are some new projects in the pipeline to improve overall power generation situation involving a total estimated project cost of Rs 17380 crore. There have been initiatives to build district level Energy Parks. There are 45103 villages in Bihar. Out of these, 17717 were electrified till 2002-03 (39.3 percent). By 2004-05, this had reached a figure of 47 percent.
2. Roads : Roads have been accorded high priority under the present government. Bihar has a total road length of 81655 kms out of which 77.5 percent roads are *pucca* and *kutchha* village roads. National highways account for 4.4 percent of road length, while State highways are just 3.9 percent of the total road length. At the village level and other district roads (ODR), there are 35861.63 kms of *kutchha* roads. The highest revenue collected by the Transport Department was Rs 308.72 crore in 2005-06. Another change in the transport administration was lowering of the registration charges.
3. Railways : Taking the entire post-independence period, the share of Bihar is 7.38 percent for new lines laid down, 7.12 percent in terms of gauge conversion and a share of 12.8 percent in the total route kms electrified in the country. But in the

period of the nineties, Bihar lost some of its advantages. In recent years, projects have been initiated in Bihar under different heads to expand the railway network in the State. The major areas in which initiatives were taken are (a) laying of new lines, (b) gauge conversion, (c) doubling of lines and (d) electrification.

4. Civil Aviation : In civil aviation, both passenger traffic and revenue has been on the rise in Bihar. The Bihar government is preparing a new aviation policy aimed at attracting new investors and tourists. With the help of the Central government, the airports in different districts will be given a facelift. In addition, provisions will be made for airports that will cater to chartered planes in districts, which do not have an airport. Till the proposal for economic assistance from the Central Civil Aviation Ministry is cleared, the State government will undertake repair and maintenance of more than a dozen runways in different district airports.
5. Postal Service : Though the total amount of postal mail has seen a reduction with the advent of private courier services, the post office remains an important conduit of small savings.
6. Telecom : Calculations show a teledensity of 70 telephones per thousand of population comprising all kinds of connections – fixed lines, GSM and CDMA connections. Last year, 8 new exchanges have been opened by BSNL. Till 1st April 2006, the total number of exchanges were 1163. At present, there are 67.1 lakh telephone (Basic plus mobile) connections in Bihar, there being four service providers. The spread of internet connections were much thinner. There were 6 internet connections from BSNL for every lakh of population in 2001-02. By 2005-06, this figure had increased to 22. The medium wave channel of Akashvani at 483.1 mtrs i.e. 621 kh covers all the districts in Bihar. It caters to 1.15 crore listeners. Capacities for an FM channel service has also been established in Patna. Bihar has seen a progressive increase in telecoverage in recent years. There are 5 high power transmitters, 36 low power TV transmitters and 2 very low power transmitters covering the State. The coverage of private channels through cable

TV has also increased every year, though estimates of actual numbers are not available.

7. Inland Water Navigation : The Ganga between Allahabad - Haldia (1620 km) has been declared as a national Waterway no 1 and is being developed for navigation by Inland Waterways Authority of India. Patna is planned to be a permanent terminal on National Waterway 1.

V. SOCIAL SECTOR

1. In conformity with its ranking with respect to Per Capita Income, Bihar also ranks at the bottom with respect to its HDI among all the States. It should be noted that, although economic growth in Bihar has far lagged behind the national average, its HDI of 0.237 and that of India have increased at nearly the same pace during the two decades to reach 0.367 for Bihar and 0.472 for India in 2001. Throughout this period, the HDI for Bihar has been about 20 percent lower than the national HDI.
2. As per 2001 census, Bihar had a literacy rate of 47.0 percent, which was only a little higher than the national literacy rate in 1981. The State is nearly two decades behind the nation vis-à-vis its literacy status. Between 1991 and 2001, the literacy rate had increased in Bihar by 9.3 percentage points and, by this rate, total literacy in Bihar is more than half a century away.
3. Educational infrastructure in a State comprises several institutions, starting from the elementary to university education. However, for spreading basic literacy, the infrastructure for elementary education is most relevant and the declining strength of this infrastructure in Bihar is apparent both from the number of such institutions and the teachers employed to run them.
4. Patna had the highest literacy with 62.9 percent, followed by Munger with 59.5 percent. The district with the lowest literacy rate was Kishanganj with 31.1 percent. There was a vast disparity in male-female literacy rates in Bihar. Rohtas topped the list with 75.3 percent male literacy and Patna with 50.8 percent topped

- the list for female literacy. Sheohar and Kishanganj bottomed the list with 45.3 percent male literacy and 18.6 percent female literacy rates respectively.
5. Significant policy decisions have been taken in education. The government has released over 4000 vacancies of teachers in the university and colleges. Integrated Education Development programme has been launched under "Mukhya Mantri Samagra Vidyalaya Vikas Yojana". It requires 2,14,000 teachers in the primary schools to bring the Pupil Teacher Ratio to 40:1. Of this, 80,000 primary teachers have been already appointed. A cabinet decision has been taken to establish a university of international standard in Nalanda.
 6. In the context of indicators of health status, there could be factors, other than the income levels or growth thereof, substantially influencing it. As regards IMR for rural areas, presently 63 for Bihar, it is slightly better than the national average at 75. However, in case of IMR for urban areas, it is 43 per 1000 live births for India as whole, compared to a higher figure of 52 for Bihar. Coming to the overall health status in Bihar, it must be noted from that all the indicators like MMR, IMR, life expectancy, CBR, CDR etc. are hovering around the national figures.
 7. Gender disparities in health status, as indicated by the estimates of expectancy of life is wider in Bihar where average female life is shorter. According to the usual demographic pattern, it is males who generally have a shorter life, as observed in India as a whole.
 8. Some of the policy decisions in this area have been the establishment of the "Mukhya Mantri Sahayata Kosh" to provide medical facilities to families with an annual income up to Rs. 1.00 lakh. Provision for medical grant, ranging from Rs. 15,000 to Rs.1.5 lakh to the families living below the poverty line, for the treatment of grave diseases, has been made. A decision has been taken for providing round the clock medical facilities in all the hospitals and primary health centers. Accordingly, all the vacancies of medical/non-medical staff, and specialized doctors in the civil hospitals are to be filled in the first phase and then similar steps are to be taken at the sub-division level hospitals followed by PHCs

and Additional PHCs. Arrangements have been made for monitoring output of the doctors.

9. Public Health Engineering : The main work is to build tubewells, carry on piped water schemes, add to existing capacities of water supply and work to save rain water. After the establishment of Panchayati Raj system, some of the work like building and maintenance of tubewells and cleanliness related works have been handed over to Panchayats.

VI. FINANCIAL SECTOR

1. The market size in Bihar is estimated to be Rs. 1,03,600 crore, or 4.8 percent of the market size of all India. This is more than that of Madhya Pradesh, Punjab, Haryana or Delhi and little less than that of Rajasthan, Karnataka or Gujarat.
2. As at the end of March 2005, 68 percent of the total 3646 branches of commercial banks in Bihar were located in rural areas, 19 percent in semi-urban and 13 percent in urban areas. As regards growth in the total number of branches, one finds that during the 4 years from March 2001 to March 2005, there was hardly any growth in the total number of branches and there was no change in their distribution among various regions either.
3. Till the 1990s, CD ratio in Bihar was one of the lowest in the country and there was no increase in the CD ratio in the State for several years. After 2000-01, however, there has been some improvement in the CD ratio, but even in 2004-05, it is still one of the lowest in the country.
4. The deposits and credits of the scheduled commercial banks in Bihar constitute respectively 2.3 percent and 1.0 percent of the total deposits and the total credits in the country, one of the lowest among the major Indian States. Investment in the State is essential for productive economic activities, but at this rate, any meaningful investment will take a long time to come. Bihar's share in the total deposits of the country, at the same time, has declined from 2.8 percent to 2.3

- percent during the last 5 years, while the share of its credit has remained more or less constant at 1.0 percent.
5. If one observes districtwise CD ratios, it is found to vary from as low as 20.35 percent (Siwan) to 66.31 percent (West Champaran). The districts where CD ratio is less than 25 percent are Arwal, Siwan and Munger; among the districts with CD ratio above 50 percent are Araria, Kishanganj, Purnea, West Champaran and Katihar. Except for West Champaran, the high CD ratios in four other districts are, however, related to high accumulated interests on previous loans in the region. Besides inter-district variation, the CD ratio in Bihar is also characterised by wide inter-bank variations.
 6. There are 5 Regional Rural Banks (RRBs) in Bihar, each serving a particular zone. Of their total number of 1466 branches, no less than 86.4 percent are located in rural areas. It is interesting to note that the overall CD ratio of RRBs is 44.77 percent, much higher than those of commercial banks.
 7. Agriculture accounts for about 23 percent of the total credit, industry and manufacturing account for about 17 percent, personal loans 34 percent, trade 17 percent and the rest 9 percent is accounted by professionals and other services, finance and miscellaneous activities.
 8. Bihar has seen a sharper increase in consumer price index for agricultural/rural labourers as compared to All India average over last two years. At the same time, consumer price index for urban non-manual workers stood lower than the national average in November 2006. But even this index for the State has seen a sharper increase as compared to the national average over the last two years.

VII. PUBLIC FINANCE

1. Revenue account in Bihar had a deficit during the three years from 2001-2002 to 2003-04, implying that funds meant for capital purposes had to be diverted to the revenue account. However, this deficit has turned into surplus 2004-05 onwards, the amount being substantial in the budget estimates of 2006-07.

2. The interest payments constitute a perennial burden on State finances. Such interest payments have been increasing steadily from Rs 2629 crore in 2001-02 to Rs 4210 crore in 2006-07. But, interest payments have been constituting decreasing proportions of the revenue expenditure since 2003-04, the budget estimates of 2006-2007 reporting it to be 19.3 percent.
3. Total debt of the state constitutes 71 percent of its GSDP, which is clearly at a high level and needs to be reduced. More seriously, the Debt-GSDP ratio has been increasing steadily from 60% in 2002-03 to 71.25 percent in 2006-07, taking away whatever limited financial flexibility the state has.
4. The Gross Fiscal Deficit (GFD) of Bihar has been consistently high in recent years. It was particularly high in 2003-04 (Rs 10016 crore), but the budget estimates of 2006-07 aimed to contain it within Rs 2000 crore. A decomposition of GFD shows that capital outlay and net lending together are its major components. In recent years, internal market borrowings of the State government mainly financed its GFD, apart from the Public Accounts receipts. From 2002-03 onwards, net loans from the Central government, an important source of funds, had a negative contribution to the financing of GFD.
5. Development expenditure of Bihar has constituted an average of about 60 percent of its total expenditure; but its share has declined from 67 percent in 2001-02 to 56 percent in 2006-07 Budget. All these years, the non-development expenditure has been growing steadily indicating that more and more of the State's resources are being used for the general administration, leaving less resources for developmental activities.
6. State's own revenue, tax and non-tax combined, barely meets 20 percent of its total expenditure and the rest has to come from the Central government. The share of state's own tax revenue in total tax revenue has remained between 22 percent and 28 percent in the period 2001-2007. The own non-tax revenue of the State has also remained nearly constant in this period except for an increase in 2006-07 Budget estimates. Thus, the state remains absolutely dependent on the Centre, making it financially vulnerable.

7. The major sources of State's taxes are sales tax, stamp and registration fee, State excise duty, taxes on goods and passengers and taxes on vehicles. The five taxes together make up more than 97 percent of the tax receipts. Except for taxes on vehicles, the growth rate of taxes on other major heads have been very high in recent years.
8. The State has already shifted to a VAT regime from April, 2005 in place of earlier sales tax. In 2005-06 and 2006-07, the State government had undertaken a number of reform measures in the tax system, including reduction in VAT rates for a large number of items. These measures are expected to improve efficiency, boost industrial production and generate additional resources for the State.
9. The recommendations of the Twelfth Finance Commission (TFC) have meant additional resources for Bihar. First, the share of the states in the net proceeds of the sharable Central taxes has been raised from 29.5 percent to 30.5 percent. Secondly, by changing the formula for tax devolution with reallocation of weights in favour of population and efficiency factors and dropping of index of infrastructure have benefited Bihar.
10. For state-specific needs, the TFC has granted a sum of Rs 400 crore to Bihar. This grant is meant for seven heads, including urban development (Rs 180 crore), technical education (Rs 50 crore), establishment of Administrative Training Institute (Rs 50 crore) and a few other activities. This sum is, however, not adequate to meet all the needs of a disadvantaged State like Bihar.
11. The government spends 32 percent of its total revenue receipt on salaries of government employees and another 14 percent on the pension of retired employees. Thus almost 46 percent of its total resources are spent on government employees (working and retired) alone and this constitutes almost 14 percent of its GSDP. The average annual salary of a government employee in Bihar is Rs. 1.80 lakh as against Rs. 1.21 lakh for the Central Government.

CHAPTER I

MACRO OVERVIEW

1.1 Introduction

The present State of Bihar is the result of a bifurcation exercise of the erstwhile larger Bihar in November 15, 2000. The reorganized State has an area of 94,163 sq. kms. and, a population of 83.0 million (2001 Census). It is the third largest State of India in terms of population. Bihar accounts for 8.07 percent of India's total population, but has only 2.9 percent of its total area. Thus, the density of population in Bihar at 881 persons per sq km. is one of the highest in India.

Even after the bifurcation of the erstwhile Bihar which entailed the substantial mineral resources falling within Jharkhand, the present Bihar has abundant natural resources in the form of its fertile soil and plentiful water resources. Thus, the economic and social backwardness of Bihar has always been an enigmatic phenomenon. In this background, the government is now determined to pay full attention to the basic challenge of development in the State, identify its weaknesses and strengths and then plan for its growth and development in a systematic manner. During the last decade, the overall Indian economy has experienced very high growth rates, making the relative economic position of Bihar even more disadvantaged. Thus, the agenda of development of Bihar is now even more pressing for the State government.

During the last year, the State government has already taken a number of steps towards strengthening its economy and the collective impact of these are expected to be visible in near future. As a part of this endeavor, the State government has also planned for this Economic Survey of Bihar, analysing the major development problems in a disaggregated sectoral framework. After this introductory chapter on Macroeconomic Indicators (Chapter I), the Report has six more Chapters — Agriculture (Chapters II), Industry and Allied Sectors (Chapter III), Physical Infrastructure (Chapter IV), Social Sector (Chapter V), Financial Sector (Chapter VI) and finally, Public Finances (Chapter VII).

1.2 Gross State Domestic Product

The Gross State Domestic Products (GSDP) at constant 1993-94 prices for the period 1993-94 to 2004-05 are presented in Table 1.1. The most notable aspect of GSDP in Bihar relates to its yearly variation in growth from (-) 13.92 percent in 1995-96 to 23.78 percent in 1996-97. This variation is reflective of the enormous dependence of the State economy on its agricultural sector which in turn is dependent on the uncertainty prone monsoon. The average annual growth rate of GSDP for the last decade (1993-94 to 2004-05) is 5.08 percent which is substantially lower than the growth rate of national GDP, approximately between 6-7 percent. This difference between Bihar and India becomes even wider for the growth rates of Per Capita Income, as population growth rate in Bihar exceeds that in India.

Table 1.1 : Gross State Domestic Product (GSDP) of Bihar

Year	State Domestic Product (Rs. lakh)	Percentage Variation over previous year	Annual Average Growth Rate at constant 1993-94) prices
1	2	3	4
1993-94	2281198	-	-
1994-95	2530210	10.92	10.92
1995-96	2178068	(-)13.92	(-)2.29
1996-97	2695960	23.78	5.73
1997-98	2592076	(-)3.85	3.25
1999-00	2891397	3.68	4.03
2000-01	3423373	18.40	5.97
2001-02	3127800	(-)8.63	4.02
2002-03(P)	3687880	17.91	5.48
2003-04(Q)	3440738	(-)6.70	4.20
2004-05(A)	3933210	14.31	5.08

For a more informative account of the disadvantaged status of Bihar economy, it may be noted that the Per Capita Income of India in 2003-04 was Rs. 21142, and the same for Bihar was only Rs. 5780, a little over one-fourth of the national average (Table1.2).

Table 1.2 : Per Capita Net State Domestic Product at Current prices for Major States**(Rupees)**

	2001-02	2002-03	2003-04
Andhra Pradesh	17932 (9)	18820 (9)	20757 (10)
Assam	11132 (14)	12074 (13)	13139 (14)
Bihar	5007 (18)	5683 (18)	5780 (18)
Chhattisgarh	12032 (13)	12244 (12)	14863 (12)
Gujarat	19607 (7)	22838 (4)	26979 (4)
Haryana	24851 (2)	26974 (1)	29963 (1)
Himachal Pradesh	21570 (4)	22671 (6)	24903 (5)
Jharkhand	10129 (15)	11544 (14)	12509 (15)
Karnataka	18196 (8)	19865 (8)	21696 (8)
Kerala	20287 (6)	22776 (5)	24492 (6)
Madhya Pradesh	12125 (12)	11483 (15)	14011 (13)
Maharashtra	24055 (3)	26291 (2)	29204 (2)
Orissa	9897 (16)	10208 (16)	12388 (16)
Punjab	25625 (1)	26032 (3)	27851 (3)
Rajasthan	13621 (11)	12745 (11)	15486 (11)
Tamil Nadu	20326 (5)	21740 (7)	23358 (7)
Uttar Pradesh	9320 (17)	9870 (17)	10817 (17)
West Bengal	17499 (10)	18549 (10)	20896 (9)
India	17883	18988	21142

1.3 Sectoral Growth Rates

The overall growth rate of the Bihar economy in 2004-05 has been 5.08 percent, a little lower than the same in previous two years (Table 1.3). Taking into account the decadal trend (Table 1.1) it is observed that the aggregate growth rate of Bihar economy has generally been between 5 to 6 percent.

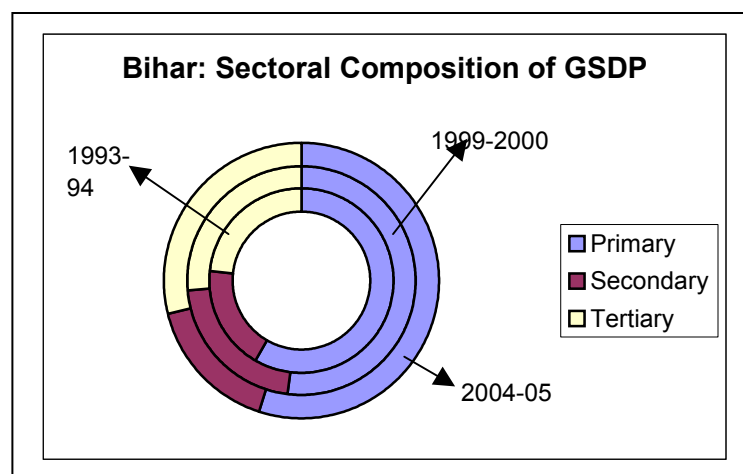
In agreement with the pattern for the national economy, the sectoral growth rates in Bihar vary considerably. Taking into account the primary sector first, its growth rate has been

Table 1.3 : Gross State Domestic Product (At constant 1993-94) for Bihar

Rs. in Lakh

Sl. No.	Sectors	GSDP at constant 1993-94 Prices						Annual Average Growth Rate (%)		
		1993-94	2000-01	2001-02	2002-03	2003-04	2004-05	2000-01	2002-03	2004-05
					(Prov.)	(Quick)	(Adv.)		(Prov.)	(Adv.)
1	2	3	4	5	6	7	8	9	10	11
1	Agri & Animal Husb.	1032734	1400112	1153450	1504481	1236924	1500980	4.44	4.27	3.46
2	Forestry & Logging	44197	55316	55848	56929	58456	59996	3.26	2.85	2.82
3	Fishing	32582	50191	64275	69782	71267	72784	6.37	8.83	7.58
4	Mining & Quarrying	3354	9226	18142	18158	18072	18095	15.55	20.64	16.56
	Sub Total (Primary)	1112867	1514845	1291715	1649350	1384719	1651855	4.50	4.47	3.66
5	Manufacturing	121232	136177	115448	118195	120343	123271	1.67	(-) 0.28	(-) 0.15
5.1	Registered	57798	52735	44243	45814	47177	48870	(-) 1.30	(-) 2.55	(-) 1.51
5.2	Un-Registered	63434	83442	71205	72381	73166	74401	3.99	1.48	1.46
6	Construction	77202	166811	140993	151948	160669	173450	11.63	7.81	7.64
7	Electricity, Water Supply & GAS	28052	50949	51824	53909	55850	58163	8.90	7.53	6.85
	Sub Total (Secondary)	226486	353937	308265	324052	336862	354884	6.59	4.06	4.17
8	Transport, Storage & Communication	108726	183145	196679	213494	228630	250807	7.73	7.79	7.89
8.1	Railways	59967	75113	80212	84774	88098	91553	3.27	3.92	3.92
8.2	Transport by other means & Storage	33734	48827	46890	50333	49296	53061	5.42	4.55	4.20
8.3	Communication	15025	59205	69577	78387	91236	106193	21.64	20.15	19.46
9	Trade Hotel & Restaurants	334743	559747	475327	579049	505070	618326	7.62	6.28	5.74
	Sub Total- Transport Commu. & Trade	443469	742892	672006	792543	733700	869133	7.65	6.66	6.31
10	Banking & Insurance	57820	113343	129011	143815	159138	176093	10.09	10.65	10.65
11	Real Estate Ownership of Dwelling & Business	81640	122097	129420	138450	148607	160404	5.92	6.04	6.33
	Sub Total Finance & Real Estate	139460	235440	258431	282265	307745	336497	7.77	8.15	8.34
12	Public Administration	174194	240795	290038	311207	328522	347288	4.73	6.66	6.47
13	Other Services	184722	335464	307345	328463	349190	373553	8.90	6.60	6.61
	Sub Total (Tertiary)	941845	1554591	1527820	1714478	1719157	1926471	7.42	6.88	6.72
	Total G.S.D.P.	2281198	3423373	3127800	3687880	3440738	3933210	5.97	5.48	5.08

Source : Directorate of Statistics, Bihar



consistently below the overall growth rate, ranging between 3.5 to 4.5 percent. However, this must be noted that this pace of agricultural growth in Bihar is higher than the national average of less than 3 percent for the last decade. Further, the growth rate of the secondary sector of Bihar's economy has also been lower than the overall growth rate, except in 2000-01. This is the weakest sector of Bihar's economy. Registered manufacturing, a sub-sector under this category, has consistently recorded negative growth rates in recent years. The growth of the tertiary sector of Bihar's economy has, however, been consistently above the aggregated growth rate, the subsector registering particularly high growth rates being communications as well as banking and insurance.

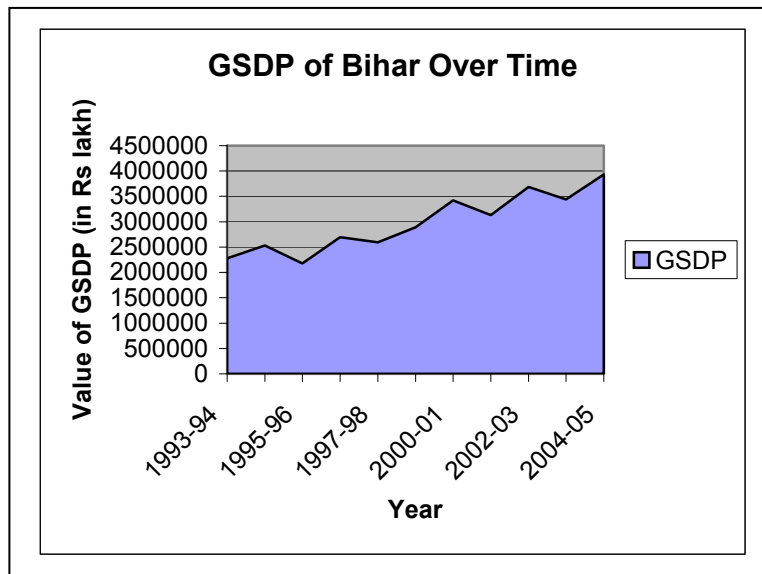
Table 1.4 : Sectoral Composition of GSDP (At constant 1993-94 prices)

Figures in Percentage

Sl.	Industries	1993-94	1999-	2004-05
1	2	3	4	5
1	Agri. & Animal Husbandry	45.27	37.22	38.16
2	Forestry & Logging	1.94	1.84	1.53
3	Fishing	1.43	1.57	1.85
4	Mining & Quarrying	0.15	0.22	0.46
	Sub Total (Primary)	48.78	40.85	42.00
5	Manufacturing	5.31	5.01	3.13
5.1	Registered	2.53	2.43	1.24
5.2	Un-registered	2.78	2.58	1.89
6	Construction	3.38	5.19	4.41
7	Electricity, Water Supply & Gas	1.23	1.88	1.48
	Sub Total (Secondary)	9.92	12.08	9.02
8	Transport Storage & Communication	4.77	5.49	6.38
8.1	Railways	2.63	2.49	2.33
8.2	Transport by other means & Storage	1.48	1.57	1.35

Table 1.4 : Contd.

8.3	Communication	0.66	1.43	2.70
9	Trade, Hotel & Restaurants	14.67	15.34	15.72
	Sub Total (Transport & Hotel)	19.44	20.83	22.10
10	Banking & Insurance	2.53	3.81	4.48
11	Real Estate, Ownership of Dwellings	3.58	3.92	4.08
12	Public Administration	7.64	7.94	8.83
13	Other Services	8.10	10.56	9.50
	Sub total (Tertiary)	41.29	47.06	48.98
	Total GSDP	100	100	100



Due to the uneven growth rates across the sectors and sub-sectors, the sectoral composition of Bihar economy has undergone major changes (Table 1.4). The primary sector used to account for 48.78 percent of GSDP in 1993-94, but by 2004-05, this share has dropped to 42.00 percent. This change has been almost entirely due to the fall in the share of agriculture and animal husbandry. The share of the secondary sector has, however, remained unaltered at around 9 percent throughout the period. Within the secondary sector, registered manufacturing has become a smaller sub-sector, yielding most of the space to construction activities. Finally, corresponding to a fall in the share of primary sector, there has been an increase in the share of the tertiary sector, from 41.29 percent in 1993-04 to 48.98 in 2004-05. Thus, the economy is witnessing a process of tertiarisation, much before a process of industrialization.

1.4 Regional Disparity in Bihar

A highly disadvantaged economy is a general phenomenon of Bihar, but this disadvantage is not equally present in all its regions or districts. Along with a small number of districts where agricultural productivity is reasonably high resulting in the relatively better off economic status, there are other districts where the conditions of the local economy are very poor. This phenomenon of regional disparity becomes quite apparent when one compares the Per Capita Gross District Domestic Product (GDDP) in Bihar (Table 1.5).

The Per Capita Income is the highest in Patna (Rs. 6958), followed by Rohtas (Rs. 4615), Munger (Rs. 4321) and Buxar (Rs. 4285). The lowest districts in the ladder are — Madhubani (Rs. 2880), Araria (Rs. 2879), Gopalganj (Rs. 2800) and Sheohar (Rs. 2219). Broadly speaking, the districts in south Bihar are relatively more prosperous than those in the north. If one undertakes an exercise to identify relatively prosperous districts in Bihar taking into account rural economy alone, the above pattern would remain unaltered.

1.5 Demographic Profile

Bihar had a population of 83.0 million in 2001 which, as per an estimate of the Central Statistical Organization (CSO), has reached 9.02 million in 2006. The State had a decadal growth rate of 28.43 percent, the highest among all the States in India, the national growth rate being 21.34 percent. Of its total population, no less than 89.6 percent live in rural areas, making the State the least urbanized among all the major States in India. The sex ratio in Bihar at 921 females per thousand males is slightly lower than the national ratio at 932, but the juvenile sex ratio in Bihar is higher than the national figure. As regards the age distribution of population, Bihar has larger percentage of population at lower age-groups of 0-6 and 7-14 years, primarily because of high birth rates.

Table 1.5 : Gross District Domestic Product (GDDP) for Different Districts of Bihar

Division / District	G.D.D.P. at constant (1993-94) prices (Rs. in lakh)		Per Capita G.D.D.P. at constant (1993-94) prices (Rs.)	
	1998-99	1999-2000	1998-99	1999-2000
Patna Division				
Patna	291482	314274	6638	6958
Nalanda	85609	89249	3791	3879
Rohtas	107516	108693	4689	4615
Kaimur	46220	47934	3861	3894
Bhojpur	8763	80340	4176	3728
Buxar	84965	57758	4193	4285
Magadh Division				
Gaya	115172	121354	3565	3651
Jehanabad	43336	43197	3067	2975
Arwal	-	-	-	-
Nawada	53474	55962	3187	3235
Aurangabad	65043	67585	3480	3515
Bhagalpur Division				
Bhagalpur	84563	86239	3712	3689
Banka	49544	54161	3268	3488
Munger Division				
Munger	45019	47527	4172	4321
Lakhisarai	40679	42781	3139	3202
Shekhpura	20109	19163	4129	3817
Jamui	27421	29070	3594	3736
Khagaria	38796	38653	3255	3153
Begusarai	86532	99306	3953	4414
Saran Division				
Saran	96813	92857	3171	2966
Gopalganj	60317	57968	2987	2800
Tirhut Division				
East Champaran	103848	113650	2827	3010
West Champaran	109320	105718	3855	3623
Muzaffarpur	157831	146241	4493	4058
Sitamarhi	63550	75464	2565	2955
Sheohar	9562	10874	2017	2219
Vaishali	83536	89163	3280	3414
Darbhangha Division				
Darbhangha	91270	93530	2984	2970
Madhubani	100928	99057	3009	2880
Samastipur	104247	108714	3249	3304
Koshi Division				
Saharsa	41561	45511	2975	3160
Supaul	51480	58891	3164	3518
Madhepura	46923	48958	3297	3346
Purnia Divison				
Araria	53898	58566	2729	2879
Kishanganj	37193	41277	3092	3331
Katihar	77394	81446	3478	3557

Note : Separate figures for Arwal (earlier part of Jehanabad) are not available.

Table 1.6 : Demographic Profile of Bihar

		Bihar		India	
		1991	2001	1991	2001
1	Population (million)	65.1	83.0	838	1029
2	Rural Population (%)	88.8	89.6	74.3	72.2
3	Sex Ratio (females/1000 males) (All)	911	921	927	932
4	Sex Ratio (females/100 males) (0-6 yrs)	959	942	945	927
5	Age Distribution of Population				
	0-6 years	13.5	13.3	12.2	10.7
	7-14 years	27.6	28.7	25.1	24.6
	15-59 years	51.3	51.2	55.5	56.9
	60-64 years	2.8	2.5	2.7	2.7
	65 years & above	3.8	4.3	4.5	5.1
	All years	100.0	100.0	100.0	100.0
6	Work Participation Ratio				
	Male (Rural)	48.5	40.8	36.2	44.3
	Male (Urban)	41.7	37.6	48.6	47.2
	Male (All)	47.6	40.5	40.9	45.1
	Female (Rural)	10.8	9.4	18.6	16.7
	Female (Urban)	4.3	4.7	8.1	9.4
	Female (All)	10.0	8.9	15.9	14.7
7	Scheduled Caste of Population (%)	12.2	15.7	16.7	16.2
8	Sectoral Distribution of Main Workers				
	Cultivators	43.6	29.3	38.7	31.7
	Agricultural Labourers	37.1	48.0	26.1	26.5
	Household Industry Workers	1.7	3.9	2.4	4.2
	Other Workers	17.6	18.8	32.8	37.6
	All Workers	100.0	100.0	100.0	100.0

The structure of Bihar economy is substantially different from the national economy, mainly because of the larger share of rural agricultural sector in Bihar. Consequently, the livelihood patterns are also very different in Bihar and India, as revealed by the Work Participation Ratio (WPR) of their respective population. Both for males and females, the WPR is lower in Bihar as its traditional economy offers less opportunities for economic work. It is also significant to note that, between 1991 and 2001, the WPR for male has decreased in Bihar, but increased in India as a whole. The distribution of the main workers among the major occupation groups is again very different in Bihar, compared to the national pattern. The proportion of cultivators is nearly the same in Bihar and India, 29.3 and 31.7 percent respectively; but, because of a much smaller urban industrial economy in Bihar, no less than 48.0 percent of its main workers are agricultural labourers. For India as a whole, agricultural labourers constitute 26.5 percent of main workers, a substantial 37.6 percent of workers being engaged as other workers, mostly in the non-agricultural occupations.

1.6 Economic Reforms Initiatives in the State

In the post reform period of the 1990s, Bihar's economy lagged far behind the national average in terms of growth indices. Agricultural growth depended on the whims of nature. Industrialization seemed to have bypassed the State with no significant private investment after the foretold dearth of public investment since the 1980s. The State government was caught in a crisis of confidence as the fiscal situation deteriorated with sources of revenue drying up as the tax base narrowed and dependence on grants from Central Government became a big deterrent in the pursuit of growth enhancing policies. In this regard, five kinds of measures have been undertaken by the present government as part of the process of economic reform initiatives.

The first of these initiatives have been in the institutional arrangements in the formation of the Land Reforms Commission, the Farmer's Commission, the Administrative Reforms Commission and the Common Schooling System Commission. The mandates of these bodies are quite wide in terms of policy perspectives. The repeal of both the Agriculture Produce Market Act with the hope that this will ensure better prices and the Urban Land Ceilings Act to facilitate land acquisition for commercial purposes are measures informed by the logic of the market. Many of the government departments have prepared their own vision documents at a departmental level feeding into a thought-induced policy making process.

The second set of initiatives has been in the form of fiscal management policies that are premised on lowering the overall fiscal deficit to less than 3 percent according to the Fiscal Responsibility and Budget Management Act (FRBM) that was promulgated in February 2006. With the passing of the FRBM Act, the focus of the government has been on finding ways to finance the existing deficit through appropriate debt-management, expenditure rationalization and tax mobilization measures. The tight financial situation has made the government increasingly reliant on market loans as a form of deficit financing. The FRBM is also a tight rope walk for the State government as the growth enhancing policies require public investment that have an effect on the overall fiscal deficit.

Notwithstanding this dagger of the deficit hanging on the government, the new growth enhancing policies have been directed towards selective incentive policies for existing industries and agricultural resources. This third range of initiatives vary in extent and content, but on the whole,

they embody a series of incentives in the form of tax rationalizations, infrastructure assistance and skill-enhancing training programmes in industry that are contingent on an increase and effective use of public investment. In some areas, like sugarcane, the responses to such initiatives have been recorded in the first year itself. The State Investment Promotion Board (SIPB) has approved 72 proposals for private investment in various sectors like sugar, steel, solvent extraction, cement, ethanol for export and fruit and vegetable packaging. However, for a large state like Bihar, this is a small start. But keeping in mind that industry has registered double digit growth figures in the recent past, this effort is commensurate with the direction of growth enhancing measures. A similar policy package for agriculture has been announced; along with the emphasis on low input technology, the institutional impediments of translating this package into growth is a more formidable exercise.

The fourth form of intervention has been more directly people-oriented and is intent on making the service delivery mechanisms in health, crime prevention and education accountable. This has been part of the 'good governance' agenda and has an ingredient of growth enhancement and employment to it in the form of large scale appointment of teachers to bring the pupil teacher ratio close to the national average of 40:1 as compared to the existing 90:1, expansion of the police force and making the primary health care system work through mandatory attendance and provision of medicines. The timely payment of salaries of the teaching staff has been a long awaited step.

The state has made substantial efforts to improve the law and order system through filling up of existing vacancies, the formation of the Special Auxiliary Police force composed of ex-army men in the state, a deliberate effort to bridge the gap between investigation and prosecution and an increased interface between the judiciary and the police. In general administration, the stress has been on delegating authority to speed up the process of plan and project approval and implementation. The universalizing of NREGP at the state's own cost and proper monitoring of BPL and Indira Awas Yojana beneficiaries are a significant policy step. The appointments under the ICDS (Integrated Child Development) projects and increase in their number have been undertaken with a holistic approach towards the development of targeted group of children under the programme.

The last form of intervention has been less visible, but is expected to have an impact on the higher levels of government functionaries like secretaries and other key administrators. This has been associated with creating a conducive working environment by conferring a degree of autonomy in decision- making and provision of logistic and resource support and directives to simplify the procedures for utilization of already allocated funds. This has led to a more motivated bureaucracy that stands behind the political structure of the present government.

Government Initiatives in Governance

- Using the services of retired CBI officers, a special vigilance unit has been constituted in the Vigilance Department to expedite cases relating to such persons who are apprehended while accepting bribes or against whom cases have been filed with respect to assets disproportionate to their known sources of income.
- A Special Auxiliary Police has been formed by contracting 5000 retired army personnel for one year; the period of contract can be extended. This has been done keeping in mind around 10000 vacancies in the police department that was creating difficulties in maintenance of law and order and was compromising the capacity to deal with criminal activity
- Funds have been allocated out of contingency fund for structural strengthening of police administration and its modernization
- Posts in the police forces have been created to ensure better administration and increased efficiency of the concerned wings
- Permanent fulltime check posts in Patna have been established to control increasing criminal incidents as a result of continuous expansion in the area of the city, in its population, increase in number of vehicles and traffic
- Police outposts where necessary are being upgraded as police stations and relevant posts are being created therein to facilitate better and effective police administration. Police outposts are being established and relevant posts are being created to operationalise them, in areas distantly located from the nearest police station, and which need a more rigorous policing for various reasons. Weapons and other equipments are being purchased and investments are being made for increased mobility of the police forces.
- A two-days joint seminar on Speedy Criminal Justice was organised in coordination with the Judiciary and the Executive. Speed of trials have improved.
- According to the cabinet decision, in each police station area, the station house officer too has been made responsible for controlling illegal liquor trade. Also, SPs are doing regular appraisals of excise cases in their monthly crime meetings.

CHAPTER II

AGRICULTURE

2.1 Introduction

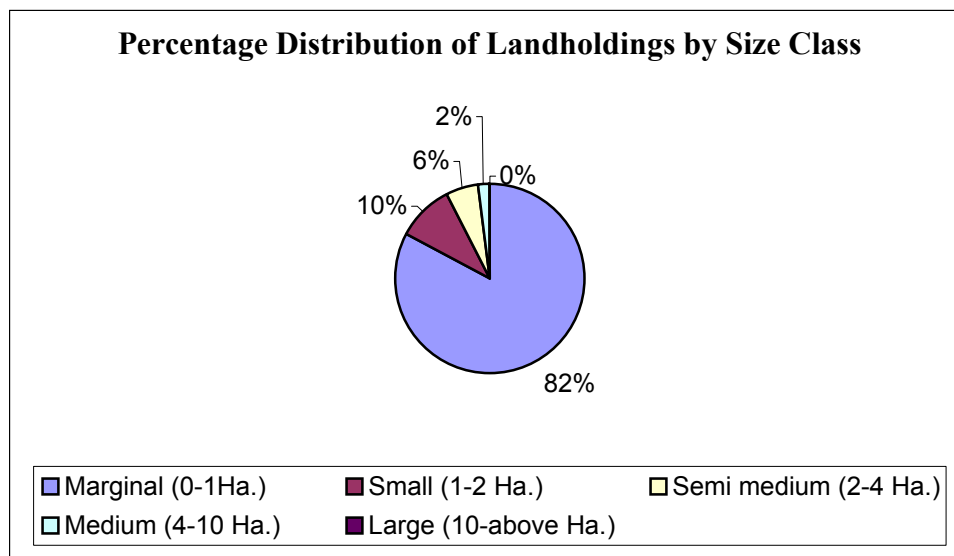
Bihar has a total geographical area of 94.16 lakh hectares on which it houses a population of 83 millions, thereby generating a population density of 881 persons per sq. km. (Census 2001). Gross sown area in the State is 79.46 lakh hectares, while net sown area is 56.03 lakh hectares. There are around 1.04 crore landholdings in the State of which around 83 percent are marginal holdings of size less than 1 hectare (Table 2.1). With around 90 percent of the total population living in rural areas, agriculture as the primary feeder of rural economy continues to operate not only on margins of land but also on the margins of human enterprise, its productivity being among the lowest in the country. Without increasing returns to these margins, not much can be done realistically to develop the agricultural sector. Thus, agriculture continues to define both the potentialities and constraints to development in Bihar.

Table 2.1: Distribution of Holdings by Size Class

Category of farmers	No. of Holdings	Operational holding (In Ha.)
Marginal (0-1Ha.)	86,45,932 (82.9%)	27,87,789 (40.8%)
Small (1-2 Ha.)	10,05,650 (9.6%)	13,00,667 (19.0%)
Semi medium (2-4 Ha.)	5,90,970 (5.7%)	15,82,279 (23.1%)
Medium (4-10 Ha.)	1,78,295 (1.7%)	9,75,355 (14.3%)
Large (10-above Ha.)	11,570 (0.1%)	1,93,760 (2.8%)
Total	1,04,32,417 (100%)	68,39,850 (100%)

Source : Agricultural Census Division, Ministry of Agriculture, New Delhi

Note : Operational holding is defined as a techno-economic unit wholly or partly for agricultural production, and operated (directly/managed) by one person alone or with assistance of others, without regard to title size or location. A household is considered to have two operational holdings only when 'either' : 1) two or more members of the household independently direct/manage two distinct economic units engaged in agricultural production, even if most of the technical resources used by them are the same; or 2) there are two distinct technical units engaged in agricultural production, even if managed/directed by the same set of persons.



According to the soil quality and climatic conditions of the relevant areas, Bihar has been classified in 3 agro-climatic zones : North-West Alluvial Plane (Zone 1), North-East Alluvial Plane (Zone 2) and South Alluvial Plane (Zone 3), the last zone being further classified in two sub-zones 3A and 3B (Table 2.2). Monsoon arrives earliest in the north-eastern Zone 2, which also receives the highest rainfall among all three zones. Zone 3 receives monsoon showers last of all three zones and also the least amount. Agriculture in Bihar is crucially dependent on the monsoon. Although around 57 percent of its gross cultivated area is irrigated, irrigation itself is crucially dependent on the monsoon. Total irrigated area in the State is 45.67 lakh hectares, of which nearly 30 percent is fed by canal water. This highlights the monsoon dependence of even irrigated lands, as catchment areas of nearly all the major rivers in the State are outside the State.

2.2 Agricultural Production in 2006-07

Kharif 2006 started with the probability of a normal rainfall, but the deviation for the first showers of the monsoon was (-)48 percent. Rainfall in the month of June and July was normal, but was again below normal by 57 percent in August. It was normal in the month of September. Finally, rainfall was 19 per cent below normal for the entire monsoon. This seems to have adversely affected area under cultivation. Area under paddy in the State according to the second advance estimate for kharif 2006 was 31.30 lakh hectares (Table 2.3) against the target of 37.00 lakh hectares (Table 2.4). Similarly, area under wheat for rabi 2006 stood at 20.34 lakh hectares, falling

short of a target of 24.00 lakh hectares. Thus, there has been a fall in the area under foodgrains from 72.42 lakh hectares in 2005-06 to 61.55 lakh hectares in 2006-07 (Table 2.5). Under the conditions of deficient rainfall and a fall in acreage, foodgrain output is expected to register a fall over the figures for 2005-06. The second advance estimate of foodgrains for 2006-07 is 82.10 lakh MT. For kharif 2006-07, foodgrain production has been estimated at 40.04 lakh MT over an area of 34.83 lakh hectares. For rabi 2006-07, the estimate of foodgrain production is of 42.06 lakh MT over an area of 26.73 lakh hectares. This is a fall of around 4 lakh MT from previous year's production of around 86 lakh MT. Effect of falling acreage on production of foodgrains has, however, been moderated by an increase in yield from 12.47 qnts/hectare in 2005-06 to 13.74 qnts/hectare in 2006-07 (Table 2.6).

Cereal production is expected to fall by almost 3 lakh MT to 78 lakh MT as compared to previous year's production of 81 lakh MT (Table 2.7). This fall comes largely from a fall in acreage under cereals by almost 9 lakh hectares. Within cereals, fall in production is largely caused by fall in maize output by almost around 4 lakh MT. Other coarse cereals too are estimated to register a marginal fall in both acreage and production. While both rice and wheat are estimated to suffer a minor fall in acreage, their production is likely to improve over previous year due to increase in productivity (Table 2.5). However, the observed fall in acreage under wheat needs to be qualified by an assessment of Department of Agriculture according to which acreage under wheat is likely to finally increase. The stated reason for this assessment is an increase in usage of zero tillage machines, a good *hathia* rain, and desilting of canals over the last one year.

Production of pulses too is expected to fall marginally by 0.75 lakh MT in 2006-07 despite an increase in productivity. This is because of a substantive fall in the area under pulses by around 2 lakh hectares as compared to previous year. Oilseed production is expected to suffer a marginal fall from 1.19 lakh MT in 2005-06 to 1.11 lakh MT in 2006-07 due to marginal fall in both acreage and productivity. Sugarcane has been planted on an area of 1.03 lakh hectares and its output is estimated to be 41.31 lakh MT.

Table 2.2 : Agro-Climatic Zones in Bihar

Agro climatic Zones	Districts	Soil	Ph	Initiation/Ce ssation of rainfall	Total Rainfall (mm)	Temperature (dg. Celcius)		Important Cropping Sequence
						Maximu m	Minimu m	
Zone-1 (North west alluvial plane zone- Pusa)	Saran, Siwan, Gopalganj, E.Champaran, W.Champaran, Sheohar, Sitamarhi, Madhubani, Darbhanga, Muzzafarpur, Vaishali, Samastipur, Begusarai	Sand y loam, loam	6.5 – 8.4	12 th June/ 30 th Sep to 10 th Oct	1040 – 1450 (1245.00)	36.6	7.7	Rice – Wheat, Rice-Rai, Rice-Sweet Poatato, Rice-Maize(Rabi), Maize-Wheat, Maize-Sweet Potato, Maize-Rai, Rice-lentil
Zone-2 (North-East Alluvial Plane zone- Purnea)	Supaul, Khagaria, Saharsa, Madhepura, Purnea, Katihar, Kishanganj, Araria, Naugachia.	Sand y loam, Clay loam	6.5 – 7.8	7 th June/30 th Sep to 10 th Oct	1200 – 1700 (1450.00)	33.8	8.8	Jute-Rice, Jute-Wheat, Jute-Potato, Jute-Kalai, Jute-Mustard, Rice-Wheat-Moong, Rice-Toria
Zone 3		Sand y loam, Clay loam, loam, Clay	6.8 – 8.0		990 – 1240 (1115.00)	37.1	7.8	Rice-Wheat, Rice-Gram, Rice-Lentil, Rice-Rai
Zone-3A (South Alluvial Plane Zone- Sabour)	Sheikhpura, Lakhisarai, Jamui, Banka, Munger and Bhagalpur			15 th June/30 th Sep to 10 th Oct				
Zone-3B (South Alluvial Plane Zone – Sabour)	Bhabhua, Rohtas, Aurangabad, Buxar, Bhojpur, Jehanabad, Gaya, Nalanda, Patna, Nawada			10 th June/ 30 th Sep to 10 th Oct				

Table 2.3 : Second Advance Estimates of Area and Production of Crops for 2006-07

1	Area (000, hectares)			Production (000, tones)			Yield (kg/hectare)		
	2	3	4	5	6	7	8	9	10
Rice	3130.905		3130.905	3527.822		3527.822	1127		1127
Wheat	-	2034.305	2034.305	-	3238.614	3238.614	-	1592	1592
Jawar	5.870	-	5.870	5.958	-	5.958	1015	-	1015
Bajra	4.039	-	4.039	4.310	-	4.310	1067	-	1067
Maize	268.015	200.124	468.139	411.913	580.76	992.673	1537	2902	2120
Ragi	16.011	-	16.011	11.560	-	11.560	722	-	722
Small Millets	4.246	-	4.246	3.172	-	3.172	747	-	747
Barley	-	18.709	18.709	-	21.066	21.066	1126	-	1126
Coarse Cereals	298.181	218.138	517.014	436.913	601.826	1038.739	1465	2750	2009
Cereals	3429.086	2253.138	5682.204	3964.735	3840.440	7805.175	1156	1704	1374
Tur	-	35.814	35.814	-	46.845	46.845	-	1308	1308
Urad	28415	-	28415	21.340	-	21.340	751	-	751
Moong	10.873	-	10.873	6132	-	6132	564	-	564
Other Kharif Pulses	14.900	-	14.900	11.86	-	11.860	796	-	796
Gram	-	71.989	71.989	-	65.006	65.006	903	-	903
Other Rabi Pulses	-	311.704	311.704	-	253.834	253.834	-	815	815
Total Pulses	54.188	419.507	473.695	39.332	365.685	405.017	726	871	855
Total food Grains	3483.274	2672.645	6155.919	4004.067	4206.125	8210.192	11.50	15.74	13.34
Ground Nut	0.716	-	0.716	0.354	-	0.354	494	-	494
Castor Seed	-	0.133	0.133	-	0.127	0.127	-	957	957
Sesamum	3.635	-	3.635	2.824	-	2.824	777	-	777
Niger Seed	-	-	-	-	-	-	-	-	-
Sun Flower	2.604	6.047	8.651	3.573	8.871	12.444	1372	1467	1438
Soyabean	-	-	-	-	-	-	-	-	-
Rapeseed and Mustard	-	83.021	83.021	-	68.658	68.658	-	827	827
Lin Seed	-	30.665	30.665	-	25.973	25.973	-	847	847
Safflower	2.604	6.047	8.651	3.573	8.871	12.444	1372	1467	1438
Total oil seeds	6.955	120.073	127.028	6.751	103.795	110.546	971	864	870
Cotton*	-	-	-	-	-	-	-	-	-
Jute*	127.847	-	127.847	1191.963	-	1191.963	1678	-	1678
Mesta	12.990	-	12.990	118.357	-	118.357	1640	-	1640
Jute and Mesta	-	-	-	-	-	-	-	-	-
Sugarcane	103.115	-	103.115	4131.509	-	4131.509	40067	-	40067
Onion	14.863	-	14.863	123.66	-	123.660	8.32	-	8.32
Potato	52.580	90.535	143.115	421.692	811.194	1232.886	8.02	8.96	8.61

Source : Statistics and Evaluation Dept., GOB

Table 2.4 : Target area and Production of crops for 2006-07 (Area-lakh hectares/Production-lakh MT)

Name of Crop	Kharif		Rabi		Total	
	Area	Production	Area	Production	Area	Production
Rice	37.00	68.00	2.50	6.00	39.50	74.00
Wheat	00	00	24.00	58.00	24.00	58.00
Maize	4.00	6.95	6.00	19.00	10.00	25.95
Other Coarse Cereals	0.75	0.75	0.50	0.50	1.25	1.25
Pulses	2.50	2.30	8.50	9.00	11.00	11.30
Total Foodgrains	44.25	78.00	41.50	92.50	85.75	170.50
Oilseeds	0.25	0.18	3.56	2.90	3.81	3.08

Source : Agriculture Dept., GOB

2.3 Long term Trend In Foodgrains Production

Foodgrain production in Bihar has shown high volatility, but there is a long-term trend of falling production in the State. Cereal production has fallen sharply from 122.29 lakh MT in 2001-02 to 81.12 lakh MT in 2005-06 (Table 2.7). This fall in production has been accompanied by an almost secular decline in area under cereal production from 70.19 lakh hectares in 2001-02 to 65.87 lakh hectares in 2006-07. Larger part of the fall in production and area is explained by the fall in production and area under rice (Table 2.5). Though production of wheat too has fallen, but area under it has largely been unchanged around 20 lakh hectares. Fall in production of wheat has been due to its falling yield. While its yield in the later half of nineties hovered around 22 qtls/hect, it has steadily fallen thereafter, reaching 21.46 qtls/hect in 2000-01 and still lower at 13.94 qtls/hect in 2005-06 (Table 2.5). Pulses too have seen a fall in production and acreage, but the fall has been moderate. Their production has fallen from 5.47 lakh MT in 2001-02 to 4.83 lakh MT in 2005-06, with acreage in the corresponding period falling from 6.94 lakh hectares to 6.55 lakh hectares. While there has been a marginal fall in the productivity of pulses, but their yield rates have remained significantly above the national average. Acreage and production of coarse cereals have largely been unchanged over the last few years. For maize, there has been a rise in production from around 12 lakh MT in late nineties to nearly 15 lakh MT in 2005-06, with almost unchanged acreage and rising productivity, from around 20 qtls/hect to 23 qtls/hect over

the same period. Acreage and production of oilseeds has more or less hovered around 1.4 lakh hectares and 1.2 lakh MT respectively in recent years with moderate fluctuations.

The falling trend in production and acreage of cereals has been further aggravated by deficient rainfall in 2006-07. Total cereal production is estimated to be 78.05 lakh MT, which is around 3 lakh MT less than the production figure for 2005-06 (Table 2.5). For kharif 2006-07, cereal production has been estimated at 39.64 lakh MT over an area of 34.29 lakh hectares. For rabi 2006-07, the estimate of cereal production is of 38.40 lakh MT over an area of 22.53 lakh hectares. The fall in production has been largely on account of fall in area from 65.87 lakh hectares in 2005-06 to 56.82 lakh hectares in 2006-07. The second advance estimates for 2006-07 have put the production figures for coarse cereals at 10.38 lakh MT on an area of 5.17 lakh hectares and an yield of 20.09 quintals/hectare. Production of pulses has been estimated at 4.05 lakh MT and that of oilseeds at 1.11 lakh MT. Estimates put the area under sugarcane cultivation at 1.43 lakh hectares with an output of 12.33 lakh MT.

The observed trend of fall in acreage and production of cereals, it might be noted is not incidental. There has been a deliberate effort by the State government during the last five years, to divert land under rice and wheat cultivation towards horticulture. Plan of crop diversion has been given priority in 12 districts of the state. About 30 percent of area under wheat in the districts of Muzaffarpur, Darbhanga, Samastipur and Madhubani (Zone 1 districts) is being considered for diversion towards mango, litchi and makhana. Similarly 20 percent of crop area in the districts of East Champaran, Samastipur, Khagaria, Muzaffarpur and Vaishali is being considered for diversion towards banana. Further, about 20 percent of rice-wheat area in the districts of Buxar, Bhojpur, Rohtas etc. is likewise being considered for diversion towards vegetable production. Finally, about 30 percent total area of the State is being considered for diversion from current crops towards new crops.

Table 2.5 : Area, Production & Productivity of Foodgrains and Oilseed

	Rice	Wheat	Maize	Other coarse cereal	Pulses	Total cereals	Oilseeds
Year 1996 – 1997							
Area	36.44	20.33	6.80	0.85	7.60	71.92	1.62
Production	58.12	44.70	15.20	0.97	6.35	125.34	1.11
Yield	15.95	22.09	22.35	11.41	8.35	17.43	6.85
National Yield	18.82	26.79	17.20	10.72	6.35	16.14	9.26
Year 1997 – 1998							
Area	36.21	20.09	6.09	0.78	7.52	70.69	1.65
Production	53.95	39.39	12.01	0.75	5.48	111.59	1.21
Yield	14.90	19.61	19.72	9.57	7.29	15.78	7.35
National Yield	19.00	24.85	17.11	9.86	5.67	15.52	8.16
Year 1998 – 1999							
Area	36.39	20.53	6.19	0.68	7.35	71.14	1.77
Production	52.91	42.92	12.09	0.73	6.69	115.34	1.51
Yield	14.54	20.91	19.53	10.74	9.10	16.21	8.53
National Yield	19.21	25.90	17.57	10.68	6.34	16.27	9.44
Year 1999 – 2000							
Area	35.96	20.81	6.38	0.64	7.22	71.01	1.57
Production	55.47	45.84	14.27	0.69	6.20	122.46	1.15
Yield	15.43	22.03	22.37	10.78	8.59	17.24	7.32
National Yield	19.86	27.78	17.92	10.34	6.35	17.04	8.53
Year 2000 – 2001							
Area	36.56	20.68	6.21	0.56	7.17	71.18	1.54
Production	54.44	44.36	14.97	0.58	6.22	120.59	1.31
Yield	14.89	21.46	24.11	10.37	8.67	16.94	8.51
National Yield	19.01	27.08	18.22	10.27	5.44	16.26	8.10
Year 2001 – 2002							
Area	35.52	21.23	5.94	0.53	6.94	70.19	1.39
Production	52.03	43.91	14.88	0.53	5.47	116.82	1.17
Yield	14.65	20.68	25.05	10.00	7.88	16.64	8.41
National Yield	20.79	27.62	20.00	11.31	6.07	17.34	9.13
Year 2002 – 2003							
Area	35.85	21.31	6.04	0.53	6.98	70.69	1.37
Production	50.86	40.41	13.50	0.48	5.61	110.85	1.05
Yield	14.19	18.96	22.35	9.06	8.04	15.68	7.66
National Yield	18.04	26.19	16.42	9.62	5.56	15.62	7.10
Year 2003 – 2004							
Area	35.78	20.77	6.16	0.47	6.80	69.98	1.41
Production	54.48	36.89	14.74	0.43	5.57	112.11	1.24
Yield	15.23	17.61	23.93	9.15	8.19	16.02	8.79
National Yield	20.50	27.07	19.83	12.28	6.23	17.07	10.72
Year 2004 – 2005 (last forecast)							
Area	31.23	20.28	6.14	0.44	6.58	64.67	1.32
Production	24.72	32.63	14.66	0.39	4.67	77.07	1.17
Yield	7.91	16.09	23.88	8.86	7.09	11.92	8.66
Year 2005 – 2006 (4th advance estimate)							
Area	32.22	20.38	6.22	0.51	6.55	65.87	1.36
Production	34.17	28.40	14.25	0.48	4.83	81.12	1.19
Yield	10.60	13.94	22.92	9.41	7.37	12.47	8.73
Year 2006-07 (2nd advance estimates)							
Area	31.31	20.34	4.68	0.49	4.73	56.82	1.27
Production	35.28	32.39	9.93	0.46	4.05	78.05	1.11
yield	11.27	15.92	21.20	9.38	8.55	13.74	8.70

Note : Area in lakh hectare, production in lakh MT and yield rates in qtls/hectare

Source : Statistics and Evaluation Dept., GOB

Table 2.6 : Productivity of Different Crops**(Quintals / hectare)**

Year	Rice		Wheat		Maize		Pulses		Oilseeds	
	State	National	State	National	State	National	State	National	State	National
1992-93	14.15	18.88	21.30	23.80	21.50	16.02	7.09	5.98	7.05	7.99
1993-94	13.52	19.11	21.08	25.59	20.61	15.70	7.38	6.10	7.07	8.43
1994-95	12.18	17.97	20.06	24.83	20.14	15.95	6.15	5.52	6.84	8.51
1995-96	15.95	18.82	22.09	26.79	22.35	17.20	8.35	6.35	6.35	9.26
1996-97	14.90	19.00	19.61	24.85	19.72	17.11	7.29	5.67	7.38	8.16
1997-98	14.54	19.21	20.91	25.90	19.54	17.97	9.10	6.34	8.55	9.44
1998-99	15.43	19.86	22.03	27.78	22.37	17.92	7.96	6.35	7.32	8.53
2000-2001	14.89	19.01	21.73	27.08	24.54	18.22	8.35	5.44	7.44	8.10
2001-02	14.65	20.79	20.65	27.62	25.04	20.10	7.88	6.07	8.41	9.13
2002-03	14.19	18.04	18.96	26.19	22.35	16.42	8.04	5.56	7.66	7.10
2003-04	15.23	20.51	17.61	27.07	23.93	19.83	8.19	6.23	8.79	10.72
2004-05	7.91	-	16.09	-	23.88	-	7.09	-	8.86	-
2005-06	10.6	-	13.94	-	22.92	-	7.37	-	8.7	-
2006-07	11.27	-	15.92	-	21.20	-	8.55	-	8.73	-

Source : Statistics and Evaluation Dept., GOB

Table 2.7 : Trends In Cereal Production

Sl. No.	Year	Area (in lakh hect.)	Production (lakh MT)	Productivity (Qtls/Hect.)
1	1950 – 1951	96.71	44.42	4.53
2	1960 – 1961	93.66	74.19	7.92
3	1970 – 1971	99.08	78.81	7.95
4	1980 – 1981	100.25	99.11	9.89
5	1990 – 1991	94.31	124.00	13.02
6	2001 – 2002	70.19	116.82	16.64
7.	2002 – 2003	70.81	110.88	15.66
8.	2003 – 2004	69.98	112.10	16.02
9.	2004-05 (last estimate)	64.67	76.87	11.92
10.	2005-06 (last estimate)	65.87	81.12	12.47
11.	2006-07 (II nd estimate)	56.82	78.05	13.74

Source : Statistics and Evaluation Directorate, GOB

2.4 Flood Control and Drainage

Every year, Bihar faces the vagaries of flood and waterlogging. After bifurcation of the State, Bihar has become the most flood prone area in the country. Total flood prone area of the State is

68.80 lakh hectares which is 73.06 percent of its total geographical area and 17.2 percent of the total flood prone area in the country. Flood situation is most severe in the northern plains of Bihar. This is because almost all the major rivers in the State enter Bihar from Nepal in this region. Bed slope of these rivers is very sharp in Nepal and they usually enter the State on plain lands. Because of a sudden drop in bed slope, silt brought by the flow of these rivers get deposited at their base and cause recurring floods.

While a long term solution to this problem can be achieved by constructing dams at upper catchment areas of Kosi, Gandak, Bagmati, Mahananda rivers in Nepal territory, in the short run, Bihar has to depend on construction and maintenance of embankments along the rivers. Till March 2006, 3430.47 km length of embankments have been constructed in the State which protect 29.16 lakh hectares of area, out of a total of 68.80 lakh hectares flood prone area. Thus, 39.64 lakh hectares of land area still stand exposed to the perennial problem of floods. Despite such high exposures to threat of flood, only 29 percent of the total 10th Plan allocation for flood control have been utilized (Table 2.8). A more efficient utilization of the allocated funds would have lessened the damage capacity of floods in the State.

Table 2.8 : 10th Plan Performance on the Outlays for Flood Control (Rs in crore)

Sl.No	Source of Funding		10 th Plan Outlay	
	Flood Control	Agreed Outlay	Actual Outlay	Anticipated Performance
1	Establishment (CSS+State Plan)	114.08	152.52	145.79
2	State Plan (Ongoing & New Schemes)	1576.00	332.92	329.81
3	NABARD	55.00	21.00	16.97
	Sub Total (works)	1631.0	353.92	346.78
	Total Flood Control	1745.08	506.44	492.57

Beside the menace of flood, about 9.41 lakh hectares of land suffer from the problem of water logging in Bihar. It has been found by various Expert Committees that it would not be economically viable to free 2.5 lakh hectares of land from water logging due to excessive depth. Thus, against 6.91 lakh hectares of water logged area from where water can be drained out, only about 1.50 lakh hectares have been freed from water logging. The task ahead is to free the remaining 5.41 lakh hectares of land area. Against a total agreed outlay of around Rs 167 crore,

on drainage works in the 10th Plan, there has been an actual utilisation of around 74 percent (Table 2.9).

Table 2.9 : 10th plan performance and 11th plan requirement Rs in Crore

Sl. No.	Source of Funding	10 th Plan Outlay	
		Agreed Outlay	Actual Utilisation
1	State Plan (Ongoing & New Schemes)	120.94	7.79
2	NABARD	166.77	122.79
	Total Drainage	166.77	122.79

2.5 Irrigation

Bihar is richly endowed with water resources and with a very favourable rainfall average of 1271.9 mms. The estimated ultimate irrigation potential in the State is around 102 lakh hectares which is far above the total cultivated area in the State (Table 2.10). However, neither rainfall nor the distribution of the water resources is uniform across the State, causing uneven irrigation potential/coverage across the State. While Zone-2 (Table 2) receives earliest showers and highest rainfall (1450 mm) among all three agro-climatic zones in the State, Zone-3 receives an average rainfall of only 1115 mms.

Table 2.10 : Ultimate Irrigation Potential in Bihar (In lakh hectares)

Source	India	Bihar	% Share of Bihar in India
1. Surface Water	737	63.58	8.63
(a) Major + Medium Schemes	585	53.53	9.15
(b) Minor Irrigation	174	10.05	5.78
2. Ground Water	641	39.06	6.09
Total (1 + 2)	1399	102.64	7.34

Source : Central Water Commission, Dept. of Water Resources, Bihar and Central Ground Water Board.

Bihar has 45.67 lakh hectares of irrigated area against its total geographical area of 94.16 lakh hectares. While created irrigation capacity of 45.67 lakh hectares means that around 49 per cent of

total area is irrigated, distribution of irrigation capacity is not even across the State. The percentage of irrigated area varies greatly across different regions/districts, from a low of 16 percent in Jamui to around 86 percent in Sheikhpura (Table 2.11). In fact, both irrigation capacity and its source vary greatly across the 3 agro-climatic Zones of the State.

While Zone 1 accounts for nearly 37 per cent of total geographical area of the State, its share in total created irrigation capacity of the State is about 31 per cent (Table 2.12). On the other hand, Zone 3B which also accounts for 31 per cent of geographical area has about 41 per cent of total irrigated land in the State. Zone 3A having 13 per cent of geographical area of the State has only around 8 per cent of total irrigated area of the State. Finally, while around 64 per cent of Zone 3B area is irrigated, Zone 3A has only around 32 per cent of its area irrigated.

This variation in irrigation capacity across the regions also extends to the sources of irrigation. Nearly 63 per cent of total created irrigation capacity in the State has tubewells as its source (Table 2.12). Canal irrigation accounts for nearly 30 per cent of total irrigated area. Thus major and medium sources of irrigation together account for 93 per cent of total created irrigation capacity in the State, with other sources (minor and micro irrigation) accounting for only about 7 percent of total irrigation. A very high dependence of irrigation on tubewells and operation of diesel tubewell due to lack of power infrastructure in the rural areas means a high cost and inefficient irrigation.

The variation in irrigation source has a very clear pattern across the agro-climatic zones of the State. While nearly 50 per cent of irrigation in Zone 3B has canal as its source, only 13 per cent of the irrigated area in Zone 2 receives canal irrigation. Reliance on tubewells is very high in Zones 1 and 2 (source more than three-fourths of their irrigated area). On the other hand, canals have a greater role to play in Zones 3A and 3B and there is a greater balance between tubewell and canal irrigation in these regions. Incidentally, the latter two zones are also the zones with lowest rainfall among all the regions of the State. Thus, while importance of canal irrigation is much greater in southern parts of Bihar (Zone 3), there is an almost exclusive reliance on tubewell irrigation in the northern parts, especially in Zone 2. This is rather peculiar as most of the rivers in Bihar flow through its northern plains, which therefore should have had a higher canal irrigation capacity.

Minor and micro irrigation have only a limited coverage in the overall irrigation scenario of the State, accounting for only 7.53 per cent of the irrigated area. Here too, there is a great deal of variation in its use across the State. While only 2 per cent of irrigated area of Zone 2 has minor irrigation as its source, its contribution to irrigated area in Zone 3 is around 17 per cent.

Ground water resources have remained largely unutilized in the State. To tap the huge potential of ground water irrigation, Million Shallow Tubewell Programme has been prepared which would imply additional irrigation capacity of 20 lakh hectares. About 6.97 lakh diesel tubewells and pumpsets are to be distributed by March 2007 under this programme. Against this target, 3.72 lakh private shallow tubewells have been sunk over last five years. Of these, 52,845 tubewells were sunk over the year 2006-07. Farmers are given a grant of 30 per cent and a loan of 50 per cent of total costs under this Programme and no discrimination is made between different categories of beneficiary farmers. Against the distribution target of 5.37 lakh pumpsets by March 2006, 3.80 lakh pumpsets were distributed by November, 2005. Over the years 2005-06 and 2006-07, there has been a huge increase of 1131 State Tubewell Schemes, 970 of which were completed in 2005-06.

On-farm water management programme is being run in all the 38 districts of the State under which shallow pumpsets, normal pumpsets, and other micro irrigation sources are being arranged. Watershed development programme is being run under which water generating ponds, and other devices of ground water regeneration are being constructed to develop and improve water utilization capacity in the State. In this direction, 5 lakh trees have been planted in 8 districts of the State under agro-forestry programme towards developing water utilization capacity. Sprinkler sets and HDPIP pipes are being distributed in the State under the Centrally sponsored ISOPOM plan for production of pulses, oilseeds and maize. By March 2006, additional irrigation capacity of 18000 hectares of land was created under this programme. Against the target to create additional irrigation capacity of 2.39 lakh hectares in 2006-07, an additional irrigation capacity of 1.76 lakh hectares was created by Septemeber 2006. In the 10th Plan, actual outlay on irrigation was Rs1980 crore which was only about 60 percent of total agreed outlay on irrigation (Table 2.13). A substantial portion of this outlay was on major and medium irrigation.

Table 2.11 : Zonal Land Usage, and Percentage of Irrigated Land

Districts	Land Area (in hectares)	Net Sown Area (in hect.)	Total Crop Area (in hect.)	Multi Cropped Area (in hect.)	total irrigated area	% irrigated area
Zone 1						
Saran	265,000	192938	233024	40086	117706	44.42
Siwan	224,000	162889	238635	75746	107262	47.88
Gopalganj	204,000	150524	232775	82251	107689	52.79
Muzafarpur	315,000	207145	339364	132219	130164	41.32
E Champaran	432,000	288804	323302	34498	155655	36.03
W Champaran	484,000	279758	366712	86954	176683	36.50
Sitamarhi	222,000	121048	188399	67351	71682	32.29
Sheohar	44,000	26483	43567	17084	12652	28.75
Vaishali	201,000	126660	190331	63671	77546	38.58
Darbhanga	254,000	172716	209949	37233	102087	40.19
Madhubani	354,000	225113	317083	91970	138551	39.14
Samastipur	262,000	184718	252196	67478	112387	42.90
Begusarai	188,000	117193	174313	57120	91089	48.45
Total	3,449,000	2255989	3109650	853661	1401153	40.62
% of Total Land Area	36.85	65.41	90.16	24.75	40.62	
Zone 2						
Saharsa	165,000	109633	194022	84389	94983	57.57
supaul	239,000	155251	268820	113569	142114	59.46
madhepura	180,000	131531	205481	73950	133124	73.96
Purnia	314,000	221166	307003	85837	170504	54.30
Kishanganj	189,000	131105	195648	64543	50535	26.74
Araria	271,000	180983	282645	101662	110962	40.95
Katihar	291,000	167217	278835	111618	129408	44.47
Khagaria	149,000	84684	133902	49218	83393	55.97
Total	1,798,000	1,181,570	1,866,356	684,786	915023	50.89
% of Total Land Area	19	65.72	103.80	38.09	50.89	
Zone 3A						
Munger	140,000	48029	69030	21001	37015	26.44
Sheikhpura	62,000	44217	62737	18520	53423	86.17
Lakhisarai	129,000	68044	78098	10054	41934	32.51
Jamui	305,000	81117	88723	7606	50780	16.65
Bhagalpur	254,000	145667	177576	31909	78364	30.85
Banka	306,000	153818	161325	7507	115698	37.81
	1,196,000	540,892	637,489	96,597	377214	31.54
% of Total Land Area	13	45.23	53.30	8.08	31.54	

Zone 3B						
Patna	317,000	206294	253848	47554	179595	56.65
Nalanda	232,000	180872	228353	47481	193288	83.31
Bhojpur	237,000	185364	227536	42172	188094	79.36
Buxar	167,000	138277	144944	6667	113910	68.21
Rohtas	391,000	254360	363159	108799	330834	84.61
Kaimur	342,000	154226	204719	50493	166537	48.70
Gaya	494,000	200333	277364	77031	235090	47.59
Jehanabad	94,000	63650	80024	16374	67206	71.50
Arwal	63,000	41784	58263	16479	48131	76.40
Nawada	249,000	110565	149046	38481	126558	50.83
Aurangabad	330,000	197912	281626	83714	224201	67.94
	2,916,000	1,733,637	2,268,882	535,245	1873444	64.25
% of Total Land Area	31	59.45	77.81	18.36	64.25	
Bihar	9,360,000	5712088	7882377	2170209	4566,834	48.79

Source : Annual Report – 2005-06, Department of Agriculture, Government of Bihar

Note : The figures for Total Land Area in this report (93.60 lakh hectares) is different from the figures of Census 2001(94.16 lakh hectares).

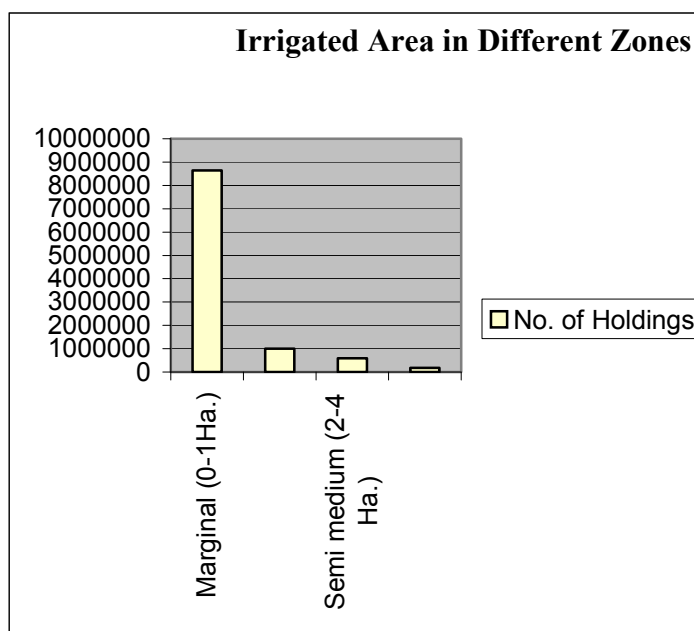
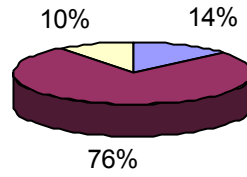


Table 2.12 : Zonal Classification of Total Irrigated Area through Different Sources

Unit in hectares					
	Name of District	Canal	Tube well	Other sources	Total irrigated Area
Zone 1					
	Saran	2414	115231	61	117706
	Siwan	6314	93353	7595	107262
	Gopalganj	50672	54027	2990	107689
	Muzaffarpur	-	130164	-	130164
	E. Champaran	794	154450	411	155655
	W. Champaran	128686	42971	5026	176683
	Sitamarhi	1491	63661	6530	71682
	Sheohar	-	12652	-	12652
	Vaishali	-	65655	11891	77546
	Darbhanga	-	95736	6351	102087
	Madhubani	-	41113	97438	138551
	Samastipur	-	112387	-	112387
	Begusarai	-	89416	1673	91089
Zone 1 total		1,90,371 (13.59% of total irrigated area)	10,70,816 (76.42% of total irrigated area)	1,39,966 (9.99% of total irrigated area)	14,01,153 (30.68% of total irrigated area)
Zone 2					
	Saharsa	5527	84562	4894	94983
	Supaul	67352	73678	1084	142114
	Madhepura	32795	92954	7375	133124
	Purnea	11729	158775	-	170504
	Kishanganj	-	50535	-	50535
	Araria	-	110962	-	110962
	Katihar	-	129408	-	129408
	Khagaria	-	76748	6645	83393
Zone 2 total		117,403 (12.84% of total irrigated area)	777,622 (84.98% of total irrigated area)	19,998 (2.18% of total irrigated area)	9,15,023 (20.04% of total irrigated area)
Zone 3A					
	Jamui	1040	30439	5536	37015
	Sheikhpura	23951	525	28947	53423
	Munger	13314	24550	4070	41934
	Lakhisarai	2185	41107	7488	50780
	Bhagalpur	4297	57797	16270	78364
	Banka	90062	23893	1743	115698
Zone 3A total		1,34,849 (35.75% of total zonal irrigated area)	1,78,311 (47.27% of total zonal irrigated area)	64,054 (16.98% of total zonal irrigated area)	3,77,214 (8.26% of total irrigated area)
Zone 3B					
	Patna	51115	121049	7431	179595
	Nalanda	9442	164270	19576	193288
	Bhojpur	40781	135775	11538	188094
	Buxar	44421	66410	3079	113910
	Rohtas	262570	36037	32227	330834
	Kaimur	98493	54414	13630	166537
	Gaya	232303	-	2787	235090
	Jehanabad	596	57839	8771	67206
	Arwal	28712	18034	1385	48131
	Nawada	13944	108831	3783	126558
	Aurangabad	142664	65794	15743	224201
Zone 3B total		9,25,041 (49.38% of total zonal irrigated area)	8,28,453 (44.22% of total zonal irrigated area)	1,19,950 (6.4% of total zonal irrigated area)	18,73,444 (41.02% of total irrigated area)
TOTAL		1367664 (29.95 of total irrigated area)	2855202 (62.52% of total irrigated area)	343968 (7.53% of total irrigated area)	4566834

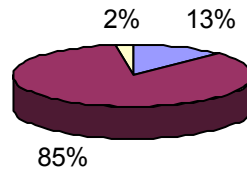
Source : Central Water Commission, Dept. of Water Resources, Bihar and Central Ground Water Board.

Irrigated Area by Source in Zone 1



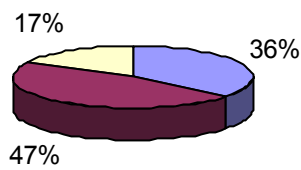
Canal Tubewell Other sources

Irrigated Area by Source in Zone 2



Canal Tubewell Other sources

Irrigated Area by Source in Zone 3A



Canal Tubewell Other sources

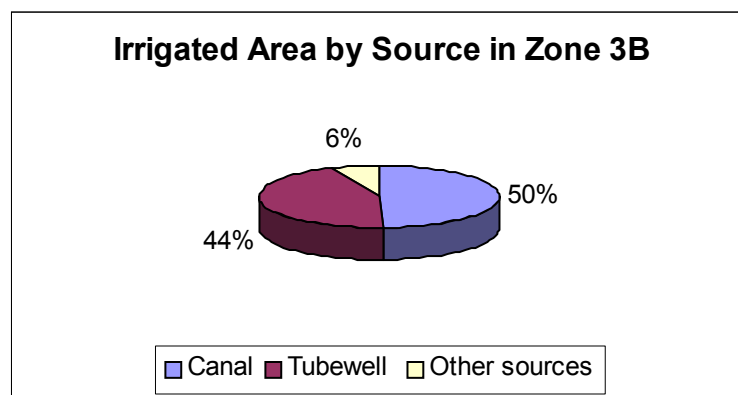


Table 2.13 : The total outlay required including establishment as per source of funding is as follows : (Rs in crore)

Sl. No.	Source of funding	10 th plan outlay		Proposed outlay for 11 th plan	
		Agreed Outlay	Actual Outlay	Anticipated Performance	
	Major & Medium Irrigation				
1	Establishment (CSS + State Plan)	468.00	508.35	482.58	625.00
2	State Plan (Ongoing & New Schemes)	1106.00	124.57	121.89	2006.90
3	RSVY	0.00	165.00	17.14	1500.00
4	AIBP	1257.63	995.00	980.85	2962.91
5	NABARD	441.56	188.0	144.87	1500.00
	Sub Total (Works)	2805.19	1472.58	1264.75	7969.81
	Total Irrigation	3273.19	1980.93	1747.33	8594.81

2.6 Agricultural Inputs

Seeds

Agriculture in Bihar has been bedeviled by a trend of falling productivity over the last few years. Major crops, particularly rice and wheat which together account for 77.26 percent of total cropped area have seen a substantive fall in their productivity in recent years.

Falling productivity of agricultural sector in Bihar inspite of its rich soil endowment, can be partly explained by the limited availability of good quality seed and a very poor seed replacement rate. Seed replacement rate for cereals is about 10-12 percent, for gram it is 7.5 percent and for rapeseed and mustard, it is 30 percent (Table 2.14). The seed replacement ratio for paddy has increased from 6.8 percent in 2003-04 to 10 percent in 2004-05 to 12 percent in 2005-06. This ratio for wheat was 10 percent in 2004-05 and 11 percent in 2005-06. These rates are much below the desirable 30-35 percent for self-pollinated crops and 50 percent for cross-pollinated crops. In other States, the seed replacement for paddy is at 50 percent in Andhra Pradesh, the rate for wheat is 41 percent in Maharashtra, for gram it is 30 percent in Orissa and for rapeseed and mustard it is 100 percent in Gujarat. However, the seed replacement ratios for oilseeds and maize in the State meet the desired norms, standing at 30 percent for rapeseeds and mustard, and 40 percent for rabi maize which is reflected in their yield being above the national average.

Table 2.14: Seed Replacement Rates of Different Crops

Sl. No	Name of the crops	2003-04		2004-05		2005-06		2006-07	
		Target	achievement	Target	achievement	Target	achievement	Target	achievement
Kharif crops									
1	Paddy	8%	6.8%	10%	10%	11%	12%	15%	
2	Maize	40%	30%	50%	40%	50%	50%	60%	
3	Pulses	10%	6%	10%	7.5%	10%	8%	14%	
4	Oilseeds	5%	2%	5%	3%	5%	5%		
Rabi Crops									
1	Wheat	10%	8.1%	10%	9%	15%	11%	15%	
2	Maize	-	-	-	-	50%	-	80%	
3	pulses	5%	1.2%	10%	7.5%	15%	-	10%	
4	Oilseeds	25%	20%	30%	25%	30%	-	30%	
5	Vegetables	25%	20%	60%	50%	60%	-	60%	

Table 2.15: Seed Consumption of Crops in Bihar (in 000 quintals)

Year	Paddy	Wheat	Maize
1997-98	34.77	26.43	1.67
1998-99	68.65	102.34	2.45
1999-2000	77.71	130.43	14.02
2000-01	82.23	128.36	41.40
2001-02	72.26	190.64	24.34
2002-03	90.02	164.09	26.65
2003-04	104.40	181.50	45.95
2004-05	144.99	242.52	36.80
2005-06	194.25	237.85	33.26
2006-07	222	300	35

Table 2.16: HYV Area as Percentage of Total Cropped Area in Bihar

Crop	Year	Bihar
Rice	TE 1982	24.7
	TE 1990	38.3
	TE 1999	67.9
	TE 2005	73.9
Wheat	TE 1982	70.4
	TE 1990	76.9
	TE 1999	90.6
	TE 2005	92.0
Maize	TE 1982	56.9
	TE 1990	62.4
	TE 1999	75.4
	TE 2005	77.1

Source : Directorate of Statistics and Evaluation, Government of Bihar

The target seed replacement rate for pulses in 2006 was 14 and 10 percent in kharif and rabi seasons respectively. Seed replacement target for oilseeds and vegetables was 30 percent and 60 percent respectively. There has been an increase in seed consumption of paddy and wheat in the State in the recent years; while seed consumption for paddy has increased sharply from 72.26 thousand quintals in 2001-02 to 194.25 thousand quintals in 2005-06, the same for wheat has increased moderately from 190.64 thousand quintals to 237.85 thousand quintals over the same period (Table 2.15). This increase in seed consumption in the backdrop of their falling acreage is explained by increase in seed replacement ratio and increasing use of HYVs for these crops. The acreage of paddy under HYVs has increased by almost 4 percent over the period 1999-2005, and that of wheat under HYV has increased by around 2 percent over the same period (Table 2.16). Arrangements have been made to supply 48,000 quintals of maize seeds, 3500 quintals of arhar, 1400 quintals of urad, and 420 quintals of moong for kharif 2006. Seed requirement for rabi 2006 has been estimated at 300 thousand quintals. The estimate for maize seeds in rabi 2006 was of 60 thousand quintals (Table 2.17).

Table 2.17 : Certified Seed Requirement of Different Crops in Bihar (2006-07)

Name of crop	Certified seed requirement (In Qtls.)
Kharif	
Paddy	2,22,000
Maize	48,000
Arhar	3500
Urad	1400
Moong	420
Rabi	
Wheat	3,00,000
Maize	60,000
Gram	11,600
Lentil	5300
Pea	2400
Rai /Tori	1440

For last several years, Bihar State Seed Corporation had become non-functional and agricultural farms of the State government were lying barren. In the current financial year, the State government has given approval for restarting seed production by Bihar State Seed Corporation for the next five years at an outlay of Rs. 27.12 crore. Seed production for paddy has started on 45 agricultural farms in the last kharif season, and 10,000 quintals of HYV paddy seeds have been produced. In the current rabi season, programme of production of wheat seeds is being carried out. This would facilitate timely and economical availability of modern crop breeds to the farmers.

Fertilisers

Fertiliser consumption in the State has steadily increased over the years. The consumption of fertilizers has increased from 85 kgs/hectare to 110 kgs/hectare in 2005-06 (Table 2.19). The estimated consumption for 2006-07 is 125 kgs/hectare. For 2006, the State government has estimated the fertilizer consumption to be 9 lakh MT of urea, 3 lakh MT of DAP, 90000 MT of MOP, 1.5 lakh MT of NPK, and 60000 MT of SSP, 90 percent of which has been allocated by the Central government. Despite an increase over the years, fertilizer consumption per hectare in the State is lower than the national average. Besides the low level, an important problem is the distorted consumption pattern of fertilizers in the State. While the ideal ratio of NPK consumption should be 4:2:1, the consumption pattern in Bihar has become increasingly distorted over the years

(Table 2.18). The NPK ratio has worsened from around 12:3:1 in 2000-01 to 24:2:1 in 2003-04, but fortunately improved to 7:1:1 in 2005-06. This problem, along with others, is being addressed by the extension initiatives of the State government, such as establishment of soil testing laboratories and Krishi Vikas Kendras (KVK) in each block.

Table 2.18 : NPK Consumption pattern from 1994 – 1995 onwards

Year	N:P:K Ratio
1995 – 1996	8.4:2.7:1.8
1996 – 1997	12.4:1.7:2.1
1997 – 1998	11.5:2.8:1
1998 – 1999	13.5:3.3:1
1999 – 2000	11.1:3.2:1
2000 – 2001	12.1:2.9:1
2001 – 2002	12.1:2.3:1
2002 – 2003	23:4.2:1
2003 – 2004	24.3:1.7:1
2004 – 2005	14.7:1.7:1
2005 – 2006	6.8:1.3:1
2006-07	4.3:1.8:1 (tentative)

Table 2.19 : Consumption of nutrient per hectare

Year	Nutrient consumption(in Kgs/hect.)
1993&1994	61–20
1994&1995	62–50
1995&1996	65–00
1996&1997	68–00
1997&1998	69–00
1998&1999	72–00
1999&2000	78–50
2000&2001	85–00
2001&2002	94–00
2002&2003	96–00
2003&2004	87–50
2004&2005	92–15
2005&2006	110–00
2006&2007	125–00

Credit

The agricultural credit need was estimated to be Rs. 11341.22 crore for Bihar in 2006-07. An amount of Rs. 10042 crore for crop loans, Rs. 78.22 crore for the Macromode / ISOPAM plan, Rs. 60 crore for micro-irrigation, Rs. 18.50 crore for agri-clinics and Rs. 1142 crore for horticulture mission etc. would be needed as loan from the banking sector. However, the credit target for agriculture set by banks for 2006-07 was only Rs 3732 crore which was much lower than the requirement.

Kisan Credit Card (KCC) is an important medium for increasing agricultural credit. At present, there are 1.04 crore landholdings in the State, but till 2005-06, only 14.5 lakh KCCs have been distributed against the target of 30.5 lakhs. To meet the target of crop loans of Rs.10042 crore in 2006-07, KCCs have to play a very important role. Although total disbursement under KCC has increased almost 2.5 times, from Rs. 342 crore in 2002- 03 to Rs. 815 crore in 2005-06 (Table 2.20), it still channels only a miniscule proportion of the total credit volume for crop loans. A target of 6 lakh more KCCs has been fixed by the banks for 2006-07. But even this target is grossly inadequate to measure up to the total credit demand in the current year. In the area of micro-finance, more than 17,000 Self-Help Groups had been financed by banks upto 2005 through their priority lending schemes in 38 districts. The target for 2006-07 is to raise the number to 24,000 SHGs and advance Rs. 48 crore through the scheme.

Table 2.20 : Details of KCC in Bihar

(Amount in Rs. Lakh)

Year	Physical Target	Sanction		Disbursement	
		No. of Applications	Amount	No. of Applications	Amount
2002-2003	759098	311731	91119	214564	34242
2003-2004	595904	594152	76302	355502	49636
2004-2005	795700	465744	87390	463519	86051
2005-2006	566751	318603	85963	317294	81495

Insurance

Agricultural production in Bihar has shown great fluctuation over the years. At one hand, this fluctuation can be devastating for a small-marginal farmer who operates on limits of subsistence, and, on the other hand, it is a disincentive for enterprising farmers who have the potential for investment. In this perspective, crops in the State are being insured since kharif 2000 to provide economic help to the insured farmers whose crops are damaged by natural disaster. Kharif crops such as paddy, maize, jute and chillies, and among rabi crops, wheat, gram, arhar, masoor, maize, rapeseed and mustard, potato, sugarcane and onion are covered under National Agricultural Insurance Plan. While participation of indebted farmers is compulsory in the plan, that of non-indebted farmers is voluntary.

Under this plan, grants are given in the premium to be paid by the small and marginal farmers, with equal shares of State and Central government. The number of beneficiary farmers for 2004-05 was 4.1 lakhs, divided between 2.9 lakhs in kharif and 1.1 lakhs in rabi season. There has been a drop in coverage of farmers under crop insurance in 2005-06 as compared to 2004-05. Crop insurance policy was taken by 4 lakh farmers in 2005-06, out of which 2.2 lakhs took cover for kharif season and 1.8 lakhs took cover for rabi season. The spread of insurance cover, however, is grossly inadequate keeping in mind that there are around 104 lakh landholdings in the State, nearly 93 percent of which are small and marginal holdings that are specially required to be protected through the agriculture insurance plan. Its coverage would have to be significantly expanded over the years in order to stabilize income from agriculture and create conducive environment for productive investment in agriculture.

Extension Services

In a sector which is based on enterprise of nearly 77 percent of total workforce on around 1.04 crore landholdings (92.5 percent of them being small and marginal holdings), importance of agricultural research to create/upgrade agricultural technology and extension of this technology and other support services to the farmers, cannot be overemphasized. In Bihar, there is a huge breach between the technology available in the agricultural universities/institutions and those on

the field. Efforts have to be made to transfer the available technology to the farmers in the field. The public sector agricultural research and extension system consists of the Rajendra Agricultural University for agricultural research and education; seven research centers/ stations of the Indian Council of Agricultural Research for commodity and location-specific research; and various Departments of the State government that provide agricultural extension and regulatory services. The agricultural research and extension system has not been fully effective in developing and disseminating appropriate technologies to the farmers in the State. While 0.4 percent of agricultural GDP is spent on agricultural research and education at the national level, the average for Bihar is 0.2 percent. Further, 95 percent of this spending is used for salaries and 5 percent for establishment expenses, thereby leaving no funds for operational expenses needed to carry out relevant research. NSSO 2003 figures point out that the performance of the extension system in the State has been such that a mere 0.5 percent of farmers access information on modern technology from extension workers.

Steps to reform the above situation have been in the recent years and, in particular, in the current year. The State government has universalized Agricultural Technology Management Agencies (ATMAs) to cover all districts of the State. The ATMAs are designed to decentralize decision-making through 'bottom-up' planning procedures that would directly involve farmers and the private sector in planning and implementing extension programmes at the block and district levels. Similarly, a decision has been taken in 2006 to universalize Krishi Vigyan Kendras to all districts of the State. In addition, 31 new seed testing laboratories have been sanctioned in the current financial year to give each district its own seed testing laboratory.

As discussed earlier, the State has a very distorted pattern of nutrient consumption regarding NPK ratio, which not only leads to a waste of resources but also mars the soil quality of the fields. A major reason for this imbalanced use of fertilizers is lack of knowledge among the farmers about the soil quality of their fields. In the current year, 16 soil-testing laboratories have been sanctioned, adding to the earlier strength of 23, thereby allowing for a complete coverage of all the districts. In fact, a megaproject with an outlay of Rs 309 crore has been sanctioned in this year to establish soil testing laboratories in all the 534 blocks of the State over next 4 years.

Management of seed supply is an important component of any programme of agricultural development. In the current year, Bihar State Seed Corporation has been revived and production of

seeds is being undertaken by it on 45 state managed farm which remained inoperative for some years. More than 1100 agriculture graduates have been trained to run agri-clinics in the State. The utilization of technical expertise of these trained youths is necessary for agricultural development. A decision was taken in the current year to use the seeds produced by agriclinic for public sector programmes. In the current year, the Kisan Samman Yojna was also launched to identify and acknowledge enterprising farmers in the State and using them as extension agents. This plan is unique and innovative programme of extension reforms.

2.7 Horticulture

Bihar is one of the major producers of vegetables and fruits in India with 9.8 and 6.7 percent of national production respectively. It ranks third and sixth among other States in the production of vegetables and fruits respectively. Fruit area in the State is 2.91 lakh hectares which is around 7.8 percent of the total fruit area in the country (Table 2.21). In general, yield rates of fruits and vegetables are lower in Bihar than those of other States. However, they are among the highest for okra and litchis. The annual production of fresh fruits in Bihar is about 29.20 lakh MT. In addition, vegetables are grown in an area of 4.87 lakh hectares from which around 72.58 lakh MT of vegetables is produced (Table 2.22). Besides this, potato cultivation takes place in an area of 3.05 lakh hectares from which 53.07 lakh MT of potato are produced.

Makhana cultivation is done in about 5000 hectares in the entire country, 90 percent of which falls in Bihar. Projects for production of makhana, litchi and mangoes are currently being promoted by NABARD under RSVY in the districts of Muzaffarpur, Darbhanga, Samastipur and Madhubani. About 30 per cent of the total area in the State is planned to be diverted from other crops towards horticulture. During last two years, 2005-06 and 2006-07, plans for horticulture development are being run in the State with 100 percent grant from the Central government under National Horticulture Mission (NHM). The districts left out by the NHM are being covered under the Chief Minister's Horticulture Mission. This plan consists of expansion of area under fruit orchards, commercial flower cultivation, cultivation of medicinal plants, bee-keeping, integrated pest management, training of cultivators and officers, post-harvest management etc. This plan is to be implemented in the public as well as private areas.

Approximately, 25-40 percent of the vegetables and fruits are lost due to lack of proper transport and storage facilities. Because of these handicaps, fruits and vegetables produced in the State are mainly sold fresh in the market, often implying distress sale by the farmers. While mandi markets are the mandated sales outlet for fruits and vegetable products, yet just 6 percent of vegetable production and 4.2 percent of fruit production get shelf space in APMCs.

State has been plagued by substantive losses of fruit and vegetable output effected by lack of adequate cold storage and godown capacity. Bihar has only 160 rural godowns (0.12 percent of the country's godowns) with an approximate capacity of 17,000 tons, which compares very poorly with the figure of 3,015 rural godowns for Punjab, which commands around 24 percent of country's capacity. Similarly, although Bihar produces about 10 percent of all vegetables and nearly 7 percent of all fruits, it has only 5 percent of the total storage capacity in India. Of the 238 cold storage units available, 187 are used for potatoes. Thus 77 percent of the capacity of these cold storage units are used to store potatoes alone, leaving only 23 percent for other purposes. The majority (92 percent) of the State's cold storage facilities is owned by the private sector and the rest by the cooperatives (8 percent). State has been adding to its storage and preservation capacities over last few years. Under the Plan of cold storage construction, capacity expansion and modernization in the State (with financial assistance from Central government), permission has been given for construction of 42 new cold storages since 2000, out of which 22 cold storages have started functioning and the remaining ones are under construction

2.8 Forestry

Out of the total geographical area of 94,163 sq. kms. of the State, only 6473 sq. kms are under natural forests, which comprise only 6.87 per cent of the total geographical area. Out of 38 districts, these forests are located in only 10 districts. According to the Forest Survey Institute, Dehradun, there are only 13.6 trees/hectare in the areas outside the forest regions of the State.

According to the Indian Forest Policy 1988, 33 per cent of the geographical area should be under forests for environmental balance. In a densely populated region like Bihar, it is difficult to increase the area under forests. But it can be compensated by making alternative arrangements and using all the fallow lands of the State. To this end, *Kishore Chetna Vriksh Yojna* has been

launched to create awareness about environment, especially about trees, among the school students and their participation is being ensured in the afforestation programmes.

Table 2.21 : Fruits in Bihar : Area (in hectares), productivity (qutls/hect), production (in tones), and estimated coverage for 2005-06 (in hect)

Sl. No.	Name of the Fruits	Area (in hectares)	Production (in tones)	Productivity (in Qntls / hect)	Estimated coverage for 2005-06 (in hectares)
1	Mango	140106	865619	6.18	149500
2	Guava	27660	256057	9.26	27800
3	<i>Litchi</i>	28383	204897	7.22	28500
4	lemon	16808	122875	7.31	17000
5	Banana	27988	920044	32.87	28300
6	Pineapple	4214	122534	29.08	4300
7	Coconut	15150	150778	9.95	15180
7	Others	30930	277450	8.97	31300
	Total	291239	2920254	10.03	292880

Source : Agriculture Dept., GOB

Table 2.22 : Area under vegetables - Area (in hectares), production (in tones), productivity (qutls/hect), and estimated coverage for 2005-06 (in hect)

Sl. No.	Name of the vegetable	Area (in hect)	Production (in tones)	Productivity (quintals/hect)	Estimated area for 2005-06
1	Cauliflower	59701	955216	16.0	60000
2	Cabbage	36513	598813	16.4	36700
3	Onion	48759	975180	20.0	49000
4	Tomato	42987	601818	14.0	43100
5	Chilly	38070	456840	12.0	38300
6	Brinjal	53651	1073020	20.0	53800
7	Ladyfinger	56173	674076	12.0	56300
8	<i>Kaddu</i>	25143	402288	16.0	25300
9	<i>Nenua</i>	33606	470484	14.0	33800
10	<i>Jhiguni</i>	8078	48468	6.0	8300
11	<i>Karela</i>	8424	50544	6.0	8600
12	<i>Parwal</i>	4594	45940	10.0	4700
13	<i>Wodi</i>	11582	69492	6.0	11700

14	Others	99685	835590	14.0	59800
	Total	486966	7257769	14.9	489400

Source : Agriculture Dept., GOB

2.9 Animal Husbandry

Bihar's livestock sector is crucial not only in terms of its contribution to rural income, but also for the section of the population to which this income goes. Bihar's livestock sector accounted for approximately one-quarter of the total value of agricultural output in TE 2002-03. Livestock activity is concentrated among landless households and those with marginal holdings of less than 1 hectare of land. Approximately 35 percent of rural households in Bihar report owning cattle, 20 percent buffalo, and 15 percent sheep and goats (NSSO 2003). Of all rural households owning cattle and/or buffalo in Bihar, more than three-quarters are either landless or have less than 1 hectare of land. Sheep and goats tend to be even more concentrated among landless and marginal rural households

Milk is the most important livestock product, accounting for approximately 50 percent of the total livestock output, followed by meat (24 percent) and other livestock products. Milk production in Bihar has grown by around 92 percent over the period 2001-2006, while meat production has grown by only 12 percent over the same period. According to the 2003 livestock census, there were approximately 10 million heads of cattle in Bihar, only 10 percent of which were cross-bred, which explains the low productivity and growth of livestock output in the State. Wool production has fallen by almost 50 percent (Table 2.23). The fact that the number of institutions providing extension services to the livestock sector have remained stagnant over the years has certainly not helped its productivity scenario (Table 2.24).

Table 2.23 : Growth rates of Major Livestock Products in Bihar (2001-2006)

Sl. No	Item	Based on 1982 Livestock census		Based on census 2003		Growth over the period (in %)	
		2001-02	2002-03	2003-04	2004-05	2005-06	
1	Total milk (in 000, litres)	2632	2869	3175	4743	5060	92.25

2	Eggs (in crores)	74	74	78	79	100	35.14
3	Meat (in 000, tonnes)	156	173	173	176	175	12.18
4	Wool (in lakh kg.)	4.24	3.62	3.94	3.78	2.2	-48.11

Source : Animal Husbandry and Fisheries Dept., GOB

Table 2.24 : Number of Institutions in Animal Husbandry Dept.

Sl. No	Item	based on 1982 livestock census	based on 1982 livestock census	based on 1982 livestock census	based on census 2003	based on livestock census 2003	growth over the period (in %)
1		2001-02	2002-03	2003-04	2004-05	2005-06	
2	No. of Artificial Insemination Institutions	1401	1401	1401	1401	1401	0.00
3	No. of Veterinary hospitals	39	39	39	39	39	0.00
4	No. of Veterinary Dispensaries	814	814	814	814	814	0.00

Source : Animal Husbandry and Fisheries Dept., GOB

2.10 Fisheries and Poultry

There has been a steady increase in fish production in the State over the period 2001-02 to 2005-06 and its share in total agricultural GDP has nearly doubled in last 10 years. While its production up to December 2006 was around 170 thousand MT, its production is estimated to go up to around 300 thousand MT by the end of the financial year (Table 2.25). Fishermen in the State are being trained to increase productivity of fisheries sector, loans are being granted for maintenance and renovation of privately owned ponds in the State. Egg production has increased by 35 percent over the period 2001-06 (Table 2.23).

Table 2.25 : Trends in fish production, income from Jalkars, and other initiatives of fisheries dept

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Fish production from all sources (,000 MT)	240.00	261.00	266.49	267.51	279.00	169.50 (up to Dec 06)
Seed Production (in lakhs)	3299.57	3679.90	3471.14	3182.11	3449.49	2866.55
Income from Jalkar settlements (in lakh Rs)	296.39	321.61	371.14	382.95	448.44	309.83 (up to Dec 06)
Number of Private fish farmers who have been given training in pisciculture	861	1192	5063	1475	134	1400 (in process)
Loans accepted for mainetenance/renovation of	4.00	14.70	35.08	32.84	73.98	74.55

privately owned ponds (in lakhs)						
Free housing plan for fishermen (at the rate of 1 per family)	117	56	243	244	205	405

Source : Fisheries Directorate, Bihar

2.11 Agricultural Mechanisation

Current level of mechanization of agriculture in the State is very low. While there are only 17 tractors per thousand hectares in the State, the figure for Punjab is 68 tractors per thousand hectares. At present, Bihar has 111672 tractors, 4000 power tillers, 2.5 lakh stonery engines, 66128 mould bold ploughs, 50000 cultivators, 15000 seed drills, 290000 sprayers, and 300000 threshers. While recommended electricity consumption for farming is 2 KW/hect, it is only 0.8 KW/ hect in Bihar due to limited availability of electricity. The Government is accordingly promoting agricultural mechanization on a large scale through provision of grants for small tractors, power tillers, threshers and GISE tillage machines.

2.12 Land and Agricultural Reforms

The available data for landholdings demonstrate the extent of inequality in the agrarian structure. For example, more than 80 percent of operational holdings in Bihar are marginal (below one hectare), and they account for only 36 percent of total operational land area. At the other end, medium and large operational holdings of more than four hectares comprise less than 2.5 percent of all holdings, but constitute over 20 percent of operational land area. In Bihar, incidence of landlessness has increased in the decade of nineties from 9 percent to 10 percent of the rural households and the proportion of households in the marginal segment has also increased significantly in the same time period (Table 2.26).

Apart from widening of disparity in land distribution, it can also be observed that while incidence of poverty has declined for all landowning classes during the nineties, it has actually increased for the landless from 51 percent to 56 percent, strongly suggesting that land ownership is clearly associated with poverty. At the end of the nineties, therefore, the share of land poor households in the total poor population has increased – from 12 to 14 percent for landless households and from 55 to 61 percent for marginal landholding households.

It is in this backdrop that the State government has constituted the Land Reforms Commission in June, 2006 to look into the issues of land ceiling, land consolidation and occupancy/tenancy rights. It also has been mandated to analyse the rural turmoil in the backdrop of land related disputes and recommend remedial measures accordingly. The Commission is to look into feasibility and impact of co-operative farming, giving due importance to the rights and concerns of the small and marginal farmers.

Table 2.26 : Rural Poverty Incidence and Shares by Land Ownership
50th round 55th round

Land owned (ha)	%of Rural Population	Poverty Incidence %	% Share of the Poor	% of Rural Population	Poverty Incidence	% Share of the Poor
No land	9	51	12	10	56	14
0<*<=0.4ha	43	51	55	53	46	61
0.4<*<=1ha	24	34	20	20	29	15
1<*<=2ha	15	28	10	10	30	7
2<*<=4ha	7	18	3	4	16	2
>4ha	3	6	0	2	18	1
Overall	100	40	100	100	40	100

Source : NSSO 50th and 55th Rounds

Government Initiatives in Agriculture

New Agricultural Policy was drafted by the State government in 2006, to build upon the natural advantages that the State has in agriculture. Its fertile land, huge water resources and conducive climatic conditions imply tremendous potential to the agricultural sector. Despite this, productivity of crops in Bihar compare poorly with other states. Thus, at the core of the new agricultural policy for Bihar is the focus on increasing productivity of crops, not merely in comparison with the national average but in comparison with the best productivity standards achieved in any State in India. Doubling of foodgrain production by year 2013, proper land utilization, integrated development of *Tal* and *Diyara* land, and encouraging farm mechanization are among the major targets of the new agricultural policy. Following major initiatives have been taken by the State government in last one year:

- Food security (Nutritional security), Increase in farmer's income, Increase in crop productivity and Environmental conservation have been fixed as the four targets of the new agricultural policy regime.

- ATMAs have been constituted in 23 districts of the State which did not have its ATMA coverage under the centrally sponsored programme. Thus all the districts of the State now have ATMA coverage.
- ~~Kisan Samman Yojna has been launched.~~
- A megaproject for establishment of soil testing laboratories in all 534 blocks of the State has been sanctioned, to take soil testing facilities right to the door of the farmers.
- 31 new seed testing laboratories are to be established in the State to give each district its own seed testing laboratory.
- Chief Minister Horticulture Mission has been started in 19 districts of the State which were not covered under National Horticulture Mission, thereby universalizing the programme in the State.
- Micro-nutrient testing laboratories have been established in 3 districts of the State. It is proposed to be established in all divisional headquarters in the coming years
- Research and Educational infrastructure of Rajendra Agricultural University, which happens to be the only agricultural university of the State, has been strengthened.
- Agricultural Produce Marketing Act, 1960 has been abolished.
- Bihar State Seed Corporation has been revived.
- Seed production has been started on 45 state agricultural farms which were lying inoperative.
- Farmers' Commission has been established.
- Land Reform Commission has been established.

CHAPTER III

INDUSTRY AND ALLIED SECTORS

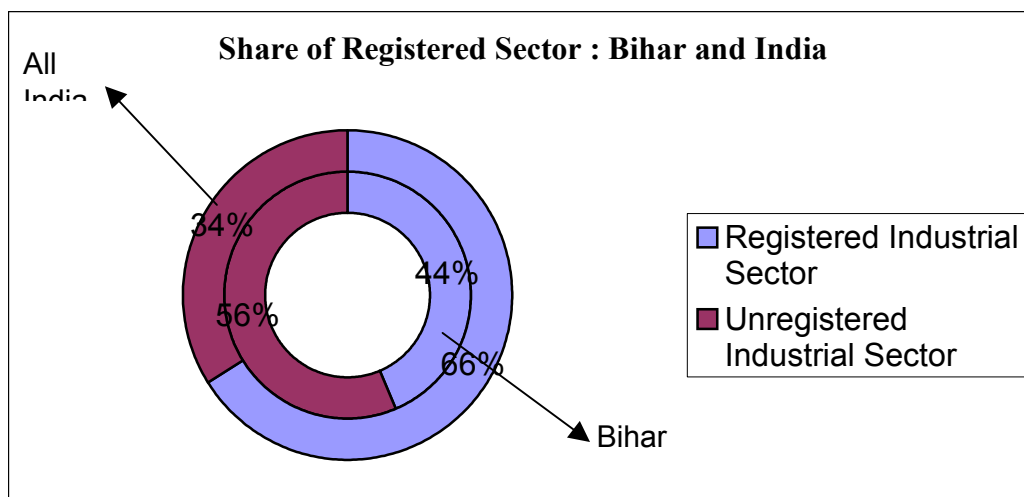
3.1 Introduction

Bihar has been predominantly an agricultural economy. Despite vast mineral deposits, the industries in the erstwhile Bihar remained in a poor shape and it recorded a growth rate lower than the national rate. The growth of industries in the State remained lop-sided with a few mineral based industries dominating the industrial scene. While there has been some development of heavy industries in the mineral belt of the erstwhile state, there has not been any significant growth of industries that cover later stages of mineral-based industrial production. The bifurcation of the State gave a severe blow and the level of industrial development of the present Bihar remained even lower than that of the erstwhile State. During the Tenth Plan period, the industrial sector in Bihar recorded a growth rate of 9.80 percent. The Net State Domestic Product for the present Bihar during the TE 2003-04 at 1993-94 prices was Rs. 32004 crore, of which the share of income from the industrial sector was only Rs. 1020 crore. Based on this, the size of industrial sector in Bihar in terms of income is much less i.e. only 3.2 percent of GSDP as against the national average of 20.1 percent. It may also be observed from Table 3.1 that Bihar's total industrial sector income worked out to only 0.4 percent of the country as a whole. The overall industrial sector in the State is predominated by the unregistered units, which account for more than half of its total income.

Table 3.1 : Size of Industrial Sector in Present Bihar

Sl. No.		Bihar	India	Percentage share of Bihar
1.	Net Domestic Product (Rs. Crore)	32004	1189773	2.7
2.	Industrial Sector Income (Rs. Crore)			
	(a) Registered	445	158240	0.3
	(b) Unregistered	575	80904	0.7
	(c) Total	1020	239144	0.4
3.	Percentage share of (2) in (1)			
	(a) Percentage share of 2 (a)	1.4	13.3	-
	(b) Percentage share of 2 (b)	1.8	6.8	-
	(c) Percentage share of 2 (c)	3.2	20.1	-

Note : Income figures are at 1993-94 prices and average for the triennium around 2002-03.



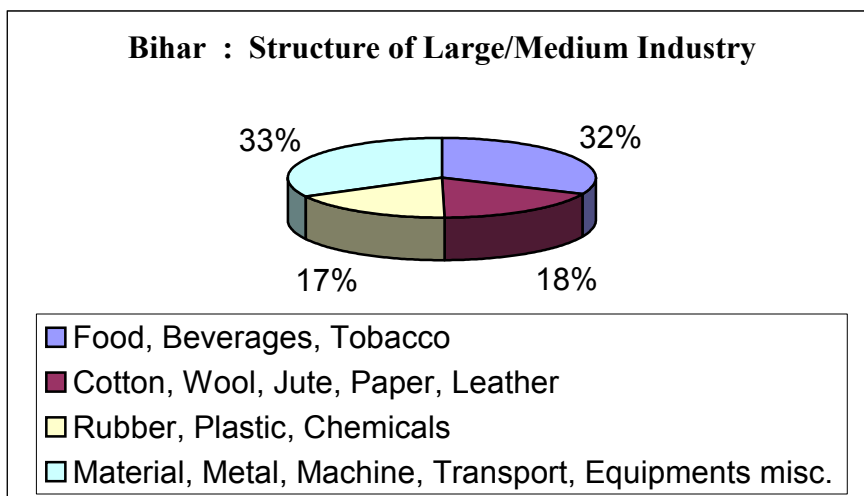
As a result of bifurcation, food, tobacco, leather and non-metallic mineral products have become prominent constituents of the industrial base in the present Bihar. An examination of the units covered by the Annual Survey of Industries (ASI) (2002-03 QE) reveals that they cover a range of products, but in terms of net value added, it is food, beverages, tobacco and petroleum products which account for more than 85 percent of the total industrial income. The aggregate contribution of remaining industry groups is very marginal. (Appendix I). A glance through some important characteristics, as estimated by the ASI 2003-04 in respect of 1460 factories in the State, reveals that the total fixed capital involved was Rs. 3032 crore and the total working capital was Rs. 1378 crore with a total invested capital of Rs. 5172 crore. However, outstanding loans against these factories worked out to Rs. 3875 crore. The aggregate value of output of these factories were Rs. 8877 crore and the Net Value Added worked out to Rs. 614 crore. The net income amounted to Rs. 512 crore. Comparative figures of some of the important States are given in Appendix II.

3.2 Large / Medium Units

The number of large and medium industries in the State, as compiled by the Department of Industries, is only 259, of which the highest concentration (38.2 percent) is in Patna Division, followed by Tirhut (21.6 percent) and Magadh (9.7 percent) in that order (Table 3.2). It may also be important to note that, out of 38 districts spread over in 9 Divisions, 10 districts do not have any large/ medium industrial unit. In another 11 districts in the State, there are less than 5 units in each.

Table 3.2 : Distribution of Large and Medium Units in Bihar by Industrial Groups

Divisions	Number of units under industry groups					Percentage share of ppn
	Food, Beverages, Tobacco	Cotton, Wool, Jute, Paper, Leather	Rubber, Plastic, Chemicals	Material, Metal, Machine, Transport, Equipmen	Total	
Patna	22	18	7	52	99 (38.2)	17.4
Magadh	6	1	9	9	23 (9.7)	10.6
Bhagalpur	2	3	2	3	10 (3.9)	4.9
Munger	2	3	12	1	18 (6.9)	9.0
Saran	12	1	0	1	14 (5.4)	9.8
Tirhut	21	6	13	16	56 (21.6)	20.0
Darbhanga	9	9	1	-	19 (7.3)	12.4
Koshi	-	-	-	-	-	5.8
Purnia	8	6	1	3	18 (6.9)	10.1
Bihar	82 (31.7)	47 (18.1)	45 (17.4)	85 (32.8)	259 (100.0)	100.0



3.3 Small Scale Industries

Though the small, tiny and artisan-based industries are not high productivity units, yet their role in promoting industrialization and opening up employment opportunities in the State cannot be overlooked. According to the Department of Industry, as on December 2006, there were 1.4 thousand, 96 thousand and 64 thousand registered units under SSI, tiny and artisan sectors respectively with a total investment of Rs. 4598 lakh, providing employment to over 5.3 lakh persons (Appendix III). However, as per the third all-India Census of SSI units (2001-02) there are only 72.6 thousand permanently registered small-scale units in Bihar, out of which 52.1 thousand units are working. The rural-urban and districtwise breakup of working units is given in Appendix IV. Besides, there are a total of 4.7 lakhs unregistered SSI, tiny and artisan units. As per the survey, the percentage of tiny units among SSI was 99.95 percent. Despite such higher number

of tiny (95.1 thousand) and artisan (64.3 thousand) units spread over evenly throughout the State, their output and employment potential are much lower. Another notable feature is that while small/medium/ large scale industrial units display geographical concentration, tiny and artisan based industries are spread all over.

It was estimated in the Third Census that there were 1675 exporting units— 80 registered and 1596 unregistered— accounting for exports to the tune of Rs. 5.30 crore which worked out to only 0.68 percent of the gross output of Rs. 3703.49 crore. The districts of Gopalganj, Muzaffarpur, West Champaran, Supaul and Samastipur together accounted for 87.7 percent of the total exporting units in the SSI sector. The exported products, by and large, included non-alloy steel primary/semi finished/finished, surgical dressings, rice, floor, doors and windows, agricultural tools, wooden furniture's, cement and asbestos cement products, locks, printing, book-bindings, etc. Besides, in 2003-04, export of lichi was 393 M.T. which was 82 percent of the total exports of lichi from the country.

3.4 Prime Minister Rozgar Yojana (PMRY)

Under the PMRY from 1993-94 to 2006-07, a total of 1.31 lakh persons were disbursed the loan amounting to Rs. 1005 crore by the banks. Thus, 52 percent of the total targets fixed for different years were disbursed loans upto December' 06 (Appendix V). The district-wise performance has been quite uneven which is evidenced from the district-wise disbursement figures in 2003-04, which ranged from the low of around 50 each in the districts of Sheohar and Arwal to the medium of 126 each in Supaul and Sheikhpura and to the high of 840 in Patna. (Appendix VI).

3.5 Industrial Sickness

As mentioned above, besides a small number of industrial units, the present Bihar also suffers from the problem of a sizeable number of units falling sick. As per the BIFR report, out of a total of 2145 sick large and medium units in the country, 61 belonged to the erstwhile Bihar. After bi-furcation, however, only a few large and medium units came to the share of Bihar. As on December 2006, there were 259 large and medium units in the state, out of which 18 units were declared sick by BIFR and of them rehabilitation package was approved for only 3, and 17 were decided to be wound up. As per the third all-India Census of SSI (2001-02), out of a total 72632 SSI registered units in Bihar, 52.1 thousand small scale industrial units were working (71.7 percent) and 20.5 thousand (28.3 percent) units were reported closed. The rural-urban and districtwise breakup of closed units is given in Appendix VII. In the all-India context, Bihar had

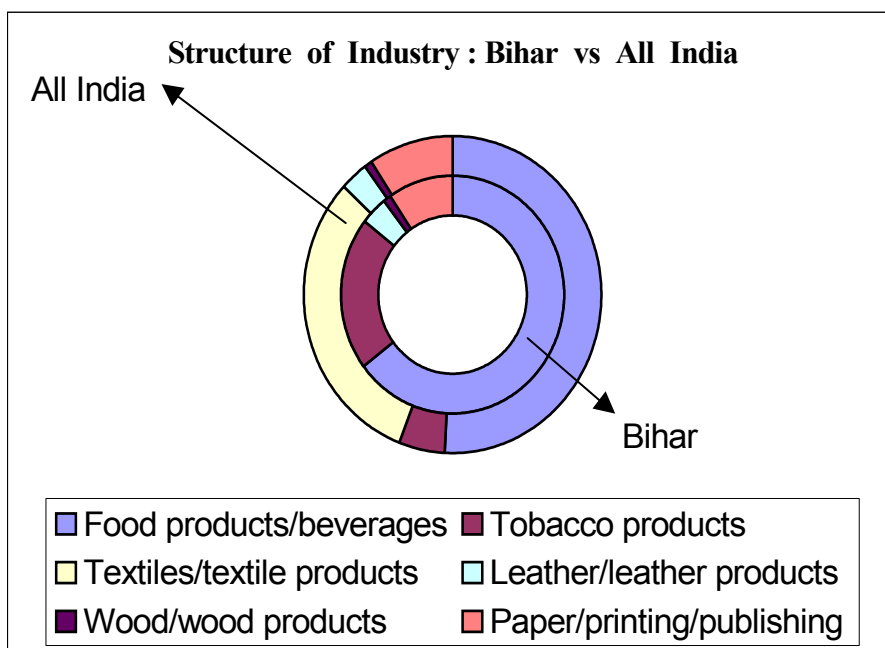
1.40 percent of sick SSI units, 1.62 percent incipient sick units, and 1.61 percent sick/incipient sick units as per the third Census. The rehabilitation status of the sick industries is far from satisfactory, which is apparent from the fact that out of 156 units reported sick by State Level Committee, no units were rehabilitated by banks. Rehabilitation of sick units is a costly proposition which, inter-alia, involves rescheduling of past overdues with concessional rate of interest on the amount overdue. The highest sickness in Bihar is due to inadequate infrastructure facilities. The lack of working capital, non-availability of raw material, inadequacy of roads network and communication services coupled with poor and uncertain power position as also weak research support led to poor industrial scenario in the State. Besides, unsatisfactory credit availability, abnormally high interest rate, delay in granting term loans and rigid attitude of banks and other financial institutions in the State are also some of the key inhibiting factors retarding the progress.

3.6 Agro Based Industries

Since Bihar's economy is primarily dependent on agriculture, agro-based industries are capable of playing a dominant role in the industrial sector of Bihar. Based on the coverage of industrial units in Bihar, the agro-based industries account for nearly half of the net value added. This is despite the fact that a substantial potential of agro-based industries in the State still remains unutilized. According to ASI data 2002-03, the total value of output of agro-based industries (excluding textile related) in India was worth Rs. 330.72 thousand crore, in which Bihar's share worked out to only 0.6 percent amounting to Rs. 2.01 crore (Table 3.3). It is an admitted fact that Bihar is not able to exploit all the advantages of the available resources for agro-based industries in the State.

Table 3.3 : Relative Size of Selected Agro-based Industries in Present Bihar and India (NIC 2-digit level) (ASI Data, 2002-03 QE)

NIC 1998 Code	Industry Group	Value of output (Rs. Crore)		Percentage share of Bihar
		All India	Bihar	
15	Food products/beverages	168565	1295	0.8
16	Tobacco products	15649	418	2.7
17-18	Textiles/textile products	103450	4	0.0
19	Leather/leather products	10309	77	0.7
20	Wood/wood products	2522	22	0.9
21-22	Paper/printing/publishing	30228	188	0.6
	Total	330723	2005	0.6



Based on a rough estimate, Bihar has the potential to produce about 5-6 percent of the total agro-based industrial products in India, and this will enable the industrial sector in the State to become one and half times of its present size (Appendix VIII).

In the year 2004-05, the area under fruits was 2.7 lakh hectare and the production was to the tune of 29.20 lakh M.T. Similarly, the vegetables were produced on 4.94 lakh hectare with 7.28 lakh M.T. of production. Bihar is also the largest producer of honey in the country producing 8400 MT during 2002. Average production of honey in Bihar is 60 Kgs per box as against national average of 20 Kgs. More than a lakh families are directly engaged in this activity.

There are only two agro-based industries, viz. tea and dairy that presented a positive trend during the last decade which is reflected from the analysis given below.

Tea : Around 20 thousand acres of land are covered under tea plantation in Kishanganj district providing employment to about 15 thousand workers. The district has been declared as a non-traditional area under Tea Board scheme and enjoys subsidies/incentives from the Tea Board. Though the area produces green leaf ultimately converted to around 2300 tonnes of processed tea, yet there are only two tea processing units in the area, which appear inadequate.

Dairy : Similarly, the performance of dairy sector has also been successful through formation of number of milk of cooperative societies. Milk and milk-based products of COMPFED and its

well-known brand Sudha have earned high reputation even outside the State. Yet, the absolute size of this industry is very small.

Sugar Industry : Sugar Industry occupies a place of prominence among the agro-based industry sector in the State. The state government gets a revenue of around Rs. 4 crore every year from this sector of industry. Upto the year 1940, a total of 33 sugar mills were established of which only 28 remained in operation. Out of 28 mills, 18 are now closed. Of the remaining 10 under private sector, 9 are working. On account of the closure of a majority of sugar mills in the state, only 4.22 lakh MT of sugar was produced during 2005-06. The sugar mills could run for 126 days on an average and the recovery was less than 10 percent. Sugar industry is entirely dependent on production of sugarcane. During the last seven years the area under sugarcane remained almost static. However, during 2005-06 only 2.30 lakh hectare (4.2 percent) of the total cultivated area of 54.80 lakh hectare were reportedly under sugarcane, its productivity being 56.50 MT per hectare which is much below the national average of 70 MT per hectare. This shows that there is a tremendous potential for augmenting the area and productivity of sugarcane in the State. The main reasons for low productivity of sugarcane are, however, 10-15 percent cultivation on water logged area, shortage of fertilizers and improved variety seeds, inadequate irrigation facilities, etc. During 2005-06, under centrally sponsored scheme a sum of Rs. 48.45 lakh (Rs. 43.61 lakh central share and Rs. 4.84 state share) has been sanctioned for sugarcane development in the state which included demonstration, training, technology transfer, implements, etc. Besides revival of closed sugar mills, with a view to rejuvenating the sugar industry, the state government has announced incentives for establishment of sugar industries and distilleries. As a result, 19 proposals have already been received from the sugar majors with sugar mill capacity of 1,00,500 TCD and distillery 235 KLPD (Appendix XIV). In addition, expansion proposals in respect of existing sugar mills have also been received. The proposals of M/S Indian Gasohol Ltd., Tamilnadu, for establishing sugarcane based Ethanol manufacturing mega plants in 10 districts of the state have been cleared. A Sugar Industry Promotion Policy has been framed under which the industrialists can establish sugar mills with 2500 TCD crushing capacity instead of 5 TCD capacity. Sugar mills can now generate electricity and produce sugarcane distillates alongside sugar production.

Makhana Industry : Bihar is the major makhana producing State which accounts for over 90 percent of the makhana production of the country (Table 3.4). Madhubani, Darbhanga, Sitamarhi, Saharsa, Katihar, Purnia, Samastipur, Supaul, Kishanganj and Araria districts are major producers of makhana. The popped seeds of makhana, either roasted or otherwise, are used in preparation of various kinds of delicious sweets and recipes. It contains 14 percent easily digestible protein, 76

percent carbohydrate, 0.1 percent fat, 0.5 percent total minerals, 0.9 percent phosphorus and 1.4 percent mgfe /100 gm. It also contains useful medical properties.

Table 3.4 : Makhana Production in India

Sl. No.	Particulars	Area (In Hac)	Production (In Tonnes)	Farm gate value (In Rs. crore)
1	India	18500	54550	450
2	Bihar	16850	50550	400

In 2006, the State Investment Promotion Board (SIPB) has approved White ball revolution project of Rs. 70 crore, initiated by Shakti Sudha Industries, which has already started operation. About 4 lakh farmers of makhana will be integrated in this backward–forward linkage project. One lakh hectares of Chaur land for expansion of makhana cultivation are available in the State.

3.7 Non-Agro based Industries

The size of non-agro based industries is very small in the State. Except the petroleum refinery at Barauni, there is no other industry worth the name under this sector. There are some metal industries in the State which include metal cutlery, utensils and kitchenware, and non-structural ceramic ware.

Leather : Leather based industries is a major area with vast potential because of rich cattle population with high quality of its hides (Appendix VIII). There are around 50,000 footwear artisans in the State with tanneries in the private sector. There are 85 leather units of which 20 manufacturing units each are located in Patna, Muzaffarpur and Bettiah and the remaining 25 units take up only job work. These units, by and large, employ 4-5 persons each. Besides, there are 6 tanneries in the Industrial Area at Muzaffarpur.

Textile : Another major area is textiles; however, most of the textile centres located at Bhagalpur, Gaya, Nalanda, Darbhanga, Madhubani, Siwan and Patna have been on decline.

Handloom : The handloom sector is the largest with about 10817 handlooms under cooperative sector and 11,361 powerlooms in the State. The handloom industry is mainly concentrated in the districts of Patna, Gaya, Bhagalpur, Biharsharif, Madhubani and Siwan. There are in all 1089 Primary Weavers Cooperative Societies in the State of which 411 are working. In non-cooperative sector, there are around 98 thousand weavers. The handloom/ powerloom sector has a big potential for growth in the State, subject to the availability of proper finance, training, designing, and marketing facilities. The state government has introduced various welfare schemes for the Handloom and Power loom sectors. These schemes, by and large include marketing assistance, modernisation of weavers training centre, shed Cum Housing for the Rural weavers, etc. The central government has also introduced certain welfare schemes including Health insurance, Technology upgradation fund, Swarojgar Credit Card Yojna, etc.

Mines and Minerals : Though undivided Bihar possessed nearly 25 percent of the total mineral deposits in the country, after bifurcation, the State is left with only 1 percent of the total deposits in erstwhile Bihar. Only two minerals, viz., limestone and pyrite are found in sufficient quantity in present Bihar. The resources of other minerals like bauxite, quartzite, feldspar, magnetite, etc. are either marginal or poor in quantity. From mineral wealth point of view, only 8 districts viz. Rohtas, Kaimur, Bhagalpur, Banka, Munger, Jammui, Gaya and Nawada are important. (Appendix IX) Further, 30 known decorative stones deposits are existing in five districts of the State, viz., Banka, Jammui, Nawada, Jehanabad and Gaya. There are around 68 million cubic meters granite deposits, of which the best quality deposits are around 32.04 cubic meters. (Appendix X). The revenue to the State from the minerals during 2005-06 was worth Rs. 96.38 crore as against Rs. 75.81 crore in the previous year. Minor minerals viz. sand, bricks and stone contribute around 85-90 percent of revenue collection from this sector.

Search for Petroleum and Natural gas is also being carried out by ONGC. The exploration work of petroleum has been awarded to Cairn Energy Ltd. through global tender under New Exploration Licensing Policy of the Government of India. The exploration work has already begun.

3.8 Tourism

With the world coming closer, the tourism industry is touching new heights and is emerging as one of the leading industries. But in Bihar, the tourism industry is still in a nascent stage in spite of its enormous potential. In the historical perspective, the state holds a very strategic position. Its glorious past peeping through the existing old monuments and remains, is capable of attracting both the domestic and foreign tourists. Bihar offers to the tourists, both international and domestic, a variety of treasure of Indian history, civilization, religion and culture coupled with scenic beauties spilled all over. It has enough potential to attract various segments of tourists, such as cultural tourists, adventure tourists and holiday tourists.

The map of Bihar is dotted with Buddhist Monasteries reflecting its ancient history. Lord Buddha, Mahavir, Great Guru Govind Singh, Mahatma Gandhi and the great Sufi Saints are all associated with Bihar, apart from the great Chinese tourists Fahien and Huen Tsang. In addition to Buddhism, other religions like Hindus, Jains and Sikhs have several pilgrim centres of religious sanctity located in the regions, like Gaya for Hindus, Pawapuri for the Jains, Bodh Gaya for Buddhists and Patna Sahib for the Sikhs. Bihar also has some of the finest monuments of Hindu and Mughal architecture. Bihar offers to tourists a variety of historical sites like Rajgir and Patliputra (ancient capital of Magadh empire), Vaishali (the first republic of the world), Bodh Gaya and Nalanda (renowned seat of international learning) and Patna Sahib (birth place of the last Guru of Sikhs).

Despite a number of important tourists spots in Bihar, out of the total international tourists to India in 2001, barely 3.37 percent visited Bihar, the absolute number being 85,673. Similarly, as per the departmental data, the total inflow of domestic tourists was only 61.47 lakh during the year. The reasons for the poor inflow of tourists include inadequate amenities, bad roads, inaccessibility, poor maintenance, inadequate publicity and a poor image building exercise.

The State government has declared the tourism sector at par with the status of an industry and a draft tourism policy is under preparation. The initiatives include rejuvenation of a State Tourism Development Corporation which operates tourist bungalows and hotels at various tourist destinations. It also provides transport facility, information regarding tours and travels. In 2004-05, the total income of the Corporation was only Rs. 4.39 crore and the operating profit accrued

was Rs. 1.29 crore. The Government has decided to constitute a 'Steering Group on Vision Bihar : Harnessing its Tourism Potential – Medium Term Perspective' to identify factors affecting tourism development, to formulate and integrated strategy/approach to tourism development and to review the incentive and other concession given to the tourism industry. A financial assistance to the tune of Rs. 1922.42 lakh has been sanctioned by the Government of India for Development of 'Tourist Circuit-Bodh –Gaya-Rajgir-Nalanda.'

3.9 IT Sector

The expansion of knowledge and service based activities, which include IT enabled services, e-commerce, e-governance and multimedia application, are yet to be developed which may boost up the growth in the State a beginning has been made to exploit the vast potential of Information and Communication Technology for expansion of employment in many segments of the economy, particularly in computerization of treasury, finance, GPF, collection of taxes, electricity bills and the governance within the judiciary. The video conferencing has already been initiated in all the 38 districts of the state.

Beltron has been nominated as a nodal agency for improvement of e-governance programme in the State Wide Area Network (SWAN) is being established and *Vasudha Kendras* (e-service centers) in all the Panchayats of the state is being taken up for the benefit of the common masses. For e-governance programme, best e-governance has been formed by a cabinet order by which Bihar Infrastructure Development Authority (BIDA), TLFS and Beltron are its partners on practiced line of public-private partnership.

3.10 Magadh Stock Exchange Limited (MSEL)

In order to open a new chapter for speedy economic development of Bihar, Magadh Stock Exchange Association MSEA was formed in 1985 and subsequently recognized by the Ministry of Finance, Government of India, on December 11, 1986. In compliance of SEBI approved Corporation & Demutualization Scheme, 2005, MSEA has become a demutualized Stock Exchange with its name changed to Magadh Stock Exchange Ltd. (MSEL) with effect from June 05, 2006. In March, 2006 the Stock Exchange had a total of 192 members of which 17 were corporate members. At present, the Magadh Stock Exchange Ltd. is a fully demutualized Stock exchange providing nation-wide online trading terminals for cash and derivatives trading in all

prominent equity shares, confirming SEBI guidelines and Central Government directives. During the financial year 2005-06, no new company was listed on the MSEL. However, four companies delisted its securities in accordance with the provisions of SEBI guidelines. At the end of March 2006, there were 66 companies listed on MSEL having a total market capitalization of Rs. 35.13 crore.

MSEL plays a crucial role for developing the economic health of investors of Bihar and Jharkhand. It does so by mobilizing domestic resources and using them for productive investments. Traditionally, investors have been inclined towards low risk instruments like bank deposits. This was largely due to the lack of investment opportunities. Of late, there has been a shift in the way investors view Securities Market investments. They are now willing to channel their savings and investments from banks to Securities Market. This shift is largely facilitated by the development of Securities market in the past few years. A vibrant Securities Market provides a range of attractive opportunities to all investors, both domestic and foreign, individual and institutional. MSEL not only provides an efficient market but also upholds the interests of the investors of the undivided Bihar and ensures redressal of their grievances, whether against the companies or its member-broker. With major corporate house eager to give a re-look to the changed market scenario in a resurgent Bihar, MSEL looks forward to provide an effective window for raising capital and facilitating investors participation in new enterprises.

3.11 Major Problems of Industrialization

- (i) Inadequate Infrastructure : Adequacy of infrastructure is a sine qua non for proper industrial development. But unfortunately the infrastructure network is very weak in Bihar. In terms of Trunk Infrastructure, viz., power plants and transmission network, major highways, waterways, railways, airports and telecommunications, Bihar is highly disadvantaged. The Trunk Infrastructure needs to be complemented by adequate Arterial infrastructure, like power distribution network, smaller highways, telephone networks, etc. But both these infrastructures are inadequate which obstruct the industrial development in the State. The third component is specialized Infrastructures which are industry specific, like cold storage for agro-based products, dry ports for export oriented units; here again, the scenario in Bihar is very weak.

- (ii) Poor financing to SMEs : The financing by banks under the Small and Medium Enterprises (SMEs) credit card as also under artisan / swarojgar credit cards has not been satisfactory as revealed by the monthly progress reports prepared for December, 2006. (Appendix XI & XII)
- (iii) Industrial Area Development Authorities (IADA) : The Government of Bihar had established IADA for enhancing the potential for industrial growth in the State in late seventies. The present Bihar is having one IADA with Patna, Darbhanga and Muzaffarpur as the regional offices. Under the IADA, there were 44 industrial areas/ estates formed, of which barely one-third had some potential for industrial units. A total of 2502 plots were developed of which 2026 were allocated to 1293 units, but only half of them could go into production.
- (iv) Sick Support Institutions : The Government of Bihar made an endeavour to promote industrialisation through establishing in all 12 agencies giving them specific task for industrial expansion. Out of these, 2 were mainly for providing financial support to industries viz. Bihar State Financial Corporation (BSFC) and Bihar State Credit and Investment Corporation (BISCICO). But these two financial institutions have virtually stopped lending operation primarily owing to very poor recovery of loans resulting into heavy outstanding due to them. For example, at the end of 1999-2000, the total outstanding due to BSFC was as high as Rs. 1413 crore. BSFC suffered heavy loss since 1993-94 and total accumulated loss upto 2003-04 amounted to Rs. 669.35 crore including Rs. 271.74 crore as interest payable to IDBI and SIDBI which has since been waived keeping in view the health of the Corporation. There was no loaning during 2003-04 to 2005-06 The BSFC approved 596 units for sale till 2005-06 out of which, upto 2004-05, as many as 255 units could be sold for a total consideration amount of Rs. 39.22 crore of which initial payment made was to the tune of Rs. 12.66 crore. The details are given in Appendix XIII. BISCICO from the beginning financed 273 units of which 114 paid/ settled the loan. It introduced a popular OTS scheme and, during 2002-06, 74 units opted for the scheme. Due to paucity of funds on account of non-availability of refinance facility from IDBI/SIDBI, financing to new establishments could not be possible. But it has paid most of the dues to IDBI/SIDBI. However, the government has decided to revive the BSFC and BICICO so as to restart

financing to small and medium industrial units. Besides, the remaining promotional institutions had altogether established 96 industries either jointly (33 units) or by themselves (57 units) or through providing assistance, of which only 10 are functional-3 in public sector and 7 either jointly owned or assisted units. These institutions have been rendered financially insolvent. In accordance with the decision taken in 2003, except the Bihar State Financial Corporation and Bihar State Credit & Investment Corporation, the remaining 10 PSUs under the Industries department were asked to file liquidation application. Out of these, the Government has decided to revive only the Bihar State Electronics Development Corporation and the Bihar State Film Development & Finance Corporation.

- (v) Reluctant Investments : The state has had a low and declining level of investments both in public and private sectors, which led to its industrial backwardness. In recent years too, the investments in the industrial sector in Bihar appeared reluctant. According to recent IEM data, of the proposed investments in the country, only 0.4 percent (Rs. 7,682 crore) is planned in the State. However, during the last one year, as many as 72 proposals worth Rs. 12896 crore investments in the State have been approved by the State Investment Promotion Board (SIPB) out of which 56 proposals worth Rs. 11,370 crore investments are for the industrial sector (Appendix XVII).

3.12 Industrial Incentive Policy (2006)

The State Government has brought about a new Industrial Incentive Policy (2006), which has added some new features. It has laid emphasis on the problems and policies for industries like food-processing, sugar, leather and handlooms. The Policy aims at providing support to industrial growth as a whole. The Bihar Single Window Clearance Act, 2006 will prove to be a boon for investments by private sector. Other major steps include Bihar Infrastructural Development Enabling Act (2006), Price Preference Policy (2006), Policy for Information Technology Mission and a number of new incentives related to VAT and other taxes / duties / fees. The state envisages to reimburse 50 percent of amount spent on plant and machinery for power generation and 100 percent exemption from electricity duty for seven years. A corpus fund has also been created for revival of sick and closed units. Highlights of the Policy are given below in the box.

Broad Highlights of Bihar Industrial Incentive Policy (2006)

- Pre-production Incentives—
100 % exemption in stamp duty and registration fee in lease/sale/transfer only for the first time.
- Post-production Incentives—
 - Re-imbusement of 50% cost on project report prepared by firms recognized by the Industry Department subject to a maximum of Rs. 75,000.
 - Concession on land/shed located in BIADA/Export Promotion Industrial Park/ Agri Export Zone to the extent of 50% to the maximum of Rs. 7.50 lakh for small/tiny and 25% or maximum of Rs. 15 lakh for large/ medium units.
- Reimbursement of fees paid after commencing production for obtaining technical know-how from recognized national research centre/labs/ institutions to the extent of 30% (max. Rs. 15 lakh)
- 50% of the amount spent on Captive Power Generation/ Diesel Generating set with no upper limit.
- New units will avail 80% re-imbusement against the admitted VAT amount deposited with government for a period of 10 years. Maximum subsidy amount 300% of capital invested.
- The units with zero VAT and paying income tax would get incentive upto maximum utilisation of 70% of the installed capacity
- Following exemptions will also be provided —
 - 100% exemption for 7 years in luxury tax;
 - 100% exemption for 7 years in electricity duty;
 - 100% exemption in conversion charges;
 - 100% emption for 7 years in market fee.
- For revival of sick/closed industry, a corpus fund to be created in collaboration with the commercial banks, Bihar Industries Association and state government.
- SC/ST/Women/Handicapped entrepreneurs running small/tiny units upto a turnover limit of Rs. 30 lakh will avail 100% subsidy of the deposited amount with government in the form of VAT for a period of 10 years.
- Only 1% Central Sales Tax will be payable on items produced by registered medium/ small units in Bihar.

Besides, steps have also been taken for rehabilitation of sick units, facilities for expansion-diversification-modernisation, quality certification, IT mission, handloom sector, etc.

Government Initiatives in Industry and Allied

The Government of Bihar has taken policy initiatives for attracting investments and bringing about phenomenal growth in industry sector. The distinctive features of the policy initiatives in industry are:

- The formation of the State Investment Promotion Board (SIPB) marks a distinctive shift in stress towards private sector investment as opposed to the earlier focus in Bihar on the public sector.
- The announcement of an industrial incentive policy with the aim of attracting private sector investments.
- The focus on infrastructure development through utilization of existing allocations is a pragmatic initiative.
- The traditional handicrafts and artisans' work are receiving the attention of the government with the dual focus as a means of livelihood and expansion of rural non-farm sector.
- In 2006-07, a sum of Rs. 1.26 crore approved for infrastructure in Industrial Area/Estates.
- Rs. 200 crore provided for establishment of a land bank for prospective investors.
- During 2006-07, a sum of Rs. 56 lakh has been approved for establishing a general services centre under Agri Export Zone in Hajipur Industrial Park.

The special policy initiatives for the growth of the sugar industry entail

- Qualitatively, sugar has been given a special focus within industry in keeping with the idea of conventional comparative advantage. This is reflected in formation of a separate Department of Sugar, and the formation of an advisory board for sugar.
- Incentives for new factories and capacity expansion of existing factories with tax concessions and policies geared towards ensuring purchase of sugarcane locally. There are also additional concessions for molasses and co-generated power units.

Mines and Geology

Even though mines are no longer important for present Bihar after bifurcation, two measures stand out :

- Even within the limited size of the sector, resource mobilization is being done.
- Search for petroleum and natural gas is being carried out Cairn Energy Ltd.

Tourism

Tourism again is an important dimension of industrial growth and hence there has been special initiatives for this sector.

- A Steering Group has been formed to formulate Vision Bihar : Harnessing its Tourism Potential on a medium term perspective.
- Constitution of Tourism Police Force is under consideration for security and assistance to tourists.

Appendix - I

Structure of Industries in Bihar (ASI Data, 2001-02 QE)

NIC 1998 Code	Industry Group	No. of factories	Value of output (Rs. Crore)	Net Value Added (Rs. Crore)	Share as % to all industries		
					No. of factories	Value of output	Net Value Added
15-16	Food products/beverages/tobacco	303	171330	35401	21.8	22.1	28.3
17-18	Textiles/textile products	23	418	-85	1.7	0.1	-0.1
19	Leather/leather products	8	7697	1318	0.6	1.0	1.1
20	Wood/wood products	138	2243	295	9.9	0.3	0.2
21-22	Paper/printing/publishing	64	18848	5718	4.6	2.4	4.6
23	Coke/petroleum/nuclear fuel	29	506106	74692	2.1	65.4	59.7
24	Chemicals	49	7834	2164	3.5	1.0	1.7
25	Rubber/plastic products	14	3601	218	1.0	0.5	0.2
27-28	Basic metals/metal products	100	29209	1299	7.2	3.8	1.0
29-33	Machinery & Equipment	57	3652	826	4.1	0.5	0.7
34-35	Transport/equipment	5	2172	449	0.4	0.3	0.4
	Others	599	20917	2793	43.2	2.7	2.2
	All industries	1388	774027	125090	100.0	100.0	100.0

Appendix - II

Estimate of some important characteristics by State for the Year 2003-04

(in Rs. Lakh)

Sl No.	Characteristics	Bihar	Jharkhand	Orissa	Gujarat
1.	Number of Factories	1460	1447	1678	12795
2.	Fixed Capital	303280	1627765	1611513	8578858
3.	Working Capital	137750	-10606	90966	1867760
4.	Invested Capital	517166	2002818	1963181	11502727
5.	Outstanding Loans	387506	959225	905341	3924424
6.	Number of Workers	46785	111073	98430	538080
7.	Total Persons Engaged	57404	144529	124983	729310
8.	Wages to Workers	17101	159253	62194	278787
9.	Total Emoluments	27044	241495	113093	581477
10.	Prov. Fund and Other Welfare Exp.	5089	43407	51068	113530
11.	Fuels Consumed	71241	258359	251828	1006271
12.	Materials Consumed	684328	1256477	941557	14111985
13.	Total Inputs	806766	1835753	1408121	17041204
14.	Products & By-products	854623	2562601	1700650	18937863
15.	Value of Output	887711	2781301	1850105	20733426
16.	Depreciation	19515	129660	120493	805677
17.	Net Value Added	61430	815888	321492	2886545
18.	Rent Paid	570	10708	8144	60852
19.	Interest Paid	9610	73430	108947	419069
20.	Rent Received	22	1594	1090	9011
21.	Interest Received	899	4379	7399	32497
22.	Net Income	51250	731750	204401	2406624
23.	Net Fixed Capital Formation	-20774	6295	-44222	-58993
24.	Gross Fixed Capital Formation	-1259	135955	76271	746684
25.	Addition in Stock of	000	000	000	000
	(a) Materials, Fuels etc.	5155	22613	22613	180911
	(b) Semi-Finished Goods	579	6931	-1134	33700
	(c) Finished Goods	-2285	-5637	-3991	-23084
	(d) Total	3449	27330	17488	191527
26.	Gross Capital Formation	2190	163285	93758	938212
27.	Profits	19117	446848	40240	1711617

Source : Estimates by ASI

Appendix – III

SUMMARY REPORT OF YEAR WISE PERMANENT S.S.I REGISTERED UNITS OF BIHAR (EXCLUDING JHARKHAND)							
Sl.No.	Year	<i>Achievement</i>					
		SSI	Tiny	Artisan	Total	Investment (In Lakhs)	Employment (in No.)
1	2	3	4	5	6	7	8
1	Upto 31.03.2000	1261	72767	44413	118441	44701.38	433808
2	2000-2001	35	3249	2530	5814	3805.15	14015
3	2001-2002	31	3206	3314	6551	4192.04	15283
4	2002-2003	24	3290	2983	6297	4638.07	13622
5	2003-2004	21	3462	2616	6099	5430.39	14346
6	2004-2005	17	3335	2897	6249	5371.79	13346
7	2005-2006	24	3584	3333	6941	4697.31	15732
8	2006-2007	17	2205	2238	4460	72836.13	11091
	Total	1430	95098	64324	160852	4598.15	531243

Source : Department of Industry, Government of Bihar

Appendix - IV

Coverage of Regd. SSI units in Third Census (2001-02), District-wise

Sl. No	Name of District	Working units in rural area		Working units in urban area		Total
		Surveyed	Not Surveyed	Surveyed	Not Surveyed	
1.	Paschim Champaran	414	24	735	52	1225
2.	Purba Champaran	1388	6	993	5	2392
3.	Sheohar	123	3	76	1	203
4.	Sitamarhi	1097	2	565	1	1665
5.	Madhubani	687	0	476	0	1163
6	Supaul	429	6	392	0	827
7	Araria	226	0	531	0	757
8	Kishanganj	249	0	285	0	534
9	Purnia	318	0	729	0	1047
10	Katihar	856	1	751	3	1611
11	Madhepura	382	0	324	0	706
12	Saharsa	719	1	731	3	1454
13	Darbhanga	581	0	719	1	1301
14	Muzaffarpur	1192	11	1889	6	3098
15	Gopalganj	460	0	315	1	776
16	Siwan	901	1	1008	1	1911
17	Saran	1232	1	733	1	1967
18	Vaishali	862	1	865	3	1731
19	Samastipur	930	2	669	2	1603
20	Begusarai	663	1	673	0	1337
21	Khagaria	388	0	319	0	707
22	Bhagalpur	252	0	904	1	1157
23	Banka	226	2	76	1	305
24	Munger	247	0	659	0	906
25	Lakhisarai	97	0	264	3	364
26	Sheikhpura	32	0	173	0	205
27	Nalanda	579	3	942	0	1524
28	Patna	936	1	7605	8	8550
29	Bhojpur	263	14	296	11	584
30	Buxar	260	39	361	45	705
31	Kaimur (Bhabhua)	680	6	339	1	1026
32	Rohtas	579	18	1095	86	1778
33	Jehanabad	388	3	283	2	676
34	Aurangabad	557	3	624	0	1184
35	Gaya	1776	21	1736	17	3550
36	Nawada	468	1	742	1	1212
37	Jamui	135	0	231	0	366
	Total	21572	171	30108	256	52107

Appendix - V

**Progress Report of Prime Minister Rojgar Yojana : Form 1993-1994 to 2006-2007 (Dec. 06)
Till December – 2006**

(Rs. in Lakh)

Year	Target	Recommended By DIC		Sanctioned By Bank		Distributed By Bank		% of Sanction against Target	% of Disbursing Against Target
		No.	Amount	No.	Amount	No.	Amount		
1993-1994	3070	5667		2051	1664.54	1487	1003.91	66.81	48.44
1994-1995	22150	33819	27867.13	11705	8658.29	8714	5535.65	52.84	39.34
1995-1996	22150	43170	32320.96	17924	1320.76	13888	9241.37	80.92	62.7
1996-1997	2150	46660	28927.82	18818	1475.47	15004	10491.81	84.96	67.7
1997-1998	21500	37320	29400.57	14720	11859.32	12288	8837.15	68.47	57.15
1998-1999	20500	26608	21056.37	11311	9322.68	9233	6851.52	55.18	45.04
1999-2000	21800	25277	24856.82	11083	10208.93	8758	6848.02	50.84	40.17
2000-2001	14549	17176	17860.41	7743	7058.41	6456	5293.48	53.22	44.37
2001-2002	18000	22713	23337.95	11393	10322.62	9167	7401.96	63.29	50.93
2002-2003	18100	23910	24776.28	11703	10881.29	10335	8598.23	64.66	57.10
2003-2004	14400	19933	20953.33	10691	10096.32	9520	8137.79	74.24	66.11
2004-2005	16000	22079	23276.95	11977	11458.49	10432	9091.45	74.86	65.20
2005-2006	25000	31467	32706.17	14833	14478.16	12318	10573.06	59.33	49.27
2006-2007 (Dec.06)	11400	17892	18706.54	5493	5398.91	3251	2635.48	48.18	28.52
Total	250769	373691	326047.3	161445	139371.19	130850	100540.88	64.38	52.18

Source : Department of Industry, Government of Bihar

Appendix - VI

DISTRICT WISE PERFORMANCE UNDER PMRY SCHEME

Programme Year 2003-2004

S. No.	District	Target	Application Received	Sanctioned		Disbursed	
				No	AMT	NO	AMT
1	Araria	278	317	163	244	163	224
2	Aurangabad	280	320	236	261	193	218
3	Banka	293	335	181	162	156	135
4	Begusarai	566	646	401	365	311	262
5	Bhagalpur	523	597	313	306	313	306
6	Bhojpur	413	472	405	340	393	315
7	Buxar	281	321	169	155	169	155
8	Darbhanga	558	637	441	391	393	327
9	E-Champaran	502	573	439	424	399	265
10	Gaya	606	692	450	403	396	330
11	Gopalganj	266	304	214	192	201	150
12	Jamui	221	252	190	156	160	144
13	Jehanabad	184	210	172	138	147	116
14	Arwal	121	138	50	47	50	47
15	Kaimur	272	311	226	213	226	213
16	Katihar	401	458	284	255	284	224
17	Khagaria	206	235	141	109	136	103
18	Kishanganj	167	191	78	69	68	60
19	Lakhisarai	170	194	148	103	148	103
20	Madhepura	266	304	216	195	196	165
21	Madhubani	486	555	404	352	343	268
22	Munger	243	278	164	136	103	73
23	Muzaffarpur	764	872	426	366	375	290
24	Nalanda	512	585	356	298	284	220
23	Nawada	324	370	155	140	155	140
26	Patna	1257	1436	1016	843	840	560
27	Purnea	318	363	310	274	271	219
28	Rohtas	372	425	322	279	307	258
29	Saharsa	301	344	221	207	215	189
30	Samastipur	518	592	323	254	285	205
31	Saran	581	664	447	381	350	273
32	Sheikhpura	147	168	150	107	126	83
33	Sheohar	105	120	54	53	46	50
34	Sitamarhi	450	514	342	306	308	271
35	Siwan	439	501	376	332	327	273
36	Supaul	188	215	126	125	126	116
37	Vaishali	443	506	310	299	267	228
38	W. Champaran	378	432	406	340	358	229
	Total	14400	16445	10825	9620	9588	7807

Appendix - VII

Distribution of closed units, District-wise & Location-wise (2001-02 Census)

Sl. No.	Name of District	No. of closed units			Percentage to
		Rural	Urban	Total	Total
1.	Paschim Champaran	223	469	692	3.37
2.	Purba Champaran	411	313	724	3.53
3.	Sheohar	15	16	31	0.15
4.	Sitamarhi	458	443	901	4.39
5.	Madhubani	309	273	582	2.84
6.	Supaul	42	73	115	0.56
7.	Araria	59	138	197	0.96
8.	Kishanganj	11	68	79	0.38
9.	Purnia	53	273	326	1.59
10.	Katihar	271	269	540	2.63
11.	Madhepura	149	160	309	1.51
12.	Saharsa	68	112	180	0.88
13.	Darbhanga	108	204	312	1.52
14.	Muzaffarpur	562	891	1453	7.08
15.	Gopalganj	396	263	659	3.21
16.	Siwan	382	361	743	3.62
17.	Saran	398	314	712	3.47
18.	Vaishali	212	172	384	1.87
19.	Samastipur	181	166	347	1.69
20.	Begusarai	357	500	857	4.18
21.	Khagaria	206	185	391	1.90
22.	Bhagalpur	121	661	782	3.81
23.	Banka	120	50	170	0.83
24.	Munger	92	353	445	2.17
25.	Lakhisarai	23	88	111	0.54
26.	Sheikhpura	2	65	67	0.33
27.	Nalanda	299	436	735	3.58
28.	Patna	134	2431	2565	12.50
29.	Bhojpur	128	158	286	1.39
30.	Buxar	89	120	209	1.02
31.	Kaimur (Bhabhua)	155	39	194	0.95
32.	Rohtas	258	319	577	2.81
33.	Jehanabad	546	293	839	4.09
34.	Aurangabad	534	376	910	4.43
35.	Gaya	609	818	1427	6.95
36.	Nawada	290	232	522	2.54
37.	Jamui	59	93	152	0.74
	Total	8330	12195	20525	100.00

Source : Third All-India Survey of Industries

Appendix - VIII

Production of Important Inputs for Agro-based Industries and Livestock Population in Present Bihar

I. Fruits & Vegetables Production (31st March, 2005)

Fruits Production			Vegetables Production		
	Production (Lakh M.T.)	% age Share in all-India		Production (Lakh M.T.)	% age Share in all-India
Mango	15.40	15	Potato	10.19	4
Banana	4.43	3	Brinjal	10.81	14
Guava	3.31	19	Cauliflower	9.55	20
Litchi	3.39	88	Bhindi	9.28	28
Citrus	1.34	3	Tomato	5.88	8
Pineapple	1.04	9	Onion	9.17	18
			Cabbage	5.84	10

II. Food Grains Production

(in lakh M.T)

Crop	Production	Bihar's Share (%)
Rice	50.94	6
Wheat	41.08	6
Maize	13.59	11
Sugarcane	39.19	1
Pulses	5.60	4
Jute (Bales)	10.48	9
Oil Seeds	1.22	1

III. Livestock Population 2000

(in lakh nos.)

Category	Livestock	Hides
Cattle	283.00	38.50
Buffalo	60.30	11.00
Goats	233.20	182.10
Sheep	20.40	1.90

Source : Department of Industry, Government of Bihar.

Appendix - IX

Industrial Mineral deposits occurring in Bihar.

Sl. No.	Name of Mineral/Ore	Districtwise place of occurrence	Reserve (in million tonne)	Quality
1	2	3	4	5
1.	Limestone	Rohtas – Banjari, Baulia, Chunahatta, Nawadih, Jaitpur etc. Munger - Gidham Kaimur - Belduria-Jaradag, Jadunathpur, Sonarika	189.30 9.45 12.10 210.85	Cement to flux grade Low grade Cement to flux grade
2	Pyrite	Rohtas – Amijhor, Nawadih	53.41	Chemical & Fertilizer
3	Mica	Nawada – Sapahi, Basoma, Manakhap Jamui – Chakai Batia, Charka Pathar, Nawadih Gaya - Dibaur, Majhuli, Bishunpur	- Trace Trace	Ruby mica Poor quality Poor quality
4	Bauxite	Munger – Kharagpur Hills, Mairwa, Saranga, Thadhi Rohtas - Adhaura, Banjari Hills	0.81 1.30 2.11	Low grade Low grade
5	Feldspar	Gaya - GurpaGazandi, Nathnagari Jamui - Chakai, Batia, Mahesri, Sono Mallepur	0.7 4.14 4.84	Low to madium grade
6	Chinaclay	Banka - Abrkha, Chauria, Katuria, Satletwa, Batesarthan, Samukhia-Jharna, Govardhara, Patharghata, Harankari Mumger - Kharagpur Hills, Aamjhoi, Bhandari, Panari, Pathalkhapati Chiraiya	0.96 0.24 1.20	High to medium grade Low grade
7	Fireclay	Bhagalpur – Kalagaon Purnea - Migare	0.01 0.02 0.03	Inferior grade
8	Talc/Steatite /Soapstone	Munger - Shankarpur	0.08	Medium grade
9	Magnetite	Gaya - Barabar Hill Jamui - Manjos	0.59 2.07 2.66	Low grade (Fe content 35-67.8%)
10	Haematite (Ironore)	Bhagalpur – Charnapur	0.033	Low grade

Appendix - IX (Contd.)

11	Quartz/ Silica Sand	Banka - Katuria, Chanan	3.147	Low grade
		Jamui - Mica Pegmatite of Kodactahi Sirmultala	0.002	
		Munger – Nawagaro, Bhedariyur, Mujharpur, Morway	6.582	
		Nalanda - Madah	0.007	
			9.738	
12	Gold	Jamui - Karmatia W. Champaran - Balmikinagar	Ore- 128.88 (Gold content Avg. 0.167 gm/tonne ore) (Gold content Avg. 0.1 to 0.6 gm/tonne ore)	Placer Gold occur as minute flakes in sand
13	Quartzite	Munger – Patam, Mirzapur, Ronakabad Rampur, Sitakund, Jattori Haveli Kharagpur to Jamalpur Jamui - Between sono and Chakai Gaya - Ramshila Hill & Prestshilla	203.30 Not estimated Not estimated	Refractory is Steel grade
14	Slate & Phyllite	Munger – Dharhara, Kajra, Kharagpur Hill	4.7 million cubic metre	High grade
15	Galena	Banka – Katuria, Abarakha	Trace	High grade
16	Graphite	Jamui – Near Simultala	No estimated	Low grade

Appendix - X

Granite

Sl. No.	Name of District	Colour of Granite	No. of Deposits	Reserve (In M.CU.M)
1	Banka	Multi Colour	15	00.52
2	Jamui	Gray	8	03.50
3	Nawada	Multi Colour	1	00.60
4	Jehanabad	Gray	3	27.00
5	Gaya	Gray to Buff	3	00.42
		Total	30	32.04

Source : Department of Mines and Geology, Government of Bihar

Appendix – XI

Progress Report of Financing Under Small & Medium Establishment Credit Card

Month : December 2006

(Rs. In Lakh)

Sl. No.	District	Target	Application Recommended Generated by Banks		Sanctioned		Disbursed		% Disburse/Target
		No	No.	Amount	No.	Amount	No.	Amount	
1	2	3	4	5	6	7	8	9	10
1	Araria	0	1	1	0	0.00	0	0.00	***
2	Arwal	66	22	62.40	5	5.40	5	5.40	8
3	Aurangabad	250	8	10.75	0	0.00	0	0.00	0
4	Banka	214	7	7.00	7	7.00	7	7.00	3
5	Begusarai	3420	15	4.23	13	3.75	13	3.75	0
6	Bhagalpur	50	15	17.80	9	12.80	9	12.80	18
7	Bhojpur	50	16	24.55	15	23.55	12	18.501	24
8	Buxar	230	20	45.00	20	45.00	20	45.00	8
9	Darbhanga	230	21	10.50	21	10.50	21	10.50	9
10	E-Champaran	0	0	410.05	0	410.05	0	410.05	***
11	Gaya	164	300	600.00	300	600.00	200	400.00	122
12	Gopalganj	22	8	16.00	4	7.60	4	7.60	18
13	Jamui	98	3	12.87	0	0.00	0	0.00	0
14	Jehanabad	82	7	3.50	1	0.50	1	0.50	1
15	Kaimur	54	10	54.00	0	0.00	0	0.00	0
16	Katihar	350	16	40.00	16	40.00	16	40.00	5
17	Khagaria*	352	4	11.50	4	11.50	3	8.00	1
18	Kishanganj	117	38	41.65	38	41.65	38	41.65	32
19	Lakhisarai	25	5	7.50	1	5.00	1	5.00	4
20	Madhepura	10	1	3.00	0	0.00	0	0.00	0
21	Madhubani	364	0	0.00	0	0.00	0	0.00	0
22	Munger	175	178	185.00	90	77.50	87	75.25	50
23	Muzaffarpur	898	0	0.00	5	2.65	5	2.65	1
24	Nalanda	280	20	20.00	0	0.00	0	0.00	0
23	Nawada	200	30	8.00	28	7.00	28	7.00	14
26	Patna	1000	322	453.17	292	421.17	204	244.77	20
27	Purnea*	238	6	3.50	0	0.00	0	0.00	0
28	Rohtas	458	300	85.05	235	65.05	235	65.05	51
29	Saharsa	280	95	23.70	95	23.70	95	23.70	34
30	Samastipur	400	13	27.00	14	25.00	13	15.00	3
31	Saran	780	6	31.00	2	13.00	2	13.00	0
32	Sheikhpura	25	1	1.00	0	0.00	0	0.00	0
33	Sheohar	70	0	0.00	0	0.00	0	0.00	0
34	Sitamarhi	70	14	15.65	0	0.00	0	0.00	0
35	Siwan	300	30	122.00	30	122.00	30	122.00	10
36	Supaul	50	150	43.80	150	43.80	15	43.80	300
37	Vaishali	520	137	127.00	85	48.50	85	48.50	16
38	W. Champaran	0	2	1.00	2	1.00	2	1.00	***
	Total	11892	1821	2530.17	1482	2074.67	1286	1677.47	11

Appendix - XII

Progress Report of Financing Under Artisan/Swarojgar Credit Card

Month : December 2006

(Rs. In Lakh)

Sl. No.	District	Target	Application Recommended Generated by Banks		Sanctioned		Disbursed		% Disbursed/ Target
		No	No.	Amount	No.	Amount	No.	Amount	
1	2	3	4	5	6	7	8	9	10
1	Araria	150	67	16.28	29	8.13	29	8.13	19
2	Arwal	125	9	1.85	9	1.85	9	1.85	7
3	Aurangabad	35	5	1.25	0	0.00	0	0.00	0
4	Banka	448	185	61.05	12	3.30	12	3.30	3
5	Begusarai	3420	95	20.30	72	10.50	72	10.50	2
6	Bhagalpur	325	1409	352.25	100	25.00	100	25.00	16
7	Bhojpur	500	51	14.45	46	12.11	46	12.11	9
8	Buxar	384	472	118.62	120	30.62	120	30.62	31
9	Darbhanga	625	522	170.94	522	170.94	522	170.94	84
10	E-Champaran	290	471	190.90	471	190.90	471	190.90	162
11	Gaya	1420	1010	271.00	129	32.25	22	4.00	2
12	Gopalganj	152	116	29.00	66	16.50	66	16.50	43
13	Jamui	40	32	7.55	2	0.50	0	0.00	0
14	Jehanabad	218	102	41.00	6	1.50	6	13.50	3
15	Kaimur	300	25	12.00	0	0.00	0	0.00	0
16	Katihar	1126	461	0.00		92.00	308	92.00	27
17	Khagaria*	284	2	1.00	2		2	1.00	1
18	Kishanganj	270	60	17.20	57	15.25	57	15.25	21
19	Lakhisarai	66	100	26.25	0	0.00	0	0.00	0
20	Madhepura	193	208	60.00	55	12.95	55	12.95	28
21	Madhubani	1607	1247	322.00	1010	245.00	895	214.00	56
22	Munger	150	210	54.90	25	3.35	18	2.25	12
23	Muzaffarpur	1395	58	14.50	20	3.75	20	3.75	1
24	Nalanda	600	190	18.00	170	63.00	0	0.00	0
23	Nawada	100	0	0.00	0	0.00	0	0.00	0
26	Patna	1100	1681	304.90	217	63.75	115	46.50	10
27	Purnea*	596	14	8.30	0	0.00	0	0.00	0
28	Rohtas	93	70	24.00	60	20.00	60	20.00	65
29	Saharsa	50	28	7.05	5	1.21	5	1.21	10
30	Samastipur	800	209	51.90	160	40.05	160	38.05	20
31	Saran	2080	73	13.59	24	4.96	22	4.46	1
32	Sheikhpura	33	7	1.20	0	0.00	0	0.00	0
33	Sheohar	275	212	57.17	73	17.10	73	17.10	27
34	Sitamarhi	525	237	8.50	203	49.80	198	48.25	38
35	Siwan	605	185	46.25	124	29.65	124	29.65	20
36	Supaul	60	14	2.30	0	0.00	0	0.00	0
37	Vaishali	1416	980	228.50		200.01	870	200.01	61
38	W. Champaran	143	10	2.00	0	0.00	0	0.00	0
	Total	22299	10827	2677.95	4967	1366.93	4457	1221.78	20

Appendix – XIII

**BIHAR STATE FINANCIAL CORPORATION
Sale of Mortgaged Assets**

Financial Year	No of Units offered for sale	Units Sold	(Rs. Lakh)		
			Amount of Sale		
			Total Consideration Amount	Initial Payment	Balance Amount
2000 – 2001	73	32	409.98	130.20	279.78
2001 – 2002	123	110	1087.90	540.66	547.34
2002 – 2003	51	53	1604.92	215.40	1389.52
2003 – 2004	71	35	486.24	274.91	21.33
2004 – 2005	102	25	333.23	104.54	228.69
2005 – 2006	176	NA	NA	NA	NA
Total	596	255	3922.27	1265.71	2466.66

N.A. : Not Available

Source : Bihar State Finance Corporation

Appendix - XIV

Proposal Approved by State Investment Promotion Board (SIPB) upto January 15, 2007

Sl.	Name of Company	Proposal	Investment (In Rs. Crores)	Direct Employment	SIPB Approval date	CM/ Cabinet approval date
1.	M/S Netarhat Alumini Educational Trust (Vidya Vihar Educational Trust), Purnea	Proposal for Establishment of Engineering College in Purnea	6.74		27-2-06	13-06-06
2.	M/s International Tractors Ltd., Hosiarpur, Punjab	Proposal for production of Tractor Commercial Vehicle in Bihar	150.00 Capital outlay		27-2-06	
3.	M/s Oil Tech Pvt. Ltd., Prakash Chandra Rastogi, C-110/7, I.I.T., Kanpur, U.P.	Establishment of Solvent Extraction Plant at Kaimur District	59.75	150	20-3-06	
4.	M/s Universal Empire Group, C-04/23, First Floor, Safdar Ganj Development Area, Haujkhas, New Delhi.	Establishment of Medical College at Bettiah District			20-3-06	
5.	M/s Gangotri Iron & Steel Co Ltd., Exhibition Road, Patna. Fax : 0612-2685959 Phone : 2665456 E-mail : gcplpat@sancharnet.in	Capacity expansion of the Unit and TMT and M.S. Twisted Bars production proposal	33.8		29-3-06	22-10-06
6.	M/s Century Ply Wood Ltd., Kokkata. Cement Manufacturing company Ltd., Sajjan Bhajanka, Chairman, 281 Deepali Pitampura, New Delhi – 110 034	Establishment of Cement Grinding Plant	119.00	300	17-4-06	08-09-06
7.	M/s Hai Medicare & Research Institute Pvt. Ltd., Patna.	Establishment of Minority Medical College at Rajabazar, Patna	8.00		2-5-06	
8.	Dr. Ashok Kumar Medical World 4U Ltd., Sussex.	Establishment of Medical College and Super Specialty Hospital at Patna	148.87		2-5-06	08-09-06
9.	M/s Adarsh Divya Vikash Hospital and Research Centre, Patna	Establishment of Multipurpose Medical Facilities and Research Centre in Hajipur.	275.00	622	2-5-06	
10.	Sri Vinod Kumar Chaudhary, M/s Ambedkar Medical & Technical Educational Development Trust, Lohiya Nagar, Patna	Establishment of Medical and Dental College at Arrah (Bhojpur)	35.076		2-5-06	31-07-06

Sl.	Name of Company	Proposal	Investment (In Rs. Crores)	Direct Employment	SIPB Approval date	CM/ Cabinet approval date
11.	Dr. Rajeshwar Thakur, Patna.	(i) Proposal for Multi Super Specialty Hospital in the Jay Prabha Hospital Complex K. Bagh, Patna. (ii) Establishment of Medical College (with training of National repute.)	500.00 300.00		2-5-06	
12.	M/s Indo-American Medical Foundation, USA Dr. Purshottam Madhu	Establishment of Hospital and Medical College in 30 KMs of Patna.	100.00		2-5-06	
13.	M/s Medi Contrivers India (P), Ltd, Jogeshwari Mumbai.	Establishment of Medical College and Modernization of MJK Hospital, Bettiah (W.Champaran)		700	2-5-06	
14.	M/s Rajeshri Sugar Mills and Chemicals Ltd., Coimbatore.	Establishment of 5000 TCD Sugar Mill in Marukia, Madhubani.	238.50	1500	22-5-06	11-07-06
15.	M/s Rajeshri Sugar Mills and Chemicals Ltd., Coimbatore	Establishment of 5000 TCD Sugar Mill in Kotwa. (W. Champaran)	242.50	1500	22-5-06	11-07-06
16.	M/s Raj Laxmi Industries, C/o Jain Paper Agency, Rajan Complex, Naya Tola, Patna.	Off-Set Paper Printing and Paper Conversion	3.00	70	19-6-06	
17.	M/s Jesuit Society Provincial Residence, Patna.	Rural Management and Allied Institute (Near Balmi Complex)			10-7-06	
18.	M/s Dhauladhar Impex Pvt. Ltd., F-1, Gorakh Nath Complex, East Boring Road, Patna.	Establishment of Sugar Mill 3500 TCD and 50 KLPD Distillery Plant at Bettiah.			10-7-06	
19	M/s Brahmaputra Consortium Ltd., New Delhi	Private Industrial Park, Bihta.	200.00		10-7-06	
20.	M/s Indian Gasohol Ltd., Tamilnadu.	Establishment of four Maize processing units.	2500.00		10-7-06	22-09-06
21.	M/s Indian Glycols Ltd. C-124, Okhla Industrial Area, Phase-1, New Delhi.	10000 TCD-Sugar Mill and 96000 KL/A Distillery and 20 MW-Co-Generation Plant.	550.00	317	10-7-06	17-08-06
22.	M/s Suncancer Hospital and Research Institute, Patna.	Establishment of cancer Hospital and Research Instit.			10-7-06	
23.	M/s Loard Buddha Shiksha Prathisthan, Saharsa	Medical College Hospital	100.00		24-7-06	
24.	M/s Rajeshri Sugar Mills and Chemicals Ltd., Coimbatore	Establishment of 5000 TCD Sugar Mill, 60 KLPD distillery and 30 MW Co-generation Plant in Muzaffarpur District	242.50	500	24-7-06	10-08-06

Sl.	Name of Company	Proposal	Investment (In Rs. Crores)	Direct Employment	SIPB Approval date	CM/ Cabinet approval date
25.	M/s Dhampur Sugar Mills, 221 Okhla Industrial Estate, Phase-III, New Delhi	5000 TCD Sugar Mill, 60KLPD Distillery and 30MW Co-generation Plant	185.00	500	24-7-06	10-8-06
26.	M/s Shrigenesh Sugar Mills Pvt. Ltd., IB-151, Sector-III, Salt Lake City, Kolkata.	5000 TCD Sugar Mill	140.00	210	24-7-06	10-08-06
27.	M/s Jay Mangla Sugar & Power Pvt. Ltd., Jagat Amrawati Apartment, Bailey Raod, Patna.	5000 TCD Sugar Mill, 60 KLPD Distillery and 28 M.W Co-generation	196.59	200	24-07-06	10-08-06
28.	M/s Telecomand Software Pvt. Ltd., Kaithar.	¾ Years Course on Computer Science			01-08-06	
29.	M/s Bharat Sugar Mills, Singhwalia, Gopalganj	Expansion of Sugar Mill from 2500 TCD to 5000 TCD and 15 M.W Co-generation Plant.	137.00		01-08-06	15-09-06
30.	M/s P & M Infrastructure Pvt. Ltd., 47/B, Shri Krishna Puri, Patna	Establishment of 5000 TCD Sugar Mill, 60 KLPD Alcohol Plant & 25 M.W. Co-generation Plant at Guruwalia Biswas (Vill.), Chanpatia (Block) Distt.- Bettiah (West Champaran).	146.93	330	1-08-06	05-10-06
31.	M/s Remco Industries Ltd. Kharagpur, Distt.- Midnapur.	Asbestos Cement Products in Kanti, Muzaffarpur	30.00	100	1-08-06	22-10-06
32.	M/s S.B. Overseas Ltd., Kolkata.	Establishment of 2500 TCD (Expandable up to 5000 TCD) Sugar Mill, 30 KLPD Alcohol Plant & 8 M.W. Co-generation Plant in Nalanda.	122.40	370	1-8-06	30-08-06
33.	M/s Kamlapur Sugar & Industries Ltd. Kolkata.	8000 TCD Sugar Mill, 120 KLPD Distillery Plant & 26 M.W. Power Plant at Vill-Barhan-Benusar-Bormam-ukund Block- Dist.- Siwan	487.80	450	7-8-06	17-10-06
34.	M/s Kamlapur Sugar & Industries Ltd. Kolkata.	8000 TCD Sugar Mill, 120 KLPD Distillery Plant & 26 M.W. Power Plant at Vill-Eraji, Orhara Dhoni, Block-Rajaun, Dist.- Banka.	487.80	450	7-8-06	17-10-06
35.	M/s Vikash Metal & Power Ltd., Kolkata.	Integrated Steel Plant	850.00	3100	7-8-06	
36.	M/s Shakti Sudha Industries, Boring Road, Patna	Establishment of Makhana Processing Unit & with Backward/ Forward Linkage.	70.00	14-08-06		

Sl.	Name of Company	Proposal	Investment (In Rs. Crores)	Direct Employment	SIPB Approval date	CM/ Cabinet approval date
37.	M/s Balmukund Lease –Fin (P) Ltd., Exhibition Road, Patna	5000 TCD Sugar Mill 60 KLPD Alcohol Plant & 26 M.W. Power Plant at Muzaffarpur.	202.65			
38.	M/s Riga Sugar Co Ltd., Netajee Subash Road, 2 nd Floor, Kolkata.	Expansion of Sugar Mill from 3500 TCD to 5000 TCD, 7.7 Megawatt Co-Generation Plant and 50 KLPD Distillery	37.98	739	14-8-06	07-11-06
39.	M/s Harinagar Sugar Mills Ltd. W-Champaran	Capacity expansion of Sugar Mill form 8500 TCD to 10000 TCD	39.96	2112	14-8-06	07-09-06
40.	M/s New Swadeshi Sugar Mills, Narkatiaganj	Capacity expansion of Sugar Mill from 5000 TCD to 7500 TCD, 30 KLPD to 100 KLPD Distillery, 5 M.W. Co- generation Plant.	107.40	728	21-8-06	30-11-06
41.	M/s Patna Notre Dem Sister's Society, Patliputra, Patna	Establishment of Media arts and Communication.	3.32		21-8-06	
42.	M/s Ambuja Cement Eastern Ltd., Howrah.	Establishment of Cement Plant of 40 Lakh MT Capacity.	138.79	140	21-8-06	
43.	M/s Riga Sugar Co. Ltd., Kolkata.	Establishment of 2500 TCD Sugar will with Co-generation at Naya Gaon, Darbhanga.	94.94	400	06-9-06	
44.	M/s Balmukund Concast Ltd., Patna	Capacity expansion of MS Road and Steel Production from 28350 MTA to 52350 MTA in the Bihta (Mahadeopur, Fulari) Unit.	13.96	175	06-9-06	22-10-06
45.	M/s Harinagar Sugar Mills Ltd., Harinagar, W-Champaran	Establishment of 45 KLPD Distillery Plant	45.00	89	06-9-06	22-10-06
46.	M/s Ganga Bangali Jute Twin Mills, Begusarai	Establishment of 5840 MT/Annum Capacity of Jute Yarn.	8.83	600	06-9-06	
47.	M/s Bihariji Flour Mills (P) Ltd., Patna City.	Establishment of 11500 Tons/Month Parle-G Biscuit in collaboration with Parle Biscuit (P) Ltd. in Hajipur, Industrial Area	8.55	208	06-9-06	22-10-06
48.	M/s Bihar Co-operative Sugar Mill Federation Ltd., Patna	5000 TCD Sugar Mill, 30 KL Ethyl Alcohol Plant, 28 MW Co-generation Plant in Supaul.	180.00	846	20-9-06	08-11-06

Sl.	Name of Company	Proposal	Investment (In Rs. Crores)	Direct Employment	SIPB Approval date	CM/ Cabinet approval date
49.	M/s International Amusement Ltd., (APPU Ghar), New Delhi.	Development of Mega Tourism City at LTC Ghat, Patna	1321.79	600	20-9-06	
50.	M/s Vishnu Sugar Mills Ltd., Gopalganj	Capacity expansion of Sugar Mills from 5000 TCD to 7500 TCD.	41.00		26-9-06	02-12-06
51.	M/s Protech Bio-System Pvt. Ltd., New Delhi	Establishment of Drug Formulation Plant at Hajipur.	35.00		26-9-06	06-01-07
52.	M/s Sharma Group of Industries, Aurangabad, Maharastra	Establishment of RPVC Pipes, SWR Pipes & fittings	7.50		9-10-06 (Consent in principle)	
53.	M/s Dhanuka Pesticides Ltd., New Delhi	Establishment of Agri Malls and Multiplex Complex			9-10-06 (Consent in principle)	
54.	M/s M.P Chini Industries Ltd., Majahaulia, West Champaran	Capacity expansion of Sugar Mills from 3500 TCD to 5000 TCD	24.35		9-10-06	15-12-06
55.	M/s Hasanpur Sugar Mills, Hasanpur Road, Samastipur Fax-06275-258232 Phone- 06275-258294	Expansion of Sugar Mill First phase-1750 TCD to 3000 TCD. (Investment Rs. 99.094 Crores) Second phase – 3000 TCD to 5000 TCD. (Investment Rs. 50.956 Crores)	150.050	532	23-10-06	05-01-07
56.	M/s Jagat Developers Ltd., 'Ujwal', 2 nd Floor, Bailey Road, Opposite, Patna, Museum	Establishment of Sugar Specialty Hospital in Belly Road, Patna	45.00	700	23-10-06 (Consent in Principle with condition)	
57.	M/s Purvanchal Urja Pvt. Ltd., R.Z.-1/57, Tuglakabad Extension, New Delhi-110 019 Fax – 011-26088750, 26082233	Establishment of Renewable Energy Power Plant (Biomass Based Power Plant in Buxar Industrial Area)	4.00	22	23-10-06 (consent in Principle with condition)	
58.	M/s Indian Gasohol Ltd. Erode, Tamilnadu	Proposal for establishment of ten unit of 100% export oriented Ethanol Plant of 5.4 million tons from sugarcane juice in five district of Bihar as Araria, Bhojpur, Rohtas, Begusarai and Jamui.	13451	5000	06-11-06	05-01-07
59.	M/s Riga Sugar Co. Ltd., Kolkata Fax-(033) 22303663 E-mail : dhanukas@cal2.vsnl.net.in	2500 TCD to 5000 TCD Expandable (within three years) and 15 Megawatts Co-generation Plant.	161.46		06-11-06	09-01-07

Sl.	Name of Company	Proposal	Investment (In Rs. Crores)	Direct Employment	SIPB Approval date	CM/ Cabinet approval date
60.	M/s G.M.R. Industries Ltd., Hyderabad, Andhra Pradesh, Pin-500 016 Phone- 04023410191 Fax- 04023410184	Proposal for establishment of 2500 TCD sugar mill (Expandable up to 10000 TCD), 18 Megawatt co- generation	220.00	350	13-11-06	
61.	M/s Vishnu Sugar Mills Ltd., Gopalganj.	Proposal for establishment of 45 KLPD Distillery Plant and 15 MW Co-generation Plant in factory situated at Gopalganj	49.00 45.06	400	13-11-06	26-12-06
62.	M/s Kishan Uday Raj Sugar Complex Swablambi Sahkari Samiti Limited, Paru, Muzaffarpur.	Proposal for establishment of 5000 TCD Sugar Mill, 60 KLPD Ethanol Plant and 8 MW Co-generation Plant at Paru, Muzaffarpur.	223.00	500	27-11-06	
63.	M/s Dhanuka Pesticide Limited, New Delhi	Establishment of Fruit and Vegetable Centre on Hajipur- Mzaffarpur High-way.			27-11-06	
64.	M/s J.H.V distilleries & Sugar Mills Limited, Marhowrah, Saran, Chapra	Establishment of 6000 TCD Sugar Mill, 25 MW Co- generation Plant at Marhowrah, Dist.-Saran (Chapra)	172.54	450	04-12-06	
65.	M/s Suprabhatam Sugar Industries Pvt. Ltd., 104-22 Gaurav Towar, P.V.R. Sonia Complex, Vikash Puri, New Delhi.	Establishment of 5000 TCD Sugar Mill, 30 KLPD Ethanol Plant and 8 MW Co- generation Plant at Vill.- Kopa Kola, Danapur, Patna	230.00	210	04-12-06	
66.	M/s P & M Infrastructure Pvt. Ltd., 47/B, Shri Krishna Puri, Patna	Establishment of 3500 TCD Sugar Mill and 12 MW Co- generation Plant at Vill.- Sitanabad, Block-Simri, Bakhtiyarpur, Dist.-Saharsa	108.68	200	04-12-06	
67.	M/s Dhanuka Pesticide Limited, New Delhi, Phone: (011) 23519461-62-63 Fax : (011) 23518981 E-mail : dhanuka@bol.net.in Website : www.dhanuka.com	Setting up of a Fully Integrated Fruit and Vegetable Processing Complex at Hajipur in two phases	55.00	200	20-12-06	
68.	M/s Signet Hotels Consortium, 15 B, Zaver Mahal, 66, Marine Drive, Mumbai – 400 020 Phone : 022-8176856 Mobile : 9820270696 E-mail : yadava@aol.com , ekp@umich.edu	Establishment of world class standard hotels at Patna, Rajgir and Bodhgaya	90.00	450	20-12-06	

Sl.	Name of Company	Proposal	Investment (In Rs. Crores)	Direct Employment	SIPB Approval date	CM/ Cabinet approval date
69.	M/s Winsome International Ltd., Unit:- Rameshwara Jute Mills, 301, Viashno Chambers (3 rd Floor) 6, Brabourne Road, Kolkata-1 Fax : 03-3259822	Proposal for establishment of new Jute Mills of 100 MT/day at Purnea / Kishanganj in Bihar	61.00 Crores	3121	15-01-07 (Consent in Principle)	
70.	M/s Braj Industries Pvt. Ltd., P.O.- Sadanandpur, Dist.- Begusaria – 851211	Proposal for manufacturing of 190 Kilo Litter per day Ethanol from Sugarcane Juice at Purnea	82.00 Crores	120	15-01-07	
71.	M/s Braj Industries Pvt. Ltd., P.O.- Sadanandpur, Dist.- Begusaria – 851211	Proposal for manufacturing of 190 Kilo Litter per day Ethanol from Sugarcane Juice at Sahpur Kamal, Dist.-Begusarai	82.00 Crores	120	15-01-07	
72.	M/s Patwari Steels Pvt. Ltd., 6-M, Rajendra Nagar, Patna-16, Fax :- 91-0612-2688874	Proposal for expansion of production capacity of Steel Ingot, M.S. Bar and Rod and Production of Cast Grinding Media Ball.	5.08 Crores		15-01-07 Proposal noted	

Source : Government of Bihar

CHAPTER IV

PHYSICAL INFRASTRUCTURE

4.1 Introduction

Bihar is in a process of developing its physical infrastructure in the post-bifurcation period. This encompasses a wide range of activities related to power, roads, road transport and inland water transport, railways, civil aviation, telecommunications, radio and TV. This Chapter records and highlights the state of physical infrastructure and some of the major initiatives in this direction in Bihar. Under the present Constitutional arrangements, the responsibility of developing some aspects of physical infrastructure lies with the State government, while others are managed by the Central government. Within the purview of the State government, this report discusses power, roads, road transport and public health engineering and, within the purview of the Central government, the aspects covered are railway, civil aviation, postal communication, telecommunications, radio/television and inland waterways. Separating out the domains of responsibility of the State and Central governments and then taking an overview of infrastructure related issues provides a better basis for understanding the scenario.

A : Physical Infrastructure – State Government

4.2 Power Sector

After bifurcation, 70 percent of the generation capacity of erstwhile Bihar has fallen within the jurisdiction of the state of Jharkhand, but 70 percent of the load is left with present Bihar. Bihar's power generating capacities were considerably diminished to just 540MW of capacity in thermal plants in Barauni (320 MW) and Muzaffarpur (220 MW). This installed capacity has been in a decrepit state and in need of a complete renovation. The power generating units of both these stations, besides being of small unit size, are very old and they suffer from long usage, irregular maintenance and lack of availability of spares. In the last three years, there has just been 30 MW of power generation in Barauni and no production at all in Muzaffarpur. In their present condition, both the stations are under shut down and are being taken up for renovation and modernization.

The meagre generating capacity of the power units of Bihar is not in any position to be utilized in the absence of thorough overhauling and substantial renovation and modernization. Thus, at the moment, Bihar is totally dependent for power on its share in Central power stations. Bihar's dependence on central sector power sections is illustrated in Table 4.1. Bihar receives a total of 1000 MW of power from the Central power stations. Bihar is also dependent on Damodar Valley Corporation for electricity.

Table 4.1. : Share of Bihar in Central Sector Power Stations

Central Power Sector Stations	Share of Bihar (in MW)
Kahalgaon TPS	265.19
Farakka St-1 and St 2	362.88
Tala Hydel	86.70
Talcher TPS	354.00
Rangit	21.00
Chukha HEP	80.00
Total	1169.77

By 2007, Bihar's peak demand is projected to be 2332 MW and energy demand is projected to be 12 billion units. Thus, there is a huge gap between supply and demand in the power sector that might exacerbate even with the 11th Five-Year Plan projections of increased share of Bihar in Central projects to the tune of 1297 MW. The peak shortage has varied between 19 percent and 15.1 percent between 2003-04 and 2005-06 as described in Table 4.2, and the absolute level of shortage has gone up from 185 MW in 2003-04 to 198 MW in 2005-06.

Table 4.2. : Power Supply Position in Bihar

Shortage	2003-04 (Requirement)	2003-04 (Shortage)	2004-05 (Requirement)	2004-05 (Shortage)	2005-06 (Requirement)	2005-06 (Shortage)
Peak	185MW	19.0%	-	-	198MW	15.1%
Energy	1710MU	22.5%	725MU	10.0%	737MU	9.3%

Supply of electricity in Bihar is organized by Bihar State Electricity Board (BSEB) under seven area boards **PESU** (Patna), **Central** (Arrah, Bhabua, Buxar, Nalanda, Sasaram), **Magadh** (Aurangabad, Gaya, Jehanabad, Nawadah), **Bhagalpur** (Banka, Bhagalpur, Jamui, Lakhisarai, Munger, Sheikhpura), **Tirhut** (Bettiah, Chhapra, Motihari, Gopalganj, Muzaffarpur, Sheohar, Sitamarhi, Siwan, Vaishali.), **Mithila** (Begusarai, Darbhanga, Madhubani, Samastipur) and **Kosi** (Araria, Katihar, Khagaria, Kishanganj, Madhepura, Purnea, Saharsa, Supaul). Total number of urban consumers is 4,89,098 according to figures obtained from BSEB.

4.3 Power Generation Status

At present, there are two power generating units in Bihar – Barauni Thermal Power Station and Muzaffarpur Thermal Power Station which are under restoration. In addition, a limited amount of power (25 MW) is available from the hydel power stations in the State. The status of these power units are very unsatisfactory for reasons described below.

Barauni Thermal Power Station

Units Nos. 1, 2 and 3 (3x15 MW) of this station were declared retired between 1983-85 due to uneconomical operations. Units No. 4 and 5 (2x50 MW) are of Polish-make and are under shut down since 1996 and 1995 respectively due to pollution problems as well as for refurbishment. The Planning Commission had identified these units for renovation and modernization in the 10th Plan. Accordingly a team of experts from NTPC, CEA and BSEB visited the site, completed their viability study and opined that both the units would be viable after completion of renovation and modernization. The Committee recommended Unit No. 5 for immediate restoration as its turbine was new, while Unit No. 4 was recommended for renovation and modernization works. Action is being initiated for revival of these units in consultation with NTPC. A sum of approximately Rs. 200 crore approximately is estimated to be spent on it, which is proposed to be met by funds from the Rashtriya Sam Vikas Yojna. After completion of renovation and modernization works, 100 MW power shall be available from the units at 80 percent Plant Load Factor (PLF).

Units Nos. 6 & 7 (2x110 MW) are of BHEL-make and were operating at 30/35 MW intermittently and badly need restoration, renovation and modernization. The schedule maintenance/capital maintenance of the units could not be carried out on time due to pressing demand of electricity and non-availability of funds. Units have overworked under such non-congenial operating conditions

that they have further deteriorated in capacity. For improvement in generation, in the light of the recommendation of the Planning Commission, BHEL has been appointed as executing agency for carrying out renovation and modernization works under the supervision of NTPC. A sum of Rs. 221 crore is estimated to spent on the above work, which will be met by funds from the Rashtriya Sam Vikas Yojna. It is expected to get about 80 MW of power by March 2007 after restoration of one unit.

Muzaffarpur Thermal Power Station

Both the BHEL make units are shut down since October-03 due to high oil consumption leading to high generation cost. Timely schedule and capital maintenance of both the units were not taken up in the past due to paucity of fund as well as pressing demand of electricity. The unit is not in a position to run anymore. In the light of recommendation of the Planning Commission to improve the power generation scenario, BHEL has been appointed as executing agency to carry out restoration and modernization works of MTPS units under supervision of NTPC at an estimated cost of Rs 222 crore to be met by Rashtriya Sam Vikas Yojana funds. The restoration work in this power station has already started. The cost of work will be Rs. 506.20 crore for repair and maintenance (R&M) works of Units No.1&2 of MTPS and Units No.6&7 of BTPS. The estimated costs are Rs 249.1 crore for MTPS and Rs 257.10 crore for BTPS. It is expected to get 80 MW of generation by March 2007 after the restoration work in one unit.

Hydel Power Stations

Presently Bihar has a very small hydroelectric (hydel) power generating capacity with installed capacity of 44 MW, but the units are operational periodically depending on the availability of water and are generating about 25 MW of power. The total hydropower generating capacity of 44 MW comes from the Koshi, Sone East and West Canal and the East Gandak canal hydropower projects in the state. The details of these hydel power plants are presented in Table 4.3

Table 4.3 : Existing Hydel Power Plants in Production

Hydel Power Plant	District	Capacity (MW)
Dehri	Rohtas	4 x 1.65
Vaarun	Aurangabad	2 x 1.65
Valmikinagar	West Champaran	3 x 5.00
Kataiya	Supaul	4 x 4.80
Agnoor	Arrwal	2 x 0.50
Dhelabag	Rohtas	2 x 0.50

Source : Bihar State Hydroelectric Power Corporation

4.4 New Power Projects

There are some new projects in the pipeline to improve overall power generation situation involving a total estimated project cost of Rs 19750 Crore. These projects are likely to be taken up in the beginning of the 11th Five Year Plan.

A brief summary of plans for these projects appear in the table below.

Table 4.4 : Details of New Projects

Sl.	New Projects	Capacity	Total Capacity	Estimated Project Cost (in Rs Crores)
1.	Barauni TPS Ext Stage-I	2x250 MW	500 MW	2,250.00
2.	Pirpainti T.P.S.	4x500 MW	2000 MW	8,000.00
3.	Nabi Nagar TPS	2x660 MW	1320 MW	5,500.00
4.	Katihar TPS	4x250 MW	1000 MW	4,000.00
	Total		4820 MW	19, 750.00

Source : <http://bseb.bih.nic.in>

Out of these projects, the Barauni T.P.S. extension project is going to be taken up under the state sector. The remaining three projects are planned as public private partnerships (PPP). Meanwhile, the NTPC has agreed to take up Nabinagar mega power project under a joint-venture company with 50:50 partnership between NTPC and Government of Bihar/BSEB. All of these power projects are likely to be completed in 54 months.

Hydel Power : In consideration of the limits on thermal power in the State, emphasis is being given on hydel power generation. There are a large number of hydel power plants which are in the process of being built (Table 4.5) and which are expected to add 44.1 MW to the current generating capacities. These are spread over five districts and thus should contribute to

Table 4.5 : Commissioned Projects of Bihar State Hydroelectric Power Corporation (BSHPC)

Name	District	Capacity (MW)
Dehri	Rohtas	6.6
Valmiki Nagar	West Champaran	15.0
Barun	Aurangabad	3.3
Kataiya	Supaul	19.2
Total		44.1 MW

Source : Bihar State Hydroelectric Power Corporation

lower transmission costs. In addition, there are 18 small projects under construction and were scheduled to be commissioned by June 2006. Out of these 18 projects, 17 are being constructed with loans from NABARD.

There is a proposal for the collaboration of a 4x100 MW Nuclear Power Plant Station at Rajauli. This will have a total capacity of 2000MW. The estimated cost of the project is Rs 16000.00 crore assessed at Rs 8 crores per MW. The process of site selection is under progress.

4.5 Renewable Energy

There have been initiatives to build district level Energy Parks in West Champaran, Bhagalpur, Begusarai, Gopalganj, Supaul, Muzaffarpur and Kaimur by Bihar Renewable Energy Development Corporation. Funds received from the Central Government towards renewable energy development have been released to 23 out of the 38 districts in Bihar.

4.6 Rural Electrification

There are 45,103 villages in Bihar. Out of that, 47 percent had been electrified by 2004-2005. A comparative study of Bihar with the rest of India emerges from the Table 4.6. Bihar lags way behind in terms of rural electrification compared to the national average of 86 percent.

Table 4.6 : Rural Electrification in India

State	No of Villages ('000)	Percentage of Villages Electrified	State	No of Villages ('000)	Percentage of Villages Electrified
All India	570.4	86	Assam	24.5	77
Uttaranchal	15.5	82	Uttar Pradesh	96.2	58
West Bengal	38.5	80	Bihar	45.1	47
Orissa	46.1	79	Jharkhand	29.4	22

Compared to the all India average of 56.5 percent of the proportion of households in rural Bihar with no access to electricity is as high as 95 percent (Table 4.7).

Table 4.7 : Rural Households Without Electricity

State	Percentage of Rural Households without Power	State	Percentage of Rural Households without Power
Punjab	10.5	Uttar Pradesh	80.0
Haryana	21.5	Orissa	80.6
Karnataka	27.8	Jharkhand	90.0
Andhra Pradesh	40.3	Bihar	95.0
West Bengal	79.7	All India	56.5

The National Policy of Rural Electrification prescribes that the State governments should ensure electrification of all the villages by 2009.

Government Initiatives in Power Sector

The Bihar State Electricity Board is being restructured into eight companies. The Power Finance Corporation has been appointed as consultant for this work. These eight companies have been notified and are in the process of registration.

- Muzaffarpur Thermal Power into a new joint venture company representing both the State Electricity Board and NTPC.
- Administrative support is to be provided in implementing anti-theft measures in the power sector. An officer of the rank of Inspector General/Deputy Inspector General of Police will oversee police support in implementing anti-theft measures in Bihar. The existing set-up serving the dual objective of vigilance and anti-theft shall be replaced by this system.
- A centralized payment system has been institutionalized for electricity dues of all government departments at both the state and at local government levels.

- Relief has been provided to defaulting consumers by waiving the delayed payment surcharge by the Bihar State Electricity Board.
- The government is adhering to a subsidy policy, which aims at coverage of at least 50 percent of cost for agricultural consumption and coverage of at least 80 percent of cost for domestic consumers within the next 5 years.
- Provision of single window clearance system has been made for renewable energy projects.
- MOUs have been signed with central undertakings to begin power generation in Kanti (Muzaffarpur) and Barauni units. It is expected that 160MW will be soon generated from these two centres.

Thus significant attempts are being made to improve the power supply situation and reduce the dependence on central supply.

4.7 Roads

The Roads Sector has been the foremost in the State Govt's Agenda. Bihar has a total road length of 81655 Kms, out of which 77.5 percent roads are village roads. National highways account for 4.4 percent of road length, while State highways are just 3.9 percent of the total road length. At the village and other district roads (ODR), there are 36851.60 Kms of kutcha roads.

Table 4.8 : Road Length Bihar (Kilometres)

Category	Pucca	Kutcha	Total	Percentage (%) to Total
National Highways (NH)	3629.00	0.00	3629.00	4.4
State Highways (SH)	3232.22	0.00	3232.22	3.9
Major District Roads (MDR)	7714.25	0.00	7714.25	9.5
Other District Roads (ODR)	2828.00	990.00	3818.00	4.7
Village Roads	27400.00	35861.63	63261.63	77.5
Total	44803.47	36851.63	81655.10	100

NB – (A total 432 km. of 9 routes are further proposed to be notified as SHs.)

The old G.T. Road is being upgraded to 4/6-Lane Super Highway under the Golden Quadrilateral Project.. Further, within national highways, an East-West Corridor is being built. This is a 4-Lane high speed corridor under construction by NHAI. Under the National Highway Development

Project-III, 890 Kilometers of National Highways have been identified for upgradation to four lane Highways under BOT providing additional corridors to Nepal and Assam.

To further improve the connectivity within the State the State Govt. has identified district roads to be converted into State Highways by launching two new initiatives called State Highway Development Programme-II & State Highway Development Programme-III. The State Highway Development Programme-I is being executed by Central agencies CPWD & IRCON.

In the financial year 2006-07, the total plan outlay was Rs. 1459.94 crores all of which has been utilised. So was the case with Non Plan expenditure wherein the entire allocation of Rs. 200 crores was spent. Within the road sector, the State Government's priority is to immediately repair the entire National Highway stretches within the State. To that end, the State Government has allocated Rs 308 crore from its own resources pending clearance by the Government of India.

Within the State Plan Schemes, Rs. 547.69 crore have been allocated for continuing schemes and Rs. 912.255 crore for new schemes. A total of 359 new schemes have been approved/sanctioned and several schemes are in the pipeline as well. Upgradation of all old State highways have been taken up under centrally funded Rashtriya Sam Vikas Yojana (RSVY) in modular format.

In addition, important major district roads and bridges thereon are being upgraded under Rural Infrastructure Development Fund (RIDF) financed by NABARD. Finally, several projects are being executed under Central Road Fund (CRF), Border Area Development Programme (BADP), Inter-State Connectivity (ISC), Economic Importance (EI) and Additional Central Assistance (ACA) projects. Under the State non-plan schemes, allocation for the year 2006-07 has been Rs. 200 crore out of which Rs. 57.93 crore have been utilized by the end of January 2006.

The bridges have been given proper allocation by launching Mukhya Mantri Setu Nirman Yojana during the past year. The approval mechanism of the bridges have been decentralized at the district level. A total of 1900 schemes have been identified of which 511 are being constructed by Bridge Construction Corporation and rest by district agencies. A total outlay of Rs. 300 crore has been earmarked for the purpose.

Government Initiatives in Roads

- Bihar State Bridge Construction Corporation was revitalized last year. Moreover, the role of this corporation has been further enhanced by giving it roads projects as well. Road construction projects worth Rs. 240 crores have already been given in the financial year 2006-07.
- To invite public sector participation and new technology, the govt. has already decided to set up State Road & Highways Development Authority. This authority shall also undertake projects on BOT basis.
- To invite new construction companies and contractors, the rules for registration of contractors have been significantly simplified inviting newer enterprises into the infrastructure sector.
- To enhance the construction capacity of the work agencies within the State, equipment banks are being set up across the State by inviting private parties to operate these banks on a wet lease basis. These equipment banks shall cater to the equipment requirements of agencies involved in road construction.
- To follow a planned approach toward road modernization and upgradation, a Road Fund is being created in the patten of Central Road Fund. All the revenues and grants towards this fund shall go into strengthening of the State road infrastructure.
- GIS mapping of all the roads has already began and this shall assist the State Govt. in future planning and upgradation of its roads.
- Quality Control has been foremost and considering its importance an external Quality Control Consultant has already been appointed which shall conduct 40,000 tests in two years and shall set up two mobile units apart from one central laboratory.

Rural Roads

For providing connectivity in rural areas of the State, village roads and bridges are constructed for which the Rural Engineering Organisation (REO) is the responsible agency. The rural roads are being constructed under various plan heads viz. Mukhya Mantri Gram Sadak Yojana (MMGSY), MLA/MLC schemes, Special Component as also under non-plan and Centrally sponsored schemes

(e.g., PMGSY). During 2006-07, for the target of constructing 4500 kms. of roads under sub-base, base and surface, a sum of Rs. 300 crore was budgeted and allocated to the Bihar Rural Roads Development Agency (BRRDA) established for the purpose. Similarly, under MLA/MLC Area Development Scheme, a sum of Rs. 335 crore has been budgeted for 2006-07, of which Rs. 161.18 crore has been spent till January, 2007. The total budget allocation for 2006-07 under Plan head is Rs. 1034.24 crore, of which Rs. 327.71 crore has been expended upto January, 2007. Under RIDF, the NABARD has allocated Rs. 200 crore in the budget for the year of which Rs. 9.86 have been spent upto January, 2007. Under the non-plan head Rs. 120 crore is budgeted of which Rs. 29.44 crore have been utilised. Similarly, under Centrally sponsored schemes, out of Rs. 1019 crore targeted amount, Rs. 462.56 crore have been spent till January 2007. Thus, as may be seen at Appendix – 1, of a total target of Rs. 3607.53 crore for rural roads, Rs. 1167.15 crore have been spent upto January, 2007.

Government Initiatives in Rural Roads

- For providing connectivity of links to habitations with population 500-999 under the head MMGSY (Mukhya Mantri Gram Sadak Yojana), about 500 km of roads will be completed during the financial year (2006-07).
- In 10 Naxal infested districts of the state, Panchayats have been identified for road connectivity under the head 'Nirmal Gram Yojana'.
- Initiatives to provide connectivity to all Sugar Mills and for cane farms (hinterland). About 258.5 km road length has already been taken up for providing road connectivity to Sugar Mills.
- GIS mapping concept is being introduced for the selection and planning of Road Connectivity Schemes.
- Quality control has been established at each 3-tier system of PR for ensuring the quality of works as per specification.
- Strengthening of BRRDA is being done to ensure connectivity of all habitations with a population of more than 1000 by 2009 under Bharat Nirman Yojana.
- Major initiatives to strengthen all other district roads (ODR) under Plan and NABARD Schemes.
- Initiatives for Capacity Building of Engineers and Contractors to enhance project implementation capacity.

4.8 Transport

The transport department is mainly responsible for collection of revenues related to road transport and registration of vehicles.

Table 4.9 : Revenue Collected by Transport Department

Year	Target (Rs crore)	Actual (Rs crore)	Percentage of Collection
2001-02	160.00	133.10	83.19
2002-03	205.00	177.54	86.61
2003-04	275.00	217.91	79.24
2004-05	308.00	257.08	83.47
2005-06	310.00	308.72	99.60
2006-07 (Till December 2006)	258.02	139.91	54.23

Source : Department of Transport

The highest revenue collected by the Transport Department was Rs 308.72 crore in 2005-06. Since then, the figure is likely to fall due to the termination of the Special Agreement under High Court order in April 2006. An assured sum of Rs 70-80 crores will no longer be available. Another change in the transport administration was lowering of the registration charges.

Table 4.10 : Number of Vehicles Registered

Year	Truck	Bus	Car	Taxi	Jeep	Auto Rickshaw	Two Wheelers	Tractor	Trailer	Others	Total
2005-06	579	113	5062	427	2321	3273	61333	3509	2440	1306	80363
2006-07 (Up to October '06)	891	459	3493	852	1995	2362	62085	2876	2972	1551	79536

Due to lower rates, the number of motor vehicles registered has gone up significantly in 2006-07 (Table 4.10).

Government Initiatives in Transport

- The Transport Department has made it mandatory to carry out pollution and fitness tests before certifying vehicles for registration.
- Issue and renewal of permits have been speeded up.
- Temporary checkposts have been set up in Durgavati, Mohania (Kaimur), Dagrua (Purnea), Rajauli (Nawada), Chainpatti (Gopalganj) and Dobhi (Gaya) to stop loss of revenue.
- Rates of various fees payable for registration, licence, permit etc. are proposed to be rationalized.
- To test and avoid overloading of vehicles that lead to accidents and damages to roads, two weigh bridges have been set up at Mohania (Kaimur) and Gopalganj.
- To promote Inland Water Transport, RITES is being appointed as consultants to survey the Kosi, Gandak and Sone rivers in order to make them navigable.
- Registration of mechanised boats has been made mandatory.

B. Physical Infrastructure – Central Government

4.9 Railways

Rail-route density, measured as route kilometres per 1000 sq. km., for Bihar is 30.15, compared to 19.09 for whole of India. However, rail-route density, measured as route kilometres per lakh of population, is 6.07 and it is one of the lowest in India. For the country as a whole, the railway route-density per lakh persons is higher at 7.42. The railway network in present Bihar is along the thickly populated Gangetic valley areas, leaving large parts of north Bihar outside its ambit. A large part of the railway network of erstwhile Bihar was around its mineral rich area in the south which has now gone to Jharkhand. This has had an adverse effect on railway route density.

Taking the entire post-independence period, the share of Bihar in the expansion programme of Indian Railways has been satisfactory. Of the total new lines laid down, the share of Bihar is 7.38 percent, 7.12 percent in terms of gauge conversion and a share of 12.8 percent in the total route kms electrified in the country. But in the period of the nineties, Bihar lost some of its advantages. The rail route density (kms per 1000 sq. kms) in Bihar was 30.53 in 1990-91 which decreased a little to 29.78 kms in 1998-99; for the country as a whole, it has however, recorded a small increase — from 18.97 kms in 1990-99 to 19.11 kms in 1998-99.

In recent years, there has been some effort by the Central government to augment the railway infrastructure in Bihar. A number of projects have been initiated in Bihar under different heads to modernise and expand railway network in the State. The major areas in which some initiatives have been taken are (a) laying of new lines, (b) gauge conversion, (c) doubling of lines and (d) electrification. Over Rs. 6200 crore worth of estimated investment has been planned for the modernization of railways in Bihar. Of this, the major portion has been earmarked for laying of new railway lines (nearly 50 percent). About 27 percent of the estimated investment in railways in the State has been earmarked for gauge conversion and the other two components, namely doubling and electrification together are slated to have a combined investment share of around 22 per cent.

4.10 Civil Aviation

Bihar has two international airports in Patna and Gaya. In addition, Darbhanga, Purnea, Gopalganj and Madhubani airports are also in a position to cater to civil aviation. The other airports in the State like Muzaffarpur, Bhagalpur, Chhapra, Arrah, Munger and Sitamarhi are in need of renovation and modernization.

Both passenger traffic and revenue has been on the rise in Bihar. Table 4.11 gives the data in this regard for the Patna-New Delhi Sector of Indian Airlines and Jet Airways, the two leading airlines in the sector. .

Table 4.11 : Passenger Traffic and Revenue for Patna-New Delhi

Details	Airline	2004-05	2005-06	2006-07
Passenger Traffic (Patna-Delhi Sector)	Indian Airlines	33920	36030	32000 (Upto December 2006))
Passenger Traffic (Delhi-Patna Sector)	Indian Airlines	44000	45233	44360 (Upto December 2006))
Revenue Generation (Patna-Delhi Sector) (Rs Crore)	Indian Airlines	16.50	17.76	20 (Upto December 2006))
Passenger Traffic (Patna –Delhi Sector)	Jet Airways	-	29260	21192 (Upto January 2007)
Passenger Traffic (Delhi-Patna Sector)	Jet Airways	-	NA	NA

Source: Indian Airlines, Jet Airways, Patna.

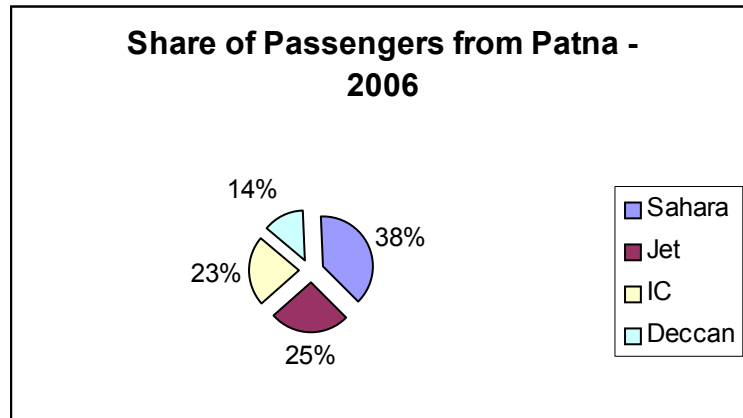
Note : Figures for Air Sahara not Available.

Details of the share of Patna and Gaya airports in the all India figures on passenger traffic and freight are provided in Table 4.12 for the year 2005-06.

Table 4.12 : Details of Patna and Gaya Airport

Percentage Share Details in All India Total	Patna (2005-06)	Gaya (2005-06)
Aircraft Movements (International Traffic)	0.00	0.30
Aircraft Movements (Domestic Traffic)	0.60	0.00
Aircraft Movement (Total Traffic)	0.50	0.10
Freight Traffic (International)	0.00	0.00
Freight Traffic (Domestic)	0.30	0.00
Freight Traffic (Total)	0.10	0.00

Source : Airport Authority of India, Patna.



Of the four airlines operating out of Patna, Sahara has the biggest passenger load, followed by Jet airways, Indian Airlines (IC) and Air Deccan.

The Bihar government is preparing a new aviation policy aimed at attracting new investors and tourists. With the help of the Central government, the airports in different districts will be given a facelift. In addition, provisions will be made for airports that will cater to chartered planes in districts which do not have an airport. Till the proposal for economic assistance from the Central Civil Aviation Ministry is cleared, the State government will undertake repair and maintenance of more than a dozen runways in different district airports.

4.11 Postal Communication

There are 9054 post offices in the State out of which 8851 post offices deliver ‘*dak*’ (Table 4.13). Each post office serves an average population of 9263. There are proposals for 14 new post offices in the State.

Table 4.13 : Details of Postal Coverage in Bihar

Details	Numbers
Post Offices	9054
Head Post Offices	31
Sub Post Offices	1011
Extra-Departmental Post Offices	8012
Delivery of Dak	8851
Panchayat Sanchar Seva Kendra	1523
Letter Boxes	904
Post Bags	84

Source : Post-Master General, Bihar Circle

Though the total amount of postal mail has seen a reduction with the advent of private courier services, the post office remains an important conduit of small savings garnering Rs 6264.62 crore in 2003-04 and Rs 7547.92 crore in 2004-05 (Table 4.14).

Table 4.14 : Details of Small Savings Garnered Through Post Offices in Bihar

Items	2003-04 (Rs Crore)	2004-05 (Rs Crore)
Savings Bank	1027.38	1187.38
Recurring Deposit	751.52	0891.57
Term Deposit	1614.49	1772.02
PPF (Public Provident Fund)	313.43	341.46
MIS (Monthly Income Scheme)	2472.48	3221.00
NSS 92 (National Savings Scheme)	85.32	85.50
Senior Citizen's Account		48.99
Total	6264.62	7547.92

Source: Post-Master General, Bihar Circle

As on March 2006, there were 50,98,124 live accounts held under different categories, details of which are stated in Table 4.15. This comes to an average of 563 accounts in each post office in Bihar.

Table 4.15: Details of Accounts Held in Post Offices

Category of Accounts in Post Offices	No of Live Accounts
Savings	2034488
Recurring Deposits	1017001
Term Deposits	1017447
Monthly Income Scheme	1021701
Public Provident Fund	3135
Senior Citizen's Account	4352
Total	5098124

Source: Post-Master General, Bihar Circle

4.12 Telecommunication

At present, there are 67.1 lakh telephone (basic plus mobile) connections in Bihar, there being four service providers. Of these four operators, BSNL commands the largest share of 41 percent, followed by Reliance, Bharti and Tata Telecom (Table 4.16).

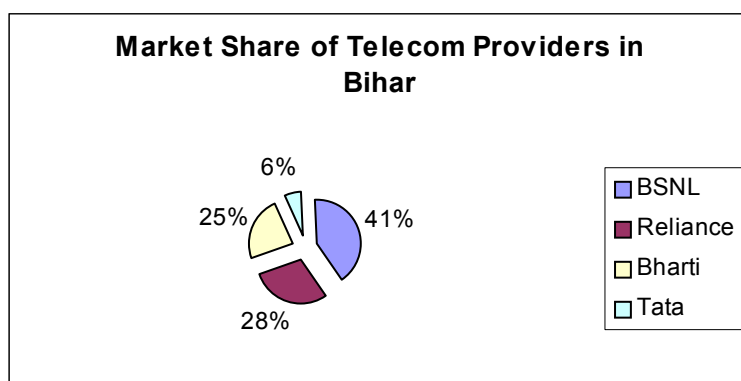


Table 4.16: Percentage Share of Operators by Type of Connection

Type of Service	Provider	Number	Percentage Share
GSM	BSNL	1125696	16.78
GSM	Bharti Airtel	1680028	25.05
GSM	Reliance Telecom	893602	13.32
CDMA	Tata Teleservices	429386	6.40
CDMA	Reliance Telecom	1002098	14.94
CDMA	BSNL	172765	2.58
Fixed	BSNL Bihar	957190	14.27
Fixed	BSNL Jharkhand	446626	6.66
Total	BSNL (Basic + Mobile)	2702277	40.29
Total	All Operators All Services	6707391	100

Source : Department of Telecommunications

Calculations based on the table show a teledensity of 70 telephones per thousand of population , comprising all kinds of connections – fixed lines, GSM and CDMA connections. Last year, 8 new exchanges have been opened by BSNL. Of these, 6 are rural, 2 are urban. Till 1st April 2006, the total number of exchanges were 1163.

In total, there were 85.4 thousand landlines, 30.8 thousand rural WLL, 1.2 thousand urban WLL and 3.31lakh mobile phones from BSNL adding to a total of 448605 (Table 4.17).

Table 4.17 : BSNL Details On Tele Capacity

Subject	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
No of telephone exchanges	910	1027	1072	1117	1155	1163
Total Capacity	770930	1044882	1274122	1495322	1670748	2172828
Telephone Connections	588067	804949	966023	1109622	1289257	1737862
Waiting List	65213	72996	101154	112465	96871	74009
Automatic Trunk Exchange capacity	67500	108000	129500	128500	167500	188000
Number of Rural Public Phones	13802	29414	38475	38475	38475	38475
Internet Connection	5632	5113	10802	15355	20424	18554
Number of PCOs	19644	30077	43063	47584	54670	63000
Mobile Capacity		9000	45000	148050	227050	698120
Mobile Connection		8056	44572	155175	239835	571117
WLL Capacity		24000	94000	141500	144000	144000
WLL Connections		40050	78698	88655	98465	130392

Source: Department of Telecommunications, Patna

The spread of internet connections were much thinner from BSNL. There were 6 internet connections for every lakh of population in 2001-02. By 2005-06, this figure had increased to 22.

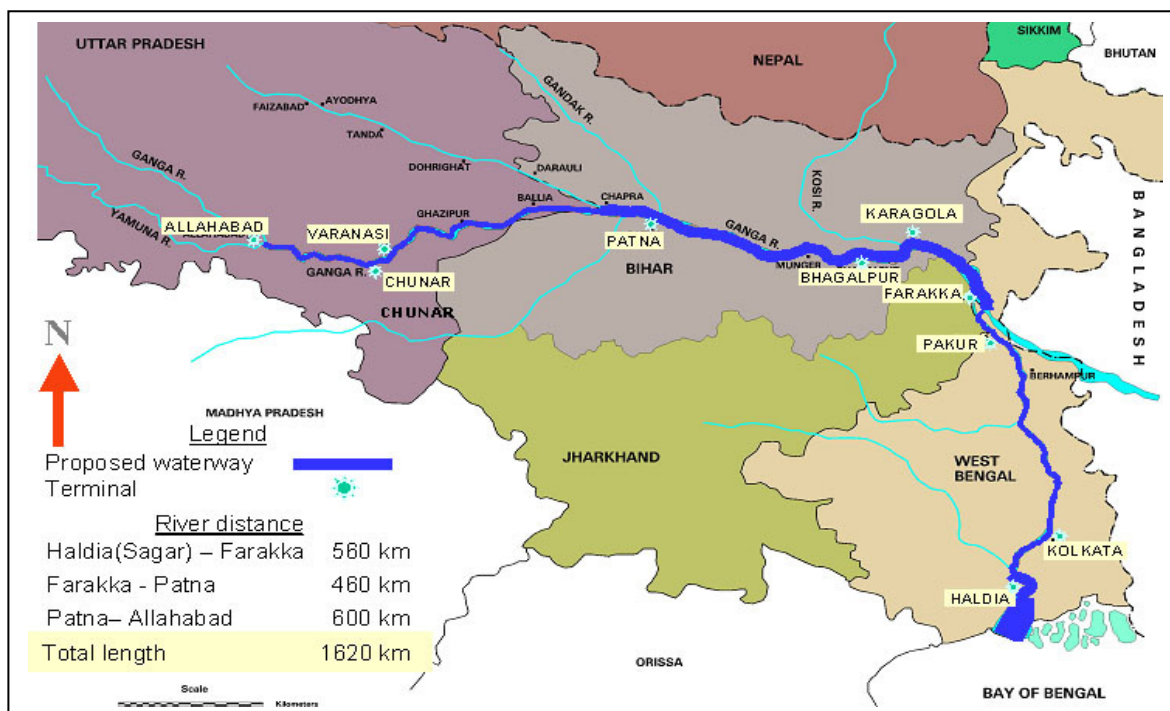
4.13 Radio and TV

The medium wave channel of Akashvani at 483.1 m i.e. 621 kh covers all the districts in Bihar. It caters to 1.15 crores listeners with broadcasts in Hindi being the mainstay, followed by Urdu, English, Sanskrit and local dialects like Magahi, Bhojpuri and Maithili. In addition, capacities for an FM channel service has also been established in Patna.

Bihar has seen a progressive increase in telecoverage in recent years. There are five high power transmitters (HPTs) – 2 in Patna, 2 in Muzaffarpur and 1 in Katihar. There are 36 low power TV transmitters and 2 very low power transmitters covering the State. The coverage of private channels through cable TV has also increased every year, though estimates of actual numbers are not available.

4.14 Inland Waterways

The Ganga between Allahabad - Haldia (1620 km) has been declared as a National Waterway no 1 and is being developed for navigation by Inland Waterways Authority of India.



Patna is planned to be a permanent terminal on National Waterway 1. The available fairway is 2.0m LAD in Haldia-Patna (1020 km) and 1.5m LAD in Patna - Varanasi (400 km). The actual fairway will be of 2.0m depth between Haldia and Patna (900) km and 1.5m depth between Patna and Varanasi (360 km). As per plan, 24 hours navigational aids upto Patna were supposed to be in place by March 2006. A permanent terminal with low level Jetty is to be constructed at Gaighat, Patna. A floating terminal will be built at Bhagalpur. Vertical & Horizontal cargo handling equipments have been set up at Gaighat, Patna.

National Inland Navigation Institute (NINI), Patna has started functioning from 14.01.04. This institute imparts training for vessel crews. According to IWAI sources, till date 341 trainees have successfully completed the vesselcrew training courses from this Institution.

Appendix I

CASH OUTFLOW (2006-07)									
Rural Development Department (REO, Panchayat Raj, Vidhayak/Parshad Yojana, Avam Koshi Kranti Ka Yojana Ka Karya (January 2007))									
Amount in Lakhs in KM									
Sl. No.	Name of Schemes	Budget	Target				Achievement		Remarks
			Financial	Physical (in KM)			Financial	Physical	
	A. PLAN HEAD			Sub-Base	Base	Surface	Bridges (Nos.)		
1	MMGSY	30000.00	30000.00	3000.00	1000.00	500.00			300cr Allocated to BRRDA
2	4515-New Roads	36458.00	36458.00	2000.00	1800.00	1600.000		16010.429	762.280
3	4515-New Bridges	1570.00	1570.00				20	315.450	
4	MLA-MLC Schemes	33500.00	33500.00					16118.970	
5	BADP	802.00	802.00	38.80	38.80	29.28		235.94	7.15
6	Special Component for S.C	1096.47	1096.47			40.00		90.25	
	Total-A	103426.47	103426.47	5038.80	2838.80	2169.28	20	32771.04	769.43
7	B. NABARD	20000.00	20000.00	1308.00	654.00	470.00	21.00	986.00	
	Total-B	20000.00	20000.00	1308.00	654.00	470.00	21	986.000	
	Total- (A+B)	123426.47	123426.47	6346.80	3492.80	2639.28	41.00	33757.04	769.43
	C. Non-Plan								
8	(a) Road Repairs (3054)	8133.00						2178.890	—
	(b) 12th FC	3867.00						765.400	
	Total – C	12000.00	12000.00			1200.00		2944.29	
	Total = (A+B+C)	135426.47	135426.47			3839.28	41.00	36701.33	769.43
	D. Central sponsored Schemes								
9	PMGSY Remaining portion of phase 1&2 – (2006-07)		5500.000			290.000		2221.000	153.920
10	PMGSY-By NEA (3rd phase & above)		96401.000			2000.000		44035.420	522.840
	Total – D		101901.000	0.000	0.000	2290.000	0.000	46256.420	676.760
	Total = (A+B+C+D)	258852.94	360753.94	6346.80	3492.80	8768.56	82.00	116714.78	2215.62

CHAPTER V

SOCIAL SECTOR IN BIHAR

5.1 Introduction

Human development is a much wider concept than economic growth, incorporating such basic human needs as capacity and freedom; but following the tradition of UNDP, it has now become a wide practice by many countries to compute HDI which is a simple summary measure of three components of human development — living a long and healthy life, being educated and having a decent standard of consumption and living conditions. The Planning Commission have been preparing such indices for all the States of India and, since these indices are now available for 1981, 1991 and 2001, they provide a useful information base for identifying the trends in human development over a fairly long period of two decades (Table 5.1).

Table 5.1 : Human Development Index of Major Indian States (1981, 1991 and 2001)

States	1981			1991			2001
	Rural	Urban	Combined	Rural	Urban	Combined	Combined
Punjab	0.386 (2)	0.494 (3)	0.411 (2)	0.447 (2)	0.566 (3)	0.475 (2)	0.537 (2)
Haryana	0.332 (4)	0.465 (6)	0.360 (5)	0.409 (5)	0.562 (4)	0.443 (6)	0.509 (6)
Maharashtra	0.306 (6)	0.489 (4)	0.363 (4)	0.403 (6)	0.548 (7)	0.452 (5)	0.523 (5)
Gujarat	0.315 (5)	0.458 (7)	0.360 (6)	0.380 (7)	0.532 (7)	0.431 (7)	0.479 (7)
H. Pradesh	0.374 (3)	0.600 (1)	0.398 (3)	0.442 (3)	0.700 (1)	0.469 (3)	NA (3)
W. Bengal	0.264 (9)	0.427 (10)	0.305 (9)	0.370 (8)	0.511 (10)	0.404 (9)	0.472 (9)
Tamil Nadu	0.289 (8)	0.445 (9)	0.343 (8)	0.421 (4)	0.560 (5)	0.466 (4)	0.531 (4)
Karnataka	0.295 (7)	0.489 (5)	0.346 (7)	0.367 (9)	0.523 (9)	0.412 (8)	0.478 (8)
Kerala	0.491 (1)	0.544 (2)	0.500 (1)	0.576 (1)	0.628 (2)	0.591 (1)	0.638 (1)
A. Pradesh	0.262 (10)	0.425 (11)	0.298 (10)	0.344 (10)	0.473 (13)	0.377 (10)	0.416 (11)
M. Pradesh	0.209 (16)	0.395 (13)	0.245 (15)	0.282 (15)	0.491 (12)	0.328 (14)	0.394 (13)
Assam	0.261 (11)	0.380 (15)	0.272 (11)	0.326 (12)	0.555 (6)	0.348 (11)	0.386 (15)
U. Pradesh	0.227 (13)	0.398 (12)	0.255 (14)	0.284 (16)	0.444 (16)	0.314 (15)	0.388 (14)
Rajasthan	0.216 (15)	0.386 (14)	0.256 (13)	0.298 (13)	0.492 (11)	0.347 (12)	0.242 (10)
Orissa	0.252 (12)	0.368 (17)	0.267 (12)	0.328 (11)	0.469 (14)	0.345 (13)	0.404 (12)
Bihar	0.220 (14)	0.378 (16)	0.237 (16)	0.286 (14)	0.460 (15)	0.308 (16)	0.367 (16)
India	0.263	0.442	0.302	0.340	0.511	0.381	0.472

Source : National Human Development Report, 2001 Planning Commission, New Delhi.

Note : The figures in bracket denote the ranking of the States.

In conformity with its ranking with respect to Per Capita Income, Bihar also ranks at the bottom with respect to its HDI in all the three years. However, it should be noted that, although economic growth in Bihar has far lagged behind the national average, its HDI of 0.237 and that of India at 0.302 have increased at nearly the same pace during the two decades to reach 0.367 for Bihar and 0.472 for India in 2001. Throughout this period, the HDI for Bihar has been about 20 percent lower than the national HDI. Of the eight indicators that are used to compute the HDI, the situation in Bihar is comparatively better with respect to ‘availability of safe drinking water’ and ‘life expectancy’. In 2001, 86.6 percent of Bihar’s population had the provision for safe drinking water, compared to 78.0 percent for India; as regards life expectancy, it was nearly the same in Bihar and India (62.8 and 62.9 years). Bihar’s position, however, was much worse with regard to ‘per capita expenditure’ and ‘poverty ratios’. A second important feature of HDI for Bihar emerges when one considers the rural and urban indices separately. Interestingly, the HDI for rural Bihar enjoys a rank of 14 among the 16 major States of India, ahead of both Uttar Pradesh and Madhya Pradesh, for both 1981 and 1991 (separate estimates for rural and urban areas are not available for 2001). Planning Commission’s estimates of HDI for different States and India as a whole at decadal intervals are extremely useful in indicating the broad trend in this area, but a finer analysis of the trend of human development in Bihar demands separate consideration of each of its components. Three of these components — poverty, health and education — are of particular importance, the first two relating to the biological survival of life and the third forming the base for any expansion of human capabilities.

5.2 Education

With respect to most of the development indicators, Bihar ranks at the lowest among all the States of India. But one indicator that hinders most its development prospects is probably its lowest literacy level. As per 2001 census, Bihar had a literacy rate of 47.0 percent which was only a little higher than the national literacy rate in 1981 (Table 5.2). In other words, the State is nearly two decades behind the nation vis-à-vis its literacy status. Between 1991 and 2001, the literacy rate had increased in Bihar by 9.3 percentage points (37.7 to 47.0 percent) and, by this rate, total

Table 5.2 : Literacy Rates in Bihar and India

Year	Literacy Rates/ Decadal	Bihar	India
Literacy Rates			
1981	Male	46.6	56.4
	Female	16.5	29.8
	Overall	31.6	43.6
1991	Male	52.5	64.1
	Female	22.9	39.3
	Overall	37.7	52.2
2001	Male	60.3	75.9
	Female	33.6	54.2
	Overall	47.0	65.4
Decadal Increase			
1981-91	Male	5.9	7.7
	Female	6.4	9.5
	Overall	6.1	8.6
1991-2001	Male	7.8	11.8
	Female	10.7	14.9
	Overall	9.3	13.2

literacy in Bihar is more than half a century away. In contrast, the literacy rate in India in 2001 was 65.4 percent, increasing by 13.2 percentage points from 52.2 percent in 1991. With this momentum, the total literacy in India can be expected in about two decades from now. The only redeeming feature of this otherwise dismal literacy scenario in Bihar is a reduction in gender disparity in literacy rates both during the eighties and nineties. In 1981, the female literacy rate of 16.5 percent was 65.0 percent lower than the male literacy rate of 46.6 percent. In 1991, this ratio has come down to 57.0 percent and, in 2001, to a still lower level of 45.0 percent. In addition, although the spread of literacy in Bihar has always lagged behind the national rate, the nineties have observed a faster spread of literacy here than during the eighties.

Educational infrastructure in a State comprises several institutions, starting from the elementary to university education. However, for spreading basic literacy, the infrastructure for elementary education is most relevant and the declining strength of this infrastructure in Bihar is apparent both from the number of such institutions and the teachers employed to run them (Table 5.3). The

number of primary schools per 10,000 population in Bihar has recorded a negative growth rate both during the eighties and nineties, the fall being sharper in the earlier decade. Interestingly, such a negative trend is visible even at the national level, but fortunately, the pace of decline is a little slower. The manpower base of these educational infrastructure, as indicated by the number of teachers per institution, had also experienced a negative growth in Bihar at least during the nineties, though not during the preceding decade.

Table 5.3 : Progress of Elementary Education Infrastructure in Bihar and India

		1980-81	1990-91	1999-00	Annual Growthrate	
					Eighties	Nineties
Number of Institutions per 10,000 Population						
Bihar	Primary	7.41	6.25	5.47	(-) 1.53	(-) 1.17
	Middle	1.64	1.55	1.40	(-) 0.54	(-) 0.87
	Elementary	9.05	7.79	6.87	(-) 1.35	(-) 1.11
India	Primary	7.32	6.69	6.54	(-) 0.82	(-) 0.18
	Middle	1.76	1.76	2.02	0.00	1.37
	Elementary	9.08	8.45	8.56	(-) 0.66	0.17
Number of Teachers per Institution						
Bihar	Primary	2.18	2.21	2.15	0.12	(-) 0.23
	Middle	7.40	7.47	7.21	0.09	(-) 0.56
	Elementary	3.13	3.25	3.18	0.36	(-) -0.30
India	Primary	2.76	2.93	2.99	0.56	0.00
	Middle	7.18	7.22	6.55	0.06	(-) 0.80
	Elementary	3.61	3.82	3.83	0.52	(-) 0.06

According to the 2001 census, Bihar has achieved 47.5 percent literacy rates as against 32.0 percent in 1981. Compared to Bihar, the literacy rate in Kerala in 2001 was as high as 90.9 percent and the All India figure was 65.4 percent. In spite of reduction in gender disparities in literacy, literacy rates are lower amongst the female population, schedule caste and schedule tribe population and its rural population. Table 5.4 shows a detailed break up of literacy rates in Bihar across the districts based on 2001 census figures. Patna had the highest literacy with 62.9 percent (still below the national average), followed by Munger with 59.5 percent. The district with

Table 5.4 : Districtwise Literacy Rates in Bihar: 2001

Percentage	Total	Male	Female	SC	ST
Bihar	47.0	59.7	33.1	28.5	28.2
Pashchim Champaran	38.9	51.1	25.2	22.3	24.1
Purba Champaran	37.5	49.3	24.3	20.6	34.3
Sheohar	35.3	45.3	23.9	16.9	38.8
Sitamari	38.5	49.4	26.1	22.1	31.4
Madhubani	42.0	56.8	26.3	22.2	35.8
Supaul	37.3	52.5	20.8	19.6	26.9
Araria	35.0	46.4	22.4	18.9	21.9
Kishanganj	31.1	42.7	18.6	28.2	15.3
Purnia	35.1	45.6	23.4	18.5	24.5
Katihar	35.1	45.3	23.8	26.3	24.2
Madhepura	36.1	48.8	22.1	17.1	33.6
Saharsa	39.1	51.7	25.3	18.5	24.5
Darbhangha	44.3	56.7	30.8	24.7	49.5
Muzaffarpur	48.0	59.1	35.8	28.9	50.4
Gopalganj	47.5	63.0	32.2	32.1	37.8
Siwan	51.7	67.3	36.9	35.6	44.0
Saran	51.8	67.3	35.8	33.6	48.5
Begusarai	48.0	59.1	35.6	31.4	78.6
Khagaria	41.4	51.8	29.4	24.2	46.7
Vaishali	50.5	63.3	36.6	29.4	29.9
Samastipur	45.1	57.6	31.7	25.1	22.0
Bhagalpur	49.5	59.2	38.1	33.7	37.2
Banka	42.7	55.3	28.7	27.6	22.2
Munger	59.5	69.9	47.4	42.6	37.3
Lakhisarai	48.0	60.7	34.0	26.3	12.9
Sheikhpura	48.6	61.9	33.9	25.2	45.6
Nalanda	53.2	66.4	38.6	29.4	29.8
Patna	62.9	73.3	50.8	38.6	68.7
Bhojpur	59.0	74.3	41.8	39.1	46.7
Buxur	56.8	71.9	39.9	37.9	44.6
Kaimur	55.1	69.7	38.8	40.5	38.6
Rohtas	61.3	75.3	45.7	41.3	3.0
Jehanabad	55.3	70.1	39.4	32.6	32.4
Aurangabad	57.0	71.1	41.9	35.7	49.7
Gaya	50.5	63.3	36.7	26.3	49.1
Nawada	46.8	60.6	32.2	22.4	20.5
Jamul	42.4	57.1	26.3	24.5	26.7

Source : Estimated from Primary Census Abstract, Census of India-Bihar, 2001

the lowest literacy rate was Kishanganj (31.1 percent). There was a vast disparity in male-female literacy rates in Bihar and within the districts. Rohtas topped the list with 75.3 percent male

literacy and Patna with 50.8 percent topped the list for female literacy. Sheohar and Kishanganj bottomed the list with 45.3 percent male literacy and 18.6 percent female literacy rates respectively.

The pace of improvement in literacy levels has been mixed across the districts in Bihar. In 1991, Patna stood at the top of the list with the highest male and female literacy rate. In 2001, it lost this position to district Rohtas, which now has the highest literacy rate for males. Patna, however, continues to hold the highest rank in female literacy. The lowest female literacy rate is found in the district of Kishanganj, located in the northeast Bihar. Kishanganj, along with Araria, Purnea, Katihar, Madhepura, and Saharsa form a cluster of low literacy districts coupled with low growth rate and high male-female gap. These districts need greater attention while devising strategies for growth of literacy. The districts of west Bihar on either side of the river Ganges, barring those located in the *tarai* have performed relatively better during the last decade. They have not only recorded higher literacy rates among the males and females but have also registered higher growth rates in literacy. These districts are Bhojpur, Buxar, Rohtas, and Kaimur in south Bihar plains and Gopalganj, Siwan and Saran in the northwest. These have invariably registered between 12-15 percentage point change in both male and female literacy rates during the last decade.

Coming to the rural and urban scenario in Bihar (Table 5.5), there are high levels of disparities. Rural Bihar had 43.9 percent literate population and urban Bihar had 71.9 percent literate population. Amongst the districts, Rohtas had maximum rural literates with 59.2 percent and Kishanganj had minimum with 27.8 percent. Patna had the highest urban literacy with 78.1 percent and Sheohar had the lowest urban literacy with 43.7 percent. The male-female disparity was wider in rural Bihar than in urban Bihar. Male-female literacy disparity was widest in Bhojpur district of rural Bihar (34.9 percent) and in Supaul district of urban Bihar (24.5 percent). For combined literacy, this male-female disparity was widest in Bhojpur with 32.5 percent.

Enrolment

Tables 5.5 to 5.7 present data on enrolment by education levels. The figures in parenthesis are the percentage shares in All India figures. It can be seen that in Bihar, in all levels of education, ranging from primary to graduates and above, the percentage of girls' enrolment remains lower

than for boys, whereas for Kerala, the State leading in social sector development, it is the reverse. The gross enrolment ratio (GER) at primary level during 2002-03 in Bihar was 80.74 percent for boys and 65.58 percent for girls and total GER was 73.52 percent.

Table 5.5 : Total Enrolment by Education Level ('000): 2002-03

States	School Level						Total
	Pre-Primary	Primary	Middle	Secondary	Sr. Secondary	Graduates & above	
Bihar	N (N)	9414 (7.71)	1757 (3.74)	1231 (3.70)	16 (1.33)	560 (5.88)	12980 (5.94)
Kerala	72 (1.31)	2496 (2.04)	1705 (3.63)	1477 (4.44)	92 (7.67)	245 (2.57)	6086 (2.78)
Jharkhand	0 (0.0)	2920 (2.39)	698 (1.49)	489 (1.47)	6 (0.50)	216 (2.27)	4329 (1.98)
All India	5484	122136	46947	33303	1200	9516	218586

Table 5.6 : Enrolment of Boys by Education Level ('000): 2002-03

States	School Level						Total
	Pre-Primary	Primary	Middle	Secondary	Sr. Secondary	Graduates & above	
Bihar	N (N)	5414 (8.34)	1144 (4.34)	871 (4.45)	15 (1.54)	376 (6.59)	7820 (6.49)
Kerala	39 (1.36)	1276 (1.96)	892 (3.39)	718 (3.67)	68 (6.96)	101 (1.77)	3094 (2.57)
Jharkhand	0 (0.0)	1627 (2.51)	418 (1.59)	314 (1.60)	5 (0.51)	137 (2.40)	2501 (2.08)
All India	2865	64946	26336	19574	977	5705	120403

Table 5.7 : Enrolment of Girls by Education Level ('000): 2002-03

States	School Level						Total
	Pre-Primary	Primary	Middle	Secondary	Sr. Secondary	Graduates & above	
Bihar	N (N)	4000 (6.99)	613 (2.97)	360 (2.62)	2 (0.89)	184 (4.83)	5160 (5.26)
Kerala	33 (1.26)	1220 (2.13)	813 (3.94)	758 (5.52)	24 (10.71)	144 (3.78)	2992 (3.05)
Jharkhand	0 (0.0)	1293 (2.26)	280 (1.36)	175 (1.27)	1 (0.45)	79 (2.07)	1828 (1.86)
All India	2619	57190	20610	13729	224	3811	98183

Source : Ministry of Human Resource Development, Selected Educational Statistics: 2003-03. Graduates/above includes Ph.D./D.Sc./M.Phil levels. Sr. Secondary includes intermediate/junior college/pre-degree/pre-university/vocational/technical education. N is negligible. Figures in the brackets are the percentage shares in the All India figures.

Dropout rates are much higher in Bihar compared to Kerala and to All India level (Tables 5.8 and 5.9). Such higher dropout rates point to poverty which forces the children to withdraw from schools and join hand for economic returns.

Table 5.8 : Dropout Rates in Primary Level: 1999-00

States	Total	Girls	% of HH Population in age 6-17 attending School
Bihar	57.27	58.64	59.6
Kerala	7.05	5.00	79.7
India	40.25	42.28	72.1

Table 5.9 : Dropout Rates in All Levels : 2002-03

	Primary	Upper Primary	Secondary
Bihar	62.31	79.01	83.60
All India	34.89	52.79	62.58

Source : Selected Educational Statistics, 2002-03, Ministry of Human Resource Development, GOI, New Delhi

Table 5.10 reflects the situation in vocational education. Bihar is lagging behind in terms of total number of schools and sections compared to Kerala. Creation of an environment of private investment can possibly improve and encourage the private institutes in the State. This can also restrict the serious problem of massive exodus of students from Bihar to other States for seeking higher education.

Table 5.10 : Number of Schools Imparting Vocational Education by Section and Enrolment Capacity in Bihar: 2003-04

State	No. of Schools	No. of Sections	Enrolment Capacity
Bihar	251	752	37,600
Kerala	363	1008	50400
All India	6800	19,599	979,950

Source: Ministry of Human Resource Development, Annual Reports; 2002-03

Table 5.11 presents a break up of education levels in Bihar. Among the people in the age group of 15 and above, the percentage is highest in the 'not literate' category in all rural, urban and combined population groups and it is lowest in 'diploma/certificate' category of education level. On the contrary, in Kerala, the percentage of people is highest in 'middle' level education. This signifies the fact that the general educational level for adolescents is low in Bihar.

Table 5.11 : Percentage of Persons in 15+ by General Education Level in Bihar: 2004-05

State	Not Literate	Literate up to Primary	Middle	Secondary	Higher Secondary	Diploma/Certificate	Graduate/above
Rural							
Bihar	54.5	20.1	11.3	8.4	3.3	0.2	2.1
Kerala	10.3	27.9	31.2	15.2	6.0	5.3	4.1
All India	45.2	23.8	15.2	8.2	4.1	0.7	2.5
Urban							
Bihar	25.8	17.3	15.6	16.5	10.8	0.4	13.5
Kerala	6.6	23.3	28.3	15.8	7.3	7.4	11.1
All India	19.6	20.0	18.2	15.3	10.4	2.6	14.0
Combined							
Bihar	51.6	19.8	11.8	9.2	4.0	0.2	3.3
Kerala	9.4	26.8	30.5	15.4	6.3	5.8	5.8
All India	38.2	22.8	16.0	10.2	5.8	1.2	5.7

Source : Estimated from NSSO Report No. 517: 'Status of Education and Vocational Training in India', 2004-05, GOI

Table 5.13 shows the emphasis of the Bihar government in elementary education. Both under plan and non-plan expenditure, the State has allocated maximum funds for elementary education. This is a highly relevant policy move for a State where 52.47 percent of the population still cannot read and write.

Table 5.12 : Expenditure on General Education in Bihar: 2004-05 (in '000)

Revenue Accounts	Plan	Non-Plan	Total
Elementary Education	225.08	2356.65	2581.74
Secondary Education	1.53	671.98	673.52
University & Other Higher Education	4.53	516.11	520.65
Adult Education	4.94	0.00	4.94
Language Development	0.08	57.35	57.43
General (research institute)	0.09	7.82	7.91
Physical Education	0.00	1.56	1.56
Sub-Total	236.25	3611.47	3847.75
Technical Education	1.80	26.67	28.47
Total	238.05	3638.14	3876.22

Source : Analysis of Budget Expenditure on Education: 2003-04, MHRD, GOI, New Delhi, 2005

Government Initiatives in Education

- Integrated Education Development programme has been launched under "Mukhya Mantri Samagra Vidyalaya Vikas Karyakram".
- A target of appointment of 2.36 lakh teachers for elementary and secondary schools has been notified to bring the Pupil Teacher Ratio to 40:1.
- Urdu teachers for every 10 teachers have been provided for under the Rules.
- A decision has been taken not to involve teachers in non-teaching works so as to minimize loss of teaching days in the schools.
- The government has started gradual transfer of school management to the PRIs (Panchayati Raj Institutions) at various levels.
- Common School System Commission has been constituted to address the issue of equity and quality in the school system and implement the national policy of common school system and neighbourhood schooling.
- 12,000 vacant posts of secondary teacher are being recruited while 10,000 additional posts have been sanctioned for universal access.
- 943 posts of +2 teachers have been created for upgrading and strengthening senior secondary school.
- Transfer policy for school teachers has been changed following which teachers have been given option to choose place of posting.
- Government has revised the system of scholarships from its own funds and from the funds available from the GOI, under the National Merit Scholarship.
- Students taking admission in IITs would be given encouragement scholarships of a sum of Rs. 50,000/-.
- Minority hostels are being constructed in every district for the purpose of education of Muslim male/female students.

- Educational Experts Committee : This Committee had been constituted to look into the matters related to improving all levels of education and to enable Government in fulfilling their constitutional duty to provide equal educational opportunity to all sections of society. The committee had since submitted its report.
- Policies Relating to Establishment of Institutes of Higher Education – To provide a single window clearance facility and to facilitate availability of land to those promoters, who propose to establish, upgrade and expand institutes of higher education. This policy is intended to stop the migration of talent from the State.
- The government has released over 4000 vacancies of teachers to the university and colleges.
- The Government has sanctioned the establish a University of Nalanda in Nalanda district in partnering with the Government of India and other Asian countries.
- Chanakya National Law University Act has been passed and thus University has been established.
- The retirement age of University teacher and staff have been increased to 62 years and the payment of their salaries has been regularized so that monies are transferred to the Universities on the first day of every month.

5.3 Health

For an overwhelmingly large section of the Indian population, the health needs are indeed more immediate than the educational achievements. Absence of literacy and formal education may restrict a person's choices with respect to livelihood and other life-supporting activities, but in the absence of good health conditions, it will not be possible to utilise even the limited choices that a person may have. Secondly, without strengthening human life as a biological phenomenon, efforts to enrich its other dimensions, social or cultural, are probably meaningless. Thus, besides income poverty and education, health standards are included as the third important component of Human Development Indices. Good health includes not merely freedom from disease, but other dimensions as well (nutrition, medical care, reproductive and child health, etc). However, 'Infant Mortality Rate (IMR)' and 'Expectation of Life at Birth' are generally considered as the two of its

most sensitive indicators. The health status of the people of Bihar and India vis-à-vis these two indicators is presented in Table 5.13, indicating their current level as well as the trend during the recent decades.

Table 5.13 : Infant Mortality Rate and Expectation of Life in Bihar and India

		1981-83	1991-93	1999-03	Improvement during	
					Eighties	Nineties
Infant Mortality Rate (per 1000 Live Births)						
Bihar	Rural	114	74	65	40	11
	Urban	61	47	51	14	(-) 5
India	Rural	116	86	75	30	11
	Urban	65	52	43	13	9
Expectation of Life (Yrs.)						
Bihar	Male	55.2	58.5	61.6	5.6	2.8
	Female	52.9	56.4	59.7	7.2	2.0
India	Male	55.6	58.6	61.8	5.0	1.8
	Female	56.4	59.0	63.8	5.3	1.7

Source : Reports of NFHS-2, 1998-99; SRS Report 1999-03

In the context of indicators of health status, one can again notice that there could be factors, other than the income levels or growth thereof, substantially influencing it. As regards IMR for rural areas, presently 63 for Bihar, it is indeed slightly better than the national average at 75. The figure for early eighties and nineties further indicate that this relatively better position of Bihar has existed in the past also. However, in case of IMR for urban areas, it is 43 per 1000 live births for India as whole, compared to a higher figure of 52 for Bihar. Indeed, Bihar has experienced a clear deterioration in urban IMR in absolute terms during the nineties, making it rise from 47 to 52. However, the urban IMR in Bihar was a little lower than the national average in the eighties and early nineties. From the overall trend in IMR in Bihar and India during the eighties and nineties, it also emerges that the decline has been much slower in the nineties.

Coming to the overall health status in Bihar, it must be noted from Table 5.15 and 5.16 that all the indicators like MMR, IMR, life expectancy, CBR, CDR etc. are hovering around the national figures. For example, the gap in crude birth and crude death rates, maternal as well as infant mortality rates are almost at par with national average.

Table 5.14 : Health Indicators in Bihar

State	MMR	Life Expectancy at Birth (1999-03)		% of Birth Attended by Trained Health Personnel	CBR	CDR	IMR	Under 5 Mortality Rate
		Male	Female					
	1997			1999	2002	2002	2002	1998-99
Bihar	451	61.6	59.7	13.8	30.9	7.9	61	112.4
Kerala	195	71.67	75.00	96.6	16.9	6.4	10	18.8
All India	408	61.8	63.8	35.0	25.0	8.1	63	94.9

Source : Reports of NFHS-2, 1998-99; SRS Report 1999-03

Table 5.15 : Three Years of Moving Average of Birth and Death Rates in Bihar

States	1991-93		2001-03	
	Birth Rate	Death Rate	Birth Rate	Death Rate
Bihar	31.7	10.5	31.0	8.0
Kerala	17.8	6.1	17.0	6.4
Uttar Pradesh	36.0	11.9	31.7	9.7
All India	29.1	9.7	25.1	8.1

Source : Registrar General of India, Sample Registration System Bulletin, Various Issues

While looking at the female infant mortality rates in Table 5.19, one can see that Bihar's figure is much above the figures of Kerala but certainly much lower than the States like Orissa and Madhya Pradesh and also it is lower than the national average. In case of the progress made by Bihar in reducing Infant Mortality Rates (Table 5.15), it is almost at par with Kerala. But while looking at the infant health status, it is apparent that the percentage of children who have received all vaccinations in the age group of 12-23 months is as low as 11 percent in Bihar as compared to 89 percent in Kerala and 42 percent in all India for the year 1998-99.

It should be noted here that the gender disparities in health status, as indicated by the estimates of expectancy of life, is much wider in Bihar where average female life is shorter; according to the usual demographic pattern, it is males who generally have a shorter life, as observed in India as a whole. This disparity is vividly displayed in Table 5.16.

Table 5.16 : Female Infant Mortality Rates (FIMR) & Gender Gap (GG) – 2001-02

States	Total		Rural		Urban	
	FIMR	GG	FIMR	GG	FIMR	GG
Bihar	62.3	-0.9	62.8	-1.5	57.7	5.2
Kerala	15.3	1.6	15.4	3.0	14.9	-3.1
MP	89.5	-0.1	96.8	1.9	50.7	-8.9
Orissa	96.0	-1.3	99.2	-2.0	65.5	1.7
India	70.8	1.0	75.2	-0.4	39.7	-7.7

From a comparison of the estimates of life expectancy in 1981-83, 1991-93 and 1999-01, it clearly emerges that Bihar and India had experienced a similar upward trend, both having faster improvement during the eighties than in nineties. One atypical feature of demographic trend in Bihar, closely related to its health status, is that, during 1991-2001, the decadal growth rate of population here has been 26.6 percent, the highest among all the major States of India. Surprisingly, this demographic growth was higher than what was observed in Bihar during the preceding decade of the eighties. The phenomenon is atypical, since it is unlikely that the fertility rates in Bihar, instead of decreasing, have actually increased here causing an increase in natural growth rate of population. After a finer analysis, it is found that the birth rates in Bihar has also dropped (from 32.3 in the early nineties to 31.4 in late nineties — a drop of 0.9), but simultaneously, the death rate has dropped here by a higher margin (10.6 in early nineties to 9.4 in late nineties — a drop of 1.2). Consequently, the natural growth rate of population has recorded an increase in Bihar. As a demographic phenomenon, this is obviously a negative trend; but paradoxically, it is attributable to a positive trend of health status relating to higher expectation of life in Bihar, as was observed before.

Table 5.17 : Progress in Reducing Infant Mortality Rates

States	1990	1999	% Reduction
Bihar	75	63	16.0
Kerala	17	14	17.6
MP	111	90	18.9
Orissa	122	97	20.5
India	80	70	12.5

Table 5.18: Percentage of Children in 12-23 Months who Receives all Vaccinations and are Malnourished

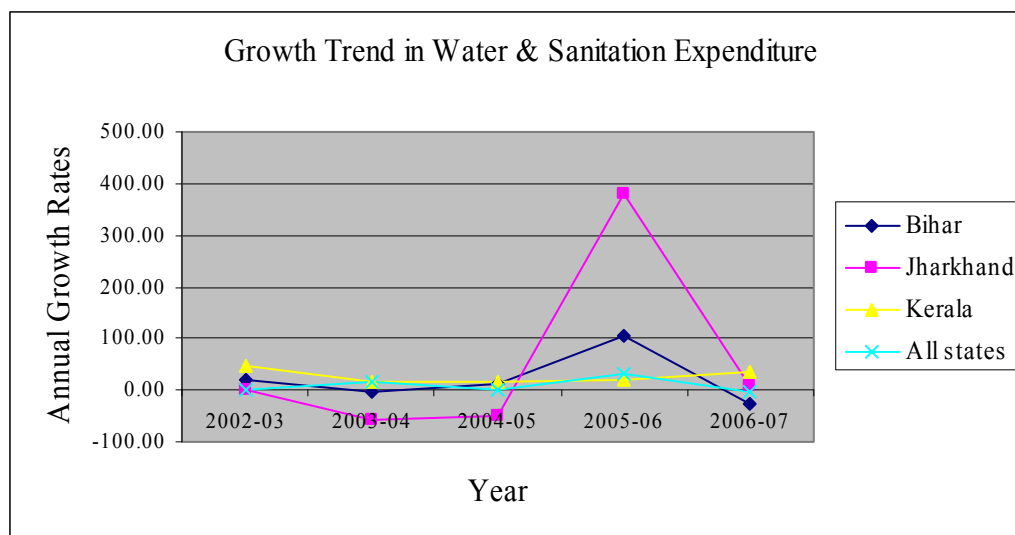
States	1992-93	1998-99	Difference
Percentage who Received All Vaccination			
Bihar	11	11	0
Kerala	65	89	24
India	35	42	7
% Who are Moderately/Severely Malnourished			
States	1992-93	1998-99	Difference in % points
Bihar	63	54	8.2
Kerala	48	37	11.5
India	53	47	6.4

Source : Ministry of Woman & Child Development, GOL, Annual Reports, 2001-02

Table 5.19 : Percentage of Children (0-4) Receiving Immunization in Bihar: 2004

	Bihar	Jharkhand	Kerala	All India
Rural				
Boys	80	88	93	89
Girls	78	86	96	89
Children	79	87	95	89
Urban				
Boys	87	87	95	93
Girls	92	87	97	94
Children	89	87	96	94
Combined				
Boys	81	88	94	90
Girls	79	87	96	90
Children	80	87	95	90

Source: 'Morbidity, Health Care and Condition of the Aged', Report No. 507, NSSO, GOI.



Addressing the growth rates of revenue expenditure in Bihar on these social sectors (Table 5.20), it can be seen that total revenue expenditure in the State has grown higher than for all States for the period 2001-02 to 2006-07, but this growth rate is lower than in Jharkhand and Kerala. For general education, the growth rate is also higher than all States and it is at par with Kerala, though much lower than Jharkhand. For technical education, the revenue expenditure has grown by 24 percent, whereas for Jharkhand, it is 90.53 percent. For medical and public health, the growth rate in revenue expenditure in Bihar is 21.21 percent, much higher than for all States (10.90 percent).

Similarly, for water and sanitation, the figure is 22.06 percent. Jharkhand has spent much more on these social heads compared to Bihar. But the growth rates in expenditure for Bihar is almost at par with Kerala, though the achievements here are much lower than in Kerala. Similarly, for sectoral composition of the total expenditure as seen in Table 5.21, Bihar's pattern is very similar to that of Kerala.

Table 5.20 : Growth Rates Revenue Expenditure in Bihar: By Head for 2001-02 to 2006-07

	Total Revenue Expenditure	Revenue Expenditure on General Education	Revenue Expenditure on Technical Education	Revenue expenditure on Medical & Public Health	Revenue Expenditure on Water & Sanitation
Bihar	14.53	15.44	24.31	21.21	22.06
Jharkhnad	18.64	29.74	90.53	53.16	55.66
Kerala	16.32	15.27	14.19	15.19	27.05
All States	10.78	11.49	15.99	10.90	9.36

Source : Annual Average Growth Rates are estimated from the data of Finance & Accounts, Bihar and other states CMIE, public Finance: 2006

Table 5.21 : Sectoral Composition of Revenue Expenditure in Bihar

	General Education		Medical & Public Health		Water & Sanitation	
	2001-02	2006-07	2001-02	2006-07	2001-02	2006-07
Bihar	21.95	22.42	3.31	4.18	0.97	1.00
Jharkhand	20.18	18.20	4.62	6.30	2.27	1.36
Kerala	19.79	18.81	5.38	5.08	1.13	1.74
All States	16.99	16.99	4.26	4.22	1.77	1.61

Source: Estimated from the data of Finance & Accounts, Bihar and other states CMIE, public Finance: 2006

The institutional needs of the health sector are illustrated through the figures in Appendix 1, 2 and 3 obtained from the District Level Household and Facility Survey of 2002-2004 and Census 2001. According to this survey, there are 24 district hospitals in the state indicating that all 38 districts are not served by district hospitals. There are 23 sub-divisional hospitals and 87 referral hospitals of which 70 are functioning. There are 398 PHCs and 1243 additional PHCs in the state. Only 19.6 percent of pregnant women visit ante-natal centres in Bihar as compared to the national average of 50.1 percent according to the figures prepared by the Department of Health, Government of Bihar based on Census 2001. Institutional deliveries constitute just 23 percent of total deliveries in Bihar as compared to the national average of 40.5 percent. Total protected deliveries account for just 29.5 percent of all deliveries compared to the national average of 47.6 percent.

In a survey of the figures provided by the Department of Health, Government of Bihar, the percentage of PHCs adequately equipped with infrastructure, staff, supply, equipment and training, and levels of immunization, institutional deliveries and antenatal care, Patna ranks first followed by Bhagalpur and Saharsa respectively. The worst off districts are Sheohar, Samastipur and Kishanganj. The present government has taken significant policy initiatives in health to alleviate the situation described above.

Government Initiatives in Health

- "Mukhya Mantri Sahayata Kosh" has been established to provide medical facilities to families with an annual income up to Rs. 1.00 lakh.
- Provision for medical grant, ranging from Rs. 15,000 to Rs.1.5 lakh to the families living below the poverty line, for the treatment of grave diseases, has been made.
- A decision has been taken for providing round the clock medical facilities in all the hospitals and primary health centers. Accordingly, all the vacancies of medical/non-medical staff, and specialized doctors in the civil hospitals are to be filled in the first phase and then similar steps are to be taken at the sub-division level hospitals followed by PHCs and Additional PHCs.
- Arrangements have been made for monitoring output of doctors, keeping in view operationalisation of 24-hour medical facility up to the level of PHCs.
- Proposal has been made for opening up new hospitals and primary health centres. A proposal has been given for building offices and residential buildings for civil surgeons and new hospitals in subdivisions. This is reflected in cabinet order no 19 of meeting no 36(08)-06-06 dated 03.01.06.
- State Health Mission has been constituted and is being headed by the CM.
- State Health Society has been set up mainly for implementation of National Rural Health Mission Programme. The State Health Society has been registered and is headed by the Development Commissioner. District Health Committees have been registered at the district level.
- Rogi Kalyan Samiti has been set up to provide health facilities to those below the poverty line.
- Selection and training of 'Ashas' (Associate Health Workers) is being given top priority
- Pathology and Radiology services are to be provided by the private organizations, following the principle of public private partnership

- Outsourcing has been done for the additional primary health centers to improve health services.
- Arrangements are being made to ensure availability of necessary medicines in district/sub-division hospitals and PHCs, and 24 hrs facilities for generators are being provided so as to enable them to maintain Cold Chain for vaccines and medicines.
- 2006 has been declared as “vaccination year” to provide emphasis on regular vaccination programme.
- 73 eye surgeons have been appointed.
- Arrangements have been made to provide specialized services in the 6 medical colleges and hospitals of the state.
- Expert Committee headed by Dr. B.N. Hegde was constituted for upgradation of health services. The committee has finalized the model of Bihar Clinical Establishment Act and forwarded it to the government for acceptance.
- Assistance is being taken from the international institutions such as UNICEF, World Bank, WHO, European Commission, DFID etc. for providing technical support.
- In all the referral hospitals, 4 posts of specialists have been approved.
- 1330 additional primary health centers have been given status of primary health centers to cover all blocks with a population of 20 thousand or more.
- Health sub-centres are to be established in all villages with a population of 3 thousand and more. In old sub-centres, one post for male and one for female, that is, a total of 2 posts were available. In the new health sub-centres, only female posts are being approved.
- Medicine testing laboratory which was non-functional for a long time due to lack of analysts, has been made functional. One analyst, one biological officer and two technicians have been employed to run the lab.
- For food adulteration prevention programme, at head office level, food control section has been set up for which the post of Joint Food Controller has been constituted.

- Chief Medical Officers have been authorized to function as Food Inspectors in their districts. At the block level, the medical officer in charge is authorized to function as Food Inspector. Vacant posts of Food Inspectors at the district level are being filled.
- The state government has sent a letter of undertaking to the Secretary, Health department, Government of India for partnership of state government for good management of organizational structure in order to strengthen food control standards and food laboratories. This comes under the capacity building scheme of World Bank food security programme taken up by Government of India.
- State is allocating funds for infrastructural development of medical institutions.
- Mother and Child health care programmes are being taken care of by State Health Society: a) measures have been taken for ligation of males and females under public private partnership, b) private clinics have been identified for delivery, c) ambulances are being provided in the spirit of PPP.
- Following initiatives have been taken under PPP: a) rates much less than market have been fixed for tests for providing pathological and radiological facilities in PHCs and for patients of government hospitals, b) 32 additional primary health centers are to be run by private institutions, c) cleanliness of 25 civil hospitals, 23 subdivisional hospitals, 76 referral hospitals and 398 primary health centers is being done by private partners.
- Under regular vaccination programmes, new means are being adopted for sending vaccines to all areas. It is being sent through courier and motorcycles. Monitoring and supervision is being done at the Health Society level. Regular monitoring and surveillance teams are being sent for roaming in all the districts.
- Free essential medicines are being distributed at the district and sub-division level hospitals since 1st of July 2006.
- Provisions have been made for free treatment of the indoor patients in the district hospitals under which 107 medicines would be available for free distribution.

- Data centers are being established in the district hospitals for proper monitoring of all the programmes of health. Data center is working on health related statistics of nearly 339 PHCs, 25 district hospitals and 22 sub-division hospitals.
- State government has provided dial 102 emergency ambulance service and dial 1911 medical help line service to the people. On dialing 102, control room would try to make available the nearest placed ambulance to the patient. Dial 1911 would send the nearest registered doctor/physiotherapist/pharmacist to the patient's residence, cost of which would be borne by the patients or their relatives. This service is presently operational in Patna

5.4 Poverty and Employment

Poverty

The income dimensions of poverty are incorporated in the HDI through two components — 'per capita consumer expenditure' and 'percentage of population below poverty line'. Of these, the poverty ratio has continued to attract more attention both in the context of judging the distributive implications of whatever growth is achieved and its close relation to the pace of human development. Since the beginning of eighties, NSSO has estimated poverty ratios for four years which allow one to see the trend of poverty ratios, both during the eighties and nineties (Table 5.22). The NSSO estimates for 2004-05 are yet to be released.

Taking the poverty ratios in the rural areas first, it is noticed that the latest estimate, relating to the year 1999-00, shows this to be 44.3 percent in Bihar compared to 27.1 percent for India as a whole. This level of rural poverty is only second highest in the country, the State of Orissa reporting a still higher ratio at 48.0 percent. In absolute terms, the above poverty ratios imply about 40 million people living below the poverty line in rural Bihar, out of a total of about 205 million poverty-stricken people in rural India. However, it must be noted that the rural poverty ratio has decreased here from 64.4 percent in 1983 to 44.3 percent in 1999-00, a substantial drop of 20.1 percentage points. The decrease in poverty ratio in India during the same period was 18.6 percentage points — from 45.6 percent in 1983 to 27.1 percent in 1999-00. This reduction in rural poverty was a steady process in India as a whole, but somewhat paradoxically, the rural

Table 5.22 : Poverty Ratios in Bihar and India

Sector	Years	Bihar	India
Poverty Ratios			
Rural	1983	64.4	45.6
	1987-88	52.6	39.1
	1993-94	58.2	37.3
	1999-00	44.3	27.1
Urban	1983	47.3	40.8
	1987-88	48.7	38.2
	1993-94	34.5	32.4
	1999-00	32.9	23.6
Combined	1983	62.2	44.5
	1987-88	52.1	38.9
	1993-94	55.0	36.0
	1999-00	42.6	26.1
Annual Reduction in Poverty Ratio (Percentage Points)			
Rural	Eighties	1.3	1.1
	Nineties	1.2	1.2
Urban	Eighties	0.8	0.8
	Nineties	1.0	1.3
Combined	Eighties	1.2	1.0
	Nineties	1.2	1.2

Source : 'Economic Survey' of Government of India for various years.

poverty ratio in Bihar had increased between 1987-88 (52.6 percent) and 1993-94 (58.2 percent). In the absence of such an atypical phenomenon, the rural poverty ratio would have probably registered a steeper fall in Bihar between 1983 and 1999-00. Thus, the overall rural poverty situation in Bihar can be described by two major observations — first, it is still the worst in the country barring Orissa; and second, a redeeming one, that the poverty ratio there is dropping as steadily as in India as a whole. Although a number of poverty alleviation programmes, largely financed by the Central government, make their own contributions towards the decline of poverty ratios, it is the growth of the economy that contributes most towards such decline. For the overall Indian economy, a study has estimated that no less than 85 percent of the decline in poverty ratios is needed mediated by the growth process, the contribution of other factors including poverty alleviation programmes being limited to only 15 percent. One can, therefore, easily relate the substantial reduction in rural poverty ratio in Bihar to the moderate growth of its agricultural economy during both the eighties and nineties.

As regards the urban areas in Bihar, the poverty ratio there in 1999-00 was 32.9 percent, compared to 23.6 percent for India. The difference between Bihar and India with respect to urban poverty ratio, one may note, is smaller than observed for the rural poverty ratio. This is primarily because urban economies are relatively more homogeneous and hence inter-regional differences are comparatively less. Apart from the expected fact that urban poverty ratio is higher in Bihar than in India as a whole, one may also note that the pace of urban poverty reduction in the overall national economy is a little faster than in Bihar. Between 1983 and 1999-00, a gap of 17 years, the urban poverty ratio has decreased by 14.4 percentage points (from 47.3 to 32.9) in Bihar; for the national economy, this reduction is 17.2 percentage points (from 40.8 to 23.6 percent). In fact, one would have expected the drop in urban poverty ratio in Bihar to be even more limited, in view of a very sluggish growth of its non-agricultural economy during the nineties, but as noted later, the urban employment (albeit in the unorganised sector) had grown at a decent rate during this decade which probably explains the trends in urban poverty reduction.

Apart from local employment opportunities which might be related to the State's own growth performance, the poverty ratios in Bihar, for both rural and urban areas, are also influenced by the phenomenon of extensive out-migration of workers from Bihar, many of whom are from the poorer households. Taking the extent of male migration into account which better approximates the extent of workers' migration, it is observed that net inter-state migrants as percent of total population was 1.18 in 1981, but had increased to 1.32 in 1991. This implies that between 1981-91, an additional 17 lakh males had outmigrated from Bihar. Bihar with Net Migration Rate per 100 (1991-01) of males at -0.39 and females at -0.17 is the highest with U.P at -0.25 and -0.16 being the next.

Looking at the rural and urban break up for poverty in Bihar in Table 5.23, it can be seen that, rural Bihar has a huge population below poverty line and the percentage is almost on par with the State of Orissa, which has the highest poverty ratio. The gap in poverty ratios in Bihar and Jammu and Kashmir, the state with lowest population below poverty line, is extremely wide (44.30 percent in Bihar and 3.97 percent in J & K in 1999).

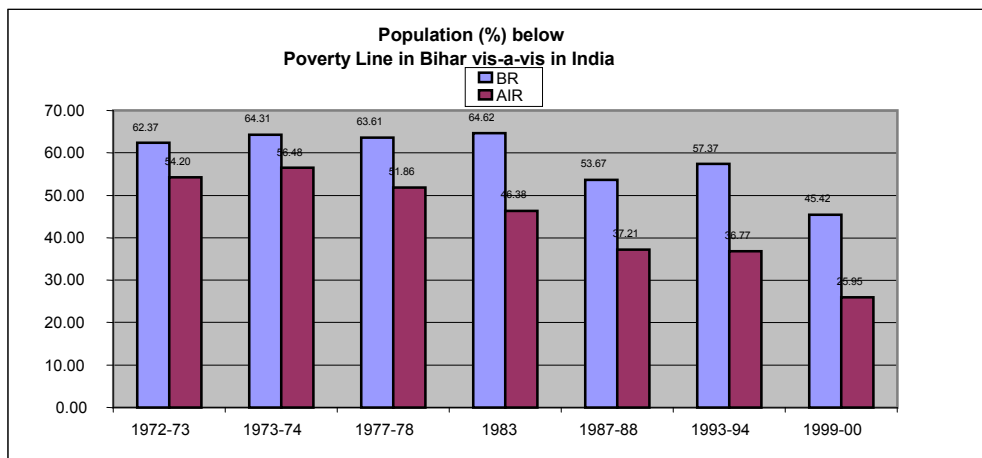
Table 5.23 : Estimated Population Below Poverty Line (lakhs)

	Bihar	Jammu & Kashmir	Orissa	All India
Rural: 1999-00*				
No. of Persons	376.51	2.97	143.69	1932.43
Percentage	44.30	3.97	48.01	27.09
Rural: 2006-07				
No. of Persons	482.16	NA	139.12	1705.26
Percentage	44.81	NA	41.72	21.07
Urban: 1999-00*				
No. of Persons	49.13	0.49	25.40	670.07
Percentage	32.91	1.98	42.83	23.62
Urban: 2006-07				
No. of Persons	54.74	NA	23.57	495.67
Percentage	32.69	NA	37.46	15.06
Combined: 1999-00*				
No. of Persons	425.64	3.46	169.09	2602.50
Percentage	42.60	3.48	47.15	26.10
Combined: 2006-07				
No. of Persons	536.91	NA	162.69	2200.94
Percentage	43.18	NA	41.04	19.34

Source : Planning Commission, GOI

* for 1999-00, the estimated figures are for 30 days recall. For 2006-07, the poverty ratios are projected figures.

Note : Poverty ratios are estimated from National Sample Survey data on their quinquennial results on Monthly Per Capita Expenditure (MPCE). The estimates have been taken from the Planning Commission both for the results of 1999-00 and the projected figures of poverty ratios. The projected scenario may actually be proven to be wrong once the Planning Commission updates the data from the 61st NSSO Quinquennial Survey that has just been published.



(BR= Bihar Rural; AIR= All India Rural)

Employment

India in its contemporary economic scenario has undergone a drastic change in its labour market and its dynamics. Employment sector looks at the dynamics of labour force and its services towards the economy. Bihar being the third largest populated State in India should expectedly contribute more in the labour market, but Table 5.24 shows that Bihar accounts for only about 7 percent of the total organised sector employment in public sector; in private sector, the share of Bihar is still lower at about 3 percent.

Table 5.24 : Employment in Organised Sector of Bihar (in lakhs)

State	Public Sector			Private Sector		
	2000	2001	2002	2000	2001	2002
Bihar	13.61 (7.05)	13.60 (7.11)	13.60 (7.24)	2.53 (2.93)	2.53 (2.92)	2.53 (3.00)
All India	193.14	191.38	187.73	86.46	86.52	84.32

Source : Manpower Profile, Institute of Applied Manpower Research, 2004, New Delhi, figures in the parentheses are the percentage share of Bihar employment in All India.

Looking at the workforce participation rate in Bihar in Table 5.25, it can be seen that both in 2001-02 and in 2004-05, the overall participation rate in rural Bihar is much below the national figure. The rates are worse for female workforce participation than for male. The situation in urban Bihar is similar with very high male-female disparity in workforce participation rates. Employment scenario for women is one of low growth in the State.

Table 5.25 : Workforce Participation Rates in Bihar

	Rural : 2001-02			Rural : 2004-05		
	Male	Female	Person	Male	Female	Person
Bihar	52.2	14.9	34.3	47.7	13.8	31.6
Jharkahnd	53.8	23.0	39.1	53.5	31.3	42.7
Madhya Pradesh	52.9	36.2	44.8	54.4	36.6	45.9
Rajasthan	52.2	36.4	44.7	51.0	40.7	45.9
Uttar Pradesh	51.9	23.8	38.2	49.6	24.0	37.1
All India	54.6	31.4	43.3	54.6	32.7	43.9

	Urban : 2001-02			Urban : 2004-05		
	Male	Female	Person	Male	Female	Person
Bihar	47.6	6.3	28.2	45.2	6.5	27.2
Jharkahnd	43.1	7.7	26.5	47.2	13.4	31.1
Madhya Pradesh	52.8	13.8	33.9	52.5	15.4	34.7
Rajasthan	50.6	14.5	33.3	50.8	18.2	34.9
Uttar Pradesh	51.3	8.1	30.6	52.4	11.7	33.1
All India	55.3	13.9	35.5	54.9	16.6	36.5

Source : NSSO Report No. 481, 2001-02, Report No. 515, 61st round.

Government Initiatives in Poverty Alleviation

- NREGP has been universalized to cover all the districts of Bihar. The programme was covering earlier only 23 districts; the new state government has extended the scheme from its own funds to remaining 15 districts in the state.
- Provisions have been made for verification and final publication of the list for Indira Awas Yojna (IAY), and selection of beneficiary households. It has been decided that beneficiaries of the IAY would be selected in order of the permanent waiting list. Further, the selection of homeless SC/ST households and general homeless households would be in the ratio of 60 percent and 40 percent
- Beneficiaries of the Indira Awas Yojna would be formed into SHGs under SGSY. It has also been recommended that these beneficiaries should interact with the banking and other institutions in groups.
- Arrangements are being made for concurrent evaluation of the implementation of the plan and construction of houses (under Indira Awas Yojna) by reputed external Institutions.
- Arrangements have been made to identify and remove non-deserving households in the BPL list 2002. The Deputy Collector at the district level and the BDO at the block level would do enquiries, once information of any such wrong entry is received.
- Arrangements have been made for re-examination and supervision of the entry of undeserved people in the BPL list, and instructions given for immediate correction of mistakes made in this regard.
- BPL list has been finalized in which a total score of 13 on different standards has been finalized as the cut off point for determination of BPL households. Instructions have also been issued to publish BPL list on the internet.
- A resolution has been passed regarding implementation of Ration Coupon and Kerosene, to ensure availability of foodgrains through the Targeted Public Distribution System on prescribed prices and in prescribed amount to the families/beneficiaries of BPL and Antyodaya Anna Yojna. Ration Coupon Plan will come into force by March 2007.

- All the distribution-cum-monitoring committees constituted to keep vigil on essential commodity items to be distributed by the fair price shops under the PDS have been abolished, and new Monitoring Committees have been constituted at the sub-division level to keep vigilance on essential commodities.
- This Monitoring Committee would monitor various plans under PDS and also distribution of foodgrains and kerosene oil under APL, BPL, Antodaya Yojna and Annapurna Yojna and would report to the government its evaluation of the difficulties arising therein.
- Allotment lists under APL/BPL/Antodaya plans would be displayed on important places to ensure transparency in the PDS and strengthen it. This has been done under the directive of the Central Government.
- Measures have been taken to properly monitor the supply of kerosene oil to PDS sellers and its distribution. a) Chief Convener of the Indian Oil Corporation has been instructed to make available to the concerned district officer, information regarding all the oil tankers that enter the commercial premises of the Kerosene Oil Wholesalers everyday. b) Measures have been taken to appoint one among BDO/CO/Block Supply Officer/Supply Inspector on an exclusive basis to physically verify the oil tanker and quantity of oil and to enter comments in its inspection book.) List of sub-allocation of kerosene oil issued from the sub-division level is to be necessarily given to all concerned, besides vigilance committee/task force/nagar parishad/zila parishad/panchayat samiti/panchayat and a copy of which would be displayed on the notice board of sub-division and division supplies office. The amount of Old Age Social Security Pension has been increased to Rs. 200 per month.
- Kerosene Oil Coupon Plan has been put into place to ensure that BPL families/beneficiaries of the targeted PDS get the determined amount of kerosene oil and at the determined price.
- A decision has been taken to stock one quintal of foodgrains in every panchayat to ensure protection against starvation deaths, which can only be released at the recommendation of mukhia.
- Measures have been taken to stop black-marketing and pilferage of the foodgrains allocated under PDS. Arrangements have been made to monitor pickup of foodgrains under different plan heads from FCI godown and its transportation. Similarly, arrangements have been made to monitor the unloading of the foodgrains in the state food corporation's storehouse and its supply to PDS dealers.

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5.5 Public Health Engineering

The main work of the Public Health Engineering Department is to provide safe drinking water and sanitation facilities in the rural areas of the State. In addition, it is responsible for providing piped water to urban areas of the State.

Within the State's own agenda, the main work is to build tubewells, carry on piped water schemes, add to existing capacities of water supply and work to save rain water. In these works, the State's share in Central schemes is also contributed. In addition, in areas that have no supply of piped water, there are NABARD assisted projects aimed at providing similar facilities. Finally, there are centrally assisted schemes consisting of Expedited Rural Water Supply Scheme, Expedited Urban Water Supply Scheme and the Total Cleanliness Programme for all of which the State PHE Department is the implementing agency. After the establishment of Panchayati Raj system, some of the work like building and maintenance of tubewells and cleanliness related works have been handed over to Panchayats.

Table 5.26 : Rural Pipe Water Supply Works by PHED

Year	Target	Actual
2001-02	17	4
2002-03	33	8
2003-04	13	4
2004-05	33	5
2005-06	25	5
2006-07 (Till January 2006)	63	15

Source : Public Health Engineering Department

Unfortunately, for financial and other reasons, the yearly target for rural piped water supply works by PHED has not been met in the past (Table 5.26). This is an area of physical infrastructure development that requires more attention of the State Government.

5.6 Panchayat Raj

The Panchayat Raj system has been strengthened in the State with the major aims of decentralization and devolution of power, inclusion of minorities and backward classes in local development and improving the share of women's participation to more than 50 percent. The Bihar Panchayat Raj Act 2006 was a step towards ensuring the achievement of these objectives.

Government Initiatives in Panchayati Raj

To ensure the participation of women and backward classes as well as Scheduled Castes/Tribes in the mainstream of the society, the State Govt. has introduced the Bihar Panchayat Raj Act, 2006, the salient features of which are as under:

- For ensuring woman empowerment in the three tiers of Panchayat Raj 50% seats have been reserved for women in all the positions under PR.
- Seats in all the positions have been reserved for the members of the Scheduled Castes and Scheduled Tribes in proportion to their population in the State.

- Similarly, 20% of the seats in all the positions have been reserved for the backward classes in all the three tiers of Panchayat Raj.
- There is a provision for reservation of seats at the positions of Mukhiya, Sarpanch, Pramukh and Chairman of the Zila Parishad.
- Under the provisions of the Bihar Panchayat Raj, Act 2006, the Bihar District Planning Committee Formation & Work Regulation Act, 2006 & the Bihar Gram Kachhary Regulation Act, 2007 & the Bihar Gram Kachhary Nyay Mitra (Employment & Service Condition) Act, 2007 have been framed. The Gram Kachhary Sachiv Niyukti Niyamavali is under the active consideration of the cabinet.
- Under the Bihar District Planning Committee Formation & Regulation Act, 2006, the District Planning Committee has been formed in all districts of the state.
- A one-day training programme has been organized for Mukhiyas and members of the Gram Panchayats at the respective district headquarters throughout the State. A training programme is being chalked out for providing training to members of the Panchayat Samitis and Zila Parishads at their respective District and Commissionerate level. Training of members of Gram Kachhary is to be organised and supervised by the Honorable High Court, Patna.
- In accordance with the recommendations the 12th FC, a grant of Rs. 325 crore will be provided each year to the 'Panchayats'. The amount will be utilized for sanitation and water supply schemes on priority basis.
- In the year 2006-07, a fresh installment of Rs. 162.40 lakh as 'grants' has been sanctioned for the Panchayat Raj Institutions in May 2006. The sanction of the second installment of Rs. 162.40 lakh is being processed.
- In 2007-08 under the Backward Region Grant Fund (BRGF), various development works will be taken up in different districts for bridging the 'critical gaps'.

Appendix I

District wise comparative R.C.H. indicators of Distt. level house hold survey of 1989-1999 and 2002-2003

Sl. No.	Name of District	% of Girls Marring below 18 years		% of Births of order 3 and above		CPR (Any)		Unmet Need (Total)		% of Pregnant Women with any ANC		% of Pregnant Women with full ANC		% of Institutional Delivery		% of safe Delivery		% of child with complete Immunization		% of children with no Immunization		% of Female with symptoms RTI/STI		% of Female Aware of HIV/AIDS	
		98-99	02-03	98-99	02-03	98-99	02-03	98-99	02-03	98-99	02-03	98-99	02-03	98-99	02-03	98-99	02-03	98-99	02-03	98-99	02-03	98-99	02-03	98-99	02-03
1	Patna	40.8	44.7	52.8	48.1	36.6	36.8	24.6	34.0	37.7	52.4	15.2	12.8	43.6	45.3	49.7	49.2	37.0	39.9	49.0	42.0	39.9	42.2	37.2	47.5
2	Nalanda	59.2	59.6	53.8	59.1	25.6	26.4	57.3	37.9	41.4	33.2	9.6	2.0	23.1	30.8	36.1	38.0	13.1	21.8	57.6	49.6	31.9	38.1	18.4	27.0
3	Bhojpur	55.7	55.3	55.6	54.0	23.4	36.9	48.9	30.8	38.6	51.3	11.1	6.8	31.8	37.4	58.3	49.0	12.0	32.3	34.0	44.4	48.5	40.6	21.3	32.3
4	Buxar	65.4	59.2	61.1	55.1	20.3	31.0	41.2	36.8	27.4	38.2	6.9	3.0	26.2	30.4	29.4	40.9	24.6	22.0	53.1	59.1	41.8	33.6	7.1	23.0
5	Rohtas	69.6	46.8	58.7	46.5	21.0	35.0	47.1	30.5	33.4	52.4	9.2	5.9	21.0	39.7	30.7	50.5	8.4	24.6	73.6	57.8	36.7	36.3	15.5	30.7
6	Kaimur	69.6	48.6	58.7	54.5	21.0	29.2	47.1	34.4	33.4	40.1	9.2	2.1	21.0	33.6	30.7	44.1	8.4	12.5	73.6	60.0	36.7	54.4	15.5	29.8
7	Gaya	62.0	54.7	55.9	50.5	22.0	28.4	27.5	41.1	20.6	33.0	6.6	4.7	12.0	23.6	15.3	37.9	24.5	14.4	56.3	53.4	44.1	38.9	11.4	25.2
8	Jehanabad	54.5	60.4	53.5	57.9	12.2	28.2	30.3	44.9	19.8	33.6	6.8	4.1	25.9	35.1	33.1	42.6	27.2	16.8	57.4	60.7	36.4	46.0	11.6	25.8
9	Aurangabad	63.5	45.6	57.0	53.7	21.8	25.7	24.8	34.3	22.3	37.8	4.6	1.4	18.7	21.3	23.0	28.7	18.3	32.6	62.8	45.6	30.3	51.5	5.3	20.1
10	Nawada	72.9	58.6	56.4	55.1	20.4	28.8	30.3	45.9	28.6	35.1	7.2	3.9	17.8	26.1	23.4	34.1	29.6	25.4	46.0	48.1	41.8	46.3	10.3	27.3
11	Munger	60.6	48.3	59.6	50.7	23.1	38.6	51.9	35.4	29.6	48.1	8.0	4.0	17.9	38.8	22.0	47.3	10.9	26.4	65.9	46.9	32.0	40.7	18.8	36.8
12	Lakhisarai	60.6	57.4	59.6	50.0	23.1	32.6	51.9	31.6	29.6	40.4	8.0	9.3	17.9	25.4	22.0	30.9	10.9	23.2	65.9	59.5	32.0	28.8	18.8	24.3
13	Sheikhpura	60.6	85.0	59.6	56.7	23.1	23.9	51.9	43.1	29.6	37.0	8.0	4.7	17.9	23.1	22.0	44.9	10.9	18.5	65.9	50.7	32.0	24.4	18.8	26.2
14	Jamui	60.6	64.7	59.6	49.8	23.1	28.9	51.9	33.2	29.6	43.7	8.0	10.3	17.9	23.5	22.0	27.4	10.9	13.1	65.9	75.0	32.0	39.7	18.8	20.0
15	Khagaria	63.9	58.2	58.4	59.4	28.8	30.8	37.0	35.2	24.4	23.3	10.4	2.2	10.4	15.1	16.7	20.2	27.9	21.1	43.3	55.2	41.0	43.4	9.3	25.0
16	Bhagalpur	58.8	42.6	53.7	51.9	27.5	39.6	36.2	33.1	31.9	48.5	10.4	6.2	14.1	29.2	18.4	41.6	25.6	42.8	47.9	34.5	49.8	47.5	11.0	38.1
17	Banka	58.8	56.0	53.7	54.4	27.5	36.9	36.2	31.0	31.9	38.5	10.4	6.4	14.1	25.4	18.4	36.4	25.6	25.6	47.9	54.5	49.8	52.6	11.0	22.7
18	Saran	51.3	28.9	59.4	58.6	18.2	30.5	49.0	36.6	31.7	32.7	8.3	7.2	14.8	15.9	42.7	22.3	20.7	35.3	32.7	30.8	46.4	27.9	16.7	35.1
19	Siwan	43.6	39.5	57.7	54.0	21.8	23.7	46.8	45.7	32.3	43.3	11.8	4.7	14.4	24.1	19.4	33.6	30.7	38.9	45.9	37.4	47.2	29.6	11.0	27.2
20	Gopalganj	58.4	34.6	56.6	54.2	15.9	30.1	51.8	34.8	33.9	53.3	7.5	7.0	16.9	24.0	21.8	35.2	21.2	39.0	54.5	31.0	42.8	39.9	9.6	29.7
21	Champan (E)	63.0	59.0	56.9	54.9	22.5	27.8	50.4	38.4	27.0	42.6	8.4	9.7	9.6	18.6	12.7	27.2	15.4	14.6	69.3	59.8	45.7	48.7	11.7	26.0
22	Champan (W)	58.5	63.9	54.3	57.0	20.0	24.6	55.5	37.2	37.4	35.1	16.7	0.8	9.9	28.6	19.6	37.1	23.6	7.6	630.7	67.6	19.6	29.6	16.2	7.7
23	Muzaffarpur	53.4	44.5	59.6	51.9	25.3	32.5	33.7	37.8	21.7	40.4	7.5	5.3	10.5	19.4	30.1	31.0	31.1	35.9	33.0	35.1	51.0	31.9	24.1	38.4
24	Vaishali	63.4	61.6	53.3	50.0	24.3	33.0	26.3	37.0	26.8	46.4	6.8	4.9	13.9	23.1	19.3	37.8	22.6	26.1	48.1	40.1	53.4	38.3	11.9	31.8
25	Sitamarhi	64.7	56.0	56.8	59.1	16.8	27.9	30.7	38.3	16.4	27.9	3.1	3.3	8.2	11.6	11.9	16.1	19.3	25.5	52.9	47.9	34.2	33.4	8.4	21.4
26	Sheohar	64.7	59.2	56.8	58.4	16.8	19.7	30.7	45.8	16.4	23.7	3.1	3.4	8.2	8.4	11.9	16.1	19.3	18.3	52.9	56.3	34.2	39.0	8.4	21.5
27	Darbhanga	51.3	49.8	59.7	56.5	27.1	31.9	22.8	40.0	26.8	33.3	8.6	4.1	11.9	16.9	14.7	25.5	22.2	22.0	47.1	54.2	33.0	32.7	14.2	38.9
28	Madhubani	64.1	60.8	56.2	54.7	22.8	30.4	31.7	31.8	15.9	36.0	5.9	3.5	7.4	7.7	10.1	15.4	18.1	15.5	60.0	47.6	36.4	48.2	5.6	26.2
29	Samastipur	64.1	67.7	58.7	58.6	22.7	22.7	31.7	42.6	13.1	23.4	3.1	4.5	6.5	11.1	7.9	19.1	20.0	16.0	57.1	52.5	47.3	37.6	9.3	17.8
30	Begusarai	58.6	50.6	56.7	52.6	23.1	27.6	56.8	41.3	36.2	33.5	12.4	2.7	15.7	15.7	28.0	28.7	16.4	21.4	34.7	60.1	30.7	23.7	22.0	26.8
31	Purnia	48.6	42.2	58.1	59.6	23.7	30.0	41.5	31.2	22.1	26.3	3.9	3.1	5.2	13.0	23.4	19.0	17.2	28.5	34.8	48.3	49.5	33.9	9.1	27.1
32	Araria	51.5	50.5	58.1	56.3	28.1	31.2	52.0	38.0	22.9	34.2	6.9	2.1	6.7	9.1	10.9	20.6	20.4	19.6	58.8	52.7	39.5	41.2	6.9	19.2
33	Kishanganj	48.2	42.6	64.8	65.6	16.1	23.1	47.8	47.3	17.7	28.3	6.5	1.8	6.7	14.1	8.3	20.5	11.4	7.9	71.6	79.1	35.7	49.5	3.8	22.4
34	Katihar	47.5	46.2	62.5	56.4	18.8	33.6	57.5	39.1	19.7	36.1	7.0	4.3	6.1	13.1	8.6	28.8	25.6	17.5	63.6	54.4	38.2	55.4	13.6	28.9
35	Saharsa	56.5	47.9	53.2	62.6	28.4	37.7	24.6	34.1	17.9	28.9	6.5	3.1	9.4	16.4	19.7	21.5	20.7	22.9	63.2	60.2	20.0	24.5	15.1	30.1
36	Supaul	56.5	61.1	53.2	51.6	28.4	36.4	24.6	25.0	17.9	24.9	6.5	2.2	9.4	12.5	19.7	27.8	20.7	15.7	63.2	52.8	20.0	41.6	15.1	15.4
37	Madhepura	66.4	54.3	57.0	50.4	25.0	31.5	44.9	37.9	19.9	27.5	3.7	6.3	9.0	11.8	11.6	21.7	15.7	21.7	62.4	54.9	36.0	47.5	10.1	17.3
38	Arwal	54.5	60.4	53.5	57.9	21.2	28.2	30.3	44.9	19.8	33.6	6.8	4.1	25.9	35.1	33.1	42.6	27.2	16.8	57.4	60.7	36.4	46.0	11.6	25.8
	Bihar	58.5	51.5	57.8	54.4	22.2	31.0	47.0	36.7	30.9	38.0	8.2	5.4	13.8	23.0	18.4	29.5	16.8	24.4	48.5	50.0	36.7	39.5	13.9	29.0

Appendix I (Contd.)

District Level House Hold & Facility Survey on R.C.H. (Round-2) 2002-2004

No.	State & Distt.	Girls Marriage below age 18 (%)	Mean age at Marriage		Current Use of Contraception (%)			Unmet Need (%)		ANC ^b (%)			Delivery ^b (%)			Immunization ^f (%)			% received Ors	Birth order 3+	Ranking of the Distt ^e	% of PHCs adequately equipped in					EO Care Kit
			Boy	Girl	Any Method	Modern Methods	Condom	Limiting	Spacing	At least on TT injection	Received IFA ^c Tablets	Full ^d ANC	Govt. Institute	Home	Attended by skilled person ^e	3 injections of DPT	Measles	Full ^e				Infrast ructur e ^b	Staff ^f	Supply ^h	Equip ment ^h	Traini ng ^h	
	Bihar	51.5	21.9	17.4	21.0	27.3	2.0	21.8	14.9	75.4	8.1	5.4	5.4	76.8	29.5	35.0	28.2	24.4	14.2	54.4	35.0	8.9	17.4	11.4	6.2	15.5	28.4
1	Araria	50.5	22.2	17.6	31.2	25.5	0.9	19.7	18.3	74.6	4.8	2.1	1.8	90.9	17.3	32.3	21.4	19.6	0.0	56.3	29.0	5.6	0.0	0.0	22.2	0.0	0.0
2	Aurangabad	45.6	20.5	17.8	25.7	24.8	1.2	22.2	12.0	83.9	4.3	1.4	6.8	78.5	26.9	41.2	34.6	32.6	0.0	53.7	16.0	14.6	4.9	4.9	0.0	14.6	7.3
3	Banka	56.0	22.7	16.9	36.9	26.9	2.6	16.8	14.2	74.6	8.5	6.4	6.9	74.4	36.2	35.6	26.5	25.6	14.2	54.4	10.0	6.7	36.7	10.0	3.3	10.0	20.0
4	Begusarai	50.6	22.8	17.5	27.6	25.0	1.7	25.7	15.6	72.3	4.8	2.7	4.5	83.9	20.6	28.2	22.6	21.4	0.0	52.6	25.0	13.3	0.0	16.7	3.3	16.7	26.7
5	Bhagalpur	42.6	24.3	18.3	39.6	29.9	2.1	18.4	14.8	84.0	7.7	6.2	4.2	70.7	39.4	51.8	44.7	42.8	32.5	51.9	2.0	10.0	30.0	13.3	10.0	6.7	33.3
6	Bhojpur	55.3	21.5	17.3	36.9	30.1	2.4	18.3	12.5	72.9	14.5	6.8	8.1	61.9	47.4	39.7	40.7	32.3	4.7	54.0	4.0	13.9	5.6	0.0	30.6	0.0	2.1
7	Buxar	59.2	20.1	16.7	31.0	25.4	2.8	20.4	16.4	62.1	4.6	3.0	4.1	68.9	39.8	30.2	22.1	22.0	2.7	55.1	14.0	0.0	44.0	4.0	0.0	1.0	12.0
8	Darbhanga	49.8	22.7	17.7	31.9	29.2	1.6	24.3	15.8	70.2	6.3	4.1	2.9	83.1	24.0	31.0	24.1	22.0	13.6	56.5	20.0	20.0	30.0	10.0	13.3	13.3	20.0
9	Gaya	54.7	22.2	17.0	28.4	27.4	1.3	23.2	17.8	83.4	7.6	4.7	3.2	76.2	28.9	24.5	23.8	14.4	57.0	50.5	19.0	25.0	12.5	2.5	15.0	12.5	10.0
10	Gopalganj	34.6	21.6	18.3	30.1	30.2	2.0	22.1	12.0	76.4	12.5	7.0	4.9	75.0	34.3	52.4	45.6	39.0	17.6	54.2	8.0	21.9	6.3	0.0	18.8	0.0	0.0
11	Jamui	64.7	21.6	17.0	28.9	24.3	1.5	21.0	12.2	75.6	12.0	10.3	2.6	76.5	26.4	16.7	15.3	13.1	44.7	49.8	21.0	6.5	22.6	32.0	3.2	9.7	29.0
12	Jehanabad	60.4	20.2	17.0	28.0	26.4	1.5	26.5	18.4	74.4	6.9	4.1	10.4	64.9	42.6	28.9	22.1	16.8	0.0	57.9	32.0	0.0	3.7	0.0	0.0	0.0	11.1
13	Kaimur	48.6	20.5	17.9	29.2	26.9	2.5	24.3	10.0	57.6	3.4	2.1	5.5	66.4	40.3	20.6	19.7	12.5	30.4	54.5	13.0	17.4	17.4	21.7	0.0	26.1	26.1
14	Katihar	46.2	22.0	17.5	33.6	28.1	1.4	21.4	17.8	77.7	7.4	4.3	5.4	86.9	27.3	27.9	19.8	17.5	3.1	56.4	17.0	17.9	7.1	0.0	28.6	28.6	0.0
15	Khagaria	58.2	22.1	17.3	30.8	28.0	0.9	20.4	14.8	68.8	3.1	2.2	6.8	84.8	19.4	29.6	22.1	21.1	25.7	59.4	30.0	0.0	20.0	5.0	5.0	20.0	25.0
16	Kishanganj	42.6	23.4	18.3	23.1	20.3	1.2	28.6	18.6	63.9	2.8	1.8	7.6	85.7	20.1	10.8	8.5	7.9	0.0	65.6	35.0	6.7	6.7	0.0	40.0	0.0	0.0
17	Lakhisarai	57.4	21.5	17.1	32.6	27.4	0.9	18.4	13.2	71.9	13.4	9.3	3.9	74.5	28.8	29.6	26.4	23.2	46.3	50.0	9.0	0.0	50.0	21.3	0.0	0.0	37.5
18	Madhepura	54.3	21.8	17.2	31.5	27.2	0.3	18.2	19.6	67.4	8.9	6.3	1.4	88.2	18.3	30.1	23.0	21.7	19.5	50.4	27.0	4.5	0.0	0.0	18.2	0.0	0.0
19	Madhubani	60.8	20.0	16.7	30.4	29.9	0.8	18.2	13.5	75.0	5.6	3.5	2.8	92.2	14.6	28.7	21.9	15.5	8.7	54.7	18.0	5.0	15.0	5.0	5.0	5.0	27.5
20	Munger	48.3	23.6	17.8	38.6	30.8	2.6	19.2	16.3	76.5	5.5	4.0	5.1	60.8	48.8	36.0	33.6	26.4	48.3	50.7	5.0	0.0	0.0	0.0	25.0	0.0	0.0
21	Muzaffarpur	44.5	22.4	17.8	32.5	31.6	1.5	23.4	14.4	90.1	7.8	5.3	3.2	80.6	24.2	48.0	40.7	35.9	4.5	51.9	6.0	13.8	3.4	34.5	3.4	20.7	34.5
22	Nalanda	59.6	21.4	16.9	26.4	23.4	1.1	25.2	12.7	77.4	5.5	2.0	3.9	69.0	35.8	32.7	29.6	21.8	0.0	59.1	31.0	4.4	0.0	0.0	15.6	0.0	0.0
23	Nawada	58.6	20.5	16.4	28.8	27.9	2.4	26.7	19.2	83.5	5.8	3.9	6.4	73.2	32.3	36.8	32.7	25.4	2.5	55.1	24.0	13.3	16.7	20.0	3.3	30.0	30.0
24	P. Champanan	63.9	20.9	16.3	24.6	18.9	0.4	18.9	18.3	60.1	4.5	0.8	18.2	70.6	35.8	14.6	12.7	7.6	23.8	57.0	34.0	3.6	17.9	10.7	0.0	25.0	64.3
25	Patna	44.7	23.3	17.8	36.8	33.9	4.1	19.9	14.2	72.3	15.4	12.8	10.7	54.4	47.8	52.5	42.1	39.9	4.6	48.1	1.0	2.5	10.0	10.0	10.0	20.0	12.5
26	Pu. Champanan	59.0	21.8	17.1	27.8	26.4	1.2	20.6	17.8	82.0	11.0	9.7	5.5	81.1	24.9	22.4	19.3	14.6	16.0	54.9	26.0	32.0	22.6	19.4	3.2	16.1	32.3
27	Purnia	42.2	22.8	18.1	30.0	24.0	1.2	24.9	6.3	74.8	3.1	3.1	2.4	86.8	18.6	41.2	32.8	28.5	NA	59.6	22.0	6.7	36.7	13.3	10.0	23.3	50.0
28	Rohtas	46.8	21.1	17.8	35.0	28.2	1.4	18.9	11.7	86.5	8.7	5.9	1.9	60.3	48.2	30.3	28.5	24.6	0.0	46.5	3.0	16.1	22.6	3.2	0.0	16.1	25.8
29	Saharsa	47.9	21.8	17.4	37.7	32.1	1.8	20.0	14.1	54.0	3.5	3.1	6.5	83.4	20.6	30.4	25.0	22.9	33.0	62.6	23.0	4.0	16.0	4.0	8.0	4.0	24.0
30	Samastipur	67.7	21.2	16.6	22.7	21.8	1.2	22.1	20.5	67.6	8.5	4.5	4.5	88.8	15.1	28.6	19.7	16.0	3.6	58.6	36.0	5.0	7.5	2.5	7.5	15.0	10.0
31	Saran	28.9	22.1	18.6	30.5	24.5	4.3	24.6	11.9	83.6	10.0	7.2	3.6	83.9	21.5	54.2	38.5	35.3	36.5	58.6	11.0	13.3	43.3	26.7	26.7	6.7	43.3
32	Sheikhpura	85.0	20.4	15.1	23.9	22.4	0.6	27.9	15.2	71.7	5.7	4.7	1.3	76.9	30.7	27.2	28.1	18.5	65.7	56.7	33.0	5.0	20.0	0.0	10.0	10.0	20.0
33	Sheohar	59.2	21.5	16.8	19.7	17.1	0.5	23.7	22.0	81.3	5.5	3.4	1.9	91.5	14.6	30.3	19.5	16.3	2.7	58.4	37.0	0.0	0.0	11.1	0.0	0.0	11.1
34	Sitamarhi	56.0	21.7	17.4	27.9	26.0	1.2	21.8	16.5	68.9	6.5	3.3	2.8	88.4	15.2	36.3	28.8	25.5	39.4	59.1	28.0	10.0	10.0	3.3	10.0	26.7	66.7
35	Siwan	39.5	22.6	18.2	23.7	21.2	3.2	32.7	12.9	80.6	6.8	4.7	8.0	75.9	32.4	51.5	41.6	38.9	33.8	54.0	15.0	13.3	33.3	16.7	6.7	33.3	26.7
36	Supaul	61.1	22.0	16.9	36.4	33.3	1.0	16.9	8.0	73.7	3.3	2.2	3.7	87.0	26.0	25.1	19.8	15.7	26.0	15.6	12.0	3.4	13.8	10.3	0.0	10.3	41.4
37	Vaishali	61.6	21.9	16.8	33.0	30.9	2.4	20.2	16.8	86.8	6.7	4.9	3.0	76.6	29.6	45.1	31.2	26.1	2.6	50.0	7.0	6.7	36.7	30.0	10.0	33.3	56.7

Appendix II
Comparison of Health Indices of Bihar and India

Sl. No.		Bihar	India
1.	No. of District Hospital	24	
2.	No. of Sub-Divisional Hospital	23	
3.	No. of Referral Hospital (functional)	87	3222
4.	No. of Primary Health Centre (PHCs)	398	23109
5.	No. of Additional PHCs (functional)	1243	
6.	No. of Health Sub-centres (functional)	8858	142655
7.	No. of Urban Family Welfare Centre	12	
8.	No. of Rural Family Welfare Centre	394	
9.	Infant Mortality Rate (IMR), 2005, Per thousand		
	i. Total	61	68
	ii. Rural	62	64
	iii. Urban	47	40
10.	Crude Birth Rate (2005), Per thousand		
	i. Total	30.4	23.8
	ii. Rural	31.2	25.6
	iii. Urban	23.8	19.1
11.	Crude Mortality Rate (2005), Per thousand		
	i. Total	8.1	7.6
	ii. Rural	8.3	8.1
	iii. Urban	6.6	6.0
12.	National Growth Rate (2005), Per thousand		
	i. Total	22.3	16.3
	ii. Rural	22.9	17.5
	iii. Urban	17.5	13.1
13.	Maternity Mortality Rate (MMR), Per lakh live Birth (1998-99)	452	407
14.	Total Fertility Rate (TFR), (1998-99)	3.7	3.3
15.	Total Couple Fertility Rate, (2002-2004), percent	27.3	45.7
16.	Total Institutional Delivery Rate (Government) (2002-04)	5.4	18.7
	Total	23.0	40.5
17.	Total Safe Delivery Rate	29.5	47.6
18.	Average Age of Marriage		
	Boy	21.9	24.5
	Girls	17.4	19.5
19.	Total Protection Rate	24.4	47.6
20.	Total Unmet needs	36.7	21.2
	Family Planning Operations	21.8	21.2
	Spacing methods	14.9	8.5
21.	% of Pregnant Women 3+ANC Visit	19.6	50.1

Appendix III
Life Expectancy at Birth : Bihar and India

Life Expectancy at Birth		Bihar			India		
		Rural	Urban	Total	Rural	Urban	Total
	Total	60.1	66.9	61.0	61.4	68.1	62.7
	Male	61.1	66.3	61.6	60.5	66.5	61.8
	Female	59.0	67.6	59.7	62.0	69.4	63.8

CHAPTER VI

FINANCIAL SECTOR

6.1 Introduction

The White Paper on State finances published by the Government in 2006 quotes data about the market size in Bihar to be Rs. 1,03,600 crore, or 4.8 percent of the market size of all India. This is more than that of MP, Punjab, Haryana or Delhi and little less than that of Rajasthan, Karnataka or Gujarat. Yet another indicator of the substantial size of the market in Bihar is the presence of 37,904 dealers in the State dealing with 56 different commodities (Appendix - I). This gives some idea about the potential of financial sector in the State.

To analyse the financial sector in Bihar, one may consider 3 kinds of institutions functioning in the State: (1) Banks that includes Commercial Banks, Regional Rural Banks, Cooperative Banks as well as other Cooperative institutions (2) State Financial Institutions and (3) National Financial Institutions. Cooperatives largely look after the requirements of agriculture sector, commercial banks provide finance for industry as well as agriculture, State financial institutions help to promote industrial development in the State and national level institutions cater to the interest of corporate houses and provide large scale finance.

6.2 Growth of Banking Sector

Table 6.1 shows the distribution of commercial bank branch offices in Bihar during 2001 - 2005 and their growth. As at the end of March 2005, 68 percent of the total 3646 branches of commercial banks in Bihar were located in rural areas, 19 percent in semi-urban and 13 percent in urban areas. As regards growth in the total number of branches, one finds that during the 5 years from March 2001 to march 2005, there was hardly any growth in the total number of branches and there was no change in their distribution among various regions either. From Table 6.2, it can be noted that Bihar accounts for 5.2 percent of all the bank branches in the country.

Table 6.1 : Distribution of Commercial Bank Branch Offices in Bihar (end March)

Years	Rural	Semi-urban	Urban	Total	Growth Rate %
2001	69.3	18.5	12.2	3620	1.49
2002	69.1	18.5	12.4	3616	-0.11
2003	69.1	18.6	12.3	3609	-0.19
2004	68.7	18.9	12.4	3618	0.25
2005	68.0	18.9	13.1	3646	0.77

Table 6.2 : Distribution of Branches of Commercial Banks among States: 2004-05

States	Rural	Semi Urban	Urban	Total	% Share
India	31967	15619	22383	69969	100.0
Bihar	2481	690	475	3646	5.2
Madhya Pradesh	1852	814	894	3560	5.1
Maharashtra	2205	1134	3369	6708	9.6
Uttar Pradesh	4837	1388	2250	8475	12.1
West Bengal	2272	585	1804	4661	6.7

6.3 Credit Deposit Ratio

Tables 6.3, 6.4 and 6.5 depict respectively the outstanding deposits, credits and the credit-deposit (CD) ratios, three important financial indicator of the performance of banking operations, of the scheduled commercial banks in selected States, including Bihar. The CD ratio of the commercial banks depends mostly on the level of economic activity and the credit absorption capacity of a particular State and is an indicator of the involvement of the banks in the economic development of the State. Till the 1990s, CD ratio in Bihar was one of the lowest in the country and there was no increase in the CD ratio in the State. After 2000-01, however, there has been some improvement in the CD ratio, but even in 2004-05, it is still one of the lowest in the country. The CD ratio of Bihar in fact now stands at 31.4 percent, far below the national average of 66.0 percent, not to mention the CD ratios of relatively more developed states like Maharashtra (75.9 percent), West Bengal (56.8 percent) or even Madhya Pradesh (61.2 percent). Risk aversion, rather than an efficient risk management, seems to be the order of the day, at least so far as credit policies of banks in Bihar are concerned.

Table 6.3 : Deposits of Scheduled Commercial Banks: by States (Rs. crore)

	2000-01	2001-02	2002-03	2003-04	2004-05	% Share, 2004-05
India	949433.3	1123393.3	1276195.7	1511273.4	1746814.0	100.0
Bihar	26800.7	29832.5	32931.6	36000.6	41007.4	2.3
Madhya Pradesh	29084.3	33162.3	37590.0	44073.9	47951.0	2.7
Maharashtra	172489.2	222546	249667.7	318335.2	382209.3	21.9
Uttar Pradesh	85372.6	98520.1	108684.6	119662.2	135360.1	7.7
West Bengal	67931.1	76897	86048.6	96084.6	111919.4	6.4

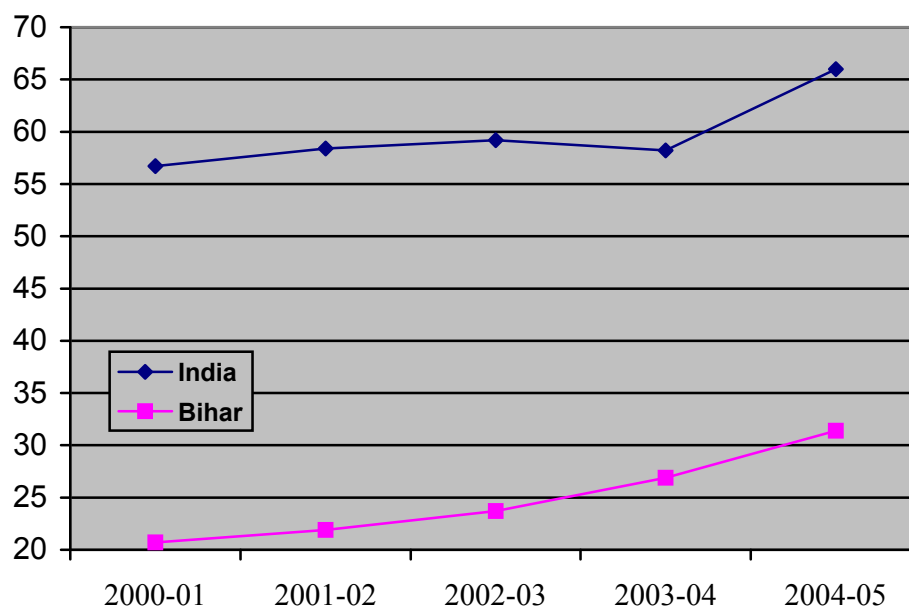
Table 6.4 : Outstanding Credits of Scheduled Commercial Banks : by States (Rs. crore)

	2000-01	2001-02	2002-03	2003-04	2004-05	% Share of 2004-05
India	538433.8	655993.1	755968.8	880312.0	1152467.9	100.0
Bihar	5547.2	6547.3	7802.6	9667.1	12868.5	1.1
Madhya Pradesh	15264.2	16684.6	19445.0	22072.8	29359.1	2.5
Maharashtra	144064.2	172535.3	193348.5	211751.3	290100.3	25.2
Uttar Pradesh	27192.6	33826.1	39083.9	45452.9	57181.4	5.0
West Bengal	29475.6	37857.9	43061.5	51673.4	63560.2	5.5

Table 6.5 : Credit Deposit Ratio of the Scheduled Commercial Banks (%)

	2000-01	2001-02	2002-03	2003-04	2004-05
India	56.7	58.4	59.2	58.2	66.0
Bihar	20.7	21.9	23.7	26.9	31.4
Madhya Pradesh	52.5	50.3	51.7	50.1	61.2
Maharashtra	83.5	77.5	77.4	66.5	75.9
Uttar Pradesh	31.9	34.3	36.0	38.0	42.2
West Bengal	43.4	49.2	50.0	53.8	56.8

Credit-Deposit Ratio (%)



As on March 2005, the aggregate deposits of all scheduled commercial banks in Bihar were Rs 41007 crore against a credit of Rs 12869 crore, giving a CD ratio of 31.4 percent, up from a pitiable 20.7 percent in 2000-01. Even before the process of liberalisation was set on in the early 1990s, the CD ratio of Bihar used to be around 40 percent. The deposits and credits of the scheduled commercial banks in Bihar constitute respectively 2.3 percent and 1 percent of the total deposits and the total credits in the country, one of the lowest among the major Indian States. Investment in the State is essential for productive economic activities, but at this rate, any meaningful investment will take a long time to come. Bihar's share in the total deposits of the country, at the same time, has declined from 2.8 percent to 2.3 percent during the last 5 years (Table 6.6), while the share of its credit has remained more or less constant at 1 percent.

Table 6.6 : Share in Total Deposits of Scheduled Commercial Banks: By States (%)

	2000-01	2001-02	2002-03	2003-04	2004-05
India	100	100	100	100	100
Bihar	2.8	2.7	2.6	2.4	2.3
Madhya Pradesh	3.1	3.0	3.0	2.9	2.8
Maharashtra	18.2	19.8	19.6	21.1	21.9
Uttar Pradesh	9.0	8.8	8.5	7.9	7.8
West Bengal	7.2	6.9	6.7	6.4	6.4

In absolute terms, it means that if the current CD ratio of 31 percent in the State were to increase to the national level of around 66 percent, investments in the State would go up by a whopping Rs 14000 crore, which is almost double the annual plan outlay of the State and would provide the much-needed impetus to economic activities. The low disbursement of credit also indicates that the credit requirements of the State are being met at higher rates of interest from private lending agencies, eating into the profitability of enterprises in the State. This naturally is a serious hindrance to industrial growth in the State.

Banks assist the economy not simply by giving credit, but also by investing a large part of their investible funds in State Government securities and in shares, bonds etc. of State Corporations and Undertakings, Quasi-Government bodies and Joint-Stock companies. Therefore, the total involvement of the banks in the economic activities of a State is truly reflected not by the Credit-Deposit ratios, but by the Investment plus Credit to Deposit (ICD) ratios. From Appendix - IV, one notices that the inter-state differences with respect to ICD ratios is lesser than for the CD ratio. The ICD ratio of Bihar and other less developed States were substantially higher than their respective CD ratios whereas for the developed States the differences were not much. As of 2003, Bihar had an ICD ratio of 38.9 percent, compared to its CD ratio of around 23.7 percent.

Tables 6.7 and 6.8 respectively depict the per capita deposits and credits of scheduled commercial banks in some States. It can be seen from these tables that the growth of per capita deposits in Bihar is low among the States; but the growth of per capita credits is one of the highest among the country. While the per capita credit in Bihar grew by over 135 percent in 5 years, the deposits grew only by 55 percent, thus hiking up the CD ratio of Bihar from 21 percent to 31 percent.

Table 6.7 : Statewise Per Capita Deposits of Scheduled Commercial Banks

	2000-01	2001-02	2002-03	2003-04	2004-05	Growth over 2000-01 (%)
Bihar	3229	3614	4006	4390	5020	55.5
Madhya Pradesh	4819	5542	6340	7508	8244	71.1
Maharashtra	17805	22538	24776	30899	36349	104.2
Uttar Pradesh	5137	5829	6318	6826	7585	47.7
West Bengal	8473	9430	10380	11410	13075	54.3

Table 6.8 : Per Capita Credit of Scheduled Commercial Banks : By States (Rs)

	2000-01	2001-02	2002-03	2003-04	2004-05	Growth over 2000-01 (%)
Bihar	668	793	949	1179	1575	135.8
Madhya Pradesh	2529	2788	3280	3760	5048	99.6
Maharashtra	14871	17473	19187	20554	27589	85.5
Uttar Pradesh	1636	2001	2272	2593	3204	95.8
West Bengal	3676	4642	5194	6136	7425	102.0

Table 6.9 : District wise CD Ratio in Bihar (As on 30.09.2006)**(Rs. in Lakh)**

Sl. No.	Name of District	Deposit Amount	Advances Amount	CD Ratio
1.	Patna	1236609	346279	28.00
2.	Arwal	30190	7366	24.40
3.	Aurangabad	99516	27821	27.96
4.	Bhojpur	159668	40034	25.07
5.	Buxar	83298	24248	29.11
6.	Gaya	208173	56437	27.11
7.	Jehanabad	46704	11883	25.44
8.	Kaimur (Bhabhua)	51994	23864	45.90
9.	Lakhisarai	44549	11545	25.92
10.	Nalanda	125110	33746	26.97
11.	Nawada	61736	15918	25.78
12.	Rohtas	133652	48175	36.05
13.	Araria	60533	30929	51.09
14.	Jamui	56811	16454	28.96
15.	Kishanganj	33718	17102	50.72
16.	Madhepura	44165	18691	42.32
17.	Purnea	84938	42983	50.61
18.	Saharsa	53723	18258	33.99
19.	Supaul	54449	17083	31.37
20.	Darbhanga	154032	49017	31.82
21.	E. Champaran	134315	64385	47.94

Table 6.9 (Contd.)

Sl. No.	Name of District	Deposit Amount	Advances Amount	CD Ratio
22.	Gopalganj	113188	29199	25.80
23.	Madhubani	115722	37907	32.76
24.	Muzaffarpur	241722	81234	33.61
25.	Saran	197930	50099	25.31
26.	Siwan	200015	40704	20.35
27.	Vaishali	139814	44320	31.70
28.	W. Champaran	90264	59852	66.31
29.	Katihar	81688	46276	56.65
30.	Shiekhpora	25635	7078	27.61
31.	Banka	50373	22692	45.05
32.	Begusarai	114984	49579	43.12
33.	Bhagalpur	158673	58316	36.75
34.	Munger	107084	22664	21.16
35.	Sheohar	13193	3881	29.42
36.	Sitamarhi	77867	29639	38.06
37.	Khagaria	52196	18918	36.24
38.	Samastipur	153081	66791	43.63
	Total for Bihar	4891312	1591367	32.53

The CD ratio in Bihar, besides being very low, also displays wide variation among the districts and different banks. The relevant figures for 2006 are presented in Tables 9 and 10. If one observes districtwise CD ratios (Table 6.9), it is found to vary from as low as 20.35 percent (Siwan) to 66.31 percent (West Champaran). Among the districts where CD ratio is less than 25 percent are included Arwal, Siwan and Munger; among the districts with CD ratio above 50 percent are included Araria, Kishanganj, Purnea, West Champaran and Katihar. Except for West Champaran, the high CD ratios in four other districts are, however, related high accumulated interests on previous loans in the region. Besides inter-district variation, the CD ratio in Bihar is also characterised by wide inter-bank variations. As shown in Table 6.10, the CD ratio for the lead banks is indeed low, except for United Commercial Bank and Union Bank of India. Among all the banks only the following report a CD ratio of more than 50 percent — Bank of Maharashtra, Syndicate Bank, State Bank of Bikaner and Jaipur and State Cooperative Bank.

6.4 Regional Rural Banks (RRBs)

Table 6.11 shows that deposit per branch of the Regional Rural Banks (RRBs) in Bihar increased from Rs 2.5 crore in March 2001 to Rs 3.7 crore in March 2005, an increase of nearly 50 percent, which was lower than the national growth rate in the same period. But given that the number of RRB branches in Bihar is close to 1500 (Table 6.12), it means an increase in deposits to the tune of Rs 1800 crore from the rural economy of Bihar during the period 2000-2005. However, the total deposits of RRBs constitute about 56 percent of the total rural deposits of the scheduled commercial banks (Table 6.13); in fact, the rural deposits of the scheduled commercial banks constitute only one third of the total bank deposits in Bihar. Bihar shares 6.3 percent of all rural deposits of the scheduled commercial banks in the country and the total amount of rural deposits of such banks in Bihar amount to Rs 13328 crore.

There are 5 RRB's in Bihar, each serving a particular zone (Table 6.14). Of their total number of 1466 branches, no less than 86.4 percent are located in rural areas. It is interesting to note that the overall CD ratio of RRB's is 44.77 percent, much higher than those commercial banks.

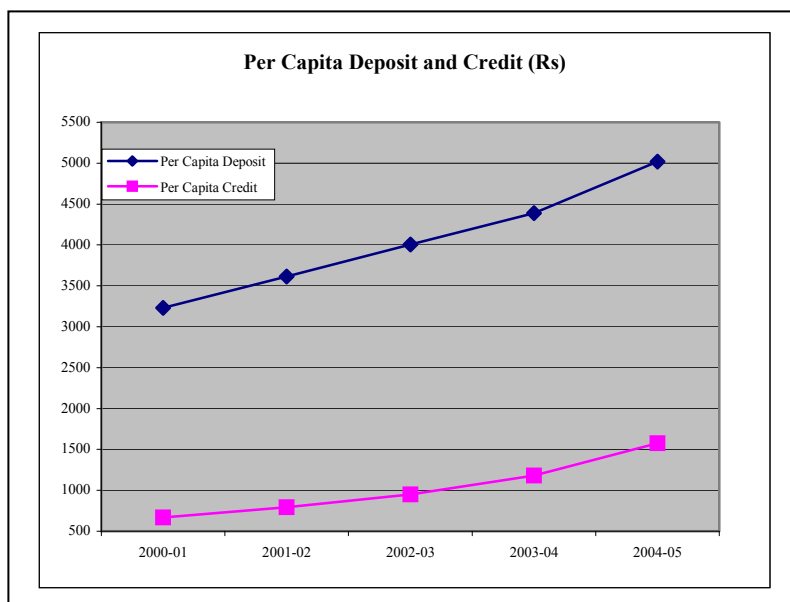


Table 6.10 : Bankwise CD Ratio in Bihar (As on 30.09.2006)

(Rs. in Lakh)

Sl. No	Institution Commercial banks	RURAL				SEMI-URBAN				URBAN				TOTAL				Investment	CD Rt
		Br. No	Deposit	Adv	CD Rt.	Br. No.	Deposit	Adv	CD Rt	Br. No.	Deposit	Adv	CD Rt	Br. No.	Deposit	Adv	CD Rt		
	Lead Banks																		
1	State Bank of India	277	283788	90100	31.75	177	593531	217346	36.62	111	669381	189342	28.29	565	1546700	496788	32.12	0	32.12
2	Central Bank of India	190	151605	57356	37.83	83	176566	51709	29.29	47	142363	35440	24.89	320	470534	144505	30.71	814	30.88
3	Punjab National Bank	316	277808	81652	29.39	46	136126	29221	21.47	35	193419	46926	24.26	397	607353	157799	25.98	8365	27.36
4	Canara Bank	36	50565	12822	25.36	12	90122	13262	14.72	32	155503	62708	40.33	80	296190	88792	29.98	0	29.98
5	Uco Bank	119	76367	37430	49.01	21	27649	9168	33.16	14	74043	23449	31.67	154	178059	70047	39.34	1747	40.32
6	Bank of Baroda	46	29212	9088	31.11	22	46936	10858	23.13	16	50903	15073	29.61	84	127051	35019	27.56	0	27.56
7	Union Bank of India	27	20306	11184	55.08	8	14391	6978	48.49	18	53804	23046	42.83	53	88501	41208	46.56	388	47.00
	Other Banks																		
8	Bank of India	97	76912	29118	37.86	29	95272	25156	26.40	24	101005	29611	29.32	150	273189	83885	30.71	1684	31.32
9	Allahabad Bank	93	67249	28433	42.28	25	60824	23096	37.97	27	102802	39373	38.30	145	230875	90902	39.37	311	39.51
10.	Andhra Bank	0	0	0	0.00	0	0	0	00.00	1	4099	672	16.39	1	4099	672	16.39	0	16.39
11.	Bank of Maharashtra	0	0	0	0.00	0	0	0	00.00	4	4282	2183	50.98	4	4282	2183	50.98	0	50.98
12.	Corporation Bank	0	0	0	0.00	0	0	0	00.00	2	11481	1057	9.21	2	11481	1057	9.21	0	9.21
13.	Dena Bank	0	0	0	0.00	1	1863	205	11.00	6	7566	2397	31.68	7	9429	2602	27.60	0	27.60
14.	Indian Bank	11	6978	2348	33.65	2	2489	314	12.62	9	29495	5003	16.96	22	38962	7665	19.67	314	20.48
15.	Indian Overseas Bank	0	0	0	0.00	2	2614	457	17.48	10	48674	6216	12.77	12	51288	6673	13.01	10	13.03
16.	Oriental Bank of Comm	0	0	0	0.00	1	628	350	55.73	3	5527	2749	49.74	4	6155	3099	50.35	0	50.35
17.	Punjab & Sind Bank	0	0	0	0.00	0	0	0	00.00	6	7878	3295	41.83	6	7878	3295	41.83	0	41.83
18.	Syndicate Bank	8	6623	6072	91.68	4	4697	1641	34.94	14	21025	9752	46.38	26	32345	17465	54.00	214	54.66
19.	United Bank of India	42	18268	6519	35.69	8	12859	5681	44.18	15	34670	7769	22.41	65	65797	19969	30.35	1137	32.08
20.	Vijaya Bank	0	0	0	0.00	0	0	0	00.00	5	15499	3588	23.15	5	15499	3588	23.15	0	23.15
	SBI Associates																		

21.	State Bank of B & J	0	0	0	0.00	0	0	0	00.00	6	8767	3615	41.23	6	8767	3615	41.23	1430	57.55
22.	State Bank of Patiala	0	0	0	0.00	0	0	0	00.00	1	2189	802	36.64	1	2189	802	36.64	246	47.88
	Private Banks																		
23.	ICICI Bank	0	0	0	0.00	0	0	0	00.00	0	52451	2218	4.23	0	52451	2218	4.23	0	4.23
24.	Federal Bank	0	0	0	0.00	0	0	0	00.00	0	3440	577	16.77	0	3440	577	16.77	0	16.77
25.	Jammu Kashmir Bank	0	0	0	0.00	1	2030	914	45.02	0	0	0	0.00	1	2030	914	45.02	0	45.02
26.	South Indian Bank	0	0	0	0.00	0	0	0	00.00	0	3045	113	3.71	0	3045	113	3.71	0	3.71
27.	Vysya Bank Ltd.	0	0	0	0.00	0	0	0	00.00	1	2479	76	3.07	1	2479	76	3.07	0	3.07
28.	IDBI Bank	0	0	0	0.00	0	0	0	00.00	0	5287	6570	124.27	0	5287	6570	124.27	0	124.27
29.	UTI Bank	0	0	0	0.00	0	0	0	00.00	0	0	0	0.00	0	0	0	00.00	0	0.00
30.	HDFC Bank	0	0	0	0.00	0	0	0	00.00	0	0	0	0.00	0	0	0	00.00	0	0.00
31.	Indusind Bank	0	0	0	0.00	0	0	0	00.00	0	0	0	0.00	0	0	0	00.00	0	0.00
32.	Centurian Bank	0	0	0	0.00	0	0	0	00.00	0	0	0	0.00	0	0	0	00.00	0	0.00
	*Total of Comm. Banks	1262	1065681	372122	34.92	442	1268597	396356	31.24	407	1811077	523620	28.91	2111	4145355	1292098	31.17	16660	31.57
	Co-operative Banks																		
33.	Land Dev. Bank	0	0	0	0.00	0	0	0	00.00	0	0	0	0.00	0	0	0	00.00	0	0.00
34.	State Co-op, Bank	0	0	0	0.00	1	0	0	00.00	13	77473	52936	68.33	14	77473	52936	68.33	10843	82.32
35.	Bombay M.Co-op Bank	0	0	0	0.00	0	0	0	00.00	1	1835	512	27.90	1	1835	512	27.90	512	55.80
36.	TUCB	0	0	0	0.00	0	0	0	00.00	0	0	0	0.00	0	0	0	00.00	0	0.00
	* Total of Coop. Banks	0	0	0	0.00	1	0	0	00.00	14	79308	53448	67.39	15	79308	53448	67.39	11355	81.71
	* Total of R.R. Bs.	1267	501804	195319	38.92	165	111133	34517	31.06	34	53712	15985	29.76	1466	666649	245821	36.87	52655	44.77
	*Total for Bihar	2529	1567485	567441	36.20	608	1379730	430873	31.23	455	1944097	593053	30.51	3592	4891312	1591367	32.53	80670	34.18

Table 6.11 : Deposit per office of Regional Rural Banks (Rs. crore)

	2000-01	2001-02	2002-03	2003-04	2004-05
India	2.6	3.0	3.4	3.8	4.2
Bihar	2.5	2.8	3.1	3.4	3.7
Madhya Pradesh	2.4	2.7	3.1	3.5	3.9
Maharashtra	1.9	2.1	2.4	2.7	2.9
Uttar Pradesh	3.3	3.7	4.1	4.5	5.0
West Bengal	3.2	3.7	4.1	4.4	4.6

Table 6.12 : No. of Offices (Branches) of Regional Rural Banks

	2000-01	2001-02	2002-03	2003-04	2004-05
India	14651	14664	14671	14663	14645
Bihar	1494	1491	1489	1489	1487
Madhya Pradesh	1098	1098	1080	1069	1064
Maharashtra	599	593	593	593	588
Uttar Pradesh	2881	2873	2877	2878	2869
West Bengal	893	893	892	894	897

Table 6.13 : Rural Deposits of SCBs (Rs. crore)

	2000-01	2001-02	2002-03	2003-04	2004-05	% Share of States 2004-05
India	139431.4	159423.5	176502.4	195081.7	213104.1	100.0
Bihar	9066.9	10311.0	11106.9	12271.3	13328.1	6.3
Madhya Pradesh	5393.5	6106.6	6662.8	7450.1	8042.4	3.8
Maharashtra	6804.2	7430.3	8228.1	9381.8	9831.5	3.9
Uttar Pradesh	23156.0	26200.3	28823.3	31345.1	34477.3	16.2
West Bengal	10305.7	11814.2	12903.6	14047.4	15179.2	7.1

Table 6.14 : Deposit, Advance and CD Ratio for RRB's in Bihar (As on 30.09.2006)

(Rs. in Lakh)

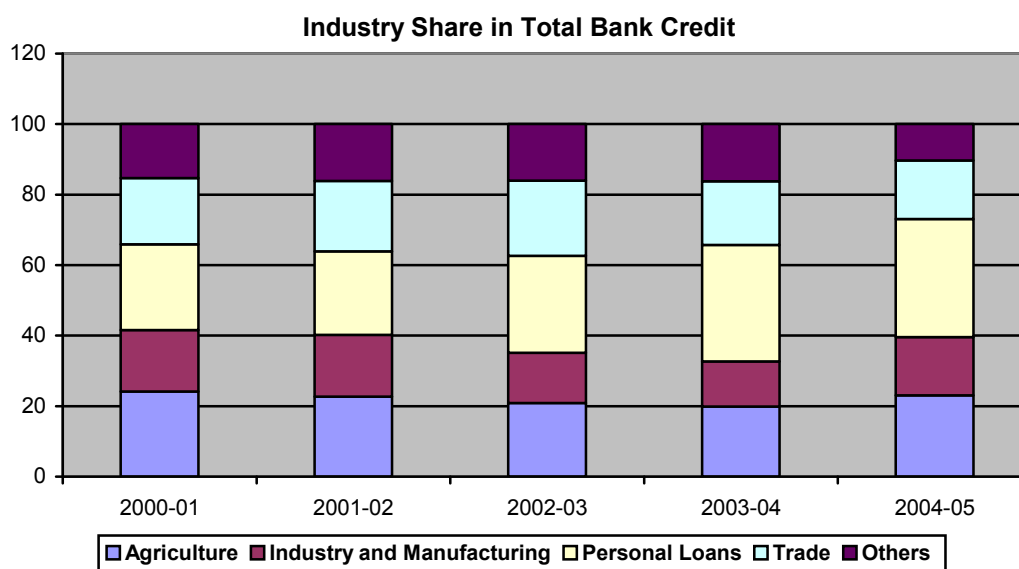
Sl. No	Institution R.R. Bs.	Spons Bank	RURAL				SEMI-URBAN				URBAN				TOTAL				Investment	CD Rt
			Br. No	Deposit	Adv	CD Rt.	Br. No.	Deposit	Adv	CD Rt	Br. No.	Deposit	Adv	CD Rt	Br. No.	Deposit	Adv	CD Rt		
1	Madhya Bihar Kshetriya Gramin Bank	PNB	363	148342	54765	36.92	33	36106	9997	27.69	11	21019	8139	38.72	407	205467	72901	35.48	47878	58.78
2	Bihar Kshetriya Gramin Bank	UCO	106	35605	17085	47.98	42	29274	7376	25.20	3	6544	2195	33.54	151	71423	26656	37.32	4540	43.68
3	Samastipur Kshetriya Gramin Bank	SBI	61	21078	8864	42.05	6	5725	2948	51.49	0	0	0	0.00	67	26803	11812	44.07	0	44.07
4	Uttar Bihar Gramin Bank	CBI	614	252537	88153	34.91	45	17182	5567	32.40	18	9311	2174	23.35	677	279030	95894	34.37	0	34.37
5	Kosi Kshetriya Gramin Bank	CBI	123	44242	26452	59.79	39	22846	8629	37.77	2	16838	3477	20.65	164	83926	38558	45.94	237	46.23
	Total of R.R. Bs.		1267	501804	195319	38.92	165	111133	34517	31.06	34	53712	15985	29.76	1466	666649	245821	36.87	52655	44.77

6.5 Industry Share in Bank Credit

Table 6.15 shows the percentage share of different sectors of economy in the total credit of scheduled commercial banks in Bihar for the period between 2001 and 2005 (end-March). No change in the distribution of credit among various sectors is observed during this period, the relative shares of different sectors remaining nearly unaltered. Thus agriculture accounts for about 23 percent of the total credit, industry and manufacturing account for about 17 percent, personal loans 34 percent, trade 17 percent and the rest 9 percent is accounted by professionals and other services, finance and miscellaneous activities. Details are given in Appendices II and III.

Table 6.15 : Industry Share of Outstanding Credit of Scheduled Commercial Banks in Bihar (%)

Sectors	2000-01	2001-02	2002-03	2003-04	2004-05
Agriculture	24.1	22.7	20.9	19.9	23.1
Industry and Manufacturing	17.5	17.5	14.2	12.8	16.5
Transport Operators	2.9	3.0	2.4	1.7	1.5
Personal Loans	24.3	23.7	27.5	33.0	33.5
Professional & Other services	3.3	2.3	2.8	2.7	2.7
Trade	18.8	20.0	21.4	18.1	16.6
Finance	0.4	0.2	0.8	0.5	0.6
Miscellaneous	8.8	10.5	9.9	11.3	5.5
Total Bank Credit	100.0	100.0	100.0	100.0	100.0



6.6 Financial Institutions

There are State financial institutions as well as Central level financial institutions working in the State that provide a variety of financial services and assistance to boost industrial growth of the State in particular and economic development in general. At the national level, there are 6 development banks (IDBI, IFCI, ICICI, SIDBI, IIBI and IDFC), 2 specialised financial institutions (NABARD and EXIMBANK) and 3 investment institutions (LICI, UTI and GIC), working in different States, some of them in Bihar also. At the State level, there are 4 corporations in the financial sector, viz, Bihar State Financial Corporation (BSFC), Bihar State Industrial Development Corporation (BSIDC), Bihar State Credit and Investment Corporation (BISCICO) and Bihar Panchayati Raj Financial Corporation (BPRFC). While all of these four organisations were non-functional, BSFC was revived in 2004-05.

NABARD, in its role as an apex development bank with a mandate for facilitating credit flow for promotion and development of agriculture, small-scale industries, cottage and village industries, handicrafts and other rural crafts, has a very crucial role to play in credit flow in Bihar. In 2006-07, NABARD had disbursed a credit of Rs 168.05 crore in the state by way of refinance to Banks, till January 31, 2006. NABARD manages the Rural Infrastructure Development Fund (RIDF) created out of the shortfall in Commercial Banks lendings for agriculture, to strengthen rural infrastructure. The fund is utilised for providing loans to State governments for completion of on-going projects relating to irrigation, soil conservation, watershed management and other rural infrastructure like rural roads and bridges, rural drinking water supply, integrated market yards, cold chains, etc. By the end of January 2007, NABARD had disbursed a total of around Rs. 29 crore under RIDF in the state.

6.7 Prices

Prices in the rural Bihar have increased much sharply as compared to the national trend over last two years. Rural population, in particular, agricultural labourers in Bihar, seem to have suffered one of the highest increases in the prices of their consumption articles across the country (Table 6.16). The Consumer Price Index for Agricultural labourers has increased by around 20 percent over last two years, from 324 in 2004-05 to 390 in Nov. 2006 (with the base of July 1986-June 1987 = 100). The increase for All India has been around 14 percent over the same period (from 342 to 390). Though the index for the richer States such as Maharashtra, Gujarat, Punjab and Haryana stands at a higher level than that of Bihar at 400,

400, 413, and 401 respectively, their increase over the last two years has been much less than Bihar.

Condition of Urban Non-Manual Employees in Bihar has been comparatively better in terms of rising prices. Consumer Price Index for Urban Non-manual Employees in Patna stood at 462 (with 1984-85 as the base) in November 2006, this index for all India was much higher at 494. Nevertheless, increase in the index for Patna has been much faster over last two years at 16.67 percent, as compared to 13.30 for all India (Table 6.17).

Table 6.16: Consumer Price Index Numbers for Agricultural Labourers (Base : July 1986-June 1987 = 100)

State	2004-05	2005-06	2005	2006						Percent rise in Prices over 2004-05
			Nov.	Jun	Jul	Aug	Sep.	Oct	Nov.	
All India	342	358	360	370	372	375	380	386	390	14.04
Bihar	324	347	350	360	368	366	376	389	390	20.37
Andhra Pradesh	357	371	379	381	385	389	394	397	402	12.61
Assam	347	362	367	373	374	376	382	389	389	12.10
Gujarat	350	369	372	380	384	389	395	400	403	15.14
Haryana	359	376	373	385	387	391	396	401	405	12.81
Himachal Pradesh	325	343	342	354	354	356	363	368	371	14.15
Jammu & Kashmir	348	359	360	370	376	379	383	386	390	12.07
Karnatka	340	341	342	350	350	351	354	359	364	7.06
kerala	351	356	354	368	367	367	366	366	373	6.27
Madhya Pradesh	330	352	349	371	374	377	382	387	392	18.79
Maharashtra	350	368	368	382	385	390	395	400	401	14.57
Manipur	310	328	333	333	333	333	335	333	333	7.42
Meghalaya	360	382	379	395	398	402	405	406	409	13.61
Orissa	320	334	343	339	346	355	359	367	371	15.94
Punjab	355	380	378	395	398	402	408	413	418	17.75
Rajasthan	346	377	373	390	394	400	404	407	409	18.21
Tamil Nadu	347	355	353	365	357	358	360	363	367	5.76
Tripura	337	351	355	371	374	375	380	389	385	14.24
Uttar Pradesh	343	371	368	386	388	390	398	405	416	21.28
West Bengal	333	342	349	351	355	354	362	369	370	11.11

Source : rbi.org.in, (RBI monthly Bulletin on Prices)

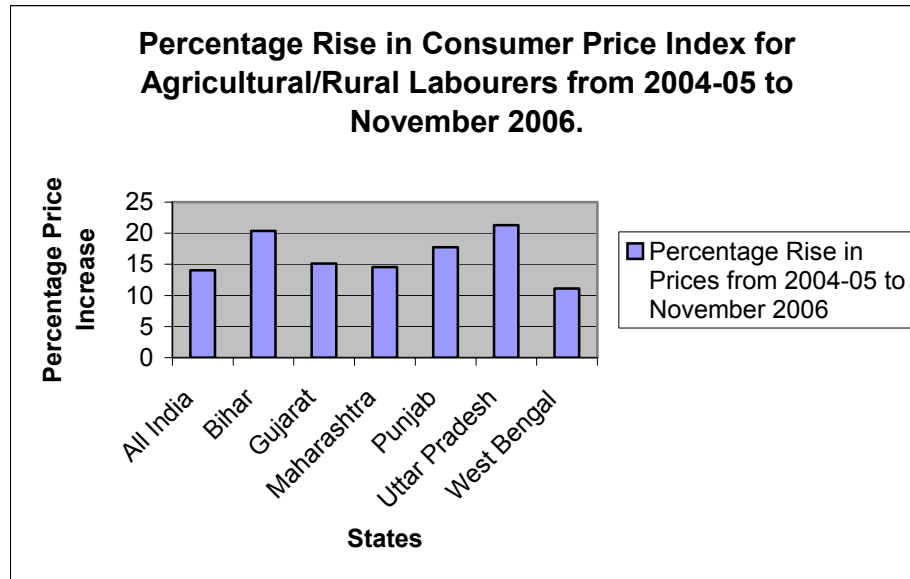


Table 6.17 : Consumer Price Index Numbers for Urban Non-manual Employees – All-India and Selected Centres (Base : 1984-85 = 100)

Centre	2004-05	2005-06	2005		2006						% rise in Prices over 2004-05
			Nov.	May	June	July	Aug.	Sep.	Oct.	Nov.	
Patna	396	418	423	430	437	438	444	455	462	462	16.67
All India	436	456	463	471	477	481	484	488	493	494	13.30

Source : rbi.org.in, (RBI monthly Bulletin on Prices)

Appendix - I

Commodity-wise No. of Dealers and Tax Deposited with Growth Rate for the State

Reporting Period : 01-Nov-06

(Rs. in lakh)

Sl. No.	Commodity	No. of Dealers	Total Tax Deposit (2005-06)	Total Tax Deposited (upto Nov. 2005)	Total Tax Deposited (upto Nov. 2006)	Growth (%)
1.	2 and 3 Wheelers (Automobiles)	267	10259.08	5313.34	8092.44	52.3
2.	All Kinds of Furniture	288	95.28	40.19	57.12	42.11
3.	Auto Parts	877	1220.26	575.71	1035.82	79.92
4.	Battery	174	2296.36	1416.61	1594.71	12.57
5.	Beverages	82	1308.93	856.86	979.54	14.32
6.	Biscuits	259	1831.69	923.27	1707.65	84.96
7.	Bricks and Minerals	1226	375.70	95.77	261.74	173.29
8.	Cement	1212	12248.05	6427.42	9664.18	50.36
9.	Coal	53	166.13	74.78	53.65	28.26
10.	Computer and Peripherals	236	501.51	260.27	398.93	53.27
11.	Consumer Durables	321	5716.74	2708.08	4437.96	63.88
12.	Crockery, Cutlery and Glassware	136	206.43	103.18	115.58	12.02
13.	Crude Oil	7	10983.93	5827.97	7753.67	33.04
14.	Cycles	250	270.45	127.81	195.07	52.63
15.	Diesel Engine	315	313.53	148.88	209.36	40.62
16.	Electrical Goods	960	7702.87	5335.00	5694.19	6.73
17.	Entertainment	107	387.02	288.63	244.36	-15.34
18.	Essentials	67	49.29	24.62	58.45	137.38
19.	FMCG	725	9622.82	4624.69	7974.78	72.44
20.	Fastfoods	243	1367.30	760.97	817.31	7.4
21.	Fertilizers	1132	4022.89	2005.19	2600.18	29.67
22.	Firework	61	40.56	23.70	20.89	-11.89
23.	Food grains	1594	5598.93	3285.68	2047.39	-37.69
24.	Footwear	462	472.04	251.95	227.81	-9.58
25.	Foreign Liquor (IMFL)	250	8718.57	5007.46	6322.36	26.26
26.	Hardware	1003	391.98	214.93	184.48	-14.17
27.	Hide and Skins	25	68.98	38.28	41.95	9.59
28.	Hotel	316	529.36	271.75	454.90	67.74
29.	Insecticide and Seeds	202	1870.34	778.22	538.85	-30.76
30.	Iron and Steel	406	3025.47	1697.37	2182.81	28.6
31.	Jewellery	1063	89.08	48.62	70.31	44.61

Appendix - I (Contd.)

Sl. No.	Commodity	No. of Dealers	Total Tax Deposit (2005-06)	Total Tax Deposited (upto Nov. 2005)	Total Tax Deposited (upto Nov. 2006)	Growth (%)
32.	Jute	52	311.99	73.30	70.49	-3.83
33.	Kerosene Oil	236	274.39	154.07	193.47	25.57
34.	Kirana and Agarbati	1728	606.40	307.48	408.29	32.79
35.	LPG	251	730.22	410.04	174.52	-57.44
36.	Marble, Mosaic and Stone	356	173.37	130.84	111.55	-14.75
37.	Medicine	6940	7145.83	4210.15	7245.37	72.09
38.	Miscellaneous	10090	19099.95	6405.58	9596.53	49.82
39.	Moulded Luggage	52	222.03	130.05	183.48	41.09
40.	Mustard Oil	179	451.25	257.28	352.93	37.18
41.	PVC Pipe	133	174.49	80.27	112.62	40.29
42.	Paints	182	1318.36	737.04	955.24	29.6
43.	Pan Masala	105	118.04	303.90	385.22	26.76
44.	Paper	337	561.96	314.15	338.94	7.89
45.	Petro Products	506	98636.95	45046.79	52323.41	16.15
46.	Plastic Goods	217	347.14	184.35	249.82	35.52
47.	Plywood and Board	220	229.42	98.88	148.29	49.96
48.	Readymade and Hosiery	1599	842.70	377.62	567.97	50.41
49.	Sanitary goods and Fittings	175	313.05	194.86	246.10	26.3
50.	Tea and Coffee	142	223.85	128.75	88.59	-31.19
51.	Timber	662	255.49	116.22	142.86	22.92
52.	Tires and Tubes	139	2334.14	1332.65	1600.96	20.13
53.	Tractor	238	737.36	362.74	907.97	150.31
54.	Utensils	261	86.80	38.21	57.16	49.59
55.	Vanspati	80	381.97	166.18	369.02	122.05
56.	Works Contract	2	1.30	0.00	2.00	—
	Total	39201	227330.03	111118.62	142871.23	28.58

Source : Finance (Commercial Taxes) Department, Summary for Tax Behaviour of Dealers, Report Dated 04-Jan-2007

Appendix - II

Industry-wise Outstanding Credit of Scheduled Commercial Banks in Bihar (Rs. crore)

	2000-01	2001-02	2002-03	2003-04	2004-05
Total bank credit	5547.2	6547.3	7802.6	9667.1	12868.5
Agriculture	1338.3	1487.1	1631.9	1926.4	2973.5
Direct finance	1239.9	1209.8	1445.1	1697.7	2634.5
Indirect finance	98.5	277.3	186.8	228.7	339.0
Industry	968.6	1147.9	1110	1237.2	2123.7
Mining & quarrying	5.3	9.5	23.4	12.1	14.3
Manufacturing and processing	954.5	1058.5	1015.2	1124.5	1923.3
Food mfg and processing	137.1	259.9	261.4	265.5	270.9
Rice, flour & dal mills	39.3	51.6	72.1	74	76.7
Sugar	70.9	170.9	148.1	125.9	143.3
Edible oils & vanaspati	6.8	10.8	12.8	21.3	15.1
Other food industries	20.1	26.6	28.4	44.3	35.9
Beverages & tobacco	8.4	11.6	8.6	8.0	32.6
Textiles	32.9	43.4	50.4	55.6	85.1
Cotton textiles	4.1	6.8	14.5	15.4	17.8
Jute textiles	1.4	4.0	3.5	6.0	7.5
Other textiles	27.4	32.6	32.3	34.3	59.8
Paper, products and printing	33.3	33.3	32.7	44.7	50.6
Leather & leather products	5.5	4.9	6.1	9.4	4.4
Rubber & rubber products	9.5	21.3	24.3	36.3	33.8
Chemicals & chemical products	32.1	87.9	55.2	55.6	241.2
Heavy industrial chemicals	4.7	0.3	28.5	14.1	9.3
Fertilisers	15.8	65.9	0.8	2.7	1.7
Drugs & pharmaceuticals	13.7	11.6	17.0	18.1	28.5
Other chemicals	27.8	10.1	9.0	20.7	201.7
Petroleum, coal & nucl. Fuels	10.2	2.9	6.9	7.2	10.5
Cement & cement products	27.8	24.5	45.1	18.1	30.5
Basic metals & metal products	134.5	128.5	104.2	217.8	195.7
Iron & Steel	97.6	84.1	76.1	168	151.1
Non-ferrous metals	2.3	1.5	1.6	8.7	6.3
Other metal products	34.5	42.9	26.5	41.2	18.3
Engineering	23.5	28.8	41.7	80.1	578.3
Heavy & light engineering	7.0	8.4	19.7	38.8	546.5
Electrical machinery & goods	14.0	11.7	12.2	29.8	17.7
Electronic machinery & goods	2.5	8.6	9.8	11.5	14.1

Appendix - II (Contd.)

	2000-01	2001-02	2002-03	2003-04	2004-05
Vehicles, parts & transp. Equip	18.8	11.7	17.5	27	53.6
Other industries	450.8	399.8	361.3	299	336.3
Electricity, gas & water	1.6	6.8	26	3.9	53.4
Elec. Generation & transmission	0.6	4.7	24.3	1.4	49.0
Gas & water	1.0	2.0	1.7	2.6	4.4
Construction	7.3	73.1	45.4	96.7	132.7
Transport operators	159.2	197.1	184.7	163	186.9
Professional & other services	185.4	152.8	221.8	261.6	341.5
Personal loans	1345.5	1551.1	2146.2	3194.1	4313.1
Loans for consumer durables	70.8	82.6	67.9	81.8	80.8
Loans for housing	493.1	499.1	708.8	1162.4	1559.1
Other personal loans	781.7	969.4	1369.5	1950	2673.2
Trade	1040.8	1309.1	1669.2	1749.3	2139.9
Wholesale trade	192.1	198.9	405.4	261.4	219.4
Retail trade	848.6	1110.1	1263.8	1487.9	1920.6
Finance	19.5	13.3	65.9	46.8	80.9
Miscellaneous	490.0	689.0	773.0	1088.7	709.0

Source : CMIE, Money & Banking, August, 2006

Appendix - III

Details of Industry Share of Outstanding Credit of Scheduled Commercial Banks in Bihar (%)

	2000-01	2001-02	2002-03	2003-04	2004-05
Total bank credit	100.0	100.0	100.0	100.0	100.0
Agriculture	24.1	22.7	20.9	19.9	23.1
Direct finance	22.4	18.5	18.5	17.6	20.5
Indirect finance	1.8	4.2	2.4	2.4	2.6
Industry	17.5	17.5	14.2	12.8	16.5
Mining & quarrying	0.1	0.1	0.3	0.1	0.1
Manufacturing and processing	17.2	16.2	13.0	11.6	14.9
Food mfg and processing	2.5	4.0	3.4	2.7	2.1
Rice, flour & dal mills	0.7	0.8	0.9	0.8	0.6
Sugar	1.3	2.6	1.9	1.3	1.1
Edible oils & vanaspati	0.1	0.2	0.2	0.2	0.1
Other food industries	0.4	0.4	0.4	0.5	0.3
Beverages & tobacco	0.2	0.2	0.1	0.1	0.3
Textiles	0.6	0.7	0.6	0.6	0.7
Cotton textiles	0.1	0.1	0.2	0.2	0.1
Jute textiles	0.0	0.1	0.0	0.1	0.1
Other textiles	0.5	0.5	0.4	0.4	0.5
Paper, products and printing	0.6	0.5	0.4	0.5	0.4
Leather & leather products	0.1	0.1	0.1	0.1	0.0
Rubber & rubber products	0.2	0.3	0.3	0.4	0.3
Chemicals & chemical products	0.6	1.3	0.7	0.6	1.9
Heavy industrial chemicals	0.1	0.0	0.4	0.1	0.1
Fertilisers	0.3	1.0	0.0	0.0	0.0
Drugs & pharmaceuticals	0.2	0.2	0.2	0.2	0.2
Other chemicals	0.5	0.2	0.1	0.2	1.6
Petroleum, coal & nucl. Fuels	0.2	0.0	0.1	0.1	0.1
Cement & cement products	0.5	0.4	0.6	0.2	0.2
Basic metals & metal products	2.4	2.0	1.3	2.3	1.5
Iron & Steel	1.8	1.3	1.0	1.7	1.2
Non-ferrous metals	0.0	0.0	0.0	0.1	0.0

Appendix - III (Contd.)

	2000-01	2001-02	2002-03	2003-04	2004-05
Other metal products	0.6	0.7	0.3	0.4	0.1
Engineering	0.4	0.4	0.5	0.8	4.5
Heavy & light engineering	0.1	0.1	0.3	0.4	4.2
Electrical machinery & goods	0.3	0.2	0.2	0.3	0.1
Electronic machinery & goods	0.0	0.1	0.1	0.1	0.1
Vehicles, parts & transp. Equip	0.3	0.2	0.2	0.3	0.4
Other industries	8.1	6.1	4.6	3.1	2.6
Electricity, gas & water	0.0	0.1	0.3	0.0	0.4
Elec. Generation & transmission	0.0	0.1	0.3	0.0	0.4
Gas & water	0.0	0.0	0.0	0.0	0.0
Construction	0.1	1.1	0.6	1.0	1.0
Transport operators	2.9	3.0	2.4	1.7	1.5
Professional & other services	3.3	2.3	2.8	2.7	2.7
Personal loans	24.3	23.7	27.5	33.0	33.5
Loans for consumer durables	1.3	1.3	0.9	0.8	0.6
Loans for housing	8.9	7.6	9.1	12.0	12.1
Other personal loans	14.1	14.8	17.6	20.2	20.8
Trade	18.8	20.0	21.4	18.1	16.6
Wholesale trade	3.5	3.0	5.2	2.7	1.7
Retail trade	15.3	17.0	16.2	15.4	14.9
Finance	0.4	0.2	0.8	0.5	0.6
Miscellaneous	8.8	10.5	9.9	11.3	5.5

Source : Computed on the basis of Annexure II data contained in CMIE, Money & Banking, August, 2006

Appendix - IV

CD and ICD Ratios of States (%)

States	Credit Deposit Ratios of SCBs		Investment plus Credit Deposit Ratio	
	2001	2003	2002	2003
Haryana	54.0	58.3	63.1	64.8
Himachal Pradesh	25.7	37.7	45.4	49.4
J&K	33.5	39.0	50.1	48.8
Punjab	42.3	43.4	49.2	49.0
Rajasthan	49.6	55.3	74.3	76.3
Delhi	57.6	59.2	59.2	59.3
Arunchal Pradesh	22.1	22.1	34.3	36.8
Assam	38.1	61.6	87.9	78.3
Manipur	40.7	30.0	59.8	64.3
Meghalaya	17.3	31.8	40.0	48.9
Mizoram	29.0	30.5	58.4	60.4
Nagaland	13.6	13.3	53.3	54.7
Tripura	21.7	23.7	33.7	38.2
Bihar	20.7	23.7	38.9	39.8
Jharkhand	30.6	30.9	33.0	34.2
Orissa	41.6	56.9	75.1	81.2
Sikkim	14.5	19.3	36.4	31.9
West Bengal	43.4	50.0	57.2	58.9
Chattisgarh	49.9	43.8	56.8	48.7
Madhya Pradesh	52.5	51.7	64.3	65.8
Uttar Pradesh	31.9	36.0	46.1	47.8
Uttaranchal	23.9	21.4	27.6	26.7
Goa	27.3	27.8	32.1	32.2
Gujarat	53.6	56.0	61.5	61.9
Maharashtra	83.5	77.4	80.5	80.1
Andhra Pradesh	64.9	69.3	79.7	80.1
Karnataka	61.8	71.1	75.7	77.8
Kerala	42.3	43.6	51.7	51.6
Tamil Nadu	90.6	93.1	95.1	100.2
Lakshadweep	11.8	5.9	9.6	5.9
Pondicherry	35.8	39.6	39.2	39.6
India	56.7	59.2	65.6	66.4

Source : RBI (2004), Report on Trend and Progress of Banking in India 2003-04, December 2004.

CHAPTER VII

PUBLIC FINANCE

7.1 Introduction

When the erstwhile state of Bihar was bifurcated into the States of Jharkhand and present Bihar, with almost the entire forest and mineral resources falling within Jharkhand, the economic scenario of the present Bihar looked very difficult. The revenue receipts plummeted by a quarter (from Rs. 3085 crore in 1999-2000 to Rs. 2319 crore in 2001-02) and the non-tax revenue receipt by nearly three-quarters (from Rs. 1166 crore to Rs. 287 crore) from the pre-bifurcation levels. While the Gross State Domestic Product (GSDP) decreased by about 30 percent, the financial liabilities decreased by about only 8 percent. On the expenditure front, the revenue expenditure went down by about Rs. 3200 crore (from Rs. 14362 crore in 1999-2000 to Rs. 11159 crore in 2001-02), and the capital expenditure decreased by Rs. 500 crore in a State that needed substantial public investment to lift it out of its present low level of development. From that difficult financial position, Bihar in 2006-07 has come a long way.

Maximizing the economic growth rate by proper exploitation of resources is the main objective of any efficient economic administration of a State, embodying prudence in expenditure and effective control over and efficient management of the available resources. In this perspective, efficient financial administration of a State by its Finance Department involves :

- Mobilization and collection of revenues and other resources.
- Budgeting and proper allocation of available resources in the optimum manner for meeting the demands of expenditure.
- Economical and efficient spending of resources for specified objectives and careful control over flow of funds.
- Day-to-day management of cash balances of the State to avoid, to the extent possible, loans and overdraft for improving position.
- Proper accounting, auditing and vigilance control.

The resources available to the State consists of tax and non-tax revenues, capital receipts, share of Central taxes assigned to the State, loans and grants from the Central Government, borrowings from the open market, and collections from the Provident Fund and other deposits kept within the Government account. The resources are utilized for either plan expenditure for development purposes or for non-plan expenditure on administration, payment of interests and other heads, from the Consolidated Fund of the State Government, subject to limit set by the Legislature. The Government also has to repay and service its debt owing to the Central Government, the open market and other institutions. The Government further advances loans to various agencies and invests in Government companies, Cooperative Societies and other bodies.

As per the provisions of the Article 266 of the Constitution, all revenues received by the State, all loans raised by it by issue of treasury bills, loans or ways and means advances and all money received by it as repayment of loans are credited to the Consolidated Fund of the State. No money can be spent out of the Consolidated Fund except with the approval of the Legislature. Other than this, there are two separate funds managed by the State Government— first, a Contingency Fund of the nature of an imprest with a fixed corpus that can be created by the Legislature under Article 267 of the Constitution to meet unforeseen expenditure, pending their subsequent authorization of the Legislature and recoument of such expenditure from the Consolidated Fund. All other money received by or on behalf of the State Government are credited to the Public Account of the State, under Article 266(2) of the Constitution. No legislative authorization is required to withdraw any money from the Public Account, the balance of which is not held separately, but stands merged with the cash balance of the State Government.

The financial and fiscal performance of the State Government can be analysed using some major indicators like Aggregate Receipts and Expenditure, Revenue and Capital Receipt, Revenue and Capital Expenditure, Plan and Non-Plan Capital Gap and Debt Burden of the State. The Centre-State financial relations and the recommendations of the Twelfth Finance Commission are also important dimensions of the finances of the State Government. The present chapter attempts such an analysis, taking into account the financial trends during 2001-02 to 2006-07; however, the figures for the last year (i.e. 2006-07) refers to the budget estimates.

7.2 Fiscal Performance

Given the division of the budget into revenue and capital components, there are revenue deficit (surplus) and capital deficit (surplus), representing the excess of expenditure over receipts under each component. The conventional budget deficit is the algebraic sum of the revenue and capital deficits. But this does not actually show the total resource gap in the economy, as it includes the borrowings under the capital receipts. This resource gap is reflected by the Gross Fiscal Deficit (GFD) which is to be bridged by borrowings of one sort or another. Towards analyzing the fiscal performance of the State Government, the present analysis uses the following 10 indicators:

- (i) Ratio between Revenue Deficit and GFD.
- (ii) Ratio between Capital Outlay and GFD.
- (iii) Ratio between Net Lending and GFD.
- (iv) Non-Development Expenditure as percentage of Aggregate Expenditure.
- (v) Non-Development Expenditure as percentage of Revenue Receipt.
- (vi) Interest Payment as percentage of Revenue Expenditure.
- (vii) State's Tax Revenue as percentage of Revenue Expenditure.
- (viii) State's Non-Tax Revenue as percentage Revenue Expenditure.
- (ix) Gross Transfer from Central Government as percentage of Aggregate Expenditure.
- (x) Debt servicing Expenditure as percentage of Gross Transfer from the Central Government.

The following analysis is done in a comparative framework, taking into account the fiscal scenario in — Maharashtra and Punjab (two prosperous States), Rajasthan and Uttar Pradesh (two State from the Hindi heartland) and West Bengal (the neighbouring State with a common agrarian and administrative history) (Table 7.1).

Ratio between Revenue Deficit and GFD : This ratio indicates the extent to which Revenue Deficit contributes to GFD. Ideally, the revenue account should leave a surplus for creation of capital assets. But, instead, the revenue account had a deficit during the three years 2001-02 to 2003-04, implying that funds otherwise meant for capital purposes had to be diverted to the revenue account

for meeting revenue deficits. However, the deficit in the revenue account turned into surplus during the next three years, 2004-05 to 2006-07, the amount being substantial in the budget estimates of 2006-07.

Ratio between Capital Outlay and GFD : As an obvious consequence of the improvements in the revenue accounts, the capital outlay as percent of GFD was high in the three years 2004-05 to 2006-07, particularly in 2006-07 touching the figure 117.7 percent.

Ratio between Net Lending and GFD : A part of the GFD is contributed by the net lending of the State Government, mainly to the State Public Sector Undertakings. The ratio between net lending and GFD is higher in Bihar than in other States. It was particularly high in 2005-06 (36.3 percent), but it had decreased substantially next year to 15.0 percent.

Non-Development Expenditure as Percentage of Aggregate Expenditure : The non-development expenditure incurred mainly for administrative purposes, as opposed to development expenditure incurred for social and economic services, should preferably be a small proportion of the total disbursements. In Bihar, however, this non-developmental expenditure, mainly in the form of non-plan expenditure, constituted about 40 percent of the total expenditure in all three years, 2004-05 to 2006-07.

Non-Development Expenditure as Percentage of Revenue Receipts : The figures show that this ratio has been steadily falling from 49.7 percent in 2004-05 to 45.4 percent in 2006-07. It should, however, be noted here that this decline is more due to a steady increase in revenue receipts, rather than any reduction of revenue expenditure.

Interest Payment as Percentage of Revenue Expenditure : The interest payments constitute a perennial burden on State's finances because of its heavy indebtedness. Such interest payments have been going up steadily over the years, from Rs. 2629 crore in 2001-02 to Rs. 4210 crore in 2006-07. But fortunately, interest payments have been constituting decreasing proportion of the revenue expenditure since 2003-04, the budget estimates of 2006-07 reporting it to be 19.3 percent.

State's own Tax and Non-Tax Revenue as Percentage of Revenue Expenditure : These ratios indicate the self-sufficiency of the State vis-à-vis its revenue expenditure needs. For the years 2004-05 to 2006-07, State's own tax revenue has been barely about 20 percent of its revenue expenditure and its non-tax revenue barely 2 percent. Together, the State's own revenue receipts do not cover even one-fourth of its total revenue expenditure.

Gross Transfers from Central Government as Percentage of Aggregate Expenditure: This ratio brings out the State's dependence on the external resources. These ratios clearly show the acute dependency of Bihar on Central Government for meeting its expenditure. In 2004-05, this ratio was 59.6 percent and it had increased steadily thereafter to reach the figure of 72.1 percent in 2006-07.

Debt Servicing as Percentage of Gross Transfer from Central Government: Debt serving, constituting interest payment as well as repayment of installments of the principal amount, used to be a substantial portion of the transfer from the Central Government upto 2003-04. However, the ratio has been decreasing steadily; in 2004-05, it was 29.1 percent and, in 2006-07 (budget estimate), it was still lower at 24.0 percent.

The above analysis can be taken further to identify the factors that make a State financially healthy and ensure its continued development. For development, it is necessary that a government should try to expand the level of its activity. It would then be necessary to know whether the means of financing these activities are sustainable, i.e. they meet the increased expenditure needs without substantially adding to the debt burden of the State. If the government wishes to expand the level of its activity, it would be pertinent to examine the flexibility of the means of financing (increasing the revenue or by borrowing) and whether the expanded levels of activity expose the government to more risks in the process and makes it vulnerable to be influenced by the sources of funding. The State Governments increase their levels of activity primarily through the Five Year Plans which translate into annual development plan and are provided for in the State budgets. Thus, it can be broadly stated that non-plan expenditure represents the maintenance of the existing levels of activity, while plan expenditure entails expansion in the level of activity. Some of the factors

which measure the sustainability, flexibility and vulnerability of Bihar Government have been shown in Table 7.2 and discussed below.

Balance of Current Revenue (BCR) : This is calculated as State's Own Revenue Receipts, plus share of Central Taxes, plus Non-Plan Grants, minus Non-Plan Revenue Expenditure. A positive BCR shows that the State has surplus funds from its revenues for meeting plan expenditure. For Bihar, the BCR turned positive from negative in 2004-05. It was moderately positive at Rs. 986 crore in 2006-07.

Interest Ratio : This is calculated as (Interest payment - Interest receipt) / (Total Own Revenue - Interest receipt). The higher the ratio, the lower the ability of the State to service any fresh debt and meet its revenue expenditure from its revenue receipts. For Bihar, the ratio was precariously high during 2002-03 and 2003-04, but has since been coming down. The ratio stands at 86.4 percent as per the budget estimates of 2006-07.

Capital Outlay/Capital Receipts : This ratio indicates to what extent the capital receipts are applied for capital formation. A ratio of less than 100 percent would not be sustainable in the long run, as that would indicate that capital receipts are utilized for revenue expenditure. Except in 2003-04 and 2005-06 when the ratio was close to 100 percent, in other years the ratio was much below 100 percent. In fact, the ratio had declined from 80.2 percent in 2005-06 to only 33.5 percent in 2006-07 (budget estimate).

State Tax Receipts/GSDP Ratio : This is an important indicator of the gap between the State's tax efforts and its tax potential. A low ratio also indicates low tax compliance and reliance on borrowings rather than taxation to meet the deficit. Further, the gap between this ratio and the ratio of Total Receipts/ GSDP indicate the extent to which a State is dependent on the share of Central Taxes.

In Bihar's case, the ratio of Total Tax Receipts to GSDP remained in the range of 20-25 percent, while the ratio of State's Own Tax Receipt to GSDP remained in the range of 5-7 percent during

the period from 2002-03 to 2006-07. Between 2005-06 and 2006-07, however, both the ratios increased at a higher rate compared to the previous years.

Debt Outstanding/GSDP : This ratio indicates whether the State has fallen into a debt trap from which it may not be able to come out on its own. A high ratio leaves little room to the State for financial manoeuvring and indicates lack of flexibility in its finances. It can be noted here that the total debt constitutes 72.8 percent of the GSDP, which clearly is a dangerous level and needs to be reduced to about 60 percent immediately, if the State is not to fall in a debt trap. Of more serious concern is the fact that the Debt: GSDP ratio has been increasing at a steady rate over the years, from nearly 60 percent in 2002-03 to as high as about 73 percent in 2006-07. This takes away whatever little flexibility the State has in respect of its finances.

Primary Deficit : This is the GFD minus interest payments. It measures the impact of finances of the Government's current policies without consideration of the liabilities created in the past, for which interest has to be paid now. The primary deficit was kept low in Bihar throughout except in 2003-04. In 2006-07 budget estimates, it had, in fact, recorded a substantial surplus. As noted earlier, the surplus was partly due to the revenue surplus of Rs. 611 crore in 2006-07, due to which the GFD in that year had come down to Rs. 1866 crore, from Rs 4680 crore the previous year. Both in 2005-06 as well as in 2006-07, the revenue deficit was managed well.

Asset/Liability Ratio : This indicates the solvency of the State Government and indicates its risk exposure and vulnerability. Given the fact that the ratio was always in the range of 72-80 percent, there is no room for complacency on this account.

Return on Investment : This had all along remained negligible at less than even Rs 1 crore throughout the period 2002-03 to 2006-07. The arrears to revenue, though high, was coming down as a proportion of the State's total own revenue as well as in absolute terms till 2004-05. The State had more or less high spread of interest during the period.

Tax receipts of the State were moderately buoyant in 2006-07 with respect to GSDP, but the non-tax receipts showed no relation to GSDP. However, it is heartening to note here that the growth of

its revenue receipts (including the share of Central taxes and Central grants) has been substantially outstripping the growth in outstanding liabilities since 2003-04, giving the finances of the State an element of security against a possible debt trap.

Table 7.1 : Major Fiscal Indicators (all figures in per cent)

State	A. Revenue Deficit : GFD			B. Capital Outlay: GFD		
	2004-05	2005-06	2006-07(BE)	2004-05	2005-06	2006-07(BE)
Bihar	-24.85	-1.74	-32.75	99.14	65.48	117.71
Maharashtra	53.88	8.61	-3.63	116.12	106.88	132.24
Punjab	84.01	46.72	38.85	94.06	76.66	107.01
Rajasthan	34.86	14.25	0.83	146.45	104.15	128.11
UP	53.80	23.78	-8.83	111.66	92.62	128.45
West Bengal	77.23	76.58	68.91	50.20	90.09	64.30

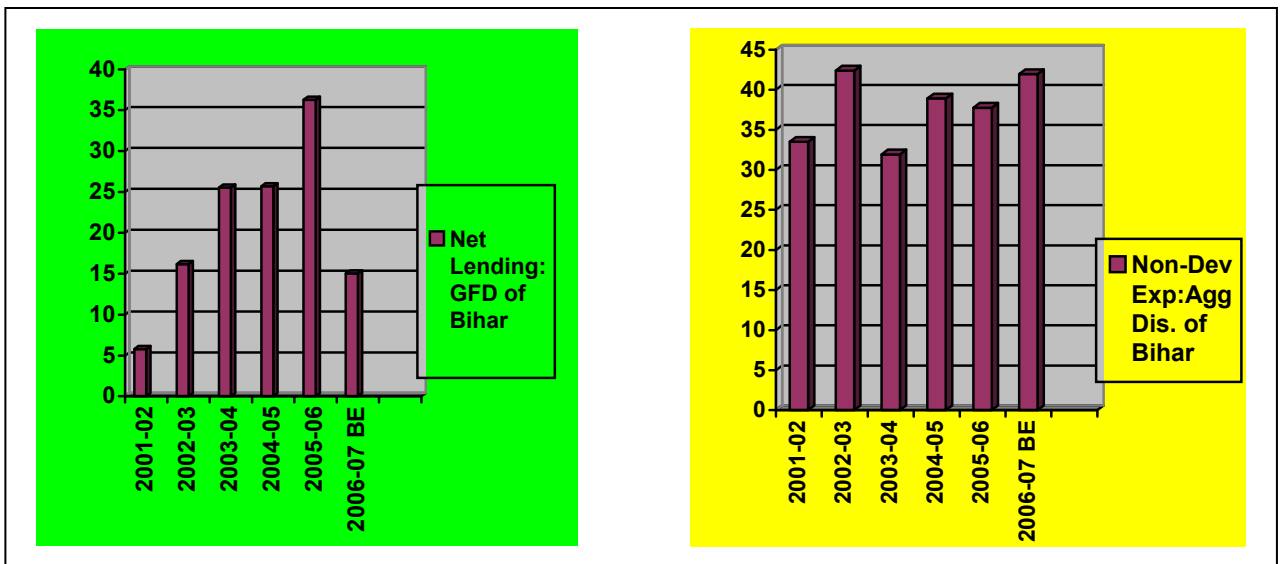
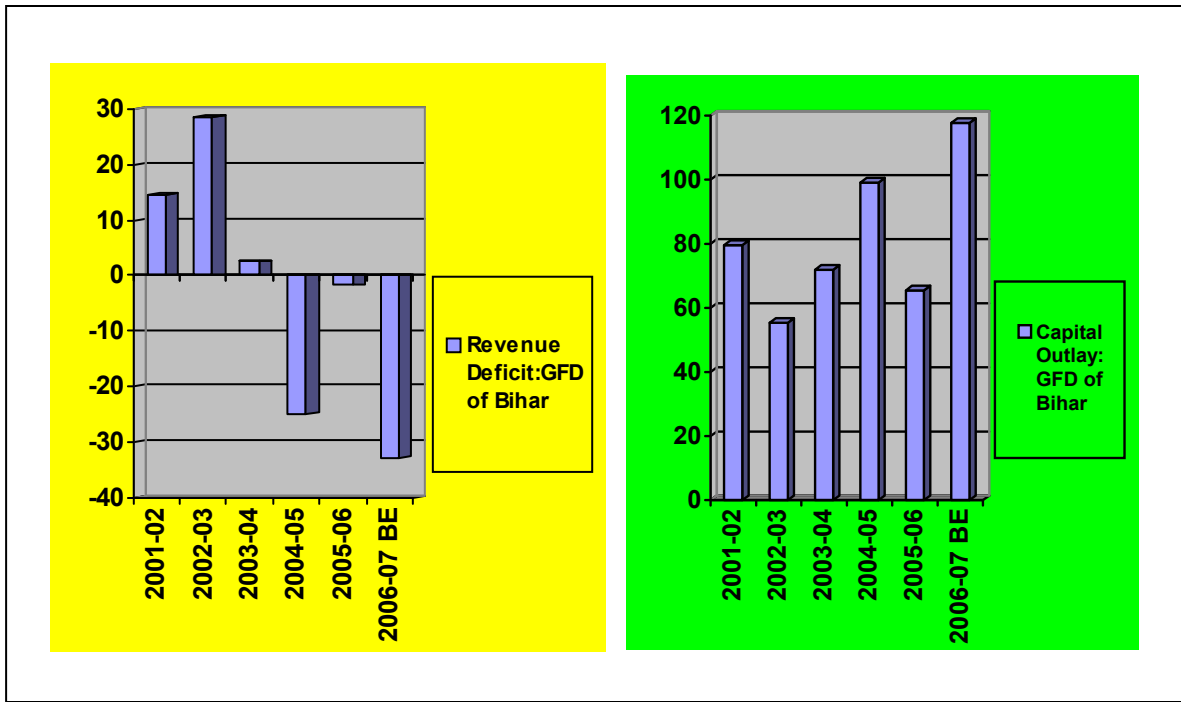
State	C. Net Lending: GFD			D. Non-Dev Exp:Agg Disbursements		
	2004-05	2005-06	2006-07 (BE)	2004-05	2005-06	2006-07(BE)
Bihar	25.71	36.26	15.05	38.90	37.76	41.95
Maharashtra	8.65	9.30	17.73	30.64	31.64	39.43
Punjab	11.10	13.41	29.05	46.91	48.23	47.79
Rajasthan	21.83	10.31	19.76	29.93	32.03	33.45
UP	15.21	3.59	7.20	38.49	35.84	33.60
West Bengal	8.94	17.14	20.45	46.90	39.25	42.79

State	E. Non-Dev Exp: Rev. Receipts			F. Interest Payment:Rev Expenditure		
	2004-05	2005-06	2006-07 (BE)	2004-05	2005-06	2006-07(BE)
Bihar	49.66	47.78	45.54	23.73	20.55	19.33
Maharashtra	54.30	43.18	46.65	17.58	17.38	20.39
Punjab	71.33	60.39	60.23	23.15	20.42	19.49
Rajasthan	48.70	43.12	42.69	25.98	24.18	24.14
UP	60.50	47.60	42.70	26.61	20.26	18.64
West Bengal	78.87	39.25	68.20	34.18	30.40	31.58

State	G. State's Tax Rev: Rev Exp			H. State's Non-Tax Rev: Rev Exp		
	2004-05	2005-06	2006-07 (BE)	2004-05	2005-06	2006-07(BE)
Bihar	22.83	20.06	20.76	2.85	2.94	1.57
Maharashtra	66.99	77.61	80.09	13.34	19.75	20.42
Punjab	45.62	50.21	52.70	34.65	41.06	40.81
Rajasthan	63.9	69.52	71.99	25.33	26.47	27.82
UP	68.92	76.38	80.94	15.40	17.33	21.09
West Bengal	57.94	53.47	59.36	12.82	20.67	17.13

Table 7.1 (Contd.)

State	I. Gross Transfers: Agg Dis.			J. Debt servicing: Gross Transfers		
	2004-05	2005-06	2006-07 (BE)	2004-05	2005-06	2006-07(BE)
Bihar	59.6	60.94	72.1	61.53	38.91	43.87
Maharashtra	11.13	13.59	16.71	226.92	101.71	106.08
Punjab	9.78	21.33	19.03	319.04	88.97	94.36
Rajasthan	47.48	NA	36.29	63.39	NA	55.48
UP	37.30	40.34	41.57	82.19	45.09	38.58
West Bengal	30.72	29.94	32.47	105.38	115.55	89.12



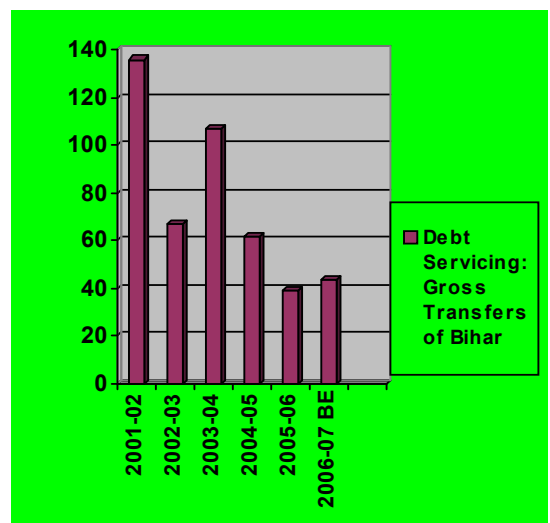
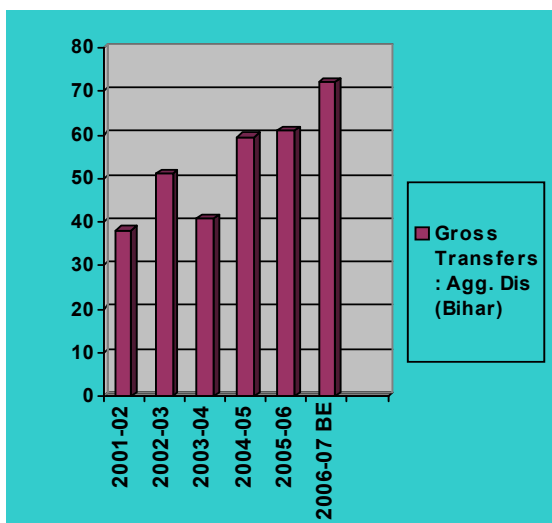
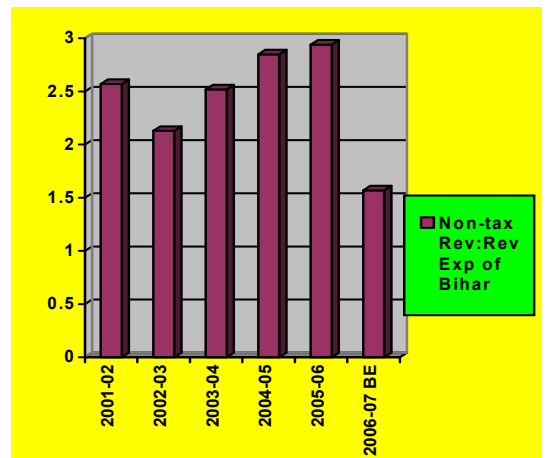
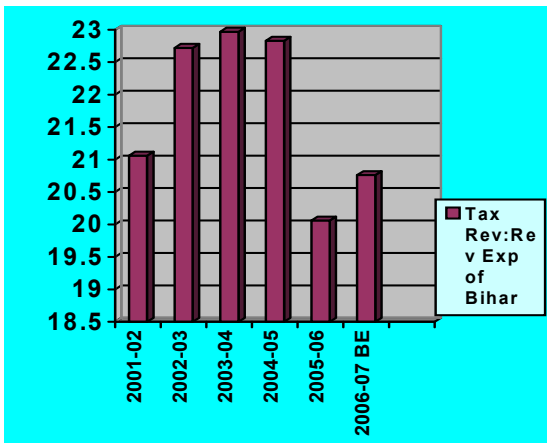
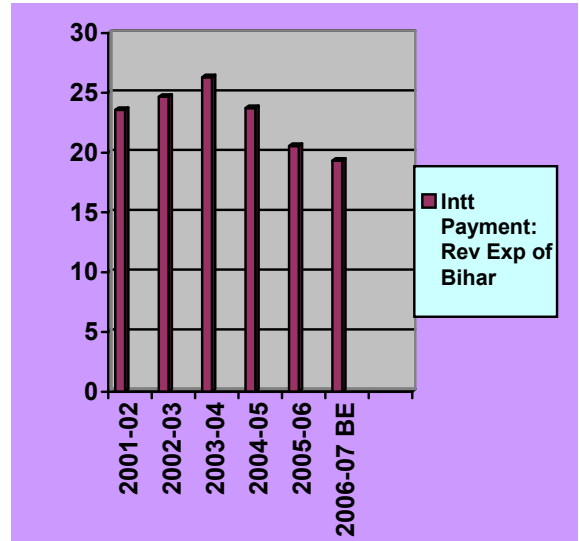
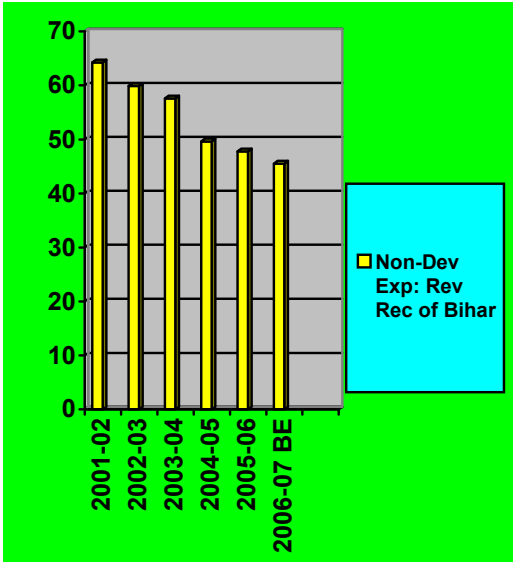


Table 7.2 : Fiscal and Financial Performance Indicators

	2002-03	2003-04	2004-05	2005-06	2006-07 BE
A: Sustainability					
Balance from Current Revenue (Rs Crore)	-1039	-638	924	685	986
Interest Ratio	99.23	103.22	92.23	88.77	86.40
Capital Outlay / Capital Receipts	59.42	90.82	56.17	80.20	33.52
State Tax Receipts / GSDP	5.24	5.58	5.85	5.88	6.93
Buoyancy of State's Tax Receipts / GSDP	1.43	-2.99	1.57	1.08	3.52
Buoyancy of State's Non-Tax Receipts / GSDP	-0.70	-14.09	3.28	4.13	-4.50
Return on Investment (Rs Crore)	0.02	0.04	0.04	0.04	0.78
Growth in outstanding liabilities	9.80	7.45	14.37	8.01	10.16
Growth in total revenue receipts	9.45	14.63	23.85	13.78	22.26
B. Flexibility					
	2002-03	2003-04	2004-05	2005-06	2006-07 BE
Capital Repayment / Capital Borrowings	67.29	36.54	71.38	40.48	26.01
Total Tax Receipts / GSDP	17.51	20.11	21.81	23.07	25.56
Weighted Interest Rate	2.47	2.52	2.36	2.21	2.32
Spread of Interest	10.42	-4.14	6.91	3.85	5.34
Debt Outstanding / GSDP	60.23	65.78	68.85	70.12	71.75
C. Vulnerability					
Revenue Deficit (Rs Crore)	-1286.61	-255.23	1075.78	81.6	611.31
Fiscal Deficit (Rs Crore)	4521.41	10015.85	4328.96	4680.02	1866.43
Primary Deficit (Rs Crore)	1499.62	6672.81	855.06	1031.13	-2343.16
Primary Deficit / Fiscal Deficit	33.17	66.62	19.75	22.03	-125.54
Revenue Deficit / Fiscal Deficit	28.46	2.55	-24.85	-1.74	-32.75
Assets / Liability (%)	72	72	78	80	NA
Outstanding Guarantees/ Revenue Receipts (%)	3.58	12.29	9.74	8.58	NA
Arrears of Revenue (Rs Crore)	1485	1357	1101	NA	NA
Arrears of Revenue/ Total Own Revenue (%)	49	42	29	NA	NA

7.3 Financial Performance

One of the fundamental principles of sound financial management of government resources is to have a surplus in the revenue account; preventing any diversion of funds from the capital account, which is meant for expenditure to create productive assets in the economy.

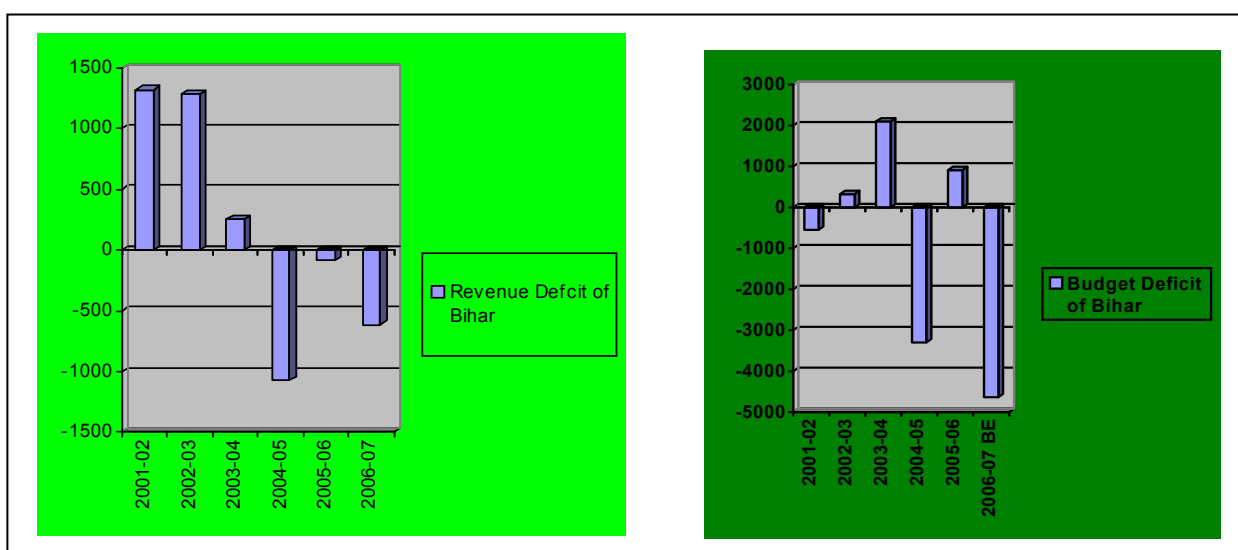
Table 7.3 shows the position in the revenue account as well as the combined position of the revenue and capital accounts of some major States for the years 2002-03 to 2006-07. It can be seen

that the very high revenue deficit of Bihar was gradually controlled effectively, with the result that, from 2004-05 onwards, there has been a substantial surplus in the revenue account — Rs. 1076 crores (2004-05), Rs. 82 crores (2005-06) and Rs. 611 crores (2006-07). In the combined revenue and capital accounts, the conventional budget deficit was contained and, as a result, there was huge surplus left in the budget estimates for 2006-07 of more than Rs 4000 crore, mainly due to a large surplus in the capital account. This surplus, however is rather uncomfortable, because it only indicates that the capital account was not utilized fully to create productive capital assets. This analysis, however, considers only the deficit in the Consolidated Fund of the State, the Contingency Fund and Public Account have not been considered as these indicate only borrowed funds (other than the normal public debt which is accounted for in the Consolidate Fund) and also include non-debt liabilities.

Table 7.3 : Deficit/Surplus position of States

(Rs. crore)

State	Revenue Deficit (+)/ Surplus(-)			Conventional Deficit (+) /Surplus(-)		
	2004-05	2005-06	2006-07 BE	2004-05	2005-06	2006-07 BE
Bihar	-1075.78	-81.60	-611.31	-3297.13	+909.67	-4636.25
Maharashtra	-10033.30	-1419.00	305.90	64.70	3875.00	6850.70
Punjab	-3390.60	-1709.70	-1389.60	348.00	1889.70	396.60
Rajasthan	-2142.60	-865.40	-43.00	20577.00	15713.30	11050.20
UP	-6992.90	-3132.00	1123.20	507.40	-477.30	139.20
West Bengal	-8227.90	-8597.80	-8172.50	641.80	227.40	-23998.40



As observed earlier, GFD of a State is a fairly sensitive indicator of the State's financial performance as it reflects the total resource gap in its economy. Table 7.4 presents the GFD of a few major States. The GFD of Bihar was high in all the years, it being exceptionally high in 2003-04 (Rs. 11016 crore). But the budget estimates of 2006-07 attempted to contain the GFD to less than Rs 2000 crore.

Table 7.4 : Gross Fiscal Deficit

(Rs. crore)

State	2002-03	2003-04	2004-05	2005-06	2006-07 BE
Bihar	4521.41	10015.85	4328.96	4680.02	1866.4
Maharashtra	-14289.9	-17928.5	-18620	-16472	-8419.1
Punjab	-4401.2	-4880.3	-4035.7	-3659	3576.3
Rajasthan	6114	7371.8	6146	6068.8	5140.6
UP	9496.9	16648.1	12997.6	13167.5	12711.5
West Bengal	10569.1	12865.4	10653.2	11225.9	11858.3

Table 7.5 shows the decomposition of the GFD of Bihar, from which one can find that the revenue deficit is only a minor contributor to the GFD of the State, while capital outlay and net lending have together contributed most to GFD during the years 2001-02 through 2006-07. The GFD / GSDP ratio was abnormally high throughout, reaching more than 19 percent in 2 out of the 6 year period considered. It is also seen that only in 2006-07, there has been an attempt to contain the GFD within 3 percent of the GSDP of the State.

Table 7.5 : Decomposition of Gross Fiscal Deficit of Bihar

(Rs crore)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07BE
Revenue Deficit	1320.04	1286.61	255.23	-1075.78	-81.6	-611.31
Capital Outlay ¹	7189.26	2503.20	7202.15	4291.73	3064.66	2196.93
Net Lending	520.77	731.6	2558.47	1113.01	1696.96	280.81
GFD	9030.07	4521.41	10015.85	4328.96	4680.02	1866.43
GSDP	47090	53161	52299.47	57145.35	60607.43	65251.18
GFD: GSDP ratio(%)	19.18	8.51	19.15	7.58	7.72	2.86

¹ Capital expenditure consists of capital outlay and loans and advances. During 2005-06, the total capital expenditure was Rs 4812.48 crore. Of this, the capital outlay was Rs 3064.66 crore and loans and advances of Rs 1747.82 crore. The capital outlay of Rs 3064.66 crore consisted of capital expenditure of Rs 2083.90 crore and public debt of Rs 980.76 crore.

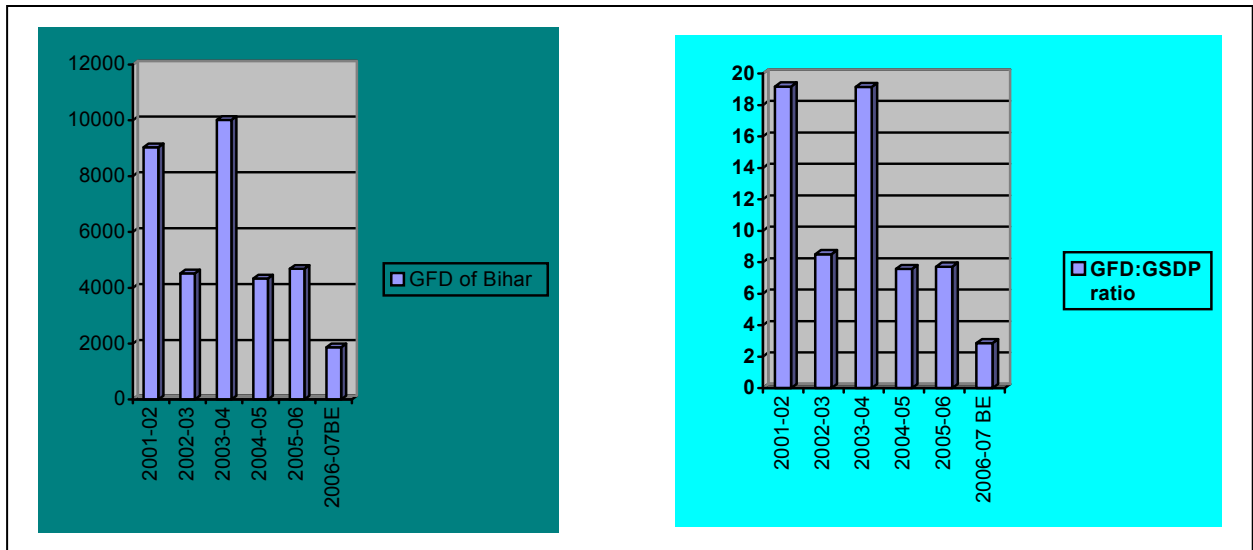


Table 7.6 shows how the GFD was financed during all these years. It can be readily seen that the internal market borrowings of the State Government mainly financed its GFD, apart from the Public Account receipts from small savings, financial institutions, reserve funds, provident funds etc.; from 2002-03 onwards, net loans from the Central Government had a negative contribution to the financing of the GFD due to the loan repayment to Central Government exceeding the loan receipts from it. All these loans add up to the outstanding liabilities of the State.

Table 7.6 : Financing of Gross Fiscal Deficit of Bihar

(Rs. crore)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
GFD	9030.07	4521.41	10015.85	4328.96	4680.02	1866.43
Net Loan from Centre	548.43	-126.13	-1559.99	-1068.54	-486.05	-522.36
Net Internal Borrowing	2585.22	2789.58	3826.86	5607.40	3275.64	4828.11
Small Savings, PF etc.	5896.42	1857.96	7748.98	-209.90	1890.43	-2439.32

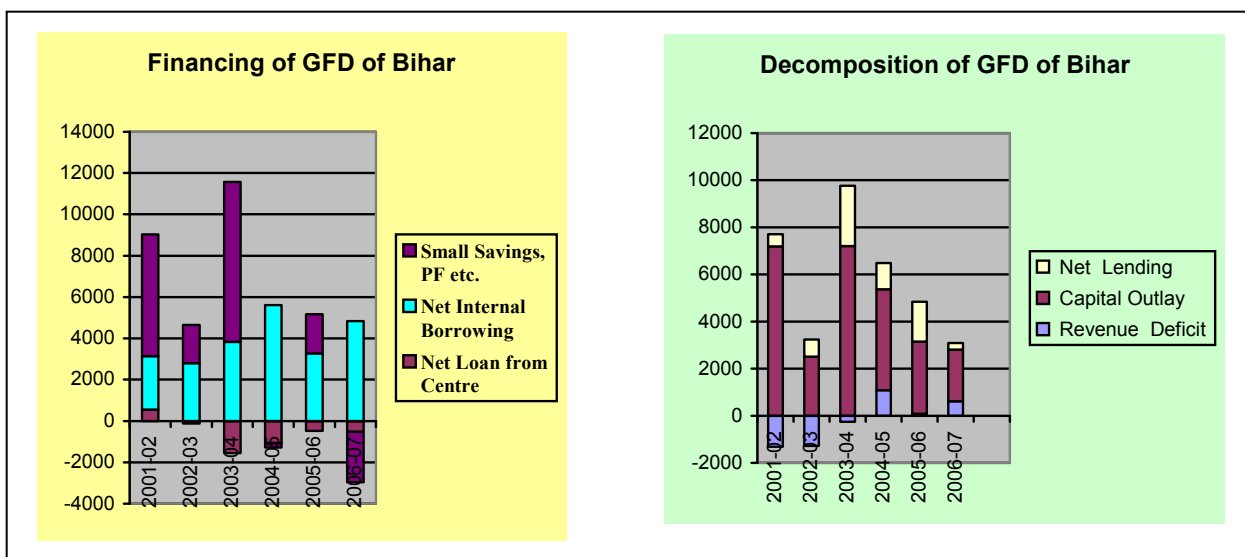


Table 7.7 shows the total expenditure of Bihar Government² for developmental and non-developmental as well as for plan and non-plan purposes. Plan expenditure is generally regarded as developmental, while non-plan expenditure is mostly non-developmental. In the absence of any clear guideline for classification of expenditure between plan and non-plan on a rational basis, the distinction continues to remain ambiguous and sometimes irrational also. All expenditure under non-developmental heads are non-plan expenditure, but non-plan expenditure may have a developmental component. This analysis of the expenditure, however, is restricted to the conventional definition of the terms.

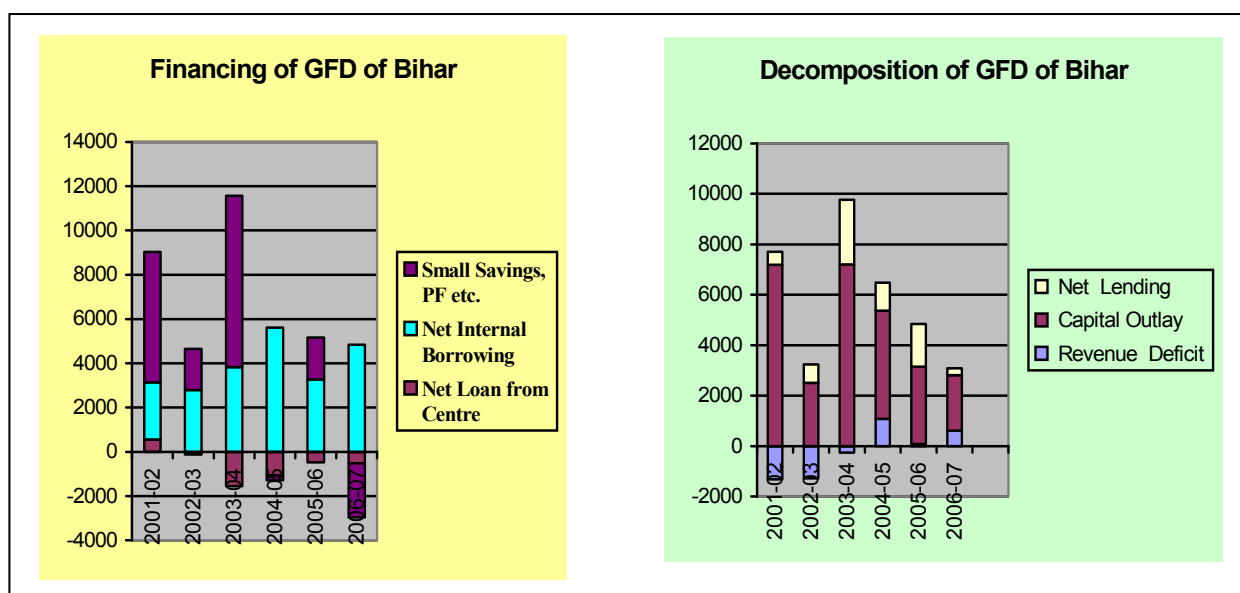
Referring to Table 7.7, one may note that while the developmental expenditure of Bihar has constituted about 60 percent of the total expenditure during all the years under consideration, it has practically remained constant over the years, except a decline in 2004-05. All these years, the non-developmental expenditure has been growing steadily, indicating that more and more of the State's

² In this analysis, total expenditure consists of plan and non-plan expenditure, both on the revenue as well as the capital account. The total capital expenditure again consists of plan and non-plan capital expenditure; the plan capital expenditure also includes loans and advances disbursed on plan schemes. For 2005-06, the plan loans amounting to Rs 102.08 crore have been included in the total plan capital expenditure of 2162.74 crore, Rs 2060.66 being the plan capital expenditure on all services. The non-plan capital expenditure includes the non-plan capital expenditure of Rs 23.24 crore on all services, Rs 1668.98 crore disbursed as non-plan capital loans and Rs 980.76 crore on account of repayment of principal amounts of outstanding public debt. Thus the total expenditure of the state during 2005-06 amounting to Rs 22568 crore also includes Rs 980.76 crore of repayment of principal amounts of public debt, without which the actual expenditure of the Government would come to Rs 21588 crore. All deficits and other ratios have been calculated taking this discharge of debt obligations into account in this analysis.

resources are being used for carrying out the administration of the State, leaving less resources for the developmental activities.

As already noted, plan expenditure is made for taking up new development projects in the State. In case of Bihar, about 80 percent of the total expenditure of the State has been non-plan expenditure during all these years, and only 20 percent were spent for plan purposes. Almost half of the non-plan expenditure is non-developmental in nature, and almost a quarter is solely due to interest payment on outstanding loans. In fact, the interest payments increased from Rs 2629 crore in 2001-02 to Rs 4210 crore in 2006-07. The total non-plan expenditure increased by Rs 3063 crore during the period, while the plan expenditure increased by Rs 2359 crore during the period from 2001-02 to 2006-07.

The revenue receipt and expenditure of the State is depicted in Table 7.8. From 2001-02 to 2006-07, revenue receipt and expenditure grew more or less uniformly at about the same rate, with receipt outstripping the growth of expenditure marginally during the last 3 years resulting in revenue surpluses. Interest payments consume about 20 percent of the total revenue expenditure; but fortunately while revenue expenditure grew by as much as 95 percent during the period, interest payments increased by only 54 percent.



Coming to the revenue receipts of the State, it may be noted that the State's own revenue, tax and non-tax combined, barely meets 20 percent of its total expenditure, and the rest has to come from its share of taxes and grants from the Centre. While the total revenue of the State has grown by 127 percent from Rs 9839 crore to Rs. 22391 crore during the period, the State's own total revenue, tax and non-tax combined, have grown at a much slower rate, from Rs. 2637 crore to Rs. 4864 crore, i.e. by 84 percent. In Table 7.9, some more parameters of the State finance are considered through a comparison of the State's own tax and non-tax revenues respectively with the total tax and non-tax revenues of the State. The State's own tax revenue consists of the State's own revenues as well as its share from the divisible pool of Central taxes, mainly Income Tax and Union Excise Duties. The share of State's own tax revenue in total tax revenue remained almost constant at 27 percent throughout the period. The own non-tax revenue of the State also remained more or less constant at the beginning and end of the period with some increases in between. Thus the State remains absolutely dependent on the Centre and consequently, this also increases its vulnerability as a viable financial entity.

Table 7.7 : Expenditure of Bihar Government

(Rs. crore)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Dev Exp	12558	8930	15302	12250	14045	16588
Non-Dev Exp.	6324	6575	7175	7803	8523	126323
Total Exp.	18882	15505	22477	20053	22568	29221
Plan Exp	2144	3071	5202	3476	4898	9244
Non-Plan Exp.	16738	12434	17275	16577	17670 ³	19976
Interest Payment	2629	3022	3343	3474	3649	4210

³ The non-plan expenditure on the revenue account during 2005-06 was Rs 15020 crore, while the plan expenditure on the revenue account was Rs 2736 crore. The non-plan expenditure on the capital account was Rs 2650 crore; this included capital expenditure of Rs 23 crore on different services, Rs 1646 crore on loans disbursed and Rs 981 crore on discharge of principal amounts of debt. The plan capital expenditure was Rs 2163 crore; this included capital expenditure of Rs 2061 crore on different services and plan loans of Rs 102 crore disbursed by the state government during 2005-06.

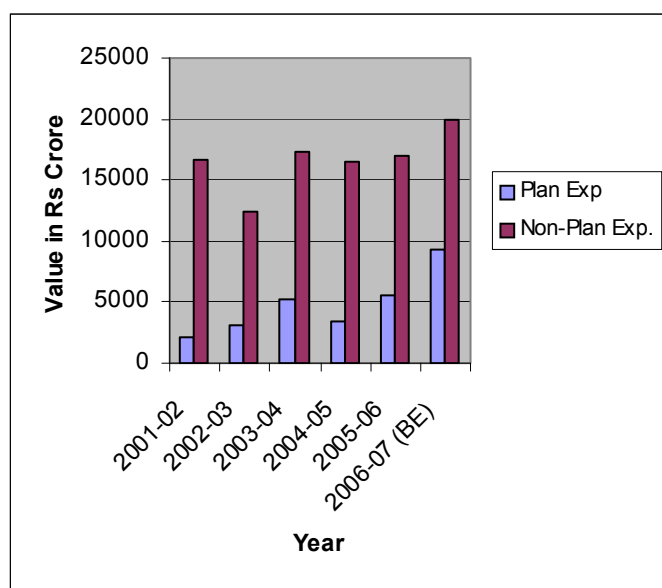
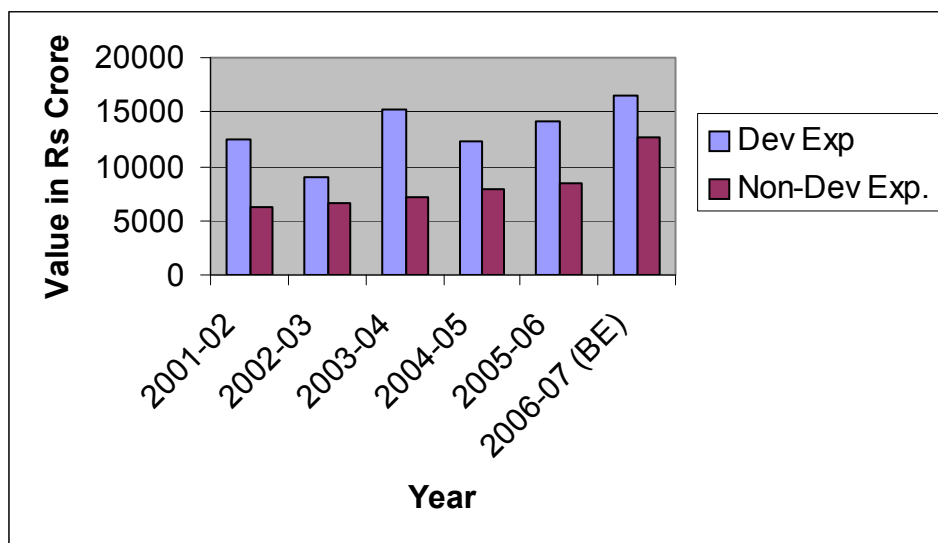


Table 7.8 : Revenue Account of Bihar

	(Rs. crore)					
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Revenue Receipt	9839.21	10968.33	12455.5	15714.07	17837.50	22390.78
Revenue Expenditure	11159.25	12254.94	12710.73	14638.29	17755.90	21779.47
Revenue Deficit	1320.04	1286.61	255.23	(-) 1075.78	(-) 81.60	(-) 611.31
State's own tax + non-tax revenue	2637.24	3044.93	3239.35	3760.2	4083.35	4863.96
State's own revenue as % of total revenue	26.80	27.76	26.01	23.93	22.89	21.72
State's own revenue as % of revenue exp.	23.63	24.85	25.49	25.69	23.00	22.33

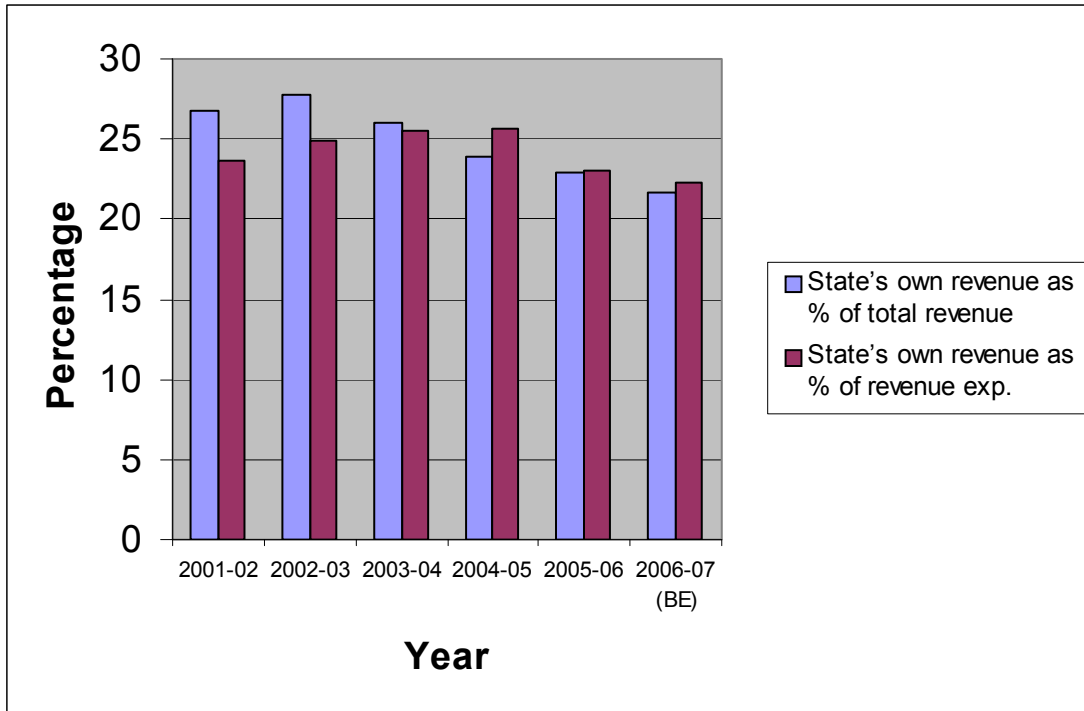
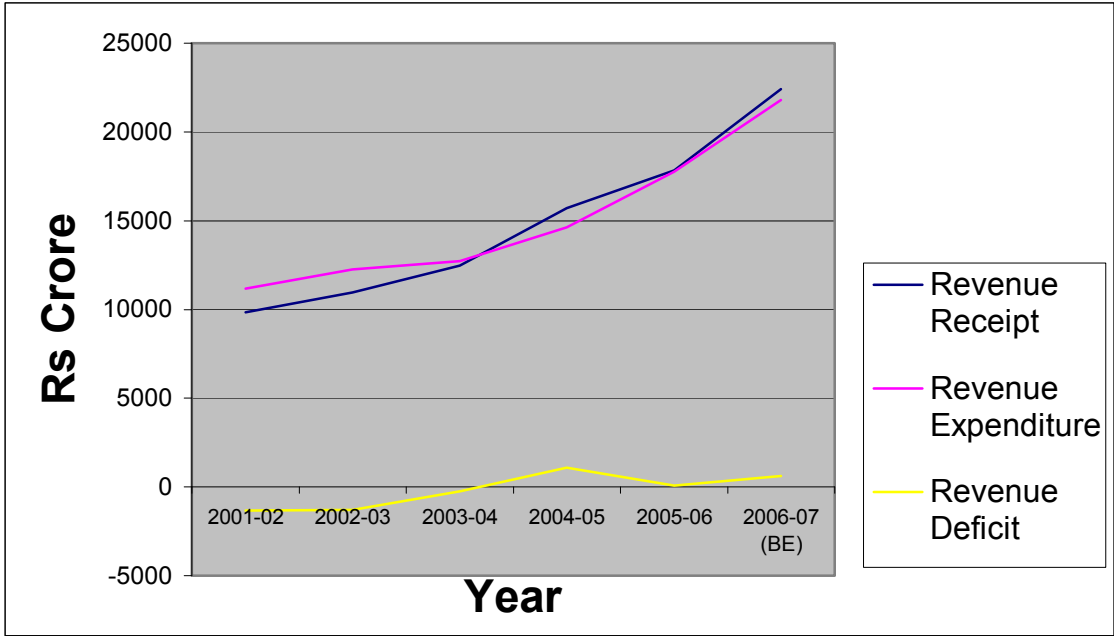


Table 7.9 : Other Parameters of Expenditure

(Rs. crore)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Total Tax Revenue	8495.53	9310.25	10517.55	12464.52	13982.52	16679.12
Own Tax Revenue	2350.58	2784.16	2919.02	3342.48	3561.09	4521.58
Total non-tax Revenue	286.66	260.77	320.33	417.72	522.26	342.38
Own non-tax Revenue	286.66	260.77	320.33	417.72	522.26	342.38
Actual Capital Outlay	7189.26	2503.20	7202.15	4291.73	3064.66	2196.93
Cap Outlay. as % of total expenditure	38.07	16.14	32.04	21.40	13.58	9.04

Table 7.10 : Interest Payment and Receipt

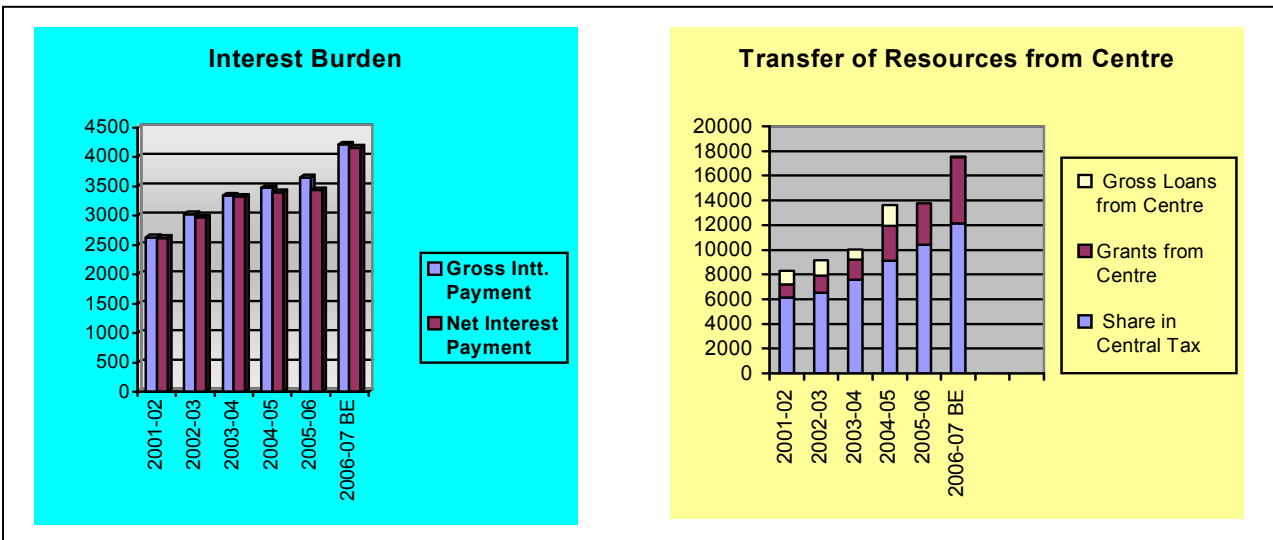
(Rs. crore)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07(BE)
Gross Interest Payment	2629.34	3021.79	3343.04	3473.90	3648.89	4209.59
Net Interest Payment	2617.59	2968.78	3319.96	3398.85	3432.82	4156.47

Table 7.11 : Cash Balance of Bihar⁴

(Rs. crore)

	2001-02	2002-03	2003-04	2004-05	2005-06
Balance in Cash Investment Account	-472.92	-930.28	-747.99	-1424.47	-1125.59
Increase in Closing Cash Balance		-457.36	182.29	-676.48	298.88



⁴ Balances shown reflect the deposits with RBI. Apart from these, the Govt has investments in the Cash Balance Investment Account as well as cash with departmental officers, investments of earmarked funds. During the year 2005-06, investments in Cash Balance Investment Account was Rs 2852.98 crore; the other investments amounted to Rs 160.19 crore. Total cash balance of the state government was Rs 1887.58 crore as compared to Rs 1518.47 crore in the previous year.

Coming once again to the crucial question of interest payment, it is seen from Table 7.10 that the difference between the gross and net interest payments is only nominal due to the extremely poor recovery of interest on the loans and advances given by the state to its mostly loss-making public sector enterprises and autonomous bodies. For many of these public enterprises, their accumulated losses have completely wiped out their equity bases including reserves. Interest receipts, however, showed more than a nominal increase, except in 2001-02, mainly from the investments of its huge cash balances (Table 7.11). Nevertheless, this increase is too small to offset the ever-widening gap between interest payments and interest receipts.

The exact nature of the State's dependence on Central resources can be seen from Table 7.12 which shows the gross transfer of resources to Bihar during the period from 2001-02 to 2006-07. The gross transfer of resources includes the State's share in Central taxes, grants-in-aid from the Centre, as well as loans. The gross transfer of resources to Bihar increased steadily from 38 percent to as much as 72 percent of the aggregate disbursements, excluding the Central loans. More than 80 percent of the gross amounts for transfer to the State came from its share of Central taxes and the rest from grants and loans. There is no real difference between the gross and net figures of resource transfer, on account of the high repayment of Central loans as can be seen from Table 7.12.

Table 7.12 : Transfer of Resources from Centre to Bihar

(Rs. crore)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07(BE)
Share in Central Tax	6144.95	6526.09	7598.53	9122.04	10421.43	12157.54
Grants-in-Aid from Centre	1057.02	1397.31	1617.62	2831.83	3332.72	5369.28
Gross Loans from Centre	1076.66	1255.16	819.71	1654.18	1.81	3.85
Gross transfer of Resources	7201.97	7923.40	9216.15	11953.87	13754.15	17526.82
Net Loans from Centre	548.43	-126.12	-1559.99	-1068.53	-486.05	-522.36
Net Transfer of Resources	7750.4	7797.28	7656.16	10885.34	13268.10	17004.46

Table 7.13 : Outstanding Liabilities**(Rs. crore)**

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07(BE)
Internal Debt	9682.04	12471.62	16298.48	21905.88	25181.52	30009.63
Central Loans	11791.72	11665.58	10105.59	9037.05	8551.00	8028.64
Total Public Debt	21473.76	24137.20	26404.07	30942.93	33732.52	38038.27
Small Savings, Provident Fund etc.	7684.16	7879.24	7997.21	8400.72	8765.73	8780.73
Total	29157.92	32016.44	34401.28	39343.65	42498.25	46819.00
Outstanding Liability as % of GSDP	61.92	60.23	65.78	68.85	70.12	71.75

Table 7.14 : Net Debt Received**(Rs. crore)**

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Gross loans from Centre	1076.66	1255.16	819.71	1654.18	1.81	3.85
Total Internal Debt	8503.77	2941.76	7100.13	5971.91	3768.54	6498.83
Small Savings, Provident Funds etc	770.04	963.20	986.73	1198.00	1087.66	1298.00
Total Borrowing	10350.47	5160.12	8906.57	8824.08	4858.01	7800.68
Recoveries of Loans, advances and Interest	12.95	15.58	10.45	14.83	50.86	51.16
Total Debt Servicing	9786.55	5323.39	9864.78	7355.61	5352.3	7689.52
Net Debt Received	563.92	-163.27	-958.21	1468.47	-494.29	111.16
Net Debt received as % of total borrowing	5.45	-3.16	-10.76	16.64	-10.17	1.43

Table 7.15 : Repayment Liabilities**(Rs. crore)**

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07(BE)
Repayment of loans to Centre	528.23	1381.29	2379.70	2722.71	487.86	526.21
Discharge of internal debt	5918.55	152.18	3273.28	364.51	492.90	1670.72
Discharge of other liabilities	710.43	768.13	868.76	794.49	722.65	1283.00
Total Repayment	7157.21	2301.60	6521.74	3881.71	1703.41	3479.93
Total Interest Payment	2629.34	3021.79	3343.04	3473.90	3648.89	4209.59

As regards the outstanding debt liability of the State, one may note from Table 7.13 that the outstanding liability as a percentage of GSDP has increased from 61.91 percent to 71.75 percent during the period under consideration.

To understand the full import of the data presented in Table 7.13, one also needs to look at Tables 7.14 and 7.15, which respectively depict the net amount of debt raised, and its discharge by the State. The total public debt of the State, as can be seen from Table 7.13, has mounted to Rs 38038 crore as at the end of 2006-07, which is 58 percent of the GSDP. This excludes the other borrowings on the Public Account (i.e. deposits and advances, suspense and miscellaneous, remittances, advances from contingency fund etc.), of which the dues as at the end of 2006-07 would be Rs 8781 crore. The total outstanding liability which is the sum of these two figures amounts to 71.75 percent of the GSDP. This large figure is the accumulated effect of financial management of the past. The total outstanding liability up to 2006-07 was Rs 46819 crore, and it has been rising at an average annual rate of about 10 percent, i.e. by more than Rs 3600 crore every year since 2001-02. The major part of this huge debt (64 percent) is due to the internal loans raised by the State from the market, and about 17 percent from the Central Government. One significant feature of the composition of outstanding debt is that the same from the Centre has been continually reducing since 2001-02, from Rs 11792 crore in 2001-02 to Rs 8028 crore in 2006-07. Public debt is a useful instrument of income generation if it is utilised for the creation of productive assets.

As we can see from Table 7.14, the debt resources could not be much utilised for creation of any asset of any kind, as these resources were mostly used to discharge the existing debt obligations, and the net accrual to the State exchequer on this account was indeed negligible, if not negative. Thus, out of a total amount of Rs 7801 crore borrowed during 2006-07, as much as Rs 7690 crore were used only for repayment of the installments of principal of the existing debt, together with the payment of the heavy interest burden which alone amounted to Rs 4210 crore, leaving only Rs 111 crore, or 1.43 percent of the total amount borrowed, for use by the State. Taking into account the small amounts recovered on its own loans given to various undertakings and the interest receipts, the net accrual to the exchequer was only Rs 162 crore during 2006-07. Leaving aside the

insignificant amounts due to recoveries of the State's own loans to various PSUs and other bodies, the share of net borrowings available to the State was 16.6 percent in 2004-05 and only 5.4 percent in 2001-02; in other 3 years, it was negative indicating net outflow of scarce resources for discharge of the debt and interest obligations. It would indeed be very difficult to come out of this situation without some generous help from the Central Government and some drastic and hard economic decisions.

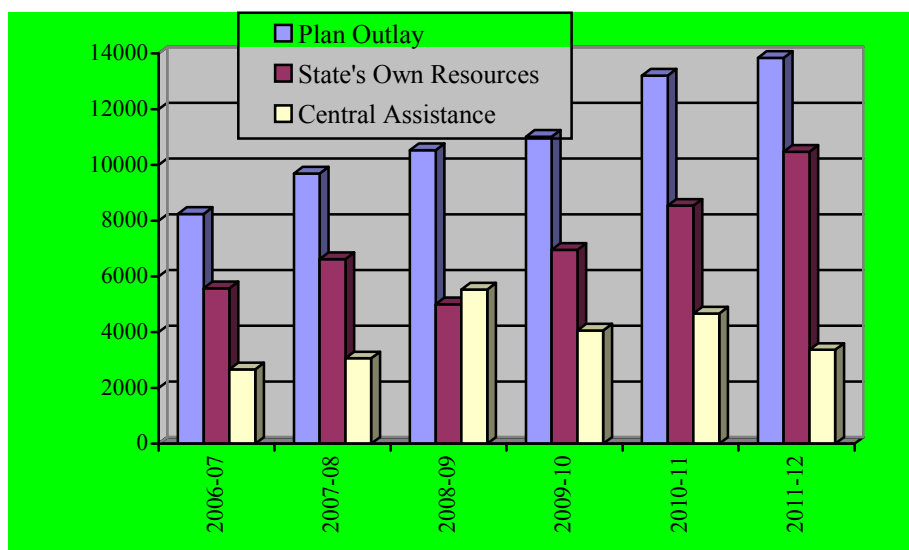
It may also be noted from Table 7.15 that while the total amount of principal repaid was Rs 3480 crore in 2006-07, the total amount of interest paid on account of the existing loans amounted to Rs 4210 crore during this year. Thus the amount of interest paid exceeded the total repayment of principal during the year, and the same was the situation during 2005-06. Finally, one may also consider the plan outlay for the Eleventh Five Year Plan. The proposed plan outlay for the period 2007-2012 is shown in Table 7.16, along with the outlay for the last year of the Tenth Plan, i.e. 2006-07. During 2006-07, the resources of the State accounts for nearly 68 percent of the total plan outlay, the rest coming in the shape of Central assistance. Of the State's own resources of Rs 5581 crore, however, the Balance of Current Revenues, Rs 986 crore, accounts for only about 18 percent. For the Eleventh Plan period of 2007-2012, the total Central assistance of Rs 20694 crore would amount to only 35 percent of the plan outlay. Thus it is imperative for the State itself to manage the bulk of the resources through various resource mobilisation measures – revenue generation as well as loans from financial institutions and others.

Table 7.16 : Plan Outlay

(Rs. crore)

Year	Plan Outlay	State's Own Resources	Of which, BCR	Central Assistance
2006-07	8250	5581	986	2669
XI-th Five Year Plan Period				
2007-08	9698	6628	3238	3069
2008-09	10538	5008	4431	5530
2009-10	11018	6959	5921	4059

2010-11	13209	8541	7601	4668
2011-12	13846	10478	9590	3368
Total	58309	37614	30781	20694



As per the projections of the Planning Commission, it can be seen that most of the resources will have to come from the Balance of Current Revenues (BCR). During the last 6 years, as was examined before, the BCR did not show any appreciable increase. If the Eleventh Plan targets are to be met, the State will have to be much more careful in its approach towards increasing its revenue from tax as well as non-tax sources by adopting suitable measures, and equally important, by drastically reducing the non-plan revenue expenditure by instituting efficient and urgent methods of expenditure control. Table 7.17 shows the total plan outlay during the period from 2001-02 to 2005-06, along with per capita plan outlay which is one of the lowest in the country. However, it must be noted that the spendings by the state government on central sector schemes, which comprise a substantial part of social spending, e.g. Bihar Education Project, NHRM etc. are not reflected in the state budget.

Table 7.17 : Plan Outlay and Social spending in Bihar

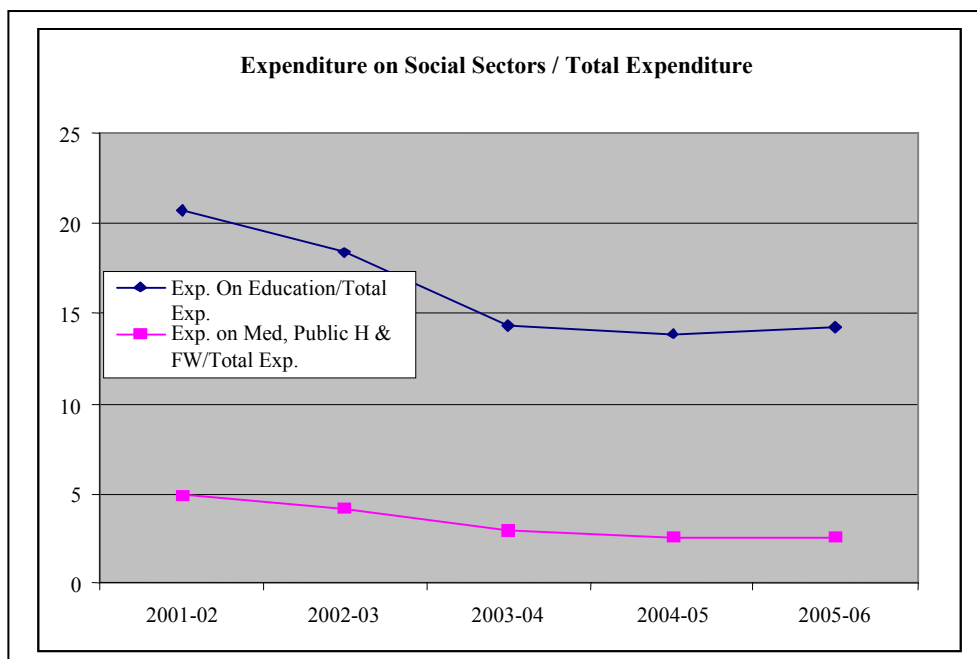
Year	Plan Outlay	
	Total	Per Capita
2001-02	1471	175
2002-03	2207	258
2003-04	2642*	303

2004-05	3059*	345
2005-06	5320 ⁺	593

(* Revised Estimate; + Approved)

Source : RBI, State Finances 2005

Expenditure on education as ratio to aggregate disbursements was 20.7 percent in 2001-02; this declined to 14.2 percent in 2005-06. Similarly, the expenditure in medical and public health also reduced to 2.6 percent from 4.9 percent of aggregate disbursements during 2001-06.



7.4 Revenue Receipts

Revenue Receipt of the State come from both tax and non-tax revenues. Tax revenue of a State consists of its own tax revenues and its share in the Central divisible pool of taxes and duties. Similarly, the non-tax revenues consist of the State's own non-tax revenue as well as Central Grants for Plan and non-Plan purposes. State's own tax revenues are classified into:

- 1) Taxes on income which include agricultural income tax, taxes on professions and trades
- 2) Taxes on property and capital transactions which include land revenues, stamp and registration fees, taxes on urban immovable property; and

- 3) Taxes on commodities and services which by far are the most important sources of the State's own tax revenue and include a variety of taxes like sales tax, turnover tax, state excise duty, taxes on vehicles, goods and passengers, electricity duty, taxes on entertainment etc.

Share of Central Taxes consist mainly of the shares of Income tax, Union Excise duty and additional excise in lieu of Sales Tax on certain commodities as we have already seen in the last chapter.

State's own non-tax revenues are again classified into interest receipts from loans and advances to various Government companies, public sector and quasi-commercial undertakings and other bodies, dividends and profit from them, receipts from general services and social services and fiscal services which are not very significant and from economic services like crop and animal husbandry, fisheries, plantations and forestry, irrigation, power, industries and minerals, small and village industries and transport and tourism services. Economic services contribute much more significantly to the State coffer than the other services. The grants from Central Government are for both plan and non-plan purposes, among the plan grants there are separate grants for the State's own plan schemes, Central plan schemes and also for the Centrally sponsored schemes. The non-plan grants include the statutory grants as well as relief on natural calamities and other public purpose grants.

Table 7.18 shows the revenue receipts of the State during the six years from 2001-02 to 2006-07. The receipts from the major taxes in Bihar during this period are shown in Table 7.19. From these two tables, one can see that more than 70 percent of the total receipts of the State came from the Centre by way of grants-in-aid and State's share of divisible pool of taxes. While the own tax revenue of the State has grown by 92 percent from Rs 2637 crore in 2001-02 to Rs 4864 crore in 2006-07, the non-tax revenue has grown by 19 percent from Rs 287 crore to Rs. 342 crore during the same period. The State's own total revenue (tax plus non-tax) has registered an increase of 84 percent, during 2001-02 to 2006-07. For the total State revenue which include the Centre's contribution and State's share of divisible tax, it increased from Rs 9839 crore in 2001-02 to Rs

22391 crore 2006-07, an increase of 127 percent. Taking the average of these six years, 75 percent of the total receipts of the State came from the Centre, and State's own revenues, tax and non-tax combined, accounted for the rest 25 percent.

Table 7.18 : Revenue Receipts of the State

(Rs. crore)

Sources of Revenue	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
I. State's Own Revenue	2637.24	3044.93	3239.35	3760.2	4083.35	4863.96
a) Tax Revenue	2350.58	2784.16	2919.02	3342.48	3561.09	4521.58
b) Non-Tax Revenue	286.66	260.77	320.33	417.72	522.26	342.38
II. Receipts from Centre	7201.97	7923.40	9216.15	11953.87	13754.15	17526.82
a) Share of Divisible Taxes	6144.95	6526.09	7598.53	9122.04	10421.43	12157.54
b) Grants-in-aid	1057.02	1397.31	1617.62	2831.83	3332.72	5369.28
III. Total Receipts	9839.21	10968.33	12455.50	15714.07	17837.50	22390.78
State's Own Revenue as % of Total Receipts	26.80	27.76	26.01	23.93	22.89	21.72

Among the direct taxes of the State are Stamp and Registration Fees, Taxes on Vehicles, Taxes and Duties on Electricity, Land Revenue and Taxes on Agricultural Income, the last one being rather insignificant. Among the indirect taxes which contribute far more than the direct taxes to the state coffer are taxes on sales, trade, state excise, taxes on goods and passengers and other taxes and duties on commodities and services. The details of receipts from these taxes from 2002-03 to 2006-07 are shown in Table 7.19.

Table 7.19 : Tax Revenue of Bihar Government

(Rs. crore)

Sources of Revenue	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Taxes on Sales, Trade etc.	1647.61	1637.23	1890.54	1733.59	2364.67
Stamp and Registration Fees	348.20	417.55	429.14	505.29	700.00
Taxes on Goods and Passengers	262.90	305.83	472.88	613.38	603.64
State Excise	241.95	240.01	272.47	318.59	400.00
Taxes on Vehicles	177.98	209.50	212.78	302.44	350.00

Land Revenue	36.15	33.80	33.39	55.02	72.42
Other Taxes and Duties on Commodities and Services	55.07	57.48	21.74	14.72	18.78
Taxes & Duties on Electricity	14.30	17.62	9.54	18.06	12.07
Taxes on Agricultural Income	0.00	0.00	0.00	0.00	0.00
Total	2784.16	2919.02	3342.48	3561.09	4521.58

An analysis of the tax receipts of the State reveals that the major sources of State's taxes are sales tax, stamp and registration fees, excise duty of the State, taxes on goods and passengers and taxes on vehicles. These 5 taxes together make up more than 97 percent of the total tax receipts of the State. Of these, Sales Tax alone comprises of more than 50 percent of the total tax receipts of the state, followed by Stamp and Registration Fees that constitutes about 15 percent of the total tax receipts. These taxes are highly buoyant and their yields increase automatically with the general increase in the income level as reflected in the increase in State's GSDP. The composition of the State's tax revenue is shown in Table 7.20 and their growth rates in Table 7.21. Except for Taxes on Vehicles, the growth rate of taxes on other major tax heads are very high. From Table 7.22, one can see that direct taxes contribute 25 percent to the own total tax revenue of the State, indirect taxes contributing the rest 75 percent.

Table 7.20 : Composition of Tax Revenue of Bihar Government (%)

Sources of Revenue	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Taxes on Sales, Trade etc.	59.18	56.09	56.56	48.68	52.30
Stamp and Registration Fees	12.51	14.30	12.84	14.19	15.48
Taxes on Goods and Passengers	9.44	10.48	14.15	17.22	13.35
State Excise	8.69	8.22	8.15	8.95	8.85
Taxes on Vehicles	6.39	7.18	6.37	8.49	7.74
Land Revenue	1.30	1.16	1.00	1.55	1.60
Other Taxes and Duties on Commodities and Services	1.98	1.97	0.65	0.41	0.42

Taxes & Duties on Electricity	0.51	0.60	0.29	0.51	0.27
Taxes on Agricultural Income	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00

Table 7.21 : Growth of Tax Revenue of Bihar Government (%)

Sources of Revenue	2003-04	2004-05	2005-06	2006-07 (BE)	Overall Growth 2002-07
Taxes on Sales, Trade etc.	(-) 0.63	15.47	-8.30	36.40	43.52
Stamp and Registration Fees	19.92	2.78	17.74	38.53	101.03
Taxes on Goods and Passengers	16.33	54.62	29.71	(-) 1.59	129.61
State Excise	(-) 0.80	13.52	16.93	25.55	65.32
Taxes on Vehicles	17.71	1.57	42.14	15.73	96.65
Land Revenue	(-) 6.95	(-) 1.21	64.78	31.62	100.33
Other Taxes and Duties on Commodities and Services	4.38	(-) 62.18	(-) 32.29	27.58	(-) 65.90
Taxes & Duties on Electricity	23.22	(-) 45.86	89.31	(-) 33.17	(-) 15.59
Taxes on Agricultural Income					
Total	4.84	14.51	6.54	26.97	62.40

Table 7.22 : Structure of Taxation in Bihar (%)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Share of Direct Taxes in State's Own Tax Revenue	21.02	20.71	23.24	20.49	24.73	25.09
Share of Indirect Taxes in State's Own Tax Revenue	78.98	79.29	76.76	79.51	75.27	74.91

Table 7.23 and 7.24 respectively show the major non-tax revenues of the State and their composition. The most important element of the State's non-tax revenue is the royalty from mines and minerals, the other important source being the interest receipts. The receipt from these two together constitute about 40 percent of the total non-tax receipts. The steep increase in the interest

receipts in 2005-06 was only due to the investment of huge balance of idle cash in the Cash Balance Investment Account. Even the most important source of non-tax revenues, i.e. royalty from mines and minerals, has been showing almost stagnant growth during the last few years; in fact, during 2006-07, the yield from this had declined marginally. Overall, the growth of non-tax revenues has been quite erratic and without any definite pattern; in 2006-07, due to the decline in interest receipts, the growth of total own non-tax revenues has been highly negative at –34 percent.

Table 7.23 : Major Non-Tax Revenues of Bihar (Rs Crore)

Sources of Revenue	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Non-Ferrous Mining and Metallurgical Industries	61.20	73.34	80.09	100.90	95.00
Interest Receipts	53.01	23.08	75.05	57.61	53.12
Other Rural Development Programmes	8.68	21.26	24.67	10.16	26.15
Major Irrigation	15.43	26.22	0.00	1.62	25.00
Other Administrative Services	15.19	80.72	107.98	34.21	22.93
Medical and Public Health	13.92	11.97	12.66	15.10	14.80
Police	22.70	16.85	13.72	6.00	14.55
Roads and Bridges	10.42	10.62	8.42	12.05	11.87
Social Security and Welfare	13.73	10.59	8.30	14.75	6.25
Education, Sports, Arts and Culture	8.35	4.11	7.34	32.99	7.81
Others	38.14	41.57	79.49	78.41	64.90
Total	260.77	320.33	417.72	522.26	342.38

Table 7.24 : Composition of Non-Tax Revenues of Bihar (%)

Sources of Revenue	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Non-Ferrous Mining and Metallurgical Industries	23.47	22.90	19.17	19.32	27.75
Interest Receipts	20.33	7.21	17.97	41.37	15.51
Other Rural Development Programmes	3.33	6.64	5.91	1.95	7.64
Major Irrigation	5.92	8.19	0.00	0.31	7.30
Other Administrative Services	5.83	25.20	25.85	6.55	6.70
Medical and Public Health	5.34	3.74	3.03	2.89	4.32
Police	8.70	5.26	3.28	1.15	4.25
Roads and Bridges	4.00	3.32	2.02	2.31	3.47
Social Security and Welfare	5.27	3.31	1.99	2.82	1.83

Education, Sports, Arts and Culture	3.20	1.28	1.76	6.32	2.28
Others	14.63	12.98	19.03	15.01	19.96
Total	100.00	100.00	100.00	100.00	100.00
Growth rate of Total Non-Tax Revenues	-	22.84	30.40	25.03	-34.44
Growth rate of Non-Ferrous Mining and Metallurgical Industries	-	-2.45	-16.26	0.77	43.62
Growth rate of Interest Receipts	-	-64.56	149.36	130.27	-62.50

The above analysis brings out the importance of sales tax in the tax revenue and royalty on mines and minerals on the non-tax revenue of the State Government. The Internal Resource Committee constituted by the State Government to study the resources of the State stated in its report in June, 1991 that the receipts accruing to the Government on account of sales tax was very meagre and that the receipts on this account was much more in the other States. The position remains more or less the same even now.

The State has already shifted to a VAT regime from April 2005 by substituting the sales taxes with VAT to avoid the cascading effect of the sales tax. VAT is much more efficient than the sales tax, but may also be counter productive as many related issues are yet to be sorted out. The main bottlenecks are administrative rather than technical, like connecting the dealers and distributors through a computer network, building and maintaining a database of dealers and distributors and educating them about the procedures of assessment etc. In 2005-06, the State Government undertook a number of reform measures of the tax system. VAT rates were substantially reduced from 12.5 percent to 4 percent in respect of LPG, tea, coffee, diesel, tractor, plastic appliances etc. VAT rates have been substantially reduced in respect of as many as 150 items and in respect of all foodgrains, the VAT rate has been reduced to 1 percent from 4 percent. Revenue has increased by 24% in one year. These measures are expected to improve efficiency, boost the industrial production and growth and are expected to generate additional resources for the State Government in 2-3 years' time.

Next to sales tax, the other important taxes are the taxes on property and capital transactions, i.e. stamp and registration fees, taxes on goods and passengers, taxes on vehicles and state excise duty. The registration rates in Bihar were already high and now has been brought down in 2006-07 to improve compliance. It has been reduced from 15.4 percent to 8 percent in urban and from 8.4 percent to 6 percent in rural areas. The effect of improved compliance may show up from next

year onwards. One tax that needs to be looked into is the professional tax, from which the yield in other comparable states like West Bengal or Assam is much more. Land revenue also has the potential to yield more.

State Excise is imposed on the production of goods within the State on which there is no Central excise duty as determined by the State list in the Seventh Schedule of the Constitution. The State can impose this tax only on a limited number of articles, most notably liquor, an article which can still be taxed at a higher rate. Nevertheless, the scope to raise more resources from this is somewhat limited.

Turning to the assessments of revenue one may note some discrepancy between the Budget and actual realisation of revenues, (Table 7.25) in respect of the individual taxes, though the overall discrepancy has been contained to only 6.8 percent. The discrepancy in respect of individual taxes varied from (-)168 percent on the higher side and 26 percent on the lower side. The cost of collection of taxes was disproportionately high in respect of Land Revenue (Table 7.26) – the cost of collection was, in fact, more than three times the actual revenues collected from this source. There were also huge arrears of uncollected revenue. As on 31st March, 2003, the arrears of uncollected revenue amounted to Rs 3022 crores as compared to the State's own tax revenue of Rs 2350 crores during 2002-03. Thus on the one hand, the high cost of collection and on the other, huge arrears in collection—both these evils continue to plague the State's tax system.

Table 7.25 : Variation between the Estimated and Actual Realisation of Tax Revenue of Bihar Govt-2005-06 (Rs Crore)

Tax Revenue	BE	Actual Receipts	% Variation Excess (-), shortfall (+)
Taxes on Sales, Trade etc.	2356.31	1733.59	26.43
State Excise	335.00	318.59	4.90
Stamp and Registration Fees	600.00	505.29	15.79
Taxes on Vehicles	310.00	302.44	2.44
Taxes & Duties on Electricity	16.30	18.06	-10.80
Land Revenue	35.00	55.05	-57.29
Other Taxes and duties on Commodities and Services	18.70	14.72	21.28

Taxes on Goods and Passengers	312.00	613.38	-96.60
Non-Tax Revenue			
Non-Ferrous Mining and Metallurgical Industries	81.00	100.9	-24.57
Forestry and Wildlife	15.00	8.89	40.73
Social Security and Welfare	5.50	14.75	-168.18
Total	19128.97	17837.50	6.75

Table 7.26 : Cost of Collection of Taxes (Rs.Crore) as % of Gross Collection

Tax Revenue	2005-06 Cost of Collection	2005-06 Actual Collection	Cost of Collection of Taxes as % of Gross Collection
Taxes on Sales, Trade etc.	31.41	1733.59	1.81
State Excise	19.23	318.59	6.04
Stamp and Registration Fees	29.12	505.29	5.76
Taxes on Vehicles	6.78	302.44	2.24
Land Revenue	171.59	55.02	311.87

Table 7.27 shows the State's own tax and non-tax revenues as percentage of GSDP which is a measure of a State's capacity to raise further resources from tax and non-tax revenues. As one may clearly see, the tax and non-tax revenue of Bihar together constitute an insignificant percentage of its GSDP (7 percent) . Certainly there is scope for raising the revenues both from tax and non-tax sources to a much higher level.

Table 7.27 : Tax and Non-tax Revenue as percentage of GSDP

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Own Tax Revenue as % of GSDP	4.99	5.24	5.58	5.85	5.88	6.93
Own Non-Tax Revenue as % of GSDP	0.61	0.49	0.61	0.73	0.86	0.52
Total Revenue as % of GSDP	20.89	20.63	23.82	27.50	29.43	34.31

7.5 Expenditure Trends

As mentioned earlier, revenue expenditure and capital expenditure are the two components of the state government's total expenditure. The expenditures of the State governments are classified under three major categories — general services, social services and economic services. Apart from these, the other areas of spending are capital outlay, repayment of loans and advances and grants to local bodies and autonomous institutions. It is to be noted that while the repayment of principal amounts of loans are made from the capital account (other than capital outlay), interest payment is made from the revenue account of expenditure, i.e. under the general services.

Table 7.28 presents the expenditure from Consolidated Fund of the state. Table 7.29 shows the structure of expenditure from the Consolidated Fund while Table 7.30 depicts the growth of expenditure from the Consolidated Fund. These three tables together give us an overview of, as well as an insight into, the State's expenditure patterns.

Table 7.28 : Expenditure from Consolidated Fund

(Rs. crore)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
General Services	6322.87	6574.10	7175.42	7803.45	8522.74	10196.32
Social Services	3532.19	3915.67	4033.42	4794.95	6861.90	8108.51
Economic Services	1302.37	1763.35	1498.13	2035.62	2367.06	3470.27
Grants in Aid	1.82	1.82	3.76	4.27	4.20	4.37
Capital, Public Debt, Loans	7722.98	3250.38	9771.07	5419.57	4812.48	2528.90
Total Consolidated Fund	18882.23	15505.32	22481.80	20057.86	22568.38	24308.37

The structure of expenditure of the State as shown in Table 7.29 indicates that General Services constitutes the bulk of expenditure from the Consolidated Fund (42 percent), followed by Social Services (34 percent) and Economic Services (14 percent) in 2006-07. One important fact to note is that the shares of all services — general, social as well as economic services — have all gone up consistently over the period, at the cost of Capital Expenditure which has come down from 41 percent in 2001-02 to only 10 percent in 2006-07. One understands the compulsions of the

Government in according high priority to social sectors, especially in view of the dismal performance of the State in the areas of education, health etc. But capital expenditure that has the potential of generating income and employment as well as economic services could have been accorded a higher priority, especially in view of the high poverty ratio and high unemployment in the State. Most important of all, the expenditure on general services ought to have been contained, if not curtailed. But the oversized staff strength of the State is the basic constraint in this regard.

Table 7.29 : Structure of Expenditure from Consolidated Fund

(Percentages)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
General Services	33.49	42.40	31.92	38.90	37.76	41.95
Social Services	18.71	25.25	17.94	23.91	30.40	33.36
Economic Services	6.90	11.37	6.66	10.15	10.49	14.28
Grants in Aid	0.01	0.01	0.02	0.02	0.02	0.02
Capital, Public Debt, Loans	40.90	20.96	43.46	27.02	21.32	10.40
Total Consolidated Fund	100.00	100.00	100.00	100.00	100.00	100.00

Table 7.30 : Growth of Expenditure from Consolidated Fund (%)

	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
General Services	3.97	9.15	8.75	9.22	19.64
Social Services	10.86	3.01	18.88	43.11	18.17
Economic Services	35.40	-15.04	35.88	16.28	46.61
Grants in Aid	0.00	106.59	13.56	-1.64	4.05
Capital, Public Debt, Loans	-57.91	200.61	-44.53	-11.20	-47.45
Total Consolidated Fund	-17.88	44.99	-10.78	12.52	7.71

Among the general services, there are certain items on which there is no possibility of any control. These are mostly items of charged expenditure, like pension, interest payment etc, expenditure in which has been rising steadily. But the expenditure on administrative services has also been growing steadily since 2003-04, which is a cause for concern. The expenditure on social services has been increasing steadily over the year. Among the social services, the revenue expenditures both on education, sports etc. and on health and family welfare show steady increase over the years, as was observed for the general services.

Because of heavy expenditure on these items, the growth of expenditure on other activities had to be curtailed. The axe fell on Capital expenditure. The actual capital outlay which is a measure of the asset creation in the State also declined in tandem, the difference between the two being used for repayment of installments of the principal amounts of the loans from the Central Government as well as the discharge of internal debt of the State Government. It follows that the capital outlay in real terms remained where it was 6 years ago obstructing the economic development of the state.

7.6 Expenditure on Salary and Pension

Salary and pension constitute the two most important expenditure items for all government. The Government of Bihar employs a large number of employees in its various Departments. The total number of Government servants in Bihar in 2006-07 number 4,35,394. Tables 7.31 A, 7.31 B and 7.31 C show the distribution of employees among the various Government Departments. From these tables, it can be seen that only 14 large Departments employ more than 4.06 lakh, or 93.42 percent of the total 4.35 lakh employees (Table 7.31 A). Each of these Departments employs more than 5000 employees. Then, 14 other Departments, each employing more than 1000 employees each; together account for 22,230 or 5.11 percent of the total number of employees. Thus these 28 Departments together account for more than 98.5 percent of the total Government workforce in Bihar. There are 21 other Departments that employ a total of 6427 employees, or 1.48 percent of the total number. Each of these employs less than 1000 employees. This is by no means a small number, given the scale of activities and operations involved. In contrast, the Government of India employs a total of 34.08 lakh employees, apart from defence personnel and this number includes the Railway employees numbering 14.52 lakhs.

Table 7.31 A : Departments with more than 5000 employees

Sl No.	Name of the Department/ Demand	Sanctioned	In Position	% to total no. of State employees
1	Secondary, Primary and Adult Education Department	218008	176579	40.56
2	Home Department	117355	90066	20.69
3	Health and Family Welfare Department	54322	33560	7.71
4	Revenue and Land Reforms Department	21758	17506	4.02
5	Rural Development Department	23881	17030	3.91
6	Water Resources Department	16629	16877	3.88
7	Road Construction Department	13012	10413	2.39
8	Law Department	10763	10172	2.34

9	Minor Irrigation Department	10366	8262	1.90
10	Public Health Engineering Department	8869	7865	1.81
11	Animal Husbandry Department	9446	5893	1.35
12	Agriculture Department	12589	5580	1.28
13	Building Construction Department	5766	3780	0.87
14	Labour, Employment and Training Department	5621	3154	0.72
	Sub-Total	528385	406737	93.42

Table 7.31 B : Departments with more than 1000 but less than 5000 employees

Sl No.	Name of the Department/ Demand	Sanctioned	In Position	% to total no. of State employees
1	Welfare Department	4192	2861	0.66
2	Finance Department	4562	2528	0.58
3	Co-operative Department	3666	1934	0.44
4	Forest and Environment Department	2585	1895	0.44
5	Registration Department	1915	1780	0.41
6	Excise and Prohibition Department	1877	1619	0.37
7	Finance (Commercial Tax) Department	2298	1522	0.35
8	Legislature	1818	1494	0.34
9	Youth, Art and Culture Department	1533	1148	0.26
10	Planning and Development Department	2114	1117	0.26
11	High Court of Bihar	1109	1095	0.25
12	Industries Department	2157	1086	0.25
13	Rajbhasa Department	1421	1084	0.25
14	Food, Supply and Commerce Department	2255	1067	0.25
	Sub-Total	33502	22230	5.11

Table 7.31 C : Departments with less than 1000 employees

Sl No.	Name of the Department/ Demand	Sanctioned	In Position	% to total no. of State employees
1	Science and Technology Department	1487	859	0.20
2	Energy Department	866	739	0.17
3	Sugarcane Department	1214	606	0.14
4	Information and Public Relation Department	799	532	0.12
5	Vigilance	894	432	0.10
6	Mines and Geology Department	575	414	0.10
7	Personnel and Administrative Reforms Department	424	356	0.08
8	Transport Department	525	334	0.08
9	Higher Education Department	485	320	0.07
10	Cabinet Secretariat and Coordination Department	297	275	0.06
11	Bihar Public Service Commission	280	273	0.06
12	Election	345	254	0.06
13	Disaster Management Department	224	174	0.04
14	Secretariat of the Governor	155	153	0.04
15	Tourism Department	222	146	0.03
16	National Savings	233	141	0.03

17	Urban Development Department	336	125	0.03
18	Civil Aviation Department	164	110	0.03
19	Institutional Finance & Programme Implementation Dept	133	82	0.02
20	Minorities Welfare Department	126	75	0.02
21	Parliamentary Affairs Department	51	27	0.01
	Sub-Total	9835	6427	1.48
	Grand Total	571722	435394	100.00

It is also interesting to note that , out of the total number of sanctioned posts, no less than one-fifth are Grade D employees (Table 7.32). Grade C posts are again very large, accounting for nearly three-fourth of the sanctioned posts. This leaves only a limited number of posts at the Grades A and B. For existing number of employees (nearly one-fifth of the post are vacant), the gradewise distribution is nearly the same.

Table 7.32 : Gradewise Percentage Distribution of Employees (2006-07)

Grades	Sanctioned Posts	Existing Employees
A	1.06	0.88
B	4.74	9.76
C	73.76	69.02
D	20.43	20.35
Total	100.00	100.00

Table 7.33 shows the total expenditure made by the Government of Bihar on salary and allowances of these employees. This amounted to Rs 5783.35 crore as per the figures for 2005-06 and is projected to exceed Rs 7800 crore during 2006-07. This constitutes 12 percent of Bihar's GSDP, and 35 percent and 36 percent respectively of its revenue receipts and expenditure, high by any standards. In case of Government of India, the total salary expenditure is only about 5 percent of its total revenue receipts. Expenditure on pension accounts for 4.83 percent of Bihar's GSDP and 13.48 percent of the revenue receipts. (Table 7.34). Thus expenditure on salary and pension together accounts for nearly half the total revenue receipts (or revenue expenditure) of the Government.

Table 7.33 : Salary Expenditure of the Government of Bihar

(Rs. crore)

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 BE

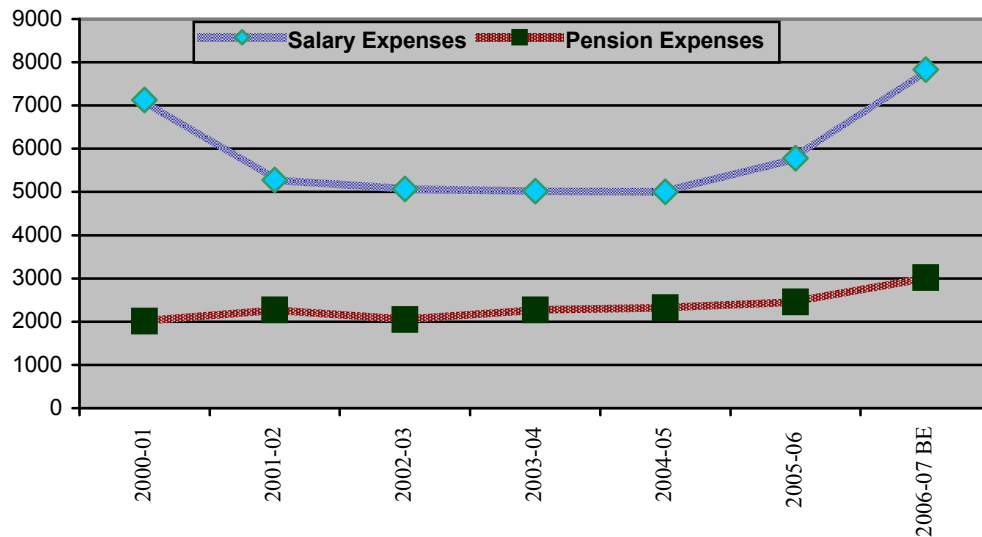
Salary Expenses	7129.22	5275.89	5073.07	5019.88	5005.36	5783.35	7831.25
As % of GSDP	14.44	11.20	9.54	9.60	8.76	9.54	12.00
As % of Revenue Receipts	63.78	53.62	46.25	40.30	31.85	32.42	32.42
As % of Revenue Expenditure	36.81	47.28	41.40	39.49	34.19	32.57	32.57

Table 7.34 : Expenditure of the Government on Pension

(Rs. crore)

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 BE
Pension Expenses	2011	2273	2049	2269	2325	2456	3020
As % of GSDP	4.83	3.85	4.34	4.07	4.53	4.05	4.83
As % of Revenue Receipts	17.99	23.10	18.68	18.22	14.80	13.77	13.48

Expenditure on Salary and Pension (Rs Crore)



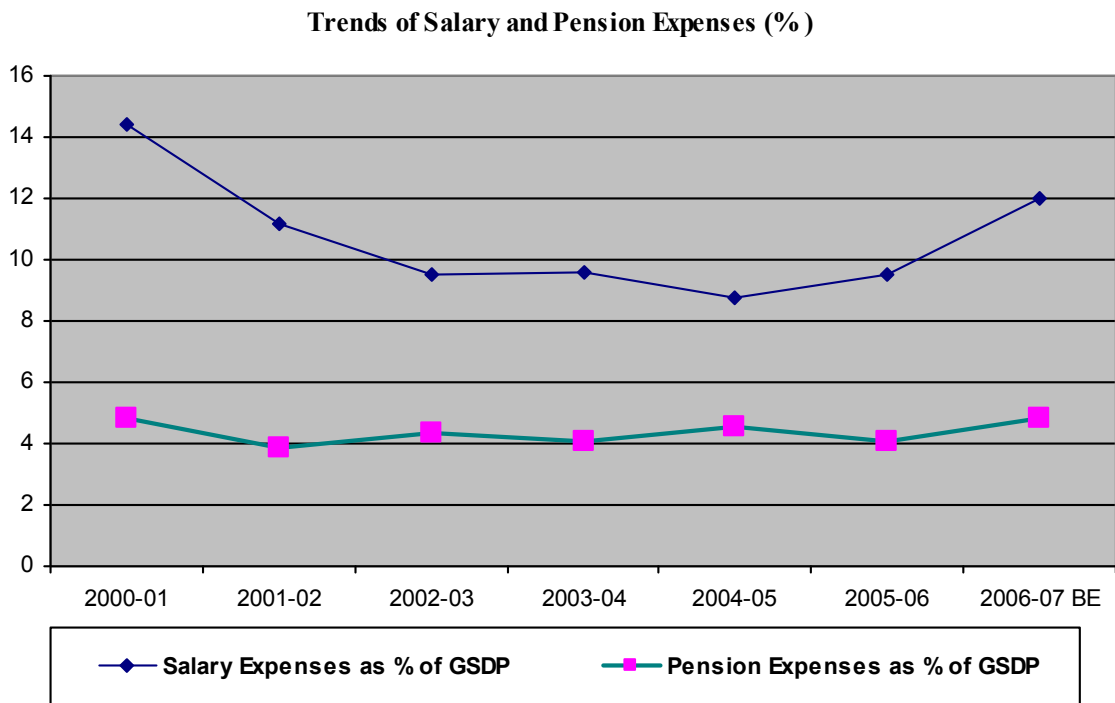
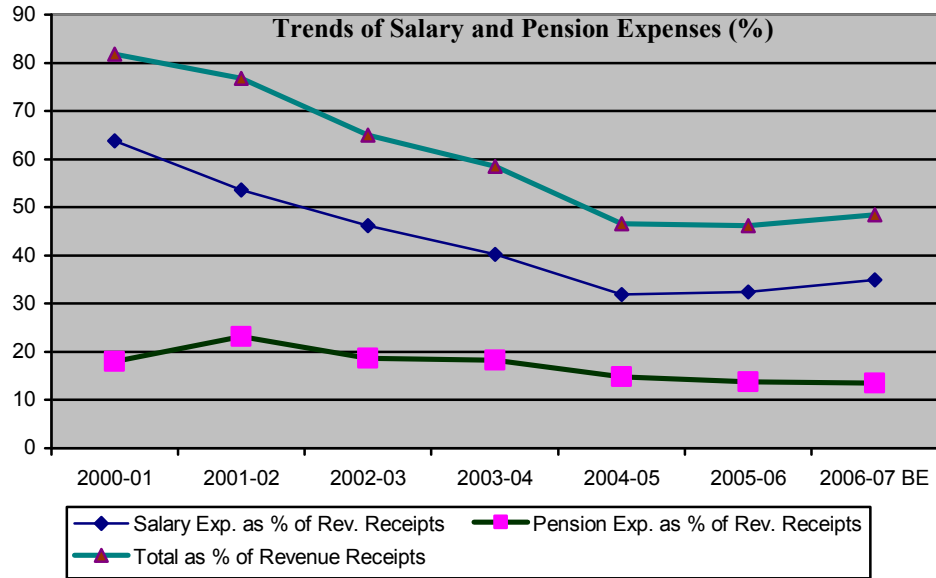


Table 7.35 : Comparative Expenditure on Salaries and Pension: Government of Bihar and Government of India

	2004-05	2005-06	2006-07 ⁵
	Actual	RE	BE

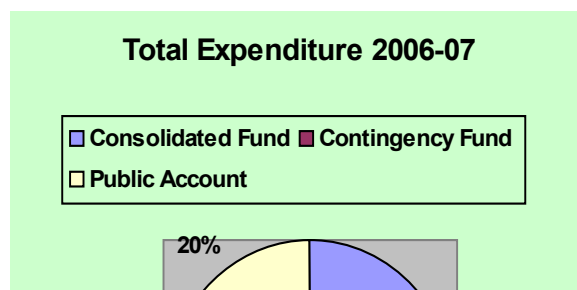
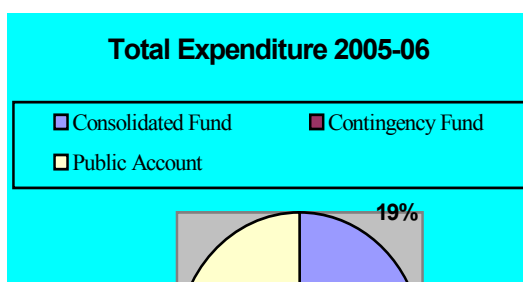
⁵ 2006-07 budget estimates of expenditure on salaries and pension have been compared with the staff strength of 2006-07 both for the Central as well as the Bihar Government. The actual figures for per capita expenditure on salaries and pension may vary and are likely to go down.

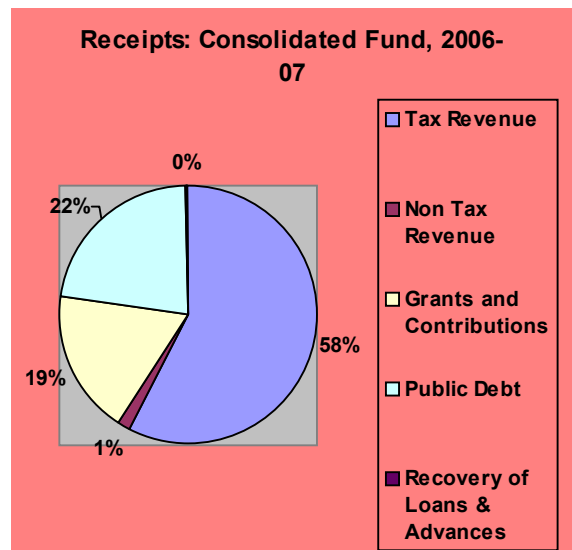
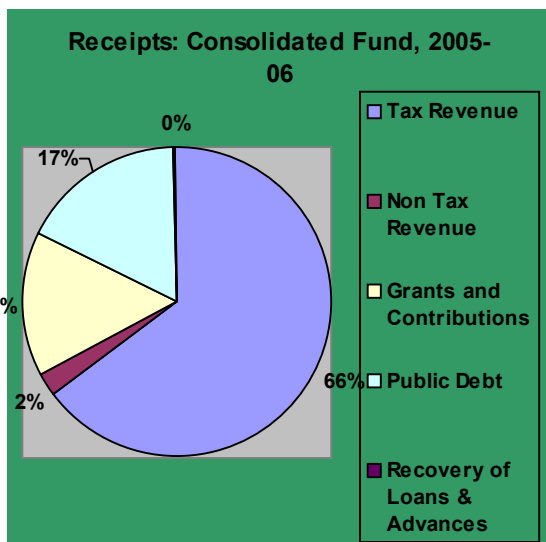
Total number of Central Government Employees (Excluding Defence Personnel)	3,274,145	3,409,032	3,408,981
Expenditure on Salary and Allowances (Rs Crore)	36,402.37	39,301.55	41,334.26
Expenditure on Pension (Rs Crore)	18,338.00	20,232.00	21,312.00
Revenue Receipt (Rs Crore)	300,904.00	348,474.00	403,465.00
Salary Exp as % of Rev Receipt	12.10	11.28	10.24
Pension as % of Rev Receipt	6.09	5.81	5.28
Per Capita Monthly Expenditure on Salaries— Central Government (Rs.)	9265.11	9607.21	10,104.26
Per Capita Annual Expenditure on Salaries – Central Government (Rs.)	111,181.30	115,286.54	121,251.07
Per Capita Monthly Expenditure on Salaries –Bihar (Rs)			14,988.82
Per Capita Annual Expenditure on Salaries – Bihar (Rs)			179,865.82

Lastly, one may compare the average salary per employee of the Bihar Government with that of the Central Government employees. From the data given in Table 7.35, it can be seen that the average annual salary of an employee of the Bihar Government amounts to Rs 1.79 lakh while that of a Central Government employee amounts to Rs 1.21 lakh only (monthly figures are Rs 14989 and Rs 10104 respectively). Thus Bihar Government employees are almost 50 percent better paid than the central Government employees. Even in a prosperous State like Punjab, the average monthly salary per State Government employee is Rs. 12180. The expenditure pattern on salaries in Bihar is, therefore, an area which merits some attention for some desired changes.

7.7 State Budget of 2006-07

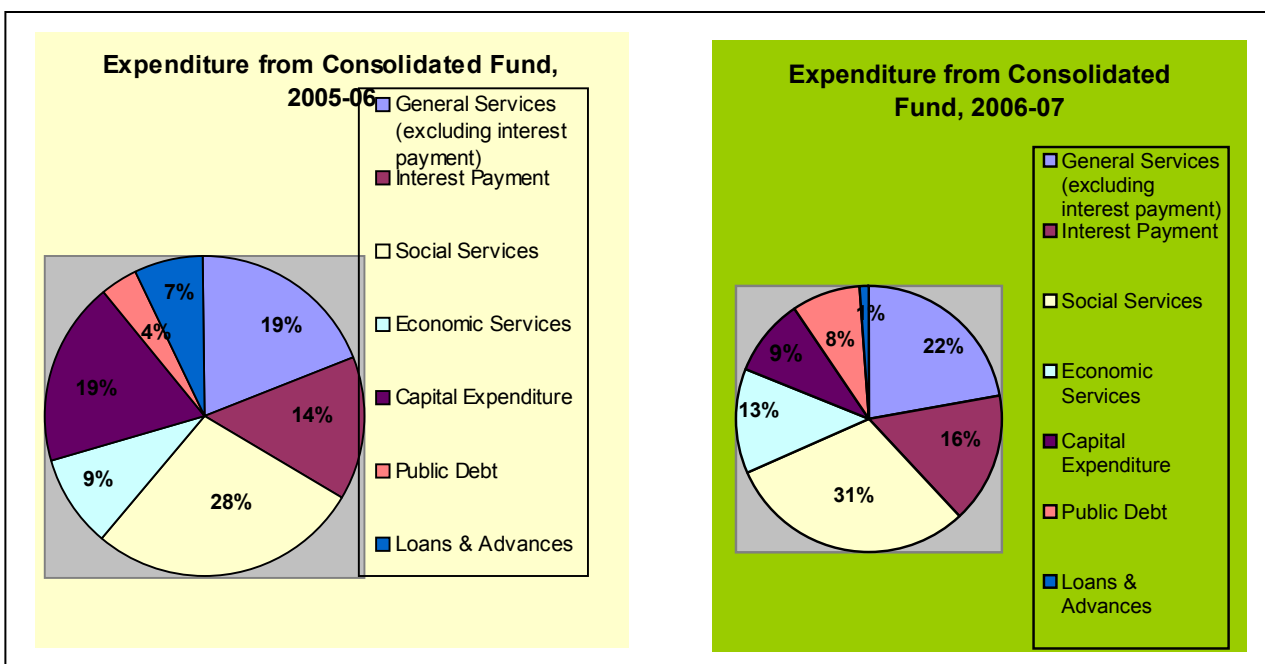
The budget for 2006-07 was a milestone in the development and welfare in present era of liberalised economy. In this section, budget of the State for 2006-07 is analysed along with a look into its key areas. Analysis of the expenditure patterns with reference to the past few years has been made to see if any structural changes have been introduced in the expenditure patterns of the State, reflecting the new realities.





The State budget is divided into three parts: Consolidated Fund, Contingency Fund and Public Account. Of these three, the first is the most important as all receipts from tax and non-tax revenues and all debt receipts are credited into it. All expenditure of the State government are also made out of it through the appropriations approved by the State Legislature. Contingency Fund of the State serves only the purpose of emergency; in any case, the expenditure made from it are recouped from the Consolidated Fund. Public Account serves to fill the gap in the State finances; it includes the receipts and expenditure on account of small savings, provident fund etc., reserve

funds and some special accounts like the Calamity Relief Fund, Civil and other deposits (like the earnest money deposits taken from the contractors for public works etc.), suspense accounts where amounts are booked as an interim measure pending their final adjustments in the books of accounts, besides remittances and certain other transactions. It must be remembered that the resources in the public account do not belong to the State, they represent resources belonging to others, though the State is empowered to draw upon them in times of need. Therefore, lesser the dependence on Public Account, the better it is for the State, as any drawal from the Public Account inevitably carries with it the repayment liability and concomitant interest burden.



From the summary of the budget for 2006-07, presented in Table 7.36, one can see that in the Consolidated Fund, there is a substantial surplus of Rs 4636 crore in 2006-07, in place of a deficit of Rs 909 crore in 2005-06. This surplus in the Consolidated Fund in 2006-07 has been slightly eroded by the deficit of Rs 375 crore in the Public Account in 2006-07, leaving an overall surplus

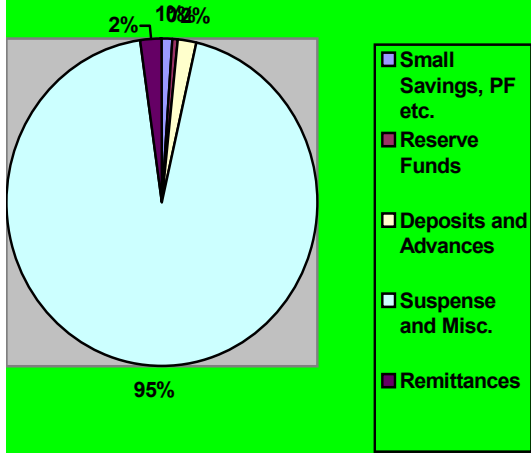
of Rs 4261 crore in the net results of the 3 funds in 2006-07.⁶ The revenue surplus is also projected to increase substantially from Rs. 81 crore in 2005-06 to Rs. 611 crore in 2006-07. Tax revenue had been projected to increase by 8 percent and fetch additional tax revenue of Rs 2697 crore over the previous year. The increase in tax revenue had been sought to be achieved in income tax, i.e. the State's share of it in which there was an increase of Rs 1140 crore over the previous year, while in taxes on commodities and services (which include the State excise, sales tax i.e. VAT and taxes on vehicles), there was an increase of Rs 1344 crore, most of it coming from the sales tax. An increase of Rs 47 crore over the previous year was anticipated for the taxes

on vehicles. As far as revenue expenditure is concerned, the earlier trend of rising revenue expenditure continues. The total revenue expenditure in 2006-07 will go up by Rs 4023 crore over the previous year, an increase of 23 percent. The increase in the share of expenditure on General Services, Social Services and Economic Services was in the region of 4 percentage points over the previous year. This reverses the trend of higher increase of expenditure in Social Services compared to that in Economic Services, a characteristic of the State in the earlier years. Regarding Capital Account, one notes that there is an increase of 5 percent in the total receipts, solely coming from an increased level of borrowing compared to the last year. On the expenditure side, capital outlay would be reduced by Rs 868 crores compared to the previous year. Repayment of the principal amount of loans taken was projected to increase by about 5 percent.

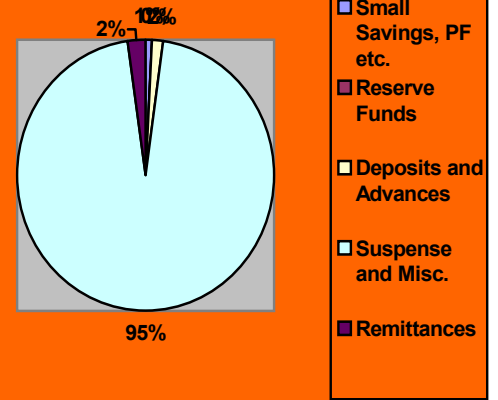
Going into the structure of receipts into and expenditure from the Consolidated Fund as shown in Tables 7.37 and 7.38 respectively, one notes that, compared to 2005-06, the shares of tax revenue in the total receipts into the Consolidated Fund have declined and the share of public debt and grants has increased by more than 8 percent. This indicates an urgent need for streamlining resource management.

⁶ In the analysis of the state budget, public account plays a very important role. The public accounts consist of balances under small savings and provident fund, reserve funds, deposits and advances, both interest as well as non-interest bearing, besides suspense and misc. balances and remittances. In the case of Bihar, suspense and misc. balances constituted a large proportion of the total balances. The suspense and misc. balances include other accounts, which in the case of Bihar accounted for the bulk of public accounts receipts as well as disbursements. During 2005-06, receipts and disbursements under the other accounts were Rs 89306 crore and Rs 89376 crore respectively. These accounts basically reflect various adjustments. Leaving these aside, the total actual receipts and disbursements in the public accounts during 2005-06 were Rs 5695 crore and Rs 4415 crore respectively. In the analysis of state budgets, however, the total receipts and disbursements including the other accounts have been considered.

Public Account Receipts, 2005-06



Public Account Expenditure, 2005-06



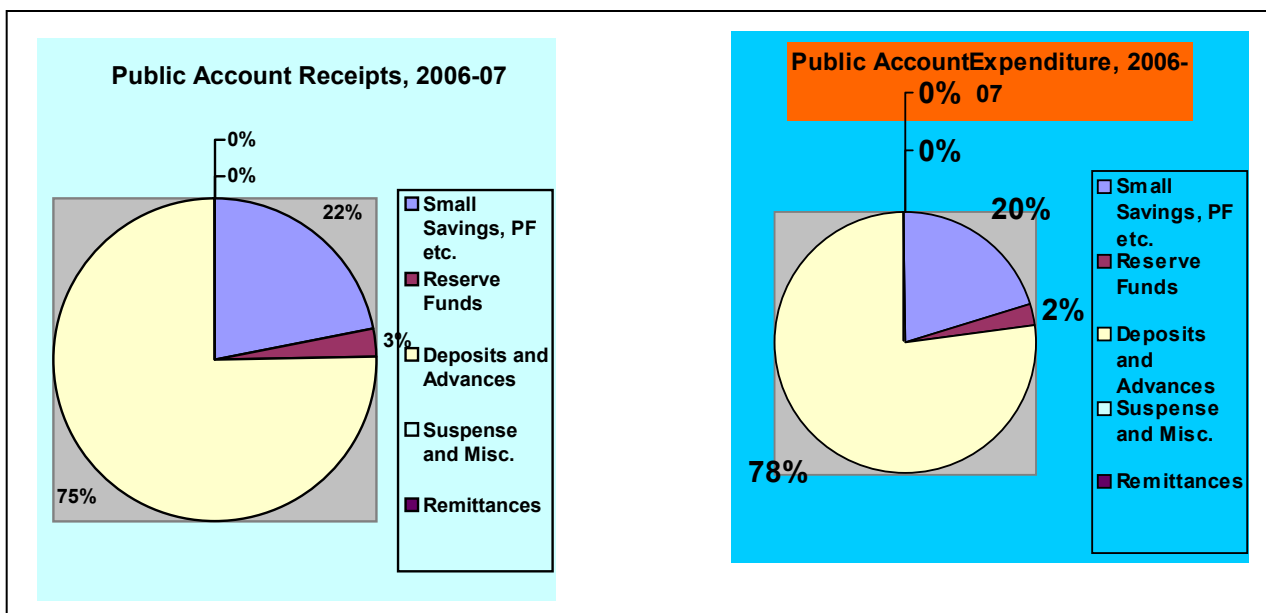


Table 7.36 : Summary of Budget, 2006-07
(Surplus +, Deficit -)

	2005-06	2006-07(BE)
Revenue Account		
Receipts		
Tax revenues	13982.52	16679.12
Non-Tax Revenues	522.26	342.38
Grants and Contributions	3332.72	5369.28
Total Receipts	17837.50	22390.78
Expenditure		
General Services	8522.74	10196.32
Social Services	6861.9	8108.51
Economic Services	2367.06	3470.27
Grants and Contributions	4.20	4.37
Total Expenditure	17755.9	21779.47
Surplus/Deficit	81.60	611.31
Capital Account		
Receipts		
Public Debt	3770.35	6502.68
Loans and Advances	50.86	51.16
Total Receipts	3821.21	6553.84
Expenditure		
Capital Outlay	3064.66	2196.93
Public Debt	980.76	2196.93
Loans and advances	1747.82	331.97
Total Expenditure	4812.48	2528.90

Table 7.36 (Contd.)

	2005-06	2006-07(BE)
Surplus/Deficit	-991.27	4024.94
	Consolidated Fund Net	
Surplus/Deficit	-909.67	4636.25
Contingency Fund		
Income	0	0
Expenditure	0	0
Surplus/Deficit	0	0
Public Account		
Receipts		
Small Savings, PF etc.	1087.66	1298.00
Reserve Funds	439.62	153.23
Deposits and Advances	1886.05	4436.87
Suspense and Misc.	89517.48	0.00
Remittances	2069.74	0.00
Total Receipt	95000.55	5888.10
Disbursements		
Small Savings, PF etc.	722.65	1283.00
Reserve Funds	0.00	153.23
Deposits and Advances	1471.49	4826.87
Suspense and Misc.	89557.40	0.00
Remittances	2039.59	0.00
Total Disbursements	93791.13	6263.10
Surplus/Deficit	1209.42	-375.00
Net Result (All Account)	299.75	4261.25

Table 7.37 : Structure of Receipts (% of total receipts)

<i>Receipts</i>	2005-06	2006-07(BE)
Tax Revenue	64.56	57.62
Non-Tax Revenue	2.41	1.18
Grants-in-Aid and Contributions	15.39	18.55
Public Debt	17.41	22.47
Recovery of Loans and Advances	0.23	0.18
Total		

Table 7.38 : Structure of Expenditure (% of revenue expenditure)

<i>Services</i>	2005-06	2006-07(BE)
General Services	37.76	41.95
Social Services	30.40	33.36
Economic Services	10.49	14.28
Public Debt (Repayment)	4.35	9.04
Loans and Advances	7.74	1.37
Capital Outlay	13.58	9.04

7.8 Twelfth Finance Commission Recommendations

The Gadgil Formula (Appendix I) was approved for distribution of plan funds to the states by the National Development Council in 1968, which was also utilised by the Finance Commissions with certain modifications. However, the Twelfth Finance Commission (TFC), constituted by the Central Government with Dr. C Rangarajan as its Chairman, observed that for the low income States like Bihar and Rajasthan, both Human Development Index (HDI) and infrastructure showed a handicap. The TFC, based on some degree of the equalisation principle, tried to benefit those States which have relatively lower ranks in the HDI. The TFC recommended a scheme of fiscal transfer that can serve the objectives of equity and efficiency within a framework of fiscal consolidation. In the scheme of fiscal transfers, in the form of tax devolution and grants, both the vertical and horizontal imbalances are sought to be corrected. The Finance Commission, as we are aware, attends only to the non-plan requirements of the states and towards certain specific capital grants. The notable departures made by the TFC in the scheme of tax devolution and grants from that of the Eleventh Finance Commission (EFC) are :

- Enhancing the share of States in the net proceeds of the shareable central taxes from 29.5 percent to 30.5 percent.
- Raising the indicative limit of revenue transfers to the States to 38 percent of the Central Government's gross revenue receipts from 37.5 percent recommended by EFC.
- Changing formula for tax devolution with reallocation of weights in favour of population and efficiency factors and dropping index of infrastructure as used by EFC.

- Application of norms in assessment of non-plan revenue gap for determining the amounts of grants-in-aid to States left with deficits in non-plan revenue account after tax devolution.
- Introduction of equalisation principle to provide grants for education and health to relatively deficient States in their revenue capacity, provided they maintain their normal expenditure on these heads at the current level.
- Providing grants for maintenance of roads and bridges, heritage conservation, State specific needs, local bodies and calamity relief on a larger scale.
- Enlarging grants to local bodies substantially and modifying the formula for their allocation among States, to take account of 'deprivation' in providing drinking water and sanitation. The index of decentralisation criterion adopted by EFC was dropped.

These proposals imply that the volume of transfers from FC's dispensation would go up substantially and raise the ratio of central transfers to GDP from 4.5 to 5.0 percent.

Sharing of Tax Revenue

Taking into account a variety of factors including the historical trends, the TFC recommended an increase in the share of states in the divisible pool of taxes to 30.5 percent from the previous level of 29.5 percent. The TFC raised the indicative limit of overall transfers out of the gross revenue receipts of the Central Government from 37.5 percent to 38.0 percent.

Thus it is seen that the TFC has raised the share of States in net tax revenue receipts of the Central Government by one percentage point, but the ceiling on total transfers has been raised by only half a percent point. However, it is apprehended that due to stoppage in plan loans to States, overall transfers to the States may be less than the recommended ceiling. The TFC has retained, by and large, the indicators used by the EFC for determining the horizontal transfers, though it altered the weights to some extent. The income distance criterion combined with population has a total weight of 75 percent, which represent together the needs and deficiency in fiscal capacity. The cost liabilities due to area get a weight of 10 percent and fiscal performance 15 percent. The share of each State in the tax devolution has been determined by a new set of criteria and relative weights (Table 7.39).

Table 7.39 : Comparison of Eleventh and Twelfth Finance Commission

Item	EFC (%)	TFC (%)
1. Population	10.0	25.0
2. Income Distance	62.5	50.0
3. Area	7.5	10.0
4. Index of Infrastructure	7.5	—
5. Tax Effort	5.0	7.5
6. Fiscal Discipline	7.5	7.5

Based on the above mentioned criteria and weights, among the States, Bihar's share is 11.028 percent. However, in the service tax, Bihar's share has been fixed at 11.173 percent. (Appendix II). The tax devolution appears to be intended to meet the vertical fiscal gap of the States arising from insufficiency of their tax powers in relation to their expenditure responsibilities. In the context of horizontal imbalance, the TFC felt that the equalisation approach to transfers was appropriate as it was consistent with both equity and efficiency. However, this approach could not be implemented fully because of too large disparities in the per capita fiscal capacities of the States, and some of the better off States too facing serious fiscal imbalance.

Despite enhanced transfers by the TFC, disparities in revenue capacity of States remain very large. Per capita revenue of Bihar assessed by the TFC together with State's share in Central taxes and grants recommended is only about 40 percent of that of Haryana and Kerala. The situation does not appear to have changed much under TFC as compared to EFC.

It appears that despite intending to make transfers more progressive, TFC made them less progressive, atleast among general category states, as the richer States like Punjab, Haryana, Gujarat and Maharashtra are the largest gainers in the TFC devolution. This is at the cost of the share of the middle and low income States. It is apparent that the fiscal transfer system has not been able to redress the issue of horizontal imbalances adequately and satisfactorily.

It also appears that the TFC's dispensation on tax devolution is less equalising than that of EFC and this is because of lowering of the weights for equalising factors in the formula and enlargement of the efficiency indicators. There has been dilution of progressivity by reducing weight to income distance criteria.

Local Bodies

In keeping with the spirit of the 73rd and the 74th amendments of the Constitution and with a view to providing an impetus to the decentralisation process, the TFC recommended a sum of Rs. 25,000 crore for a five year period from 2005-2010 as grants-in-aid to augment the consolidated fund of the States to supplement the resources of the municipalities and the Panchayats. This will be equivalent to 1.24 percent of the sharable tax revenues and 0.9 percent of gross revenue receipts of the Central Government. The TFC on the pattern of EFC recommended that the amount of Rs. 25,000 crore may be divided between the Panchayats and the municipalities in the ratio of 80:20 i.e. Rs. 20,000 crore for PRIs and Rs. 5,000 crore for the municipalities. The TFC expressed that the grants for PRIs be utilised to improve the service delivery by the Panchayats of water supply and sanitation. For urban local bodies, TFC stressed the importance of public-private partnership to enhance the service delivery. Grants would be available to support the cost of collection, segregation and transportation of solid waste. The TFC used the criteria for inter-se allocation of grants using the criteria and weight presented in Table 7.40.

Table 7.40 : Allocation of Grants Eleventh and Twelfth Finance Commission

Criteria	Weights (Percent) used	
	EFC	TFC
1. Population	40	40
2. Geographical Area	10	10
3. Distance from Highest per capita income	20	20
4. Index of decentralisation	20	—
5. Index of deprivation	—	10
6. Revenue Effort	10	20
(a) With respect to own revenue of state	—	10
(b) With respect to GSDP	—	10

Based on the criteria and weights given above, TFC recommended 8.120 percent of total allocation for Panchayats and 2.840 percent for municipalities to the State of Bihar. Thus, the TFC recommended Rs. 1624 crore for Panchayats and Rs. 142 crore for municipalities in Bihar for the year 2005-06 (Appendix III).

The TFC did not consider it proper to deprive the States of the Finance Commission grants on the basis of conditionality of (a) non-utilisation/ under-utilisation of the amounts already released and (b) the inability of the State/ local bodies to raise matching contributions. This approach of the TFC helped Bihar in the sense that the State/ local bodies here are not in a position to raise matching contributions.

The TFC recommended that the PRIs be encouraged to take over the assets relating to water supply and sanitation and utilise the grants for repairs / rejuvenation as also the Office and Maintenance (OM) costs. It also suggested that PRIs should recover atleast 50 percent of the recurring costs in the form of user charges. It recommended that priority be given to expenditure on the OM costs of water supply and sanitation. This, they said, will facilitate panchayats to take over the schemes and operate them. TFC also recommended that atleast 50 percent of the grants-in-aid provided to each State for the urban local bodies be earmarked for the scheme of solid waste management through public-private partnership. These recommendations will go a long way to help poor States like Bihar.

Calamity Relief Fund

The size of the Calamity Relief Fund (CRF) has been enhanced by the TFC to Rs. 21,333.33 crore from Rs. 11,007.59 crore recommended by the EFC. The Central Government's contribution increases from Rs. 8255.69 crore to Rs. 16000 crore. The TFC has recommended higher Calamity Relief Fund for each State as compared to the EFC even after indexation for inflation. The TFC did not agree to the suggestions of the States and of the Ministry of Home Affairs to take into account other factors like proneness of the States to calamities and their severity and amount of losses due to disasters in the last ten years. TFC recommended that the Central and State Governments will continue to contribute to the CRF to the extent of 75 percent and 25 percent respectively. Bihar suggested reduction in State's contribution to the CRF to 10 percent.

Besides cyclone, drought, earthquake, fire, flood and hailstorm, the definition of natural calamity, as applicable at present, has been extended to cover land slides, avalanches, cloud burst and pest attacks. But, as proposed by Bihar, the heatwave, coldwave, etc. have not been included.

The TFC recommended continuance of National Calamity Contingent Fund (NCCF) with core corpus of Rs. 500 crore and recommended replenishment of the outgo through collection of NCC

Duty and levy of special surcharge. The Central Government may continue to allocate foodgrains to the needy States as relief measure.

Grants-in-aid to States

1. The TFC has done away with the system of imposing a 70:30 ratio between loans and grants for extending plan assistance to non-special or general category of States (10:90 for special category States). Instead, it recommended that the Planning Commission should confine itself to extending plan grants to the States and leave it to the States to decide how much they wish to borrow and from whom, i.e., from the Central Government or the open market.
2. A total non-plan revenue deficit grant of Rs. 56855.87 crore is recommended during the award period of 2005-10 for fifteen States and Bihar does not figure among these because it demonstrates post-devolution non-plan revenue surplus during the entire award period.
3. While considering too large amount involved for a full application of the equalisation approach, the TFC decided to focus on two critical areas of deficiencies, namely education and health.
4. Eight States, including Bihar, have been recommended for grants amounting to Rs. 10171.65 crore over the award period for the education sector. Bihar has been given a total of Rs. 2683.76 crore for the award period of 2005-10 (Appendix IV). It appears that the TFC has failed to take into account the existing level of education in the State and as such could not properly assess the financial requirement for the same.
5. Similarly, seven States have been recommended for grants of Rs. 5887.08 crore over the award period for the health sector, and Bihar's total share comes to Rs. 1819.69 crore for the five years period (Appendix V).
6. The grants for the education and health sectors are an additionality, over and above the normal expenditure to be incurred by the States in these sectors. The TFC has emphasised that these grants should be utilised only for the respective sectors (non-plan). Monitoring of expenditure of these grants will rest with the concerned State government.
7. A grant of Rs. 15,000 crore over the award period is recommended for maintenance of roads and bridges in equal instalments over the last four years i.e. 2006-07 to 2009-10 of the award period, so that the States get a year for preparing to absorb these funds. This amount is in

addition to the normal expenditure, which the States would be incurring on maintenance of roads and bridges. The amount has been distributed among the States on the basis of road lengths. Bihar has been given a sum of Rs. 309.36 crore (Appendix VI).

8. An amount of Rs. 5000 crore has been recommended by the TFC as grants for maintenance of public buildings based on plinth area. Out of this, Bihar has been given Rs. 359.61 crore (Appendix VII).
9. A grant of Rs. 1000 crore spread over the award period 2005-10 is recommended by the TFC for maintenance of forests, which will be an additionality over and above what States would be spending through their Forest Department. The amount to the States has been distributed based on their forest area and should be spent on preservation of forest wealth. Bihar has been given Rs. 5 crore, one crore in each year of the award period (Appendix VIII).
10. The TFC recommended a grant of Rs. 625 crore spread over the award period for heritage conservation which will be used for preservation and protection of historical monuments, archaeological sites, public libraries, museums and archives and also for improving the tourist infrastructure to facilitate visits to the sites. Bihar has been given Rs. 40 crore i.e. Rs. 10 crore per year during the last four years of the award period (Appendix IX).
11. As regards state specific needs, an amount of Rs. 7100 crore has been recommended as grant which has been phased out equally over the last four years of the award period, and this phasing be taken as indicative in nature. Bihar has been given Rs. 400 crore for the whole award period (Appendix X), the details of which are given below :

Table 7.41 : Twelfth Finance Commission Grants for State Specific Needs

(i)	Tech. Education – Improve and expand	Rs. 50 crore
(ii)	Adm. Training Institute	Rs. 50 crore
(iii)	E-governance	Rs. 40 crore
(iv)	Homes under Juvenile Justice Act.	Rs. 20 crore
(v)	Urban water supply & drainage	Rs. 180 crore
(vi)	Fire Services	Rs. 10 crore
(vii)	Residential Schools/ hostel for SC/ ST/ OBC	Rs. 50 crore
Total		Rs. 400 crore

A perusal of the table above reveals that awards under state specific needs are not commensurate with the needs and backwardness of the State. For example, only Rs. 50 crore for the improvement and expansion of technical education and Rs. 40 crore for e-governance in the State are very

inadequate considering the volume of expansion needed. The total transfers awarded by the TFC for State-specific needs is presented in Appendix XI. For Bihar, the total transfer of the TFC for the period of 2005-10 is Rs. 75646.83 crore, as per details presented in Table 7.42.

Table 7.42 : Total TFC Transfers to Bihar (2005-10)

Sl. No.	Items	Rs. crore
1.	Share in Central Taxes and Duties	67671.04
2.	Grants in Aid	7975.79
	(i) Non-Plan Revenue Deficit	—
	(ii) Health Sector	1819.69
	(iii) Education	2683.76
	(iv) Maintenance of Roads & Bridges	309.36
	(v) Maintenance of Buildings	359.61
	(vi) Maintenance of Forests	5.00
	(vii) Heritage Conservation	40.00
	(viii) State Specific Needs	400.00
	(ix) Local Bodies	1766.00
	(x) Calamity Relief Fund	592.37
3.	Total Transfers (Items 1 and 2)	75646.83

Government Initiatives in Public Finance

- The publication of a White Paper on the state of finances in Bihar.
- The Passing of the Bihar Fiscal Responsibility and Budget Management (FRBM) Act that aims to eliminate the revenue deficit by 2008-09 pays special attention to increase in non-tax revenue and prioritization of capital expenditure.
- The formation of Steering Group of Vision Bihar: Managing Financial Resources - Medium Term Perspective.
- The restructuring of debt by more market borrowings to replace difficult-to-obtain central loans and prioritization of repayment of high-interest loans (e.g. RIDF loan from NABARD).
- The augmentation of tax revenue by rationalization of tax rates, better tax administration and widening of the tax base.
- A thrust on capital expenditure for several departments.
- Strengthening of VAT administration in terms of clarification of stages, fixation of rates and inclusion of some commodities that were left out of the purview of VAT before.
- Tax exemptions as incentives for new units – specifically industrial units and modern cinema halls.

Government Initiatives in Deficit Management

- In March 2006 the Government of Bihar published a White Paper on the state of finances facing the government since it took up office with a special stress on the sources of problems in managing the finances of the state.
- The state government has shifted to market borrowing in its debt management principles since February 2006. This was concomitant on a substantial reduction in loans and advances from the Central Government which led to a more than two-fold increase in market borrowings.
- Main emphasis of the Government has been on revenue sources and means of controlling expenditure. The main problem according to the White Paper is the ‘steady accumulation of debt, and a large debt service burden on public finances’. In this context, the Bihar Fiscal Responsibility and Budget Management Act, 2006 (BFRBM Act) was tabled on 5th April 2006 in the state legislature and adopted on 26th April 2006, ‘to ensure prudence in fiscal management and fiscal stability’ retrospectively from 18th February 2006. This is reflected in cabinet order number 75, meeting number 36(08)-11-06, dated 07.02.2006. This had three major aims:
 1. The State Government would take appropriate measures to eliminate the revenue deficit by 2008-09 and thereafter build up adequate revenue surplus and contain the fiscal deficit at 3% of Gross State Domestic Product from 2008-09 onwards, and utilize such surplus for discharging the liabilities in excess of the assets or for funding capital expenditure.
 2. The State Government would pursue policies to raise non-tax revenue with due regard to cost and equity.
 3. The State Government would lay down norms for prioritization of capital expenditure, and pursue expenditure policies that would provide impetus for economic growth, poverty reduction and improvement in human welfare.
- A Steering Group has been formed to prepare Vision Bihar: Managing Financial Resources, to identify proper financial measures within a medium term perspective.
- Advance of Rs. 816.07 lakh has been given against loans to the National Co-operative Development Corporation, New Delhi for different projects as on 05.01.2006 and covering the loans taken earlier as well as the interest components to the loans.
- One time return of high interest loan for R.I.D.F. at different times was made to NABARD through cabinet order no 21 passed in meeting no 36(08)-10-06 dated 24.01.06. The relevant amount was Rs 4381.17 lakh.

Government Initiatives in Tax and Resource Mobilization - I

- Overall thrust of the new government is geared towards increase in capital expenditure to build assets.
- Tax collection for November 2006, from all districts of Bihar showed an increase of 25.08% in aggregate, as reflected in cabinet order no 46 in meeting no 36(08)-11-06 dated 07.02.06.
- Bihar's overall utilization of central resources towards development purposes has been among the lowest in India. This led to systemic downgrading of plan outlays in previous years. The present government's intentions are to reverse this situation with full utilization of allocated funds in a given financial year. According to interviews with top officials of the finance department, the present government is intent upon reversing this situation.
- In the last financial year, tax collection from excise increased to Rs 319.70 crore against a target of Rs 335 crore up to 31st March 2006.
- A target of Rs 400 crore has been adopted by the Excise department for the current financial year as part of the new policy in excise revenue.
- The rules under Bihar Tax on Entry of Good into Local Areas for consumption have been amended to widen the scope of taxation on electrical, related items and devices and fittings used in generation, distribution and use of electricity.
- Rates of sales tax have been reduced from 12.5% to 4% for a variety of goods like pressure cookers, stainless steel utensils, shoes etc. Tyres and tubes of cycles and tricycles have been included under Bihar Value Added Tax 2005.
- All tax rates have been revised through the Bihar Finance Bill 2006.
- Canteen store department and regimental units have been excluded from the purview of VAT for 3 months.
- The Bihar Value Added Tax has been amended by rationalizing VAT. A cabinet order has been passed to clarify that the tax will be payable at the point of sale by importer if the goods are imported from outside the state, at the point of sale by manufacturer if the goods are manufactured in Bihar, and, in all other cases at the first point of sale in the State of Bihar
- The amount of VAT to be paid for bricks has been specified according to area of operation of dealers.
- Stage at which VAT is payable has been clarified along with conditions and restrictions for sale for petrol, HSD oil and Light Diesel Oil, Natural Gas, Aviation or turbine fuel, Country Liquor including Spiced country liquor and Potable Spirit, Wine, or Liquor whether imported from other countries or manufactured in India, Drugs and medicines, chemical fertilizers like slag, pesticides, weedicides, insecticides, germicides, fungicides and herbicides other than bleaching powder.
- A surcharge of 10% has been levied on High Speed Diesel Oil and Light Diesel Oil.
- The rate of VAT has been set at 20% on High Speed Diesel Oil and Light Diesel Oil.
- Theatres with modern sound system and infrastructure have been exempted from paying entertainment tax for two years provided they make an incremental capital investment of minimum Rs 1 crore up to 31/03/2010. Similar exemption to New Twin Digital Cinema Centres making a capital investment of minimum of Rs1.5 crore.

Government Initiatives in Tax and Resource Mobilization - II

- New Industrial Units have been exempt from payment of Electricity Dues subject to the condition that it should commence industrial production between 1-4-06 and 31-3-2011 and the exemption from the levy shall be available for a period of seven years from the date of commencement of commercial production by the unit.
- The rate of entertainment tax has been specified at 50 percent.
- VAT rules have been further amended to include a wide variety of consumables in various schedules.
- Road tax for buses, maxis, jeeps and autorickshaws have been reduced. Road tax for buses, which ranged between 74 thousand to 144 thousand, has been reduced to Rs. 26,124/-. Road tax for maxi has been reduced from Rs. 24,208/- to Rs. 9572/-. Road tax for Jeep has been reduced from Rs. 12,000/- to Rs. 3,888/-. Road tax autoricksaw has been reduced from Rs. 2,184/- to Rs. 992/-.
- Till October 2006, about 1212,1267 country and Foreign Liquor shops and 789 spiced liquor shops have been set up against a target of doubling the number of shops.
- In order to mix 5% ethanol in petrol, a previously imposed tax of Rs 5/litre has been abolished for 'savings and utilization'. New denaturants have been set up which would promote sugarcane, molasses and energy industry.
- A sum of Rs. 10.00 lakh has been disbursed for modernization of excise chemical laboratory.
- The government will adopt the conventions in Tamil Nadu relating to wholesale marketing of liquor and categorization of production tax slabs.
- Section 3 of the Bihar Tax on Entry of Goods into local areas has been amended for consumption, use or sale of paddy, rice wheat, pulses, flour, *atta*, *maida*, *suji* and *besan*, as listed under Schedule no 25 to impose a 4% rate of entry tax.
- Mahua Flower Control regulation has been formulated to control illegal “*chulai*” (brewing) and to ensure increase in revenue.
- Bihar State Beverages Corporation has been constituted under the excise policy of the state government, which is to act as the only wholesale outlet of country/spiced country/foreign liquor in the state. This has been done keeping in mind cabinet’s decision to generate a huge increase in revenue. This has been discussed in cabinet meeting no 36(08)-39-06 dated 01.08.06.
- The process of molasses usage (*uthao*) has been simplified which would further simplify export of molasses, generate revenue and release the funds of the sugar factory owners trapped in storage of molasses.
- Tax collection from mineral products for 2005-2006 was Rs 96.38 crore against a target of Rs 89 crore.
- Registration duty has been reduced from 15.4 percent to 8 percent in urban areas and from 8.4 percent to 6 percent in rural areas.
- Bihar Money Lender Act has been amended to make registration of moneylenders compulsory.

Appendix - I

The Gadgil formula

The Planning Commission evolved formula-based central plan assistance to the States which is called The Gadgil Formula. The Gadgil Formula deals with the processes involved in transfer of finances from the Union to the States through non-statutory channels. These transfers are essentially in the nature of Central assistance for State Plans.

Evolved in 1968 in view of the general demand for an objective and transparent formula for the allocation of Central Assistance for the State Plan; Gadgil Formula was adopted for distribution of plan assistance during the Fourth and Fifth Five year Plans. This made the horizontal distribution among the States non-discretionary under Article 282. This, being approved by the National Development Council, represents the concensus approach. The formula, which was framed during the fourth five-year plan, gave 60% weightage to population, 20% to States having per capita income below the national average, 10% to major and medium irrigation projects and 10% to special problems of individual States. This Formula was modified in 1980 which gave 60% weightage to population, 20% to states having per capita income below the national average, 10% to per capita tax effort and 10% for the social problems. This new formula became the basis for the allocation during the Sixth and Seventh Five Year Plans. The modified Formula was again revised in 1990 and formed the basis for the allocation of Central Assistance for 1991-92 only. The formula was further revised in 1991, which has been in operation since the Eighth plan Period. Recent modification of the distribution formula takes into consideration the separate indices of infrastructure, Social sector, Law and Order administration, fiscal discipline, affluence, etc. On the basis of overall rank thus obtained by states, while some grants to forward States are withheld, ex-gratia grants to backward States are recommended in the interest of equity and balance.

The Gadgil formula for transfers of Plan funds (normal central assistance) to states, although modified a number of times, has been in force for over 30 years. The formula has ensured a

predictable flow of non-discretionary financial resources from the Centre to support the development of the states. Prior to Twelfth Finance Commission, for the Special Category States, the normal Central Assistance was 90% grants and 10% loan whereas for others 70% was loan and 30% only as the grant component. The Twelfth Finance Commission, however, favoured doing away with the system and instead recommended that the Centre should confine itself to extending plan grants to the states and leave it to the states to decide how much they wish to borrow and from whom, Centre or market.

The Gadgil Formula allows for sharing of resources from the Central tax pool between the States. However, the perception is that the regional imbalances have actually got accentuated, particularly over the past 15 years. Different parts of country are at different stage of development and development has not been uniform at any point of history. Even the problem of intra-state inequalities has not been adequately addressed, with regional disparities persisting within all states.

Appendix - II

Inter se Shares of States in the Net Proceeds of all the sharable Union Taxes

State	All shareable taxes excluding Service Tax (percent)	Share including Service Tax other than J & K (percent)	State	All shareable taxes excluding Service Tax (percent)	Share including Service Tax other than J & K (percent)
Andhra Pradesh	7.356	7.453	Manipur	0.362	0.367
Arunachal Pradesh	0.288	0.292	Meghalaya	0.371	0.376
Assam	3.235	3.277	Mizoram	0.239	0.242
Bihar	11.028	11.173	Nagaland	0.263	0.266
Chhattisgarh	2.654	2.689	Orissa	5.161	5.229
Goa	0.259	0.262	Punjab	1.299	1.316
Gujarat	3.569	3.616	Rajasthan	5.609	5.683
Haryana	1.075	1.089	Sikkim	0.227	0.230
Himachal Pradesh	0.522	0.529	Tamil Nadu	5.305	5.374
Jammu & Kashmir	1.297	—	Tripura	0.428	0.433
Jharkhand	3.361	3.405	Uttar Pradesh	19.264	19.517
Karnataka	4.459	4.518	Uttaranchal	0.939	0.952
Kerala	2.665	2.700	West Bengal	7.057	7.150
Madhya Pradesh	6.711	6.799	All States	100.000	100.000
Maharashtra	4.997	5.063			

Appendix - III

Shares of States in Allocation to Panchayats and Municipalities (2005-10)

Sl. No.	State	Panchayats		Municipalities	
		Percent	(Rs. Crore)	Percent	(Rs. Crore)
1.	Andhra Pradesh	7.935	1587	7.480	374
2.	Arunachal Pradesh	0.340	68	0.060	3
3.	Assam	2.630	526	1.100	55
4.	Bihar	8.120	1624	2.840	142
5.	Chhattisgarh	3.075	615	1.760	88
6.	Goa	0.090	18	0.240	12
7.	Gujarat	4.655	931	8.280	414
8.	Haryana	1.940	388	1.820	91
9.	Himachal Pradesh	0.735	147	0.160	8
10.	Jammu & Kashmir	1.405	281	0.760	38
11.	Jharkhand	2.410	482	1.960	98
12.	Karnataka	4.440	888	6.460	323
13.	Kerala	4.925	985	2.980	149
14.	Madhya Pradesh	8.315	1663	7.220	361
15.	Maharashtra	9.915	1983	15.820	791
16.	Manipur	0.230	46	0.180	9
17.	Meghalaya	0.250	50	0.160	8
18.	Mizoram	0.100	20	0.200	10
19.	Nagaland	0.200	40	0.120	6
20.	Orissa	4.015	803	2.080	104
21.	Punjab	1.620	324	3.420	171
22.	Rajasthan	6.150	1230	4.400	220
23.	Sikkim	0.065	13	0.020	1
24.	Tamil Nadu	4.350	870	11.440	572
25.	Tripura	0.285	57	0.160	8
26.	Uttar Pradesh	14.640	2928	10.340	517
27.	Uttaranchal	0.810	162	0.680	34

28.	West Bengal	6.355	1271	7.860	393
		100.000	20000	100.000	5000

Appendix - IV

Grants-in-aid for Education Sector (major head 2202)

(Rs. in crore)

State	2005-06	2006-07	2007-08	2008-09	2009-10	2005-10
Assam	183.20	200.60	219.66	240.53	263.38	1107.37
Bihar	443.99	486.17	532.36	582.93	638.31	2683.76
Jharkhand	107.82	118.06	129.28	141.56	155.01	651.73
Madhya Pradesh	76.03	83.25	91.16	99.82	109.30	459.56
Orissa	53.49	58.57	64.13	70.22	76.89	323.30
Rajasthan	20.00	20.00	20.00	20.00	20.00	100.00
Uttar Pradesh	736.87	806.87	883.52	967.45	1059.36	4454.07
West Bengal	64.83	70.99	77.73	85.11	93.20	391.86
Total States	1686.23	1844.51	2017.84	2207.62	2415.45	10171.65

Appendix – V

Grants-in-aid for Health Sector (major head 2210 & 2211)

(Rs. in crore)

State	2005-06	2006-07	2007-08	2008-09	2009-10	2005-10
Assam	153.58	171.24	190.93	212.89	237.38	966.02
Bihar	289.30	322.57	359.66	401.02	447.14	1819.69
Jharkhand	57.39	63.99	71.35	79.55	88.70	360.98
Madhya Pradesh	28.88	32.20	35.90	40.03	44.63	181.64
Orissa	31.22	34.81	38.81	43.28	48.25	196.37
Uttar Pradesh	367.63	409.90	457.04	509.60	568.21	2312.38
Uttaranchal	10.00	10.00	10.00	10.00	10.00	50.00
Total States	938.00	1044.71	1163.69	1296.37	1444.31	5887.08

Appendix – VI

Grants-in-aid for Maintenance of Roads & Bridges

(Rs. in crore)

State	2005-06	2006-07	2007-08	2008-09	2009-10	2005-10
Andhra Pradesh	0.00	245.03	245.03	245.03	245.03	980.12
Arunachal Pradesh	0.00	11.09	11.09	11.09	11.09	44.36
Assam	0.00	82.53	82.53	82.53	82.53	330.12
Bihar	0.00	77.34	77.34	77.34	77.34	309.36
Chhattisgarh	0.00	65.60	65.60	65.60	65.60	262.40
Goa	0.00	9.87	9.87	9.87	9.87	39.48
Gujarat	0.00	223.80	223.80	223.80	223.80	895.20
Haryana	0.00	45.68	45.68	45.68	45.68	182.72
Himachal Pradesh	0.00	65.41	65.41	65.41	65.41	261.64
Jammu & Kashmir	0.00	29.42	29.42	29.42	29.42	117.68
Jharkhand	0.00	102.26	102.26	102.26	102.26	409.04
Karnataka	0.00	364.53	364.53	364.53	364.53	1458.12
Kerala	0.00	160.58	160.58	160.58	160.58	642.32
Madhya Pradesh	0.00	146.72	146.72	146.72	146.72	586.88
Maharashtra	0.00	297.42	297.42	297.42	297.42	1189.68
Manipur	0.00	19.24	19.24	19.24	19.24	76.96
Meghalaya	0.00	21.60	21.60	21.60	21.60	86.40
Mizoram	0.00	10.53	10.53	10.53	10.53	42.12
Nagaland	0.00	30.22	30.22	30.22	30.22	120.88
Orissa	0.00	368.77	368.77	368.77	368.77	1475.08
Punjab	0.00	105.24	105.24	105.24	105.24	420.96
Rajasthan	0.00	158.33	158.33	158.33	158.33	633.32
Sikkim	0.00	4.66	4.66	4.66	4.66	18.64
Tamil Nadu	0.00	303.60	303.60	303.60	303.60	1214.40
Tripura	0.00	15.37	15.37	15.37	15.37	61.48
Uttar Pradesh	0.00	600.79	600.79	600.79	600.79	2403.16
Uttaranchal	0.00	81.14	81.14	81.14	81.14	324.56
West Bengal	0.00	103.23	103.23	103.23	103.23	412.92
Total States	0.00	3750.00	3750.00	3750.00	3750.00	15000.00

Appendix – VII

Grants-in-aid for Maintenance of Public Buildings

(Rs. in crore)

State	2005-06	2006-07	2007-08	2008-09	2009-10	2005-10
Andhra Pradesh	0.00	60.64	60.63	60.63	60.63	242.53
Arunachal Pradesh	0.00	14.35	14.35	14.36	14.36	57.42
Assam	0.00	57.66	57.66	57.66	57.66	230.64
Bihar	0.00	89.90	89.90	89.91	89.90	359.61
Chhattisgarh	0.00	45.78	45.77	45.77	45.77	183.09
Goa	0.00	6.05	6.05	6.04	6.04	24.18
Gujarat	0.00	50.90	50.90	50.90	50.91	203.61
Haryana	0.00	37.95	37.95	37.95	37.95	151.80
Himachal Pradesh	0.00	36.90	36.90	36.90	36.90	147.60
Jammu & Kashmir	0.00	41.14	41.14	41.13	41.13	164.54
Jharkhand	0.00	39.90	39.90	39.90	39.91	159.61
Karnataka	0.00	51.28	51.28	51.28	51.28	205.12
Kerala	0.00	25.88	25.88	25.87	25.87	103.50
Madhya Pradesh	0.00	110.76	110.76	110.75	110.75	443.02
Maharashtra	0.00	55.90	55.90	55.90	55.91	223.61
Manipur	0.00	9.42	9.43	9.43	9.43	37.71
Meghalaya	0.00	8.75	8.76	8.75	8.76	35.02
Mizoram	0.00	5.82	5.82	5.82	5.83	23.29
Nagaland	0.00	11.54	11.55	11.54	11.54	46.17
Orissa	0.00	97.28	97.28	97.29	97.29	389.14
Punjab	0.00	37.95	37.95	37.95	37.95	151.80
Rajasthan	0.00	53.27	53.27	53.27	53.28	213.09
Sikkim	0.00	8.04	8.03	8.04	8.04	32.15
Tamil Nadu	0.00	60.64	60.63	60.63	60.63	242.53
Tripura	0.00	12.53	12.53	12.53	12.52	50.11
Uttar Pradesh	0.00	150.07	150.07	150.08	150.06	600.28
Uttaranchal	0.00	24.40	24.40	24.40	24.40	97.60
West Bengal	0.00	45.30	45.31	45.32	45.30	181.23
Total States	0.00	1250.00	1250.00	1250.00	1250.00	5000.00

Appendix – VIII

Grants-in-aid for Maintenance of Forests

(Rs. in crore)

State	Forest Area (Sq.Km.)	2005-06	2006-07	2007-08	2008-09	2009-10	2005-10
Andhra Pradesh	44637	13.00	13.00	13.00	13.00	13.00	65.00
Arunachal Pradesh	68045	20.00	20.00	20.00	20.00	20.00	100.00
Assam	27714	8.00	8.00	8.00	8.00	8.00	40.00
Bihar	5720	1.00	1.00	1.00	1.00	1.00	5.00
Chhattisgarh	56448	17.00	17.00	17.00	17.00	17.00	85.00
Goa	2095	0.60	0.60	0.60	0.60	0.60	3.00
Gujarat	15152	4.00	4.00	4.00	4.00	4.00	20.00
Haryana	1754	0.40	0.40	0.40	0.40	0.40	2.00
Himachal Pradesh	14360	4.00	4.00	4.00	4.00	4.00	20.00
Jammu & Kashmir	21237	6.00	6.00	6.00	6.00	6.00	30.00
Jharkhand	22637	6.00	6.00	6.00	6.00	6.00	30.00
Karnataka	36991	11.00	11.00	11.00	11.00	11.00	55.00
Kerala	15560	5.00	5.00	5.00	5.00	5.00	25.00
Madhya Pradesh	77265	23.00	23.00	23.00	23.00	23.00	115.00
Maharashtra	47482	14.00	14.00	14.00	14.00	14.00	70.00
Manipur	16926	6.00	6.00	6.00	6.00	6.00	30.00
Meghalaya	15584	6.00	6.00	6.00	6.00	6.00	30.00
Mizoram	17494	5.00	5.00	5.00	5.00	5.00	25.00
Nagaland	13345	5.00	5.00	5.00	5.00	5.00	25.00
Orissa	48838	15.00	15.00	15.00	15.00	15.00	75.00
Punjab	2432	0.40	0.40	0.40	0.40	0.40	2.00
Rajasthan	16367	5.00	5.00	5.00	5.00	5.00	25.00
Sikkim	3193	1.60	1.60	1.60	1.60	1.60	8.00
Tamil Nadu	21482	6.00	6.00	6.00	6.00	6.00	30.00
Tripura	7065	3.00	3.00	3.00	3.00	3.00	15.00
Uttar Pradesh	13746	4.00	4.00	4.00	4.00	4.00	20.00
Uttaranchal	23938	7.00	7.00	7.00	7.00	7.00	35.00
West Bengal	10693	3.00	3.00	3.00	3.00	3.00	15.00
Total States	668200	200.00	200.00	200.00	200.00	200.00	1000.00

Appendix –IX

Grants-in-aid for Heritage Conservation

(Rs. in crore)

State	2005-06	2006-07	2007-08	2008-09	2009-10	2005-10
Andhra Pradesh	0.00	10.00	10.00	10.00	10.00	40.00
Arunachal Pradesh	0.00	1.25	1.25	1.25	1.25	5.00
Assam	0.00	5.00	5.00	5.00	5.00	20.00
Bihar	0.00	10.00	10.00	10.00	10.00	40.00
Chhattisgarh	0.00	2.50	2.50	2.50	2.50	10.00
Goa	0.00	5.00	5.00	5.00	5.00	20.00
Gujarat	0.00	6.25	6.25	6.25	6.25	25.00
Haryana	0.00	3.75	3.75	3.75	3.75	15.00
Himachal Pradesh	0.00	2.50	2.50	2.50	2.50	10.00
Jammu & Kashmir	0.00	2.50	2.50	2.50	2.50	10.00
Jharkhand	0.00	2.50	2.50	2.50	2.50	10.00
Karnataka	0.00	12.50	12.50	12.50	12.50	50.00
Kerala	0.00	6.25	6.25	6.25	6.25	25.00
Madhya Pradesh	0.00	5.00	5.00	5.00	5.00	20.00
Maharashtra	0.00	12.50	12.50	12.50	12.50	50.00
Manipur	0.00	1.25	1.25	1.25	1.25	5.00
Meghalaya	0.00	1.25	1.25	1.25	1.25	5.00
Mizoram	0.00	1.25	1.25	1.25	1.25	5.00
Nagaland	0.00	1.25	1.25	1.25	1.25	5.00
Orissa	0.00	12.50	12.50	12.50	12.50	50.00
Punjab	0.00	2.50	2.50	2.50	2.50	10.00
Rajasthan	0.00	12.50	12.50	12.50	12.50	50.00
Sikkim	0.00	1.25	1.25	1.25	1.25	5.00
Tamil Nadu	0.00	10.00	10.00	10.00	10.00	40.00
Tripura	0.00	1.25	1.25	1.25	1.25	5.00
Uttar Pradesh	0.00	12.50	12.50	12.50	12.50	50.00
Uttaranchal	0.00	1.25	1.25	1.25	1.25	5.00
West Bengal	0.00	10.00	10.00	10.00	10.00	40.00
Total States	0.00	156.25	156.25	156.25	156.25	625.00

Appendix – X

Grants-in-aid for State-specific needs

(Rs. in crore)

State	2005-06	2006-07	2007-08	2008-09	2009-10	2005-10
Andhra Pradesh	0.00	125.00	125.00	125.00	125.00	500.00
Arunachal Pradesh	0.00	2.50	2.50	2.50	2.50	10.00
Assam	0.00	32.50	32.50	32.50	32.50	130.00
Bihar	0.00	100.00	100.00	100.00	100.00	400.00
Chhattisgarh	0.00	75.00	75.00	75.00	75.00	300.00
Goa	0.00	2.50	2.50	2.50	2.50	10.00
Gujarat	0.00	50.00	50.00	50.00	50.00	200.00
Haryana	0.00	25.00	25.00	25.00	25.00	100.00
Himachal Pradesh	0.00	12.50	12.50	12.50	12.50	50.00
Jammu & Kashmir	0.00	25.00	25.00	25.00	25.00	100.00
Jharkhand	0.00	82.50	82.50	82.50	82.50	330.00
Karnataka	0.00	150.00	150.00	150.00	150.00	600.00
Kerala	0.00	125.00	125.00	125.00	125.00	500.00
Madhya Pradesh	0.00	75.00	75.00	75.00	75.00	300.00
Maharashtra	0.00	75.00	75.00	75.00	75.00	300.00
Manipur	0.00	7.50	7.50	7.50	7.50	30.00
Meghalaya	0.00	8.75	8.75	8.75	8.75	35.00
Mizoram	0.00	16.25	16.25	16.25	16.25	65.00
Nagaland	0.00	11.25	11.25	11.25	11.25	45.00
Orissa	0.00	42.50	42.50	42.50	42.50	170.00
Punjab	0.00	24.0	24.0	24.0	24.0	96.00
Rajasthan	0.00	112.50	112.50	112.50	112.50	450.00
Sikkim	0.00	25.00	25.00	25.00	25.00	100.00
Tamil Nadu	0.00	75.00	75.00	75.00	75.00	300.00
Tripura	0.00	12.25	12.25	12.25	12.25	49.00
Uttar Pradesh	0.00	200.00	200.00	200.00	200.00	800.00
Uttaranchal	0.00	60.00	60.00	60.00	60.00	240.00
West Bengal	0.00	222.50	222.50	222.50	222.50	890.00
Total States	0.00	1775.00	1775.00	1775.00	1775.00	7100.00

Appendix – XI

Debt-GSDP Ratios and Percentage Share of States in Overall Debt in 2002-03

Sl. No.	State	Debt GSDP ratio	Share in total debt of states	Sl. No.	State	Debt GSDP ratio	Share in total debt of states
General Category States							
1	Andhra Pradesh	28.85	7.50	16	Uttar Pradesh	39.08	11.90
2	Bihar	55.33	4.79	17	West Bengal	41.15	10.46
3	Chhattisgarh	25.46	1.20	Special Category States			
4	Goa	28.15	0.45	18	Arunachal Pradesh	55.45	0.18
5	Gujarat	33.93	6.61	19	Assam	33.91	1.94
6	Haryana	27.85	2.70	20	Himachal Pradesh	63.25	1.71
7	Jharkhand	24.28	1.29	21	Jammu & Kashmir	53.80	1.65
8	Karnataka	25.12	4.72	2	Manipur	43.08	0.31
9	Kerala	36.34	4.65	23	Meghalaya	32.17	0.22
10	Madhya Pradesh	32.28	4.07	24	Mizoram	81.56	0.27
11	Maharashtra	21.56	9.51	25	Nagaland	52.10	0.38
12	Orissa	62.93	4.23	26	Sikkim	60.27	0.13
13	Punjab	48.51	5.52	27	Tripura	37.78	0.46
14	Rajasthan	45.38	6.31	28	Uttaranchal	32.37	0.80
15	Tamil Nadu	26.80	6.02				

Debt excludes reserve funds and deposits

Appendix - XII

Expenditure on Salaries, No. of Employees and Per Capita Salary Expenditure

States	Expenditure on Salaries Relative to Revenue Expenditure* (%) (2002-03)	Statewise Number of Government Employees (Number) (2002-03)	Per Employee Salary Expenditure (In Rs.) (2002-03)
Andhra Pradesh	25.5	545859	80909
Arunachal Pradesh	47.8	41165	98221
Assam	71.7	435534	83720
Bihar	67.6	462137	105125
Goa	19.5	34499	102491
Gujarat	14.8	203286	108095
Haryana	49.6	325439	101355
Himachal Pradesh	58.3	180540	110582
Karnataka	38.3	622547	81000
Kerala	32.0	352730	85961
Madhya Pradesh	50.0	497965	106000
Maharashtra	19.8	692265	86281
Meghalaya	57.5	49813	113808
Orissa	65.5	419468	92876
Punjab	45.5	NA	NA
Rajasthan	48.0	607469	87115
Sikkim	16.5	23973	121684
Tamil Nadu	40.8	NA	NA
Tripura	69.9	98379	99631
Uttar Pradesh	37.5	705803	108602
West Bengal	35.4	439300	103714
Total (21 states)	37.3	6738191	94603

Source : Report of Twelfth Finance Commission

Note : * Excludes Interest Payment and Pensions

Appendix - XIII

The Fiscal Responsibility and Budget Management (FRBM) Ordinance, 2006

The Ordinance for Fiscal Responsibility and Budget Management (FRBM) was promulgated in February 2006, which became Act in April 2006. The Ordinance envisaged that the State Government is responsible to ensure prudence in fiscal management and fiscal stability; and to enhance the scope for improving social and physical infrastructure and human development by progressive elimination of revenue deficit, reduction in fiscal deficit, prudent debt management consistent with fiscal sustainability, greater transparency in fiscal operation of the government and conduct of fiscal policy in a medium term framework.

To give effect to fiscal management objectives laid down in the Act, the State Government shall, *inter alia*,

(a) Beginning from financial year 2006-07 and in case there being revenue deficit, reduce revenue deficit/Gross State Domestic Product ratio every year by at least 0.1 percent depending upon the economic situation, eliminate revenue deficit by 2008-09 and generate revenue surplus thereafter.

(b) Beginning from financial year 2006-07 reduce fiscal deficit/Gross State Domestic Product ratio by at least 0.3 percent per year, if it is more than three percent and to not more than 3 percent by 2008-09.

Provided that revenue deficit and fiscal deficit may exceed the limits specified under this section due to unforeseen circumstances arising out of internal disturbance or natural calamity or such other exceptional grounds as the State Government may specify,

Provided further that a statement in respect of the ground or grounds specified in the first proviso shall be placed before the House or Houses of the Legislature, as soon as may be after such deficit amount exceeds the aforesaid targets.

Sources of Data / Information Obtained

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2. Economic Survey 2005-06, Government of India
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4. Reports of the Comptroller and Auditor General of India
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6. Department of Telecommunication
7. Directorate of Civil Aviation
8. Jet Airways
9. Indian Airlines
10. Inland Water Ways Authority of India
11. Doordarshan, Patna
12. All India Radio, Patna
13. Twelfth Finance Commission Report
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15. Bihar Approach to Eleventh Five Year Plan, Vision for Accelerated Inclusive, Growth, Planning and Development Department – 2006
16. Planning Board, Bihar
17. Department of Finance, Government of Bihar
18. Department of Agriculture, Government of Bihar
19. Department of Animal Husbandry, Government of Bihar
20. Department of Industry, Government of Bihar
21. Department of Commercial Taxes, Government of Bihar
22. Department of Transport, Government of Bihar
23. Department of Road Construction, Government of Bihar
24. Rural Engineering Organisation
25. Department of Human Resource Development, Government of Bihar
26. Department of Health and Family Welfare, Government of Bihar
27. Department of Public Health Engineering, Government of Bihar
28. Department of Statistics and Evaluation, Government of Bihar
29. Department of Energy, Government of Bihar
30. Department of Institutional Finance, Government of Bihar
31. Bihar State Electricity Board
32. Cabinet Secretariat, Government of Bihar
33. Department of Sugarcane, Government of Bihar
34. Department of Rural Development, Government of Bihar
35. Department of Welfare, Government of Bihar
- 36.. Department of Minority Welfare, Government of Bihar
37. Board of Revenue, Government of Bihar
38. Department of Land Reforms, Government of Bihar
39. Magadh Stock Exchange
40. Reserve Bank of India
41. State Bank of India and Others
42. Airport Authority of India

Note :

- All data on public finance has been tallied with the CAG report for Bihar 2005-06.
- Any table not mentioning source has been generated by the authors of the report from various primary documents.
- Charts that are unnamed or unnumbered pertain to adjoining tables which are self-explanatory.