
HARYANA
DEVELOPMENT REPORT
सत्यमेव जयते
PLANNING COMMISSION
GOVERNMENT OF INDIA

Haryana Development Report

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GOVERNMENT OF INDIA
NEW DELHI

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सत्यमेव जयते

एम. एस. आहलुवालिया
MONTEK SINGH AHLUWALIA

उपाध्यक्ष
योजना आयोग
भारत
DEPUTY CHAIRMAN
PLANNING COMMISSION
INDIA

जय हिन्द

MESSAGE

One of the important Tenth Plan initiatives of the Planning Commission was to sponsor the preparation of State Development Reports with much of the work being done by reputed national level institutes. This exercise was undertaken in recognition of the fact that economic circumstances and performance in individual States's varied considerably and it was necessary to examine development challenges for individual States in the light of State specific constraints and circumstances. The basic idea is to produce quality reference documents on development profiles of individual States and the possible strategies for accelerating growth, and reducing poverty and inequality.

The Haryana Development Report reviews Haryana's experience and highlights issues critical for the State's development in the years ahead. I hope its publication will stimulate debate on growth strategies appropriate for Haryana. I am sure the road map indicated in the report will stimulate a broader awareness of the critical policy issues facing the State and will assist the State to move to a higher growth path and to achieve all round human and economic development.

(Montek Singh Ahluwalia)

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भूपेन्द्र सिंह हुड्डा
BHUPINDER SINGH HOODA

मुख्य मन्त्री, हरियाणा
चण्डीगढ़।
CHIEF MINISTER
HARYANA,
CHANDIGARH

MESSAGE

The preparation of 'State Development Report of Haryana' is the result of the praise worthy initiative taken up by the Planning Commission, Govt. of India. Haryana has a creditable record of all-round development. It set the trend by adopting the green revolution strategy during mid-sixties which has made the State No.2 in the Country in food-grain production. During the last forty two years, Haryana has transformed itself from a backward Socio-economic State an vibrant economically progressive State one.

Today, Haryana is not only the granary of India exporting large quantities of food-grains to other States but is also the hub for producing a wide range of industrial products.

This progress has been well chronicled in the Development Report of the State. Our State Government is committed for all-round development of all regions and all people of the State. However, I do belive that we have a long road to travel before we can claim to have fulfilled Mahatma Gandhi's prayer to wipe the last tear from the poorest of the poor. Our Government is committed to making the growth process more socially inclusive.

The State Development Report is an important instrument for strengthening the pace of development of the State. This report provides a subtle synthesis among the development indicators of all sectors. I compliment the talented team of Dr. S.B. Dahiya, Prof. of

Economics, MDU, Rohtak and Dr. V.N. Attro, Prof. of Economics, Kurukshetra University, Kurukshetra for their pains taking effort in preparing the First State Development Report of Hayana. I also acknowledge the supporting work done by officers and staff of the Planning Department and the Economic and Statistical Organisation.

(Bhupinder Singh Hooda)

सत्यमेव जयते

डॉ. सईदा हमीद
Dr. Syeda Hameed

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योजना आयोग
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MEMBER
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FOREWORD

In keeping with the Central Plan Scheme of the "50th Year Initiative for Planning", the Planning Commission has been preparing Development Reports for each State. The SDRs are an attempt to compile quality reference document on the profile and strategy for accelerating the pace of development in the respective States.

The Haryana State Development Report (HSDR) has been prepared by the Planning Commission with the assistance of the Institute of Development Studies, Maharshi Dayanand University, Rohtak and Deptt. of Economics, Kurukshetra University, Kurukshetra in partnership with the Government of Haryana. A Core Committee reviewed the dimensions of the various developmental issues and helped to chart out the scope and coverage of the SDR for Haryana in association with the State Government and the Institute of Development Studies, Maharshi Dayanand University, Rohtak and Deptt. of Economics, Kurukshetra University, Kurukshetra.

I am sure this Report will serve as a resource material not only for the State and Central Government but also for all the non-governmental organisations working in Haryana.

New Delhi

(SYEDA HAMEED)

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Acknowledgements

The first meeting of the Core Committee on State Development Report-Haryana was held on July 15, 2003 under the Chairmanship of Shri Som Pal, Member, Planning Commission. Shri Mantreshwar Jha, Principal Advisor (SP-N) Planning Commission, Shri Chander Singh, Principal Secretary (Planning), Government of Haryana and Shri J.P. Vijay, Deputy Advisor (SP-N), Planning Commission were the other participants of the meeting. In this meeting it was decided that State Government would prepare a chapter format keeping in view the problems and development prospects of Haryana. Thereafter, in a meeting of state government officials held on September 12, 2003 under the Chairmanship of Financial Commissioner and Principal Secretary to Government of Haryana, Planning Department, the task of preparing the State Development Report of Haryana was assigned to Maharshi Dayanand University, Rohtak and Kurukshetra University, Kurukshetra. The second meeting of the Core Committee was held on December 10, 2003 under the Chairmanship of Shri Som Pal. The third meeting of the Core Committee was held on March 23, 2004 under the Chairmanship of Dr. D.N. Tiwari, Member, Planning Commission. Smt. Meenakshi Anand Choudhary, Principal Advisor (SP-S), Planning Commission, Prof. S.B. Dahiya, Director, Institute of Development Studies, Maharshi Dayanand University, Rohtak, Dr. V.N. Attri, Professor of Economics, Kurukshetra University, Kurukshetra and Shri T.P. Biswas, Director (SP-N), Planning Commission were the other participants of the meeting. In this meeting the chapter format for State Development Report of Haryana was approved.

The fourth meeting of the Core Committee on State Development Report-Haryana was held on 1st September 2004 under the Chairpersonship of Dr. (Ms.) Syeda Hameed, Member, Planning Commission. Smt. Kasturi Gupta Menon, Principal Advisor (SP-N), Planning Commission, Smt. Promila Issar, Principal Secretary (Planning), Government of Haryana, Shri Ranvir Gupta, Economic and Statistical Advisor, Government of Haryana, Prof. S.B. Dahiya and Prof. V.N. Attri were the other participants of the meeting. In this meeting the terms of references/the chapter design for the study was modified and finalised. Prof. S.B. Dahiya was appointed Coordinator for preparation of the State Development Report-Haryana.

Chapters 1, 2 and sections 5.1, 5.2.2, 5.2.3, 5.2.9, 5.2.10, 5.2.11 and 5.2.13 of Chapter 5 were assigned to the Institute of Development Studies, Maharshi Dayanand University, Rohtak and Chapters 3, 4 and sections 5.2.1, 5.2.4, 5.2.5, 5.2.6, 5.2.7, 5.2.8 and 5.2.12 of Chapter 5 were assigned to Department of Economics, Kurukshetra University, Kurukshetra

The work for the preparation of the State Development Report started in April, 2005 under the overall guidance of Dr. (Ms.) Syeda Hameed. The first draft of the Report was completed in April, 2006 and the same was submitted to the Planning Department, Government of Haryana and the Planning Commission, Government of India for peer review. The first seminar on the Report was held on June 30, 2006 at Haryana Niwas, Chandigarh under the Chairpersonship of Dr. (Ms.) Syeda Hameed. In this seminar Chief Secretary, Principal Secretaries and other officials of Government of Haryana participated. The participants made certain suggestions for improvement of the Report. The second seminar on "Declining Sex Ratio: Problems and Challenges" was held at Maharshi Dayanand University, Rohtak under the Chairpersonship of Dr. (Ms.) Syeda Hameed, Member, Planning Commission on March 25, 2007. After incorporating the suggestions of the Planning Department and that of Government of Haryana the final draft of the State Development Report-

Haryana was submitted to the State Government in August 2007 and to the Planning Commission in December 2007. In a meeting of the Core Committee held on February 25, 2008 the State Development Report–Haryana was finalised and the final draft for publication was submitted to the Planning Commission on March 17, 2008.

The process of preparing the State Development Report began with the then Member, Planning Commission Shri Som Pal who shared his deep insight and wide range of experience while chairing the first two meetings of the officials and members of the team. Thereafter, it was Dr. D.N. Tiwari who replaced Shri Som Pal and chaired the third meeting of the Core Committee. Soon after that Dr. (Ms.) Syeda Hameed became the Chairperson of the Core Committee and as a matter of fact Dr. (Ms.) Syeda Hameed and her colleagues have spent considerable time in going through the report and making some valuable suggestions which have been incorporated as desired.

May I avail of this opportunity to express my sincere thanks to Shri Som Pal, Dr. D.N. Tiwari, Dr. (Ms.) Syeda Hameed, Shri Mantreshwar Jha, Smt. Meenakshi Anand Choudhary, Smt. Kasturi Gupta Menon, Shri Chander Singh, Smt. Promila Issar, Shri T.P. Biswas, Shri J.P. Vijay and Shri Ranvir Gupta for their valuable suggestions and to all the members of the research team for their significant contribution in preparing the State Development Report-Haryana.

I thankfully acknowledge the contribution made by Dr. Jitender Prasad and Dr. R.S. Hooda of Haryana State Remote Sensing and Application Centre (HSRSAC), Hisar in writing Chapter 2.1.1 of the report. Mr. Joginder Kumar deserves our special thanks for secretarial assistance.

I, on behalf of both the universities, would like to thank the Planning Commission and the Government of Haryana for having given us this opportunity to prepare the report.

Shri Bhagwan Dahiya

Director
Institute of Development Studies
Maharshi Dayanand University, Rohtak

Executive Summary

The State of Haryana came into existence on 1st of November 1966. Since then it has been achieving an all round development. Its importance lies in the fact that 30 per cent of its total area, comprising the districts of Faridabad, Mewat, Gurgaon, Rewari, Jhajjar, Rohtak, Sonipat and Panipat, falls into the National Capital Region (NCR) of India. Differently stated, 40 per cent of the total area of the National Capital Region (NCR) is that of Haryana State. The NCR area of the State needs to be extended to the radius of 125 kilometres or so from the border of Delhi State and within this area a world class infrastructure needs to be created.

In the sixties, Haryana progressed rapidly with a growth rate of 5.5 per cent per annum against the all-India's growth rate of 3.0 per cent. In the seventies, while the national average of annual economic growth picked up from 3.0 per cent in the sixties to 3.6 per cent, the average annual rate of growth of Haryana declined from 5.5 per cent to 4.8 per cent. Haryana progressed rapidly during the 1980s with an average annual growth rate of 6.68 per cent as against all-India's growth rate of 5.60 per cent. In the 1990s, Haryana grew at an average annual rate of 6.71 per cent as against all-India's growth rate of 6.03 per cent per annum. It is interesting to note that during the overall period from 1980-81 to 1990-2000, Haryana recorded the highest growth rate of 7.80 per cent per annum in the country as against all-India's growth rate of 5.66 per cent per annum. In the years 2000-01, 2001-02, 2002-03, 2003-04, 2004-05 and 2005-06 the rate of growth in the State has been 6.8, 5.4, 5.0, 8.6, 8.4 and 8.5 per cent, respectively.

The State of Haryana achieved the fastest acceleration in secondary sector growth during 1980s with an average annual growth rate of 15 per cent. However, in the 1990s, this annual growth rate declined to 8.37 per cent. During the period 1981-2000, as a whole, the fastest acceleration in the secondary sector growth in India took place in Haryana with an average annual growth rate of 12.58 per cent. In the years 2000-01, 2001-02, 2002-03, 2003-04, 2004-05 and 2005-06 the rate of growth in the secondary sector has been 5.7, 5.7, 4.1, 7.7, 8.1 and 8.3 per cent, respectively.

As regards the tertiary sector, in the 1980s Haryana had an average annual growth rate of 7.49 per cent. In the subsequent decade of 1990s, it increased to a growth rate of 8.38 per cent. In the years 2000-01, 2001-02, 2002-03, 2003-04, 2004-05 and 2005-06 the rate of growth in the tertiary sector has been 11.4, 9.3, 10.0, 8.9, 11.8 and 12 per cent, respectively.

Haryana's per capita SDP at constant prices (1993-94) increased significantly during the 1980s and 1990s. In the 1980s, it grew by an annual average rate of 4.12 per cent as against all-India's rate of 3.36 per cent. In the 1990s, it grew by 4.42 per cent per annum as against all-India's rate of 4.07 per cent. It is interesting to note that since 2002-03, with the exception of such small States as Goa, Delhi, and Pondicherry, Haryana has been recording the highest per capita NSDP in the country. In the years 2000-01, 2001-02, 2002-03, 2003-2004 and 2004-05 the rate of growth in the State has been 4.1, 2.7, 3.4, 7.1 and 7.1 per cent, respectively.

The economy of the State has undergone major structural changes. There has been a shift from the primary sector to secondary and tertiary sectors. At constant (1993-94) prices, the share of primary sector has declined from 42.5 per cent during 1993-94 to 28.2 per cent during 2004-05. The share of secondary sector has increased from 26.2 per cent to 27.4 per cent over the same period. Likewise, the share of tertiary sector has increased from 31.3 per cent to 44.4 per cent.

The high rate of economic growth in the State has been accompanied by a reduction in poverty. There has been an appreciable decline in the percentage of population below the poverty line from over 35 per cent in the 1970s to less than 9 per cent in the late 1990s. An encouraging trend that emerged between 1993-94 and 1999-2000 in the State is that rural poverty decreased much faster than urban poverty. The population below the poverty line in rural Haryana has significantly declined from 28.02 per cent in 1993-94 to 8.27 per cent in 1999-2000 as against all-India's average figure of 27.09 per cent. There have been improvements in the social indicators as well. The literacy rate has increased from almost 26 per cent in 1971 to 68 per cent in 2001.

The agricultural production index in Haryana has increased from 106.37 in 1980-81 to 243.42 in 2004-05. Apparently, the increase in production was due almost entirely to increase in yield. The yield index almost doubled over this period. Whereas the non-food grains index increased from 104.72 to 318.73, the index of food grains increased from 107.02 to only 217.72, over the period 1980-2005. And, within food grains, the index of cereals grew up sharply from 103.89 to 245.20 and of pulses declined steeply from 125.54 to 27.50 over this period. As a result of higher production of food grains the State of Haryana is one of the largest contributors of food grains to the central pool. In 2005-06, the contribution of Haryana in the procurement of wheat was 30.60 per cent of the total procurement made in the country and it was next only to Punjab whose share was 60.90 per cent. Similarly, Haryana has also been significantly contributing to the procurement of rice in the country. Whereas the all-India average yield per hectare in respect of wheat and rice during 2003-04 was 2713 and 2077 kilograms respectively, in Haryana the corresponding yield was 3935 and 2749 kilograms.

Haryana is emerging very fast as one of the leading States in the field of horticulture. The main thrust is being given for the development on floriculture and mushroom apart from fruits and vegetables. In 1990-91, the area under fruits stood at 12,640 hectares producing 99.8 thousand tonnes. These figures increased to 24,071 hectares and 247.6 thousand tonnes, during 2004-05. Likewise, during this period the area under vegetables increased from 55360 hectares in 1990-91 to 2.08 lakh hectares in 2004-05, and the production increased from 8.02 lakh tonnes to 27.67 lakh tonnes. The area under floriculture has also increased from 50 hectares in 1990-1991 to 4810 hectares in 2004-05. This period also witnessed remarkable growth in mushroom production which increased from 850 tonnes to 6163 tonnes.

In order to improve the conditions of farmers, the State economy needs to be diversified with progressive shift of population from agriculture to secondary and tertiary sectors; policy of corporatisation of agriculture through contract farming be introduced; and big corporation in agro-business be involved. The farming community needs to be involved through cooperative activities in agriculture production, processing and marketing. In order to eliminate poverty in the State an accelerated growth rate (GSDP) of about 10 per cent is required

To realise Haryana State's full share of Ravi-Beas water the Satluj-Yamuna Link (SYL) canal needs to be completed at the earliest. Necessary steps need to be taken for the conservation and better management of surface water, rainwater harvesting, recharging of groundwater and improvement of sub-soil water level in the State. Steps should also be taken to popularise drip irrigation system particularly for quality improvement and early ripening of horticultural produce. Necessary steps need to be taken to bring the entire sown area under irrigation

Since the existing paddy-wheat rotation in the agriculture sector in the State is causing degradation in soil fertility and further fall in the groundwater level, there is an urgent need for crop diversification in the State. The cultivation of Jatropha and the setting up of Jatropha based bio-diesel units in the State should be given priority. The State should also promote agro-based industries. Efforts should be made to set up public investment in extended agriculture in terms of accelerating the switch from cereals to oilseeds, pulses, horticulture, floriculture, fishery, bee keeping, and cultivation of medicinal and energy plants.

The livestock sector, by contributing milk, eggs and meat to the food basket, plays a critical role in fulfilling the animal protein requirement of the people. Livestock is one of the important components of primary sector of the economy and there still exists a substantial scope for growth in this sector. Haryana is the milk pail of India and is famous for its breed of "Hariana Cows" and "Murrah Buffaloes". The State Government is laying emphasis on increasing the production capacity of the animal through genetic improvement of the animals. Great stress is being laid on the improvement of breed of the cattle and buffaloes to increase the milk yield through artificial insemination with exotic and other improved semen.

Salt affected land, scrub land, waterlogged land, barren land and sandy area constitute the main wasteland in the

State. The majority of salt-affected lands are associated with waterlogged areas. These are mainly spread over the central and southern parts of the State. Absence of natural drainage outlet and use of poor quality groundwater for agriculture purpose render highly fertile soils salt affected. Barren lands are generally associated with Aravali ranges. Land becomes barren with scrub due to loss of soil fertility caused by waterlogging and poor quality of groundwater. Sandy areas in the form of sand dunes are mainly located in areas bordering Rajasthan State. Arid climate with no irrigation facilities rendered the soil unproductive with development of barren sand dunes. About 70 per cent area of the State has marginal to saline groundwater.

Accurate mapping of groundwater zones as per their suitability for domestic, irrigation and industrial uses is highly desirable for proper management of groundwater resources and to safeguard human beings from consumption of poor quality groundwater. To check further deterioration in the quality of groundwater in the State regular monitoring of their chemical quality is necessary.

Canal water is main source of irrigation as well as domestic supplies to the State. The availability of water from both the sources, that is, surface and sub-surface, is much below the requirement. Whereas the supply of surface water is more or less constant with a small variation depending upon water level in the Bhakra and Pong reservoirs and the flow of water in river Yamuna, the availability of sub-surface water is declining due to more withdrawal than its recharging. Canal irrigated area in Haryana in 2004-05 has been 48 per cent of the total net area irrigated. The share of tubewells in total irrigated area has been increasing continuously. It was 50.5 per cent of total net area irrigated in 2004-05. The area under irrigation, as percentage of gross area sown was 84 per cent in 2004-05.

Being an alluvial formation, the State has very little mineral wealth. Iron ore, limestone and slate are the only three principal minerals economically exploited at present. Other minerals are lime, *kankar*, china clay, dolomite, quartz and silica. Limestone and *kankar* are used in cement manufacturing. The Geological Survey of India has estimated the resources of crystalline limestone to be of the order of 17.5 million tonnes. Slate is found in the Rewari, Mohindergarh and Gurgaon districts. The iron ore reserves are of the order of five million tonnes. The ore is of high grade, varying from 50 per cent to 65 per cent in iron contents.

The proximity of villages to the administration centres enhances their growth potential. The inconveniences, if any, faced by the villagers are readily reported and consequently the probability of introducing corrective measures is usually higher. The access to various places of the economy determines substantially the performance and efficiency of the government. Absence of access signifies prevalence of a self-reliant village economy having little development opportunities and low growth potential. Increasing access augments the possibility of diversification and higher growth. The villages located in Haryana are most effectively connected with rest of the economy. The infrastructure level of the villages, both social and physical, is extremely important in the realisation of development potential. In this regard Haryana is among the best performing large States.

Infrastructure in the State, be it irrigation, power, roads, dry ports, airports or any other sector, needs the massive overdose of restructuring and investments. In order to bridge the demand-supply gap of electricity necessary steps need to be taken to set up power generation plants. Steps need to be taken for the electrification and construction of new rail tracks and ring rail along the Kundli-Manesar-Palwal (KMP) expressway in the State. There is a necessity for four laning of all the State and national highways passing through the State, and strengthening and widening of all link roads in the State. Special emphasis should also be given for the construction of fly overs and rail over bridges. Airports and dry ports need to be set up and developed in the State.

The State should take necessary steps for the metro rail links from Delhi to Faridabad, Delhi to Gurgaon, Delhi to Bahadurgarh, Delhi to Kharkhoda and Delhi to Sonipat. Kharkhoda town, which is only few kilometers from Delhi, needs to be fully developed as a modern residential and industrial town. Kharkhoda is full of development potentials.

At the time of formation of the State in 1966, Haryana had only 162 large and medium units. By June 2006, this number has grown to 1290. At present, these units are operating with capital investment of more than Rs.220 billion, employing more than 2 lakh persons and producing goods worth Rs.12,800 crore. The export which was only Rs.4.5 crores in 1966 has crossed Rs.20,000 crores in 2004-05. During the period August 1991-May 2001, as many as 206 fully export-oriented units were established in Haryana alone which constituted 5.59 per cent of the total such units in the country. Industrial Model Township, Manesar near Gurgaon has already become the destination of many

multinational companies. The area between Kundli and Sonipat town falls under a highly industrialised zone. A multi-functional complex is also being developed at Kundli. It is in this complex that export promotion industrial park, food park, cold chain complex have been developed by the HSIDC. Industrial Growth Centre at Bawal has also emerged as the destination of multinational companies.

Haryana's index of industrial production is far above the all-India average. Haryana currently produces 75 per cent of passenger cars, 60 per cent of tractors, 70 per cent of motor cycles and 50 per cent of refrigerators manufactured in the country. About 25 per cent of India's total production of sanitary-ware is from Haryana. One out of every four bicycles in the country is manufactured here. The progress of industry in the recent decade saw some new milestones emerging with the remarkable performance by industrial units engaged in the production of motor cycles, scooters, mopeds, cars, etc. As a result, the industrial production almost doubled over the recent 10 year period.

The growth of small industries in the State has also been phenomenal. Their number has increased from 4500 in 1966 to 80,000 today. They are producing goods worth Rs.4500 crores per annum while generating employment for 8.7 lakh persons. Twenty per cent of the country's total export of scientific instruments, 60 per cent of the demand of ammunition boxes of the country's defence forces and 60 per cent of the total needs of woollen blankets of the Indian army are met by small units of Haryana. Haryana's small scale sector also enjoys the reputation of manufacturing the largest number of electrical mixies and gas stoves in the country. Engineering goods, chemicals, software, handloom products, agro-based lamps, scientific instruments, leather products, automobiles and tractors are exported from Haryana.

The State Government formulated a new industrial policy in June 2005. The basic objective of the policy is to develop and promote industries and to create employment opportunities in the manufacturing and service sector. This policy has three pronged strategy. The first is to develop infrastructure, the second is to provide incentives and concessions to the industry in backward/rural areas in order to check exodus of rural population to the urban areas and the third is to simplify the rules and regulations making investment procedure easy and hassle free.

Under the Government of India schemes, three cluster development projects, Panipat for textiles, Gurgaon for automobiles and faridabad for light engineering are under consideration. Government is considering to set up Central Institute of Plastic and Engineering Technology in collaboration with the Government of India to promote and develop plastic industry in Haryana. State Government has approached the Government of India, Ministry of Food Processing for establishing National Institute for Food Technology Management besides one mega food park in Haryana. This will boost agro-based food processing industry in the State. Also, in the private sector the first irradiation food park has been set up at Bahalgarh in district Sonipat. This food park would prove a boon for exporters and the farmers as the agricultural products, food items, vegetables, fruits, onions, potatoes, pulses, *basmati* rice, wheat flour and other edible products would be preserved by using irradiation technology.

In an excellent recent study Veeramani and Goldar (2005) place various States under three distinct categories of investment climate (IC) scenarios for the purpose of determining total factor productivity (TFP) estimates in the manufacturing sector in these States. The TFP estimates have been based on both value-added function as well as gross output function. In this study, Haryana has been classified under the 'good investment climate' category along with States like Gujarat, Andhra Pradesh, Karnataka and Punjab. It is satisfying to note that Haryana occupied no less than second position for most part of the period, 1980-81 to 1999-2000, in respect of TFP performance. This adequately brings out the extent of efficiency prevailing in the manufacturing sector of the State.

The State of Haryana has been able to attract sizable investment from multinational companies, large business houses, foreign investors, non-resident Indians and small scale entrepreneurs. Haryana is an investor friendly State and offers a rich reservoir of skilled, motivated and relatively low cost manpower with a good infrastructure and harmonious industrial relations. The State has about 1000 projects with foreign technical financial collaboration.

Since tertiary sector holds the promise of being the major source of employment generation, it should be endeavour of the State policy to accord special priority to the fullest exploration of its employment potential. The performance of the tertiary sector has been quite satisfactory during the Tenth Plan period. It recorded a growth rate of 10 per cent in 2002-03, 8.9 per cent in 2003-04 and 11.8 per cent in 2004-05 which is quite close to the targeted growth rate of 10.3 per cent fixed under

the Plan. Given the vast growth potential of this sector, it appears quite within the reach of the State to push this rate to above 12 per cent by 2012 which incidentally happens to be the nearest proximation of the highest rate fixed under the Tenth Plan for Karnataka, the top leading State in this respect. There is a need to take necessary steps to boost the service sector including information technology, biotechnology and tourism.

Rates of literacy among the population have risen considerably in Haryana. The 2001 census recorded literacy rates of 67.91 per cent, as compared to 55.85 per cent in 1991. In 2001, the male literacy rate was 79.3 per cent which was 48.2 per cent in 1981 as against it, the female literacy rate was 56.3 per cent which was just 22.3 per cent in 1981. The gap between male and female rates has therefore narrowed down from 25.9 per cent in 1981 to 23.0 per cent in 2001.

The gross enrolment ratio in classes I-V was 75.25 per cent and in classes VI-VIII it was 65.51 per cent in 2003-2004. The percentage of school going girls in the age group of 6-11 years has been 77.31 per cent in 2003-04. In the case of boys it is 73.53 per cent. The percentage of school going girls in the age group of 11–14 years has been 62.40 per cent in 2003-04. In case of boys it is 68.24 per cent over the same period. In the year 2003-04, Haryana's gross enrolment ratio of children in the age group of 6-14 years was only 71.51 as against India's 84.91.

By the year 2004-05, the system of higher education had expanded substantially to include in its ambit a total of 202 colleges of which 60 were government colleges and 142 non-government colleges. In these colleges the over all enrolment of boys has been 53.45 per cent and that of girls 46.55 per cent. The faculty in these colleges consisted of 53.87 per cent male teachers and 46.13 per cent female teachers. These statistics adequately bring out the fact that over time women education has been accorded the priority it deserved.

Technical manpower is essential input for industrialisation, modernisation, promotion of trade and business. Technical manpower is also required for research and development. Technically qualified persons can also set their own business and get self-employed. By the end of year 2001-02, there were 29 degree level engineering institutions and 29 diploma/post-diploma level institutions. In 2004-05, there were 124 institutions offering engineering/MBA/MCA/BHM and CT and M.Tech Programmes with an annual intake of 18,834 students. The number of polytechnics was 38 with annual intake capacity of 8640 students. The intake capacity in degree courses in engineering colleges in the state was 10,631 students.

The number of scholars in recognised colleges for general education has increased from 75,863 in 1980-81 to 1,99,761 in 2002-03. The number of girls students in these colleges has increased from 22,319 in 1980-81 to 90,754 in 2002-03.

Highly specialised courses at post-graduate/under graduate/diploma level need to be introduced in emerging areas like nano science and technology, VLSI design and embedded systems, integrated product design and manufacturing, print and graphic communication, optical engineering, product design, mechotronics and aircraft maintenance engineering, etc.

The Human Development Index (HDI) for the country as a whole has improved from 0.302 in 1981 to 0.472 in 2001. The HDI for Haryana has improved from 0.360 in 1981 to 0.509 in 2001. As per HDI, the Haryana was ranked at 15 in 1981, 16 in 1991 and 5 in 2001.

A reduction of gender inequality in access to resources and opportunities leads to an increase in the rate of economic growth, which, in turn, is poverty reducing. This is because of the fact that greater gender equality enables women to take up income earning opportunities, and participate in the growth process. Gender disparities are very closely associated with poverty levels. For example, improving women's access to education or land in rural areas is likely to lead a significant increase in agricultural productivity. In addition, lower gender disparities increase women's power to allocate family resources. This benefits children's health and education, inducing a reduction in inter-generational poverty. Furthermore, gender equality in access to education helps to reduce infant mortality and fertility. Significant steps have been taken in this direction in Haryana and its women are much more empowered now than in the 1960s or 1970s. The State has been implementing various schemes for the socio-economic advancement and development of women in the State to eliminate all types of discrimination against women and the girl child and ensure empowerment and gender justice for them. But the declining sex ratio in the State is of particular concern.

Improvement in the health status of the population has been one of the major thrust areas in social development programmes of the State. This was to be achieved through improving access to health services

with special focus on under developed and under privileged sections of the society. The infant mortality rate (IMR) is considered to be a sensitive indicator of not only the health status of the population but also the level of human development in the context of education, economic conditions, nutrition etc. Poverty, malnutrition, a decline in breast feeding and inadequacy or lack of sanitation are all associated with high infant mortality. High infant mortality and high fertility are related concepts. Haryana has registered declining infant mortality rates over the period 1971-2001. But there is cause for concern over the higher IMR for female children than for male children in Haryana.

Life expectancy at birth or longevity is an overall indicator of the economic and social well-being of the people. As a society advances, the life expectancy of its people also increased. Haryana is one of the top four States, after Kerala, Punjab and Maharashtra, in this regard.

Haryana is one of the few States in India whose decadal growth rate of population has showed almost a negligible change over the last three decades. It is a matter of great concern for the State and requires an in-depth analysis of its socio-economic genesis.

A total fertility rate (TFR) of 2.1 is considered to be the replacement level of fertility, which needs to be achieved in all States for population stabilisation. In case of Haryana, the TFR was 3.3 in 1998 which is much higher than most of the States in the country.

The sex ratio in Haryana during the past hundred years has remained between 835 on the lowest side and 870 on the highest side. In 1901, the sex ratio in the State was 867. It was the same in 1971 and increased to 870 in 1981 but declined marginally to 865 in 1991 and again to 861 in 2001. In 2001, it was 867 in rural Haryana as against the urban sex ratio of 847. The sex ratio of child population in the age group of 0-6 in rural Haryana was 824 as against 809 in urban areas. The decline in the sex ratio during the last decade in Haryana is a matter of serious concern and demands urgent necessary action

The sharply declining sex ratio in the State is a matter of serious concern. It is important to identify the specific areas of the State where the problem is particularly alarming. It needs to be tackled with appropriate, effective and sustainable measures. This problem cannot be approached simply in terms of raising literacy rates and providing pecuniary incentives. The Census 2001 data on sex ratio and literacy rates pertaining to 67 *tehsils* of Haryana brings out the fact that sex ratio and literacy rate are rather inversely related. For instance, the sex ratio has been recorded the highest in respect of *tehsils* of Punahana (910) and Ferozepur Jhirka (902) even as these have the lowest literacy rates, 37.58 per cent and 40.61 per cent, respectively. As we come across areas (*tehsils*) of population having increasing levels of sex ratio, these areas tend to include low literacy areas in an increasing proportion, and high literacy areas in a decreasing proportion. This intriguing phenomenon needs to be intensively probed to find out the underlying reasons.

In Haryana total dependency ratio in 2001 was 770 which was much higher (886) in 1991. In case of young, it was 637 and for old 133 in 2001 and the respective figures in 1991 were 741 and 145. This means that the young as well as old dependency ratio in the State has decreased.

The total work participation rate of Haryana in the year 2001 was 39.62 per cent, of which 42.93 per cent was in rural areas and 31.49 per cent in urban areas. Agricultural workers constituted 51.29 per cent of the total working population. Cultivators constituted 36.03 per cent of the total working population. Agricultural labour constituted 15.27 per cent of the total working population. The percentage of non-agricultural workers in the total working population was 48.71. This percentage was 35.17 in rural areas and 94.07 in urban areas. It clearly shows that in rural areas people are mostly dependent on agricultural activities while in urban areas people are mostly dependent on non-agricultural activities.

Not many people are employed in household industries. In 2001, only 2.56 per cent of the total working population was engaged in household industries. In rural areas this percentage was 2.17 and in urban areas it was 3.88.

In Haryana there are a sizeable number of other workers who earn their livelihood by working in the occupations other than mentioned above. Their percentage in the year 2001 was 46.15 of the total working population of Haryana. In rural areas, this percentage was 33.00 and in urban areas, it was 90.19.

Marginal workers as per cent of total population of the State stood at 10.10 per cent in 2001. This percentage was higher in rural areas (12.86) as compared to urban areas (3.33).

Among all States the maximum growth in the workforce took place in the State of Haryana (2.83 per cent) followed by the State of Punjab (2.53 per cent). The all-India average in this regard has been 0.81 per cent.

In 1987-88, in Haryana, the per cent shares of primary, secondary and tertiary sectors in total employment were 58.90, 12.70 and 28.40, respectively, as against the corresponding all-India average figures of 58.82, 10.85 and 30.33. This position has altered in favour of the tertiary sector over the subsequent period. Twelve years later, in 1999-2000, the per cent shares in employment of primary, secondary and tertiary sectors stood at 45.15, 12.45 and 42.40, respectively, in Haryana and at 52.43, 10.87 and 36.71, respectively, at the all-India level. Apparently, whereas in 1987-88, the contribution of tertiary sector in Haryana was below the national average. This position changed fast to not only far exceed the average all-India level but also placed Haryana among the top ranking States by enabling it move up from twelfth to sixth rank. This is a particularly impressive performance when we observe that among the three top ranking States are the smaller States of Delhi, Tripura and Pondicherry. Among the major States, Haryana (42.40 per cent) had only Kerala (49.76 per cent) and Punjab (43.22 per cent) ahead of it in this regard.

Haryana with less than 5 per cent unemployment rate may be ranked among the low level unemployment States particularly when we compare it with States like Kerala (19 to 22 per cent), West Bengal (10 to 17 per cent), Tamil Nadu (9 to 13 per cent), Assam (7 to 12 per cent) and Bihar (7 to 10 per cent).

The process of sustainable development in Haryana should be pursued in the framework of public-private partnership mechanism. The PPP model is the way to achieve sustainable development in Haryana and the new state policy initiatives are the pointer(s) in the same direction.

The sector shift in Haryana has been constantly moving in favour of tertiary sector *vis-à-vis* secondary and primary sectors. In 2002-03, the composition of Gross State Domestic Project (GSDP) in Haryana by industry was 29.50 per cent in primary, 31.10 per cent in secondary and 42.40 per cent in tertiary sector. The projected composition of SDP in 2011-12 would be 19.97 per cent, 30.69 per cent and 49.34 per cent respectively in primary, secondary and tertiary sectors. The most emerging challenge for the State is to provide productive and gainful employment to all its inhabitants. This can be achieved by reoriented development of agriculture and allied activities such as contract farming, organic farming, diversification of agriculture, agro-forestry and agro-based industries. Having varied agro-climatic conditions, and strategic location near NCR, Haryana can be one of the most competitive centres of agro-based industries in the State. Floriculture, mushroom, herbal medicines, cereal based industry, cotton based industry and forest produce based industries, etc. may be easily developed in the State provided imaginative policy initiatives related with finance, energy, marketing and market-oriented institutions are introduced.

To achieve the overall reorientation of agriculture in Haryana, application of latest technology and adoption of latest marketing techniques along with sound financial management for meeting the agriculture requirements of State and knowledge of WTO trading regime i.e. rules related with SPS, certification and standardisation of agriculture products are needed to be adopted by the government.

The performance of tertiary sector in Haryana during the 10th Plan period has been more than satisfactory. On the basis of assumption of per capita income at constant prices it will increase at a rate of 7 per cent in Haryana during the period from 2006-07 to 2011-12. The share of tertiary sector in SDP of Haryana will reach up to 29.34 per cent by the year 2012. The growth in the tertiary sector needs to be carefully examined as there is dearth of studies indicating a positive link between overall growth and growth of the tertiary sector. All that can be said is that with an increase in the share of tertiary sector in the SDP, the productivity should also be increased otherwise the growth in the tertiary sector in the economy will appear as a "bubble" which can vanish at any time.

Haryana has made tremendous economic development. The search for more avenues of economic development is on the agenda of the State government. Tourism forms a part of such an agenda. But isolated growth of tourism has prevented tourism to grow as a significant economic activity. Intensive and extensive work plan to utilise the cultural and commercial character of the region for tourism is the need of the time. The further strengthening of Highway tourism, proper grooming and marketing of its three major festivals, that is, Surajkund, Kartik and Geeta Jayanti festivals, a planned, professional and comprehensive development of Kurukshetra and Morni Hills, development of spots exclusively for recreation and pleasure can contribute significantly to the State's economy.

The IT Kiosks can be instrumental in providing a wide range of useful services to the farmers related with agricultural and allied activities and to rural poor and downtrodden sections of the society. The IT Kiosk

programme for Haryana should have three broad components i.e. (i) electronic delivery of services, (ii) computer literacy, and (iii) broadband connectivity upto villages by 2007. These Kiosks should deliver all types of services such as agriculture, health, education, etc. Strict quality standards should be established for providing easy, timely, cost-effective and reliable service to the IT Kiosk users.

Balanced regional development of different parts of the State, extension of the benefits of economic progress to the less developed regions and widespread diffusion of industries are among the major aims of planned development. Successive Five Year Plans seek to realise these aims. Balanced regional development, as far as possible, must go together with fast economic growth if the latter has to be really meaningful. In striving for such a balance, certain inherent difficulties have to be met. Sometimes the sense of lagging behind in development may be due to inadequate or tardy development of specific fields such as agriculture, irrigation, power, industry, employment, education, etc. This is the case with Haryana also where there are regions which are less developed than others. There are regional disparities in the State as regards irrigation. Recently the State government has declared 88 areas in the State as industrially backward.

There are regional disparities in the industrial development of various parts of the State. While in 2003 there were 2567 registered working factories employing 1,86,638 workers in Faridabad district, there were only 60 such factories employing 4,250 workers in Mahendragarh district. The lowest number of industrial workers is in Kaithal district where 124 factories employed 2,710 workers. Similarly in Kurukshetra district, 3,163 workers are employed in 164 working factories, in Fatehabad 3,723 workers are employed in 117 factories. On the other hand, more than one lakh people are employed in 1,031 factories in Gurgaon district and about 40,000 workers are employed in 1238 factories in Yamuna Nagar district. In Panipat district, 35,813 workers are employed in 741 factories, in Sonipat district, 29,440 workers are employed in 528 factories and in Karnal district, 27,879 workers are employed in 449 factories.

Another indicator of regional disparities is the percentage of urban population. In Faridabad district, 55.63 per cent population live in urban areas, followed by Panchkula (44.47 per cent), Panipat (40.51 per cent) and Yamuna Nagar (40 per cent) districts. On the other hand the urban population of Mahendragarh district is only 13.46 per cent followed by Fatehabad (17.63 per cent), Rewari (17.82 per cent), Bhiwani (18.97 per cent) and Kaithal (19.36 per cent) districts.

In the area of financial management, Haryana is one of the best managed States in the country. The notable feature of State finances is that Haryana is the first State in the country which has not availed of overdraft even for a single day during 2003-04 and 2004-05. The 12th Finance Commission of India has also commended the performance of Haryana in the areas of revenue growth, expenditure checking and reduction of deficit indicators. The State has been focusing on the development of infrastructure in urban as well as rural areas out of its own resources.

As regards the deficit position, Haryana has, on the whole, performed much better as compared to most other States. With its GFD/GSDP ratio equal to just 1.8 per cent, it stands at the top among all States. Similarly, with regard to PD/GSDP ratio, it is the only State which has a negative value for this ratio. As regards the other deficit ratios, the State occupies fifth position on the basis of RD/GSDP ratio and seventh position on the RD/RR ratio criterion. In sharp contrast to these achievements, it stands among the bottom three States when compared on the RD/GFD ratio basis. Its revenue deficit position is a matter of serious concern and requires greater, concerted action particularly on the expenditure side of the revenue account.

As regards the State's own tax and non-tax revenue position, it ranks among the top six states on the ONTR/GSDP ratio criterion, and bottom four states on the OTR/GSDP ratio basis. On the whole, considering both own tax and non-tax revenue together, the State figures among the top four states which is a measure of its relatively satisfactory performance in the direction of achieving self-reliance in resource generation.

In respect of non-developmental expenditure, the State may be said to be among the top five states which are spending a relatively lesser proportion of their GSDP for non-developmental purposes. But as regards developmental expenditure, the State's performance is highly disappointing as it ranks among the two states at the bottom. The same is true in respect of social sector expenditure and capital outlay as well where it has all States ahead of it.

Haryana figures among the top three states showing excellent performance on the basis of Debt/GSDP ratio. It is ranked among the top seven states which are spending a relatively lesser proportion of their revenue

receipts for interest payments as compared to other states.

The large share of wages and salary (31.6 per cent) in total revenue expenditure of Haryana is one of the primary factors underlying the downward rigidity in revenue expenditures. This expenditure needs to be curtailed sufficiently in order to put revenue account in good shape.

In Haryana, the expenditure on education stands at 13.7 per cent. The State stands at the sixth position in the country in this regard. Education is one of the most important areas towards which development expenditure must be directed in sufficiently large amount.

The expenditure on medical and public health and family welfare shows that all States, taken together, spend on average 3.6 per cent of their aggregate disbursements on medical and public health and family welfare, but Haryana is spending only 2.8 per cent, which is much less than the average level. It is disappointing to note that in the area of medical and pubic health and family welfare, the State stands at the second place from bottom ahead of only Gujarat in this regard.

The indices of fiscal self reliance and improvement given by 11th Finance Commission and the 12th Finance Commission shows that during the period 1990-1999 Haryana was placed at 11th rank. But during the period 1993-2003, Haryana attained the first rank in the country. This shows excellent performance by the State in achieving fiscal self-reliance and improvement.

There is an urgent need for bringing down the revenue expenditure of the State. For instance, the revenue deficit as a percentage of GFD and revenue receipts (RR) stood at 43.1 and 9.4, respectively in 2003-04 (BE). In this case, a one per cent reduction in revenue expenditure (RE) may be expected to induce a decline of as much as five per cent points in the RD/GFD ratio. In other words, RE as a percentage of RR if brought down from 9.4 to 8.3 amounts to bringing down the RD/GFD ratio from 43.1 to 38.1.

But still there is much more growth potential in Haryana than has been achieved to date.

Chapter 1

Haryana: Development Profile

1.0 Introduction

The State of Haryana came into existence on 1st of November 1966. Since then it has been achieving an all round development. Its importance lies in the fact that 30.33 per cent of its total area, comprising the districts of Faridabad, Mewat, Gurgaon, Rewari, Jhajjar, Rohtak, Sonipat and Panipat, falls into the National Capital Region (NCR) of India. Differently stated, 39.95 per cent of the total area of the NCR is that of Haryana state.

The development strategies of Haryana, over a period of time, were intended to lead to a more balanced growth in the State. It was expected that, over time, regional disparities in the State would be minimised. Plans and policies were designed to facilitate more investments in the relatively backward areas of the State. Though considerable progress has been made in this direction, socio-economic variations across regions continue to exist even today.

This chapter attempts to bring out comparable trends in the development of Haryana state *vis-à-vis* other States of the country in terms of available and generally accepted development indicators. An attempt is made to cover as large a period of planning experience of the State as is possible, given the constraints of consistency and comparability of data. This chapter is arranged in sections that deal with specific subjects and areas: aggregate, sectoral and per capita state domestic product (SDP); agriculture and allied activities; rural development; poverty; infrastructure; industries; social infrastructure; human development and demographic changes; and regional disparities.

1.1 Aggregate/Sectoral/Per Capita SDP—Trend and Comparative Analysis

1.1.1 Growth of State Domestic Product

Growth of State Domestic Product (SDP) is the single most important indicator of development for a State. As is clear from Table 1.1, the rate of growth of the State Domestic Product (NSDP) of Haryana in the

TABLE 1.1

Trends in Rates of Growth in Net State Domestic Product at Current Prices

(Per cent per annum)

Sl. No	*State/ Union Territory*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06*
1.	Andhra Pradesh	12.1	8.8	6.6	13.9	8.9	11.7
2.	Arunachal Pradesh	12.1	17.8	-1.6	14.5	15.8	6.8
3.	Assam	5.5	3.9	12.3	8.9	8.9	12.4
4.	Bihar	14.0	-0.1	13.3	1.6	9.9	7.3
5.	Jharkhand	-17.6	8.8	10.0	10.9	37.4	10.7
6.	Goa	6.5	3.8	13.8	14.9	24.7	9.1
7.	Gujarat	-0.3	10.3	16.1	20.7	11.2	17.7
8.	**Haryana**	**12.7**	**11.2**	**10.2**	**13.7**	**13.4**	**12.9**
9.	Himachal Pradesh	11.1	9.8	10.1	8.2	11.8	10.5
10.	Jammu & Kashmir	T5.9	7.9	12.6	9.1	9.1	n.a.
11.	Karnataka	5.8	3.3	8.4	9.1	19.4	14.1
12.	Kerala	4.1	6.6	11.6	11.7	9.9	11.2
13.	Madhya Pradesh	-2.3	9.2	-1.1	18.5	3.5	9.6
14.	Chhattisgarh	-5.7	14.4	8.2	24.8	14.8	13.5
15.	Maharashtra	0.4	8.3	10.8	13.3	12.5	14.2
16.	Manipur	-4.7	5.7	5.6	13.4	27.4	12.8
17.	Meghalaya	13.0	14.2	5.2	11.9	7.0	8.2
18.	Mizoram	T11.1	11.8	10.3	7.8	4.7	n.a.
19.	Nagaland	T28.6	17.9	13.1	7.2	6.0	n.a.
20.	Orissa	0.2	7.3	7.7	22.3	15.6	7.3
21.	Punjab	10.9	5.2	3.6	7.9	7.6	8.0
22.	Rajasthan	-1.8	12.7	-5.6	29.9	2.6	8.3
23.	Sikkim	11.8	11.8	12.8	12.2	12.2	12.6
24.	Tamil Nadu	9.0	0.9	5.2	11.5	13.5	11.3
25.	Tripura	13.7	15.2	5.7	12.3	9.4	9.5
26.	Uttar Pradesh	3.8	4.9	8.6	10.0	8.2	13.2
27.	Uttaranchal	15.3	7.9	16.6	10.9	9.5	13.1
28.	West Bengal	5.7	9.1	6.7	12.4	9.5	13.2
29.	Andaman & Nicobar Islands	7.6	9.2	14.9	14.1	-3.1	16.3
30.	Chandigarh	16.7	16.1	16.1	17.1	16.9	19.2
31.	Delhi	11.1	9.0	7.5	12.9	14.2	15.1
32.	Pondicherry	19.5	10.1	16.9	10.2	-5.8	10.0
	All India (1999-2000 base)	7.4	8.6	7.6	12.6	11.4	13.8

Source: *Economic Survey 2007-08*, Table 1.7, p.A-12. New Delhi: Government of India.

TABLE 1.2

Growth Rate during Tenth Five-Year Plan: Target and Achievement (At Constant 1993-94 Prices)

(in Per cent)

Sector	*Growth Rate Fixed by Planning Commission for Tenth Five Year Plan (2002-07) for India as a whole*	*Growth Rate Fixed by Planning Commission for Tenth Five Year Plan (2002-07) for Haryana*	*Growth Rate Achieved during 2002-03 (P) in Haryana*	*Growth Rate Achieved during 2003-04 (P) in Haryana*	*Growth Rate Achieved during 2004-05 (P) in Haryana*	*Growth Rate Achieved during 2005-06 (P) in Haryana*
Primary	4.0	4.1	(-) 0.8	9.1	3.7	3.2
Secondary	8.9	9.6	4.1	7.7	8.1	8.3
Tertiary	9.4	10.3	10.0	8.9	11.8	12.0
Total	8.0	7.9	5.0	8.6	8.4	8.5

Source: *Economic Survey of Haryana 2004-05*, p.3; *Economic Survey of Haryana 2005-06*, p.105 and Economic and Statistical Organisation, Haryana.

year 2005-06, at current prices, was 12.9 per cent. During the last six years, the lowest rate of growth (10.2 per cent) of Haryana's GSDP was observed in the year 2002-03. And the highest rate of growth (13.7 per cent) was achieved in 2003-04.

The Planning Commission fixed 7.9 per cent average growth rate of GSDP for the Tenth Five Year Plan period for Haryana as compared to 8.0 per cent for all India. During the years 2002-03, 2003-04, 2004-05 and 2005-06 Haryana achieved a growth rate (at constant 1993-94 prices) of 5.0, 8.6, 8.4 and 8.5 per cent, respectively.

The comparative average growth rates of Net State Domestic Product (NSDP) for Haryana and 18 other States at current prices for the decades of 1960s (1960-61 to 1969-70) and 1970s (1970-71 to 1979-80) are given in Table 1.3.

From the Table, it may be seen that in the sixties, the highest growth rates were recorded by Orissa, Punjab, Himachal Pradesh and Haryana. Haryana progressed rapidly during this period with 5.5 per cent per annum growth rate against the all-India growth rate of 3.0 per cent. Bihar was the slowest growing state economy recording 0.7 per cent per annum growth. Rajasthan, Andhra Pradesh, Madhya Pradesh and Uttar Pradesh also grew very slowly at 1.3, 1.5, 1.5, and 1.6 per cent growth rates, respectively.

In the seventies, the pattern of growth rates remained largely unchanged. While the national average of economic growth picked up from 3.0 per cent in the sixties to 3.6 per cent in the seventies, the rate of growth of Haryana declined from 5.5 per cent to 4.8 per cent during this period. Delhi, Goa, Maharashtra, and Punjab were the States which grew at faster rates as compared to Haryana (6.2, 6.1, 5.7, and 5.4 per cent, respectively). On the other hand, States of Madhya Pradesh and Kerala achieved the lowest growth rates (1.3 and 1.7 per cent, respectively).

TABLE 1.3

Trends in Rates of Growth in Net State Domestic Product at Current Prices—Decades of Sixties and Seventies

(Per cent per annum)

States	*1960-61 to 1969-70*	*1970-71 to 1979-80*
Delhi	5.1	6.2
Goa	N A	6.1
Maharashtra	2.9	5.7
Punjab	5.6	5.4
Haryana	**5.5**	**4.8**
Gujarat	2.7	4.5
Jammu & Kashmir	3.1	4.4
Karnataka	3.4	4.3
Tamil Nadu	2.1	3.4
Andhra Pradesh	1.5	3.2
Assam	4.0	3.0
Rajasthan	1.3	3.0
West Bengal	2.5	2.9
Bihar	0.7	2.8
Uttar Pradesh	1.6	2.6
Himachal Pradesh	5.6	2.4
Orissa	9.7	2.3
Kerala	3.8	1.7
Madhya Pradesh	1.5	1.3
All India	**3.0**	**3.6**

Note: Deflators used in estimation of NSDP for Orissa in this period have discrepancies, as a result of which the state growth rates are non-comparable. Name of States is arranged in order of rank in rates of growth of NSDP in 1970-71 to 1979-80.

Source: *Tenth Five Year Plan 2002-2007*, Volume III, Table 3.1, p.35. New Delhi: Planning Commission, Government of India.

The comparative average growth rates of SDP for Haryana and 16 other major States at constant (1993-94) prices for the decades 1980s (1980-81 to 1989-90) and 1990s (1990-91 to 1999-2000) are given in Table 1.4.

TABLE 1.4

Growth Rate of SDP at Constant Prices

(Per cent per annum)

States	*1980-90*	*1990-2000*
Andhra Pradesh	4.81	5.12
Assam	3.91	2.47
Bihar	5.20	3.46
Goa	5.71	8.23
Gujarat	5.71	8.28
Haryana	**6.68**	**6.71**
Himachal Pradesh	6.10	6.91
Karnataka	6.10	7.07
Kerala	4.50	6.00
Madhya Pradesh	5.18	5.45
Maharashtra	5.98	6.80
Orissa	5.85	3.60
Punjab	5.14	4.63
Rajasthan	7.17	6.46
Tamil Nadu	6.35	6.65
Uttar Pradesh	5.88	4.33
West Bengal	5.20	7.24
All-India	5.60	6.03
Coefficient of variation	0.14	0.29

Source: Bhattacharya, B.B. and S. Sakthivel (2004), "Regional Growth and Disparity in India", Table 1, p.1073, *Economic and Political Weekly*: 1071-77, March 6.

From this Table, it may be observed that Haryana progressed rapidly during the 1980s with average annual growth rate of 6.68 per cent as against all-India's growth rate of 5.60 per cent. During the same period, Rajasthan recorded the highest growth rate of 7.17 per cent. However, the 1990s belonged to the relatively industrialised States. While Haryana grew at 6.71 per cent per annum during this period against all-India's growth rate of 6.03 per cent per annum, Gujarat, Goa, West Bengal, Karnataka and Maharashtra grew at an average annual growth rates of 8.28, 8.23, 7.24, 7.07, and 6.80 per cent, respectively. Among other States, Haryana along with Rajasthan, Kerala, Himachal Pradesh and Tamil Nadu recorded above average growth rates.

1.1.2 Sectoral Shares and Growth Rates

The economy of the State has undergone major structural changes. There has been a shift from the Primary sector to secondary and tertiary sectors. The share of primary sector which includes agriculture and allied sectors, at constant (1999-2000) prices has declined from 31.9 per cent during 1999-2000 to 23.3 per cent during 2005-06. The share of secondary sector has increased from 30.0 per cent during 1999-2000 to 32.4 per cent during 2005-06. Likewise, the share of tertiary sector has increased from 38.1 per cent during 1999-2000 to 44.3 per cent during 2005-06. The same picture emerges when we consider the per cent shares of these sectors in term of current prices.

TABLE 1.5

Composition of Gross State Domestic Product by Broad Sectors

(Per cent)

Year	*At Current Prices*			*At Constant (1999-2000) Prices*		
	Primary	*Secondary*	*Tertiary*	*Primary*	*Secondary*	*Tertiary*
1	*2*	*3*	*4*	*5*	*6*	*7*
1999-2000	31.9	30.0	38.1	31.9	30.0	38.1
2000-01	30.7	29.5	39.8	30.8	29.5	39.7
2001-02	28.0	31.0	41.0	28.9	30.3	40.8
2002-03 (P)	26.2	32.7	41.1	27.0	31.1	41.9
2003-04 (P)	25.9	33.1	41.0	26.9	31.3	41.8
2004-05 (P)	24.1	33.7	42.2	25.6	31.4	43.0
2005-06 (Q)	22.1	34.7	43.2	23.3	32.4	44.3

Note: P: Provisional Estimates Q: Quick Estimates

Source: Government of Haryana (2007). *Economic Survey of Haryana 2006-07*, Annexure-1.2, p.124.

The composition of GSDP reveals that the share of primary sector is continuously declining whereas the share of secondary as well as tertiary sector is continuously increasing. It shows that the state economy is shifting from agriculture to manufacturing and services sectors, which is a sign of healthy economy. The structural transformation reveals that the state economy is moving in the right direction.

The sectoral analysis shows that during 2005-06 the GSDP at constant (1999-2000) prices originating from

TABLE 1.6

Annual Growth Rates of Gross State Domestic Product by Broad Sectors at Constant (1999-2000) Prices

(Per cent)

Year	*Primary*	*Secondary*	*Tertiary*	*Total*
1	*2*	*3*	*4*	*5*
2000-01	3.4	5.2	11.4	7.0
2001-02	0.0	9.7	9.8	6.8
2002-03(P)	(-)1.6	8.1	7.9	5.2
2003-04(P)	7.9	9.3	8.2	8.4
2004-05(P)	3.3	8.9	11.8	8.6
2005-06(Q)	(-)1.6	11.5	11.3	8.1

Note: P: Provisional Estimates Q: Quick Estimates

Source: Government of Haryana (2007). *Economic Survey of Haryana 2006-07*, Annexure-1.3, p.125.

primary sector declined by 1.6 per cent, the GSDP originating from secondary sector registered an increase of 11.5 per cent; and in the case of tertiary sector it recorded a growth of 11.3 per cent.

TABLE 1.7

Sectoral Composition of SDP

(Per cent)

States	*Sector*	*1980-81*	*1990-91*	*1999-2000*
Andhra Pradesh	Primary	41.21	34.20	27.16
	Secondary	21.88	24.67	26.10
	Tertiary	36.91	41.13	46.74
Assam	Primary	50.11	41.48	35.80
	Secondary	20.17	24.49	25.02
	Tertiary	29.72	34.03	39.18
Bihar	Primary	59.93	46.52	29.59
	Secondary	21.89	24.66	28.06
	Tertiary	18.18	28.82	42.36
Goa	Primary	18.45	14.30	8.93
	Secondary	43.48	34.50	38.09
	Tertiary	38.10	51.19	52.98
Gujarat	Primary	46.25	30.95	15.96
	Secondary	29.90	34.38	42.47
	Tertiary	23.85	34.67	41.58
Haryana	**Primary**	**58.80**	**42.60**	**34.10**
	Secondary	**11.00**	**24.60**	**28.60**
	Tertiary	**30.20**	**32.70**	**37.83**
Himachal Pradesh	Primary	47.55	35.67	21.16
	Secondary	22.27	24.88	36.01
	Tertiary	30.17	39.45	42.83
Karnataka	Primary	46.56	33.10	27.11
	Secondary	24.54	27.59	28.40
	Tertiary	28.89	39.31	44.49
Kerala	Primary	42.31	31.26	24.74
	Secondary	25.38	21.47	21.74
	Tertiary	32.32	47.27	53.53
Maharashtra	Primary	28.75	21.80	15.60
	Secondary	35.41	35.26	34.93
	Tertiary	35.84	42.94	49.47
Madhya Pradesh	Primary	50.71	38.43	30.79
	Secondary	29.60	28.56	30.67
	Tertiary	19.70	33.01	38.55
Orissa	Primary	49.79	42.43	33.78
	Secondary	17.18	22.90	23.00
	Tertiary	33.03	34.67	43.22
Punjab	Primary	47.87	46.31	40.68
	Secondary	18.94	21.12	24.29
	Tertiary	33.18	32.57	35.04
Rajasthan	Primary	51.93	42.72	28.88
	Secondary	18.77	24.65	30.19
	Tertiary	29.30	32.64	40.93
Tamil Nadu	Primary	24.64	22.83	17.23
	Secondary	34.78	34.03	34.06
	Tertiary	40.58	43.15	48.70
Uttar Pradesh	Primary	49.53	36.74	34.68
	Secondary	19.54	24.17	26.37
	Tertiary	30.93	39.09	38.95
West Bengal	Primary	33.15	31.82	28.45
	Secondary	27.46	25.58	24.50
	Tertiary	39.39	42.60	47.05
All India	Primary	39.64	32.91	25.20
	Secondary	24.36	28.03	21.83
	Tertiary	35.99	39.06	52.97

Source: Bhattacharya, B.B. and S. Sakthivel (2004). "Regional Growth and Disparity in India", Table 1, p.1073, *Economic and Political Weekly*: 1071-77, March 6.

The generally expected pattern of development is that as an economy progresses, the share of the primary sector declines and that of the secondary sector increases and the latter becomes the dominant sector in the economy. Finally, when the economy attains a fairly high level of development, the tertiary sector overtakes the secondary sector. "However, in India, at the aggregate level, and also at the regional level, the tertiary sector became the larger sector even before the secondary sector predominated the economy" (Bhattacharya and Mitra, 1990) and (Bhattacharya and Sakthivel, 2000). Haryana's development pattern also confirms this.

It is apparent from Table 1.7 that the Tertiary Sector in Haryana had come to occupy the predominant position with 37.83 per cent share in SDP in 1999-2000 even as the share of secondary sector stood at 28.6 per cent as against the 34.10 per cent share of the primary sector. A comparative analysis of various states would show that there is hardly any other state which should have exhibited structural transformation in such a remarkable way.

Table 1.8 brings out a comparative view of the growth acceleration of secondary and tertiary sectors in various states. The state of Haryana achieved the fastest acceleration in secondary sector growth during 1980s with an average annual growth rate of 15.08 per cent followed by Rajasthan (11 per cent). In the 1990s, Himachal Pradesh recorded the highest average annual growth rate in the secondary sector (11.86 per cent), followed by Gujarat (10.61), Goa (8.82), and Haryana (8.37).

TABLE 1.8

Sectoral Growth Rates of SDP

(Per cent per annum)

States	*Sector*	*1980-1990*	*1990-2000*
Andhra Pradesh	Primary	2.37	2.41
	Secondary	5.93	6.00
	Tertiary	6.62	6.53
Assam	Primary	2.41	0.86
	Secondary	4.94	2.62
	Tertiary	5.63	4.00
Bihar	Primary	2.62	-0.93
	Secondary	6.15	4.79
	Tertiary	9.84	7.09
Goa	Primary	2.91	2.07
	Secondary	2.42	8.82
	Tertiary	9.91	9.24
Gujarat	Primary	-0.34	2.67
	Secondary	7.83	10.61
	Tertiary	11.34	9.62
Haryana	**Primary**	**3.37**	**4.07**
	Secondary	**15.08**	**8.37**
	Tertiary	**7.49**	**8.38**

Contd...

...contd...

Himachal Pradesh	Primary	2.92	1.20
	Secondary	7.35	11.86
	Tertiary	9.54	7.35
Karnataka	Primary	2.83	4.06
	Secondary	7.58	7.72
	Tertiary	9.17	8.93
Kerala	Primary	1.24	3.00
	Secondary	2.31	6.04
	Tertiary	8.88	7.71
Maharashtra	Primary	2.93	3.42
	Secondary	6.27	7.00
	Tertiary	7.74	8.00
Madhya Pradesh	Primary	1.53	3.28
	Secondary	4.85	7.07
	Tertiary	12.05	7.17
Orissa	Primary	4.75	0.65
	Secondary	7.44	4.36
	Tertiary	5.67	6.14
Punjab	Primary	4.75	2.60
	Secondary	6.26	6.65
	Tertiary	5.04	5.97
Rajasthan	Primary	3.27	3.08
	Secondary	11.00	8.15
	Tertiary	10.36	8.60
Tamil Nadu	Primary	4.99	2.68
	Secondary	5.68	7.41
	Tertiary	7.72	7.98
Uttar Pradesh	Primary	2.55	3.70
	Secondary	8.34	6.13
	Tertiary	8.64	4.54
West Bengal	Primary	6.39	7.09
	Secondary	4.00	6.68
	Tertiary	5.04	9.30
All India	Primary	2.95	3.33
	Secondary	7.34	7.37
	Tertiary	6.46	7.63

Source: Bhattacharya, B.B. and S. Sakthivel (2004). "Regional Growth and Disparity in India", Table 1, p.1073, *Economic and Political Weekly*: 1071-77, March 6.

As regards the average annual growth rate in tertiary sector, Haryana was much behind as many as nine states during the 1980s with its growth rate of 7.49 per cent. But in the subsequent decade of 1990s, Haryana improved its position and came to be ranked at the fifth place with 8.38 per cent growth rate, next only to Gujarat (9.62), Goa (9.24), Karnataka (8.93) and Rajasthan (8.6).

1.1.3 Per Capita SDP

The per capita income represents the amount of resources available for consumption and is expected to be inversely related to the poverty ratio. Therefore, for a better, rather, qualitative analysis of the development process in some way, we should analyse not merely aggregate growth rates but also the growth of per capita SDP.

The growth of per capita income of all States in the country is given in Table 1.9. It is clear from this table

TABLE 1.9

Trends in Rates of Growth in Per Capita Income at Current Prices

(Per cent per annum) (Rupees)

Sr. No	*State/ Union Territory*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05(P)*	*2005-06*
1.	Andhra Pradesh	11.2	8.0	5.0	12.6	7.7	10.5
2.	Arunachal Pradesh	9.9	15.8	-2.6	13.0	14.4	5.5
3.	Assam	4.3	2.8	11.0	7.4	7.3	10.5
4.	Bihar	10.9	-3.1	11.8	-0.2	8.0	5.5
5.	Jharkhand	-19.2	6.6	8.1	9.1	35.2	9.0
6.	Goa	3.4	0.9	10.7	11.7	21.2	6.0
7.	Gujarat	-2.5	7.8	14.4	18.7	9.5	15.9
8.	**Haryana**	**9.9**	**8.0**	**8.4**	**11.5**	**11.2**	**10.8**
9.	Himachal Pradesh	9.6	8.0	8.2	6.4	9.9	8.6
10.	Jammu & Kashmir	4.0	5.1	9.5	6.5	6.3	n.a.
11.	Karnataka	4.2	1.8	7.1	7.7	18.0	12.8
12.	Kerala	3.2	5.7	10.3	10.5	8.7	10.1
13.	Madhya Pradesh	-4.2	7.0	-3.1	16.3	1.6	7.7
14.	Chhattisgarh	-6.6	13.3	5.6	22.5	12.2	11.5
15.	Maharashtra	-1.5	6.3	9.2	11.5	10.8	12.4
16.	Manipur	-6.7	3.5	3.5	11.2	24.8	10.6
17.	Meghalaya	10.2	11.4	4.6	10.5	5.7	6.9
18.	Mizoram	8.4	9.0	7.5	5.1	2.1	n.a.
19.	Nagaland	22.3	12.2	7.6	2.0	0.9	n.a.
20.	Orissa	-1.1	6.0	6.4	20.9	14.4	6.1
21.	Punjab	8.8	3.9	1.7	5.9	5.6	6.0
22.	Rajasthan	-4.3	9.8	-7.3	27.3	0.6	6.3
23.	Sikkim	8.0	7.8	12.1	10.5	10.8	11.0
24.	Tamil Nadu	8.0	0.0	4.2	10.5	12.6	10.4
25.	Tripura	13.2	14.9	3.8	10.9	8.0	8.2
26.	Uttar Pradesh	1.4	2.5	6.7	7.8	6.1	11.1
27.	Uttaranchal	13.2	6.0	14.7	9.0	7.7	11.3
28.	West Bengal	4.4	7.9	5.2	11.0	8.2	12.0
29.	Andaman & Nicobar Islands	6.1	7.7	10.8	10.3	-6.5	12.4
30.	Chandigarh	12.7	12.3	12.2	13.2	13.0	15.2
31.	Delhi	7.1	5.2	4.3	9.5	10.8	11.7
32.	Pondicherry	17.3	8.1	14.7	8.1	-7.5	7.9
	All India (1999-2000 base)	5.1	6.9	6.2	10.8	9.6	12.1

Source: *Economic Survey 2007-08*. Table 1.8, p.A-13. New Delhi: Government of India.

that since 1999-2000 per capita income of Haryana at current prices has been continuously increasing. During 2005-06 it stood at Rs.38,832 as against previous years' Rs.35,044 (Table 1.10) implying a growth rate of 10.8 per cent in per capita income.

Table 1.10 shows that during 1960s the per capita NSDP (at current prices) in Haryana grew by 2.6 per cent per annum against the all-India annual average growth rate of 0.8 per cent. During this period, Orissa recorded the highest annual average growth rate per capita

TABLE 1.10

Trends in Rates of Growth in Per Capita NSDP at Current Prices—Decades of Sixties and Seventies

(Per cent per annum)

States	*1960-61 to 1969-70*	*1970-71 to 1979-80*
Andhra Pradesh	-0.4	1.1
Assam	0.9	0.8
Bihar	-1.3	0.6
Goa	n. a.	3.6
Gujarat	0.1	2.0
Haryana	**2.6**	**2.2**
Himachal Pradesh	3.4	0.2
Karnataka	1.2	1.8
Kerala	1.4	-0.2
Madhya Pradesh	-1.1	-1.0
Maharashtra	0.04	3.3
Orissa	7.3	0.3
Punjab	3.5	3.2
Rajasthan	-1.1	0.2
Tamil Nadu	0.1	1.6
Uttar Pradesh	-0.2	0.4
West Bengal	0.02	0.7
All India	**0.8**	**1.2**

Note: Deflators used in estimation of NSDP for Orissa in this period have discrepancies as a result of which the stated growth rates are non-comparable.

Source: *Tenth Five Year Plan 2002-2007*, Volume III, Table 3.1, p.35. New Delhi: Planning Commission, Government of India.

TABLE 1.11

Growth Rate of Per Capita SDP at 1993-94 prices

(Per cent per annum)

States	1980-90	1990-2000
Andhra Pradesh	2.56	3.62
Assam	1.74	0.65
Bihar	2.97	1.86
Goa	4.08	6.84
Gujarat	3.62	6.38
Haryana	**4.12**	**4.42**
Himachal Pradesh	4.36	5.11
Karnataka	4.00	5.27
Kerala	3.04	4.78
Madhya Pradesh	2.74	3.22
Maharashtra	3.60	5.04
Orissa	3.96	2.12
Punjab	3.19	2.71
Rajasthan	4.41	4.09
Tamil Nadu	4.79	5.40
Uttar Pradesh	3.46	1.98
West Bengal	2.93	5.41
All India	3.36	4.07
Coefficient of variation	0.22	0.43

Source: Bhattacharya, B.B. and S. Sakthivel (2004). "Regional Growth and Disparity in India", Table 1, p.1073, *Economic and Political Weekly*: 1071-77, March 6.

NSDP of 7.3 per cent, followed by Punjab (3.5) and Himachal Pradesh (3.4). The per capita annual average growth rate of Haryana declined to 2.2 per cent in 1970s but it stood above the all-India rate of 1.2 per cent. Goa recorded the highest rate of growth of 3.6 per cent followed by Maharashtra (3.3) and Punjab (3.2).

Haryana's per capita SDP at constant prices (1993-94) increased significantly during the 1980s and 1990s. It may be seen from Table 1.11 that in the 1980s the per capita SDP of Haryana grew by an annual average rate of 4.12 per cent as against all-India's rate of 3.36 per cent. During this period, Tamil Nadu recorded the highest annual average per capita SDP growth rate (4.79), followed by Rajasthan (4.41) and Himachal Pradesh (4.36).

In the 1990s, the per capita SDP of Haryana grew by 4.42 per cent per annum as against the all-India annual average growth rate of 4.07 per cent. During this period, Goa recorded the highest growth rate of 6.84 per cent, followed by Gujarat (6.38), West Bengal (5.41), Tamil Nadu (5.4), Karnataka (5.27), Himachal Pradesh (5.11), Maharashtra (5.04) and Kerala (4.78). Apparently, Haryana was yet to catch up with some of the other States in respect of growth performance in terms of per capita income.

It is interesting to note from Table 1.12 that in 2005-06, with the exception of such small States as Goa, Delhi, and Pondicherry, Haryana recorded the highest per capita NSDP (Rs.38,832) in the country, followed by Maharashtra (Rs.37,081) and Punjab (Rs.34,929). It may be observed from the same Table that upto 1999-2000, Haryana fell behind both of these States in this regard. It overtook Maharashtra in 2000-01, and Punjab in 2003-04.

1.2 Agriculture and Allied Activities

1.2.1 Agriculture

Agriculture in Haryana continues to occupy a significant position in State economy. Despite the decline in the share of agriculture sector in the GSDP to just 22.6 per cent in 2005-06, about two-third population of the State still depends upon agriculture for their livelihood. Table 1.13 shows the land use pattern of the State. From this Table it is clear that the total area of the State under cultivation has already reached at a saturation level and thus there is hardly any scope to bring more area under cultivation. The agricultural

TABLE 1.12

Per Capita Net State Domestic Product at Current Prices

(Rupees)

Sr. No	*State/ Union Territory*	*1999-2000*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06*
1.	Andhra Pradesh	15507	17243	18630	19568	22041	23729	26211
2.	Arunachal Pradesh	14054	15452	17893	17434	19707	22542	23788
3.	Assam	12269	12797	13153	14600	15687	16825	18598
4.	Bihar	5766	6396	6197	6928	6913	7467	7875
5.	Jharkhand	12747	10294	10972	11865	12941	17493	19066
6.	Goa	42296	43735	44110	48839	54577	66135	70112
7.	Gujarat	18864	18392	19823	22683	26922	29468	34157
8.	**Haryana**	**21966**	**24138**	**26077**	**28259**	**31509**	**35044**	**38832**
9.	Himachal Pradesh	20806	22795	24608	26627	28333	31140	33805
10.	Jammu & Kashmir	13745	14301	15031	16452	17528	18630	n.a.
11.	Karnataka	16758	17464	17776	19041	20515	24199	27291
12.	Kerala	19294	19917	21047	23207	25645	27864	30668
13.	Madhya Pradesh	12384	11862	12697	12303	14306	14534	15647
14.	Chhattisgarh	11761	10985	12443	13145	16098	18068	20151
15.	Maharashtra	23340	22992	24450	26697	29770	32979	37081
16.	Manipur	13260	12369	12801	13250	14728	18386	20326
17.	Meghalaya	14611	16100	17936	18756	20729	21915	23420
18.	Mizoram	16443	17826	19430	20896	21963	22417	n.a.
19.	Nagaland	13819	16903	18961	20407	20821	20998	n.a.
20.	Orissa	10567	10452	11075	11788	14252	16306	17299
21.	Punjab	25615	27863	28949	29443	31192	32945	34929
22.	Rajasthan	13477	12897	14165	13126	16704	16800	17863
23.	Sikkim	14890	16077	17324	19428	21476	23791	26412
24.	Tamil Nadu	19378	20927	20924	21813	24106	27137	29958
25.	Tripura	14119	15983	18368	19059	21138	22836	24706
26.	Uttar Pradesh	9405	9541	9781	10435	11250	11941	13262
27.	Uttaranchal	13672	15482	16408	18819	20519	22093	24585
28.	West Bengal	15826	16521	17826	18746	20806	22522	25223
29.	Andaman & Nicobar Islands	23728	25177	27112	30050	33150	31004	34853
30.	Chandigarh	41386	46660	52385	58772	66512	75181	86629
31.	Delhi	38682	41436	43587	45483	49825	55215	61676
32.	Pondicherry	30865	36220	39138	44903	48547	44908	48477
	All India (1999-2000 base)	15839	16648	17800	18899	20936	22946	25716

Source: *Economic Survey 2007-08*, Table 1.8, p.A-13. New Delhi: Government of India.

production can only be increased through enhanced cropping intensity, change in cropping pattern, improvement in seeds of high yielding varieties, better cultivation practices and development of post harvest technology etc.

Table 1.14 shows the expenditure on Agriculture and Allied Activities under Five Year/Annual Plans in Haryana. During the Fourth and Fifth Five Year Plan, the expenditure on this sector was 7.35 and 6.64 per cent of the total expenditure, respectively. During the Sixth, Seventh and Eighth Five Year Plan the expenditure in this sector increased significantly to 9.88, 9.53 and 9.22 per cent of the total expenditure, respectively. But during the Ninth Five Year Plan it significantly declined to 5.96 per cent and further to 4.57 per cent in the Tenth Five Year Plan. This shows that the agriculture sector, which significantly contributes to the GSDP, is being given lower priority as regards allotment of funds.

TABLE 1.13

Land Use Pattern in Haryana

('000 Hectares)

Area	*1966-67*	*1970-71*	*1975-76*	*1980-81*	*1985-86*	*1990-91*	*1995-96*	*2000-01*	*2003-04*	*2004-05 (P)*
Total Area according to Village Papers	4399	4402	4404	4405	4391*	4378	4398	4402	4374	4374
Forests	91	99	104	132	166	169	110	115	45	44
Land Put to Non-agricultural Uses	257	309	374	369	236	320	400	368	432	429
Barren and Unculturable land	232	181	99	65	156	97	94	102	100	96
Total Land not Available for Cultivation	489	490	473	434	392	417	494	470	532	525
Permanent Pastures and Other Grazing Lands	46	54	44	30	28	23	24	34	25	25
Land under misc. Tree Crops and Groves not Included in Net Area Sown	4	3	@	@	1	4	4	7	6	6
Culturable but Barren Land	87	41	34	30	23	21	23	18	36	35
Fallow Land	259	150	125	177	168	169	156	232	196	212
Net Area Sown	3423	3565	3624	3602	3613	3575	3586	3526	3534	3528
Culturable Area	3819	3813	3827	3839	3833	3792	3793	3817	3797	3806
Area Sown More than Once	1176	1392	1827	1860	1988	2344	2388	2589	2854	2897
Total Cropped Area	4599	4957	5451	5462	5601	5919	5974	6115	6388	6425

Note: * The decrease in total area is on account of rechecking of revenue records.
@ Below 500 hectares P Figures are provisional

Source: Government of Haryana (2007). *Haryana Statistical Abstract 2005-06*, Table 12.1, pp. 212-213.

TABLE 1.14

Expenditure on Agriculture and Allied Activities under Five-Year/Annual Plans in Haryana

	Expenditure (Rs. Crore)	*Percentage to Total Expenditure*
Fourth Five-Year Plan 1969-74	26.33	7.35
Fifth Five-Year Plan 1974-79	44.96	6.64
Annual Plan 1979-80	14.51	7.15
Sixth Five-Year Plan 1980-85	157.53	9.88
Seventh Five-Year Plan 1985-90	239.29	9.53
Annual Plan 1990-91	65.42	10.64
Eighth Five-Year Plan 1992-97	451.58	9.22
Ninth Five-Year Plan 1997-2002	476.20	5.96
Annual Plan 1997-98	104.81	8.04
Annual Plan 1998-99	79.83	5.24
Annual Plan 1999-2000	90.14	5.38
Annual Plan 2000-01	92.92	5.41
Annual Plan 2001-02	108.50	6.14
Tenth Five Year Plan 2002-07	547.82	4.57
Annual Plan 2002-03	84.29	4.75
Annual Plan 2003-04	92.79	4.97
Annual Plan 2004-05	100.45	4.77
Annual Plan 2005-06	150.20	5.01
Annual Plan 2006-07 (Revised outlay)	174.56	4.57
Eleventh Five Year Plan (2007-12) (Approved outlay)	1638.82	4.68
Annual Plan 2007-08 (Approved outlay)	193.39	3.65

Source: Compiled from *Statistical Abstract Haryana 2005-06*, Table 29.1, pp.586-91, Government of Haryana, 2007; and Economic and Statistical Organisation, Haryana.

Two-thirds of the total landholdings, covering less than one-fourth of the total area in Haryana are in the size group of less than 2 hectares. Almost 28 per cent of the total holdings are less than half a hectare. These landholdings can hardly be termed as economic holdings. Almost half of the total landholdings are of less than 1 hectare in size. So Haryana agriculture can be

TABLE 1.15

Land Holdings in Haryana: 2000-01

Size Group	*Total Holdings (in Hectares)*	
	No.	*Area*
1	*2*	*3*
Below 0.5	438096 (28.68)	115832 (3.26)
05-1.0	265917 (17.41)	200711 (5.65)
1.0-2.0	294102 (19.25)	421858 (11.88)
2.0-3.0	168442 (11.03)	404956 (11.41)
3.0-4.0	109479 (7.17)	375999 (10.59)
4.0-5.0	71963 (4.71)	319761 (9.00)
5.0-7.5	87770 (5.74)	531551 (14.97)
7.5-10.0	42230 (2.76)	358693 (10.10)
10.0-20.0	40369 (2.64)	530026 (14.93)
20 and Above	9406 (0.62)	290496 (8.18)
Total	1527774 (100)	3549883 (100)

Note: Figures in parentheses show percentage

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 12.3, p.221.

characterised as small and marginal landholdings. Just about 3 per cent of the total landholdings, covering 23 per cent of total area, are in the size of more than 10 hectares. Therefore, Haryana is a State of small farmers.

Though there is no significant increase in the net sown area in Haryana yet there has been a significant increase in the area sown more than once. While about 35 per cent of the total sown area was sown more than once in 1966-1967, it increased to 50 per cent in 1975-76, 65 per cent in 1991 and 82 per cent in 2005-06. In this way, the cropping intensity in the state has enhanced from 139 per cent in 1970-71 to 182.39 per cent during 2005-06.

The total cropped area has increased considerably since 1970-71. The total cropped area, which was 45.99 lakh hectares during 1966-67, has increased to 49.57 lakh hectares in 1970-71 and further increased to 65.04 lakh hectares during 2005-06.

A matter of serious concern today is that the agriculture sector in the State is dominated by paddy-wheat rotation. It is causing degradation in soil fertility and further fall in the under ground water level. Table 1.17 shows the dominance of wheat and rice crops in the gross area sown. The area under these two crops as percentage of the total gross area sown has increased from 28.20 per cent during 1970-71 to 51.26 per cent during 2005-06. However, during the last five years, the area under these crops has shown moderate change. Though efforts have been made to break dominance of the wheat-paddy rotation, yet no significant achievement has been made in respect of crop diversification.

TABLE 1.16

Net Sown and Cropped Area in Haryana

(Area in '000 hectares)

Year	*Net Area Sown*	*Area Sown More than Once*	*Total Cropped Area*
1966-67	3423	1176 (34.36)	4599
1970-71	3565	1392 (39.05)	4957
1975-76	3624	1827 (50.41)	5451
1980-81	3602	1860 (51.64)	5462
1985-86	3613	1988 (55.02)	5601
1990-91	3575	2344 (65.57)	5919
1995-96	3586	2388 (66.59)	5974
2000-01	3526	2589 (73.43)	6115
2001-02	3566	2752 (77.17)	6318
2002-03	3458	2577 (74.52)	6035
2003-04	3534	2854 (80.76)	6388
2004-05	3528	2897 (82.11)	6425
2005-06 (P)	3566	2938 (82.33)	6504

Source: Director, Land Records, Government of Haryana, Chandigarh.

TABLE 1.17

Area Under Principal Crops

(000 Hects)

Year	*Wheat*	*Rice*	*Total Foodgrains*	*Sugar-Cane*	*Cotton*	*Oilseeds*	*Gross Area Sown*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1966-67	743	192	3520	150	183	212	4599
1970-71	1129	269	3868	156	193	143	4957
1980-81	1479	484	3963	113	316	311	5462
1990-91	1850	661	4079	148	491	489	5919
1995-96	1972	830	4021	144	652	611	5974
1996-97	2017	831	4026	162	653	673	6075
1997-98	2057	914	4187	141	632	616	6143
1998-99	2188	1086	4482	128	583	526	6320
1999-2000	2317	1083	4290	137	544	463	6029
2000-01	2355	1054	4344	143	555	414	6115
2001-02	2300	1028	4255	161	630	545	6318
2002-03	2267	906	3978	189	518	621	6035
2003-04	2315	1015	4298	160	526	647	6388
2004-05	2317	1024	4218	133	621	715	6480
2005-06*	2304	1052	4269	127	583	734	6480
2006-07*	2365	1041	4364	140	530	677	6480

Note: * Provisional

Source: Government of Haryana (2007). *Economic Survey of Haryana 2006-07*, p.28.

Crop diversification from traditional paddy-wheat rotation towards oilseeds, pulses, maize, fruits and vegetables is the need of the hour. Paddy-wheat rotation since long has resulted in severe degradation in natural resources like soil and water. The objective of crop diversification can be achieved if farmer is assured about sustainability of his income through alternative crops, namely, oilseeds, pulses, maize, fruits and vegetables.

State department of agriculture is making concerted efforts to motivate farmers to go for the cultivation of alternative crops. Centrally sponsored scheme like Integrated Scheme of Oilseeds, Pulses, Oilpalm and Maize (ISOPOM) is being implemented for promoting oilseeds, pulses and maize in the state. Under the ISOPOM, demonstrations are organised and seed minikits of new and promising varieties are distributed among the farmers free of cost. Gypsum, certified seeds, spray pumps, sprinkler and HDPE pipe sets, culture packets, bio-control agents etc. are provided to the farmers on subsidised rates. Trainings and Farmer Field School (FFS) are also organised to increase awareness about new crop production and protection technologies among the farmers. Because of high yield and assured marketing of paddy and wheat crop, diversification programme may not be successful without assistance from Government of India. During 2005-06 a successful campaign was launched in the State to diversify within wheat to C-306 in Panchkula, and to wean away farmers

in Kurukshetra, Karnal, Yamuna Nagar, Kaithal and Fatehabad from summer paddy to *moong* and *dhaincha*.

State department of agriculture has identified some areas in the State where special campaigns have been launched to motivate farmers to divert area from paddy and wheat to alternative crops. In the districts of Kurukshetra, Karnal, Fatehabad, Kaithal and Sirsa a campaign was launched to dissuade the farmers from cultivating *sathi* paddy, which consume huge quantity of water and results in degradation of soil. In these districts, farmers were urged to go for the cultivation of pulses like *moong* and *urad*. In the *rabi* season, farmers in some areas were encouraged to divert area from high yielding varieties of wheat to *desi* variety, that is, C-306.

The State Government has submitted an action plan to Government of India wherein financial assistance has been sought for compensating the farmers in view of the fact that net return from alternate crops is far less than the income obtained from wheat and paddy. Government of India has not yet made the assistance available, but the State Government is pursuing this programme. The success will depend on favourable minimum support price (MSP) and assured procurement. So far, limited success has been achieved in increasing area under pulses and oilseeds.

Besides motivating the farmers to divert area from paddy and wheat, State Government is also contemplating increase in acreage under horticultural crops, that is, fruits, vegetables and floriculture. In addition, farmers are also being encouraged to go for the cultivation of high value crops like medicinal and aromatic plants.

The area under wheat has been continuously increasing since 1966-67. This area was 23.15 lakh hectares in 2003-2004 and 23.65 lakh hectares in 2006-07. The area under rice was 10.15 lakh hectares in 2003-04 and 10.41 lakh hectares in 2006-07. The area under commercial crops, i.e., sugarcane, cotton and oilseeds fluctuates every year.

Table 1.18 shows that the area under High Yielding Variety (HYV) of various food grains in Haryana has significantly increased since 1970-71. Area under HYV of wheat as percentage of total area under wheat cultivation has increased from 55.8 per cent in 1970-71 to 99.5 per cent in 2005-06. Similarly, in case of *bajra* the area under HYV increased from 27.3 per cent in 1970-71 to 91.6 per cent in 2005-06; in case of maize from 12.2 per cent in 1970-71 to 57.1 per cent in 2005-06; and in case of rice from 11.1 per cent in 1970-71 to 73.2 per cent in 2005-06.

TABLE 1.18

Area under High Yielding Varieties of Foodgrains in Haryana

('000 Hectares)

Year	Rice			Maize			Bajra			Wheat		
	Total	HYV	%	Total	HYV	%	Total	HYV	%	Total	HYV	%
1	2	3	4	5	6	7	8	9	10	11	12	13
1970-71	269.2	30	11.1	114.4	14	12.2	879.6	240	27.3	1129.3	630	55.8
1975-76	303.5	169	55.7	138.7	17	12.3	1005.6	250	24.9	1226.0	1087	88.7
1980-81	483.9	414	85.6	71.3	28	39.3	870.3	335	38.4	1479.0	1360	92.0
1985-86	584.0	495	84.8	54.9	20	36.4	649.5	410	63.1	1701.3	1612	94.8
1990-91	661.2	479	72.4	34.8	16	46.0	608.6	410	67.4	1850.1	1829	98.9
1995-96	830.0	498	60.0	26.0	12	46.2	575.2	329	57.2	1972.1	1863	94.5
1999-2000	1083.1	620	57.2	20.1	11	54.7	586.7	490	83.5	2316.5	2260	97.6
2000-01	1054.3	656.7	62.3	15.4	8.0	51.9	608.3	516.0	84.8	2354.8	2295.0	97.5
2001-02	1027.5	667.0	64.9	17.9	9.0	50.3	585.5	470.0	80.3	2299.9	2256.0	98.1
2002-03	905.7	600.0	66.3	15.9	8.0	50.3	513.7	437.8	85.2	2267.1	2216.5	97.8
2003-04 (P)	1015.2	690.0	68.0	16.6	8.0	48.2	624.5	559.7	89.6	2315.4	2246.7	97.0
2004-05	1024.2	741.0	72.3	15.8	10.0	63.3	565.3	482.7	85.4	2316.7	2286.7	98.7
2005-06 (P)	1072	784.70	73.2	-	-	57.1	-	-	91.6	2250	2238.75	99.5

Note: P: Provisional

Source: Compiled from *Statistical Abstract Haryana 2005-06*, Table 12.8, p. 237, Government of Haryana, 2007; *Economic Survey of Haryana 2005-06*, p.17 and 20, Government of Haryana, 2006.

TABLE 1.19

Percentage of Gross Area Sown under Foodgrain Crops and Commercial Crops to Total Cropped Area in Haryana

(Area in '000 hectares)

Year	Foodgrain Crops*		Commercial Crops**	
	Area	Percentage	Area	Percentage
1970-71	38677	78.03	5031	10.15
1975-76	42112	77.26	5870	10.77
1980-81	39625	77.55	7133	13.96
1985-86	40434	72.19	8446	15.08
1990-91	40793	68.92	11335	19.15
1995-96	40205	67.30	14111	23.62
2000-01	43435	71.03	11197	18.31
2001-02	42529	67.31	13427	21.25
2002-03	39777	65.91	13337	22.10
2003-04	42980	67.28	13053	20.40
2004-05	**42175**	**65.60**	**14741**	**22.90**

Note: * Foodgrain crops includes Cereals and Pulses
** Commercial Crops includes Sugarcane, Cotton, Spices and Oilseeds

Source: Director, Land Records, Government of Haryana, Chandigarh.

TABLE 1.20

Agricultural Production in Haryana

('000 tonnes)

Year	Total Food Grains	Wheat	Paddy	Total Cereals	Total Pulses	Total Oil-seeds	Total Cotton ('000 Bales)	Sugar-cane
1	2	3	4	5	6	7	8	9
1966-67	2592	1059	223	2029	563	92	288	5100
1970-71	4771	2342	460	3939	832	99	373	7070
1980-81	6036	3490	1259	5533	503	188	643	4600
1990-91	9559	6436	1834	9017	542	638	1155	7800
1995-96	10172	7291	1847	9721	451	783	1284	8090
1996-97	11448	7826	2463	11102	345	985	1507	9020
1997-98	11332	7528	2556	10956	376	456	1107	7500
1998-99	12105	8568	2432	11782	323	653	874	7010
1999-2000	13065	9650	2583	12987	78	605	1304	7640
2000-01	13295	9669	2695	13195	100	563	1383	8170
2001-02	13298	9437	2726	13150	148	805	722	9270
2002-03	12329	9188	2468	12246	83	712	1038	10650
2003-04	13193	9114	2790	13050	143	1022	1407	9280
2004-05	13057	9043	3010	12922	135	836	2075	8230
2005-06 (P)	12998	8857	3210	12880	118	825	1499	8180
2006-07 (P)	14443	9697	3371	14238	205	1047	1814	8400

Source: Government of Haryana (2007). *Economic Survey of Haryana 2006-07*, Table 3.2, p.29 and Annexure-3.2, p.134.

Table 1.19 shows the changes in the gross area sown (as percentage of total cropped area) under foodgrain crops and commercial crops, in Haryana. While 78 per cent of the total cropped area in the State was under foodgrain crops in 1970-71, it declined to about 65.60 per cent by 2004-05. Consequently the gross area sown under commercial crops increased significantly from 10.15 per cent in 1970-71 to 22.90 per cent in 2004-05.

A remarkable increase in foodgrains production is visible in Haryana since 1970-71. Production of total foodgrains increased form 47.71 lakh tonnes in 1970-71 to 144.43 lakh tonnes in 2006-07. Wheat and rice played a major role in pushing up the agriculture production. The production of rice, which was 4.60 lakh tonnes in 1970-71, increased to 33.71 lakh tonnes in 2006-07. Similarly, the production of wheat increased from 23.42 lakh tonnes to 96.97 lakh tonnes; of oilseeds from 0.99 lakh tonnes to 10.47 lakh tonnes; and of cotton from 3.73 lakh bales to 18.14 lakh bales, over the same period. It can be noted from Table 1.20 that the production of sugarcane has been significantly declining since 2002-03 from 106.50 lakh tonnes to 81.80 lakh tonnes in 2005-06.

A true measure of performance of agricultural sector is the increase in productivity. Yield-index is a very useful tool in this regard. Table 1.21 depicts the increase in

TABLE 1.21

Index Numbers of Agriculture in Haryana

(Base: Triennium ending 1981-82=100)

Year	Area	Yield	Production
1	2	3	4
1970-71	92.87	96.84	86.88
1980-81	100.51	104.46	106.37
1981-82	107.74	99.5	106.37
1982-83	96.65	115.88	113.98
1983-84	105.06	108.14	114.68
1984-85	100.49	120.25	119.53
1985-86	103.36	132.75	141.50
1986-87	105.17	127.18	136.71
1987-88	86.46	120.20	112.61
1988-89	109.43	139.03	169.12
1989-90	105.70	143.06	162.56
1990-91	110.07	152.70	181.12
1991-92	103.49	152.31	179.12
1992-93	110.52	145.63	185.49
1993-94	109.22	149.50	190.86
1994-95	111.73	159.14	205.14
1995-96	114.45	146.17	195.01
1996-97	115.85	161.23	220.21
1997-98	117.09	138.95	188.23
1998-99	121.62	145.23	202.38
1999-2000	115.99	159.72	219.68
2000-01	116.32	161.53	222.73
2001-02	119.16	153.80	220.71
2002-03	112.46	191.16	214.98
2003-04	119.21	200.88	239.47
2004-05	120.57	201.55	243.01
2005-06 (P)	**121.09**	**188.88**	**228.71**

P: Provisional

Note: Indices are based on 20 selected crops.

Source: Government of Haryana (2007). *Economic Survey of Haryana 2006-07*, Annexure-1.5, p.127.

area, yield and production indices over-time. The production index increased from 106.37 in 1980-81 to 243.01 in 2004-05. But over the same period, as the area index shows, there was no marked increase in area. Apparently, the increase in production was entirely due to increase in yield. The yield index almost doubled over that period.

It is clear from Table 1.22 that the increase in production reflected a greater increase in non-food grains as compared to food grains, in relative terms. The non-foodgrains index increased from 104.72 in 1980-81 to 319.53 in 2004-05, and the index of foodgrains increased from 107.02 in 1980-81 to 212.84 in 2004-05. And, within foodgrains, the index of cereals grew up sharply from 103.89 in 1980-81 to 244.25 in 2004-05 and of pulses declined steeply from 125.54 in 1980-81 to 27.05 in 2004-05.

As a result of higher production of foodgrains, the State of Haryana is one of the largest contributors of foodgrains to the central pool. As is clear from Table 1.23, since 2002-03 the contribution of Haryana in the procurement of wheat has been more than 30 per cent of the total procurement made in the country and it remains next only to Punjab whose share has been more than 55 per cent. Similarly, Haryana has also been significantly contributing in the procurement of rice in the country. In the year 2004-05, Haryana contributed 16.62 lakh tonnes of rice to the central pool.

As can be seen from Table 1.25, whereas the all-India average yield per hectare in respect of wheat and rice during 2004-05 was 2718 kilograms and 2026 kilograms, respectively, in Haryana the corresponding yield was 3901 and 2939 kilograms, respectively.

Table 1.26 presents an impressive picture of Haryana's performance in the sphere of level and growth of crop-yield *vis-à-vis* other States. During 1962-1965, Haryana's yield level in terms of rupee yield value per hectare was quite low and in this respect it ranked at the 8th place. During 1970-1973, it improved its position to figure at

TABLE 1.22

Index Numbers of Agricultural Production in Haryana

(Base: Triennium ending 1981-82=100)

Year	*Cereals*	*Pulses*	*Total Foodgrains*	*Oil Seeds*	*Fibres*	*Miscellaneous*	*Total Non-Foodgrains*	*All Commodities*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1980-81	103.89	125.54	107.02	136.34	100.87	95.44	104.72	106.37
1981-82	107.19	87.48	104.34	109.77	107.72	116.00	111.52	106.37
1982-83	119.96	78.85	114.02	85.98	131.96	107.59	113.89	113.98
1983-84	123.60	88.01	118.45	119.55	89.15	114.89	105.11	114.68
1984-85	122.64	88.17	117.66	222.62	107.59	100.10	124.28	119.53
1985-86	141.17	169.33	145.24	209.67	131.12	100.80	132.02	141.50
1986-87	135.66	133.64	132.48	166.54	157.31	129.74	147.42	136.71
1987-88	118.65	19.92	104.37	243.70	119.61	101.62	133.49	112.61
1988-89	168.36	162.56	167.52	354.09	145.79	125.44	173.18	169.12
1989-90	157.04	99.96	148.79	317.92	202.96	142.31	197.49	162.56
1990-91	171.18	127.76	164.90	466.45	197.35	145.92	222.27	181.12
1991-92	167.43	56.05	151.33	486.24	230.11	171.01	249.60	179.12
1992-93	189.35	70.85	172.22	380.74	240.48	131.28	219.15	185.49
1993-94	185.77	108.46	174.59	585.28	193.20	124.52	232.11	190.86
1994-95	198.07	118.36	186.54	588.561	235.54	129.85	252.30	205.14
1995-96	185.39	102.95	173.74	534.97	232.55	148.53	249.63	195.01
1996-97	210.32	76.09	190.91	655.45	273.96	165.56	294.50	220.21
1997-98	206.96	85.68	189.42	270.90	201.80	133.41	185.21	188.23
1998-99	223.99	83.73	203.71	451.11	159.96	133.35	199.01	202.38
1999-2000	247.37	17.48	214.13	436.89	239.86	143.76	233.76	219.68
2000-01	250.94	22.61	217.93	410.09	249.03	148.58	234.92	222.73
2001-02	249.82	34.80	218.73	585.83	130.18	171.19	225.73	220.71
2002-03	233.08	12.99	201.25	512.82	194.66	195.47	249.79	214.98
2003-04	247.41	28.75	215.79	706.51	255.99	174.29	299.54	239.47
2004-05	244.25	27.05	212.84	603.91	370.92	151.25	319.53	243.01
2005-06 (P)	**242.95**	**22.03**	**211.01**	**581.18**	**262.93**	**156.97**	**273.60**	**228.71**

Note: P : Provisional
Source: Government of Haryana (2007). *Economic Survey of Haryana 2006-07*, Annexure-1.6, p.128.

TABLE 1.23

Procurement of Wheat

(Lakh tonnes)

States	Quantity (Lakh tonnes)					Percentage Share				
	2002-03	2003-04	2004-05	2005-06	2006-07	2002-03	2003-04	2004-05	2005-06	2006-07*
Bihar	0.41	0.01	0.15	45.30	-	0.22	0.01	0.09	23.5	-
Haryana	**58.88**	**51.22**	**51.15**	**45.29**	**22.29**	**30.90**	**32.42**	**30.46**	**23.45**	**24.16**
Himachal Pradesh	0.02	0.01	0.00	0.00	-	0.01	0.01	0.00	0.0	-
Madhya Pradesh	4.38	1.88	3.49	4.80	0.00	2.30	1.19	2.08	2.5	0.00
Punjab	98.80	89.38	92.40	90.10	69.46	51.85	56.57	55.02	46.7	75.3
Rajasthan	4.61	2.59	2.79	1.60	0.02	2.42	1.64	1.66	0.8	0.00
Uttranchal	1.84	0.67	0.54	0.40	0.00	0.97	0.42	0.32	0.2	0.00
Uttar Pradesh	21.10	12.13	17.41	5.60	0.49	11.07	7.68	10.37	2.9	0.5
Delhi	0.34	0.12	0.02	0.02	-	0.18	0.08	0.01	0.0	-
Total	190.54	158.01	167.95	193.11	92.26	100.00	100.00	100.00	100.0	-

Note: * : As on November 30, 2006.
Source: Compiled from *Economic Survey 2004-05*, Table 5.16, p. 99; *Economic Survey 2005-06*, Tables 5.15, p.94, and *Economic Survey 2006-07*, Table 5.16, p.101, Government of India, New Delhi.

TABLE 1.24

Procurement of Rice

(Lakh tonnes)

States	Quantity (Lakh Tonnes)					Percentage Share				
	2001-02	2002-03	2003-04	2004-05	2005-06	2001-02	2002-03	2003-04	2004-05	2005-06
Andhra Pradesh	64.26	26.35	42.30	39.04	49.72	29.04	16.04	18.53	15.82	18.00
Bihar	0.89	1.59	3.63	3.43	5.24	0.40	0.97	1.59	1.39	1.90
Chhattisgarh	19.21	12.91	23.74	28.37	32.65	8.68	7.86	10.40	11.49	11.80
Haryana	**14.84**	**13.24**	**13.34**	**16.62**	**20.54**	**6.71**	**8.06**	**5.84**	**6.73**	**7.40**
Maharashtra	1.29	1.52	3.08	2.05	1.94	0.58	0.93	1.35	0.83	0.70
Orissa	12.53	8.90	13.73	15.90	17.85	5.66	5.42	6.02	6.44	6.50
Punjab	72.83	79.40	86.62	91.06	88.55	32.91	48.35	37.94	36.89	32.00
Tamil Nadu	8.52	1.07	2.07	6.52	9.26	3.85	0.65	0.91	2.64	3.30
Uttar Pradesh	19.36	13.60	25.54	29.71	31.51	8.75	8.28	11.19	12.04	11.40
West Bengal	0.48	1.26	9.25	9.44	12.75	0.22	0.77	4.05	3.82	4.60
Others	7.08	6.39	4.98	4.69	6.55	3.20	2.67	2.18	1.9	2.40
Total	221.29	164.23	228.28	246.83	276.56	100.00	100.00	100.00	100.00	100.00

Source: Compiled from *Economic Survey 2004-05*, Table 5.17, p. 100; *Economic Survey 2005-06*, Table 5.14, p. 93, and *Economic Survey 2006-07*, Table 5.15, p.100, Government of India, New Delhi.

TABLE 1.25

Average Yield of Principal Crops

(Kgs. Per hectare)

Year	Haryana		India	
	Wheat	Rice	Wheat	Rice
1	2	3	4	5
1990-91	3479	2775	2281	1740
1995-96	3697	2225	2483	1797
1996-97	3880	2964	2679	1882
1997-98	3660	2797	2485	1900
1998-99	3916	2239	2590	1921
1999-2000	4165	2385	2778	1986
2000-01	4106	2557	2708	1901
2001-02	4103	2652	2762	2079
2002-03	4053	2724	2610	1744
2003-04	3937	2749	2713	2077
2004-05	3901	2939	2718	2026
2005-06*	3844	3051	N.A.	N.A.
2006-07*	4100	3238	N.A.	N.A.

Note: * : Provisional
Source: Government of Haryana (2007). *Economic Survey of Haryana 2006-07*, p.30.

the 6th place and it continued to be there for quite some time. During 1992-1995, its position improved to 4th place. In order to achieve this yield level over the period 1962-1995, it surpassed all other States in terms of annual compound growth rate of yield of 3.21 per cent.

Table 1.27 shows the percentage of area irrigated and sown in the State of Haryana. The gross area irrigated as percentage of gross area sown has increased from 37.7 per cent in 1966-67 to 84.6 per cent in 2004-05. As a result of this, the area sown more than once (during a year) as percentage of area sown has also increased from 34.4 per cent in 1966-67 to 82.2 per cent in 2004-05. Cropping intensity in the state has increased from 139.0 in 1970-71 to 182.2 during 2004-05.

Though a fair degree of drought proofing has been done in the State, some of the crops grown in rainfed areas still remain vulnerable to vagaries of monsoon. In

TABLE 1.26

State and Region-wise Levels and Growth of Crop Yield

(At 1990-1993 Constant Prices)

Sr. No.	State	Average Value of Yield (Rs./Hectare)				Per Cent Annual Compound Growth Rate			
		1962-1965	1970-1973	1980-1983	1992-1995	1962-1973	1970-1983	1980-1995	1962-1995
1.	**Haryana**	**3927.21**	**5090.01**	**6229.13**	**10128.73**	**3.3**	**2.04**	**4.13**	**3.21**
2.	Himachal Pradesh	3048.15	3733.76	3917.69	5195.63	2.57	0.48	2.38	1.79
3.	Jammu & Kashmir	2986.95	4481.4	5758.75	5567.01	5.2	2.54	-0.28	2.1
4.	Punjab	5395.62	7476.29	9707.65	13597.22	4.16	2.65	2.85	3.13
5.	Uttar Pradesh	3970.1	4589.98	5805.13	8656.2	1.83	2.38	3.39	2.63
6.	Assam	5727.97	6241.2	6906.69	8196.82	1.08	1.02	1.44	1.2
7.	Bihar	3679.55	4009.73	4048.56	5678.08	1.08	0.1	2.86	1.46
8.	Orissa	4114.37	4072.7	4374.84	5979.16	-0.13	0.72	2.64	1.25
9.	West Bengal	5074.57	5614.56	5943.81	9958.45	1.27	0.57	4.39	2.27
10.	Gujarat	3673.01	4326.57	5693.43	7460.09	2.07	2.78	2.28	2.39
11.	Madhya Pradesh	2603.49	2835.86	3069.65	4773.12	1.07	0.8	3.75	2.04
12.	Maharashtra	2898.61	2343.57	3794.68	5176.94	-2.62	4.94	2.62	1.95
13.	Rajasthan	1740.45	2217.1	2334.77	3715.22	3.07	0.52	3.95	2.56
14.	Andhra Pradesh	4064.96	4363.05	6276.23	9390.64	0.89	3.7	3.41	2.83
15.	Karnataka	3207.56	4267.23	4989.92	6969.7	3.63	1.58	2.82	2.62
16.	Kerala	11375.65	12957.56	12333.85	15625.96	1.64	-0.49	1.99	1.06
17.	Tamil Nadu	6689.49	7889.75	8756.47	14073.94	2.1	1.03	4.03	2.51
	All India	3738.19	4256.79	5090.42	7388.05	1.64	1.8	3.15	2.3

Source: *Tenth Five Year Plan 2002-2007*, Volume III, annexure 3.4, p. 78, Planning Commission, Government of India, New Delhi.

TABLE 1.27

Percentage of Area Irrigated and Sown

Year	Percentage of Net Area Irrigated to Net Area Sown	Percentage of Gross Area Irrigated to Gross Area Sown	Percentage of Area Sown More than Once to Net Area Sown
1	2	3	4
1966-67	37.8	37.7	34.4
1970-71	43.0	45.0	39.0
1975-76	48.4	50.1	50.4
1980-81	59.2	60.6	51.6
1985-86	62.2	65.7	55.0
1990-91	72.7	71.6	65.6
1995-96	77.0	78.2	66.6
2000-01	83.9	85.4	73.4
2001-02	82.4	84.1	77.2
2002-03	85.8	86.2	74.5
2003-04	84.0	83.6	80.8
2004-05	**83.7**	**84.6**	**82.2**

Source: Director, Land Records, Government of Haryana, Chandigarh.

order to provide better risk management in agriculture, State government has implemented National Agriculture insurance Scheme from *kharif* 2004 onwards. High-risk crops like *bajra*, cotton, maize and *arhar* were covered in *kharif* season and gram and mustard during *rabi* season under the scheme. The scheme is compulsory for loanee farmers and optional for non-loanee farmers. A provision of 10 per cent subsidy has been made for small and marginal farmers under the scheme.

The State government has implemented Varsha Bima Scheme on pilot basis in four districts namely, Ambala, Karnal, Hisar and Rohtak for paddy, cotton, *bajra* and maize crops from *kharif* 2006. It has also supported weather insurance on wheat crop on the basis of loss of production due to increase or decrease of temperature and Normalised Differential Vegetative Index (NDVI) in three districts namely, Ambala, Karnal, and Rohtak during *rabi* 2005-06 and 2006-07 by providing 10 per cent subsidy to small and marginal farmers.

Zero Till technology has proved very useful for timely sowing of crops, saving of energy as well as reduction in cost of cultivation by Rs.2000 to Rs.2500 per hectare. Wheat crop has been sown in an area of 15 lakh acres with this technology during the year 2006-07. During the year 2005-06, 1267 Zero Till Seed-cum-Fertiliser Drills, 1484 Rotavators, 68 Potato Planters have been provided to the farmers on 25 per cent subsidy. Further, about 1500 Zero Till Seed-cum-Fertiliser Drill will be provided to the farmers on 25 per cent subsidy during the year 2006-07. In addition, 3000 Rotavators, 50 Bed Planters, 100 Potato Planters, 70 Potato Diggers and 11 Self-Propelled Weeders will also be provided to the farmers on 25 per cent subsidy. The

government is also promoting the installation of Bio-gas plants in the State. During the year 2006-07, a total number of 1000 Bio-gas plants were installed by providing the subsidy of Rs.2700 for general category and Rs.3500 for scheduled caste (SC), small and marginal farmers for each Bio-gas plant.

The State government has also been running other innovative programmes like Toll Free Agricultural Help-line in Chaudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar; Regional Research Stations at Uchani (Karnal) and Bawal (Rewari), wherein the farmers can contact the specialists of CCSHAU, Hisar over telephone and seek solution to their problems. A new service has also been introduced to do SMS on the particular Cell No 9815862026 to solve the problems of the farmers. Farmer Kisan Clubs have been constituted in every district of the State. The members of Farmer Kisan Clubs are meeting frequently to plan their strategies and to discuss various problems relating to agriculture and allied sectors. Kisan Purskar is also awarded at the state as well as district level with the prize money of Rs.1 lakh and Rs.25,000, respectively for those farmers who have made the outstanding contribution in agricultural sector. In addition, there is a close rapport between the extension workers and farmers.

Fertiliser is one of the most important components of new technology. It has played a very important role in enhancing agricultural production and ushering in green revolution in the State. Since the introduction of high yielding varieties, the consumption of chemical fertilisers has been increasing steadily. As is clear from Tables 1.28 and 1.29, the consumption of fertilisers per hectare of gross area sown in Haryana has increased manyfold, from 42 kgs per hectare in 1980-81 to 170 kilograms per hectare in 2006-07. Total consumption of NPK (Nutrients) which was almost 231 thousand tonnes in 1980-81 rose to 1128.67 thousand tonnes in 2005-06.

As regards the per hectare consumption of NPK fertiliser, Haryana comes next only to Punjab in the country. The per hectare consumption of NPK fertiliser in Punjab during the year 2004-05 was 210.06 kilograms while it was 166.72 kilograms per hectare in Haryana. It stood in sharp contrast to the all-India average of just 104.50 kilograms.

In order to promote organic farming system in the state, a scheme of vermicompost has been formulated. This scheme is in operation for last two years in the state. Under this scheme, financial assistance of Rs.1200 or 25 per cent subsidy per unit of size 10'x3'x1.5', whichever is less, on the production and use of vermicompost is provided to the farmer. The State has made a budget provision if Rs.24.00 lakh during the year 2005-06 for covering 2000 units of vermicompost in the State. Against these projections, 2000 unit have been set up and an amount of Rs.24 lakh has been released as subsidy to the farmers.

TABLE 1.28

Consumption of Fertilisers

Year	*Consumption of Fertilisers (kgs. per hectare)*
1980-81	42
1990-91	99
1995-96	121
1996-97	125
1997-98	136
1998-99	133
1999-2000	150
2000-01	152
2001-02	156
2002-03	163
2003-04	158
2004-05	174
2005-06	162
2006-07*	**170**

Note: * : Provisional

Source: Government of Haryana (2007). *Economic Survey of Haryana 2006-2007*, p.31.

TABLE 1.29

Fertiliser Consumption in Haryana (Nutrients)

(In Tonnes)

Year	*Consumption*			
	N	*P*	*K*	*Total*
1	*2*	*3*	*4*	*5*
1966-67	12626	574	147	13347
1970-71	60972	6860	2228	70060
1975-76	86308	8322	2285	96915
1980-81	187385	31340	12098	230823
1985-86	296394	69639	6154	372187
1990-91	443245	138005	5042	586292
1995-96	587045	133582	3160	723787
1999-2000	670386	226206	5207	901799
2000-01	714308	206319	9668	930295
2001-02	742049	232161	9750	983960
2002-03	720494	250806	12298	983598
2003-04	761770	230252	17086	1009108
2004-05	845529	262272	16887	1124688
2005-06	**847427**	**252570**	**28674**	**1128671**

Note: For the years 1974-75 to 1980-81 fertiliser year has been taken as February to January.

N: Nitrogenous P: Phosphatic K: Potassic

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 12.17, p. 255. Haryana: Directorate of Agriculture.

TABLE 1.30

Per Hectare Fertiliser Consumption of NPK Fertilisers during 2004-05 and 2005-06 (in Kg.)

(Based on 2004-05 Provisional Gross Cropped Area)

(Kgs.)

Sr. No.	*State/U.T.*	*2004-05*	*2003-04*
1.	Andhra Pradesh	203.61	158.57
2.	Karnataka	117.34	99.51
3.	Kerala	57.00	56.74
4.	Tamil Nadu	183.67	159.07
5.	Pondicherry	1100.26	1086.30
6.	Andaman & Nicobar Island	12.63	10.92
7.	Gujarat	111.07	99.49
8.	Madhya Pradesh	47.13	53.42
9.	Chhattisgarh	67.36	65.19
10.	Maharashtra	84.52	74.68
11.	Rajasthan	36.29	31.33
12.	Goa	32.66	34.08
13.	Dadra and Nagar Havali	43.97	41.25
14.	**Haryana**	**166.72**	**155.10**
15.	Himachal Pradesh	48.75	47.00
16.	Jammu and Kashmir	81.31	66.30
17.	Punjab	210.06	194.56
18.	Uttar Pradesh	140.37	134.13
19.	Delhi	10.51	13.08
20.	Uttranchal	94.24	88.93
21.	Bihar	152.32	99.78
22.	Jharkhand	67.61	62.10
23.	Orissa	57.33	51.59
24.	West Bengal	127.50	129.73
25.	Arunachal Pradesh	2.94	2.98
26.	Assam	49.26	41.25
27.	Tripura	39.21	34.74
28.	Manipur	59.84	85.97
29.	Meghalaya	17.98	18.05
30.	Nagaland	1.50	1.46
31.	Mizoram	25.45	5.85
32.	Sikkim	2.83	5.01
	All India	104.50	94.52

Source: *Economic Survey 2006-07*, Table 8.18, p.175. New Delhi: Government of India.

To popularise the bio-fertiliser amongst the farmers to enhance/supplement the nutrient requirement of crop and to increase the use efficiency of chemical fertilisers, under the INM scheme of MMM Programme 2005-06, the demonstration on the use of bio-fertiliser in wheat crop has been organised on the farmer field and an area of 6000 hectares has been covered.

Marketing and storage facilities are the crucial components of post-harvest technology. The Haryana State Agricultural Marketing Board provides improved and easily accessible market facilities for sale of produce to the farmers in a regulated manner. At the time of creation of this Board in 1969, there were only 58 principal yards and 60 sub-yards in the state. At present, the Board has 106 principal yards and 178 Sub-Yards and 175 purchase centres spread over the State. Thus, the farmers have regular *mandis* all over the State and due to this network of *mandis*, the farmers have to cover only a distance of 6 to 8 kilometres to sell their produce. As on 31st March 2005 the total storage capacity of foodgrains in the State was 34.13 lakh tonnes in covered godowns and 15.33 lakh tonnes in open godowns.

The Central Government circulated a Model Act to all the State Governments for carrying out amendments in their respective APMC Acts. After careful study of this Model Act it was found that contract farming, direct marketing and setting up of markets by private entrepreneurs and in cooperative sectors are the thrust areas for reforms. Keeping in view this aspect, a bill has already been passed by the Haryana Vidhan Sabha and notified on 12 December 2005 thereby introducing contract farming system in Haryana.

1.2.2 Horticulture

The importance of Horticulture in improving the productivity of land, generating employment, improving economic conditions of the farmers and entrepreneurs, enhancing exports, and above all, providing nutritional security to the people, is widely acknowledged. Horticulture sector includes fruits, vegetables, spices, floriculture, among others. Haryana is emerging very fast as one of the leading States in the field of Horticulture. The main thrust is being given for the development on floriculture and mushrooms apart from fruits and vegetables. With the adoption of these vocations more employment opportunities are being generated resulting in upliftment of the farming community. The area and production under fruits stood at 12,640 hectares and 99.8 thousand tonnes, respectively, during 1990-91. These figures have increased to 27,103 hectares and 2,36,200 tonnes, respectively, during 2005-06. Likewise, the area under vegetables has also increased from 55,360 hectares in 1990-91 to 2,32,660 hectares in 2005-06. The production of vegetables increased from 8,02,240 tonnes in 1990-91 to 29,84,800 tonnes in 2005-06. The commercial flower cultivation has also been taken up at a large scale. The area under floriculture has increased from 50 hectares during 1990-91 to 5418 hectares during 2005-2006. This period also witnessed remarkable growth in mushroom production, which increased from 850 tonnes in 1990-91 to 6044 tonnes in 2005-06.

For raising disease free nursery and production of off-season vegetables, the State is popularising green house

production technology amongst the farmers. As a result the green houses have been set up in the area of 1,07,500 sqm. in the State till 2005-06. In addition to this, during the year 2005-06, 2104 hectares have been brought under medicinal and aromatic plants in the state.

1.2.3 Animal Husbandry and Dairing

The livestock sector by contributing milk, eggs and meat to the food basket plays a critical role in fulfilling the animal protein requirement of the people. Livestock is one of the important components of primary sector of the economy and there still exists a substantial scope for growth in this sector. The State had more than 15 lakhs cattle in the year 2003, more than 60 lakhs buffaloes and about 25 thousand horses and ponies. The number of buffaloes has increased from 43.73 lakhs in 1992 to 48.22 lakh in 1997, and 60.34 lakhs in 2003. But as is clear from Table 1.31 the number of horses, donkeys, mules, sheep, goats, camels, pigs, dogs etc. has decreased significantly while the number of poultry has increased by almost 150 per cent during the period 1997-2003.

The State Government is laying emphasis on increasing the production capacity of the animal through genetic improvement of the animals. As to minimise production losses, efficient health cover facilities are being given through the veterinary institutions. As on 31st December 2005, 673 veterinary hospitals, 999 veterinary dispensaries, 745 stockmen centres/key village centres, 60 regional artificial insemination centres and 128 other Veterniary Institutions were functioning in the State.

Great stress is also being laid on the improvement of breed of the cattle and buffaloes to increase the milk yield through artificial insemination with exotic and other improved semen. Haryana Livestock Development Board has been set up to improve the livestock breed. In order to improve the genetic stock, special attention is being given towards preservation, multiplication and improvement of indigenous germplasm such as *Murrah* breed of buffaloes and *Hariana* and *Sahiwal* breeds of cows. The amount of Rs.100 lakh has been specifically earmarked for improving *Murrah* germplasm during 2007-08. Under this programme, animals of better quality will be identified with an ultimate objective of establishing a gene pool of this unique germplasm for future breeding. Further efforts are being made to introduce latest technology in order to maximise

TABLE 1.31

Live Stock and Poultry in Haryana

	1992	*1997*	*2003*
Cattle	21,33,500	23,99,800	15,40,200
Buffaloes	43,72,900	48,22,400	60,34,800
Horses and Ponies	49,700	49,100	24,800
Donkeys	73,800	63,400	8,300
Mules	25,600	34,500	13,600
Sheep	10,43,800	12,93,300	6,33,000
Goats	7,99,400	7,97,200	4,60,200
Camels	1,28,300	96,200	50,000
Pigs	5,17,300	6,75,100	1,19,800
Dogs	8,02,800	8,10,500	5,59,000
Total	99,47,100	1,10,41,500	94,43,700
Poultry	**85,80,200**	**92,22,900**	**1,36,18,900**

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 14.1, pp. 280-281.

TABLE 1.32

Veterinary Institutions in Haryana

Year	*CVH*	*RAIC*	*CVD*	*SMC /KVC*	*Sheep Wool Extension Centres*	*Poultry Farms PEC/ IDB Poultry-cum-piggery Centres*	*Piggery Farms*	*Horse Breeding Centre*	*Gosadan*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1966-67	125	17	66	97	23	17	-	-	1
1970-71	154	37	71	337	25	13	2	-	2
1975-76	180	49	105	528	25	18	2	1	2
1980-81	301	60	273	765	29	22	2	1	1
1985-86	376	60	380	828	57	21	2	1	1
1990-91	495	60	679	777	59	22	2	1	2
1995-96	546	60	859	751	59	22	2	1	2
2000-01	579	60	853	751	59	22	2	1	2
2002-03	620	60	864	749	59	22	2	1	2
2003-04	620	60	864	749	59	22	2	1	2
2004-05	621	60	866	748	59	35	2	1	2
2005-06	**673**	**60**	**999**	**745**	**59**	**35**	**2**	**1**	**2**

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 14.13, p. 298.

TABLE 1.33

Staff of Veterinary Institutions in Haryana

Year	*Number of Veterinary Surgeons*	*Number of Animal Husbandry Assistants*	*Number of Compounders of Provincialised Dispensaries*	*Number of VLDA*	*Number of Dressers and Farriers*	*Other Class IV*
1	*2*	*3*	*4*	*5*	*6*	*7*
1966-67	115	9	79	77	23	-
1970-71	154	2	120	14	30	-
1975-76	320	6	283	763	23	-
1980-81	322	4	312	907	22	2546
1985-86	425	11	717	1307	19	2395
1990-91	548	-	-	2665	20	4018
1995-96	634	-	-	2736	23	4572
2000-01	731	-	-	2738	23	4784
2002-03	780	-	-	2738	23	4842
2003-04	752	-	-	2848	23	5157
2004-05	752	-	-	2848	23	4979
2005-06	**697**	**-**	**-**	**2848**	**23**	**4538**

Note: i) From the year 1975-76 onwards, Stock Assistants working in all the schemes have been included.
ii) Compounders merged as VLDA.
VLDA: Veterinary and Livestock Development Assistant.

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 14.14, p. 299.

productivity in the shortest possible time. A comprehensive programme for control of foot and mouth diseases is also being implemented in the State.

The Livestock Insurance Scheme with 50 per cent financial contribution by Government of India and 25 per cent contribution by State Government is being implemented as a pilot project in five districts of Bhiwani, Hisar, Jhajjar, Jind and Rohtak benefiting 1.2 lakh farmers in addition to providing self employment to about 400 youths.

Haryana is the milk pail of India and is famous for its breed of "Hariana Cows" and "Murrah Buffaloes". To encourage the breeders to maintain high yielding buffaloes and for identification of quality of germplasm, an incentive scheme has been introduced. Incentive money ranging from Rs.1000 to Rs.6000 is given under this scheme. Further, to give protection to these animals in selected five districts (Rohtak, Jhajjar, Bhiwani, Hisar and Jind) an insurance scheme has been started with 50:25:25 premium from Government of India, State Government and breeders, respectively. Another scheme of livestock insurance in remaining districts, purely funded by the State Government, is also available in the State. Under this scheme 50 per cent premium is paid by the state and 50 per cent by the beneficiaries. The Haryana Veterinary Vaccines Institute (HVVI) is producing vaccines of very high quality which are used not only in the State but also supplied to other States, as well.

The milk production in the State stood at 52.22 lakh metric tonnes in 2004-05 as against 52.21 lakh metric tonnes in 2003-04. The per capita availability of milk in the State has increased from 656 grams per day in 2002-2003 to 660 grams per day in 2005-06. The Haryana state with per capita per day milk availability of 660 grams is at the second highest position in the country against the national average of 232 grams.

With the increased production of milk in the State, the procurement of milk has increased from 283.5 lakh litres in 1978-79 to 1468.28 lakh litres in 2005-06. Though the number of milk plants during this period has remained 5, the number of Chilling Centres has increased from 6 in 1978-79 to 27 by 2004-05. Thus, the capacity of chilling centres per day has increased from 75,000 litres to 3,33,000 litres. The capacity of milk plants has also increased from 2.35 lakh litres per day in 1978-79 to 4.7 lakh litres per day by 1997-98 and since then it has remained the same.

TABLE 1.34

Per Capita Availability of Milk Per Day in Haryana

Year	*Per capita availability of milk per day (grams)*
1	*2*
1966-67	352
1977-78	412
1978-79	414
1979-80	440
1980-81	484
1981-82	475
1982-83	492
1983-84	482
1984-85	468
1985-86	478
1986-87	478
1987-88	456
1988-89	486
1989-90	539
1990-91	571
1991-92	579
1992-93	601
1993-94	602
1994-95	620
1995-96	602
1996-97	611
1997-98	621
1998-99	626
1999-2000	631
2000-01	640
2001-02	646
2002-03	656
2003-04	660
2004-05	660
2005-06	**660**

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 14.25, p. 311. Haryana: Directorate of Animal Husbandry and Dairying.

TABLE 1.35

Procurement of Milk, Number of Milk Plants and Milk Chilling Centres in Haryana

Year	*Milk Procurement* (Lac litres)*	*Number of Milk Plants*	*Capacity (Lac litres) per Day*	*Number of Milk Chilling Centres*	*Capacity (lac litres) per Day*
1	*2*	*3*	*4*	*5*	*6*
1978-79	283.5	5	2.35	6	0.75
1979-80	292.5	5	2.35	10	1.45
1980-81	211.8	5	2.35	10	1.45
1985-86	598.5	5	3.15	16	2.70
1990-91	341.5	5	3.65	12	2.30
1991-92	405.6	6	3.65	9	1.70
1992-93	473.3	6	3.65	9	1.70
1993-94	438.2	6	4.15	9	1.70
1994-95	372.7	6	4.15	9	1.70
1995-96	434.1	6	5.15	9	1.70
1996-97	492.4	5	5.15	8	1.66
1997-98	720.6	6	4.70	12	1.80
1998-99	795.0	5	4.70	13	2.20
1999-2000	918.3	5	4.70	16	2.45
2000-01	1009.3	5	4.70	19	3.05
2001-02	1237.1	5	4.70	23	3.00
2002-03	1355.6	5	4.70	25	3.10
2003-04	1209.1	5	4.70	25	3.10
2004-05	1331.8	5	4.70	27	3.33
2005-06	**1468.28**	**5**	**4.70**	**27**	**3.33**

Note: * Milk Produced through societies only.
Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 14.24, p. 310.

The egg production in the State has increased from 11,668 lakh in 2001-02 to 15,125 lakh in 2005-06. But the production of wool decreased from 24.61 lakh kilograms in 2001-02 to 11.36 lakh kilograms in 2005-06.

TABLE 1.36

Production of Milk, Eggs and Wool in Haryana

Item	*Unit*	*Achievements*				
		2001-2002	*2002-2003*	*2003-2004*	*2004-2005*	*2005-2006*
1	*2*	*3*	*4*	*5*	*6*	*7*
Milk	000 Tonnes	4977	5125	5221	5222	5299
Eggs	Lakh Nos.	11668	12508	12802	14816	15125
Wool	000 Kgs.	2461	2498	2518	1304	1136

Source: Government of Haryana (2007). *Economic Survey of Haryana 2006-07*, p.25.

Fisheries

In spite of pre-dominant vegetarian population in the State, Fisheries has made significant progress in the last two decades. At the time of creation of Haryana in 1966, only 58 hectare of village ponds were under fish culture. The quality fish seed production stood at 1.5 lakh/year and the fish production was 600 metric tonnes/year. By the end of the year 2004-05; 8882.17 hectares area was under fish culture and total fish production was 42,050 metric tonnes.

Rivers, canals and drains are the main sources to capture fisheries in Haryana. Although, there are 14 rivers and rivulets, yet the Yamuna and Ghaggar rivers are the only potential sources from fisheries point of view. The remaining rivulets contribute water to these two rivers. There are 94 drains in the State which collect the over-flow water from fields and join rivulets and rivers. The State has 3 main canal systems, namely, Western Jamuna Canal System, Bhakra Canal System and Lift Canal System. It is reported that 55 species of fish are available in these natural water bodies. Fish production from the natural water bodies is declining fast. Fisheries Department, Haryana regulates the fisheries in natural water bodies under Indian Fisheries Act 1897 and Punjab Fisheries Act 1914 and Haryana Fisheries Rule, 1996 framed thereunder. The present fish production from these waters is 120 kg. per kilometre per year.

The main sources of fisheries development in the state are given as under:

Sr. No.	*Item*	*Unit*	*Area*
1.	Ponds:		
	i) Perennial	Hectare	8,000
	ii) Seasonal	Hectare	2,000
2.	Marshy Land	Hectare	2,000
3.	Reservoirs	Hectare	900
4.	Micro Water Shed	Number	160
5.	Underground Saline Water	Kilometre Square	28,000
6.	Rivers	Kilometre	5,000
7.	Canals	Kilometre	13,800
8.	Drains	Kilometre	3,600
9.	Critically water logged area	Hectare	25,000

Source: Dircetor of Fisheries, Government of Haryana.

The fish farming activity in the state of Haryana is of recent origin. In the short span of less than three decades, the fish farming in the state has developed to a status of significance. Haryana stands 2nd in the average annual fish production per unit area in the country. The average annual fish production in the state is 4209 kg. per hectare against a national average of 2260 kg. The State has also achieved self-sufficiency in seed production of Indian Major Carp and Common Carp. At the time of creation of the State in November 1966, the total water area under fish farming was 58 hectare, which has increased to 8882.13 hectares by the end of March 2004. Likewise fish seed stocking has also increased from 1.5

lakh to 2470.6 lakh. The farmers of the districts adjoining Delhi have further evolved a new technique in fish marketing, that is, harvesting the fish at 600 to 700 gm. and carrying them in live condition to Delhi fish market, to get high price. The total fish production was 600 metric tonnes during the year 1966-67 which increased to 42,050 metric tonnes in 2004-05 in spite of depletion in fish population at natural water bodies.

Despite limitation of water resources in the state, Haryana has made notable progress. The main thrust of the State is to bring all available water bodies under fish culture by creating a class of fish farmers through hands on training and providing necessary technical and financial assistance. More than 80 per cent of the village ponds in the State have been brought under fish farming.

The main objectives and activities of the Fisheries Department of Haryana are as under:

- To manage and conserve the natural fisheries in rivers, canals, drains and other water bodies.
- To utilise available village ponds and tanks for fish farming.
- To provide technical and financial assistance to fish farmers through Fish Farmers Development Agencies.
- To create a class of trained fish farmers in the state.
- To increase the production of quality fish seeds of all species.
- To utilise unused, waste agricultural land for fish farming
- To create additional employment opportunity in rural area.

The present status and future vision of Haryana Fisheries are the following:

- Water area coverage from 11,000 hectares during 2005-06 to 16,000 hectares by the end of 2009-10.
- Increased fish seed production from 2,140 lakh during 2005-06 to 3,300 lakh by the end of 2009-10.
- Fish production from 48,000 metric tonnes during 2005-06 to 70,000 metric tonnes by the end of 2009-10.
- Fish productivity to be increased from 4,500 kg. during 2005-06 to 5,000 kg. per hectare per year by the end of 2009-10.

Employment Generation

i) Fish farmers from 11,010 during 2005-06 to 16,000 by 2009-10.

ii) Persons engaged in fisheries trade from 22,000 during 2005-06 to 32,000 by 2009-10.

New Programmes

1. *Fish Health Care*

Mortality rate to be reduced	2004-05	2005-06	2009-10
Egg to Seed	75%	70%	40%
Seed to Adult	60%	50%	30%

State level diagnostic laboratory at ARTI Hisar

Fish Healthcare Centers to be setup at each district headquarter – 20

Aquatic Polyclinic to be set up at every fish seed farm – 15

2. *Introduction of High Valued Fish Species*

Indian *Magur* and *Singhara* during 2005-06

Sol and *Singhi* during 2006-07

3. Opening two new seed farms at Mundri and Ottu
4. Diversification to Ornamental Fish

Four Hatcheries to be set at Saidpura district Karnal

5. *Marketing*

Present markets	Faridabad, Yamuna Nagar and Panipat
New markets during 2005-06	Gurgaon and Bahadurgarh
New markets during 2006-07	Hisar and Ambala

6. *Development of Cold Water Fisheries*

In the cold waters of upper reaches of river Yamuna and Shivalik Hills

7. *Awareness Camps*

One awareness camp in each district every month

The fish farming has increased manifold in the State in recent years. More than 80 per cent of the village ponds available in the State are under fish culture. Village *Panchayats* are earning more than Rs.300 lakh every year from leasing the village ponds for fish farming. In addition to this more than 1500 pond units have been constructed by the fish farmers in their own land. As the internal fish marketing infrastructure is not adequate, the fish farmers have to send their produce to neighbouring States and Delhi market for sale, thus incurring extra expenditure on packing and forwarding. It is, therefore, strengthening of the post harvest infrastructure in the State has become necessary so that the farmers may get remunerative prices.

In order to provide marketing support to fish producers the State has established three fish markets at Faridabad, Panipat and Yamuna Nagar. The superintending and supervision work of these three fish markets has been given to the Haryana State Agriculture Marketing Board. There is a provision of vehicles in these markets which are provided to fish farmers for transportation of their produce from pond site to the markets at the concessional rates. In order to further strengthen the marketing infrastructure in the State, two new fish markets are established at Bahadurgarh and

Gurgaon during 2006-07. There is also a proposal to establish two new fish markets at Hisar and Ambala.

Under the Centrally Sponsored Scheme, strengthening of post harvest infrastructure, the Government of India provides assistance to the government undertakings, NGOs/Cooperatives/Joint Sector/Assisted Sector/Private Sector for establishing marketing infrastructure in the State. The funding pattern of the scheme is as:

1. Hundred per cent grant (limited to Rs.1 crore) to government undertakings/corporations/federations.
2. 50 per cent grant (limited to Rs.0.50 crore) to NGOs/cooperatives/joint sector.
3. Twenty-five per cent grant (limited to 0.25 crore) to assisted sector/private sectors.

The following infrastructure can be created under this centrally sponsored scheme:

- Developing marketing infrastructure such as retail vending kiosks, aqua shops, insulated/refrigerated vehicles, mini trucks, auto rikshaws with ice box, motor cycles/bicycles with ice box, fish display cabinets, visi coolers, weighing scales, computer units and allied equipments.
- Any NGOs/Cooperatives Societies or Private Sector willing to establish fish markets may contact nearest office of the Fisheries Department for availing financial assistance.

The pond fish culture practice is being adopted by farmers in all the districts of the state. There are 4922 fish culture units having an area of more than 8760 hectares in the state. Out of these 3082 pond with 6584.44 hectare water area are village *panchayat* ponds. The ownership of these ponds is vested with the *Panchayat*. *Panchayat* leases out their ponds to the farmers for fish farming. These village ponds are generally visited by cattle for drinking water. The cattle release dung and urine in the pond. The organic water released by the cattle are recycled into manure and help in the production of plankton which is basic food for fish. Thus all the village fish culture ponds in Haryana are the good example of fish cum cattle farming. With the passage of time, the farmers have modified the technologies as per the need. Generally *Rohu, catla, mrigal* and common carp are used for culture. The stocking density is kept at 20,000 fish seed per hectare. Farmers have adopted the technique of multiple harvesting which give better returns. Government provides 20 per cent subsidy to general category while 25 per cent to scheduled caste fish farmers for excavation of new pond/renovation of old pond and fisheries inputs.

Fisheries Department of Haryana provides technical and financial assistance for integrated fish farming. The integrated fish farming practices utilise the waste from different components of the system *viz*. live stock, poultry, duckery, piggery and agriculture byproducts for fish production. 40-50 kg. of organic wastes are converted into 1 kg. of fish, while the pond silt is utilised as fertilisers for the fodder crops, which in turn is used to raise livestock. The system of integrated farming is very wide. The system provides meal, milk, eggs, fruits, vegetables, mushroom, fodder and grains in addition to fish. It utilises the pond dykes which otherwise remain un-utilised for the production of additional food and income to the farmer. The possible integrated farming systems are given below:

a)	Fish cum Agriculture System	b)	Fish cum Animal System
	Fish cum Paddy Culture		Fish cum Dairy
	Fish cum Water Chestnut		Fish cum Pig Farming
	Fish cum Papaya		Fish cum Rabbit Farming
	Fish cum Mulberry		Fish cum Poultry
	Fish cum Mushroom		Fish cum Duck Farming

Human Resources Development (HRD) is a critical input for sustainable utilisation of fisheries resources. Recognising the importance of HRD, a training Centre named Aquaculture Research and Training Institute (ARTI), Hisar was established under the World Bank project. As Haryana is a non-traditional fish farming State, HRD is of more importance for the State. State has taken steps to bring available water resources for economical utilisation. The main objective of the programme is to impart in service training of the departmental officers and official and hands-on training to fish farmers so as to increase their efficiency through training/refresher courses and study tours under the scheme. The plan schemes of education, training and extension and utilisation of Saline Ground Water have been merged with the scheme. A Fish Farmer Day is being celebrated at state level every year and participation of fish farmers of all districts is ensured. It is targeted to provide training to 230 departmental officers/ officials and fish farmers during the year at the Training Institute. Research programmes for fish biotechnology and bio-diversity are also proposed to be undertaken at the Institute.

There is a great potential of fish culture in the State. After Green and White Revolution, Haryana state is now on the threshold of Blue Revolution. Fish culture is also being accepted by the fish farmers of the State as subsidiary occupation along with agriculture. Farmers have also started construction of fish tanks in

their own waste land. The government is providing technical and financial assistance through Fish Farmers Development Agencies to the fish farmers which have been set up in all the districts of the State except Panchkula and Mewat. The fish production increased from 42,050.00 tonnes in 2004-2005 to 48,200.00 tonnes in 2005-06. 46,271.33 tonnes of fish have already been produced and 3085.39 lakh fish seed have been stocked upto 31st December 2006. However, it is targeted to produce 55,000 tonnes of fish by stocking of 3000 lakh fish seed during 2006-07. It is envisaged to produce 61000 tonnes fish by stocking 3300 lakh fish seed during the year 2007-08. As shown in Table 1.37, there are 25 fishery seed farms in the State. In order to promote pisciculture in the State, one new fish seed farm is being set up at village Ottu in Sirsa district.

To prevent the diseases in the fish, Heath Care Centers at districts, Aquatic Polyclinics at Farms and Diagnostic Laboratories at State level are also being set up. Hatchery of high valued *Magur* Fish is being constructed at Government Fish Seed Farm, Badkhal (Faridabad) and that of Ornamental Fish at Government Fish Seed Farm, Saidpura (Karnal). Two new fish markets are being set-up at Gurgaon and Bahadurgarh.

1.2.4 Rural Development

Rural development implies both economic betterment of people as well as greater social transformation. Increased participation of people in the rural development process, decentralisation of planning, better enforcement of land reforms and greater access to credit and inputs go a long way in providing the rural people with better prospects for economic development. Improvements in health, education, drinking water, energy supply, sanitation and housing coupled with attitudinal changes also facilitate their social development.

During the Fourth and Fifth Five Year Plan the expenditure on Rural Development in the state was 0.42 per cent and 1.50 per cent of the total expenditure, respectively. But during the Sixth, Seventh and Eighth Five Year Plans the expenditure in this sector increased to 2.95 per cent, 2.85 per cent, and 2.56 per cent, respectively. It further increased to 3.65 per cent during the Ninth Five Year Plan. But during the Tenth Five Year Plan the expenditure on rural development came down to 2.97 per cent. The approved outlay for rural development in the state during the Eleventh Five Year Plan has been increased to 3.62 per cent of the total expenditure.

TABLE 1.37

Location of Fishery Seed Farms in Haryana

(in Hectares)

Sr. No.	*Location of the Farm*	*Total Land Area*	*Total Water Area*
Government Farms			
1.	Jansui (Ambala)	1.00	0.94
2.	Sidpura (Karnal)	3.00	1.98
3.	Jyotisar (Kurukshetra)	14.60	6.93
4.	Rohat (Sonipat)	3.00	1.42
5.	Damadama (Gurgaon)	6.61	1.25
6.	Badhkal (Faridabad)	6.50	3.50
7.	Lisana (Rewari)	4.81	1.93
8.	Sampla (Rohtak)	6.44	3.24
9.	Kakroi (Sonipat)	4.52	2.31
10.	Jhajjar	4.00	1.42
11.	Tohana (Fatehabad)	4.20	1.60
12.	Hisar	21.80	7.17
13.	Dadupur (Yamuna Nagar)	0.60	0.08
14.	Mundri (Kaithal)	2.00	0.90
Private Farms			
1.	Dherdu (Kaithal)	2.00	1.80
2.	Bhutana (Karnal)	10.00	8.00
3.	Mandheri (Kurukshetra)	10.00	6.40
4.	Laloda (Fatehabad)	3.50	1.80
5.	Gochi (Jhajjar)	1.00	0.60
6.	Dabra (Hisar)	4.50	3.45
7.	Satrod (Hisar)	4.00	3.25
8.	Julani-Khera (Kaithal)	1.50	0.80
9.	Mauli (Panchkula)	1.00	0.60
10.	Majra (Jhajjar)	1.00	0.60
11.	Gagan Kheri (Hisar)	1.60	1.20

Source: Fisheries Department, Haryana.

As per the 2001 Census, 71 per cent of Haryana's population lives in rural areas. The sex ratio of Haryana's rural population, as per 2001 Census, was 867 as against the urban sex ratio of 847. The sex ratio of child population in the age group of 0-6 in rural Haryana was 824 as against 809 in urban areas. The sex ratio of rural literates is 572. The dependency ratio has declined from 937 in 1991 to 827 in 2001. All the villages in the State are electrified and linked with metalled roads.

The population below poverty line in rural Haryana has significantly declined from 26.62 per cent in 1993-94 to 13.41 per cent in 2004-05 as against all-India's average figure of 29.18 per cent (Dev and Ravi, 2007). The number of rural hospitals has increased from 3 in 1968 to 8 in 2002-03. The number of primary health centres has increased from 73 in 1968 to 367 in 2003-04. In addition, there are 33 dispensaries and 33 community health centres in rural areas presently. The

number of family welfare clinics in rural Haryana increased from 81 in 1966-67 to 93 in 1985-86. The access to safe drinking water in rural households increased from 42.9 per cent in 1981 to 67.1 per cent in 1991 and to 81.1 per cent in 2001. By November 2004 all the habitations in the State were covered under rural water supply.

TABLE 1.38

Expenditure on Rural Development Under Five Year/ Annual Plans in Haryana

(Rs. in Crore)

	Expenditure	*Percentage to total Expenditure*
Fourth Five-Year Plan 1969-74	1.49	0.42
Fifth Five-Year Plan 1974-79	10.13	1.50
Annual Plan 1979-80	4.26	2.10
Sixth Five-Year Plan 1980-85	47.07	2.95
Seventh Five-Year Plan 1985-90	71.48	2.85
Annual Plan 1990-91	16.50	2.68
Eighth Five-Year Plan 1992-97	125.40	2.56
Ninth Five-Year Plan 1997-2002	291.11	3.65
Annual Plan 1997-98	37.52	2.88
Annual Plan 1998-99	31.07	2.04
Annual Plan 1999-2000	91.86	5.48
Annual Plan 2000-01	47.69	2.78
Annual Plan 2001-02	82.96	4.70
Tenth Five Year Plan 2002-07	356.85	2.97
Annual Plan 2002-03	89.33	5.03
Annual Plan 2003-04	95.13	5.10
Annual Plan 2004-05	89.99	4.27
Annual Plan 2005-06	161.25	5.38
Annual Plan 2006-07 (Revised outlay)	173.26	4.54
Eleventh Five Year Plan 2007-12 (Approved outlay)	1268.42	3.62
Annual Plan 2007-08 (Approved outlay)	209.13	3.95

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 29.1, pp. 586-91.

The proximity of villages to the administration centres enhances their growth potential. The inconveniences, if any, faced by the villagers are readily reported and consequently the probability of introducing corrective measures is usually higher. The access to various places of the economy determines substantially the performance and efficiency of the government. Absence of access signifies prevalence of a self-reliant village economy having little development opportunities and low growth potential. Increasing access augments the possibility of diversification and higher growth. The villages located in Haryana are most effectively connected with rest of the economy. The infrastructure level of the villages, both social and physical, is extremely important in the realisation of development potential. In this regard Haryana is among the best performing large States.

Table 1.39 reveals that as regards the well-being of villages in the country, the over all ranking of Haryana in case of large States is only next to Kerala. As regards access to the economy, Haryana ranks fourth after Kerala, Tamil Nadu and Punjab. Regarding physical and social infrastructure as well as reach of government support programmes, Haryana gets second place after Kerala. But regarding the presence of private initiatives, Haryana comes at fifth place after Kerala, Tamil Nadu, Andhra Pradesh and Maharashtra (Chakraborty and Guha, 2005). Thus in case of large States, Haryana is in the top spot alongwith Kerala, Tamil Nadu, Andhra Pradesh and Maharashtra.

Haryana has three-tier system of Panchayati Raj Institutions (PRIs), that is, *Gram Panchayats*, *Panchayat Samities* and *Zila Parishads*. The administrative and financial powers given to the Panchayati Raj Institutions and local bodies have definitely strengthened the social security, equality and social justice in Haryana. For qualitative work and people's participation, *Gram Vikas Samities* have been constituted. The concept of *Gram Vikas Samities* has been implemented to actively involve people in the development process. The development works are implemented by the *Gram Vikas Samities*, thus, accelerating the pace of development with better quality.

Twelfth Finance Commission has recommended a grant of Rs.388 crore for PRIs for the period 2005-06 to 2009-10. The grant would be used to enhance the Service Delivery Mechanism for Sanitation/Drainage/ Disposal. The amount is disbursed to the *Gram Panchayats*, *Panchayat Samitis* and *Zila Parishads* in the State in the ratio of 75:15:10, respectively.

Haryana Rural Development Fund Administration Board was constituted under Haryana Rural Development Act, 1986. Under Section 5 (1) of this Act, a fee on *ad-valorem* basis, at the rate of two per cent of the sale proceeds of the agricultural produce bought or sold or brought for processing in the notified market area was levied. The amount so collected is spent on the rural areas for various development works like development of roads, establishment of dispensaries, making arrangements for water supply, sanitation and other public facilities, welfare of agricultural labour, conversion of notified market areas in rural areas into model market areas, construction of godowns and other places of storage for agricultural

TABLE 1.39

How Well are the Villages Equipped: Ranking for the Large States

Rank	*Overall Ranking*		*Access to the Economy*		*Physical and Social Infrastructure*		*Reach of Government Support Programmes*		*Presence of Private Initiatives*	
	State	*Score*	*State*	*Score*	*State*	*Score*	*State*	*Score*	*State*	*Score*
1	Kerala	10.00	Kerala	10.00	Kerala	10.00	Kerala	10.00	Kerala	10.00
2	**Haryana**	**6.24**	**Tamil Nadu**	**7.06**	**Haryana**	**7.06**	**Haryana**	**6.95**	**Tamil Nadu**	**7.36**
3	Tamil Nadu	6.20	Punjab	5.79	Punjab	6.08	Chhattisgarh	6.87	Andhra Pradesh	6.94
4	Andhra Pradesh	5.04	Haryana	5.28	Tamil Nadu	5.06	Andhra Pradesh	6.52	Maharashtra	5.86
5	Maharashtra	4.55	Andhra Pradesh	4.52	Karnataka	4.27	Tamil Nadu	6.36	Haryana	4.92
6	Punjab	4.53	Uttar Pradesh	4.04	Uttar Pradesh	4.21	Maharashtra	6.06	Karnataka	4.47
7	Karnataka	4.31	West Bengal	3.82	Maharashtra	4.16	West Bengal	5.63	Chhattisgarh	3.79
8	West Bengal	4.14	Karnataka	3.77	Himachal Pradesh	4.10	Karnataka	4.89	Madhya Pradesh	3.43
9	Uttar Pradesh	3.95	Gujarat	3.50	Jammu & Kashmir	3.91	Uttar Pradesh	4.78	West Bengal	3.42
10	Himachal Pradesh	3.74	Rajasthan	3.49	West Bengal	3.86	Madhya Pradesh	4.49	Gujarat	3.38
11	Gujarat	3.35	Jammu & Kashmir	3.45	Andhra Pradesh	3.73	Gujarat	4.40	Himachal Pradesh	3.30
12	Rajasthan	3.19	Maharashtra	3.34	Rajasthan	3.61	Orissa	3.92	Punjab	3.18
13	Chhattisgarh	2.89	Himachal Pradesh	3.23	Uttaranchal	2.81	Himachal Pradesh	3.81	Rajasthan	2.21
14	Madhya Pradesh	2.72	Uttaranchal	2.81	Gujarat	2.59	Rajasthan	3.12	Uttar Pradesh	2.18
15	Jammu & Kashmir	2.65	Bihar	2.35	Madhya Pradesh	2.30	Assam	2.82	Assam	1.91
16	Uttaranchal	2.23	Jharkhand	2.09	Assam	2.00	Bihar	2.20	Jammu & Kashmir	1.35
17	Assam	1.94	Assam	1.45	Chhattisgarh	1.86	Punjab	1.55	Orissa	0.73
18	Bihar	1.80	Orissa	1.18	Jharkhand	1.84	Uttaranchal	1.29	Bihar	0.69
19	Orissa	1.74	Madhya Pradesh	1.15	Bihar	1.75	Jharkhand	1.14	Uttaranchal	0.55
20	**Jharkhand**	**1.51**	**Chhattisgarh**	**0.65**	**Orissa**	**1.48**	**Jammu & Kashmir**	**0.68**	**Jharkhand**	**0.15**

Source: Chakraborty and Guha (2005).

produce and construction of rest houses with modern amenities to make the stay of visitors (both sellers and purchasers) comfortable.

The Restructured Centrally sponsored Rural Sanitation Programme (RCRSP) was launched in the year 2000-01. All the districts of the State have been covered under Total Sanitation Campaign. Under this campaign, individual Household Latrines for BPL families, Women Sanitary Complexes, School Toilets, *Anganwadi* Toilets and Rural Sanitary Marts/Production Centres are constructed. Since then 1,99,621 Individual Toilets, 4,020 School Toilets, 382 Sanitary Complexes for women and 1,563 Anganwadi Toilets have been constructed besides establishing 73 Rural Sanitary Marts/Production Centres upto 31st December 2006.

Under Revenue Earning Scheme, interest free loan is given to *Panchayats/Panchayat Samities* for installation of tube wells, wells, construction of shops and staff quarters etc. The loan is recovered in 30 yearly installments.

Under the matching Grant Scheme, an equivalent amount is sanctioned by the government as Matching Grant to *Panchayats* and other organisations which raise their resources through public contribution for various development works. In cases of Girls Schools, Girls Colleges and Girls Hostels, the amount of grant provided by the government will be twice the amount raised through voluntary contribution in order to promote women education.

Government of Haryana gives incentives of Rs.5 lakh to the best village in each district and Rs.10 lakh to the best village in the entire state for their performance in implementing the scheme of *Panchayat*, Education and Health.

Haryana Rural Employment Guarantee Scheme, an important initiative for rural employment and development, has been launched initially in all *Gram Panchayats* of Mahendragarh and Sirsa districts from 2nd February 2006. This scheme has been formulated under the National Rural Employment Guarantee Act, 2005.

The funding pattern of National Rural Employment Guarantee Scheme (NREGS) is: Centre 90 per cent and State 10 per cent. The basic objective of the scheme is to enhance livelihood security in rural areas by

providing at least 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work.

The scheme is applicable only to rural areas. One third of the jobs are reserved for women. Minimum wages applicable in the state are payable to the persons employed. Unemployed persons are to apply for registration with concerned *Gram Panchayats*. After registration, Job Cards are issued to the households by the *Gram Panchayats*. The payment of wages is being made on weekly or fortnightly basis. The contractors are banned under this programme.

The following works are permissible under NREGS:

i) water conservation and water harvesting;

ii) drought proofing (including afforestation and tree plantation);

iii) irrigation canals including micro and minor irrigation works;

iv) provision of irrigation facility to land owned by households belonging to the Scheduled Castes and Scheduled Tribes or to land beneficiaries of land reforms or that of the beneficiaries under the Indira Awaas Yojana of the Government of India;

v) renovation of traditional water bodies including desilting of tanks;

vi) land development;

vii) flood control and protection works including drainage in water logged areas;

viii) rural connectivity to provide all-weather access; and

ix) any other work which may be notified by the Central Government in consultation with the State Government.

The programme is being implemented through the *Gram Panchayats*. The Annual Action Plans are also sanctioned by PRIs.

The Desert Development Programme (DDP) has been launched by Government of India during the year 1995-96 in 45 blocks of districts Bhiwani, Hisar, Fatehabad, Sirsa, Jhajjar, Rewari and Mohindergarh. The funding pattern of the Desert Development Programme (DDP) is: Central Government 75 per cent and State Government 25 per cent.

The objective of DDP is to control the severity of drought and desert conditions and to bring ecological balance by having integrated development of soil and moisture conservation including land shaping and development, dry land farming, water resource development and afforestation and pasture development on watershed development approach in an integrated manner.

The Government of India has sanctioned 1030 watersheds from 1995-96 to 2005-06. The norms of Watershed Development Project has now been fixed as Rs.6,000 per hectare for the development of 500 hectare area of each watershed. Thus, on an average, the cost of each watershed is Rs.30.00 lakh for development in a normal period of five years. The programme is now governed by the guidelines on *Hariyali* prescribed by the Government of India.

Integrated Wasteland Development Programme (IWDP) is aimed at an integrated wastelands development based on village/micro watershed plans. These plans are prepared after taking into consideration the land capability, site condition and local needs of the people. The following major activities can be taken up under this programme:

1. Soil and moisture conservation measures.
2. Planting and sowing of multi purpose trees.
3. Encouraging natural regeneration.
4. Promotion of agro forestry and horticulture.
5. Measures needed to desseminate technology.
6. Encouraging people participation.

The IWDP projects are sanctioned by Government of India in the non D.D.P. districts each year. The cost norm of Rs.6,000 per hectare is also applicable while sanctioning assistance under IWDP.

Public Distribution System (PDS) is the chief instrument for meeting twin objectives of price stability and ensuring availability of essential commodities at easily affordable prices especially for the poor. At the time of creation of Haryana, PDS was of a very small size having only 988 fair price shops in rural areas. However, with the passage of time, it has expanded to almost every nook and corner of the State. It has been reorganised and streamlined from time to time to accommodate human needs. As on 30th of November 2005, there was a big network of 6076 fair price shops in the rural areas. At present, under the "Targetted Public Distribution System" scheme, 25 kilograms of wheat and 10 kilograms of rice per month is being made available to the below poverty line families at a subsidised rate.

Cooperation

Cooperative Movement is an effective instrument of economic and social reform. It has played a highly significant role particularly in the sphere of agricultural credit and marketing. The Cooperatives in the State have amply demonstrated their strength in several fields of rural economy. There are 22,545 Cooperative Societies with a membership of about 50 lakh. There are 19 Central Cooperative Banks with 356 branches and 2431 Mini Banks. There is Haryana State Cooperative Agriculture and Rural Development Bank also.

The Cooperative Movement is playing a vital role in the economic and social transformation of the people of Haryana. The movement is engaged in the activities pertaining to the disbursement of adequate credit and marketing facilities to the people by encouraging the development of activities like Housing, Dairying and Sugar Cooperatives etc. to augment the income of the people.

The Cooperative Banks have disbursed loans to the tune of Rs.4357 crore during the year 2005-06. In the year 2006-07, Rs.2940.86 crore have been disbursed as loans upto 20th December, 2006. The branches of Cooperative Banks are being increased from 358 to 560.

With a view to provide easy and adequate credit and other allied facilities to the farmers, the primary Cooperative Credit Societies have been reorganised. 560 Primary Cooperative Agriculture Credit Societies have been formed and to make these Societies viable, these are engaged in providing credit, marketing, consumers and other facilities in their respective area of operation.

Haryana Cooperative Societies Act, 1984 has been amended and the provision under which the over due amount of Cooperative loans was being recovered as arrears of land revenue has been deleted. Now, no farmer will be arrested for the recovery of Cooperative loans.

The Cooperative Agriculture and Rural Development Banks have disbursed a loan to the tune of Rs.4307.90 crore to 10.51 lakh members since their inception. These banks have disbursed Rs.146.49 crore as loans during the period from April 2006 to 30th November 2006. These banks disbursed loans amounting to Rs.302.68 crore during the year 2005-06. The government has reduced the rate of interest on short term agriculture loans from 11 per cent to 10 per cent as on 1st May 2005. The rate of interest on these loans has further been slashed from 10 per cent to 7 per cent with effect from April 2006.

The Cooperative Sugar Mills in Haryana have crushed 196.30 lakh quintals sugarcane during the year 2005-06 resulting into the production of 18.75 lakh quintals of sugar. These mills have paid total cost of sugarcane to the tune of Rs.243.24 crore during the year 2005-06.

Haryana State Cooperative Supply and Marketing Federation (HAFED), which is engaged in providing Marketing and Processing facilities to farmers, has purchased 4.62 lakh tonnes mustard during *Rabi* 2006. This institution is encouraging farmers to produce good quality *Basmati* and *Desi* Wheat by allowing them 10 per cent additional price for their produce. During *Rabi* 2006, HAFED has purchased 8.40 lakh tonnes wheat which is 37.72 per cent of the total wheat purchased by government agencies in the State. To benefit further the farmers of the state, HAFED has also made commercial purchase of wheat. During 2006-07, HAFED has purchased 1,07,043 tonnes wheat. It has distributed 3.31 lakh tonnes fertiliser upto 30th November 2006. ISO 9001-2000 certification has been awarded to all the oil mills, rice mills, cattle feed plants and pesticides plants of HAFED. Besides, Oil Mills have also been granted Food Safety Standard Certification for adopting best safety norms.

There is a three tier system under Cooperative Sector for the development of milk. During 2005-06, the Cooperative Milk Producers Societies have procured average 4.02 lakh litres milk every day. Milk Cooperatives in Haryana are giving remunerative prices of Rs.220 per kilo to milk producers. The white card scheme has been introduced to benefit those farmers who are supplying milk to the society continuously during the last three years. These farmers will get Rs.1.00 lakh as loan for which no security will be required. Haryana Dairy has also introduced insurance scheme for those farmers who are committed members and are supplying milk continuously for the last three years. Presently, Haryana Dairy has 205 milk booths for the sale of milk and milk products.

HARCOFED, which is engaged in the activities of publicity and extension of cooperative movement, has imparted knowledge to 24,039 members, 1160 cooperative leaders, 13,529 school students, 1364 women and 1307 for the year 2006-07 upto 31 December 2006. Besides, this organisation has organised seminars, speech contests, essay competitions and brought out Hindi fortnightly magazine *Haryana Sahkari Parkash* and English quarterly *Cooperative Mirror* to disseminate information regarding various activities of Cooperative Institutions and also principles and practices of cooperative movement.

To generate employment for the unemployed youth, 2203 Primary Labour and Construction Cooperative

Societies have been organised during the period from 1996 to 2006 with a membership of 22,580. The number of Labour and Construction Societies has increased to 4634 upto October 2006. These societies had executed work to the tune of Rs.9610 lakh during the year 2005-06 whereas these societies have executive work amounting Rs.9588 lakh during the current financial year upto October 2006. Haryana State Cooperative Housing Federation has provided loans of Rs.119.25 lakh during 2005-06 for the construction of dwelling units.

The State of Haryana, in collaboration with National Cooperative Development Corporation, is implementing Intensive Cooperative Development Project in ten districts of the State.

Cooperative marketing is a two-tier structure in Haryana, HAFED at Apex Level and Primary Cooperative Marketing-cum-Processing Societies at '*mandi*' level. HAFED has established a name for itself in the field of marketing at the national level among cooperative marketing institutions. HAFED purchases produce of the farmers and help them by timely supplies of fertilisers, seeds, pesticides etc. There are 61 cooperative marketing societies at the primary level which are working for the benefit of farmers providing them fertilisers/seeds at rates cheaper than in the market. HAFED has created godown capacity of 7.50 lakh metric tonnes to ensure safe and scientific storage of foodgrains. In addition, godowns having 2.65 lakh metric tonnes capacity have been constructed under seven years guarantee scheme through private parties.

The Sugar Mills in Haryana in cooperative sector are performing well and ensuring timely payment to the sugarcane growers. It is heartening to note that two Cooperative Sugar Mills in the State bagged five National Awards for technical efficiency and cane development during the year 2004-05.

The objective of the dairy cooperatives is to promote the economic interest of milk producers of Haryana by purchasing milk and marketing the same and by undertaking allied activities as are conducive for promotion of milk production. A large network of cooperative milk societies has been established which provides market to milk producers at their door steps at a remunerative price. Apart from payment of remunerative price, dairy cooperatives also provide quality cattle feed, fodder seeds, veterinary medicines and milk products to producers, thus helping them to increase their incomes.

Institutional finance is essential for any development programme. In Haryana, the number of Cooperative Banks and Rural Land Development Banks at the end of December, 2004 were 356 and 48 (9 district level and 39 village level Primary Cooperative Agriculture and Rural Development Banks), respectively. The Haryana Cooperative Apex Bank Ltd is providing credit facilities throughout the State through the existing 2433 Primary Agriculture Credit Societies (as on 31 March 2005). These Primary Agriculture Credit Societies are financially assisted by 19 Central Cooperative Banks functioning at the district level. The Haryana State Cooperative Apex Bank Ltd. provides adequate credit facilities by securing financial assistance from NABARD and also by pumping in its own resources.

1.2.5 Poverty

Poverty eradication is one of the most important objectives of our development policy. The growth performance of the State truly lies in poverty reduction. *Prima facie*, poverty may be expected to decline more rapidly in a faster growing state.

In an excellent recent study, Dev and Ravi (2007) show that poverty ratio in Haryana has declined form 24.26 in 1993-94 to 13.92 in 2004-05. As is clear from Table 1.40, this trend is noticed in almost all the major states. Of course, some of the States are having very high poverty ratios for the total population. In 2004-05, it was more than 40 per cent in Orissa and Bihar and between 30 and 40 per cent in Madhya Pradesh and Uttar Pradesh and between 25 per cent and 30 per cent in Maharashtra, Tamil Nadu, Karnataka and West Bengal. Rural poverty is high in all these States except in Tamil Nadu. Urban poverty was 30 per cent or more in Bihar, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh in 2004-05.

The absolute number of poor is given in Table 1.41. In Haryana, the absolute number of rural poor people declined from 3.51 millions in 1993-94 to 2.17 millions in 2004-05. But, the absolute number of urban poor people increased from 0.81 million to 1.1 million during this period. Only in the States of Madhya Pradesh, Orissa and Uttar Pradesh the number of rural poor increased in 2004-05 as compared to 1993-94. But the number of urban poor increased in eight States. The number of poor for the total population increased in Madhya Pradesh, Maharashtra, Orissa and Uttar Pradesh.

As shown in Table 1.42, the percentage of very poor in the total population declined in all the states since 1983—the only exception being Orissa between 1993-94

TABLE 1.40

Head Count Ratio of Poor by Major States

(in Per cent)

States	*Rural*			*Urban*			*All*		
	1983	*1993-94*	*2004-05*	*1983*	*1993-94*	*2004-05*	*1983*	*1993-94*	*2004-05*
Andhra Pradesh	27.31	16.64	10.85	37.49	37.63	25.41	29.75	22.30	14.80
Assam	41.92	44.43	23.05	23.07	10.19	3.83	40.03	40.46	20.46
Bihar	64.89	57.24	43.06	47.49	36.54	31.66	62.71	54.50	41.53
Gujarat	27.92	22.44	19.76	38	29.44	11.96	31.11	24.92	16.75
Haryana	**21.77**	**26.62**	**13.41**	**25.47**	**17.54**	**15.06**	**22.59**	**24.26**	**13.92**
Himachal Pradesh	17.77	29.27	12.50	16.01	8.26	3.87	17.63	27.37	11.61
Jammu and Kashmir	25.23	19.73	4.81	17.48	7.38	4.81	23.57	16.75	4.81
Karnataka	37.51	30.24	23.73	42.88	39.67	33.4	39.08	33.25	27.15
Kerala	38.46	26.49	12.27	45.11	25.45	20.86	39.81	26.22	14.48
Madhya Pradesh	48.21	40.43	38.17	53.11	48.29	34.44	49.23	42.30	37.21
Maharashtra	45.04	37.66	30.36	39.69	34.74	29.42	43.13	36.50	29.95
Orissa	67.52	50.11	47.76	49.19	41.02	43.34	65.31	48.85	47.07
Punjab	14.3	13.72	9.55	23.52	11.83	5.57	16.88	13.14	8.12
Rajasthan	37.72	26.89	18.91	38.81	31.55	29.81	37.95	27.96	21.48
Tamil Nadu	56.22	32.99	22.96	47.94	38.92	34.06	53.48	35.20	28.31
Uttar Pradesh	46.38	42.33	34.06	49.47	36.15	30.29	46.94	41.08	33.25
West Bengal	61.56	37.35	28.49	31.5	23.24	18.5	53.60	33.45	25.67
All-India	45.16	37.26	29.18	42.27	32.56	26.02	44.93	36.02	28.27

Note: Bihar, Madhya Pradesh and Uttar Pradesh include the reorganised states of Jharkhand, Chhattisgarh and Uttranchal, respectively.
Source: Dev and Ravi (2007).

TABLE 1.41

Absolute Number of Poor

(in Millions)

States	*Rural*			*Urban*			*All*		
	1983	*1993-94*	*2004-05*	*1983*	*1993-94*	*2004-05*	*1983*	*1993-94*	*2004-05*
Andhra Pradesh	11.75	8.43	6.33	5.08	7.04	5.52	16.82	15.47	11.85
Assam	7.21	9.31	5.72	0.44	0.28	0.15	7.65	9.59	5.87
Bihar	42.00	46.39	45.31	4.39	4.51	5.18	46.39	50.89	50.49
Gujarat	6.82	6.39	6.70	4.31	4.60	2.55	11.12	10.99	9.25
Haryana	**2.33**	**3.51**	**2.17**	**0.78**	**0.81**	**1.10**	**3.11**	**4.32**	**3.27**
Himachal Pradesh	0.74	1.45	0.73	0.06	0.04	0.03	0.79	1.49	0.76
Jammu and Kashmir	1.27	1.26	0.40	0.24	0.15	0.14	1.51	1.41	0.54
Karnataka	10.36	9.75	8.67	4.88	5.99	6.67	15.24	15.74	15.34
Kerala	8.03	5.85	3.03	2.40	2.00	1.78	10.43	7.86	4.79
Madhya Pradesh	21.19	21.80	25.10	6.11	8.11	7.86	27.30	29.91	32.96
Maharashtra	19.26	19.08	17.97	9.40	11.68	13.68	28.65	30.76	31.65
Orissa	16.43	14.33	15.75	1.64	1.89	2.66	18.07	16.22	18.41
Punjab	1.82	2.04	1.61	1.16	0.79	0.53	2.97	2.82	2.14
Rajasthan	10.86	9.88	9.07	3.02	3.47	4.42	13.88	13.34	13.49
Tamil Nadu	18.89	11.93	7.83	7.96	8.34	10.80	26.85	20.26	18.62
Uttar Pradesh	44.62	50.57	51.39	10.60	10.95	12.54	55.22	61.51	63.92
West Bengal	26.15	19.40	17.58	4.82	4.62	4.50	30.98	24.02	22.08
All-India	252.05	247.18	232.16	72.29	77.38	83.31	324.34	324.55	315.48

Source: Dev and Ravi (2007).

and 2004-05. However, the percentage of very poor is higher than the all-India figure in Bihar, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu and Uttar Pradesh. The level for very poor in Orissa was two and half times high than that of the all-India figure.

Similar to the category of poor, the poverty of very poor is concentrated in a few States. The share of five States (Bihar, Madhya Pradesh, Maharashtra, Orissa and Uttar Pradesh) in the total very poor increased from 57.5 per cent in 1983 to 66.8 per cent in 1993-94 and to 70.6 per cent in 2004-05. Similarly, the share of eight states, (*viz*., Bihar, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu and West Bengal) for the very poor in urban areas rose from 75 per cent in 1983 to 78 per cent in 1993-94 and to 85.4 in 2004-05.

Table 1.43 reveals increasing concentration of poor in a few States. A group of four States comprising Bihar, Madhya Pradesh, Orissa and Uttar Pradesh had a share of 49.8 per cent in the rural poor of the country in 1983. This share increased to 55 per cent in 1993-94 and further to 61 per cent in 2004-05. Similarly, the share of seven states (Bihar, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu and Uttar Pradesh) in urban poor rose from 61.6 per cent in 1983 to 70 per cent in 1993-94 and to 76 per cent in 2004-05. Poverty for total population is getting concentrated in five States, *viz*., Bihar, Madhya Pradesh, Maharashtra, Orissa and Uttar Pradesh—their share being 65 per cent of the total poor in 2004-05.

There exists empirical evidence from trend analysis of growth and poverty which shows positive linkage between growth and poverty reduction. Significant declines in rural poverty as a whole (between 33 and 40 percentage points) have been recorded in the period in question by the faster growing States of Maharashtra, Tamil Nadu, Karnataka, Gujarat and Andhra Pradesh. In the case of Madhya Pradesh, moderate growth has been accompanied by moderate declines in poverty over a long period. Both Bihar and Orissa have recorded relatively poor economic growth, and there seems to have been correspondingly little impact on poverty reduction.

The growth-poverty reduction linkage does not have such a good fit in the case of West Bengal and Kerala. Both States have recorded significant declines in the rural poverty ratio over the last three decades. However, as we have seen in the analysis of growth performance, Kerala had a relatively weak to moderate growth till the eighties, with the per capita income growth ranging

TABLE 1.42

Head Count Ratio of Very Poor by Major States

(In Per cent)

States	*Rural*			*Urban*			*All*		
	1983	*1993-94*	*2004-05*	*1983*	*1993-94*	*2004-05*	*1983*	*1993-94*	*2004-05*
Andhra Pradesh	10.98	4.11	2.80	17.62	19.55	9.86	12.57	8.27	4.72
Assam	14.24	13.52	4.96	6.36	1.21	0.53	13.45	12.09	4.36
Bihar	39.53	28.29	14.65	26.34	18.1	15.66	37.88	26.94	14.79
Gujarat	9.53	5.75	5.04	15.71	11.08	2.72	11.49	7.64	4.14
Haryana	**8.74**	**9.62**	**2.91**	**10.31**	**5.01**	**4.94**	**9.09**	**8.42**	**3.54**
Himachal Pradesh	6.76	9.03	1.95	7.02	0.92	1.07	6.78	8.30	1.86
Jammu and Kashmir	6.41	4.07	0.64	5.01	0.99	0.55	6.11	3.33	0.62
Karnataka	18.36	10.76	3.83	24.95	22.62	18.76	20.28	14.54	9.10
Kerala	18.54	9.31	3.91	25.43	9.5	8.66	19.94	9.36	5.13
Madhya Pradesh	26.50	17.59	14.72	29.87	26.09	18.04	27.20	19.61	15.58
Maharashtra	23.29	16.85	11.25	22.49	19.95	14.8	23.00	18.09	12.81
Orissa	43.63	23.27	25.16	27.21	23.67	27.63	41.65	23.33	25.55
Punjab	5.08	2.06	1.04	10.61	2.07	0.51	6.62	2.06	0.85
Rajasthan	22.87	8.25	3.39	18.93	13.96	12.02	22.03	9.57	5.43
Tamil Nadu	34.89	12.68	5.04	27.13	19.7	17.97	32.32	15.29	11.27
Uttar Pradesh	24.33	19.93	11.14	27.72	18.58	13.92	24.95	19.66	11.74
West Bengal	39.26	11.30	7.41	14.43	9.53	6.57	32.68	10.81	7.17
All-India	25.52	15.38	9.64	22.45	16.00	12.00	24.79	15.54	10.32

Note: Very poor are those who are below 75 per cent of poverty line.
Source: Dev and Ravi (2007).

TABLE 1.43

Percentage Distribution of Poor Persons across the Major States

(In Per cent)

States	*Rural*			*Urban*			*All*		
	1983	*1993-94*	*2004-05*	*1983*	*1993-94*	*2004-05*	*1983*	*1993-94*	*2004-05*
Andhra Pradesh	4.70	3.49	2.81	7.54	9.35	6.89	5.31	4.89	3.88
Assam	2.89	3.86	2.54	0.66	0.37	0.18	2.41	3.03	1.92
Bihar	16.82	19.22	20.11	6.53	5.99	6.46	14.64	16.07	16.53
Gujarat	2.73	2.65	2.97	6.40	6.11	3.18	3.51	3.47	3.03
Haryana	**0.93**	**1.45**	**0.96**	**1.16**	**1.08**	**1.37**	**0.98**	**1.37**	**1.07**
Himachal Pradesh	0.30	0.60	0.32	0.08	0.05	0.03	0.25	0.47	0.25
Jammu and Kashmir	0.51	0.52	0.18	0.36	0.20	3.17	0.48	0.45	0.18
Karnataka	4.15	4.04	3.85	7.25	7.96	8.32	4.81	4.97	5.02
Kerala	3.22	2.43	1.34	3.56	2.66	2.22	3.29	2.48	1.57
Madhya Pradesh	8.49	9.03	11.14	9.08	10.78	9.82	8.61	9.45	10.79
Maharashtra	7.71	7.91	7.97	13.97	15.52	17.08	9.04	9.71	10.36
Orissa	6.58	5.94	6.99	2.44	2.51	3.32	5.70	5.12	6.03
Punjab	0.73	0.84	0.71	1.72	1.05	0.66	0.94	0.89	0.70
Rajasthan	4.35	4.09	4.03	4.48	4.61	5.52	4.38	4.21	4.42
Tamil Nadu	7.56	4.94	3.47	11.83	11.08	13.48	8.47	6.40	6.10
Uttar Pradesh	17.87	20.95	22.80	15.75	14.55	15.66	17.42	19.43	20.93
West Bengal	10.47	8.04	7.80	7.17	6.13	5.62	9.77	7.59	7.23
All-India	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Dev and Ravi (2007).

from negative to less than 2 per cent per annum. The reduction in the rural poverty ratio of almost 50 percentage points in less than three decades is, therefore, much more than for States that have been recording a strong growth performance. Kerala is widely acknowledged as a success story of human development.

In the case of West Bengal too, economic growth has been very weak in the first two decades, rising significantly only in the nineties to a per capita income increase of 5 per cent per annum. However, this could not have been a contributory factor to the significant decline of 41 percentage points in the rural poverty ratio, most of which seems to have occurred in the period before the nineties. What may have set apart West Bengal is the different direction of public policy that it has followed since the seventies. The policy of increasing the access of the rural poor to assets, that is, agricultural land, through a programme of asset redistribution (land reforms) may have helped spread income earning opportunities more evenly and contributed to a major decline in rural poverty in this period without having a noticeable impact on the growth rate of the economy.

Haryana has been constantly making efforts to eradicate poverty in the State by assisting people living below the poverty line through various schemes, in order to break the vicious circle of poverty. Necessary steps are being taken to identify the poorest of the poor families and, distribution of pink coloured ration cards under "Antyodaya Anna Yojana" scheme of Government of India was launched in Haryana during 2001-02. Under this scheme, 35 kilograms wheat per family per month is being supplied to the Antyodaya Families at the rate of Rs.2.10 per kilogram. The transportation and dealers margin is borne by the State Government at the rate of 50 paise per kilogram amounting to Rs.5.08 crore per annum. Under this scheme, the Government of India is allocating 10,235 metric tonnes of wheat per month to the State of Haryana for Antyodaya Families. Pink ration cards have been issued to 2.89 lakh Antyodaya Families in the State.

The State has also taken up several measures for carrying out socio-economic programmes especially for the welfare of the backward classes, handicapped persons, destitute women and weaker sections by adopting a policy of one job for one family, permits to unemployed youths for operating maxi-cabs, introduction of "Sulabh Shauchalayas", liberation of scavengers from their traditional occupation of manual removal of night soil and universalisation of education.

To alleviate poverty and to generate employment opportunities, "Swarnjayanti Gram Swarozgar Yojana

(SGSY)" is being implemented in the rural areas. This is a holistic programme covering all aspects of self employment such as organisation of the poor into Self Help Groups, training, credit, technology, infrastructure, and marketing etc. The target group consists of families living below the poverty line. The objective of the scheme is to bring every assisted family above the poverty line within three years.

Under "Indira Awaas Yojana (New construction)", houses are constructed for the poor living below poverty line. "Sampooran Grameen Rozgar Yojana (SGRY)" aims to provide additional wage employment opportunities to rural poor who are in need of work. The secondary objective of the scheme is the creation of durable community, social and economic assets and infrastructural development in rural areas. The wages to the workers are being paid in the shape of cash and kind. The Ministry of Rural Development, Government of India has launched a scheme namely, "National Food For Work Programme (NFFWP)" from the year 2004-05 in Mahendragarh District. This is a 100 per cent Centrally Sponsored Scheme. Foodgrains are provided by the Government of India, free of cost. The main objective of this programme is to provide additional resources apart from the resources available under the SGRY so that generation of supplementary wage employment and provision of food-security through creation of need based economic, social and community assets is further intensified. This programme is open to all rural poor who are in need of wage employment and desire to do manual and unskilled work.

National Rural Employment Guarantee Scheme has been launched in all *Gram Panchayats* of district Mahendragarh and Sirsa of the State on 2nd February 2006. The basic objective of the scheme is to enhance livelihood security in rural areas by providing at least 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. The scheme is applicable only to rural areas. One third of the jobs are reserved for women. Minimum wages applicable in the State are payable to the persons employed. Unemployed persons are to apply for registration with the *Gram Panchayats* concerned. The payment of wages is being made on weekly or fortnightly basis. The development works like water conservation, water harvesting, drought proofing, afforestation, tree plantation, canals irrigation, irrigation facilities to the land owned by scheduled castes and other rural poor, renovation of traditional water bodies, land development, flood control and protection works and rural connectivity etc. are taken up by the *Gram Panchayats* and other implementing agencies.

The Planning Commission, Government of India, had launched a new 100 per cent Centrally Assisted Scheme for Backward Districts namely Rashtriya Sam Vikas Yojana (RSVY) now Backward Region Grant Fund (BRGF) from the year 2004-05 in Sirsa district. From the year 2007-08, this scheme has been extended by the Government of India to district Mahendragarh also. The main aim of this scheme is to solve the problems of poverty, low growth and poor governance in the backward districts. Under this scheme, an amount of Rs.1226.14 lakh has been spent and 656 works have been completed upto the month of December 2006 and 231 works are under progress. An outlay of Rs.2450.00 lakh has been proposed for the year 2007-08.

Desert Development Programme (DDP) is based on Watershed Development Projects and is being implemented in 47 blocks of Bhiwani, Hisar, Fatehabad, Sirsa, Jhajjar, Rewari and Mahendragarh districts from the year 1995-96. The strategies of this programme are to control severity of drought and desert conditions in the targeted areas.

The basic objective of Integrated Wastelands Development Programme (IWDP) is aimed at an integrated wastelands development based on village/micro watershed plans. These plans are prepared after taking into consideration the land capability, site conditions and local needs of the people. The major activities like soil and moisture conservation measures, planting and sowing of multi purpose trees, encouraging natural regeneration, promotion of agro forestry etcetera can be taken up under IWDP. An expenditure of Rs.316.32 lakh has been made during 2006-07 (upto December 2006). An outlay of Rs.100.00 lakh has been proposed for the Annual Plan 2007-08 as State share in the ratio of 11:1 between the Centre and State Government.

The Member of Parliament Local Area Development Scheme (MPLADS) has been launched from 23 December 1993. Under this scheme, Government of India provides each Member of Parliament an amount of Rs.2.00 crore per annum for the development works.

The State Urban Development Society, Haryana is implementing Swarna Jayanti Shahri Rozgar Yojana (SJSRY) to provide gainful employment to the urban unemployed and underemployed poor beneficiaries by setting up of self-employment ventures providing wage employment through skill development training. The

scheme is funded in the ratio of 75:25 by the Centre and State Government. During the financial year 2006-07, 1737 individual beneficiaries and 58 groups relating to Development of Women and Children in Urban Areas (DWCUA) were provided loans and subsidy, 5380 persons were provided training, 59 Thrift and Credit Societies were assisted and 0.39 lakh mandays were generated upto 31.12.2006 by utilising Rs.599.95 lakh.

The scheme of Integrated Housing and Slum Development Programme (IHSDP) was introduced by Government of India by replacing National Slum Development Programme (NSDP) and Valmiki Ambedkar Awas Yojana (VAMBAY) in December 2005. The objective of the scheme is to provide basic amenities, that is, Water, Sewerage, Drainage, Roads & Streets and Dwelling Units to slum dwellers. This is a demand based scheme and the funds are to be provided by Government of India and State Government in the ratio of 80:20. The contribution of the beneficiary is merely 12 per cent for general category and 10 per cent for SC category for the construction/upgradation of dwelling units. So far, project reports for 31 towns have been submitted to Government of India out of which 12 projects with a total financial outlay of Rs.235.74 crore have been approved. The 50 per cent central share amounting to Rs.91.48 crore pertaining to 12 projects have been sanctioned.

In the area of social security, a scheme known as Rajiv Gandhi Parivar Bima Yojana launched from 1st April 2006 is providing social security to the citizens of the State. Under this scheme, all the persons of Haryana in the age group of 18 to 60 years are provided compensation of Rs.1 lakh in case of unnatural death or permanent total disability due to accidents like rail or road or air accidents, tractor or farming equipment, riot, earthquake, strike, terrorist activity, storm, cyclone, snake bite, drowning, poisoning, electrocution, falling from height, collapse of house or building, fire, explosion, implosion, murder, attack of animals, stampede and suffocation, lightening, frost bite, sun burn (*loo*), burn injuries, death or permanent total disability due to any other unnatural event, within 72 hours of the submission of claim form. Similarly, Rs.25,000 to Rs.50,000 is also given on the basis of disability percentage. Under this scheme 980 cases have been covered upto 31st December 2006.

To remove the sense of economic insecurity in the minds of parents who have only daughters Ladli Social Security Pension Scheme is being implemented with effect from 1st January 2006 under which pension at the rate of Rs.300 per month will be paid to the families from the 55th birthday of the father or mother till their 60th birthday, that is, for five years. Thereafter, they will be eligible for old age allowance.

The Unemployment Allowance for the Educated Unemployed Scheme has become effective from 1st November 2005. The rates of Unemployment Allowance are Rs.300 per month in case of those with qualification 10+2 or equivalent (with minimum 2 years certificate/diploma course after Matric) and Rs.500 per month to graduates or diploma holders (with minimum three years after 10+2) and above from any Board/University recognised by Haryana Government. The applicants with qualification below 10+2 are also receiving the Unemployment Allowance at the rate of Rs.100 per month till they attain the upper age limit of 35 years. The Unemployment Allowance has been disbursed to 38,550 beneficiaries amounting to Rs.7.23 crore under this scheme upto 31st December 2006.

The Department of Employment, Haryana has started On-Line Services for Facilitating Placement in private sector. These services are available at the website *www.haryanajobs.in*. Any applicant or employer can make use of these services free of charge. A Private Placement Cell has been established in the District Employment Exchange, Gurgaon for such facilities.

In order to cater to the growing demands for skilled and unskilled labour, technicians, IT professionals, engineers and doctors in foreign countries especially in the middle-east, the State has launched the Overseas Placement Bureau on 1st July 2006 at Sonipat. This Bureau is functioning under the aegis of Haryana Overseas Placement Assistance Society (HOPAS), with its registered office at Panchkula. For the functioning of this Society, Overseas Placement Committee was constituted on 5th October 2005 which is competent to exercise all powers on behalf of Government in this regard. The committee approved the constitution in the Society. These services are freely available at the website *www.haryanajonbs.in*.

"Old Age Pension Scheme" prevalent in the State has been based on economic criteria and the eligibility age is 60 years or more so as to give the benefit to the really poor and needy persons. Under this scheme, pension at the rate of Rs.300 per month is given to the eligible senior citizens of Haryana domicile. As many as 10,74,610 senior citizens have been covered under the scheme upto 31st December 2006.

"Widow Pension Scheme" is also being implemented to provide security and financial assistance to widows and destitute women. Under this scheme, widows and

destitute women aged 18 years and above, who have no other financial support, are provided pension at the rate of Rs.300 per month. A total of 3,89,481 such women have been benefited upto December 2006. In addition, the State is running three women homes, at Karnal, Rohtak and Faridabad for young widows and destitute women and their dependent children to rehabilitate and provide the facilities of boarding, lodging, education and vocational training in various trades. A cash dole at the rate of Rs.275 per month and the clothing allowance at the rate of Rs.75 per month is provided to each inmate of these homes. As on 31st December 2006, the beneficiaries of this scheme included 326 members of 129 families who were residing in *Mahila Ashrams* at Karnal, Rohtak and Faridabad.

The State has also taken a number of steps for rehabilitation of blind, deaf, handicapped and mentally retarded persons. As many as 1,06,995 "Physically Handicapped Persons" are being provided pension at the rate of Rs.300 and Rs.600 per month (Rs.600 per month only for 100 per cent physically handicapped) as on 31st December 2006. Scholarships ranging between Rs.100 to Rs.750 per month are being given to handicapped students. Unemployment allowance to the educated handicapped persons is being given between Rs.200 to Rs.300 per month. The blind people are given an allowance of Rs.400 to Rs.600 per month. The retainship allowance of Rs.2000 per month is also given to the blind persons.

1.2.6 Infrastructure

Infrastructure can generally be defined as the physical framework of facilities through which goods and services are provided to the people. Its linkages to the economy are multiple and complex, because it affects both production and consumption directly; it creates spillover effects and involves large inflow of expenditure. Good infrastructure raises productivity and lowers production costs. But it has to expand fast enough to accommodate growth. As a State develops, infrastructure must adapt to changing patterns of demand. Infrastructure also determines the effect of growth on poverty reduction.

1.2.6.1 Irrigation

Water is indispensable to agricultural production. In areas where rainfall is plentiful and well distributed over the year, there is no problem of water. But rainfall in certain areas is very scanty as well as uncertain. This is particularly so in south Haryana consisting of adjoining areas of Rajasthan (Jhajjar, Bhiwani, Mahendragarh, Rewari, Faridabad, Mewat and Gurgaon districts of the State). Provision of developed irrigation facility is necessary for growing of more than one crop in the year. There are some main crops in Haryana such as rice and sugarcane, which require abundant and regular supply of water.

During the Fourth and Fifth Five Year Plans the expenditure on irrigation and flood control was 37.45 per cent and 30.02 per cent of the total expenditure, respectively. But during the Sixth, Seventh and Eighth Five Year Plans the expenditure in this sector kept on decreasing from 27.68 per cent to 25.82 per cent, to 16.27 per cent, respectively. During the Ninth Five Year Plan it increased to 19.93 per cent. But in the Tenth Five Year Plan it sharply decreased to 14.98 per cent. In the Eleventh Five Year Plan it has further decreased to 11.90 per cent of the approved outlay.

Canal water is the main source of irrigation as well as domestic supplies to the State. The availability of water from both the sources, that is, surface and sub-surface, is much below the requirement. Whereas the

TABLE 1.44

Expenditure on Irrigation and Flood Control under Five-Year/Annual Plans in Haryana

(Rs. Crore)

	Expenditure	*Percentage to Total Expenditure*
Fourth Five Year Plan 1969-74	134.18	37.45
Fifth Five Year Plan 1974-79	203.38	30.02
Annual Plan 1979-80	73.36	36.14
Sixth Five Year Plan 1980-85	441.68	27.68
Seventh Five Year Plan 1985-90	648.20	25.82
Annual Plan 1990-91	108.05	17.57
Eighth Five Year Plan 1992-97	797.02	16.27
Ninth Five Year Plan 1997-2002	1591.96	19.93
Annual Plan 1997-98	277.60	21.30
Annual Plan 1998-99	307.08	20.16
Annual Plan 1999-2000	329.80	19.70
Annual Plan 2000-01	312.51	18.19
Annual Plan 2001-02	364.98	20.66
Tenth Five Year Plan 2002-07	1798.00	14.98
Annual Plan 2002-03	218.66	12.31
Annual Plan 2003-04	209.97	11.25
Annual Plan 2004-05	275.77	13.08
Annual Plan 2005-06	442.46	14.76
Annual Plan 2006-07 (Revised outlay)	498.00	13.04
Eleventh Five Year Plan 2007-12 (Approved outlay)	4165.00	11.90
Annual Plan 2007-08 (Approved outlay)	718.00	13.54

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 29.1, pp. 586-91.

TABLE 1.45

Length of Operating Canals and Distributaries: 1966-2001

(in Miles)

Year	Length of Operative Canals	
	Main Canals	Distributaries
1966-67	910	4708
1970-71	988	4769
1980-81	1452	6124
1990-91	1494	6570
2000-01	1518	7032
2003-04	1518	7032
2004-05 (P)	1518	7032

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 13.7, p. 277.

supply of surface water is more or less constant with a small variation depending upon water level in the Bhakra and Pong reservoirs and the flow of water in river Yamuna, the availability of sub-surface water is declining due to more withdrawal than its recharging. The length of main canals in the State has increased from 910 miles in 1966-1967 to 1518 miles in 2000-01; and that of the distributaries from 4708 miles to 7032 miles during the same period. And since then these have remained the same.

The drainage system of State is divided mainly into two parts known as Yamuna basin and Ghaggar basin. Drainage system is quite effective in Yamuna Basin but Ghaggar basin is not adequately equipped with gravity drainage. There are about 4600 km. length of drains and sub-drains in the State.

Net Area under Irrigation in Haryana

It may be seen from Table 1.46 that although canal irrigated area in Haryana has increased from 991 thousand hectares in 1966-67 to 1426 thousand hectares in 2004-2005, yet its importance has come down from 76.64 per cent to 48.27 per cent in total net area irrigated over the same period. Most of the areas of Haryana are plain where water level is falling due to excessive pumping as availability of canal water is very scarce due to non-construction of SYL canal and storages on river Yamuna. The share of tubewells in total irrigated area has been increasing continuously. During the year 1980-81, 941 thousand hectares were under tubewells irrigation. This area increased to 1503 thousand hectares, that is, 50.88 per cent of total net area irrigated by 2004-05. Significantly, area under irrigation as percentage of net area sown increased from 37.8 per cent to 84.0 per cent over the period 1966-67 to 2003-04. In this regard, it is satisfying to note that Haryana stands at second position after Punjab.

TABLE 1.46

Net Area Under Irrigation in Haryana

Year	Net Area Irrigated by source (000 Hectares)						Percentage to Net Area Sown
	Govt. Canals	Tanks	Wells	Tube Wells	Other Sources	Total	
1	2	3	4	5	6	7	8
1966-67	991	4	289	+	9	1293	37.8
1970-71	952	1	574	+	5	1532	43.0
1980-81	1161	(a)	26	941	6	2134	59.2
1981-82	1183	(a)	21	1034	10	2248	61.4
1982-83	1262	(a)	12	1078	4	2356	65.5
1983-84	1185	1	10	990	4	2190	60.8
1984-85	1203	1	9	972	4	2189	60.5
1985-86	1191	1	10	1042	4	2248	62.2
1986-87	1203	1	14	1126	4	2348	64.8
1987-88	1220	1	(a)	1355	3	2579	79.8
1988-89	1239	(a)	(a)	1286	7	2532	71.0
1989-90	1359	2	1	1293	2	2657	73.9
1990-91	1337	1	(a)	1248	14	2600	72.7
1991-92	1381	(a)	(a)	1256	29	2666	76.0
1992-93	1359	1	1	1238	29	2628	75.3
1993-94	1353	1	16	1267	26	2663	75.8
1994-95	1382	(a)	(a)	1304	33	2719	76.4
1995-96	1375	1	(a)	1352	32	2760	77.0
1996-97	1372	1	(a)	1353	40	2766	76.5
1997-98	1397	(a)	(a)	1363	32	2792	76.8
1998-99	1433	1	(a)	1395	13	2842	78.3
1999-2000	1441	1	(a)	1432	14	2888	81.3
2000-01	1476	1	(a)	1467	14	2958	83.9
2001-02	1421	1	(a)	1502	14	2938	82.4
2002-03	1433	-	-	1522	11	2966	85.8
2003-04	1396	-	-	1561	12	2969	84.0
2004-05	1426	A	A	1514	14	2954	83.7
2005-06	1330	-	-	1592	14	2936	82.2

Note: (a) Means less than 500 hectares +: Not available
Source: Director, Land Records, Government of Haryana, Chandigarh.

Tubewells, both diesel and electricity operated, have contributed a lot in raising the irrigation facility remarkably. Ever since the coming into existence of the Haryana State, the number of tubewells has increased by more than 24 times, from 25,311 in 1966-67 to 6,18,023 in 2005-06 as can be seen from Table 1.47.

The government accords high priority to the provision of adequate irrigation facilities for the prosperity of farming community. The concrete steps have been taken to ensure equitable distribution of canal water to the farmers of the State. Wherever possible, water supplies to the area of scarcity have been enhanced.

TABLE 1.47

Tubewells and Pumping Sets

Year	*Diesel Sets*	*Electric Sets*	*Total*
1	*2*	*3*	*4*
1966-67	—	—	25,311
1970-71	17,903	86,455	1,04,358
1975-76	65,092	1,39,644	2,04,736
1980-81	1,09,353	2,22,674	3,32,027
1985-86	1,34,136	2,72,282	4,06,418
1990-91	1,55,842	3,41,729	4,97,571
1993-94	2,14,343	3,17,297	5,31,640
1994-95	2,25,485	3,21,731	5,47,216
1995-96	2,25,848	3,23,448	5,49,296
2000-01	2,55,302	3,34,171	5,89,473
2001-02	2,54,654	3,40,870	5,95,524
2002-03	2,53,006	3,48,985	6,01,991
2003-04	2,43,033	3,64,065	6,07,098
2004-05	2,34,255	3,77,343	6,11,598
2005-06	2,31,821	3,86,202	6,18,023

Note: Sets include both pumping sets and tubewells.

Source: Government of Haryana (2007). *Statistical Abstract Haryana, 2005-06*, Table 13.6, p. 276.

The supply of water to J.L.N. Feeder has been increased from 1500 cusecs to 2000 cusecs and the steps are being taken for further increase to 2200 cusecs. Siwani Canal System has been made to run in two groups out of four groups with capacity of 300 cusec whereas earlier it was running in one group out of four groups with the same capacity. The average supply of water during *Kharif* 2006 remained at 17,445 cusecs per day as compared to 14,000 cusecs per day during *Kharif* 2004. Similarly the supply was maintained at 12,179 cusecs per day during *Rabi* 2005-06 which was 8939 cusecs during *Rabi* 2004-05.

In order to ensure equitable distribution of water for irrigation and drinking purposes throughout the State, the government has decided to construct a canal namely Bhakra Main Line—Hansi Branch—Butana Branch Multipurpose Link Channel of 109 kilometre length costing Rs.259 crore. The channel will transfer 2000 cusecs of Ravi-Beas water being received through Bhakra Main Line to Yamuna Canal and Lift Canal Commands. During monsoon season, it will help to grow paddy crop and raise sub soil water level in the nearby areas through which it will pass. The construction work is in full swing and channel will be completed by October 2007.

To utilise surplus water of River Yamuna during monsoon season, the construction work of Shahabad Dadupur Nalvi Canal has been taken up at an estimated cost of Rs.267 crore with carrying capacity of 590 cusecs at its head. The length of canal alongwith its distribution system is 375 kms. The canal will provide irrigation and recharging facilities to an area of 92,532 hectares falling in districts of Yamuna Nagar, Ambala and Kurukshetra.

Another scheme to utilise surplus water of River Yamuna during monsoon season namely Ambala Irrigation Scheme has been sanctioned by the government at a cost of Rs.295 crore and stands submitted to Central Water Commission (CWC) in September 2006 for clearance. The scheme consists of construction of 80 kilometers long canal namely Naraingarh Branch offtaking from Western Jamuna Canal Link Channel near Hathni Kund Barrage with a discharge of 683 cusecs. The scheme on its execution will provide irrigation and recharging facilities to an area of 1,35,628 hectares falling in districts of Yamuna Nagar, Ambala and Panchkula.

The government is keen to provide irrigation and drinking water facilities to the backward and water deficient area of Mewat. A project estimate amounting to Rs.326.4 crore has been prepared for the construction of Mewat Canal. The canal will offtake from J.L.N. Feeder near Sahlawas meeting Gurgaon Canal through Nuh Sub-branch, as major part of Mewat district is served by the Gurgaon Canal. The carrying capacity of J.L.N. Feeder will be increased by 1000 cusecs and the Mewat Canal will run with 728 cusecs at head and deliver 638 cusecs into Gurgaon Canal for about 60 days during monsoon season. After completion of Bhakra Main Line—Hansi Branch—Butana Branch Multipurpose Link Channel, 200 to 300 cusecs water could be made available regularly. Further increase will be possible after construction of upstream storage on River Yamuna.

The capacity of canal network receiving water from River Yamuna is being enhanced under Accelerated Irrigation Benefit Programme to utilise more water of River Yamuna for irrigation and recharging purpose. The capacity of WJC Main Line Lower of Western Yamuna Canal system is being increased from 14,000 cusecs to 20,000 cusecs at a cost of Rs.30.00 crore for utilising additional 0.48 MAF flood water of River Yamuna.

The government has sanctioned four projects of low height dams namely Kaushlya dam, Dangrana dam, Dewanwala dam and Chhamla dam on river Ghaggar and its tributaries to prevent wasteful flow of water and loss to property by flood during the monsoon season. These projects on execution will solve irrigation and drinking water problem of district Panchkula and help

in moderating floods in River Ghaggar affecting Punjab and Haryana areas.

The government is pursuing the construction of upstream storage dams namely Kishau dam, Renuka dam and Lakhwar Viyasi dam on river Yamuna vigorously with Governmnt of India.

For the utilisation of surplus flood water for irrigation purpose a detailed project report for creation of a water body namely Kotla Lake in Mewat district has been prepared. Scheme of rehabilitation of Ottu Lake and Bibipur Lake has also been approved by the government.

The construction work regarding Ground Water Recharge Project at Massani Barrage in Rewari district has already been completed. The flood water of River Yamuna through JLN Canal will be utilised for the purpose. Another scheme for recharging of ground water through injection bore wells in districts of Ambala, Kurukshetra, Karnal, Kaithal and Panipat has been approved by the government. The repair and rehabilitation work of 6675 damaged lined watercourses is being carried out in a phased manner.

The State has made the best efforts to popularise the Drip Irrigation System by creating awareness amongst the farmers about the optimum use of available water resources. By the end of 2005-06, an area of 3712 hectares has been covered under the Drip Irrigation system. The target of 1804 hectares of area to be covered under the irrigation system during the year 2006-07 is expected to be achieved. The target of covering area under this system for the year 2007-08 has been fixed at 2000 hectares.

1.2.6.2 Energy

The availability of cheap, abundant and regular power supply is an essential condition for development. Haryana State has limited availability of natural sources of energy. There is no hydro generation potential in the State. Even, the coal mines are far away located from the State. There is a very limited forest area. Wind velocity in the State is also not sufficient to exploit power generation. Although the solar intensity is relatively higher, the land area limitation does not encourage harnessing of this resource at a scale large enough to make it viable. Therefore, the State has been depending on the limited thermal generation capacity installed within the State and hydropower from the jointly owned projects. The State's efforts have been supplemented by the Central Generation Projects from where the State gets share on the formula evolved by the Government of India for such projects.

The total installed capacity available to the State at present is 4033.30 MW. It includes 1587.40 MW from State's own stations, 937.50 MW from jointly owned projects and the balance as share in central projects and independent private power projects. The power availability from these sources during the year 2004-05 was 21,713.6 million units upto 31st December 2005.

In spite of the importance of energy, the expenditure on it in the State has been continuously declining during successive five-year and annual plans. While during the Fifth Five Year Plan, 38.39 per cent of the total expenditure was on energy, it has declined to 13.62 per cent in the Tenth Five Year Plan and further to 13.47 per cent in the Eleventh Five Year Plan's approved outlay.

There has been wide expansion of both the LT and KV Lines in the State. The increase in LT Lines from 9,796 circuit kilometre in 1966-67 to 1,13,688 circuit kilometre in 2005-06 is more significant than the KV Lines which increased from 7,089 circuit kilometre in 1966-67 to 67,499 circuit kilometre in 2005-06. Similarly the number of transformers has also increased from 5,390 in 1966-67 to 1,55,404 in 2005-06.

TABLE 1.48

Expenditure on Energy under Five-Year/ Annual Plans in Haryana

	Expenditure (Rs. Crores)	*Percentage to total expenditure*
Fourth Five Year Plan 1969-74	87.53	24.43
Fifth Five Year Plan 1974-79	260.01	38.39
Annual Plan 1979-80	56.40	27.79
Sixth Five Year Plan 1980-85	491.62	30.81
Seventh Five Year Plan 1985-90	639.03	25.45
Annual Plan 1990-91	155.93	25.35
Eighth Five Year Plan 1992-97	1203.95	24.57
Ninth Five Year Plan 1997-2002	1547.98	19.38
Annual Plan 1997-98	287.75	22.07
Annual Plan 1998-99	430.50	28.27
Annual Plan 1999-2000	436.01	26.04
Annual Plan 2000-01	357.05	20.78
Annual Plan 2001-02	36.67	2.08
Tenth Five Year Plan 2002-07	1634.00	13.62
Annual Plan 2002-03	203.60	11.46
Annual Plan 2003-04	224.49	12.03
Annual Plan 2004-05	265.58	12.60
Annual Plan 2005-06	307.16	10.25
Annual Plan 2006-07 (Revised outlay)	574.64	15.04
Eleventh Five Year Plan 2007-12 (Approved outlay)	4713.46	13.47
Annual Plan 2007-08 (Approved outlay)	844.32	15.93

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 29.1, pp. 586-91.

TABLE 1.49

L.T. and 11 K.V. Lines in Haryana

(Circuit Kilometer)

Year	*L.T. Lines*	*11 K.V. Lines*	*Number of Transformers*
1966-67	9,796	7,089	5,390
1970-71	32,056	22,819	15,236
1975-76	48,731	30,434	22,968
1980-81	66,493	35,939	31,385
1985-86	79,850	40,964	43,601
1990-91	92,831	48,602	68,883
1995-96	1,02,639	53,159	93,356
2000-01	1,05,356	55,607	1,10,855
2001-02	1,06,528	55,678	1,17,301
2002-03	1,07,695	59,048	1,25,368
2003-04	1,08,555	61,014	1,34,943
2004-05	1,11,130	65,638	1,46,458
2005-06	1,13,688	67,499	1,55,404

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 20.1, p. 427.

It may be seen from Table 1.50 that in Haryana the installed generation capacity of power has increased from 29.42 MW in 1967-68 to 2,525 MW in 2005-06. The increase in the installed generation capacity is due mainly to thermal power which increased from 24.20 MW in 1970-71 to 1587.50 MW by 2005-06 as well as hydel power which went up from 403.30 MW to 937.40 MW almost over the same period. Consequently, the availability of power for sale also increased from 601 KWH in 1967-68 to 26,719 KWH by the year 2005-06.

The consumption structure of electricity in Haryana has also changed since 1966-67 when the share of industrial sector was 62 per cent and that of agriculture sector was 22.7 per cent. By 2005-06, industry's share declined to 25.4 per cent and agriculture's share increased to 41.1 per cent. The share of domestic sector increased significantly from 6.8 per cent in 1966-67 to 19.6 per cent in 2005-06. The number of electricity consumers in the State as on March 2006 was 40 lakh.

While generation capacity directly influences power production and hence availability, it may not always be a good indicator of power availability in the State as sharing of power generated in a particular State is possible through the National Power Grid. A more reliable indicator of availability of power is the per capita consumption of power. Table 1.52 reveals that annual per capita domestic, commercial and industrial consumption of electricity in the State was much higher than the all-India average in the year 2004-05. But if individual States and Union Territories are ranked then Haryana stands at 15th rank in per capita domestic consumption, at 19th rank in per capita commercial consumption and at 14th rank in per capita industrial consumption.

The per capita consumption of electricity in Haryana increased from 88.8 KwH in 1970-71 to 530.8 KwH in 1999-2000. As against this, India's overall average per capita consumption increased from 79.8 KwH to 354.7 KwH over the same period. In 1970-71, the union territory of Chandigarh consumed maximum power (280.2 KwH), followed by Delhi (250.6 KwH), and Pondicherry (175.8 KwH). Among the States, Punjab recorded the highest per capita consumption at 156.2 KwH, followed by Maharashtra's 151.7 KwH, Tamil Nadu's 124.9 KwH, West Bengal's 107.3 KwH, and Karnataka's 101.5 KwH. But by the year 1999-2000, the Union Territory of Daman and Diu consumed power the most (3927.4 KwH) followed by Dadra and Nagar Haveli (3882.8 KwH) and Pondicherry (931.9 KwH). Among the states, Punjab kept its record of highest per capita consumption (921.1 KwH) followed by Goa (712.5 KwH) and Gujarat (834.7 KwH). In 2004-05 the per capita power consumption in Haryana was 609 units.

On 13th February 2001, a Memorandum of Understanding (MoU) between Ministry of Power, Government of India and the Government of Haryana was signed. This MoU records the steps that the Government of Haryana will take in a time bound manner to further the process of reform and restructuring and the support Government of India would give to Government of Haryana. According to this MoU Haryana is committed to reforming its power sector in order to provide sufficient, reliable and good quality power to all the people of Haryana, and achieve commercial viability in the power sector so that the sector can finance its own growth.

In order to attain these objectives, Haryana has already undertaken the following steps:

a) It has passed its own Electricity Reforms Act in 1997, which is being implemented in letter and spirit.

b) It has unbundled the State Electricity Board into four independent Power Corporations—The Haryana Power Generation Corporation, Haryana Vidyut Prasaran Nigam, Uttari Haryana Bijli Vitran Nigam, Dakshini Haryana Bijli Vitran Nigam.

c) It has established the State Electricity Regulatory Commission (HERC).

TABLE 1.50

Installed Generation Capacity and Power Availability in Haryana

Year	Installed Generation Capacity* (in MW)				Power Availability (in Million K.W.H.)			Generation			Power sold @ (in million K.W.H.)	Transmission and Distribution Losses (in Million KWH) (11-12)
	Hydel	Thermal	Internal Combustion Plant	Total	Hydel	Thermal	Total	Auxiliary consumption	Power Purchased	Power Available for Sale (8+10-9)		
1	2	3	4	5	6	7	8	9	10	11	12	13
1967-68	—	24.20	5.22	29.42	—	21.00	21.00	3.00	583.00	601.00	501.00	100.00
1968-69	—	24.20	5.22	29.42	—	11.00	11.00	1.00	908.00	918.00	662.00	256.00
1969-70	—	24.20	5.22	29.42	964.00	85.00	1049.00	2.00	24.00	1071.00	799.00	272.00
1970-71	—	24.20	5.22	29.42	912.00	298.00	1210.00	8.00	44.00	1246.00	903.00	343.00
1975-76	403.30	144.30	4.19	551.79	2001.00	681.00	2682.00	63.00	206.00	2825.00	2354.00	471.00
1980-81	654.00	417.50	2.50	1074.00	2967.00	1302.00	4269.00	205.00	120.00	4184.00	3391.00	793.00
1981-82	696.00	477.50	3.19	1176.69	3198.00	1570.00	4768.00	240.00	147.00	4675.00	3867.00	808.00
1982-83	721.00	477.50	3.19	1201.69	3310.00	1498.00	4808.00	230.00	190.00	4768.00	3946.00	822.00
1983-84	818.00	477.50	3.92	1299.42	3252.00	1376.00	4628.00	220.00	289.00	4697.00	3955.00	742.00
1984-85	830.00	477.50	3.92	1311.42	2938.00	1604.00	4542.00	219.00	284.00	4607.00	3725.00	882.00
1985-86	831.00	587.50	3.92	1422.42	3142.00	1634.00	4776.00	216.00	596.00	5156.00	4256.00	900.00
1986-87	847.00	697.50	3.92	1548.42	3397.00	1868.00	5265.00	258.00	681.00	5688.00	4639.00	1049.00
1987-88	863.00	697.50	3.92	1564.42	3305.00	2554.00	5859.00	309.00	1199.00	6749.00	5157.00	1592.00
1988-89	871.00	907.50	3.92	1782.42	3616.00	2471.00	6087.00	311.00	1750.00	7526.00	5690.00	1836.00
1989-90	879.00	877.50	—	1756.50	3490.00	2466.00	5956.00	328.00	2300.00	7928.00	5983.00	1945.00
1990-91	879.00	877.50	—	1756.50	4093.00	2645.00	6738.00	327.00	2614.00	9025.00	6641.00	2384.00
1991-92	879.00	877.50	—	1756.50	3996.00	3606.00	7602.00	385.00	3336.00	10553.00	7741.00	2812.00
1992-93	879.00	877.50	—	1756.50	3927.00	3890.00	7817.00	417.00	4158.00	11558.00	8625.00	2933.00
1993-94	879.00	877.50	—	1756.50	3386.00	3154.00	6540.00	357.00	4985.00	11168.00	8316.00	2852.00
1994-95	884.00	877.50	—	1761.50	3732.00	3434.00	7166.00	377.00	4683.00	11472.00	8203.00	3269.00
1995-96	884.00	877.50	—	1761.50	3675.00	3342.00	7017.00	391.00	6112.00	12738.00	8745.00	3993.00
1996-97	884.00	877.50	—	1761.50	3828.00	3641.00	7469.00	456.00	6250.00	13263.00	9058.00	4205.00
1997-98	902.00	877.50	—	1779.50	3297.06	3826.22	7123.28	464.07	6643.85	13303.06	8864.44	4438.62
1998-99	902.00	877.50	—	1779.50	4267.92	3576.14	7844.06	429.53	6621.02	14035.55	9289.91	4745.64
2000-01	902.00	877.50	—	1779.50	3227.13	3766.27	6993.40	—-	9862.00	16855.40	15423.12	1432.28**
2001-02	917.00	1087.50	—	2004.50	3069.29	5280.07	8349.36	—-	9238.74	17588.10	16307.73	1280.37**
2002-03	922.00	1087.50	—	2009.50	3193.56	6138.49	9332.05	—-	9876.65	19208.70	18072.68	1136.02**
2003-04	922.00	1087.50	—	2009.50	3772.74	6218.24	9990.98	—-	10772.73	20763.71	19815.87	947.84
2004-05	937.40	1587.50	—	2524.90	2927.62	6308.48	9236.10	—-	12477.47	21713.57	20589.82	1123.75
2005-06	937.40	1587.50	—	2524.90	3531.11	9151.00	12682.11	902.26	14939.60	26719.45	22222.60	4496.85

Notes: * Excluding the share of Haryana from Central Sector Generating Stations of NHPC, NTPC and others i.e. MARUTI, MAGNUM, NAPP, RAPP etc.
** Only transmission losses
P – Provisional R – Revised
Including power sold to other States/other Agencies also.

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 20.7, pp. 434-5.

TABLE 1.51

Percentage Consumption of Electric Power—Purpose-wise

Year	*Domestic*	*Industrial*	*Agricultural*	*Others*	*Total*
1966-67	6.8	62.0	22.7	8.5	100.0
1967-68	6.7	63.9	20.5	8.9	100.0
1970-71	6.4	52.9	33.1	7.6	100.0
1975-76	7.3	48.4	37.0	7.3	100.0
1980-81	8.9	47.7	37.3	6.1	100.0
1985-86	14.3	38.0	40.3	7.4	100.0
1986-87	15.1	35.6	42.2	7.1	100.0
1987-88	14.8	29.6	49.0	6.6	100.0
1989-89	17.0	31.4	44.2	7.4	100.0
1989-90	17.9	27.4	47.4	7.3	100.0
1990-91	18.8	28.8	44.8	7.6	100.0
1991-92	18.1	24.8	49.5	7.6	100.0
1992-93	18.5	23.8	50.0	7.7	100.0
1993-94	19.6	21.8	50.2	8.4	100.0
1994-95	19.8	24.1	46.7	9.4	100.0
1995-96	19.6	24.2	46.7	9.5	100.0
1996-97	20.6	22.4	46.9	10.1	100.0
1997-98	21.5	22.8	45.4	10.3	100.0
1998-99	22.6	21.1	45.4	10.9	100.0
1999-2000	21.8	19.7	47.8	10.7	100.0
2000-01	21.2	20.5	46.9	11.4	100.0
2001-02	21.5	23.2	43.6	11.7	100.0
2002-03	20.2	23.8	42.9	13.1	100.0
2003-04	19.8	24.7	42.6	12.9	100.0
2004-05	20.6	25.2	41.2	13.0	100.00
2005-06	19.6	25.4	41.1	13.9	100.00

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 36.18, p. 768.

d) The State Electricity Regulatory Commission is fully functional and has passed its first tariff order, which is being implemented by the State Government and Power Utilities.

e) Haryana is taking effective steps to bring about improvement in the management of distribution and improvement of revenue collection.

As regards reform programme of Haryana, it would be taking the following measures:

a) T&D losses, which have been set at 40.76 per cent by the Regulatory Commission, are proposed to be brought down to 20 per cent by 2006 by reducing T&D losses by 5 per cent per year.

b) Energy Audit will be undertaken at all levels in order to reduce system losses. This would be done in a time bound manner with the following milestones:

- Installation of metering at all 11 KV feeders by 31.3.2001.
- 100 per cent metering of all consumers by 31st December 2001.
- Computerised billing for effective energy audit at all major towns by 31st March 2002.
- Formation of distinct distribution profit centres at Divisional level and preparation of separate commercial accounts/shadow Balance Sheets for such centres from 31st March 2002.

c) Take steps towards achieving commercial viability in distribution by such further measures/restructuring as may be required.

Haryana will maintain grid discipline, comply with grid code and carry out the directions of Regional Load Dispatch Centre.

The Government of Haryana will ensure timely payment of subsidies required in pursuance of GoH's orders on the tariff determined by the HERC.

Government of Haryana will give securities of outstanding dues of CPSUs as per scheme approved by Government of India. After the securitisation, Government of Haryana will ensure that CPSU outstanding does not cross the limit of 2 months' billing.

The Power Sector Report of June 2006 of the Ministry of Power, Government of India has assigned an overall score of 23.75 to the power sector in Haryana. The distribution of marks against the various parameters is as follows:

		Max Score	*Min Score*	*Score Assigned*	*Weightage (%)*	*Final Score*
	Part-I	100.00	(25.00)	16.33	75	12.25
A	State Government related parameters	18.00	(8.00)	2.00		
B	Regulatory Process	9.00	(5.00)	2.50		
C	Business Risk Analysis	30.00	(7.00)	6.95		
D	Financial Risk Analysis	20.00	(1.00)	4.13		
E	Others	7.00	(2.00)	2.75		
F	Progress in attaining commercial viability	16.00	(2.00)	(2.00)		
	Part-II	100.00	0.00	46.00	25	11.50
A	Sustainability of state power sector revenue model	50.00	0.00	24.00		
B	Creation of competitive environment	50.00	0.00	22.00		
	Final Score	100.00	(18.75)			23.75

Strengths

- Thrust on addition of generation capacity within the state
- High level of household electrification at around 95 per cent
- Low level of power and fuel purchase creditors.

TABLE 1.52

Annual Per Capita Consumption of Electricity in India during the Year 2004-05 (State-wise)

(In KWH)

Sr. No.	*Name of the State/ Union Territory*	*Utilities*						*Non-Utilities*	*Grand Total*
		Domestic	*Commercial*	*Industrial including public water works and miscellaneous*	*Public Lighting*	*Agricultural*	*Total*		
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1.	Andhra Pradesh	99.61	23.59	169.06	17.68	179.02	488.97	54.17	543.14
2.	Assam	25.49	8.03	30.65	0.24	0.51	64.88	20.39	85.27
3.	Bihar	13.64	3.40	15.24	0.33	11.96	44.56	0.00	44.56
4.	Chhattisgarh	62.25	10.88	239.34	2.12	47.06	361.66	173.49	535.15
5.	Delhi	407.01	231.39	172.43	14.50	4.66	829.98	0.00	829.98
6.	Gujarat	101.25	37.93	321.82	3.47	224.62	689.09	219.03	908.12
7.	**Haryana**	**126.25**	**33.56**	**199.42**	**1.70**	**252.44**	**613.38**	**44.62**	**658.00**
8.	Himachal Pradesh	127.93	38.61	294.45	1.72	3.99	466.69	17.35	484.04
9.	Jammu & Kashmir	137.19	41.84	153.72	4.43	11.47	348.65	0.09	348.74
10.	Jharkhand	29.43	5.63	254.28	1.97	2.12	293.43	108.70	402.14
11.	Kerala	129.79	39.64	101.54	5.65	6.06	282.67	13.40	296.07
12.	Madhya Pradesh	58.97	12.55	101.18	2.00	90.00	264.69	43.72	308.40
13.	Maharashtra	124.02	52.44	255.39	6.19	105.13	543.16	42.19	585.35
14.	Manipur	45.01	4.88	19.23	1.26	0.09	70.47	0.00	70.47
15.	Karnataka	89.18	34.88	145.37	10.55	168.88	448.86	55.83	504.69
16.	Nagaland	57.15	8.71	21.04	0.33	0.00	87.23	0.00	87.23
17.	Orissa	69.34	13.92	114.19	1.23	4.77	203.45	191.44	394.89
18.	Punjab	198.33	50.62	375.81	4.23	253.36	882.34	24.96	907.30
19.	Rajasthan	55.53	17.91	111.53	1.88	87.54	274.38	53.71	328.09
20.	Tamil Nadu	172.12	58.53	252.95	5.90	151.67	641.19	72.07	713.26
21.	Tripura	44.19	9.74	35.86	2.18	21.13	113.10	0.00	113.10
22.	Uttaranchal	112.14	63.61	116.01	5.15	54.16	351.07	42.40	393.47
23.	Uttar Pradesh	57.75	11.71	57.73	1.83	27.21	156.23	45.79	202.03
24.	West Bengal	66.71	24.81	122.65	2.55	9.90	226.61	20.94	247.54
25.	Meghalaya	70.61	15.86	264.75	0.61	0.38	352.21	0.00	352.21
26.	Sikkim	172.81	98.25	47.37	79.80	0.00	397.72	0.00	397.72
27.	Arunachal Pradesh	56.52	11.74	68.91	7.61	0.00	144.78	0.00	144.78
28.	Goa	206.56	80.67	906.02	20.68	10.84	1224.76	93.58	1318.34
29.	Daman & Diu	248.40	139.35	5504.09	20.59	15.44	5927.87	0.00	5927.87
30.	Mizoram	90.13	6.95	30.43	6.18	0.00	133.69	0.00	133.69
31.	Chandigarh	364.11	229.54	326.30	15.29	1.80	937.03	6.91	943.94
32.	Dadra Nagar Haveli	127.91	67.66	7271.27	34.04	23.40	7524.30	62.17	7586.47
33.	Lakshadweep	220.63	67.97	6.25	17.34	0.00	312.19	0.00	312.19
34.	Pondicherry	280.84	83.11	1288.17	15.26	116.04	1783.42	93.10	1876.52
35.	Andaman Nicobar Island	160.80	65.33	51.86	15.23	0.00	293.23	0.00	293.23
	All India	87.77	28.79	151.92	4.56	81.25	354.28	56.76	411.04

Note: Total may not tally on account of rounding off.

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 20.10, pp. 440-41.

- Pension liabilities have been quantified and trust has been created for funding the same

Weaknesses

- High level of subsidies putting strain on the State government finances
- High level of unmetered agricultural consumers and zero distribution transformer (DTR) metering, leading to a weak energy audit system.
- High aggregate technical and commercial losses (AT&C losses) at over 43 per cent in 2004-05.

TABLE 1.53

Per Capita Consumption of Electricity

(KwH)

S. No.	States/Union Territories	1970-1971	1974-1975	1980-1981	1989-1990	1996-1997	1999-2000
1.	Daman & Diu		130.8	276.4	440.1	2346.7	3927.4
2.	D & N Haveli	13.5	14.8	56.3	878.8	2298.8	3882.8
3.	Pondicherry	175.8	214.4	263.7	592.4	1034.5	931.9
4.	Chandigarh	280.2	363.7	309	686.2	794.4	823.8
5.	Punjab	156.2	154.2	303.6	620.5	789.9	921.1
6.	Goa	96.9	157.5	250.8	411.2	719.1	712.5
7.	Gujarat	124.4	165	238.8	436.8	685.7	834.7
8.	Delhi	250.6	299.2	403.8	673.6	589.7	653.2
9.	Maharashtra	151.7	172.6	244.5	393.6	557	520.5
10.	**Haryana**	**88.8**	**115.1**	**209.5**	**367.4**	**508.3**	**530.8**
11.	Tamil Nadu	124.9	126.4	186	295	469.4	484.1
12.	Orissa	72.9	69.2	114	249.2	446.7	354.6
13.	Madhya Pradesh	45.2	61.3	100.3	217.4	368.4	351.7
14.	Karnataka	101.5	119.3	146	272.8	338.3	380.1
15.	Andhra Pradesh	50.4	55.4	101.8	233.5	331.7	391.1
16.	Rajasthan	36.8	55.9	99.4	191.6	294.4	334.5
17.	Himachal Pradesh	34.1	58.8	66.4	191.9	278.5	339.1
18.	Kerala	71.4	79.4	112	171	235.8	261.8
19.	Lakshadweep		11.2	26.8	143.6	234.2	217.9
20.	Jammu and Kashmir	36.8	52.7	74.8	176.4	223.7	267.9
21.	A & N Islands	26.1	27.2	42.3	109.7	210	222.4
22.	West Bengal	107.3	106.1	117	136.2	196.6	204.4
23.	Uttar Pradesh	48.5	50	83.1	157.4	194.3	175.8
24.	Sikkim			37.2	103.3	182.4	192.4
25.	Bihar	45.9	48	74.1	109.9	145.1	140.8
26.	Meghalaya		31.3	31	106.4	134.5	160.3
27.	Manipur	4.7	7.7	7.9	79.5	127.9	69.5
28.	Mizoram		4.3	5.6	65	127.8	120.7
29.	Assam	20	24	33.5	92.7	107.6	95.5
30.	Nagaland	7.8	27.2	34.2	58.6	88	84.7
31.	Arunachal Pradesh		3.4	14.6	56.6	80.8	68.6
32.	Tripura	4.5	6	14.5	45	80.4	95.5
	INDIA	79.8	174.9	120.5	236	334	354.7

Source: *Tenth Five Year Plan 2002-2007*, Volume III, Annexures-3.10, p.87. New Delhi: Planning Commission, Government of India.

- Low revenue cost coverage of 63 per cent in 2004-2005 and an increasing trend in adjusted book losses leading to greater reliance on subsidies.
- High level of receivables at 215 days of sales in 2004-05.
- High manpower strength, both at the generation and T&D levels.

The State Government

Key Positives

Government of Haryana is making efforts to expand the generation capacity within the State. It has added 500 MW during 2004-05 and plans to add 600 MW in the next three years. It has unbundled the trading and transmission functions. HPGCL, the generating company, has been handling the trading function separately since June 2005. The level of household electrification in the State is high at 95 per cent.

Areas of Improvement

The power subsidy for the State is leading to very high pressure on the State Government finances. In 2004-05, the power subsidy was Rs.11000 million against a total revenue deficit of Rs.2258 million. Further, there have been delays in the implementation of various targets of the electricity Act 2003 such as constitution and functioning of the Special Courts for theft related cases, setting up of separate fund for Regulatory Commission and constitution of district level committees.

Regulatory Process

Key Positives

HERC has come out with regulations as per the Electricity Act 2003 and has issued directives to the distribution companies for improving functioning within the state in terms of operational efficiency, costs, and quality of services.

Areas of Improvement

Timeliness of the tariff orders as well as filling of the petitions by the Discoms need to be improved. Efforts must be taken for reducing cross-subsidy element and introduction of Time of Day tariff. Further, utilities must be more diligent in complying with the directives issued by HERC. HERC did not approve of the Ombudsman appointed in 2004-05 and a new Ombudsman needs to be appointed. Adoption of multi-year framework for determining tariff is yet to be done, which is a requirement as per the National Tariff Policy.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

Hundred per cent metering of all the feeders upto 11 KV has been completed. Availability of transmission network is also high at above 99 per cent in 2004-05. The operational parameters with respect to the generating plants also show an improving trend with the Plan Load Factor (PLF) increasing from 57 per cent in 2001-02 to 70 per cent in 2004-05 and the availability factor increasing from 70 per cent in 2001 to 80 per cent in 2004-05.

Areas of Improvement

The AT&C losses continue to be at high levels (43 per cent for the entire state in 2004-05) and there is a

need to improve metering as the units billed on the metered basis form only about 44 per cent (in 2004-05) of the total power input into the State. This is attributed to the high level of agricultural consumers in the State. The Revenue cost coverage has declined from 73 per cent in 2003-04 to 63 per cent in 2004-05. Though there has been an improvement in manpower level per MW generated over previous year, it is very high compared with the benchmark.

There is a need to improve the distribution infrastructure as the distribution transformer failure rates are at a high level of 14 per cent (in 2004-05) and there are large-scale interruptions and outages along with load shedding, especially in the rural areas. The distribution companies need to take up complete distribution transformer metering, consumer indexing, and HT remote metering.

Financial Risk Analysis

Key Positives

The creditors of purchase of power and fuel are at a low level of 18 days (in 2004-05) of the total fuel and power purchases. In addition, two trusts, which are being adequately funded, take care of the servicing of the pension liabilities.

Areas of Improvement

The cash loss levels for Discoms and Transcos have increased from Rs.13.23 billion (2001-02) to Rs.28.52

TABLE 1.54

Scores Assigned to the States/Electricity Department in June 2006

Rank	*State*	*State Govt.*	*Regulatory Process*	*Generation*	*T&D*	*Financial Risk*	*Others*	*Commercial Viability*	*Total Part I*	*Sustainability of State Power Sector Revenue Model*	*Creation of Competitive environment*	*Total Part II*	*75% of Part I*	*25% of Part II*	*Final scores*
1	Andhra Pradesh	4.70	7.75	5.00	12.77	14.25	5.07	6.20	55.74	32.00	24.00	56.00	41.81	14.00	55.81
2	Gujarat	5.31	3.00	4.25	10.09	11.00	5.50	6.80	45.95	40.00	40.00	80.00	34.46	20.00	54.46
3	Delhi	10.49	4.50	3.00	11.80	8.50	5.00	6.20	49.49	38.00	17.00	55.00	37.12	13.75	50.87
4	Karnataka	7.03	3.85	5.00	8.70	9.63	3.55	2.80	40.56	34.00	32.00	66.00	30.42	16.50	46.92
5	West Bengal	3.47	7.00	1.25	8.71	6.50	3.86	12.20	42.99	40.00	16.00	56.00	32.24	14.00	46.24
6	Goa	3.70	-3.00	0.00	13.80	13.00	0.50	16.00	43.28	50.00	0.00	50.00	32.46	12.50	44.96
7	Himachal Pradesh	3.72	4.50	5.00	14.45	7.60	2.95	3.20	41.45	32.00	16.00	48.00	31.09	12.00	43.09
8	Maharashtra	2.78	1.25	3.00	5.47	10.00	2.25	7.80	32.55	20.00	24.00	44.00	24.41	11.00	35.41
9	Kerala	-1.31	2.25	1.75	12.93	6.50	2.92	6.80	31.84	16.00	15.00	31.00	23.88	7.75	31.63
10	Tamil Nadu	-1.49	1.50	3.50	13.47	8.38	0.73	3.20	29.29	16.00	15.00	31.00	21.97	7.75	29.72
11	Assam	7.00	3.15	0.50	5.95	5.50	2.25	5.60	29.95	8.00	16.00	24.00	22.46	6.00	28.46
12	Rajasthan	6.43	4.00	5.00	0.00	6.00	3.50	-1.20	23.73	16.00	24.00	40.00	17.80	10.00	27.80
13	Punjab	-1.05	-0.25	4.38	8.45	7.88	2.25	4.60	26.25	16.00	16.00	32.00	19.69	8.00	27.69
14	Chhattisgarh	-2.74	4.00	3.16	6.60	6.51	0.87	1.20	19.60	32.00	19.00	51.00	14.70	12.75	27.45
15	Uttranchal	3.04	4.00	0.00	10.32	3.25	1.17	1.30	23.08	14.00	25.00	39.00	17.31	9.75	27.06
16	Tripura	5.53	-1.00	1.00	4.85	9.25	0.25	12.80	32.68	8.00	0.00	8.00	24.51	2.00	26.51
17	Meghalaya	1.50	-3.00	6.00	1.25	8.25	1.75	6.80	22.55	32.00	0.00	32.00	16.91	8.00	24.91
18	Uttar Pradesh	7.60	3.00	2.25	1.40	3.88	3.38	3.00	24.51	0.00	24.00	24.00	18.38	6.00	24.38
19	**Haryana**	**2.00**	**2.50**	**3.25**	**3.70**	**4.13**	**2.75**	**-2.00**	**16.33**	**24.00**	**22.00**	**46.00**	**12.25**	**11.50**	**23.75**
20	Madhya Pradesh	5.60	6.00	5.00	1.19	0.26	1.25	-1.00	18.30	18.00	15.00	33.00	13.72	8.25	21.97
21	Orissa	3.25	5	3	3	0	0.75	0	15.00	16.00	24.00	40.0	11.25	10.00	21.25
22	Sikkim	0.83	-5.00	0.75	2.06	7.75	0.25	9.40	16.04	8.00	0.00	8.00	12.03	2.00	14.03
23	Mizoram	1.00	-5.00	2.50	7.00	3.00	0.00	1.00	9.50	0.00	0.00	0.00	7.13	0.00	7.13
24	Jharkhand	-1	0.5	0	-0.5	0	-1	0	-2.00	12.00	10.00	22.00	-1.50	5.50	4.00
25	Arunachal	-0.70	-5.00	0.00	-0.60	8.75	-1.50	3.60	4.55	0.00	0.00	0.00	3.41	0.00	3.41
26	Nagaland	1.65	-5.00	0.00	0.10	8.00	-0.50	0.00	4.25	0.00	0.00	0.00	3.19	0.00	3.19
27	Bihar	-0.80	-3.00	0.38	-0.90	2.50	-0.25	-2.00	-4.08	0.00	0.00	0.00	-3.06	0.00	-3.06
28	Manipur	-0.81	-5.00	0.75	-1.58	0.75	-1.00	-2.00	-8.89	0.00	0.00	0.00	-6.67	0.00	-6.67
29	Jammu & Kashmir	-2.23	-5	0	-2.45	0	0.1	0	-9.58	0.00	2.00	2.00	-7.19	0.50	-6.69

Source: Haryana Power Sector Report to the Ministry of Power, June 2006.

billion (2004-05). The revenue cost coverage remains low at 63 per cent. Further, interest payments are overdue to the state government as well as commercial banks.

The receivable levels for the two Discoms have increased to 215 days of annual sales in 2003-04 from 142 days in 2001-02. A scheme has been introduced in the State for the waiver of agriculture and rural domestic receivables amounting to Rs.16.60 billion, out of which Rs.7.17 billion will be borne by the Discoms and the balance by the Government of Haryana.

Sustainability of State Power Sector Revenue Model

The power sector in Haryana is significantly dependent on State subsidies for coverage of operating expenses. The distribution utilities in the State are able to collect only around 70 per cent of the cash expenses through revenue from customers while almost 22 per cent of the revenue is contributed by subsidies. Haryana is largely an agrarian economy with high agricultural consumption. Government of Haryana is providing highly subsidised power to agricultural consumers, which is contributing to the rising levels of requirement for subsidies. Though, the finances of Government of Haryana (GoH) are marked by very high self-reliance to fund total revenue expenditure (85 per cent in 2004-05) with a strong State's own tax revenue base and a robust economy base with annual growth of over 14 per cent in State's revenue receipts, such high levels of subsidies put a significant strain on the finances of the State government. In fact, in case the power sectors subsidies in 2004-05 were lower by just 20 per cent, Haryana would have generated a revenue surplus.

Creation of Competitive Environment

The Haryana State Electricity Board (HSEB) was one of the first SEBs to be unbundled on functional lines into a generation company, a transmission company and two distribution companies. Subsequently, the trading function has been separated out from transmission. The generation company (HPGCL) is handling the trading function in the State from June 2005. In order to introduce competition, HERC has notified the 'Open Access' regulations for the State, which would allow large consumers the choice of power supplier starting from October 2006. However, the regulator is yet to frame policy regarding levying of various charges under the said policy, in whose absence no clarity regarding the viability of the open access policy can be ascertained.

Levels of AT&C Losses

As the table below shows, despite improvements, AT&C losses remain high. There are several States whose AT&C losses remain above 30-40 per cent:

Less than 20%	*Between 20-30%*	*Between 30-40%*	*Above 40%*
Goa	Andhra Pradesh	Karnataka	Delhi
Tamil Nadu	Gujarat	Kerala	Uttar Pradesh
	West Bengal	Assam	Bihar
	Himachal Pradesh	Meghalaya	Jharkhand
	Maharashtra	Chhattisgarh	Madhya Pradesh
	Tripura	Mizoram	Arunachal Pradesh
	Punjab	Sikkim	Rajasthan
	Uttaranchal		Haryana
			Manipur
			Nagaland
			Jammu and Kashmir

Source: Ministry of Power, Government of India.

Overall timeliness of the issue of tariff order is captured in the following table:

Before March 2005	*Subsequent to March 2005*	*Did not file for 2005-06*
Andhra Pradesh	Delhi	Gujarat
West Bengal	Karnataka	Goa
Kerala	Himachal Pradesh	Maharashtra
Orissa	Assam	Tamil Nadu
	Tripura	Haryana
	Rajasthan	Meghalaya
	Punjab	Uttar Pradesh
	Chhattisgarh	Bihar
	Uttaranchal	Jharkhand
	Madhya Pradesh	

Source: Ministry of Power, Government of India.

Haryana

There has been a significant decline in the scores assigned as per current exercise to Haryana compared to last year's exercise resulting in a drop in overall ranking for the State from 14 to 19. The key contributors to the decline include:

- A high and increasing level of subsidies; almost five times the State revenue deficit in 2004-05.
- Reduction in coverage of expenditure from cash revenue other than subsidies; from 73 per cent in 2003-04 to 63 per cent in 2004-05. As a result, the gap between ARR and ACS has increased from Rs.0.95 per kwh to Rs.1.34 per kwh in the same period.
- The receivables levels have increased from 185 days of sales to 215 days of sales.
- Significant delays in filing of ARRs and subsequently, issue of tariff orders.

Renewable Energy

The Department of Renewable Energy is responsible for formulating policies and programmes necessary for popularising the applications of various non-conventional and renewable sources of energy in the State. It is implementing various schemes concerning utilisation of solar energy, biogas, micro hydel, biomass energy etc.

The Integrated Rural Energy Programme (IREP) is being implemented in 38 clusters of villages of 20 districts. Under this programme, various types of renewable energy and energy efficient systems like solar cookers, solar lanterns, compact florescent lamps, SPV home lighting systems, SPV water pumping systems, SPV stand alone street lighting systems, energy efficient motors etc. are being promoted through financial incentives, demonstration and extension activities in the selected clusters of villages of IREP for helping rural people to meet their cooking, heating and lighting energy needs.

To meet the irrigation needs of farmers in the agriculture sector, Ministry of Non-Conventional Energy Sources (MNES), Government of India, has launched SPV water pumping programme. Under this programme, Ministry is promoting SPV water pumping system from 200 watt. to 3000 watt. capacity by providing central assistance at the rate of Rs.100/- per watt. Upto the year 2002-03, 388 SPV Water Pumping Systems of 1800 W capacity were got installed in the state with financial assistance from MNES and the state government. For the year 2005-06, the Ministry has conveyed the administrative approval of the scheme but the subsidy has been reduced to Rs.35 per watt with a maximum subsidy of Rs.50,000 per system (that is, Rs.50,000 per pump for 1800 W capacity system). The present market cost of one such pump of 1800 W capacity is approximate Rs.3.50 lakh. Thus, after deducting the state subsidy of Rs.50,000, the beneficiary has to pay Rs.2,50,000 as beneficiary share. This beneficiary share is not in the reach of small farmers. Therefore, after 2002-03, no pumping system has been installed in the state. This scheme needs to be continued with the old subsidy pattern, that is, @ Rs.135 per watt so that more farmers may avail the benefits of this scheme.

In Haryana, HAREDA is also providing additional subsidy at the rate of Rs.40,000 per pump to promote these pumps in Haryana. Keeping in view the water table in the State, 1800 watt. capacity SPV water pumping system with 2 HP DC monoblock pump set is suitable which can provide 1,37,000 litres of water per day from the depth of 10 metre. The cost of one such pump is Rs.3.00 lakhs on which Ministry is providing central financial assistance of Rs.1.8 lakhs and State Government provides subsidy of Rs.40,000.

Ministry of Non-Conventional Energy Sources, Government of India is providing assistance to the State Nodal Agencies for setting up of renewable Energy Parks in the educational institutions to demonstrate the working of various types of renewable energy based systems to the public, particularly, the students to educate them about clean and environment friendly technologies which they can use in their daily life. As many as 13 Energy Parks have been set up in the State so far.

For meeting heating and cooking energy requirements through solar energy, HAREDA is implementing Solar Water Heating and Solar Cookers (both Box and Dish Type) schemes with the financial assistance of State/Central Government. For meeting the hot water requirements in the domestic, industrial and institutional sector, the solar water heating technology is being promoted by creating awareness.

TABLE 1.55

Expenditure on Transport under Five-Year/ Annual Plans in Haryana

(Rs. Crore)

	Expenditure	*Percentage To Total Expenditure*
Fourth Five Year Plan 1969-74	51.98	14.51
Fifth Five Year Plan 1974-79	56.82	8.39
Annual Plan 1979-80	20.71	10.20
Sixth Five Year Plan 1980-85	124.18	7.78
Seventh Five Year Plan 1985-90	150.17	5.98
Annual Plan 1990-91	37.18	6.05
Eighth Five Year Plan 1992-97	306.50	6.26
Ninth Five Year Plan 1997-2002	581.25	7.28
Annual Plan 1997-98	72.84	5.59
Annual Plan 1998-99	62.28	4.09
Annual Plan 1999-2000	61.99	3.70
Annual Plan 2000-01	107.91	6.28
Annual Plan 2001-02	276.24	15.63
Tenth Five Year Plan 2002-07	1501.20	12.51
Annual Plan 2002-03	265.44	14.947
Annual Plan 2003-04	269.26	14.43
Annual Plan 2004-05	271.10	12.86
Annual Plan 2005-06	341.19	11.39
Annual Plan 2006-07 (Revised outlay)	303.20	7.94
Eleventh Five Year Plan 2007-12 (Approved outlay)	4335.35	12.39
Annual Plan 2007-08 (Approved outlay)	504.78	9.53

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 29.1, pp.586-91.

Keeping in view the requirement of people residing in cities and towns, MNES has launched a new scheme of providing 'solar generator' of capacity ranging from 150 watt. to 600 watt. The Ministry is providing central subsidy at the rate of 40 per cent cost of the system with upper limit of Rs.40,000.

1.2.6.3 Roads and Bridges

Road Transport has emerged over the past decades as the major mode of transporting freight and passenger traffic in the state as in the country. It is the main mechanised means of transport in rural areas not served by railways. During the Fourth, Fifth and Sixth Five Year Plans the expenditure on transport in the State has been continuously decreasing from 14.51 per cent to 8.39 per cent, and to 5.98 per cent of the total expenditure, respectively. But it increased to 6.26 per cent in the Eighth Five Year Plan, and further, to 7.28 per cent in the Ninth Five Year Plan, and to 12.51 per cent in the Tenth Five Year Plan. In the Eleventh Five Year Plan it is 12.39 per cent of the total approved outlay.

The length of National Highways in Haryana has doubled from 767 kms in 1965-66 to 1479 kms in 2005-2006. Similarly, the length of state roads has increased by four times from 5370 to 22,175 kms over the same period. As is apparent from Table 1.56, the total length of roads in Haryana has almost tripled, from 8187 kms to 23,258 kms during this period.

TABLE 1.56

Length of National highways, State Roads and Local Roads in Haryana from 1966-67 to 2001-02 Maintained by PWD (B&R)

(Length in K.M.)

Year	*National Highway*	*State Roads*	*Local Roads*	*Total*
1966-67	767	5370	2050	8187
1975-76	682	14248	1409	16339
1985-86	655	21686	-	22341
1990-91	656	22361	-	23017
1995-96	656	22830	-	23486
2001-02	1354	22148	-	23502
2002-03	1354	22142	-	23496
2003-04	1349	22131	-	23480
2004-05	1083*	22195	-	23278
2005-06	1083	22175	-	23258

Note: * Decrease is due to transfer of some Roads to National Highway Authority.

Source: Government of Haryana (2007). *Statistical Abstracts of Haryana 2005-06*, Table 21.9, pp.462-63.

The following National Highways pass through Haryana:

Sr. No.	*NH No.*	*Route*	*Length (km.)*
1.	1	From Delhi Border-Kundli-Murthal-Samalkha-Panipat-Karnal-Pipli-Shahbad-Ambala-upto Punjab border	180
2.	2	From Delhi Border-Faridabad-Ballabgarh-Palwal-Rundhi-Hodal-UP Border	74
3.	8	From Delhi Border-Gurgaon-Dharuhera-Bawal-Rajasthan Border	101
4.	10	From Delhi Border-Bahadurgarh-Rohtak-Maham-Hansi-Hissar-Agroha-Bodopal-Fatehabad-Sirsa-Odhan-Dabwali-Punjab Border	313
5.	21A	Pinjaur-Karapur upto HP Border	16
6.	22	Ambala-Panchkula-Chandi Mandir-Pinjaur-Kalka-HP Border	30
7.	64	Dabwali-Punjab Border	0.5
8.	65	Ambala-Pehowa-Kaithal-Narwana-Barwala-Hisar-Siwani-upto Rajasthan Border	240
9.	71	From Punjab Border—Narwana-Jind-Julana-Rohtak-Dighal-Jhajjar-Guraora-Rewari-Rajasthan Border	177
10.	71A	Rohtak-Gohana-Israna-Panipat	72
11.	71B	Rewari-Dharuhera-Taoru-Sohna-Palwal	69
12.	72	Ambala-Shahzadpur-Narayangarh-Kala Amb-upto HP Border	45.5
13.	73	From UP Border-Yamuna Nagar-Mulana-Saha-Raipur-Panchkula	108
14.	73A	Yamuna Nagar-Jagadhari-Mustafabad-Ledi-Darpur-upto HP Border	42
			1468

Source: Department of Road Transport and Highways, Ministry of Shipping, Road Transport and Highways, Government of India.

A comparative picture of Indian States in terms of length of National Highways is presented in Table 1.57 and in terms of surfaced roads in Table 1.58.

Haryana is one of the very few states which has done well in respect of rural roads connectivity. This is apparent from Table 1.59 which presents the physical targets for new connectivity under the Bharat Nirman programme. Physical targets for upgradation of roads in Indian states under Bharat Nirman are given in Table 1.60.

The achievements of Haryana regarding upgradation of roads under Prime Minister Gramin Sadak Yojana (PMGSY) from 2000-01 to 2006-07 are given in Table 1.61.

Since the inception of the state of Haryana in 1966, only 16 Railway Over Bridges (ROBs) were constructed upto April 2005. And since April 2005, the construction of one ROB is completed and another 16 are in progress. The following is the status of ROBs in the state during 2006-07:

Construction of Railway Over Bridges

Sr. No.	Description	Numbers
I.	ROBs sanctioned by State Government	36
	i) ROBs completed and opened to traffic	1
	ii) ROBs under construction	16
	iii) ROBs under approval with Railways	16
	iv) ROBs under Joint feasibility study with Railways	3
II.	ROBs identified for next phase	53
	i) ROBs identified on State Roads	36
	ii) ROBs identified on National Highways	17

Source: Engineer-in-Chief, PWD (BER) Haryana.

TABLE 1.57

Length of National Highways (As on 31st March)

(In Km)

Sr. No.	States / Union Territories	2000	2001	2002	2003	2004
States						
1.	Andhra Pradesh	3910	4038	4038	4038	4472
2.	Arunachal Pradesh	352	392	392	392	392
3.	Assam	2706	2836	2836	2836	2836
4.	Bihar	3539	4915	3502	3502	3537
5.	Chhattisgarh	...	...	1774	1774	2184
6.	Goa	269	269	269	269	269
7.	Gujarat	2241	2461	2461	2461	2871
8.	**Haryana**	**1361**	**1361**	**1361**	**1361**	**1468**
9.	Himachal Pradesh	1188	1188	1188	1188	1208
10.	Jammu & Kashmir	738	823	823	823	823
11.	Jharkhand	...	...	1413	1413	1805
12.	Karnataka	3394	3570	3570	3570	3843
13.	Kerala	1230	1440	1440	1440	1440
14.	Madhya Pradesh	5174	6438	4664	4664	5200
15.	Maharashtra	3626	3626	3626	3626	4176
16.	Manipur	954	954	954	954	959
17.	Meghalaya	717	717	717	717	810
18.	Mizoram	857	927	927	927	927
19.	Nagaland	369	369	369	369	494
20.	Orissa	2863	3301	3301	3301	3704
21.	Punjab	1328	1553	1553	1553	1557
22.	Rajasthan	4381	4481	4597	4597	5585
23.	Sikkim	62	62	62	62	62
24.	Tamil Nadu	3681	3758	3758	3758	4183
25.	Tripura	400	400	400	400	400
26.	Uttar Pradesh	4570	5758	4942	4942	5599
27.	Uttranchal	...	...	1075	1075	1991
28.	West Bengal	1951	1951	1951	1951	2325
Union Territories						
1.	Andaman & Nicobar Islands	...	...	...	...	300
2.	Chandigarh	24	24	24	24	24
3.	Dadra & Nagar Haveli	...	...	...	...	...
4.	Daman & Diu	...	...	...	...	...
5.	Delhi	72	72	72	72	72
6.	Lakshadweep	...	...	...	...	...
7.	Pondicherry	53	53	53	53	53
	Total	52010	57737	58112	58112	65569

Note: Separate figures for Chhattisgarh, Jharkhand and Uttaranchal for 2000 and 2001 are not available and are included in Madhya Pradesh, Bihar and Uttar Pradesh, respectively.

Source: Department of Road Transport and Highways, Ministry of Shipping, Road Transport and Highways, Government of India.

These 89 Railway Over Bridges would cost about Rs.1474 crore. It is proposed to take up construction of ROBs in phases. 50 per cent cost of the ROBs on the state roads would be borne by the Railways. On National Highways, the expenditure would be borne by Government of India.

The position of on going works of bridges and ROBs is as under:

Sr. No.	Description	Nos.	Cost (Rs. In crore)	Completed (2006-07)	In progress
1	Bridges	23	35.88	3	18
2	Railway Over Bridges (ROBs)	36	519.77	1	16

The PWD department of the State is also preparing master plan for by-passes. The same is under preparation. Some of the by-passes are proposed to be taken up on Built Operate Transfer (BOT) basis. Information Technology Tools like On-line Management Information system (MIS) for works and Digitisation of Road Maps of the state and Road Information System are being introduced.

A project of Rs.980.00 crore has been approved 'in principle' under NCR loan scheme by the government for the 4/6 laning/widening and upgradation, improvement of State roads and construction of by-passes and ROBs in the NCR area.

1.2.6.4 Railways

Railways are an extremely efficient form of transportation. The energy consumption for a given freight movement on railroads is about one quarter of the consumption required for trucks. In addition, the railways generate less pollution, and involve fewer accidents.

If we consider the growth of rail route-length over the period 1980-81 to 1996-97, we find from Table 1.62 that a meager increase of just 2.44 per cent occurred for the country as a whole. Looking at the growth scenario State-wise, it is disappointing to observe that whereas some States such as Tripura, Nagaland, Kerala, Assam and Orissa, and even Jammu and Kashmir experienced a sizeable percentage increase, it is just 0.87 per cent in the case of Haryana. Also, whatever increase took place at the all-India level, only 0.9 per cent of that is accounted by Haryana whereas it was markedly greater in case of Maharashtra (21.3 per cent), Assam (17.1 per cent), Orissa (13.9 per cent) and Kerala (9 per cent). Railway density is presented through Table 1.63.

1.2.7 Industries

Haryana State has been able to attract sizeable

TABLE 1.58

Total and Surfaced Length of Roads in India (State-wise) (As on 31st March)

(In Km.)

Sr.No.	*States/Union Territories*	*Total/Surfaced*	*1998*	*1999*	*2000*	*2001 (P)*	*2002 (P)*
1		*2*	*3*	*4*	*5*	*6*	*7*
	States						
1.	Andhra Pradesh	T	178315	179287	191031	192057	196172
		S	109045	110110	118861	119151	119857
2.	Arunachal Pradesh	T	17843	18272	18322	18362	18365
		S	5290	5596	5659	5699	5689
3.	Assam	T	68523	85778	90727	87173	89486
		S	11723	12701	12753	12891	12882
4.	Bihar	T	88901	89436	76867	77478	76065
		S	33547	34082	33660	34271	32858
5.	Chhattisgarh	T	...	...	33825	33858	35372
		S	...	...	22716	22450	24476
6.	Goa	T	9728	9753	9504	9563	9672
		S	5976	6003	6650	6726	6830
7.	Gujarat	T	92043	93344	137281	137384	137617
		S	81385	83071	123402	123818	124295
8.	**Haryana**	**T**	**28416**	**28871**	**28093**	**28158**	**28203**
		S	**25790**	**26245**	**26011**	**26101**	**26311**
9.	Himachal Pradesh	T	29041	29337	29398	29510	29617
		S	15862	16565	16621	16675	16754
10.	Jammu & Kashmir	T	23369	23884	23200	23301	23429
		S	9955	10183	9816	9904	9943
11.	Jharkhand	T	...	...	700	10069	11486
		S	...	...	644	1423	2840
12.	Karnataka	T	147957	151936	152068	152453	152599
		S	101308	103045	105895	106352	104241
13.	Kerala	T	147450	148341	148151	150495	150851
		S	46314	46884	47737	49745	50164
14.	Madhya Pradesh	T	201757	203807	162309	162370	160968
		S	90128	92178	79135	79575	78191
15.	Maharashtra	T	236340	252414	258858	261783	267452
		S	183020	195778	198022	203050	209559
16.	Manipur	T	10911	11434	11434	11434	11434
		S	3340	3816	3863	3863	3863
17.	Meghalaya	T	8751	9126	9360	9497	9565
		S	4439	4589	6248	6566	6560
18.	Mizoram	T	4484	4846	4731	4970	5075
		S	4265	4632	2743	2887	2877
19.	Nagaland	T	19637	20337	21015	21021	21021
		S	5610	6236	6450	6451	6451
20.	Orissa	T	262272	262513	236082	236993	237034
		S	87161	88416	51231	51849	52245

...contd...

...contd...

Sr.No.	States/Union Territories	Total/Surfaced	1998	1999	2000	2001 (P)	2002 (P)
1		2	3	4	5	6	7
21.	Punjab	T	64308	64549	61275	61525	61530
		S	52364	52602	52503	52746	52747
22.	Rajasthan	T	136412	140856	141055	142010	132482
		S	84483	89378	90193	91340	82456
23.	Sikkim	T	1851	1851	1911	1992	2019
		S	1544	1544	1514	1546	1546
24.	Tamil Nadu	T	145062	153087	159706	163111	166061
		S	109972	117468	119468	123373	125887
25.	Tripura	T	13802	15565	14801	14031	16296
		S	4320	4385	4391	4390	4393
26.	Uttar Pradesh	T	278289	284765	240646	247248	248481
		S	155984	163908	156908	164371	166659
27.	Uttaranchal	T	...	...	32306	31881	33547
		S	...	...	9600	9402	10730
28.	West Bengal	T	79030	79255	88818	90245	92023
		S	44750	44970	48419	48345	49571
	Union Territories						
1.	Andaman & Nicobar Islands	T	1084	1128	1177	1183	1180
		S	1038	1082	1154	1166	1180
2.	Chandigarh	T	1829	1829	2005	2025	2045
		S	1829	1829	2005	2025	2045
3.	Dadra & Nagar Haveli	T	533	536	563	564	580
		S	533	536	563	564	580
4.	Daman & Diu	T	255	255	414	414	414
		S	255	255	324	324	324
5.	Delhi	T	27603	27611	25785	25785	25785
		S	25092	25100	23274	23274	23274
6.	Lakshadweep	T	131	131	135	141	150
		S	131	131	135	141	150
7.	Pondicherry	T	2429	2516	2525	2587	2571
		S	1967	2062	2030	2093	2115
	INDIA	T #	2328356*	2396650*	2416078	2442671	2456647
		S	1308420*	1355380*	1390598	1414547	1420489

Note: (P): Provisional. * Reconciled figures

#: Excludes the length of around 9 lakh kms of rural roads reported as constructed under JRY as on 31.3.1996 and onwards; also excludes 3996 km (2001) and 26697 km (2002) of roads constructed under PMGSY.

Source: Department of Road Transport and Highways, Ministry of Shipping, Road Transport and Highways, Government of India.

TABLE 1.59

Bharat Nirman—Physical Targets for New Connectivity

(Length in Kilometres, Habitations in Numbers)

Sr. No	Name of the State	2005-06		2006-07		2007-08		2008-09		Total	
		Length	Habs	Length	Habs	Length	Habs	Length	Habs	Length	Habs
1.	Andhra Pradesh	0	0	0	0	0	0	0	0	0	0
2.	Arunachal Pradesh	162.5	22	637.5	85	646.875	86	671.875	105	2118.75	298
3.	Assam	605.852	421	2864.063	1988	3889.845	2701	5793.46	4022	13153.22	9132
4.	Bihar	1665.831	896	3928.75	2062	6121.425	3214	7230.306	3784	18946.31	9956
5.	Chhattisgarh	1501.365	478	4367.606	1310	6450.644	2007	8255.181	2514	20574.8	6309
6.	Goa	0	0	0	0	0	0	0	0	0	0
7.	Gujarat	402.955	230	429.723	246	438.675	251	438.675	251	1710.028	978
8.	**Haryana**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
9.	Himachal Pradesh	464.583	127	795.833	209	638.542	166	479.167	123	2378.125	625
10.	Jammu & Kashmir	169.972	57	1059.49	352	1781.869	593	1405.099	466	4416.43	1468
11.	Jharkhand	1051.779	526	2594.39	1295	1812.298	901	2319.31	1155	7777.777	3877
12.	Karnataka	0	0	0	0	0	0	0	0	0	0
13.	Kerala	0	0	0	0	0	0	0	0	0	0
14.	Madhya Pradesh	2602.139	768	6162.451	1760	8326.848	2399	10470.17	2905	27561.61	7832
15.	Maharashtra	0	0	0	0	0	0	0	0	0	0
16.	Manipur	100	11	460.714	48	464.286	48	719.048	74	1744.48	181
17.	Meghalaya	123.609	35	135.971	39	140.091	40	144.211	41	543.882	155
18.	Mizoram	82.746	12	274.819	39	277.844	39	306.498	43	941.947	133
19.	Nagaland	93.318	9	104.529	10	109.507	10	114.485	11	421.839	40
20.	Orissa	1055.95	493	1985.609	874	2524.021	1087	4427.774	1993	9993.354	4447
21.	Punjab	0	0	0	0	0	0	0	0	0	0
22.	Rajasthan	2153.615	743	3629.519	1252	3554.217	1225	2123.494	732	11460.85	3952
23.	Sikkim	75.031	22	104.042	30	108.043	31	132.053	37	419.169	120
24.	Tamil Nadu	0	0	0	0	0	0	0	0	0	0
25.	Tripura	94.774	66	261.74	183	354.701	248	447.661	313	1158.876	810
26.	Uttar Pradesh	1966.416	1236	2390.632	1504	2059.213	1295	1378.701	867	7794.962	4902
27.	Uttranchal	380.609	95	122.008	106	1025.641	257	1020.299	255	2848.557	713
28.	West Bengal	739.378	787	2572.767	2138	3265.307	3473	3643.359	3876	10220.81	10874
	Total	15492.42	7034	35182.16	16130	43989.93	20071	51520.83	23567	146185.3	66802

Source: Ministry of Rural Development, Government of India, New Delhi.

investment from multinational companies, large business houses, foreign investors, non-resident Indians, small scale entrepreneurs. Haryana is an investor friendly State and offers a rich reservoir of skilled, motivated and relatively low cost manpower with a good infrastructure and harmonious industrial relations. Having occupied just 1.37 per cent of the country's geographical area and 1.97 per cent of the country's total population, the State claims to have highest per capita income in the country.

The favourable investment environment has resulted in creation of investment of more than Rs.10,000 crore in the industrial sector in Haryana ever since the Industrial Policy 2005 was announced. At present, industrial projects of about Rs.40,000 crore are under implementation. Haryana has received foreign direct investment of Rs.680 crore in the last one and half year. Haryana received highest number of SEZ proposals in the country and the largest SEZ in the country is being set up by Reliance Industries Limited in collaboration with the Haryana State Industrial and Infrastructure Development Corporation in Gurgaon and Jhajjar. Haryana is number one in the country in implementation of Industrial Entrepreneur Memoranda/Letters of Intent for setting up of large and medium industries.

Haryana today produces more than 50 per cent of passenger cars, 50 per cent of motor cycles and 25 per cent of tractors, manufactured in the country. About 25

TABLE 1.60

Bharat Nirman Physical Targets for Upgradation

(Length in Kilometers)

Sr. No	*State*	*2005-06 length*	*2006-07 length*	*2007-08 length*	*2008-09 length*	*Total length*
1.	Andhra Pradesh	1821.494	2258.652	2258.652	2258.652	8597.45
2.	Arunachal Pradesh	0	0	0	0	0
3.	Assam	0	2005.71	2269.808	2219.843	6495.361
4.	Bihar	0	2393.617	3510.638	3390.958	9295.213
5.	Chhattisgarh	0	1986.063	3240.418	3222.996	8449.477
6.	Goa	190.114	190.114	190.114	190.114	760.456
7.	Gujarat	0	1557.971	1557.971	1413.043	4528.985
8.	**Haryana**	**229.358**	**1146.789**	**1146.789**	**1238.532**	**3761.468**
9.	Himachal Pradesh	0	1515.923	1694.268	1503.185	4713.376
10.	Jammu & Kashmir	0	1007.584	920.91	1007.584	2936.078
11.	Jharkhand	0	2108.433	2123.494	1987.952	6219.879
12.	Karnataka	2573.529	2573.529	2573.529	2573.529	10294.12
13.	Kerala	524.109	628.931	524.109	524.109	2201.258
14.	Madhya Pradesh	0	5189.543	6614.379	6823.53	18627.45
15.	Maharashtra	4334.365	4334.365	4334.365	4334.365	17337.46
16.	Manipur	0	0	0	0	0
17.	Meghalaya	0	587.583	587.583	665.189	1840.355
18.	Mizoram	0	257.998	257.998	216.718	732.714
19.	Nagaland	0	246.914	246.914	370.371	864.199
20.	Orissa	0	4438.574	4663.144	5059.445	14161.16
21.	Punjab	423.729	1483.051	1483.051	1680.791	5070.622
22.	Rajasthan	0	4764.543	4653.74	3656.51	13074.79
23.	Sikkim	0	196.85	137.795	98.425	433.07
24.	Tamil Nadu	1297.71	2824.427	2824.427	4167.939	11114.5
25.	Tripura	0	373.737	383.838	414.141	1171.716
26.	Uttar Pradesh	0	7158.962	6956.031	14408.12	28523.11
27.	Uttranchal	0	889.454	1283.354	1270.648	3443.456
28.	West Bengal	0	2549.942	2878.965	4054.053	9482.96
	Total (States)	11394.41	54669.26	59316.28	68750.74	194130.7

Source: Ministry of Rural Development, Government of India, New Delhi.

per cent of India's total production of sanitary ware is from Haryana. One, out of every four bicycles in the country is manufactured in Haryana The number of large and medium units in the state has increased from 162 in 1966 to 1290 by the end of June 2006. In addition there are 80,000 small scale industries in the state. The state has about 1000 projects with foreign technical/financial collaboration

Since July 1991 and upto June 2006, 3559 Industrial Entrepreneur Memorandas (IEMs) and 248 Letters of Intent (LOIs) have been filed with Government of India for setting up projects in Haryana catalysing an investment of Rs.45,594 crore and Rs.4,834 crore, respectively. Out of these, 1936 Industrial Entrepreneur Memoranda and 159 Letters of Intent have been implemented with investment of Rs.16,345 crore and of Rs.3,767 crore and generated employment for 3,25,181 and 46,270 persons, respectively. Haryana ranks number sixth in the country based on the IEMs filed by entrepreneurs and is number one in the country in implementation of the Industrial Entrepreneur Memoranda/Letters of Intent. At present 78 IEMs are under implementation which will create investment of Rs.2,258 crore. During the year 2005-06, 219 IEMs catalysing investment of Rs.3,584 crore have been filed.

TABLE 1.61

Network Service Providers (NSP): State Profile for Haryana Status of Connectivity

		1000+	*500-999*	*250-499*	*Less than 250*	*Total*
Total Number of Habitations (As on 01.04.2000)		4132	1544	593	490	6759
Total Number of Habitations Entered		4447	1393	586	524	6950
Total Number of Connected Habitations (As on 01.04.2000)		4132	1542	587	475	6736
Total Number of Connected Habitations Entered		4432	1390	583	524	6929
Total Number of Unconnected Habitations (As on 01.04.2000)		0	2	6	15	23
Total Number of Unconnected Habitations Entered		15	3	3	0	21
Habitations covered by PMGSY: 2000-01	New Connectivity	0	0	0	0	0
	Upgradation 95	11	1	0	107	
Habitations covered by PMGSY: 2001-02	New Connectivity	0	0	0	0	0
	Upgradation 153	42	17	10	222	
Habitations covered by PMGSY: 2003-04	New Connectivity	0	0	0	0	0
	Upgradation 58	8	3	2	71	
Habitations covered by PMGSY: 2004-05	New Connectivity	0	0	0	0	0
	Upgradation	54	23	9	2	88
Habitations covered by PMGSY: 2005-06	New Connectivity	0	0	0	0	0
	Upgradation	82	16	7	1	106
Habitations proposed to be covered by PMGSY: 2006-07	New Connectivity	0	0	0	0	0
	Upgradation	143	22	9	12	186
Balance Unconnected Habitations		0	2	6	15	23

Source: Ministry of Rural Development, Government of India.

After the liberalisation of economy, 295 units were registered with Government of India as 100 per cent Export Oriented Units (EOU). Out of these, 131 EOUs have gone into production creating investment of 1740 crore and providing employment to 14,947 persons. At present, twenty four 100 per cent Export Oriented Units are under implementation which will catalyse investment of Rs.366 crore and employment to 2717 persons. Also, where the licensing is compulsory, Government of India granted 99 Industrial Licences since July 1991. Out of these, 74 Industrial Licences were implemented generating investment of Rs.692 crore and employment to 19,678 persons.

So far, the State has received Foreign Direct Investment (FDI) of Rs.7480 crore and out of which FDI of Rs.680 crore has come up after the implementation of the new Industrial Policy of 2005.

Export from the State has exceeded Rs.25,000 crore in the year 2005-06. Major export items are software, handloom products, scientific instruments, garments, automobiles and automotive components, electrical appliances, Rice, guar gum, pickles etc.

Haryana announced its new Industrial Policy on 6th June 2005. The objective of this policy is to generate employment, create investment and to facilitate dispersal of economic activities particularly in the backward areas of the State. Multi-pronged strategy has been adopted to achieve the objective of creating investment of rupees two lakh crore and generating employment for one million persons in the next 10-years by adopting

TABLE 1.62

Rail Route-length, Absolute Increase, Share and Per cent Increase

(Arranged in Rank Order of % Increase)

S. No.	States/Union Territories	1980-81	1996-97	Absolute Increase	Per cent Share	Per cent Increase
1.	Tripura	12	45	33	2.2	275.00
2.	Nagaland	9	19	10	0.7	111.11
3.	Kerala	916	1050	134	9.0	14.63
4.	Assam	2179	2435	256	17.1	11.75
5.	Orissa	1982	2190	208	13.9	10.49
6.	Jammu & Kashmir	77	84	7	0.5	9.09
7.	Maharashtra	5235	5554	319	21.3	6.09
8.	Andhra Pradesh	4781	5057	276	18.5	5.77
9.	Himachal Pradesh	256	269	13	0.9	5.08
10.	Rajasthan	5614	5890	276	18.5	4.92
11.	Madhya Pradesh	5736	5893	157	10.5	2.74
12.	Tamil Nadu	3895	3999	104	7.0	2.67
13.	Delhi	168	171	3	0.2	1.79
14.	Karnataka	3015	3059	44	2.9	1.46
15.	West Bengal	3725	3768	43	2.9	1.15
16.	**Haryana**	**1500**	**1513**	**13**	**0.9**	**0.87**
17.	Uttar Pradesh	8880	8911	31	2.1	0.35
18.	Punjab	2139	2140	1	0.1	0.05
19.	Arunachal Pradesh	1	1	0	0.0	0.00
20.	Goa	79	79	0	0.0	0.00
21.	Manipur	1	1	0	0.0	0.00
22.	Bihar	5362	5254	-108	-7.2	-2.01
23.	Gujarat	5632	5322	-310	-20.7	-5.50
24.	Chandigarh	11	8	-3	-0.2	-27.27
25.	Pondicherry	27	11	-16	-1.1	-59.26
26.	All India	61230	62725	1495	100	2.44

Source: *Tenth Five Year Plan 2002-2007*, Volume III, Annexure-3.9 (2), p. 86. New Delhi: Planning Commission, Government of India.

TABLE 1.63

Railway Density in Km. (Per '000 sq. km. of area) (arranged in Rank Order of 2001)

S. No.	States/ Union Territories	1971-72	1981-82	1991-92	As on 31.3.2001
1.	Delhi		84	113.28	134.63
2.	Chandigarh		110	96.49	67.89
3.	Punjab	42.38	42.78	42.89	41.73
4.	West Bengal	41.55	41.85	43	41.26
5.	Bihar	29.67	30.82	30.57	36.55
6.	Uttar Pradesh	29.36	30.2	30.29	35.93
7.	**Haryana**	**32.2**	**34.09**	**33.9**	**35.00**
8.	Tamil Nadu	28.91	29.96	30.83	32.21
9.	Assam	27.76	27.58	31.45	32.08
10.	Gujarat	28.77	28.73	26.94	27.10
11.	Kerala	22.82	23.49	25.32	27.02
12.	Pondicherry		54	54.88	22.56
13.	Goa		19.75	21.34	18.72
14.	Andhra Pradesh	17.24	17.39	18.49	18.67
15.	Maharashtra	16.97	17.32	17.68	17.74
16.	Rajasthan	16.34	16.42	17.02	17.32
17.	Madhya Pradesh	12.95	12.95	13.31	15.52
18.	Karnataka	14.61	15.7	15.98	15.51
19.	Orissa	12.03	12.71	12.86	14.83
20.	Himachal Pradesh	4.57	4.57	4.78	4.83
21.	Tripura	1.2	1.2	4.29	4.26
22.	Nagaland	0.53	0.53	0.54	0.78
23.	Jammu and Kashmir	0.03	0.35	0.35	0.43
24.	Mizoram			0.09	0.07
25.	Manipur			0.04	0.06
26.	Arunachal Pradesh	0	0	0.01	0.02

Source: *Tenth Five Year Plan 2002-2007*, Volume III, compiled from Table 3.18, p. 63 and Annexure-3.9 (1), p.85. New Delhi: Planning Commission, Government of India.

simplification of rules and regulations, effective institutional mechanism, development of strong infrastructure and incentives and concessions to the industry particularly in the backward areas.

For simplifying the procedure for the establishment of industry, the institutional mechanism has been strengthened. Two Investment Promotion Centres, one at Delhi and the other at Chandigarh, have been set up to act as a single point contact agency to provide information, guidance and hand holding services for venture location. To facilitate time bound clearances/ approvals from the State Government agencies, the government has enacted Haryana Industrial Promotion Act 2005, and also introduced Self Certification Scheme and Outsourcing of authority. Haryana is the first state in the country which has introduced State Labour Policy 2006 to create friendly environment and to bring cordial relation between the employers and the employees.

For development of industrial infrastructure, the State government has designated Haryana State Industrial Development Corporation as a nodal agency. The corporation is acquiring about 8,000 hectare of land for development of industrial estate/parks, new economic hubs, special economic zones, mega petrochemical hubs, Industrial Model Townships, Theme parks, Food Parks, Gems and Jewellery Park, Apparel Park/Textile Park. Kundli-Manesar-Palwal Expressway is under implemen-tation, economic hubs would be developed around this Expressway. This will generate large economic activities and employment. This Expressway has been planned over a length of 135 kms and will pass through major towns from Kundli (Sonipat on National Highway No. 1) to Palwal (Faridabad on National Highway No. 2) via Bahadurgarh (on National Highway No.10), Jhajjar and Manesar (on National Highway No.8). This Expressway will be of four lane divided road project, on BOT basis

TABLE 1.64

Multilateral TFP in Registered Manufacturing Sector across Indian States (1980-81 to 1999-2000, averages)

	Based on Value Added Function				*Based on Gross Output Function*			
	1980-81 to 1990-91	*1992-93 to 1995-96*	*1996-97 to 1999-2000*	*1992-93 to 1999-2000*	*1980-81 to 1990-91*	*1992-93 to 1995-96*	*1996-97 to 1999-2000*	*1992-93 to 1999-2000*
Best IC								
Maharashtra	112.22	126.33	117.23	121.78	106.71	112.15	110.68	111.41
Delhi	105.93	132.53	137.96	135.63	103.16	108.58	108.90	108.76
Good IC								
Gujarat	84.88	102.69	90.83	95.91	100.61	108.60	104.74	106.40
Andhra Pradesh	64.17	62.82	76.34	69.58	94.96	94.18	99.36	96.77
Karnataka	84.66	102.00	92.95	98.12	99.57	105.23	104.01	104.71
Punjab	79.06	93.64	108.62	101.13	98.54	104.39	108.73	106.56
Tamil Nadu	97.37	102.12	91.36	96.74	103.20	106.78	104.30	105.54
Haryana	93.57	100.68	112.26	106.47	101.46	104.00	107.47	105.74
Poor IC								
Madhya Pradesh	71.13	82.11	88.65	85.38	94.64	99.01	101.51	100.26
Kerala	83.13	81.46	97.57	90.67	101.35	100.17	102.71	101.62
West Bengal	75.30	73.93	77.03	75.48	97.11	98.27	99.81	99.04
Uttar Pradesh	81.73	97.86	94.01	96.21	99.13	105.29	105.41	105.34
Not Classified								
Assam	98.61	82.05	83.66	82.85	106.24	99.60	100.91	100.26
Bihar	62.10	71.85	116.57	91.01	91.95	96.19	108.11	101.30
Himachal Pradesh	67.03	90.30	96.14	93.22	93.42	98.31	100.21	99.26
Rajasthan	79.26	86.50	85.74	86.12	88.96	104.58	104.63	104.60
Orissa	60.85	54.39	60.80	57.60	89.18	88.66	91.79	90.22

Notes: (1) Averages of TFP levels are shown for four periods. While computing the averages, the years in which there was more than 50 per cent increase or decrease in gross output, value added, fixed capital, employment or materials (all real) have been excluded. The purpose is to make the averages less susceptible to short-term fluctuations in the data. The same practice is followed in Table. (2) The year 1991-92 has not been considered in the analysis because there was a severe balance of payments crisis in India, affecting the domestic industries.

Source: Veeramani, C, and Bishwanath Goldar (2005). "Manufacturing Productivity in Indian States", *Economic and Political Weekly*, June 11, Table 1, p. 2414.

with an estimated cost of Rs.1200 crore for construction and Rs.630 crore as cost of land.

Industrial Model Township at Manesar provides amenities and facilities of international standards. Keeping in view the success of this project, state government has planned for massive expansion of IMT Manesar as well as setting up of another four IMTs at Kharkhoda, Rohtak, Faridabad and Yamuna Nagar.

Indian Oil Corporation at their Panipat Refinery has doubled its refining capacity from 6 million metric tonne to 12 million metric tonne per annum. It is further increasing its capacity to 15 million metric tonne per annum. Recently, the Indian Oil Corporation at Panipat has commissioned Paraxylene/Purified Terephthalic Acid plant with investment of Rs.5,000 crore. Indian Oil Corporation is also setting up Naphtha Cracker Plant at Panipat with investment of Rs.12,000 crore. These projects would facilitate to set up a large number of downstream industries creating forward and backward linkages. Indian Oil Corporation in collaboration with Haryana State Industrial and Infrastructure Development Corporation is developing Petrochemical Hub at Panipat to develop and promote the downstream industries. The hub will be an integrated complex on the land of 5,000 acre. Land Acquisition is in progress. This project on implementation will create investment of Rs.30,000 crore and employment for 50,000 persons. However, this project will be a full fledged township having a lot of economic activities. Further, to provide skilled manpower to the petrochemical sector, the Central Institute of Plastic and Engineering Technology (CIPET) is being set up at Panipat. However, CIPET has started its functioning presently in a rented building at Panipat.

State government has also enacted Haryana Special Economic Zone Act facilitating to set up a large

number of industries having export commitments. So far 63 proposals to set up Special Economic Zones (SEZs) in Haryana catalysing industrial infrastructure investment of Rs.1.75 lakh crore have been received. Out of these, 37 proposals have 'in principle' approval from the Government of India. It is envisaged that industrial investment of Rs.1.50 lakh crore for ten lakh persons over the years will be created through these SEZs. Reliance Industries Limited has signed a MoU with the Haryana State Industrial and Infrastructure Development Corporation to set up mega Special Economic Zone in a joint venture at Gurgaon and Jhajjar. This project would be developed on 10,000 hectare of land. Infrastructure investment on this project is of the order of Rs.40,000 crore and would catalyse industrial investment of about Rs.1.00 lakh crore and generate employment for five lakh persons.

As mentioned in the State Industrial Policy of 2005, State government is providing several incentives and concessions to the industry including Interest Free Loan in lieu of Value Added Tax, exemption of electricity duty, customised package of incentives, exemption from LADT, and subsidy on freight for exporting units. As a result of the new Industrial Policy of 2005, 29 new, large and medium industrial units with an investment of Rs.348 crore providing employment to 3365 persons and 1356 small scale units with an investment of Rs.31 crore providing employment to 8415 persons have been established since the implementation of this policy. Industrial projects having investment of Rs.10,000 crore generating employment for 15,000 persons have been implemented.

Based on the growth potential and contribution to the long term economic development of the State, the following sectors have been identified as the thrust areas in the Industrial Policy of 2005:

i) Agro based and Food Processing Industries.
ii) Electronics and Information and Communication Technology.
iii) Automobiles and Automotive components.
iv) Handloom, Hosiery, Textile and Garment manufacturing.
v) Export oriented units.
vi) Footwear, leather garment and accessories.

Haryana is an agrarian economy. A large part of population of the State is engaged in agriculture and allied activities. It contributes about 45 lakh tonnes of foodgrain every year to the central pool. *Basmati* Rice of Haryana finds an easy market abroad and the State ranks number one in its export. There is a large scope for the growth of agri-business, animal husbandry and dairying in the State of Haryana. Crop diversification, efficiencies in logistics, storage and distribution of foodgrains can substantially contribute to this sector. Haryana government is keen to encourage the investment in agro processing sector. The State government has taken several initiatives and has provided a number of incentives in the new industrial policy for promotion of food processing industry. The thrust is to create best infrastructure for the growth of this sector.

The Government of India, Ministry of Food Processing Industry, is in the process of setting up of National Institute of Food Technology, Entrepreneurship and Management (NIFTEM) in the State at a project cost of about Rs.350 crore. The project will be the first of its kind in India. Haryana State Industrial and Infrastructure Development Corporation has offered to allot 100 acres of land for this project at Kundli. Food Parks at Rai (Sonipat) and Saha (Ambala) have been established.

An Irradiation Centre has been set up in private sector at Bahalgarh in district Sonipat with investment of Rs.18 crore. The facilities provided will increase the shelf life of food products. Container Corporation of India is setting up a Cold Chain Project at Rai in district Sonipat. A Modern Fruit and Vegetable market along with processing industries to make value addition and prevent wastage of farm produce is also being set up in Sonipat.

Haryana is number one State in the country so far as production of passenger cars and two wheelers are concerned. Gurgaon and Faridabad are the major automobile centres in the State. The presence of established manufacturers Maruti Suzuki, Honda Motors, Hero Group, Yamaha Group and Escorts has contributed a lot to develop ancillary automotive components. Industrial Model Township, Manesar is developing as a prominent cluster of automobiles and autocomponents. Maruti Udyog Limited is undertaking its massive expansion programme at Manesar creating fresh investment of Rs.8,000 crore. They are doubling the capacity of passenger cars and also putting up diesel engine project in Manesar.

For the promotion of automobile industry, government of India, Ministry of Heavy Industries is setting up National Automotive Testing and R&D Infrastructure Project (NTRIP) at a cost of Rs.400 crore at IMT, Manesar. State government is providing 40 acres of land for this project.

Haryana is a pioneer in producing textiles and ready made garments. Orient Craft Limited is the largest exporter of readymade garments in the country. The state has the inherent advantage of manufacturing

facility, availability of skilled manpower and advantage of marketing through large and medium buying houses and sourcing agents in Delhi and Gurgaon. Panipat in Haryana is a home of home furnishings. The export of handloom products from Panipat is the highest in the country. Panipat has the advantage of largest shoddy yarn manufacturing facility and it is a pioneer in producing low cost blankets in the country.

Under the Cluster Development Scheme of the Government of India, Ministry of Commerce & Industry, a Textile Cluster at Panipat is being developed with an investment of Rs.54.53 crore. Light Engineering Goods Cluster at Faridabad is coming up with an investment of Rs.80 crore. Auto Parts Cluster at Gurgaon with an investment of Rs.67 crore is under consideration with the Government of India

For the promotion of IT and ITES industry, state government has enacted its IT policy and provides number of incentives and concessions. Gurgaon has emerged as a preferred destination for the IT and ITES industry. The export of software is of the order of Rs.10,700 crore. Gurgaon is the third largest after Bangalore and Chennai in the export of software. Gurgaon has the largest number of call centres and BPO centres in the country. State has formulated a policy to develop Technology Parks and Cities. The State is developing Manesar and Panchkula as IT corridors promoting IT industry by providing best of the infrastructure facilities. State is also laying emphasis on IT education and e-governance in its offices.

In an excellent recent study Veeramani and Goldar (2005) place various states under three distinct categories of Investment Climate (IC) scenarios for the purpose of determining Total Factor Productivity (TFP) estimates in the manufacturing sector in these states. The TFP estimates have been based on both value-added function as well as gross output function. In this study, Haryana has been classified under the 'good investment climate' category alongwith states like Gujarat, Andhra Pradesh, Karnataka and Punjab. It is satisfying to note that Haryana occupied no less than second position for most part of the period 1980-1981 to 1999-2000, in respect of TFP performance. This adequately brings out the extent of efficiency prevailing in the manufacturing sector of the State.

Index of Industrial Production is one of the prime indicators of the economic development for measurement of trend in the industrial production over a period of time with reference to a chosen base year. Index of Industrial Production, presently being prepared in the State on annual basis with 1993-94 as base year, covers two sectors namely manufacturing and electricity. The mining and quarrying sector has been excluded due to its insignificant contribution in the State Domestic Product.

By the year 2005-06, the General Index of Industrial Production with 1993-94 as base year rose to 253.44; the index of manufacturing sector rose to 251.16; the index of electricity sector rose to 388.55; the index of manufacture of transport equipments and parts rose to 452.66, and that of textile products rose to 400.29.

Haryana State Industrial and Infrastructure Development Corporation (HSIIDC) was set up in 1967 for promoting medium and large scale industries so as to ensure balanced regional development of the State. It has been acting as an institutional entrepreneur and a financial institution. It is a Public Limited Company wholly owned by the Government of Haryana.

Sr. No.	*Industrial Estate/ Distance from Delhi*	*Location and Industrial Highlights*	*Existing type of Industries*
1.	IMT, Manesar	On National Highway No.8 about 32 kms from Indira Gandhi International Airport. Focus on Hi-technology, Hi-precision, Non-polluting Units	Maruti spare parts, Automobile industries
2.	Growth Centre Bawal 90 kms	On National Highway No.8 about 90 kms from New Delhi	YKK Ltd. Svedala Ltd. TDT copper Ltd. Beckton and Dickinison etc.
3.	Udyog Vihar, Gurgaon 20 kms	On National Highway No.8 about 6 kms from Indira Gandhi International Airport. Prestigious units such as Maruti Udyog Ltd., IDPL, Lumax, Hindustan Computer, etc. are located at Gurgaon	Strictly pollution free industries, Electronics, Electrical, Pharmaceutical, Light Engineering, Auto parts/ Component and Readymade Garments
4.	Kundli 30 kms	On National Highway No.1, just on Delhi-Haryana border in Sonipat District. Atlas Cycle Industries, Hilton Rubbers, ECE Industries Ltd. etc. nearby.	General Engineering, Cycle Parts, Dairy products and Agro-based industries.
5.	Faridabad 20 kms	On National Highway No.1. One of the largest industrial towns of the country on Delhi-Mathura Highway. Excellent infrastructure facilities available	Mainly light Engineering items.
6.	Murthal 50 kms	On National Highway No.1. Haryana Breweries, Indo Asian Fuse gear etc. nearby.	General Engineering Maltery, Chemicals and Cycle parts.
7.	Ambala 200 kms	National Highway No.1. Well connected by rail. Has rich base of scientific instruments industries. cent of country's export of scientific instruments from here. It has UNDP assisted instrument design and development centre.	Scientific instruments, electronic and light 20 per engineering.

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8.	Tohana 200 kms	A centrally declared backward area with rich agriculture base. A number of agro projects in the pipeline.	Agriculture implements, foundry and light engineering.
9.	Yamuna Nagar	Known for its timber and light engineering industry. The 'brass-town'-Jagadhri adjacent. Large industries like Indian Sugar and General Engineering Corporation, Ballarpur Industries, Bharat Starch and Chemicals, Jamuna Auto, Kay Iron works, etc.	Light engineering components for sugar mills.
10.	Jind 120 kms	Well connected by rail and road with potential for agro-based, leather-based products and chemical industries. M/s Haryana Leather Chemicals, ICI etc., located	Process house and light engineering.
11.	Samalkha 70 kms	On National Highway No.1 well linked by rail	Light engineering and foundry.
12.	Karnal 125 kms	On National Highway No.1 well linked by rail	Agriculture implements and general engineering.
13.	Roz-ka-Meo 70 kms	State declared backward area. Many auto parts manufacturing units including DH Woodhead, Amtek Auto, etc., located here.	Components for Partap steels Ltd., Faridabad.
14.	IIDC Sirsa	Integrated infrastructure 255 kms Development Centre for promoting Small Scale Industries.	
15.	Industrial Estate Manakpur (Yamuna Nagar) 200 kms		
16.	Barwala 210 kms	Adjacent to Panchkula. A State declared backward area, most pollution free location.	
17.	Rai	Modern Industrial Park 35 kms with latest infrastructure facilities for small scale industries.	
18.	Panchkula 230 kms	Adjacent to Chandigarh. A State declared backward area, most pollution free location. M/s Bharat Electronics Limited located here. HMT's tractor plant nearby.	Components for the tractor division of HMT
19.	Kalka 260 kms	On Delhi-Simla Highway. Well linked by rail. Very near to Chandigarh. Benefits of State declared backward area available.	Components for Eicher Goodearch Ltd., Parwanoo.
20.	Sonipat 45 kms	On National Highway No.1 Barhi/Hosiery Complex District Sonipat located nearby.	Hosiery complex, Chemicals and Cycle parts

The HSIIDC has so far developed the following Industrial Estates in Haryana:

In order to attract industry on a large scale, the State's approach is to further simplify the rules and procedures, eliminate red-tapism ensuring transparency in the system by introducing the concept of e-governance, to promote public-private participation in the infrastructure projects, develop new industrial townships with all basic amenities supported with residential, commercial and institutional activities, to provide financial and fiscal incentives in the backward areas and the rural areas, to promote mega projects having spin-off effect of developing small and medium enterprises for the over all industrial development of the region, to develop new industrial clusters and to strengthen the existing clusters by improving infrastructure facilities. The State's priority is to promote agro based food processing industry besides encouraging the thrust areas like Software Development, Information Technology, Bio-technology, Textiles, Scientific Instruments, Automobiles, Gems and Jewellery and the Pharma Sector.

Table 1.67 shows the growth trend of large and medium industries in Haryana. And Table 1.68 presents the growth trends of small scale industries in the State.

TABLE 1.65

Index of Industrial Production in Haryana

Year	*Index (Base: 1970-71=100)*	*Index (Base: 1993-94=100)*
1981-82	250.51	
1982-83	263.43	
1983-84	280.84	
1984-85	298.98	
1985-86	334.55	
1986-87	364.04	
1987-88	396.44	
1988-89	445.18	
1989-90	461.67	
1990-91	501.28	
1991-92	531.50	
1992-93	518.17	
1993-94		100.00
1994-95		109.46
1995-96		120.37
1996-97		132.18
1997-98		142.63
1998-99		151.21
1999-2000		161.27
2000-01		171.24
2001-02		180.67
2002-03		192.77
2003-04		210.81
2004-05 (P)		231.37
2005-06 (P)		253.44

Note: Series with base 1970-71 was replaced by a new series with base 1993-94.

Source: Government of Haryana (2007). *Economic Survey of Haryana 2006-2007*, Annexure-1.7, p.129.

TABLE 1.66

Annual Index of Industrial Production

Base Year 1993-94=100

Group	*Description*	*Weight*	*Index*								
			1997-98	*1998-99*	*1999-2000*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06*
20-21	Manufacture of food products	162.15	115.26	123.33	130.32	138.69	146.10	155.13	165.40	166.92	177.04
22	Manufacture of beverage, tobacco and related products	10.30	101.88	101.29	101.93	105.30	112.93	127.35	143.84	152.49	184.31
23	Manufacture of cotton textiles	34.50	117.07	123.66	128.80	133.96	120.76	125.74	137.11	147.38	158.18
24	Manufacture of wool, silk and man-made fiber textiles	38.24	129.50	137.72	149.86	158.65	164.62	170.01	176.22	180.25	184.08
26	Manufacture of textile product (including wearing apparel)	45.87	146.55	161.69	177.57	196.82	218.52	257.51	303.57	337.54	400.29
28	Manufacture of paper and paper products and printing, publishing and allied industries	29.51	124.93	137.96	145.80	153.10	160.48	166.62	171.08	172.48	187.38
29	Manufacture of leather and products of leather, fur and substitutes of leather	8.09	125.93	137.04	144.44	155.56	170.37	181.48	192.59	198.81	225.77
30	Manufacture of basic chemicals and chemical products (except products of petroleum and coal)	60.65	140.75	148.96	156.80	164.72	167.59	171.22	173.53	173.22	187.52
31	Manufacture of rubber, plastic, petroleum and coal products, processing of nuclear fuels	54.21	133.12	138.45	147.18	156.19	161.06	167.67	174.32	173.09	177.17
32	Manufacture of non-metallic mineral products	32.93	119.74	122.78	127.30	133.15	138.43	143.29	149.30	146.34	162.00
33	Basic metal and alloys industries	89.31	110.26	118.37	122.89	127.95	132.00	138.10	144.22	159.63	172.82
34	Manufacture of metal products and parts except machinery and equipment	34.07	109.20	118.76	126.21	133.68	140.94	145.61	152.55	152.79	163.52
35-36	Manufacture of machinery and equipment other than transport equipment, scientific equipment, photographic/cinematographic equipment.	146.83	139.53	148.05	152.72	159.31	156.99	158.12	134.69	148.19	169.75
37	Manufacture of transport equipment and parts	225.39	200.80	210.86	229.59	242.88	264.26	289.10	353.36	416.33	452.66
38	Other manufacturing industries	11.30	128.83	140.04	156.05	175.37	191.43	235.89	257.63	289.19	344.07
	Division 2 and 3 Manufacturing	983.35	143.00	151.74	161.55	170.85	179.26	191.21	209.08	229.65	251.16
40	Division 4 Electricity	16.65	120.71	119.82	162.97	194.22	263.80	284.49	312.54	333.13	388.55
	General Index	1000.00	142.63	151.21	161.57	171.24	180.67	192.77	210.81	231.37	253.44

Note: P: Provisional
Source: Government of Haryana (2007). *Statistical Abstract of Haryana 2005-06*, Table 19.8, p.395.

TABLE 1.67

Year wise Status of Large and Medium Units: 1990-91 to 2005-06

Year	*Number of Unites*	*Investment (Rs. In Crores)*	*Employment*	*Production (Rs. in Crores)*
1990-91	418	13075.95	1,33,578	20128.4111
1991-92	462	13330.69	1,41,816	21449.3355
1992-93	528	13724.42	1,49,160	21949.1731
1993-94	612	14308.06	1,60,344	23127.1301
1994-95	721	15093.59	1,71,350	24096.4025
1995-96	823	15607.66	1,78,027	25300.5552
1996-97	923	16307.26	1,86,104	26955.7490
1997-98	978	16534.63	1,89,906	27057.4394
1998-99	1026	20367.29	1,94,193	27338.6634
1999-2000	1054	21018.75	1,96,059	27490.6645
2000-01	1095	21267.51	1,99,513	34513.0045
2001-02	1155	22073.50	2,07,483	49685.4445
2002-03	1211	22512.86	2,14,504	49685.4445
2003-04	1233	22791.40	2,16,475	49690.7645
2004-05	1249	22864.18	2,17,696	49690.7645
2005-06	1271	23190.51	2,20,498	50181.5952
Total	1271	23190.51	2,20,498	50181.5952

Source: Department of Industries, Government of Haryana, Chandigarh

The trends of industrial production of major industries in the State are presented in Table 1.69.

1.2.8 Social Infrastructure

1.2.8.1 Education

The system of education has a determining influence on the rate at which economic progress is achieved and the benefits which can be derived from it. Economic development naturally makes growing demands on human resources endowed with necessary skills, values and attitudes. The education sector plays a vital role in this regard. In fact, it is the main engine of socio-economic transformation of the economy.

Though the level and quality of education can be measured in a number of ways, literacy figures are essential in any measurement of educational attainment. The level of literacy is an important and the most basic index of the educational achievements of an economy. Besides overall education, female education has a special role in the development process. There is

TABLE 1.68

Year wise Growth of SSI Units in Haryana

Year	*Previous Year Number of Units*	*Units Registered during the Year*	*De-Registered during the year*	*Total Units*	*Investment (Rs. in Crores)*	*Employment*	*Production (Rs. in Crores)*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1985-86	56732	8724	156	65300	1142.75	391800	1959.00
1986-87	65300	9220	420	74100	1296.75	444600	2223.00
1987-88	74100	6295	295	80100	1401.75	480600	2403.00
1988-89	80100	6238	238	86100	1506.75	516600	2583.00
1989-90	86100	6305	—	92405	1617.09	554430	2772.15
1990-91	92405	6738	147	98996	1732.43	593976	2969.88
1991-92	98996	7511	496	106011	185.19	636066	3180.83
1992-93	106011	6740	270	112481	1968.42	674886	3374.43
1993-94	112481	7164	517	119128	2084.74	714768	3573.84
1994-95	119128	6847	200	125775	2201.06	754650	3773.25
1995-96	125775	6042	199	131618	2303.31	789708	3948.54
1996-97	131618	5623	130	137111	2399.94	822666	4113.33
1997-98	137111	4901	49511	92501	1618.77	555006	2775.03
1998-99	92501	2238	22882	71857	1257.50	431142	2155.71
1999-2000	71857	1602	269	73190	1280.83	439140	2195.70
2000-01	73190	1076	139	74128	1297.22	444762	2223.81
2001-02	74127	689	216	74601	1359.43	452116	3978.90
2002-03	74601	573	254	74920	1421.49	459401	4562.42
2003-04	74920	502	3037	72385	1509.25	466250	5528.48
2004-05	72385	639	2740	70284	1584.41	474604	6428.88

Source: Department of Industries, Government of Haryana, Chandigarh

TABLE 1.69

Industrial Production in Haryana

Industry	*1970-71*	*1990-91*	*2002-03*	*2003-04*	*2004-05*	*2005-06*
Paper (M. Tons)	43, 395	63,785	1,21,273	1,00,915	131577	332846
Cotton Textile (Lakh Rs.)	3,179	68,367	37,898	41412	11398	41668
Cement (M. Tons)	4,99,387	6,52,110	1,25,759	72816	81573	43433
Sugar (M. Tons)	83,459	6,68,290	3,61,642	814765	491269	2773446
Cycles (No.)	4,68,349	14,43,836	9,22,276	815867	966800	969680
Sewing Machines (Nos.)	..	6,291	16,407	19737	19747	20505
Steel Re-rolling (M. Tons)	23,576	2,02,603	1,28,040	109217	86668	953377
Cycle Parts (Lakh Rs.)	109	1,327	1,314	1327	1538	1697
Scientific Instruments (Lakh Rs.)	504	1,426	9,722	12622	13675	13555
Glass (Lakh Rs.)	403	3,395	2,550	22839	37472	3535
Hosiery (Lakh Rs.)	461	224	70,292	60927	89795	93571
Woolen Textiles (Lakh Rs.)	517	5,813	2,972	4496	4774	4569
Power Loom Weaving (Lakh Rs.)	350	3,192	3,23,815	413000	422343	591180
Sports (Lakh Rs.)	5	25	48,220	25016	27017	29000
Motor Cycles, Scooters, Mopeds (No.)	..	..	18,21,350	1996350	3041968	4970026
Automobiles (No.)	..	..	3,23,000	343000	487402	561822
Tractors (No.)	2,227	75,629	15,891	39307	26239	19517

Source: Government of Haryana (2007). *Statistical Abstract of Haryana 2005-06*, Table 19.6, pp. 390-93 and Table 19.8, p. 395.

TABLE 1.70

Expenditure Incurred on Educational Institutions by Type of Education in Haryana

(Rs. in crore)

Year	*Primary Education*	*Secondary Education*	*Higher Education*	*Total*
1966-67	0.8697	1.6803	0.2225	2.7725
1970-71	3.8362	7.5267	1.0943	12.4572
1975-76	14.4163	14.3072	3.2860	32.0095
1980-81	26.9762	28.1495	10.2284	65.3541
1985-86	58.6443	59.5313	19.8275	138.0031
1988-89	86.7389	88.8306	40.0746	215.6441
1989-90	108.9980	126.3351	53.2971	288.6302
1990-91	133.69	123.21	50.93	307.83
1991-92	152.4349	132.6394	58.4773	343.5516
1992-93	113.5689	232.3690	64.7688	410.7067
1993-94	119.9027	246.5201	73.4083	439.8311
1994-95	137.5695	283.7028	79.3589	500.6362
1995-96	165.7127	344.0646	100.4538	610.2311
1996-97	206.0398	392.2966	106.5019	704.8383
1997-98	218.6438	453.3726	126.3467	798.3631
1998-99	257.8802	771.4498	131.3586	1160.6886
1999-2000	315.3791	675.7808	160.9886	1152.1485
2000-01	375.1576	691.7287	231.7754	1298.6617
2001-02	391.7528	792.3472	222.5863	1406.6863
2002-03	412.3208	771.8914	200.0829	1384.2951
2003-04	439.4460	827.1365	244.5599	1511.1424
2004-05	521.8357	817.2639	221.1835	1560.2831

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 6.11, p.132.

the need to lay a special emphasis on female education.

The expenditure on primary education in Haryana has increased several times from about Rs.87 lakhs in 1966-1967 to Rs.521.84 crore in 2004-05. Similarly, the expenditure on secondary education increased from Rs.1.68 crores in 1966-67 to Rs.817.26 crore in 2004-05. The same pattern of increase in expenditure can be seen in case of higher education, where the expenditure increased from Rs.22.25 lakhs in 1966-67 to Rs.221.18 crore in 2004-05. In this way the total expenditure incurred on education in the State has increased from Rs.2.77 crores in 1966-67 to Rs.1560.28 crore in 2004-05.

A comparison of Haryana with other States as regards the expenditure on education (revenue + capital) is given in Table 1.71. The percentage change in the expenditure on education over the previous year with regard to major States is given in Table 1.72. It is clear from this table that the percentage increase in expenditure on education in Haryana has been higher than all India. This is also true in case of share of education in State's total expenditure since 2004-05 as is shown in Table 1.73. But as is clear from Table 1.74 Haryana's state share in total expenditure on education has remained between 2.2 per cent to 2.5 per cent since 2000-2001 which is much less that that of Uttar Pradesh, Maharashtra, Andhra Pradesh, West Bengal, Bihar, Gujarat, Karnataka, Rajasthan, Tamil Nadu, Kerala and Punjab.

While there was only one university in the State in 1966-67, this number increased to 5 by 2005-06. Similarly, the number of Arts and Science Colleges increased from 40 in 1966-67 to 168 in 2005-06. Teachers training colleges increased from 5 in 1966-67 to 36 in 2005-06. The number of high/senior secondary schools increased significantly from 597 in 1966-67 to 5317 in 2005-06. Likewise, primary and middle schools also increased.

The classification of colleges in the State is given in Table 1.76, which shows that the number of Arts and Science Colleges has increased from 31 in 1966-67 to 108 in 2005-06 and that of Women Colleges from 9 to 60 during this period.

School-stage Education

Education facilities in Haryana are available within a distance of 1.08 km, 1.37 km, 1.63 km and 2.62 km at the primary, middle, high and senior secondary levels, respectively. Post-literacy programme is being implemented in seven districts. State Government is providing free cycles to girl students of those villages which do not have a middle school.

During the year 2005-06, 12,179 Pre-primary schools/ Balwaries and Primary Schools were functioning in the State; and the total number of children studying at pre-primary and primary stages, were 21,19,221.

Under National Programme for Nutritional Support to Primary Education, Centrally Sponsored Mid-Day-Meal (cooked food) Scheme to provide cooked food to the children for Primary classes (I-V) in all Government, Local Bodies and Government Aided Private Schools, has been launched in the entire State from 15th August 2004. The main objective of the scheme is to boost universalisation of primary education by increasing enrolment, retention and attendance and simultaneously impacting on nutritional level of students in primary classes. Under the scheme, foodgrains (wheat/rice) is provided by the Government of India through Food Corporation of India at the rate of 100 grams per child per school day. Under the scheme, five recipes (*daliya, meetha* rice, vegetable *pulao*, *paushtik khichri* and *bakli*) having minimum 300 calories and 8-12 grams of protein contents are being provided to the children.

TABLE 1.71

Expenditure on Education (Revenue + Capital) in Rs. crore

State	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05 RE*	*2005-06 BE*
Andhra Pradesh	3740.30	3871.04	4027.18	4667.84	5384.45	5879.19
Arunachal Pradesh	77.24	183.20	165.58	198.66	219.76	195.58
Assam	1943.52	1872.49	1998.02	2363.78	3198.35	3553.58
Bihar	4012.27	3076.22	3259.98	3607.36	4143.86	4485.57
Chhattisgarh	250.32	696.59	750.47	969.45	1304.46	1417.29
Goa	233.13	247.25	286.32	292.34	362.36	374.61
Gujarat	3684.77	3263.55	3634.36	3692.64	4093.72	4117.03
Haryana	**1334.47**	**1479.66**	**1455.01**	**1540.68**	**1793.49**	**2099.60**
Himachal Pradesh	904.52	918.72	957.34	1005.61	1072.20	1085.36
Jammu & Kashmir	866.84	936.70	955.59	977.50	1080.67	1276.09
Jharkhand	0.00	1283.06	1859.34	1379.37	1739.23	2104.13
Karnataka	3488.75	3505.88	3570.72	3771.34	4505.33	4889.50
Kerala	2635.52	2489.81	2986.22	3094.80	3645.83	3884.24
Madhya Pradesh	2762.53	2125.86	2312.14	2375.77	2720.61	2873.79
Maharashtra	9420.25	9387.91	8941.40	9440.98	10238.58	10226.90
Manipur	279.51	290.60	286.25	304.94	415.39	381.90
Meghalaya	236.86	250.08	242.30	269.06	346.73	402.28
Mizoram	189.86	213.89	204.26	218.36	257.91	237.87
Nagaland	237.68	223.01	210.05	256.41	284.30	292.55
Orissa	1760.48	1755.64	1902.44	1899.52	1967.84	2178.43
Punjab	1859.24	1832.93	2092.76	2080.81	2493.02	2643.02
Rajasthan	3286.28	3455.52	3329.86	3655.09	4093.33	5043.60
Sikkim	134.09	152.44	161.19	174.15	210.23	223.18
Tamil Nadu	4409.67	4299.80	4158.92	4254.13	4642.74	5283.89
Tripura	411.40	459.25	485.23	504.47	553.57	617.73
Uttranchal	238.63	696.92	969.31	1094.04	1329.99	1401.17
Uttar Pradesh	6172.52	6088.10	6137.29	6315.77	7679.18	8707.38
West Bengal	4581.63	4552.45	4405.72	4522.60	5246.41	5594.45
NCT Delhi	1115.02	1184.53	1237.53	1271.74	1766.93	1816.74
All States	60267.30	60793.10	62982.78	66191.21	76790.47	83286.65

Source: *State Finances – A Study of Budgets* (various issues) – Reserve Bank of India

With a view to remove rural urban disparities amongst students at primary level, teaching of English language has been introduced from class one with effect from the academic session 2000-01.

An innovative scheme for honouring talented students of primary schools has been started from the academic session 2001-02. Under this scheme, ten students per class per block are honoured, out of which five should be girls, other five should be boys and one boy and one girl would essentially belong to Scheduled Castes. Students are given cash prize.

Haryana Prathmik Shiksha Pariyojna Parishad is implementing the National Programme of Sarva Shiksha Abhiyan in all 20 Districts of the State for providing quality elementary education to all the children in the age group of 6-14 years.

Table 1.78 depicts the growth of enrolments in recognised schools of Haryana over the period, 1966-67 to 2004-05. The growth has been quite significant. The number of students enrolled has increased by about 3.92 times in case of primary schools and 4.75 times in case of high and senior secondary schools. Due to upgradation of some of the middle schools, the enrolment of these schools has come down, overtime. An important thing to be noted is the fact that the growth of enrolments has been much more marked in the case of girl scholars. For instance, in primary

TABLE 1.72

Percentage Change in the Expenditure on Education (Revenue + Capital) Over the Previous Year

State	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06*
Andhra Pradesh	3.5	4.0	15.9	15.4	9.2
Arunachal Pradesh	137.2	-9.6	20.0	10.6	-11.0
Assam	-3.7	6.7	18.3	35.3	11.1
Bihar	-23.3	6.0	10.7	14.9	8.2
Chhattisgarh	178.3	7.7	29.2	34.6	8.6
Goa	6.1	15.8	2.1	24.0	3.4
Gujarat	-11.4	11.4	1.6	10.9	0.6
Haryana	**10.9**	**-1.7**	**5.9**	**16.4**	**17.1**
Himachal Pradesh	1.6	4.2	5.0	6.6	1.2
Jammu & Kashmir	8.1	2.0	2.3	10.6	18.1
Jharkhand	-	44.9	-25.8	26.1	21.0
Karnataka	0.5	1.8	5.6	19.5	8.5
Kerala	-5.5	19.9	3.6	17.8	6.5
Madhya Pradesh	-23.0	8.8	2.8	14.5	5.6
Maharashtra	-0.3	-4.8	5.6	8.4	-0.1
Manipur	4.0	-1.5	6.5	36.2	-8.1
Meghalaya	5.6	-3.1	11.0	28.9	16.0
Mizoram	12.7	-4.5	6.9	18.1	-7.8
Nagaland	-6.2	-5.8	22.1	10.9	2.9
Orissa	-0.3	8.4	-0.2	3.6	10.7
Punjab	-1.4	14.2	-0.6	19.8	6.0
Rajasthan	5.1	-3.6	9.8	12.0	23.2
Sikkim	13.7	5.7	8.0	20.7	6.2
Tamil Nadu	-2.5	-3.3	2.3	9.1	13.8
Tripura	11.6	5.7	4.0	9.7	11.6
Uttranchal	192.1	39.1	12.9	21.6	5.4
Uttar Pradesh	-1.4	0.8	2.9	21.6	13.4
West Bengal	-0.6	-3.2	2.7	16.0	6.6
NCT Delhi	6.2	4.5	2.8	38.9	2.8
All States	0.9	3.6	5.1	16.0	8.5

Source: *State Finances – A Study of Budgets* (various issues) – Reserve Bank of India

TABLE 1.73

Share of Education in State's Total Expenditure

(Per cent)

State	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06*
Andhra Pradesh	13.3	12.5	11.7	3.4	8.7	8.5
Arunachal Pradesh	6.4	13.3	12.1	2.6	5.7	5.0
Assam	25.5	21.9	22.4	11.4	10.0	15.6
Bihar	23.7	20.7	18.4	13.8	13.9	14.2
Chhattisgarh	13.1	12.4	11.0	3.1	4.5	4.8
Goa	11.9	10.5	11.9	4.4	7.7	6.7
Gujarat	13.6	12.7	13.5	5.2	4.1	4.5
Haryana	14.6	13.8	13.7	4.7	6.3	7.3
Himachal Pradesh	17.0	16.2	14.5	6.1	11.6	11.5
Jammu & Kashmir	11.1	11.6	10.9	8.9	8.9	9.3
Jharkhand	-	16.2	19.0	11.3	11.7	13.5
Karnataka	17.7	16.0	14.8	5.2	9.0	9.5
Kerala	20.1	19.0	17.6	5.8	6.3	6.8
Madhya Pradesh	16.3	12.5	12.2	4.2	3.9	4.2
Maharashtra	22.3	22.1	18.9	9.3	7.0	9.1
Manipur	20.2	13.7	13.3	7.5	9.5	8.6
Meghalaya	16.6	17.9	15.3	2.1	2.4	2.7
Mizoram	14.7	16.0	14.5	5.7	11.5	13.2
Nagaland	12.9	11.0	11.0	3.8	8.2	8.1
Orissa	15.9	14.6	14.3	6.0	6.5	8.2
Punjab	13.2	11.7	12.1	3.3	3.8	4.0
Rajasthan	18.8	18.2	15.5	4.9	5.1	6.4
Sikkim	14.2	8.0	7.6	5.6	5.1	6.0
Tamil Nadu	18.0	17.3	13.7	4.8	4.4	6.0
Tripura	19.3	18.6	19.1	7.3	8.0	8.4
Uttranchal	21.5	21.1	20.0	3.6	9.2	9.0
Uttar Pradesh	16.8	16.0	14.6	2.9	6.5	8.0
West Bengal	17.1	16.2	15.9	3.7	4.6	5.0
NCT Delhi	15.1	13.7	12.1	10.9	12.8	15.8
All States	17.4	16.1	15.0	5.0	6.2	7.2

Source: *State Finances – A Study of Budgets* (various issues) – Reserve Bank of India

schools it is 6.96 times in case of girls as compared to 2.84 times in case of boys. Similarly, in high and senior secondary schools it is 8.5 times in case of girls as compared to 3.57 times in case of boys.

The State Government is determined to achieve Universalisation of Elementary Education, a mission mode as has been provided under Sarva Shiksha Abhiyan which provides that all children complete 5 years of Primary Schooling by 2007 and 8 years Elementary Schooling by 2010.

Free stationery is being given to Scheduled Caste students and Weaker Section Girls at the rate of Rs.40 for students in Class 1st, Rs.50 for those in Class 2nd, Rs.60 for those in Class 3rd, Rs.70 for those in Class 4th and Rs.80 in Class 5th. During the year 2005-06, 5,16,000 children got the benefit.

Free uniform is being given to Scheduled Caste and Weaker Section Girls. The amount of Rs.150 is given to girls in Classes 3rd, 4th and 5th. During the year 2005-06, 2,55,000 girls were given free uniform grant. Attendance prizes at the rate of Rs.20 per month are given to Scheduled Caste and Weaker Section Girls who have at least 70 per cent attendance in a particular month. During the year 2005-06, 2,51,000 girls were covered.

Two students, one boy and one girl, who stand first from amongst the boys and girls, respectively, per class

TABLE 1.74

State's Share in Total Expenditure on Education of Major States

(Per cent)

State	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06*
Andhra Pradesh	6.2	6.4	6.4	7.1	7.0	7.1
Arunachal Pradesh	0.1	0.3	0.3	0.3	0.3	0.2
Assam	3.2	3.1	3.2	3.6	4.2	4.3
Bihar	6.7	5.1	5.2	5.4	5.4	5.4
Chhattisgarh	0.4	1.1	1.2	1.5	1.7	1.7
Goa	0.4	0.4	0.5	0.4	0.5	0.4
Gujarat	6.1	5.4	5.8	5.6	5.3	4.9
Haryana	**2.2**	**2.4**	**2.3**	**2.3**	**2.3**	**2.5**
Himachal Pradesh	1.5	1.5	1.5	1.5	1.4	1.3
Jammu & Kashmir	1.4	1.5	1.5	1.5	1.4	1.5
Jharkhand	0.0	2.1	3.0	2.1	2.3	2.5
Karnataka	5.8	5.8	5.7	5.7	5.9	5.9
Kerala	4.4	4.1	4.7	4.7	4.7	4.7
Madhya Pradesh	4.6	3.5	3.7	3.6	3.5	3.5
Maharashtra	15.6	15.4	14.2	14.3	13.3	12.3
Manipur	0.5	0.5	0.5	0.5	0.5	0.5
Meghalaya	0.4	0.4	0.4	0.4	0.5	0.5
Mizoram	0.3	0.4	0.3	0.3	0.3	0.3
Nagaland	0.4	0.4	0.3	0.4	0.4	0.4
Orissa	2.9	2.9	3.0	2.9	2.6	2.6
Punjab	3.1	3.0	3.3	3.1	3.2	3.2
Rajasthan	5.5	5.7	5.3	5.5	5.3	6.1
Sikkim	0.2	0.3	0.3	0.3	0.3	0.3
Tamil Nadu	7.3	7.1	6.6	6.4	6.0	6.3
Tripura	0.7	0.8	0.8	0.8	0.7	0.7
Uttranchal	0.4	1.1	1.5	1.7	1.7	1.7
Uttar Pradesh	10.2	10.0	9.7	9.5	10.0	10.5
West Bengal	7.6	7.5	7.0	6.8	6.8	6.7
NCT Delhi	1.9	1.9	2.0	1.9	2.3	2.2
All States	100.0	100.0	100.0	100.0	100.0	100.0

Source: *State Finances—A Study of Budgets* (various issues)—Reserve Bank of India

per school will be honoured on the basis of annual assessment/examination result. The two students of Class 1st are given an award of Rs.300 each, of Class 2nd Rs.400 each, of Class 3rd Rs.500 each, of Class 4th Rs.600 each and of Class 5th Rs.750 each.

There has been manifold increase in the number of female students enrolled in various classes in schools of Haryana. The increase of female students is much more than that of the male students. But the dropout rate of girls is also higher than that of the boys. While the number of girls in classes I–V increased from 2,48,228 in 1970-71 to 9,30,747 in 2005-06, the number of boys increased from 6,10,764 to 10,66,744 during the same period. Number of female students in classes VI–VIII increased from 73,292 in 1970-71 to 5,26,647 in 2005-06 and the number of male students increased from 2,62,392 to 6,33,189 over the same period. In classes IX–XII the number of female students increased from 36,788 in 1970-71 to 3,76,025 in 2005-06. During the same period the number of male students increased from 1,30,164 to 4,96,781.

Significantly the percentage of school going girls in the age group of 6–11 years has increased from 34.7 per cent in 1966-67 to 87.4 per cent in 2004-05. However, this percentage in the case of boys increased only marginally from 80.7 per cent to 89.9 per cent during the same period. Likewise, whereas the percentage of school going girls in the age group of 11–14 years increased from 16.3 per cent in 1966-67 to 73.70 per cent in 2004-05. This percentage in case of boys

TABLE 1.75

Number of Recognised Institutions in Haryana

Type of Institution	*1966-67*	*1970-71*	*1975-76*	*1980-81*	*1985-86*	*1990-91*	*1995-96*	*2000-01*	*2002-03*	*2003-04*	*2004-05*	*2005-06*
Universities	1	1	3	3	3	3	4	4	4	5	5	5
Arts and Science College	40	65	98	98	110	120	130	150	155	163	166	168
College for Physical Education	-	-	1	1	1	1	1	1	1	1	1	1
Teachers Training Colleges	5	12	19	20	18	18	18	20	21	23	36	36
High/Senior Secondary Schools	597	975	1129	1468	1946	2356	2998	4138	*	5120	5222	5317
Middle/Senior Basic Schools	735	760	758	881	1121	1399	1499	1887	*	2171	2269	2168
Primary/Junior Basic Schools	4447	4204	5149	4934	5078	5109	5474	11013	*	11500	11800	12152
Pre-Primary Schools	2	3	7	27	27	27	27	27	*	27	27	27
Teachers Training Schools	10	12	10	1	-	-	17	17	17	17	17	17
Schools for Handicapped	5	5	5	5	5	6	6	6	6	6	6	6

Note: * The data for the year 2002-2003 have been collected under Seventh all India Educational Survey. The Final results have not been worked out yet.

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 6.1, p.107.

TABLE 1.76

Classification of Colleges in Haryana

Type of Education Imparted	*Total*											
	1966-67	*1970-71*	*1975-76*	*1980-81*	*1985-86*	*1990-91*	*1995-96*	*2000-01*	*2002-03*	*2003-04*	*2004-05*	*2005-06*
1. Arts and Science												
i) General	31	50	76	75	83	89	89	102	104	106	106	108
ii) For Women	9	15	22	23	27	31	41	48	51	57	60	60
2. Medicine												
i) General	1	2	6	4	4	4	5	7	7	7	7	7
ii) For Women	-	-	-	1	1	1	1	1	1	2	2	2
3. Education												
i) General	5	9	16	15	15	15	15	16	17	18	33	33
ii) For Women	-	3	3	5	3	3	3	4	4	5	3	3
4. Law*	-	1	1	-*	-*	-*	-*	1	1	1	1	1
5. Engineering	1	1	1	1	1	2	4	25	37	37	37	44
6. Agriculture	2	2	2	2	2	2	2	3	3	3	3	3
7. Physical Training	-	-	1	1	1	1	1	1	1	1	1	1
8. Oriental Studies@	-	-	-	15	15	15	15	15	15	15	15	15
9. Veterinary Science @@	1	2	2	2	2	2	2	2	2	2	2	2
10. Technology	1	1	1	1	1	1	1	1	1	1	1	1
11. Dairy Science	1	1	1	1	1	1	1	1	1	1	1	1
Total	52	87	132	146	156	168	181	228	246	257	273	282
General	43	69	108	117	125	133	136	175	190	193	208	217
For Women	9	18	25	29	31	35	45	53	56	64	65	65

Notes: * Law College, Kurukshetra has been made law Department of Kurukshetra University.
@ The information of the institutions of oriental studies is being collected since 1978-79.
@@ Includes Animal Science College.

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 6.2, p.108.

TABLE 1.77

Number of Scholars (As Well As Scheduled-Caste Scholars*) in Recognised Schools in Haryana

Year	*High/Senior Secondary/ Navodya Schools*			*Middle Schools*			*Primary/Pre-Primary Schools*			*Grand Total*		
	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls
1966-67	3,76,080	2,86,475	89,605	2,50,673	1,83,043	67,630	5,34,764	3,93,761	1,41,003	11,61,517	8,63,279	2,98,238
	(30,617)	(27,360)	(3,257)	(22,899)	(19,247)	(3,652)	(62,249)	(53,853)	(8,396)	(1,15,765)	(1,00,460)	(15,305)
	8.14	9.55	3.63	9.14	10.52	5.4	11.64	13.64	5.95	9.97	11.64	5.13
2004-05	1769835	1005728	764107	298713	162543	136170	2175525	1152610	1022915	4244073	2320881	1923192
	(312548)	(179733)	(132815)	(59975)	(31785)	(28190)	(581990)	(304964)	(277026)	(954513)	(516482)	(438031)
	17.66	17.87	17.38	20.08	19.55	20.70	26.75	26.46	27.08	22.49	22.25	22.78
2005-06	1746133	983203	762930	286409	146767	139642	2119221	1132795	986426	4151763	2262765	1888998
	(299371)	(173389)	(125982)	(63241)	(32647)	(30594)	(617756)	(324051)	(293705)	(980368)	(530087)	(450281)
	17.14	17.63	16.51	22.08	22.24	21.90	29.15	28.60	29.77	23.61	23.42	23.83

Note: * The numbers of Scheduled-Caste Scholars are indicated by figures given in parentheses. Each figure indicated just below the parentheses specifies the corresponding percentage of these scholars.

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Tables 6.6 and 6.7, pp.124-27.

TABLE 1.78

Number of Students in Schools of Haryana (Class-wise)

Year	Classes I to V*			Classes VI to VIII			Classes IX to XII		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1970-71	610764	248228	858992	262392	73292	335684	130164	36788	166952@
1975-76 **	751761	352291	1104052	290118	92094	382212	151828	43807	195635@
1980-81	822640	422847	1245487	351514	125778	477292	135398	41443	176841
1985-86	947888	627665	1575553	408991	178566	587557	181537	65420	246957
1990-91	899520	715098	1614618	458477	267948	726425	270041	127411	397452
1995-96	1025420	870477	1895897	477060	340709	817769	257780	149627	407407
2000-01	1063730	954125	2017855	533181	418313	951494	493172	326727	819899
2001-02	1040688	928856	1969544	546490	432639	979129	521943	349263	871206
2003-04	1070770	939889	2010659	604498	485249	1089747	532055	375790	907845
2004-05	1097631	976308	2073939	656396	528418	1184814	511875	371859	883734
2005-06	1066744	930747	1997491	633189	526647	1159836	496781	376025	872806

Note: @ Class IX to XI
* Students of Pre-Primary Schools have not been included
** Includes 37 boys and 2 girls studying in attached Primary Classes in J.B.T. Schools , Khunga Kothi.

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 6.9, p. 130.

increased from 56.2 per cent to 80.43 per cent over the same period.

But when we compare the gross enrolment ratio of Haryana with rest of the country, we find that Haryana lags behind several States in the country. In the year 2003-04, Haryana's gross enrolment ratio of children in the age group of 6-14 years was only 71.51 as against all-India's 84.91.

A number of incentives to girls and all children belonging to weaker sections have been provided to encourage their enrolment and retention in schools. Free text books have been provided to Scheduled Caste and weaker section students studying in Classes VI-XII in Government schools.

In addition to 38 centres for Integrated Education for the Disabled Children already functioning, 86 new centres have been got sanctioned under a centrally sponsored scheme "specially focus groups" covering all the 124 educational blocks. Under this scheme, the Children With Special Needs are provided necessary facilities such as books and stationery, transport allowance, uniform allowance, equipment allowance etc. Facilities like medical assessment camps, aids and appliances to the needy, guidance for competitions are also provided under Sarva Shiksha Abhiyan. So far 28,548 children with special needs have been identified and enrolled in schools.

Secondary Education

In the first phase, Satellite Interactive Terminals (SITs) are being made functional in the state in 232 Science stream Senior Secondary Schools. The Test Broadcast to Senior Secondary Schools has been started from July 2006. In the next phase all 1232 Government Senior Secondary Schools will be installed with Direct To Home (DTH) Receive Only Terminals (ROTs).

The Centrally sponsored scheme namely Information and Communication Technology (ICT) was introduced in the state in the year 2004-05 by modifying the class project for imparting Computer Education in the government senior secondary schools. Free computer education training to the students of classes 6th to 12th is provided to all 1232 Government Senior Secondary Schools under this scheme.

TABLE 1.79

Percentage of School-going children

Year	Age Group 6-11			Age Group 11-14		
	Boys	Girls	Total	Boys	Girls	Total
1966-67	80.7	34.7	58.9	56.2	16.3	37.3
1967-68	80.7	34.4	58.7	61.9	18.3	41.2
1970-71	83.0	38.0	61.6	67.4	20.9	45.3
1975-76	91.4	47.4	70.5	65.2	23.0	45.2
1980-81	99.1	54.7	77.7	65.2	26.3	46.9
1985-86	99.8	71.5	86.2	72.5	35.8	55.3
1990-91	97.3	76.1	86.7	78.6	50.5	65.2
1995-96	95.2	88.6	92.6	70.4	55.4	63.3
1999-2000	81.2	82.9	82.0	65.8	59.3	62.8
2000-01	78.1	79.8	78.9	66.9	61.0	64.2
2001-02	75.96	76.95	76.42	65.13	58.65	62.11
2003-04	81.11	79.85	80.52	74.54	68.25	71.60
2004-05	89.9	87.4	88.7	80.43	73.70	77.28

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 36.21, p.771.

TABLE 1.80

Gross Enrolment Ratio in Classes I-V, VI-VIII and I-VIII

Sl. No.	States/Union Territories	2003-2004								
		Classes I-V (6-11 Yrs)			Classes VI-VIII (11-14 yrs.)			Classes I-VIII (6-14 yrs.)		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10	11
1.	Andhra Pradesh	87.42	88.03	87.72	67.10	62.49	64.86	79.80	78.58	79.20
2.	Arunachal Pradesh	115.35	103.47	109.56	67.99	59.06	63.60	98.68	87.64	93.29
3.	Assam	88.22	88.09	88.16	66.02	61.15	63.65	80.10	78.32	79.23
4.	Bihar	80.20	64.20	72.57	30.64	19.21	25.33	92.37	48.50	55.82
5.	Chhattisgarh	123.69	122.86	123.29	78.51	62.21	70.52	106.99	99.97	103.58
6.	Goa	100.30	95.50	97.96	104.77	97.55	101.23	102.07	96.31	99.26
7.	Gujarat	117.67	108.62	113.41	81.88	57.40	70.40	104.19	89.38	97.23
8.	**Haryana**	**84.24**	**81.94**	**83.15**	**68.24**	**62.40**	**65.51**	**71.53**	**71.49**	**71.51**
9.	Himachal Pradesh	106.10	106.88	106.47	99.91	96.49	98.24	103.62	102.61	103.13
10.	Jammu & Kashmir	87.47	76.42	82.10	65.20	52.95	59.28	78.77	67.31	73.21
11.	Jharkhand	86.70	71.10	79.09	42.47	32.19	37.54	70.51	57.15	64.04
12.	Karnataka	110.53	107.23	108.91	78.95	73.32	76.20	97.95	93.76	95.89
13.	Kerala	97.25	96.59	96.92	95.69	91.49	93.64	96.61	94.51	95.58
14.	Madhya Pradesh	112.11	100.68	106.59	71.78	53.88	63.30	96.89	83.43	90.44
15.	Maharashtra	108.32	106.84	107.60	89.41	85.52	87.55	100.71	98.31	99.56
16.	Manipur	139.30	135.64	137.51	86.95	81.57	84.33	118.85	114.60	116.77
17.	Meghalaya	104.19	106.88	105.51	60.27	62.02	61.14	88.01	90.34	89.16
18.	Mizoram	122.54	117.71	120.17	77.25	76.70	76.98	105.10	101.86	103.51
19.	Nagaland	80.95	79.97	80.48	43.56	45.85	44.66	66.11	66.50	66.30
20.	Orissa	114.23	107.44	110.91	58.13	49.69	54.01	93.28	85.86	89.65
21.	Punjab	71.04	76.38	73.45	59.31	60.93	60.06	66.52	70.25	68.22
22.	Rajasthan	120.18	109.41	115.07	74.30	47.22	61.54	103.65	87.19	95.87
23.	Sikkim	116.54	116.48	116.51	52.02	61.63	56.75	90.63	94.77	92.68
24.	Tamil Nadu	117.47	115.49	116.51	102.28	98.44	100.41	111.57	108.88	110.26
25.	Tripura	125.73	119.68	122.76	75.34	70.23	72.84	105.01	99.41	102.27
26.	Uttar Pradesh	96.69	92.58	94.75	53.61	42.97	48.64	81.09	74.86	78.16
27.	Uttaranchal	106.10	107.66	106.85	81.08	79.59	80.36	96.57	96.88	96.72
28.	West Bengal	107.45	107.21	107.33	65.90	62.57	64.28	91.57	90.20	90.90
29.	Andaman & Nicobar Islands	118.78	113.23	116.05	100.13	91.41	95.85	111.27	104.47	107.92
30.	Chandigarh	72.00	70.77	71.44	69.19	69.85	69.50	70.95	70.42	70.71
31.	Dadar & Nagar Haveli	133.92	117.88	126.06	95.75	66.08	81.64	120.14	99.86	110.30
32.	Daman & Diu	111.66	111.01	111.35	100.85	94.11	97.62	107.76	104.81	106.36
33.	Delhi	90.34	89.81	90.10	84.83	85.91	85.34	88.26	88.33	88.30
34.	Lakshadweep	111.65	100.93	106.37	104.04	89.77	97.09	108.51	96.38	102.56
35.	Pondicherry	121.94	118.72	120.37	121.89	117.37	119.68	121.92	118.18	120.09
	India	100.75	95.67	98.31	66.87	57.69	62.49	88.02	81.51	84.91

Source: *Economic Survey, 2005-06*, Table 9.2, p.S-112. New Delhi: Government of India.

In order to make education system more flexible, semester system has been introduced in Haryana State. Haryana is the first State in the country which had started semester system. Through this system every student will have to work hard the whole of the year. The results of this system are very much encouraging. Enrolment as well as attendance in schools will be increased through this system. Qualitative improvement will also increase.

Government provides many incentives to SC and weaker section students to increase the enrolment and reduce the drop out rate in classes 9th to 12th in government schools, such as free uniform, free stationery, etc. Besides this, government also provides Rs.500 for purchase of jersey, shoes and socks to SC girl students in classes 9th to 12th and Rs.235 for purchase of dictionary (English and Hindi). Rajiv Gandhi Scholarship Scheme for excellence in education provide Rs.1000 per year to one boy and one girl student who stood first in classes 9th to 12th.

Government has opened a Model School at Panchkula in the year 2003-04 having all facilities. Now government has opened one such school in all other districts for quality education.

State government honours those teachers who take keen interest in education, sports and cultural activities every year. Government has increased the number of state awardee teachers from 39 to 90 in the year 2006-07.

Higher Education

Higher Education must provide knowledge and skills to build productive careers so that the people have professionally satisfying lives and also contribute positively to a strong and vibrant economy. Since its inception, the State of Haryana has made tremendous expansion in the field of Higher Education. Besides, substantial increase in the number of colleges teachers and the number of girl students studying in various colleges of the State has also increased. In 1966, there were in all, 45 colleges with total enrolment of 30,109 which included 23,276 boys (77.3 per cent) and 6,833 girls (22.7 per cent). These colleges had a total faculty of 1433 teachers having 1190 male teachers (83.04 per cent) and 243 female teachers (16.96 per cent). By the year 2005, the system of Higher Education had expanded substantially to include in its ambit a total of 217 colleges of which 64 were government colleges and 153 non-government colleges. As on 30 September 2005, in these colleges the overall enrolment stood at 1,97,892 with 99,559 boys (50.31 per cent) and 98,333 girls (49.69 per cent). The faculty in these colleges consisted of 4,859 teachers with 2,489 male teachers (51.22 per cent) and 2,370 female teachers (48.78 per cent). These statistics adequately bring out the fact that over time, women education has been accorded the priority it deserved.

To encourage and enhance the participation of women in Higher Education, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan, Sonipat has been established. The academic programmes of the university will develop specific skills or gainful occupation and create in girl student the awareness of work ethics, work habits and motivate them for creative interaction with the society. Haryana is a pioneer in Northern India—the first State to establish a State University exclusively for women.

In order to encourage healthy competition, to promote quality education and to attract private investment in the field of Higher Education and also to promote the establishment of institutions of higher learning of international standards Haryana Private University Act, 2006, the Government of Haryana has decided to set up Rajiv Gandhi Education City at Kundli (Sonipat). The institutions of excellence for higher learning and research will be set up in the Education City so that students in Haryana can get the world class facilities in the sphere of education.

Education through Satellite (EDUSAT) project is being implemented in all the Government Colleges of the state. The EDUSAT equipments have been installed by ISRO through Bharat Electronics Limited, Bangalore. The imparting of education through EDUSAT has already been started from 24 July 2006. Haryana is the first State in India to introduce this project on such a large scale. The scheme was started in six selected Government Colleges of the State during the year 2005-06 for imparting soft skills training to the students. The Society for Promotion of IT in Chandigarh (SPIC) charges Rs.4000 per student for training of four and a half months duration. A student has to pay a sum of Rs.1000 per course and a sum of Rs.3000 per student is being given by the government of Haryana as subsidy. The government proposes to telecast soft skills training through EDUSAT in the afternoon, that is, from 2.00 to 4.00 p.m. daily for the benefit of students.

The various job oriented courses in some of the Government Colleges from the academic session 2005-06 have been started. These are BTM (Bachelor of Tourism Management), BIM (Bachelor of Information Management), Bio-Technology, BBA (Bachelor of Business administration), BCA (Bachelor of Computer Application), BMC (Bachelor of Mass Communication), PGDCA (Post Graduate Diploma in Computer Application), BMCJ (Bachelor of Mass Communication and Journalism), BMC & VP (Bachelor in Mass Communication and Video Production), Computer Science and Industrial Microbiology.

A Post Graduate Regional Centre at Maharshi Dayanand University, Rohtak at Village Mirpur (Rewari) and a Post Graduate Regional Centre at Kurukshetra University, Kurukshetra at Jind are being established in order to disseminate quality education in rural areas of Haryana.

The Department of Higher Education is implementing various scholarship schemes for meritorious and needy students. These are "National Merit Scholarship Scheme", "State Merit Scheme", "State Meritorious Incentive Scheme" and "Under Graduate Girls Scholarship Scheme (+2 Level)". Apart from these, there is a scheme to grant scholarship to the poor and needy students from Scheduled Castes/ Backward Classes category.

There is scheme of Remedial Coaching in the subject of Science, Mathematics and English for the students belonging to weaker sections of society like SC/BC

including students belonging to educationally backward minorities. This scheme envisages special coaching for three months in an academic year in each subject.

Technical Education

Technical Education is one of the most significant components of Human Resources Development spectrum with great potential for adding value to products and services and for contributing to the national economy through gainful employment of youth and improving quality of life of the people. The Department of Technical Education is responsible for providing technical manpower in the field of Engineering and Technology, Computer, Management, Pharmacy through Diploma, Degree and Post Graduate level courses conducted by various Polytechnics, Engineering Colleges, Institutions of Management and Computer Application and Pharmacy.

At the time of inception of Haryana as a separate state in 1966, there were only six polytechnics (government—4 and privately managed government aided—2) and only one Engineering College at Kurukshetra (joint venture of State Government and Government of India). As on 31st January 2007, the number of institutions has increased to 183 with an intake of 31,976, as detailed below:

Sr. No.	*Name/Type of the Institute*	*No. of Institutes*	*Intake Capacity*
1.	Engineering Colleges University Departments	44	15,055
2.	M.B.A. Colleges/University Departments	36	2450
3.	M.C.A. Colleges/University Departments	30	1330
4.	B. Pharmacy Colleges/ University Departments	19	1201
5.	BHMCT College	1	60
6.	Polytechnics	53	11,880
	Total	183	31,976

Source: Directorate of Technical Education, Haryana.

Special emphasis has been given to start Post Graduate Courses in Engineering and Technology at National Institute of Technology, Kurukshetra, YMCA Institute of Engineering, Faridabad, CR State College of Engineering, Murthal and Technological Institute of Textile and Sciences, Bhiwani, thereby increasing the total M. Tech capacity from 154 to 226.

Under the Direct Central Assistance from Ministry of Human Resources Development, Government of India, Community Development Scheme has been introduced in 18 Community Polytechnics with the objective of imparting job oriented training programmes of 3 to 6 months duration to the unemployed rural/ urban youths for their self-employment/wage employment at these institutions and also through their extension centres. Besides this, appropriate low-cost technologies suitable for the need of rural masses are identified, developed, tested and multiplied/ transferred to the rural areas after making their field demonstration for their acceptability and adoptability. The Technical Support services like repairs and maintenance of agricultural implements, electrical and domestic appliances etc. are also provided to the people of rural areas under this scheme.

The intake capacity in degree courses in Engineering Colleges in the State has a record increase from 250 in 1966-67 to 14,180 in 2006-07. This increase in intake capacity has occurred mainly during the last sixteen years. The intake capacity was only 586 in the year 1990-91, 1156 in 1995-96, 6714 in 2000-01 and 14,180 in 2006-07. The intake capacity during the year 2006-07 was merely 125 in Civil Engineering, 3100 in Computer Engineering, 3490 in Electronics and Communication, 2550 in Mechanical and 1290 in Electrical Engineering.

TABLE 1.81

Intake Capacity in Degree Courses in Engineering Departmentwise

Year	*Civil*	*Mechanical*	*Electrical*	*Electronic and Communication*	*Computer Engineering*	*Other*	*Total*
1966-67	70	90	90	-	-	-	250
1970-71	70	90	75	15	-	-	250
1975-76	70	90	75	15	-	-	250
1980-81	65	80	75	30	-	-	250
1985-86	95	110	105	45	-	-	355
1990-91	85	155	145	113	60	28	586
1995-96	85	170	160	223	170	348	1156
2000-01	85	1079	510	1661	1755	1624	6714
2002-03	120	1439	720	2775	2611	2463	10128
2003-04	125	1545	842	2719	2735	2665	10631
2004-05	60	2070	1050	3420	2720	2650	11970
2005-06	60	2380	1480	3200	2810	2125	12055
2006-07	125	2550	1290	3490	3100	3525	14180

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 6.10, p.131. Haryana: Directorate of Technical Education.

As per policy decision of the State Government to open at least one Government Polytechnic/Technical Institution in each district of the State, three more Polytechnics are to be established during 11th Five Year Plan 2007-2012. A number of self-financing private Engineering Colleges/Polytechnics have been established during the 10th Five Year Plan. Further, many new courses are also likely to be added, keeping in view of the requirements of industry in emerging areas in the existing Polytechnics during 11th Five Year Plan.

The major achievements in the field of technical education are as follows:

a) Plan budget increased from Rs.29 crore in 2004-

2005 to Rs.50 crore in 2005-06 and to Rs.90 crore in 2006-07.

b) Total number of institutions and intake increased by 25 per cent in 2006-07 over the previous year.

c) Start of three Government Polytechnics at Sanghi (Rohtak), Lisana (Rewari) and Chikka (Kaithal) from session 2006-07.

d) Opening of new Polytechnics at Narwana, Sampla and Mewat from session 2007-08.

e) Establishment of Deen Bandhu Chhotu Ram University of Science & Technology at Murthal (Sonipat).

f) Guru Jambeshwar University, Hisar named as University of Science and Technology to focus on Technical Education.

Private Sector in Education

The private sector is also playing a significant role in the expansion of education in the State. In the year 1966-1967 there were 52 government colleges and 38 private colleges. By the year 2003-04, the number of government colleges increased to 71 and that of the private colleges to 190 (124 being on government aid and 66 un-aided). In the year 1966-67 there were 440 Government High/Senior Secondary Schools and 157 such private schools. By the year 2005-06 the number of Government Schools increased to 2827 and that of the private schools to 2490. Similarly, the number of schools for Girls increased from 109 in 1966-67 to 536 in 2005-06.

Participation of private sector in the establishment of middle schools and primary schools has also been highly significant. The number of private middle schools increased from 31 in 1966-67 to 743 in 2005-2006. The number of private primary schools increased from 105 in 1966-67 to 3215 in the year 2005-06. Similarly, the number of girls' middle schools increased from 106 in 1966-67 to 206 in 2005-06. The number of girls' primary schools increased from 257 in 1966-67 to 1581 in 2005-06.

TABLE 1.82

Classification of Recognised High/Senior Secondary Schools by Management in Haryana

Year	*Government*	*Non-Government*	*For Boys*	*For Girls*	*Total*
1966-67	440	157	488	109	597
1970-71	797	178	811	164	975
1975-76	907	222	931	198	1129
1980-81	1226	247	1228	245	1473
1985-86	1657	289	1643	303	1946
1990-91	1944	412	2001	355	2356
1995-96	2345	653	2547	451	2998
2000-01	2620	1518	3631	507	4138
2001-02	2677	1817	3973	521	4494
2003-04	2812	2308	4611	509	5120
2004-05	2819	2403	4709	513	5222
2005-06	2827	2490	4781	536	5317

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 6.5, p.121. Haryana, Chandigarh: Directorate of School Education.

TABLE 1.83

Classification of Recognised Middle Schools by Management in Haryana

Year	*Government*	*Non-Government*	*For Boys*	*For Girls*	*Total*
1966-67	704	31	629	106	735
1970-71	730	30	661	99	760
1975-76	742	16	673	85	758
1980-81	848	33	805	76	881
1985-86	1062	59	990	131	1121
1990-91	1249	150	1231	168	1399
1995-96	1194	305	1327	172	1499
2000-01	1211	676	1706	181	1887
2001-02	1243	927	1976	194	2170
2003-04	1332	839	1982	189	2171
2004-05	1416	853	2018	251	2269
2005-06	1425	743	1962	206	2168

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 6.5, p.122. Haryana, Chandigarh: Directorate of School Education.

Literacy Level in States

There has been a continuous rise in the literacy rates in India. The overall literacy rate has increased from 18.33 per cent in 1951 to 64.84 per cent in 2001. In 2001, Kerala had the highest literacy rate of 90.86, followed by Mizoram (88.80 per cent). Pondicherry, Goa

TABLE 1.84

Classification of Recognised Primary (Including pre-Primary/*Balwari*) Schools by Management in Haryana

Year	*Government*	*Non-Government*	*For Boys*	*For Girls*	*Total*
1966-67	4344	105	4192	257	4449
1970-71	4106	101	4071	136	4207
1975-76	5075	81	4892	264	5156
1980-81	4896	65	4738	223	4961
1985-86	5018	87	4557	548	5105
1990-91	4969	167	4398	738	5136
1995-96	5321	180	4451	1050	5501
2000-01	8650	2390	9381	1659	11040
2001-02	8648	2587	9581	1654	11235
2003-04	8696	2831	9895	1632	11527
2004-05	8737	3090	10216	1611	11827
2005-06	8964	3215	10598	1581	12179

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 6.5, p.123.

TABLE 1.85

State-wise Literacy Rates (1951-2001)

(In Per cent)

Sl. No.	State/Union Territories	1951	1961	1971	1981	1991	2001
1.	Jammu & Kashmir	-	12.95	21.71	30.64	NA	55.52
2.	Himachal Pradesh	-	-	-	-	63.86	76.48
3.	Punjab	-	NA	34.12	43.37	58.51	69.65
4.	Chandigarh	-	NA	70.43	74.80	70.81	81.94
5.	Uttaranchal	18.93	18.05	33.26	46.06	57.75	71.62
6.	**Haryana**	**-**	**-**	**25.71**	**37.13**	**55.85**	**67.91**
7.	Delhi	NA	61.95	65.08	71.94	75.29	81.67
8.	Rajasthan	8.5	18.12	22.57	30.11	38.55	60.41
9.	Uttar Pradesh	12.02	20.87	23.99	32.65	40.71	56.27
10.	Bihar	13.49	21.95	23.17	32.32	37.49	47.00
11.	Sikkim	-	-	17.74	34.05	56.94	68.81
12.	Arunachal Pradesh	NA	7.13	11.29	25.55	41.59	54.34
13.	Nagaland	10.52	21.95	33.78	50.28	61.65	66.59
14.	Manipur	12.57	36.04	38.47	49.66	59.89	70.53
15.	Mizoram	31.14	44.01	53.80	59.88	82.26	88.80
16.	Tripura	NA	20.24	30.98	50.10	60.44	73.19
17.	Meghalaya	NA	26.92	29.49	42.05	49.10	62.56
18.	Assam	18.53	32.95	33.94	NA	52.89	63.25
19	West Bengal	24.61	34.46	38.86	48.65	57.70	68.64
20	Jharkhand	12.93	21.14	23.87	35.03	41.39	53.56
21	Orissa	15.80	21.66	26.18	33.62	49.09	63.60
22	Chhattisgarh	9.41	18.14	24.08	32.63	42.91	64.66
23	Madhya Pradesh	13.16	21.41	27.27	38.63	44.67	63.74
24	Gujarat	21.82	31.47	36.95	44.92	61.29	69.14
25	Daman & Diu	-	-	-	-	71.20	78.18
26	Dadra & Nagar Haveli	-	-	18.13	32.90	40.71	57.63
27	Maharashtra	27.91	35.08	45.77	57.24	64.87	76.88
28	Andhra Pradesh	-	21.19	24.57	35.66	44.08	60.47
29	Karnataka	-	29.80	36.83	46.21	56.04	66.64
30	Goa	23.48	35.41	51.96	65.71	75.51	82.01
31	Lakshadweep	15.23	27.15	51.76	68.42	81.78	86.66
32	Kerala	47.18	55.08	69.75	78.85	89.81	90.86
33	Tamil Nadu	-	36.39	45.40	54.39	62.66	73.45
34	Pondicherry	-	43.65	53.38	65.14	74.74	81.24
35	Andaman & Nicobar Islands	30.30	40.07	51.15	63.19	73.02	81.30
	ALL INDIA[2]	18.33	28.30	34.45	43.57	52.21	64.84

Note: 1. Literacy rates for 1951, 1961 and 1971 Censuses relate to population aged five years and above. The rates for the 1981, 1991 and 2001 Censuses relate to the population aged seven years and above. The literacy rate for 1951 in case of West Bengal relates to Total population including 0-4 age group. Literacy rate for 1951 in respect of Chhattisgarh, Madhya Pradesh and Manipur are based on sample population.

2004. India and Manipur figures exclude those of the three sub-divisions *viz*. Mao Maram, Paomata and Purul of Senapati district of Manipur as census results of 2001 in these three sub-divisions were cancelled due to technical and administrative reasons.

2004. N.A. – Not available as no census was carried out in Assam during 1981 and in Jammu & Kashmir during 1991.

2004. Created in 2001. Uttarakhand Pradesh, Jharkhand and Chhattisgarh for 1981 are included under Uttar Pradesh, Bihar and Madhya Pradesh respectively.

Source: *Economic Survey 2005-06*, Table 9.4, p.114. New Delhi: Government of India.

and Delhi have literacy rates above 80 per cent. The literacy rate in Haryana increased from 25.71 per cent in 1971 to 67.91 per cent in 2001. Some of the traditional, educationally backward States too have shown considerable improvements in recent times, especially in the last decade. Literacy in Rajasthan and Madhya Pradesh went up by around 20 percentage points in a single decade. The literacy rate in Rajasthan increased from 38.55 per cent in 1991 to 60.41 per cent in 2001. Madhya Pradesh registered an increase from 44.67 per cent to 63.74 per cent over the same period.

TABLE 1.86

Literacy Rates for Male and Female—1961, 1981 and 2001 (Arranged in Rank Order of 2001 for Female)

Sl. No.	States/Union Territories	1961		1981		2001	
		Male	Female	Male	Female	Male	Female
1.	Kerala	64.9	45.6	75.3	65.7	94.2	87.9
2.	Mizoram	NA	NA	64.5	54.9	90.7	86.1
3.	Lakshadweep	42.0	12.8	65.2	44.6	93.2	81.6
4.	Chandigarh	62.6	43.1	69.0	59.3	85.7	76.7
5.	Goa	48.7	22.8	NA	NA	88.9	75.5
6.	Andaman & Nicobar Islands	48.8	24.5	58.7	42.1	86.1	75.3
7.	Delhi	70.4	50.9	68.4	53.1	87.4	75.0
8.	Pondicherry	58.9	28.7	65.8	45.7	88.9	74.1
9.	Daman & Diu	44.6	26.0	65.6	47.6	88.4	70.4
10.	Himachal Pradesh	37.6	11.2	53.2	31.5	86.0	68.1
11.	Maharashtra	49.3	19.8	58.8	34.8	86.3	67.5
12.	Tripura	35.3	12.4	51.7	32.0	81.5	65.4
13.	Tamil Nadu	51.6	21.1	58.3	35.0	82.3	64.6
14.	Punjab	40.7	20.7	47.2	33.7	75.6	63.6
15.	Nagaland	27.2	13.0	50.1	33.9	71.8	61.9
16.	Sikkim	22.4	4.9	43.9	22.2	76.7	61.5
17.	Meghalaya	NA	NA	37.9	30.1	66.1	60.4
18.	West Bengal	46.6	20.3	50.7	30.3	77.6	60.2
19.	Manipur	53.5	18.9	53.3	29.1	77.9	59.7
20.	Gujarat	0.0	0.0	54.4	32.3	80.5	58.6
21.	Karnataka	42.3	16.7	48.8	27.7	76.3	57.5
22.	**Haryana**	**35.1**	**11.3**	**48.2**	**22.3**	**79.3**	**56.3**
23.	Assam	44.3	19.6	NA	NA	71.9	56.0
24.	Andhra Pradesh	35.0	14.0	39.3	20.4	70.9	51.2
25.	Orissa	40.3	10.1	47.1	21.1	76.0	51.0
26.	Madhya Pradesh	32.2	8.1	39.5	15.5	76.8	50.3
27.	Rajasthan	28.1	7.0	36.3	11.4	76.5	44.3
28.	Arunachal Pradesh	53.4	24.1	28.9	11.3	64.1	44.2
29.	Dadra & Nagar Haveli	17.7	5.0	36.3	16.8	73.3	43.0
30.	Uttar Pradesh	31.9	8.3	38.8	14.0	70.2	43.0
31.	Jammu & Kashmir	19.8	5.1	36.3	15.9	65.8	41.8
32.	Bihar	35.2	8.2	38.1	13.6	60.3	33.6
	All India	40.4	15.4	56.4	29.8	75.9	54.2

Note: States/Union Territories are arranged in order of rank in 2001
N.A.: Not Available

Source: *Tenth Five Year Plan 2002-2007*, Volume III, Table 3.10, p. 50. New Delhi: Planning Commission, Government of India.

A case in contrast is Bihar with the lowest literacy rate of just 47 per cent. Literacy in Bihar, which was at par with Rajasthan in 1991, has fallen far behind in just one decade. Both Rajasthan and Bihar started with more or less the same literacy rate in 1991. But a decade later whereas Rajasthan improved its literacy rate by 20 percentage point (from 38.55 to 60.41 per cent), Bihar could achieve a progress of just 10 percentage point (from 37.49 to 47 per cent).

Gender Disparities in Literacy Rates

There are gender disparities in literacy at all-India level, as also within individual States. The gap is the narrowest in Mizoram where in 2001 male literacy stood at 90.7 per cent and female literacy at 86.1 per cent. For Kerala, the two rates in 2001 were 94.2 and 87.9 per cent, respectively. The gap is the widest in the low literacy States. For instance, male-female literacy rates in 2001 were 60.3 per cent and 33.6 per cent in Bihar, and 70.2 per cent and 43 per cent in Uttar Pradesh. At the same time, it should be recognised that these States, as also Jammu & Kashmir and Madhya Pradesh, have come a long way since 1961, when female literacy rates were in single digit only. The exception is Meghalaya where in spite of low overall literacy rate, the differential between male and female rate is small. In Haryana, in 2001 the overall literacy rate was 67.91 per cent and the male and female literacy rates were 79.3 per cent and 56.3 per cent, respectively.

1.2.8.2 Health

In Haryana, the per capita expenditure on health for the year 2005-06 was Rs.199.40. There was a provision of per capita expenditure of Rs.243.27 for the year 2006-07. The health services are being provided to the people through a well connected network of 50 Government Hospitals, 82 Community Health Centres, 408 Primary Health Centres, 2433 Sub Centres, 15 District Tuberculosis Centres, 41 Dispensaries, 14 Mobile units and 2 Mobile Dental Dispensaries, 377 PP Centres and 16 Urban Health Posts. In addition, there is a Post-Graduate Institute of Medical Education and Research Centre at Rohtak with a capacity of 1276 beds and specialities services which also provides Medical Training at the Graduate and Post-Graduate level. There is another Medical College at Agroha, Hisar. Thus the State has made tremendous progress in the augmentation of health and medical services.

The number of hospitals, dispensaries and health centres in the State increased from 785 in 1968 to 3176 in 2005-06. Almost 95 per cent of these are of government. Similarly, the number of PHCs in rural and urban Haryana increased from 73 and 16 in 1968 to 363 and 46 in 2005-2006, respectively.

The Revised National Tuberculosis Control Programme (RNTCP) has been implemented in the State to control the problem of tuberculosis (TB). This programme was launched in 3 Districts of Faridabad, Gurgaon and Sonipat in April, 2000 in the first phase. The scheme was extended to the districts of Karnal and Jind in March 2003 in the 2nd phase. In the 3rd phase, the Government of India agreed to extend this programme to whole of Haryana under USAID in August, 2003. Haryana State has been successful to cover 14 more districts namely Panchkula, Yamuna Nagar, Ambala, Kaithal, Rewari, Narnaul, Fatehabad, Sirsa, Rohtak, Kurukshetra, Jhajjar, Bhiwani, Panipat and Hisar under RNTCP by February, 2004. With the inclusion of these districts, entire population of 2.2 crore has been covered under RNTCP. Under this programme, more than 5000 Directly Observed Treatment (DOT) centres, 206 Microscope centres and 45 TB Units are functioning in the entire State. The Government provides free medicines and investigations. Under this programme, the medicine is being given by the Health Worker to the patient under his direct supervision. Directly Observed Treatment (DOT) centres are made near the patient's house. The State has again made a National record for the fastest DOTS expansions in the country and it has been appreciated by the World Health Organisation. With the implementation of the RNTCP, the cure rate has increased to 83.4 per cent.

The Pulse Polio Programme is being implemented in the State, efficiently and effectively. An Intensive Campaign on School Health Programme is being carried out in the State. The Reproductive and Child Health Programme Phase-II is being implemented from 1st April, 2005 in the State of Haryana. To provide 24 hours delivery services and emergency obstetric care, Integrated Management of New Born and Childhood Premises strategy and hiring of medical and para-medical personnel are some of the few activities undertaken in this programme. The goal of the RCH-II programme is to improve Total Fertility Rate, Infant Mortality Rate, Maternal Mortality Rate, Institutional Deliveries, Emergency Obstetric Care, Immunisation and Contraceptive Prevalence.

The first Trauma Centre of the State was made functional on 19th January 2003 on National Highway No.1 at General Hospital, Karnal. Another Trauma Centre at Sirsa was also opened in the year 2003-04. The Government of India has agreed to establish another Trauma Centre at Government Hospital, Rewari

TABLE 1.87

Hospitals, Dispensaries and Health Centres in Haryana

Year	State	Special				Private				
	State Public	Police	Canals	Railways	Others	Local Bodies	Private Aided	Private Un-aided	Subsidised	Total
1	2	3	4	5	6	7	8	9	10	11
1968	684	4	12	8	11	37	7	9	13	785
1970	744	4	10	7	15	29	7	10	14	840
1975	1061	4	9	7	2	4	8	11	7	1113
1980	1368	9	12	7	59	2	9	10	4	1480
1985	2270	11	12	7	70	3	9	9	1	2392
1990-91	2866	18	12	7	70	3	48	11	2	3037
1995-96	2900	18	12	7	73	3	46	11	1	3071
2000-01	2905	18	12	7	73	3	42	11	1	3072
2002-03	2911	18	12	7	73	3	38	11	1	3074
2003-04	2916	18	12	7	73	3	38	11	1	3079
2004-05	3057	18	12	7	73	3	38	11	1	3220
2005-06	3066	18	12	7	73	-	-	-	-	3176

Note: The Information up to the year 1985 relates to 31st December

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 7.1, p. 145.

TABLE 1.88

Number of Medical (Allopathic) Institutions in Haryana—Rural and Urban

Year	Rural						Urban				
	Hospitals	PHC's	Dispensaries	CHC's	Sub-centres	Total	Hospital	PHC's	Dispensaries	CHC's	Total
1	2	3	4	5	6	7	8	9	10	11	12
1968	3	73	70	-	510	656	58	16	55	-	129
1970	6	71	98	-	534	709	64	18	49	-	131
1975	5	71	115	-	751	942	63	18	90	-	171
1980	6	71	149	-	1060	1286	78	18	98	-	194
1985	8	164	120	-	1894	2186	77	20	106	3	206
1990-91	8	348	39	15	2293	2703	71	46	191	26	334
1995-96	8	351	40	26	2299	2724	71	47	192	37	347
2000-01	7	361	35	32	2299	2734	71	41	194	32	338
2002-03	8	362	34	32	2299	2735	71	41	195	32	339
2003-04	8	367	33	33	2299	2740	71	41	195	32	339
2004-05	7	362	33	36	2433	2871	72	46	195	36	349
2005-06	6	363	31	43	2433	2876	54	46	162	38	300

PHC's: Primary health Centres CHC's: Community Health Centres.

Note: The Information up to the year 1985 relates to 31st December.

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 7.2, p. 146.

and Yamuna Nagar. Trauma Centres at Ambala, Kurukshetra, Palwal and Gurgaon are also proposed.

The State of Haryana has 50 licensed Blood Banks in the State, out of which 16 are in the Government Sector. Four blood banks in the Government sector have been upgraded as Zonal Blood Testing Centres at Rohtak, Hisar, Karnal and Faridabad. According to National Blood Policy, Hospital Transfusion Committees have been set up in most of the district level Hospitals. The State of Haryana has been recommended for "Voluntary Blood Donation Shield" for collecting maximum number of blood units in proportion to the population by President of India and President of Indian Red Cross Society.

Haryana AIDS Control Society has set up 19 Voluntary Counselling and Testing Centres in PGIMS, Rohtak, and in Civil Hospitals at Hisar, Panchkula, Gurgaon, Jind, Karnal, Faridabad, Sirsa, Ambala, Yamuna Nagar, Kaithal, Sonipat, Rewari, Fatehabad and Jhajjar. At present, 20 STD Clinics are functioning in

the State for treatment of Sexually Transmitted Diseases.

Under the banner of the National Rural Health Mission (NRHM), the Government of India has launched Reproductive Child Health (RCH-II) to the tune of Rs.749 crore for Haryana. This programme was launched on 12th April, 2005 and will continue upto the year 2011. The Health services are being provided through a well-connected network of 50 Hospitals, 85 Community Health Centres, 408 Primary Health Centres, 2433 Sub-centres, 15 District T.B. Centres and 41 Dispensaries. In addition, there is a Post Graduate Institute of Medical Education and Research at Rohtak and a Medical College at Agroha, Hisar. The Infant Mortality Rate which was 61/1000 in 2004 has now been reduced to 42/1000 in 2006. Similarly, the Maternal Maternity Rate which was estimated to be 300 per one lakh deliveries is now 162 and institutional deliveries which were 23 per cent in 2004 have increased to 46 per cent in 2006.

The estimated per capita expenditure on health for the year 2006-07 is Rs.243.47. This was Rs.185.90 in the year 2004-05 and Rs.199.40 in 2005-06.

399 Delivery Huts have been established in the state to provide safe deliveries to the rural women in a hygienic environment. This would decrease the maternal and infant mortality rate. Efforts are being made to establish 500 Delivery Huts till end of year 2007.

Multi-speciality Health Camps were organised in every Block of Mewat Area to improve the health status of the people. 20 such Multi-speciality camps were organised in which 46,000 people availed health benefits. Health Camps were also organised in each Sub-centre. Primary health care outreach services are being provided through Mobile Health Units.

Arogya Kosh scheme in the state provides health care to patients Below Poverty Line (BPL) requiring specialised treatment and financial help. This is 50:50 sharing scheme between the State and the Government of India.

Another scheme VIKALP is providing treatment to BPL families through accredited private hospitals. It has now been extended to all the districts. 96 MoUs have been signed with private health care providers. Approximately 1500 families have been registered with each doctor. The government has constituted a panel of private specialists wherever specialist services are not available in government institutions. These specialists are paid prescribed honorarium for their services and follow up to the families.

Janani Suraksha Yojna being implemented in the state is a cent per cent centrally sponsored scheme to reduce the infant and maternal mortality rate by promoting institutional deliveries for BPL families. Antenatal mothers are being registered in their first trimester and high-risk mothers are also been identified and given adequate advice. Under this scheme, rural BPL women are being given Rs.700 for institutional delivery.

The state has started Janani Suvidha Yojana for urban slum population under which the women of these slums can avail free antenatal, natal and post-natal facilities in some selected nursing homes through an NGO. This is a prepaid voucher scheme for antenatal, natal and post-natal care in health institutions. One woman worker, Sakhi, has been identified who will act as a link worker to run this programme. This scheme is presently (in 2006-07) being implemented in 8 districts, that is, Panchkula, Gurgaon, Yamuna Nagar, Narnaul, Kurukshetra, Rewari, Bhiwani and Sonipat.

Under the NRHM umbrella, one female Accredited Social Health Activist (ASHA) has been identified per 1000 rural population who will act as a link between the community and the Health Workers. Till date, 7000 ASHAs have been identified. 14,000 ASHAs will be identified by the year 2008. Health check-ups of all primary school children are conducted under the School Health programme and free medicines are given on the spot for minor ailments. A special Mass De-worming Campaign of Primary School children was launched in the state on 5th September 2005 as it was seen that a lot of children were suffering from anaemia, and worm-infestation is one of the main causes of this disease. An intensive health campaign for health check up of children is being carried out from July 2006 in which health check up of all children of primary classes is being conducted. Each child is being given a health card in which the date of health checkup, height, weight, diagnosis and treatment, if any, are recorded.

The State government has increased the coverage of the School Health Programme under the Girl Child Year 2006. Health checks up are being conducted of all school girls upto 18 years of age and a health card is issued to them. Health education and advice is given on spread and control of Sexually Transmitted Diseases (STD), HIV/AIDS and nutrition etc. Private schools are also being brought under the perview of this programme.

Under Blindness Control Programme 8,81,655 children were screened in the year 2005-06. 3,95,019 were screened in the year 2006-07 out of which 24,820 children were found with refractive errors and 3,076 children were given free spectacles.

The declining female/male ratio in the state is a matter of great concern. As per the census of 2001 the sex ratio of the state is 861 females/1000 males. The PNDT Act 1994 and the amendment Act 2002 are being effectively implemented in the state to stop the social practice of female foeticide. The state has so far registered 901 Genetic Clinics and 66 Genetic Counseling Centres. Registration of 134 Ultrasound clinics has been suspended/cancelled. 46 ultrasound clinics are registered in government institutions. 89 ultrasound machines have been seized and sealed by the respective district appropriate authorities.

In order to increase male participation in Family Welfare Programme, the No Scalpel Vasectomy (NSV) technique has been introduced and till January 2007, 121 doctors have been trained in all the districts. During the year 2005-06, a total of 12,995 Vasectomy Operations were conducted out of which 12,683 were NSV while in the year 2004-5, 1900 Vasectomies were conducted out of which 1500 were NSV. In the year 2006-07, 6306 Vasectomies were conducted out of which 6206 were NSV.

Haryana has been declared one of the top ranking States for male participation in Family Welfare Programme. General Hospital, Sonipat and CHC, Gohana have been linked to a prestigious hospital of Delhi for diagnostic services under the Telemedicine Programme.

To spread the message on HIV/AIDS across the state under the Aids Control Programme, Free Telecounselling Centres with toll free Number 1097 have been established in all the districts where information regarding HIV/AIDS is being given for 24 hours. 19 Voluntary Counselling and Testing Centres have been established by Haryana AIDS Control Society. There are 19 Parent to Child Transmission and Counseling Centre. There are 20 STD Clinics for treatment of Sexually Transmitted Diseases.

Targetted Intervention Programme has been started by NGOs and Red Cross. The school AIDS Education Programme in which students of Secondary and Senior Secondary Schools are being made aware of HIV/AIDS, 6600 teachers from 3050 schools have been imparted training. There are 51 licensed blood banks in the state out of which 16 are in the government sector. Zonal Blood Testing Centres have been established at Rohtak, Karnal, Hisar and Faridabad.

The Revised Tuberculosis Control Programme (RTCP) is being implemented in the entire state to control the problem of TB. The main objective of this programme is to have 85 per cent cure rate in new cases. Under this programme more than 6000 DOT (Directly Observed Treatment) Centres, 210 Microscope Centres and 46 TB Units are functioning in the State. The Health Workers/Voluntary DOT provider gives the medicines to the patient under his/her direct supervision. DOT centres are made near to the patients' houses.

Integrated Disease Surveillance Programme (IDSP) has been started in the State from April 2005 with the assistance of the World Bank. This project will continue upto 31 March 2009. The objective of the programme is to establish decentralised State bases system of surveillance for communicable and non-communicable diseases so that timely action can be taken for prevention and containment of disease. This is the E-highway for disease surveillance. It also involves upgrading laboratory services, specialised training for disease surveillance so that the health status of the community improves. All the districts are being connected with the state headquarter.

Integrated Management of Neo Natal and Childhood Illnesses (IMNCI) to promote early identification, home based management and timely referral of sick newborns and children, was launched in the state during 2005-06. This project was started in the districts of Rewari, Panchkula, Rohtak, Faridabad and Kaithal. In the year 2006-07, the IMNCI training in the districts of Narnaul, Yamuna Nagar, Sonipat and Sirsa are being covered under this programme.

Doctors, LHVs, ANMs, CDPOs, Anganwadi Workers and ASHA were trained by PGI Chandigarh, WHO, UNICEF and CLEN programme. The registration of births and deaths in the state is being done by the Health Department, Haryana now. This system has been started from 1st January 2005. The Director General, Health Services, Haryana is the Chief Registrar of Births and Deaths in Haryana state. The registration of births and deaths in the state is about 90 per cent.

Ayurveda

Indian Systems of Medicine and Homeopathy (AYUSH) cover both the systems which originated in India and outside but got adopted in India in course of

TABLE 1.89

Ayurvedic, Unani and Homeopathic Institutions and their Staff in Haryana

Year	Number of Institutions					Medical Personnel	
	Ayurvedic	*Unani*	*Homeopathic*	*Total*	*Patients treated*	*Vaidyas/Hakims/ Homeopathic Doctors*	*Dispenser/ Compounder*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1966-67	122	21	-	143	1015709	143	143
1970-71	183	17	-	200	1191527	202	200
1975-76	209	20	-	229	1797762	218	201
1980-81	330	20	-	350	3036941	350	350
1985-86	365	20	-	385	1369987	385	385
1990-91	389	19	9	417	2602570	417	417
1995-96	407	21	20	448	2584655	418	398
2000-01	433	21	20	474	2762499	416	365
2002-03	446	20	20	486	3017168	442	360
2003-04	468	20	20	508	3169276	414	335
2004-05	470	20	20	510	3366699	461	410
2005-06	483	19	20	522	3376617	454	379

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 7.7, p.153.

TABLE 1.90

Medical Staff in Haryana

(As on 31st December)

Year	*Medical Officers Class I & II (Excluding Teaching Staff)*	*Nurses/ Matron Sister Incharge*	*Mid-wives/ ANMS*	*Nurses Orderly*	*Technicians/ Lab. Assistant*	*Dispensers/ Pharmacists*	*Ministerial Staff*	*Dais/ Nurse Dais*	*Other Class IV Staff including sweepers*	*Others*	*Total*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1966	464	269	438	44	64	309	172	-	1552	-	3312
1970	440	420	454	231	226	320	230	223	1844	-	4388
1975	770	753	519	367	280	433	315	150	2719	-	6306
1980	916	801	655	613	182	615	348	218	2179	309	6836
1985	1225	1171	1326	390	278	732	699	470	3007	937	10235
1990	1395	1448	2470	-	424	850	973	98	3730	1335	12723
1995	1519	1156	2380	-	487	815	873	15	4235	2240	13720
2000	1610	1442	2274	-	527	853	1001	30	4412	2010	14159
2002	1770	1511	2189	-	532	857	1008	24	4472	1726	14089
2003	1837	1496	2447	-	534	840	959	23	4601	1780	14517
2004	1828	1458	2242	-	527	839	944	19	4368	1711	13936
2005	1839	1266	2100	-	527	781	958	37	4494	1482	13484

* Staff under the Family Welfare Clinics is not included.
Note: Nurse Orderlies have been merged in other class IV staff.
Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 7.3, p.147.

time. These systems are Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy. These systems have been providing health care services to a large section of population, particularly in the rural areas. AYUSH systems are popular in a large number of states including Haryana state. People, not only in India but also in other parts of the world, are getting inclined for treatment through these systems due to lesser side effects in comparison to the modern medicines.

At the formation of Haryana state, there were only 139 Ayurvedic/Unani Dispensaries and 2 ten bedded Ayurvedic/Unani Hospitals in the state. At present, medical relief through AYUSH is being provided by the Department with the network of 3 Ayurvedic, 19 Unani

and 20 Homeopathic Dispensaries. Besides, Government Institute of Indian Systems of Medicine and Research, Panchkula is also providing medical relief to the masses in the state. Most of the institutions of Indian Systems of Medicines and Homeopathic are functioning in the rural and remote areas of the state. Medical education is being provided in the state through Shri Krishna Government Ayurvedic College, Kurukshetra. Besides 5 Ayurvedic and 1 Homeopathic college are also functioning in private sectors.

Medical and Para-medical staff of institutions of AYUSH functioning under the state government is fully involved in all the Health Programmes of state and Government of India. 3,424 family planning cases were motivated by the staff of these institutions and 26,72,321 patients have been treated during the year 2006-07 upto December 2006. 1,86,668 students of schools were examined by the AYUSH doctors of these institutions in this period and 10,578 delivery cases were performed by the Trained *Dais* of these institutions upto December, 2006 during the year 2006-07.

12 new Ayurvedic Dispensaries have been opened during the year 2005-06. Ayurvedic Health Melas with Medical Camps were also organised by the department in the state during the year 2005-06.

As per the policy of the Government of India to integrate AYUSH with Allopathic System, 21 Community Health Centre (CHCs) have been identified by the Health Department, Haryana for AYUSH scheme under National Rural Health Mission for Comprehensive Health care.

Specialty clinics of AYUSH in Civil Hospitals Gurgaon, Hisar and Ambala and Specialised Therapy Center in Civil Hospital Jind have been established. The Drug Testing Laboratory of AYUSH and Government Ayurvedic Pharmacy is being established at Kurukshetra with the Central assistance.

Medical and Para-medical staff of institutions of Indian Systems of Medicine and Homoeopathy (ISM&H), functioning under the State Government is fully involved in all the Health Programmes of States and the Government of India.

In the field of ayurvedic education, six ayurvedic colleges are providing ayurvedic education of BAMS. Four ayurvedic colleges are also providing education for Diploma in Ayurvedic Pharmacy in the State. J. R. Krishan Homeopathic Medical College, Asthal Bohar, Rohtak has been started in private sector from the session 2004-05. One homoeopathic college at Jagadhari, (Yamuna Nagar) in private sector has also been given No Objection Certificate by the State Government.

"Vanaspati Van" has been established in district Panchkula by "Vanaspati Van Society" with the financial assistance of Government of India. State Government has also constituted "State Medicinal Plant Board" for the development of medicinal plants.

Pandit Bhagwat Dayal Sharma Postgraduate Institute of Medical Sciences, Rohtak is a tertiary care and teaching institute of the State, which excels in the field of academic and research activities. It not only provides qualitative services to the needy patients of Haryana but also of the neighbouring States. The need based expansion of the institution is taking place progressively. There are 33 departments (including 7 super-specialties departments) in the institute which are providing best quality patient care in their respective fields. This Institute is also providing super-specialty services in the field of Paediatrics Surgery, Neuro-Surgery, Cardio-Thoracic Surgery, Burn and Plastic Surgery, Neurology, Cardiology, Oncology Surgery, Nephrology and Clinical Haematology, as well.

Over the period, 1966 to 2005, the number of medical officers in the State increased from 464 to 1,839, the number of nurses and mid-wives/ANMS increased from 269 and 438 to 1,266 and 2,100, respectively; and the number of technicians and lab assistants increased from 64 to 527. In this way, the total number of medical staff in Haryana increased from 3,312 in 1966 to 13,484 in 2005.

The number of beds available for males also increased substantially from 2501 in 1966 to 5039 in 2005-06. Likewise, the number of female beds increased from 2083 to 4545. Thus, the total number of beds available in the State increased from 4584 in 1966 to 9584 in 2005-06.

The number of female welfare clinics in rural and urban areas which were as low as 81 and 8 in 1966-67, increased to 93 and 16, respectively, in 2005-06.

The infant mortality rate and the life expectancy at birth are the two basic indicators used in analysing the health status of people. The infant mortality rate in Haryana declined from 94 in 1961 to 59 in 2003. In comparison to other States, Haryana ranks much behind several States as far as bringing down the infant mortality rate is concerned. In the year 2003, the lowest infant mortality rates have been observed in the case of Kerala (11), Mizoram and Manipur (16), Andaman and Nicobar (18) and Goa (16). Even the neighbouring

TABLE 1.91

Beds Available in Haryana

(As on 31st December)

Year	Beds		
	Males	Females	Total
1	2	3	4
1966	2501	2083	4584
1970	3184	2872	6056
1975	4128	3620	7748
1980	4728	4020	8748
1985	5123	4352	9475
1990-91	5562	5069	10631
1995-96	5855	5473	11328
2000-01	5632	5246	10878
2002-03	5715	5329	11044
2003-04	5734	5348	11082
2004-05	5734	5348	11082
2005-06	5039	4545	9584

Note: Information relating to beds for the years 1990-91 onwards relates to 31st March.

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 7.4, p.148.

TABLE 1.92

Number of Family Welfare Clinics in Haryana

Year	Number of Family Welfare Clinics/Centres		
	Rural	Urban	Total
1966-67	81	8	89
1970-71	89	9	98
1975-76	89	14	103
1980-81	89	41	130
1985-86	93	43	136
1990-91	93	56	149
1995-96	93	56	149
2000-01	93	56	149
2001-02	93	56	149
2002-03	93	53	146
2003-04	93	53	146
2004-05	93	52	145
2005-06	93	16	109

Note: (1) Post-partum Centres are included under urban information from 1980-81.
(2) Urban Centres of voluntary organistions have also been included from the year 1988-89.

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 7.8, p.154.

States of Punjab (49) and Himachal Pradesh (49) are ahead of Haryana in this regard. Obviously, in the sphere of improving health conditions, this constitutes an important area of serious concern for the State.

Happily, the life expectancy at birth in Haryana has increased from 60.3 in 1981-85 to 64 in 1993-97 which has placed Haryana only after Kerala (73), Punjab (68) and Maharashtra (66) among the major States of the country.

MEGA HEALTH CAMP-DISTRICT JHAJJAR (HARYANA)

2-3-4, APRIL, 20006

(As Experiment in Public-Private Partnership)

Background

Jhajjar is basically a rural and backward district of the state having a weak health infrastructure. Most of the population living in the rural area is socio-economically backward having little means and unable to avail the costly private health facilities. Moreover, being a backward district even private health care is not available in the area. The rural population of the district cannot afford the high cost specialist treatment available in the nearby cities due to weak economic condition. The only nearest super specialty government hospital is PGIMS, Rohtak, which is already overburdened with long queues of patients, and sometimes operation cases have to wait for several days.

Planning

Shri Deepender Singh Hooda, Member of Parliament from Rohtak (Jhajjar district is a part of Rohtak Parliamentary constituency) and the District Administration of Jhajjar decided to hold a Mega Health Camp wherein super specialist treatment could be provided to the people of the area at their door steps. After discussing all aspects of Medicare facilities available in the area, health care infrastructure available in the district and surrounding districts, the medicines were distributed free of cost.

Venue

The building of S.D. Institute of Medical Technology on Badli Road was chosen because it has good infrastructure. It is a three-storeyed building with large size rooms, huge lawns and several entry points to the building, with drinking water and toilet facilities on each floor.

Identification of Activities and Tie up with private Hospitals:

Detailed discussions were held with the Director and faculty of the PGIMS Rohtak and it was decided that all specialities should be made available so that patients may get specialised treatment at one go and under one roof. Simultaneously private hospitals were also approached by the M.P. Consequently, the following private hospitals agreed to join hands in this noble venture:

1. Bhagwan Mahavira Viklang Sanstha, Jaipur agreed to come and provide artificial limbs free of cost.
2. Escorts Heart Centre agreed to send its mobile unit for ECG and other heart related tests.
3. Escorts, Faridabad agreed to send its team for general health check-up.
4. Sun Flag Hospital, Faridabad volunteered to send its team for chest and T.B. check-up.
5. Shri Guru Gobind Singh Tri-centenary Dental College (Budhera), Gurgaon agreed to send their team for dental check up and to provide basic dental care.
6. The remaining specialities like Orthopedics, Eye, Skin, Gynaecology, Pediatrics, Psychiatry, ENT and Medicine were to be covered by the specialists from PGIMS, Rohtak.

7. The ophthalmology department of PGIMS even volunteered to even operate patients for cataract at Jhajjar Civil Hospital.
8. The back up to the PGIMS team was provided by the Health Department of Jhajjar district.

It was decided to do all routine pathological tests of the patients at the venue, and Ultra-Sound and X-Ray facilities were also provided. The Department of Ayurveda, Government of Haryana also participated.

Publicity:

The next important aspect of the Health Camp was publicity. For this purpose Public Relation Department of the district carried out wide publicity. Coverage in newspapers was provided by giving press statements and news, everyday, for 5 days preceding the camp. The entire district was divided into zones so that patients coming on a single day could be attended to within 1 to 1.5 hour thus a large number of patients could be covered.

Facilities for Patients:

Every patient coming to the venue was first taken to the Registration Counter (10 in number). Here all the details of the patient were entered in a register and he/she was issued a numbered Registration Card. After registration the patient was escorted to the screening table (20 in number)—10 each for male and female-manned by Junior Doctors of the PGIMS. After enquiring from the patient about his ailment, they entered the room numbers of the specialists where the patient was required to go.

The services of about 100 volunteers were utilised to guide the patients to the various rooms and even help in streamlining the entry to various rooms to prevent overcrowding.

The patients could visit as many OPDs as they desired. Here the private hospitals and the PGIMS doctors again issued their follow-up cards—as the Private Hospitals had agreed to provide free follow-up to the patients at their hospitals for 15 days after the camp. The PGIMS doctors also gave the patients follow-up cards with the OPD days and room-numbers of the PGIMS indicated thereupon. Thereafter the patient went to the medicine counter, where he/she was given medicines for one full course, generally 5-7 days.

Arrangements for drinking water were made on each floor and *durries* were provided in the lobby of each floor for the comfort of the patients. Sweepers were assigned duty round the clock, to keep the area, galleries and toilets clean.

Other Activities:

Since people were coming from distant places, they were also provided other facilities such as: 1) Physically Handicapped Certificates, 2) Widow Pension Certificates, 3) Bus Passes for the Physically Challenged, and 4) Loan facilities for the physically challenged.

At the same time, arrangements were also made by each department to have an exhibition depicting the activities. Documentaries on various social issues including AIDS and safe drinking water were shown.

The services of the Public Relations Department were utilised to keep the people entertained. They provided the services of the *bhajan* parties to keep the people waiting for their turn, entertained.

On the third day a closing ceremony was organised where 500 Hearing Aids, 75 Wheel Chairs, 200 Tricycles, Spectacles and Calipers etc. were distributed to the needy patients. Freedom Fighters of the district were also honoured on this occasion.

Mementoes were given to honour the institutes. Private as well as Government organisations which had played a major role in making the camp a success and appreciation certificates were issued to each individual Doctor/Para Medical and other Staff for their contribution.

This three day Mega Health Camp generated keen interest among the people of the area which is evident from the statistics given below:

Number of Patients Registered on 2.4.2006	-	3616
Number of Patients attended OPD	-	3820
Number of Patients Registered on 3.4.2006	-	4037
Number of Patients attended OPD	-	4425
Number of Patients Registered on 4.4.2006	-	4401
Number of Patients attended OPD	-	5597
Total Number of Patients Registered	-	12,054
Total Number of OPD	-	13,842
Break-up Specialty wise		
Gynae	-	520
Medicine	-	1619
Orthopedic	-	2357
Pediatric	-	658
Eyes	-	1394* (96 operated out of 200 identified)
ENT	-	1521
Skin	-	716
Dental	-	857
Psychiatry	-	126
Heart	-	1166
Surgery	-	594
Chest	-	590
Ayurveda	-	1724
Total		13,842

* 104 eye operations could not be conducted due to the patients being found medically unfit.

The camp was a grand success which is evident from the large number of people who visited it and benefited from it. People from all corners of the five assembly segments of the district got benefited from this mega Health Camp. It was an attempt to serve the poor, needy, ailing rural people of the district.

TABLE 1.93

State-wise Infant Mortality Rate

Sr. No.	*States/Union Territories*	*1961*			*2002*			*2003*		
		Male	*Female*	*Person*	*Male*	*Female*	*Person*	*Male*	*Female*	*Person*
1.	Kerala	55	40	52	9	12	10	11	12	11
2.	Pondicherry	77	68	73	24	25	25	29	18	24
3.	Mizoram	73	65	69	9	2	5	16	17	16
4.	Manipur	31	33	32	13	7	10	18	13	16
5.	Andaman & Nicobar Islands	78	66	77	17	29	23	12	24	18
6.	Lakshadweep	124	88	118	6	26	15	21	32	26
7.	Chandigarh	53	53	53	15	30	22	21	16	19
8.	Goa	60	56	57	17	16	16	15	18	16
9.	Arunachal Pradesh	141	111	126	64	60	62	59	59	59
10.	Jammu & Kashmir	78	78	78	45	40	43	46	41	44
11.	Maharashtra	96	89	92	48	42	45	32	54	42
12.	Tripura	106	116	111	35	31	33	36	27	35
13.	Delhi	66	70	67	29	38	33	28	29	28
14.	Meghalaya	81	76	79	64	69	66	56	59	57
15.	Sikkim	105	87	96	23	27	25	34	31	33
16.	Tamil Nadu	89	82	86	46	43	44	44	43	41
17.	West Bengal	103	57	95	53	45	49	45	46	46
18.	Punjab	74	79	77	38	66	51	46	52	49
19.	Karnataka	87	74	81	56	53	55	51	52	52
20.	Dadra & Nagar Haveli	102	93	98	51	52	51	69	39	54
21.	Gujarat	81	84	84	55	66	60	54	61	57
22.	Himachal Pradesh	101	89	92	66	55	61	54	44	49
23.	Andhra Pradesh	100	82	91	64	60	62	59	59	59
24.	Bihar	95	94	94	56	66	61	59	62	60
25.	**Haryana**	**87**	**119**	**94**	**54**	**73**	**62**	**54**	**65**	**59**
26.	Assam	NA	NA	NA	70	71	70	69	65	67
27.	Rajasthan	114	114	114	75	80	78	70	81	75
28.	Uttar Pradesh	131	128	130	76	84	80	69	84	76
29.	Madhya Pradesh	158	140	150	61	88	85	77	86	82
30.	Orissa	119	111	115	95	79	87	82	83	83
31.	Nagaland	76	58	68	#	43	20	NA	NA	NA
32.	Daman & Diu	60	56	57	46	12	30	43	34	39
33.	Chhattisgarh	-			15	30	22	21	16	19
34.	Jharkhand	-			44	37	41	50	52	51
35.	Uttarakhand	-			16	55	34	31	53	41
	All India **	122	108	115	62	65	63	57	64	60

Note: N A.: Not available.
#: Inadequate sample to provide estimates.
**: Excludes Nagaland (Rural) due to part receipt of returns for 2002.
Source: *Economic Survey 2005-2006*, Table 9.5, p.S-115. New Delhi: Government of India.

TABLE 1.94

State-wise Life Expectancy at Birth

(Rank as in 1993-1997)

Sl. No.	*States*	*1981-1985*	*1991-1995*	*1992-1996*	*1993-1997*
1.	Kerala	68.4	72.9	73.1	73
2.	Punjab	63.1	67.2	67.4	68
3.	Maharashtra	60.7	64.8	65.2	66
4.	Tamil Nadu	56.9	63.3	63.7	64
5.	**Haryana**	**60.3**	**63.4**	**63.8**	**64**
6.	Karnataka	60.7	62.5	62.9	63
7.	West Bengal	57.4	62.1	62.4	63
8.	Gujarat	57.6	61.0	61.4	62
9.	Andhra Pradesh	58.4	61.8	62.0	62
10.	Rajasthan	53.5	59.1	59.5	60
11.	Bihar	52.9	59.3	59.4	60
12.	Uttar Pradesh	50.0	56.8	57.2	58
13.	Orissa	53.0	56.5	56.9	57
14.	Assam	51.9	55.7	56.2	57
15.	Madhya Pradesh	51.6	54.7	55.2	56
	All India	55.5	60.3	60.7	61

Note: 1. The estimates are not available for smaller States/Union Territories
2. Madhya Pradesh includes Chhattisgarh
3. Uttar Pradesh includes Uttaranchal
4. Bihar includes Jharkhand

Source: *Tenth Five Year Plan 2002-2007*, Volume III, Table 3.13, p. 54. New Delhi: Planning Commission, Government of India.

1.2.8.3 Women and Child Development

As per the 2001 Census, women constituted about 48 per cent of the total population of the State. Women suffer many disadvantages as compared to men in the areas of education, labour participation and earnings. The State has been implementing various schemes for the socio-economic advancement and development of women in the State to eliminate all types of discrimination against women and the girl child and ensure empowerment and gender justice for them.

Haryana state has declared to celebrate the year 2006 as "Year of the Girl Child." During this year, different departments would launch new programmes for girls and women. Haryana is implementing various schemes such as Integrated Child Development Services (ICDS), Kishori Shakti Yojna, Nurtition Programme for adolescent girls, Balika Samridhi Yojna and Swayamsidha Scheme for the overall development and empowerment of children and women. The State's first priorities are to arrest the declining sex ratio and to address the problem of female foeticide, reduce malnutrition among children and enhance socio-economic status of women.

To create a platform at the grass root level and involve women in the decision making process and economically empower them, the Haryana government has set up Village Level Committees of Women to facilitate implementation of programmes pertaining to development of women and children. This committee comprises of all Women *Panches*, three educated Adolescent Girls, Mahila Mandal Pradhan, a representative from each of Self Help Groups, representative of war widows, social activists, school lady teacher, ANM, ASHA and Anganwadi Worker, Woman *Sarpanch* or Woman *Panch* nominated by the *Gram Panchayat* heads the committee and Anganwadi Worker is the convener. Over 6500 such village committees have been constituted so far.

In a major initiative to empower women in village and generate employment for them, the Haryana Government has dispensed with the existing centralised system of procuring food items from open market for the beneficiaries of Integrated Child Development Scheme (ICDS) and entrusted the responsibility of supplementary nutrition to women self help group with effect from 1st January 2007 under the supervision of the *Gram Panchayats* through Sub-Committees set up for the development of women and children. The scheme has generated employment for about 75,000 women.

The State Government has also decided to form Sakshar Mahila Samooh (SMS), that is, a group of educated women in every village to lend the necessary resource support to the *gram panchayat* and its sub-committee for effective discharge of the functions assigned to them. SMS will generate awareness on key issues of sex ratio, literacy, universalisation of elementary education, health and nutrition, opportunities for economic empowerment for women, hygiene, sanitation and environment and schemes run by the government for women, girls, children and village community. A total of 5829 SMSs have been formed till January 2007.

Rashtriya Mahila Kosh (RMK) has agreed to recognise SMS as an eligible NGO for the purpose of promoting micro credit and undertaken the responsibility of training members of SMS for this purpose. Haryana Women Development Corporation (WDC) is the nodal agency for this purpose.

Incentives and awards in the districts, showing improvement in declining Sex Ratio and securing 1st, 2nd and 3rd position in the state, are to be given every year to the tune of Rs.5 lakh, Rs.3lakh and Rs.2 lakh, respectively.

To reduce malnutrition among children in Haryana, Nutrition Awards have been instituted at district level. The Nutrition Awards at the rate of Rs.2 lakh, Rs.1

lakh and Rs.0.5 lakh are to be given every year to the districts securing 1st, 2nd and 3rd positions, respectively, in the State.

In order to make the Anganwadi Centres (AWCs) attractive and ensure regular attendance of children, the State government has made a provision at the rate of Rs.5,000 per Anganwadi Centre to provide toys and swings for children in Anganwadi Centre in the state.

The State Government has enhanced the financial norms under Supplementary Nutrition Programme (SNP) with effect from 1st January 2007 from Rs.2.00 to Rs.3.00 per day per child and from Rs.2.50 to Rs.5.00 per day per mother/adolescent girl so that protein and calories requirements as per norms of ICDS scheme could be ensured to all the beneficiaries. These rates are highest in the country. The honorarium of Anganwadi Workers and helpers has been enhanced with effect from 1st May 2006 at the rate of Rs.100 per year for next five years. Financial assistance to all Mahila Mandals in Haryana at the rate of Rs.5,000 every year is being given.

For speedy disposal of family disputes, the state government has sanctioned 4 Family Courts at Faridabad, Gurgaon, Hisar and Bhiwani to be set up in phased manner. Female Protection Officers are proposed to be appointed to protect women from domestic violence.

In order to combat the problem of female foeticide and arrest the declining sex ratio in the state, an incentive based scheme Ladli has been launched by the state government. Under this scheme Rs.5,000 per year are given on the birth of second daughter born on or after 20 August 2005 for five years. The parents who are resident of Haryana or having Haryana domicile are eligible for this cash incentive irrespective of their caste, creed, religion, income and number of sons. The amount is invested in Kisan Vikas Patras in the name of the second daughter through mother/father/guardian and the matured amount of approximately Rs.86,927 at current rates of interest would be paid after the second daughter attains the age of 18 years. 15,482 beneficiaries have been covered upto December 2006. It is proposed to cover 42,000 beneficiaries during 2007-08.

In order to encourage rural girls to pursue higher education, the scheme of Awards to Rural Adolescent Girls has been started from the year 2005-06. Under this scheme, 3 rural girls who pass the matriculation examination conducted by Haryana State Education Board from each block are given awards of Rs.2000, Rs.1500 and Rs.1000 for 1st, 2nd and 3rd positions, respectively.

To encourage women for proper rearing of their children, especially the girl child with a view to improve their nutritional and health status, the scheme of Best Mother Award has been started form the year 2005-06. Under this scheme from each circle and each block of ICDS scheme, 3 mothers having at least one girl child are selected for 1st, 2nd and 3rd prizes, who are given prizes of Rs.1000, Rs.750, and Rs.500, respectively, at block level and Rs.500, Rs.300 and Rs.200, respectively, at the circle level.

For providing exposure to sports and recreation to women, the state government has implemented the scheme of Annual Sports Meet at block level. Three prizes at the rate of Rs.500, Rs.300 and Rs.200 for each event are given to winners in each block. The state government has decided to hold sports meet at district level also from the year 2006-07. Three prizes at the rate of Rs.1000, Rs.600 and Rs.400 for each event are given to winners in each district.

To reduce malnutrition among children, the scheme of Improving Infant and Young Child Feeding has been started by the state government. All Anganwadi Workers are being trained to equip them with knowledge and skill of infant and young child feeding to enable them to create awareness and counseling of mothers more effectively.

The village community in general and women in particular come into frequent contacts with various development functionaries and officials like Doctors, Multi Purpose Health Workers, *Panchayati Raj* Members and Police Personnel etc. who often lack gender sensitivity to realise the need and problems of women. Within this context, Gender Sensitisation Training to *Panches* and *Sarpanches*, Medical Officers/Health functionaries and Police personnel at the first instance is being imparted.

1675 Self Help Groups from members of Mahila Mandals have been formed to make women economically independent. This scheme will be operational for a period of 5 years during which the SHGs will be formed and their capacity will be built through trainings on Group Dynamics, Accounts Keeping, Legal Literacy, Gender Sensitisation, Self Defence and Social Evils including AIDS to empower them.

Centrally sponsored Integrated Child Development Services Scheme (ICDS) has been expanded and as a step towards universalisation of ICDS, the total number of sanctioned ICDS projects in the state has risen to 128 with 16,359 Anganwadi Centres, including 10

urban projects. Under this scheme, services like Supplementary Nutrition, Immunisation, Health Check Up, Referral Services, Non-formal Pre-School Education and Health and Nutrition Education are being provided to children below six years of age, pregnant and nursing mothers and other women in the age group of 15-45 years in an integrated manner through the network of Anganwadi Centres.

Centrally sponsored Kishori Shakti Yojna is being implemented in 128 ICDS projects for improving the health and nutritional status of adolescent girls in the age group of 11-18 years and to train and equip them to improve home based and vocational skills and to promote awareness of health, hygiene, nutrition, home management, child care etc. Under the scheme, services are provided through formation of Balika Mandals for six months in 10 per cent of the Anganwadi Centres. At present 1622 Balika Mandals have been formed. The girls are also provided supplementary nutrition at the rate of Rs.5 per girl per day.

Haryana Women Development Corporation is functioning to promote activities for women's development, awareness generation, vocational training and arrange institutional finance for self employment to ameliorate the socio-economic conditions of women belonging to weaker sections. This corporation is implementing a loaning scheme for women to set up their own enterprises. During the year 2006-07, against the target of 11,070 women 7544 women have been covered upto December 2006.

Financial assistance in the form of Grant-in-Aid is provided to Voluntary Organisations/Semi-Government/ Welfare Organisations/training and research institutes operating in Haryana State which may render welfare services to women, children and adolescents.

For creating awareness amongst women for their development and empowerment through Mahila Mandals, assistance upto Rs.1500 per Mahila Mandal under the scheme of Promotion and Strengthening of Mahila Mandals is provided apart from providing Incentive Awards to Mahila Mandals, holding *Mahila Sammelan* and Inter state Study Tours.

The centrally sponsored Swayamsidha, an integrated scheme for women's empowerment is based on the formation of women Self Help Groups and aims at the holistic empowerment of women through training on capacity building, awareness generation, economic empowerment and convergence of various schemes. Under this programme, 1300 Self Help Groups of women have been formed. These SHGs have been imparted training on accounts keeping, legal literacy, self defence, gender sensitisation and group dynamics. The habit of saving is being inculcated among SHGs and 1300 SHGs have made savings to the tune of Rs.391.17 lakh while inter-loaning to the tune of Rs.330.87 lakh has taken place among 1300 SHGs up to December, 2006. 8281 women of 1081 SHGs are doing income generating activities in different trades.

To eradicate the social evil of dowry, Dowry Prohibition Act is being implemented in the state. For effective implementation of the Act, Dowry Rules under Dowry Prohibition Act has been amended and were notified in February 2003 giving more powers and functions to Dowry Prohibition Officers. Director, Women and child Development Department, Haryana is designated as Chief Dowry prohibition Officer. All Sub Divisional Magistrates and City Magistrates have been appointed as Dowry Prohibition Officers. State government has declared 26th November, to be celebrated as Dowry Prohibition Day every year. For the purpose of advising and assisting the Dowry Prohibition Officers, Advisory Boards/Committees have also been constituted.

To provide safe accommodation at economical rates to working women, 12 Working Women Hostels are being run at Ambala, Karnal, Gurgaon, Sonipat, Faridabad, Rohtak, Kurukshetra, Sirsa, Rewari, Bhiwani, Hisar and Jind by the respective Red Cross society/ Municipality. Under the provisions of this scheme, financial assistance to the tune of 50 per cent of the cost of land and 75 per cent of the total cost of construction is provided to voluntary organisations/ autonomous bodies etc. by the Government of India. The balance 50 per cent cost of land and balance 25 per cent cost of construction is to be borne by the organisation. However, the state government is providing assistance upto 15 per cent of the cost of construction. The Hostels at Jagadhari, Panchkula, Meham, Bahadurgarh, Haryana Agriculture University, Hisar and Guru Jambheshwar University, Hisar and Maharshi Dayanand University, Rohtak are under construction by the different organisations/agencies.

The NFH-3 presents data on three commonly used measures of child malnutrition among children under three years: stunting, that is, deficit in height-for-age, wasting, that is, deficit in weight for height, and proportion of underweight, that is, weight-for-age, children. These three indicators of undernourishment provide somewhat different information about the nutritional status of children. Stunting captures chronic undernutrition as its reflects a failure to receive adequate nutrition over a long period of time or from chronic or

recurrent diarrhoea. Wasting captures the thinness of children and indicates the prevalence of acute malnutrition. Weight-for-age, that is, underweight, captures elements of stunting and wasting, that is, chronic as well as acute undernutrition.

The levels of undernourishment vary widely across Indian states. Table 1.95 presents data on the proportion of stunting, wasting and underweight among children below three years across Indian States. Kumar (2007) has conducted an excellent study on child malnutrition which can be briefly described in the following paragraphs.

The proportion of underweight children varies, for instance, from less than 30 per cent in Punjab, Kerala and Jammu & Kashmir to over 50 per cent of children in Chhattisgarh, Bihar, Jharkhand and Madhya Pradesh. The proportion of stunted children is the lowest in Kerala (21 per cent), Tamil Nadu (25 per cent), and Himachal Pradesh (27 per cent) and the highest in Gujarat and Bihar (both 42 per cent), Chhattisgarh (45 per cent) and Uttar Pradesh (46 per cent). The extent of wasting among children is the least in Punjab (9 per cent), Andhra Pradesh and Assam (both 13 per cent) and surprisingly Uttar Pradesh (14 per cent) whereas it is maximum in Bihar (28 per cent) and Madhya Pradesh (33 per cent).

TABLE 1.95

Malnutrition among Indian Children Below Three Years

(Per cent)

Sr. No.	*States*	*Stunted*		*Wasted*	*Under-weight*
		NFHS-3	*2005-06*		
1.	Punjab	28		9	27
2.	Kerala	21		16	29
3.	Jammu and Kashmir	28		15	29
4.	Tamil Nadu	25		22	33
5.	Himachal Pradesh	27		19	36
6.	Andhra Pradesh	34		13	37
7.	Uttranchal	32		16	38
8.	Maharashtra	38		15	40
9.	Assam	35		13	40
10.	Karnataka	38		18	41
11.	**Haryana**	**36**		**17**	**42**
12.	West Bengal	33		19	44
13.	Orissa	38		19	44
14.	Rajasthan	34		20	44
15.	Uttar Pradesh	46		14	47
16.	Gujarat	42		17	47
17.	Chhattisgarh	45		18	52
18.	Bihar	42		28	58
19.	Jharkhand	41		31	59
20.	Madhya Pradesh	40		33	60
	India	38		19	46

Note: States ranked in descending order of underweight children. Figures have been rounded.

Source: Kumar (2007).

TABLE 1.96

Rural-Urban Differentials in Child Malnutrition Proportion of Underweight Children below Three Years

(Per cent)

Sr. No.	*State*	*NFHS-3 2005-06*		
		All Areas	*Urban*	*Rural*
1.	**Haryana**	**42**	**42**	**42**
2.	Himachal Pradesh	36	34	36
3.	Tamil Nadu	33	31	35
4.	Assam	40	34	41
5.	Gujarat	47	43	50
6.	Bihar	58	52	59
7.	Punjab	27	22	30
8.	Maharashtra	40	35	44
9.	Kerala	29	23	32
10.	Rajasthan	44	36	46
11.	Madhya Pradesh	60	53	63
12.	Jammu and Kashmir	29	21	32
13.	Andhra Pradesh	37	29	40
14.	Karnataka	41	34	45
15.	Uttranchal	38	29	41
16.	Uttar Pradesh	47	38	49
17.	Orissa	44	33	46
18.	Chhattisgarh	52	39	55
19.	West Bengal	44	30	47
20.	Jharkhand	59	43	63
	India	46	36	49

Source: Kumar (2007).

Proportions of underweight children are consistently higher in rural than in urban areas across all Indian States. The rural and urban differential in the proportion of underweight children is the largest in Chhattisgarh, West Bengal and Jharkhand.

The national immunisation coverage in urban areas has declined from 61 per cent in 1998-99 to 58 per cent in 2005-06 and has increased marginally in rural areas from 37 per cent to 39 per cent. The proportion of fully-immunised children has declined during this period, surprisingly, in eight states—Andhra Pradesh, Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Punjab and Tamil Nadu–generally regarded as better performing states in health and economically more prosperous than other states. On the other hand, immunisation coverage rates have shown a significant improvement in West Bengal, Bihar, Jharkhand and Chhattisgarh.

Anaemia is a serious concern for young children as it can adversely affect cognitive performance, behavioural and motor development, coordination, language development and scholastic achievement as well as increase morbidity from infectious diseases.

TABLE 1.97

Children of 12-23 Months Fully Immunised (BCG, Measles and Three Doses Each of Polio/DPT)

(Per cent)

Sr. No.	*States*	*NFHS-3 2005-06*	*NFHS-2 1998-99*
1.	Chhattisgarh	49	22
2.	Jharkhand	35	9
3.	Bihar	33	12
4.	West Bengal	64	44
5.	Uttaranchal	60	41
6.	Madhya Pradesh	40	23
7.	Assam	32	17
8.	Jammu and Kashmir	67	57
9.	Rajasthan	27	17
10.	Orissa	52	44
11.	Uttar Pradesh	23	20
12.	**Haryana**	**65**	**63**
13.	Kerala	75	80
14.	Karnataka	55	60
15.	Gujarat	45	53
16.	Tamil Nadu	81	89
17.	Himachal Pradesh	74	83
18.	Punjab	60	72
19.	Andhra Pradesh	46	59
20.	Maharashtra	59	78
	India	44	42

Source: Kumar (2007).

The proportion of anaemic children of 6-35 months has risen from 74 per cent in 1998-99 to 79 per cent in 2005-06. The increased is notices in both rural and urban areas though the increase is higher in rural than in urban areas.

There are large interstate variations in the levels of anaemia among children. Table 1.98 presents data from NFHS-3 on levels of anaemia among children aged 6-35 months across Indian States.

The levels of anaemia among children of 6-35 months vary from 56 per cent in Kerala and 59 per cent in Himachal Pradesh, 85 per cent in Uttar Pradesh and 88 per cent in Bihar. West Bengal and Kerala have done well to reduce the levels of anaemia among children. But there has been an increase in levels of anaemia among children of 6-35 months in seven states—Haryana, Rajasthan, Jammu & Kashmir, Jharkhand, Chhattisgarh, Himachal Pradesh and Uttarakhand. The levels of anaemia are also higher among rural than urban children. And the rural-urban differential has widened from 4 percentage points in 1998-99 to 8 percentage points in 2005-06.

Data also seem to suggest that states that have done well in reducing the proportion of underweight children have also recorded decreases in the level of anaemia among women and children. Table 1.99 shows the trends in levels of anaemia among women and children in two sets of states: good performers and poor performers in terms of reducing the proportion of underweight children.

TABLE 1.98

Children Aged 6-35 Months who are Anaemic

(Per cent)

Sr. No.	*States*	*NFHS-3 2005-06*	*NFHS-3 1998-99*	*NFHS-3 2005-06*	
				Urban	*Rural*
1.	Uttarakhand	62	77	60	62
2.	Himachal Pradesh	59	70	49	60
3.	Chhattisgarh	81	88	76	82
4.	Jharkhand	78	82	66	81
5.	Jammu and Kashmir	68	71	72	67
6.	Rajasthan	80	82	78	80
7.	**Haryana**	**83**	**84**	**80**	**83**
8.	Punjab	80	80	81	80
9.	Maharashtra	72	71	66	77
10.	Orissa	74	72	63	76
11.	Gujarat	80	75	74	84
12.	Bihar	88	81	76	89
13.	Andhra Pradesh	79	72	72	83
14.	Tamil Nadu	73	66	74	71
15.	Uttar Pradesh	85	74	83	86
16.	Madhya Pradesh	83	71	75	85
17.	Karnataka	83	71	79	84
18.	Assam	77	63	70	77
19.	Kerala	56	44	51	58
20.	West Bengal	69	44	58	72
	India	79	74	73	81

Source: Kumar (2007).

TABLE 1.99

Trends in Anaemia among Children and Women in Selected States

Sr. No.	*States*	*Children Aged 6-35 Months who are Anaemic*		*Ever-Married Women Aged 15-49 who are Anaemic*	
		NFHS-2 1998-99	*NFHS-3 2005-06*	*NFHS-2 1998-99*	*NFHS-3 2005-06*
Good performers in reducing child malnutrition					
1.	Maharashtra	76	72	49	49
2.	Orissa	72	74	63	63
3.	Himachal Pradesh	70	59	41	41
4.	Jammu and Kashmir	71	68	59	53
5.	Chhattisgarh	88	81	69	58
	India	74	79	52	56
Poor performers in reducing child malnutrition					
16.	Bihar	81	88	60	68
17.	Jharkhand	82	78	73	70
18.	Assam	63	77	70	69
19.	Madhya Pradesh	71	83	49	58
20.	**Haryana**	**84**	**83**	**47**	**57**

Source: Kumar (2007).

The proportion of children of 6-35 months who are anaemic has come down in four out of the five states that have recorded maximum reductions in child malnutrition. In Orissa, a state in the set of good performers, the proportion of anaemic children has gone up marginally from 72 per cent in 1998-99 to 74 per cent in 2005-06. On the other hand, the proportion of children with anaemia has risen in four of the five states where the proportion of underweight children has increased the most. The exception is Jharkhand where the proportion of anaemic children had dropped marginally from 73 per cent in 1998-99 to 70 per cent in 2005-06. Among the good performers, the proportion of ever-married women aged 15-49 years who are anaemic has decreased or more or less remained unchanged in the five states. On the other hand, among the poor performers, the proportion of ever-married women aged 15-49 years who are anaemic has increased significantly in three states and come down marginally in the other two.

To reduce malnutrition among children, the scheme of "Improving Infant and Young Child Feeding" has been started in the state from the year 2005-06. National Programme for Nutritional Support to Primary Education, a centrally sponsored mid-day meal scheme, launched in the state from 15th August 2004, is another effort in the direction of eradication of malnutrition among young children going to primary classes (I-V) in government, local bodies and private-aided schools in the state. To encourage women for proper rearing of their children, especially the girl child, with a view to improve their nutritional and health status, the scheme of "Best Mother Award" has been started from the year 2005-06. To remove the sense of economic insecurity in the minds of parents who have only daughters, "Ladli Social Security Pension Scheme" is being implemented with effect from 1st January 2006.

In sum, NFHS-3 brings out sharply the serious neglect of young children below three years—and especially newborn babies for whom early childhood development and care are critical for healthy growth. Preliminary results confirm the continuing neglect of health, inadequate reach and efficacy of health and childcare services, the failure of strategies to reach newborn children and those under three years.

1.2.9 Human Development and Demographic Changes

An economy's human resources are a vital component in stimulating rapid economic growth. While physical capital and natural endowments of land and resources are also important, human resources are critical in bringing about structural and technological transformation required for industrialisation and raising per capita income rapidly. People, not machines, make the crucial decisions that result in improved allocation of resources and implementation of new technology. People save and invest in new technology and infrastructure. People decide how resources are to be used and mobilised. It is, therefore, critical that these human resources be developed and nurtured to ensure that they are capable of making these important decisions of far reaching consequences.

The improvement of human capital has become a prime economic development objective. Through the provision of education and better health and nutrition, the level of human capital has been raised substantially in Haryana.

Human development is a process of enlarging people's choices. In principle, these choices can be infinite and change over time. But at all levels of development, three essential things are: people lead a long and healthy life, they acquire knowledge and have access to resources needed for a better standard of living. If these essential conditions are not available, all opportunities of moving forward are bound to remain inaccessible.

Human development has two sides: the formation of human capabilities—such as improved health, knowledge and skills—and the use people make of their acquired capabilities. Development must, therefore, be more than just an expansion of income and wealth. Its focus must be people.

The first ever National Human Development Report (NHDR), 2001 brought out by the Planning Commission estimated the value of Human Development Index (HDI) for the States and the Union territories for 1981, 1991 and 2001. Table 1.100 presents the findings for some of the major States.

Although the estimation of HDI for 2001 does not cover all the States, NHDR has estimated that the HDI for the country as a whole has improved from 0.302 in 1981 to 0.472 in 2001. The HDI for Haryana has improved from 0.360 in 1981 to 0.509 in 2001. As per HDI, Haryana was ranked at 15 in 1981 and it has improved its rank to 5 in 2001. Kerala—albeit a middle income State—remains at the top with HDI equal to 0.638, which stood at 0.5 in 1981. West Bengal, which had an index of 0.305 in 1981 improved it to 0.404 in 1991 and 0.472 in 2001. The HDI for Bihar registered the lowest value of 0.367 in 2001 despite an improvement over the earlier years.

The States which have done well in terms of HDI are Punjab (0.537), Tamil Nadu (0.531) and Maharashtra (0.523). The HDI of Karnataka (0.478), the

TABLE 1.100

Human Development Index 1981, 1991, and 2001 (Arranged in Rank Order of 1991)

Sl. No.	States/Union Territories	1981		1991		2001	
		Value	Rank	Value	Rank	Value	Rank
1.	Chandigarh	0.550	1	0.674	1	n. e.	
2.	Delhi	0.495	3	0.624	2	n. e.	
3.	Kerala	0.500	2	0.591	3	0.638	1
4.	Goa	0.445	5	0.575	4	n. e.	
5.	Andaman & Nicobar Islands	0.394	11	0.574	5	n. e.	
6.	Pondicherry	0.386	12	0.571	6	n. e.	
7.	Mizoram	0.411	8	0.548	7	n. e.	
8.	Daman & Diu	0.438	6	0.544	8	n. e.	
9.	Manipur	0.461	4	0.536	9	n. e.	
10.	Lakshadweep	0.434	7	0.532	10	n. e.	
11.	Nagaland	0.328	20	0.486	11	n. e.	
12.	Punjab	0.411	9	0.475	12	0.537	2
13.	Himachal Pradesh	0.398	10	0.469	13	n. e.	
14.	Tamil Nadu	0.343	17	0.466	14	0.531	3
15.	Maharashtra	0.363	13	0.452	15	0.523	4
16.	**Haryana**	**0.360**	**15**	**0.443**	**16**	**0.509**	**5**
17.	Gujarat	0.360	14	0.431	17	0.479	6
18.	Sikkim	0.342	18	0.425	18	n. e.	
19.	Karnataka	0.346	16	0.412	19	0.478	7
20.	West Bengal	0.305	22	0.404	20	0.472	8
21.	Jammu & Kashmir	0.337	19	0.402	21	n. e.	
22.	Tripura	0.287	24	0.389	22	n. e.	
23.	Andhra Pradesh	0.298	23	0.377	23	0.416	10
24.	Meghalaya	0.317	21	0.365	24	n. e.	
27.	Rajasthan	0.256	28	0.347	27	0.424	9
28.	Orissa	0.267	27	0.345	28	0.404	11
29.	Arunachal Pradesh	0.242	31	0.328	29	n. e.	
30.	Madhya Pradesh	0.245	30	0.328	30	0.394	12
31.	Uttar Pradesh	0.255	29	0.314	31	0.388	13
32.	Bihar	0.237	32	0.308	32	0.367	15
	All India	0.302		0.381		0.472	
	Standard Deviation	0.083		0.100			

Note: n. e.: No estimate was made for these States

Source: *Tenth Five Year Plan 2002-2007*, Volume III, Table 3.15, p.58. New Delhi: Planning Commission, Government of India.

TABLE 1.101

Decadal Growth of Population in Haryana Since 1901

Year	Total Population	% Decadal Variation	Sex Ratio
1901	4623064	-	867
1911	4174677	-9.70	835
1921	4255892	1.95	844
1931	4559917	7.14	844
1941	5272829	15.63	869
1951	5673597	7.60	871
1961	7590524	33.79	868
1971	10036431	32.22	867
1981	12922119	28.75	870
1991	16463648	27.41	865
2001	21144564	28.43	861

Source: *Census of India–2001 Haryana*, Data Sheet. Director of Census Operations, Haryana.

TABLE 1.102

Percentage Decadal Growth of Population (Arranged in Rank Order of 1991-2001)

Sr. No.	States/ Union	1951-61	1961-71	1971-81	1981-91	1991-2001
1.	Nagaland	73.24	39.96	50.05	56.08	64.44
2.	Dadra & Nagar Haveli	41.46	27.83	39.84	33.57	58.87
3.	Daman & Diu	-24.49	70.27	25.40	27.85	56.44
4.	Delhi	52.47	52.90	53.00	51.45	46.31
5.	Chandigarh	400.00	114.38	75.55	42.16	40.34
6.	Sikkim	17.39	29.53	50.77	28.47	32.86
7.	Jammu & Kashmir (3)	9.43	29.64	29.69	28.92	30.46
8.	Manipur	34.95	37.53	32.46	29.29	30.04
9.	Meghalaya	26.90	31.56	32.04	32.86	29.93
10.	Mizoram	35.71	24.96	48.55	39.70	29.18
11.	Rajasthan	26.20	27.83	33.36	28.07	28.33
12.	**Haryana**	**33.79**	**32.21**	**28.75**	**27.41**	**28.06**
13.	Andaman & Nicobar Islands	106.45	79.90	63.93	48.70	26.84
14.	Arunachal Pradesh (1)		38.73	35.15	36.83	26.19
15.	Maharashtra	23.60	27.45	24.54	25.73	22.57
16.	Gujarat	26.87	29.39	27.67	21.19	22.48
17.	Pondicherry	16.40	27.83	28.15	33.64	20.58
18.	Punjab	21.56	21.70	23.89	20.81	19.76
19.	Uttar Pradesh	16.66	19.78	25.49	25.48	19.37
20.	Assam (2)	34.97	34.96	23.36	24.24	18.84
21.	Lakshadweep	14.29	32.54	26.53	28.47	17.97
22.	West Bengal	32.80	26.87	23.17	24.73	17.84
23.	Himachal Pradesh	17.85	23.06	23.71	20.79	17.52
24.	Karnataka	21.57	24.22	26.75	21.12	17.25
25.	Orissa	19.82	25.05	20.17	20.06	15.94
26.	Tripura	78.72	36.28	31.92	34.30	15.73
27.	Goa	7.86	45.38	26.69	7.64	14.89
28.	Andhra Pradesh	15.65	20.90	23.10	24.20	13.86
29.	Tamil Nadu	11.85	22.30	17.50	15.39	11.19
30.	Kerala	24.76	26.29	19.24	14.32	9.42
31.	Bihar	19.93	21.33	24.06	23.54	-4.05
32.	Madhya Pradesh	24.16	28.67	25.27	26.84	-8.76
	All India	21.64	24.80	24.84	23.67	21.35

Note: (1) Censused for the first time in 1961.
(2) The 1981 Census could not be held in Assam. Total population for 1981 has been worked out by interpolation.
(3) The 1991 Census could not be held in Jammu & Kashmir. Total population for Jammu & Kashmir as projected by Standing Committee of Experts on Population Projection. (October 1989).
(4) Figure for Madhya Pradesh, Bihar & Uttar Pradesh for 2001 is after bifurcation.

Source: *Tenth Five Year Plan 2002-2007*, Volume III, Annexure-3.5 (2), p. 80, New Delhi: Planning Commission, Government of India.

Centre of the information technology revolution, has still a long way to go in this regard.

Demographic Changes

The population of Haryana doubled during a period of 30 years from about 10 million in 1971 to more than 21 million in 2001. The decadal growth rate of population was 32.2 per cent in 1961 which declined to 28.75 per cent in 1971 and further to 27.41 per cent in 1981. But it increased to 28.06 per cent in 2001. Thus, the growth rate of population continues to be high for the State.

TABLE 1.103

District-wise Sex Ratio Since 1901

District *Year*	*1901*	*1911*	*1921*	*1931*	*1941*	*1951*	*1961*	*1971*	*1981*	*1991*	*2001*
Panchkula	806	753	776	785	797	799	805	820	833	839	823
Ambala	806	753	776	785	797	807	828	882	902	903	868
Yamuna Nagar	811	762	783	789	802	841	836	848	855	883	862
Kurukshetra	844	826	827	815	832	858	853	859	872	879	866
Kaithal	NA	NA	NA	NA	NA	849	837	843	848	853	853
Karnal	845	828	828	815	833	860	853	856	856	864	865
Panipat	NA	NA	NA	NA	NA	866	857	852	849	852	829
Sonipat	881	856	852	864	915	886	886	867	866	840	839
Jind	NA	NA	NA	NA	NA	849	857	860	857	838	852
Fatehabad	NA	NA	NA	NA	NA	853	852	870	881	877	884
Sirsa	871	837	877	855	878	843	845	865	877	885	882
Hisar	NA	NA	NA	NA	NA	871	866	859	859	853	851
Bhiwani	NA	NA	NA	NA	NA	880	880	878	897	878	879
Rohtak	881	856	852	864	915	883	885	878	869	849	847
Jhajjar	881	856	852	864	915	911	902	903	891	861	847
Mahendragarh	NA	NA	NA	NA	NA	972	961	910	939	910	918
Rewari	NA	NA	NA	NA	NA	930	926	927	926	927	899
Gurgaon	905	878	858	859	880	895	891	886	880	871	873
Faridabad	905	878	858	859	880	854	848	810	811	828	839
Haryana	**867**	**835**	**844**	**844**	**869**	**871**	**868**	**867**	**870**	**865**	**861**

Source: Compiled from Population Data Sheet, *Census of India-2001*, Haryana, Director of Census Operations, Haryana.

The population situation calls for urgent attention. However, this higher growth rate can be attributed to some extent to substantial migration as well.

If the decadal rate of growth of population in Haryana is compared with rest of the country during the period 1991-2001 then among the major states, Haryana (28.06) comes after Jammu and Kashmir (30.46 per cent) and Rajasthan (28.33 per cent) as against all India's 21.35 per cent.

Gender Balance

Sex ratio is a measure of gender balance. Biologically, the sex ratio should be in favour of women, and it is so, in almost all countries of the world. However, a pronounced skew in sex ratios in favour of men has been a feature of most States in India. This is largely attributed to lower status of women in Indian society, which contributes to their early marriages, lower literacy levels, higher fertility and mortality levels, and affects adversely progress in human development.

The sex ratio (number of women per 1000 men) in Haryana during the past hundred years, as shown in Table 1.103, has remained between 835 on the lowest side and 870 on the highest side. In 1901, the sex ratio in the State was 867. It was the same in 1971 and increased to 870 in 1981 but declined marginally to 865 in 1991 and again to 861 in 2001.

In 1951, there were as many as ten States and Union Territories in India that had sex ratios in favour of women. By 2001, only Kerala and Pondicherry have a sex ratio in favour of females. The ratio has also fallen considerably in some of the States which were better placed in 1951. For example, Orissa, where sex ratio declined from 1022 in 1951 to 972 in 2001, and Tamil Nadu which registered a decline in the ratio from 1007 to 986 in the same period. Bihar has shown the sharpest decline, from 1000 in 1951 to 921 in 2001. Rajasthan has registered a marginal improvement in the last decade from 910 to 922, which is significant in view of its low starting point. The decline in the sex ratio during the last decade particularly in the relatively better off States like Haryana and Punjab is a matter of serious concern and demands urgent necessary action. Kerala remained the only State in the post-independence period where the ratio remained in favour of females throughout.

A Total Fertility Rate (TFR) = 2.1 is considered to be the replacement level of fertility, which needs to be achieved in all states for population stabilisation. Looking ahead, it is instructive to compare the total fertility rates for 1998 and projections of TFRs of the states and union territories for the year 2007.

It can be seen from Table 1.105 that all states will have TFRs of less than 3 by 2007 except the newly

TABLE 1.104

Sex Ratio (Female per Thousand Male) in India (Arranged in Rank Order of 2001)

Sr. No.	States/Union Territories	1951	1961	1971	1981	1991	2001
1.	Kerala	1028	1022	1016	1032	1036	1058
2.	Pondicherry	1030	1013	989	985	979	1001
3.	Tamil Nadu	1007	992	978	977	974	986
4.	Andhra Pradesh	986	981	977	975	972	978
5.	Manipur	1036	1015	980	971	958	978
6.	Meghalaya	949	937	942	954	955	975
7.	Orissa	1022	1001	988	981	971	972
8.	Himachal Pradesh	912	938	958	973	976	970
9.	Karnataka	966	959	957	963	960	964
10.	Goa	1128	1066	981	975	967	960
11.	Tripura	904	932	943	946	945	950
12.	Lakshadweep	1043	1020	978	975	943	947
13.	Mizoram	1041	1009	946	919	921	938
14.	West Bengal	865	878	891	911	917	934
15.	Assam	868	869	896	910	923	932
16.	Maharashtra	941	936	930	937	934	922
17.	Rajasthan	921	908	911	919	910	922
18.	Bihar	1000	1005	957	948	907	921
19.	Gujarat	952	940	934	942	934	921
20.	Madhya Pradesh	945	932	920	921	912	920
21.	Nagaland	999	933	871	863	886	909
22.	Arunachal Pradesh	N.A.	894	861	862	859	901
23.	Jammu & Kashmir	873	878	878	892	896	900
24.	Uttar Pradesh	998	907	876	882	876	898
25.	Sikkim	907	904	863	835	878	875
26.	Punjab	844	854	865	879	882	874
27.	**Haryana**	**871**	**868**	**867**	**870**	**865**	**861**
28.	Andaman & Nicobar Islands	625	617	644	760	818	846
29.	Delhi	768	785	801	808	827	821
30.	Dadra & Nagar Haveli	946	963	1007	974	952	811
31.	Chandigarh	781	652	749	769	790	773
32.	Daman & Diu	1125	1169	1099	1062	969	709
	All-India	946	941	930	934	927	933

Source: *Tenth Five Year Plan 2002-2007*, Volume III, Table 3.11, p. 51, New Delhi: Planning Commission, Government of India.

formed states of Chhattisgarh and Jharkhand. Fifteen states and union territories will achieve TFR of 2.1 or below, but the population of a large number of states would still be growing with TFRs more than 2.1, and these states have to be the focus of policy interventions during the Tenth Plan. In case of Haryana, TFR was 3.3 in 1998 which is much higher than most of the states in the country. The TFR would be 2.1 in 2007. The highest TFR was that of Uttar Pradesh (4.6) followed by Meghalaya (4.57), Bihar (4.3), Rajasthan (4.1), Madhya Pradesh (3.9) and Nagaland (3.77).

TABLE 1.105

Total Fertility Rates, 1998 and Projected Total Fertility Rates, 2007

Sr. No.	States	TFR 1998	TFR 2007
1.	Kerala	1.8	N. A.
2.	Tamil Nadu	2.0	N. A.
3.	Andhra Pradesh	2.4	N. A.
4.	Karnataka	2.4	2.3
5.	West Bengal	2.4	N. A.
6.	Punjab	2.6	N. A.
7.	Maharashtra	2.7	2.3
8.	Orissa	2.9	2.4
9.	Gujarat	3.0	N. A.
10.	Assam	3.2	2.5
11.	**Haryana**	**3.3**	**2.1**
12.	Madhya Pradesh	3.9	3.4
13.	Rajasthan	4.1	3.8
14.	Bihar	4.3	3.3
15.	Uttar Pradesh	4.6	4.4
16.	Goa	1.77	N. A.
17.	Himachal Pradesh	2.14	N. A.
18.	Delhi	2.40	N. A.
19.	Arunachal Pradesh	2.52	N. A.
20.	Jammu & Kashmir	2.71	N. A.
21.	Sikkim	2.75	N. A.
22.	Mizoram	2.89	N. A.
23.	Manipur	3.04	N. A.
24.	Nagaland	3.77	N. A.
25.	Meghalaya	4.57	N. A.
	All India	3.2	2.7

Note: N. A.: Projections for these states were not made.
Source: *Tenth Five Year Plan 2002-2007*, Volume III, Table 3.8, p.46. New Delhi: Planning Commission, Government of India.

Looking at the religion-wise distribution of population, it may be observed from Table 1.106 that the Hindu population in Haryana decreased from 89.21 per cent in 1991 to 88.23 per cent in 2001 and Muslim population increased from 4.64 per cent to 5.78 per cent during the same period. Similarly, the population of Sikhs also decreased from 5.81 per cent to 5.54 per cent. The population of Christians, Buddhists and Jains increased insignificantly during this period. Christians had the highest sex ratio of 918 in the State in 2001 followed by Jains (911), Sikhs (893), Muslims (870), Hindus (858) and Buddhists (783). The highest literacy rate of males in the State in 2001 was that of Jains (94.18 per cent), followed by Christians (85.34 per cent), Hindus (69.36 per cent), Sikhs (68.94 per cent) and Buddhists (67.39 per cent). Muslims had the lowest male literacy rate (39.97 per cent) in the State. Similarly, the female literacy rate of Jains (90.67 per cent) was the highest followed by Christians (81.80 per

TABLE 1.106

Religion-wise Population of Haryana

(Per cent)

Religious Communities	*Population 1991*	*Population 2001*	*Sex Ratio (2001)*	*Literacy (2001)*	
				Male	*Female*
All Religions	100.00	100.00	861	67.91	55.73
Hindus	89.21	88.23	858	69.36	57.14
Muslims	4.64	5.78	870	39.97	21.55
Christians	0.10	0.13	918	85.34	81.80
Sikhs	5.81	5.54	893	68.94	62.15
Buddhists	0.01	0.03	783	67.39	54.93
Jains	0.21	0.27	911	94.18	90.67
Others	0.00	0.01	790	66.88	57.73
Religion not stated	0.02	0.01	809	62.33	48.60

Source: Compiled from *Population Data Sheet*, p.7, Director of Census Operations, Haryana.

cent), Sikhs (62.15 per cent), Hindus (57.14 per cent). The lowest female literacy rate in the State was of Muslims (21.55 per cent).

The age distribution of population in the State as revealed by the 2001 Census is given in Table 1.107. It is clear from this table that almost 36 per cent of Haryana's population is in the age group of 0-14 years and another 7.5 per cent in the age group of more than 60 year. About 11 per cent people in the State is in the age group of 15-19 years.

The increasing proportion of aged persons has been accompanied in most populations by a steady decline in the proportion of young persons. The impact of low fertility is most immediately evident in the younger age cohorts of a population whose size shrinks in comparison to the other age-groups. The trends in the change in the population of age-group 0-14 years is important as it would determine the future course of population growth in the medium term up to about next 20 year or so. This age-group is the one that would require provision of various educational services and employment opportunities in future.

Age structure of the population indicates the likely pattern of demand for health care facilities, education, social security and other services. It also indicates broadly the entries into, and withdrawals from, the labour force. The relative number of persons in various age-groups considerably affects social relationships within a community. Conventionally in India, the population (particularly males) in the age-group of 15-59 in relation to the rest of the population in the two age-groups, 0-14 and 60 years and over, provides an idea about the magnitude of burden of dependency on

TABLE 1.107

Distribution of Population of Haryana by Age Groups, 2001

Age-Group	*% to Total Population*
All l ages	-
0-4	10.75
5-9	12.40
10-14	12.69
15-19	10.67
20-24	9.26
25-29	8.20
30-34	7.15
35-39	6.63
40-44	5.24
45-49	4.09
50-54	2.98
55-59	2.07
60-64	2.32
65-69	2.08
70-74	1.52
75-79	0.70
80+	0.87

Source: Compiled from *Population Data Sheet*, p.6, Director of Census Operations, Haryana.

it. In a way, the dependency ratio provides an indication of the likely burden that certain age structures place on a population.

Ageing of the population is now considered to be one of the most important social phenomena in India. One of the consequences of fertility decline is reflected in population ageing. Here, it is conventional to identify the elderly with those aged 60 years or more because of their relationship with social security and retirement. It is around this age that working capacity begins to be affected by biological, physical and mental stability. The age-structure in India is changing due to the fertility decline and improvements in the life expectancy.

In India, the sex ratio initially declines as we come across higher age groups. It can be seen from Table 1.108 that beginning with sex ratio of 934 for age-group 0-4, it gradually declines to 858 for age-group 15-19, and thereafter, it begins to increase until the age-group 30-34 is reached. But this is not so in case of Haryana when the sex-ratio is seen to increase in the initial age groups. In the age-group 5-9 years, the sex ratio is particularly low in Punjab (821), Haryana (835), Chandigarh (844), Delhi (872) and Gujarat (888). The highest sex ratio in this age group is seen in Sikkim (990) followed by Dadra and Nagar Haveli (982) and Meghalaya (975).

TABLE 1.108

Age Specific Sex Ratio: India, States and Union Territories: 2001

Sr. No.	India/State/ Union Territory	All Ages	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+
1.	Jammu & Kashmir	892	938	946	936	937	868	868	840	903	806	914	731	1058	767	1020	748	931	821
2.	Himachal Pradesh	968	889	917	952	932	972	1017	1009	1057	1016	1052	972	1020	1015	1109	1003	962	1026
3.	Punjab	876	794	821	859	834	862	922	988	934	891	897	792	1017	1080	1039	781	928	904
4.	Chandigarh	777	846	844	838	695	713	707	775	803	497	600	600	697	730	873	706	652	672
5.	Uttaranchal	962	906	922	931	914	998	1067	1047	1026	1016	1065	979	1092	1059	1086	949	935	985
6.	Haryana	861	817	835	868	775	821	901	960	918	861	871	824	991	1167	1039	823	843	841
7.	Delhi	821	870	872	869	749	752	825	829	823	719	751	728	911	1004	969	863	883	944
8.	Rajasthan	921	913	902	882	838	922	972	993	931	889	943	841	1120	1013	1159	1014	1187	1251
9.	Uttar Pradesh	898	929	894	861	787	909	972	1025	932	879	947	780	1098	8919	976	771	888	809
10.	Bihar	919	957	910	853	785	988	1041	1045	971	884	961	763	1115	876	987	798	910	801
11.	Sikkim	875	951	990	963	944	866	905	808	785	745	747	749	711	803	777	698	756	754
12.	Arunachal Pradesh	893	975	948	963	921	933	978	852	799	791	824	718	795	880	930	878	895	901
13.	Nagaland	900	978	928	917	902	905	966	904	918	923	887	759	811	787	822	794	834	746
14.	Manipur	973	958	959	958	1008	1015	1039	969	984	942	955	895	926	955	974	938	919	953
15.	Mizoram	935	973	959	968	976	945	911	885	875	914	861	849	833	902	898	894	969	1115
16.	Tripura	948	966	961	954	947	1029	1042	929	892	812	854	803	937	1012	1048	1018	1027	1184
17.	Meghalaya	972	975	975	975	969	1067	1111	978	916	871	872	847	933	904	925	925	899	981
18.	Assam	935	971	960	940	908	999	1058	966	882	808	822	831	925	1016	1010	882	796	910
19.	West Bengal	934	966	956	941	876	979	1022	938	909	814	852	900	975	1104	1150	1057	1021	1092
20.	Jharkhand	941	976	951	908	850	978	1008	1023	941	913	917	867	1056	1042	1122	960	1007	872
21.	Orissa	972	959	954	961	1006	993	1045	1006	947	890	919	924	1103	1051	1124	989	962	880
22.	Chhattisgarh	989	976	979	955	916	1019	1009	1041	953	969	986	982	1109	1174	1243	1182	1257	1165
23.	Madhya Pradesh	919	938	933	884	803	919	973	986	904	865	924	845	1139	1016	1112	959	1099	1071
24.	Gujarat	920	888	888	882	881	906	936	966	910	942	922	912	1103	1092	1156	1152	1280	1385
25.	Daman & Diu	710	923	933	904	590	410	540	621	729	670	798	897	1123	1225	1227	1617	1369	1473
26.	Dadra & N. H.*	812	980	982	907	765	613	616	725	751	8886	878	898	1039	1372	1194	1495	1205	1468
27.	Maharashtra	922	913	929	907	819	852	963	945	966	900	934	910	1127	1392	1137	974	1042	1206
28.	Andhra Pradesh	978	965	965	937	917	994	1094	969	1018	874	972	931	1195	1088	1220	973	1005	1176
29.	Karnataka	965	948	964	951	895	922	1066	993	1033	887	911	909	1094	1074	1178	1096	1107	1246
30.	Goa	961	936	953	958	924	877	959	917	964	906	1025	1038	1152	1180	1308	1401	1454	1565
31.	Lakshadweep	948	967	940	918	945	1035	987	941	1012	879	985	848	827	1025	938	1227	814	1137
32.	Kerala	1058	962	964	960	1010	1072	1148	1122	1136	1036	1030	985	1090	1149	1246	1220	1270	1424
33.	Tamil Nadu	987	946	948	948	972	1019	1093	1000	1052	938	998	976	1048	1016	1065	946	860	965
34.	Pondicherry	1001	971	957	963	978	1034	1099	969	978	862	960	988	1168	1150	1197	1108	953	1014
35.	A & N Islands**	846	958	945	945	848	827	896	797	878	762	723	655	633	713	750	784	744	912
	INDIA	933	934	923	902	858	938	1007	988	958	889	936	866	1086	1035	1096	937	1002	1017

Note: * Dadra & Nagar Haveli,
* Andaman & Nicobar Islands

Source: Report and Tables on Age, Series-1, India *Census of India–2001*, Statement 2.6, pp. 20-21.

As per the Census 2001, 10.7 per cent of the total population in India has been reported to be in the age-group 0-4 years, 12.5 per cent is in the age-group 5-9 years; and both combined (0-9 years) constitute 23.2 per cent of the total population. The respective figures in 1991 were 12.2, 13.3 and 25.5 per cent. The trends compared to 1991 figures reveal a clear decline in percentage share of population in age 0-4 years (from 12.2 to 10.7 per cent) whereas the decline is marginal in case of age-group 5-9 year.

The rural urban comparison of percentage share of India's population in age groups 0-4 and 5-9 years shows that in rural area, 11.5 per cent of population is in the age group 0-4 and 13.3 per cent is in the age group 5-9 years, whereas in urban areas, these percentages are 8.9 and 10.4 respectively, that is, much lower compared to rural areas. Compared to 1991 figures, the share of population in these age groups has decreased both in rural as well as in urban areas but the decline is much sharper in urban areas, where the percentage of population in the age group 0-4 years came down by 1.8 percentage points, from 10.7 per cent to 8.9 per cent. In rural areas, it came down by 1.2 percentage points, from 12.7 per cent to 11.5 per cent. For the age group 5-9 years, the population share in urban areas declined by 1.50 percentage points, from 11.9 per cent to 10.4 per cent, whereas the corresponding decline in rural areas is only 0.4 percentage points, from 13.7 per cent to 13.3 per cent.

In case of Haryana, 10.8 per cent of the total population in the State is in the age group of 0-4 years, 12.4 per cent is in the age-group 5-9 years; and both combined (0-9 years), constitute 23.2 per cent of the total population. The respective figures in 1991 were 13.1, 13.5, and 26.6 per cent. The trends compared to 1991 figures reveal a clear decline in percentage share of population in these age groups.

In the year 2001, the rural urban comparison of percentage share of population in age group 0-4 and 5-9 years shows that in rural Haryana 11.3 per cent of population is in the age group 0-4 years and 12.9 per cent is in the age-group 5-9 years; whereas in urban areas these percentages are 9.5 and 11.2, respectively, that is, much lower compared to rural areas. Compared to 1991 figures, the share of population in these age groups has decreased both in rural as well as in urban areas. But the decline is much sharper in urban areas, as at the all-India level.

The proportion of population falling in the age group 0-4 is of significance as it reflects, to a large extent, the impact of birth control measures, in the recent past. Comparing the state wise position with respect to the proportions of population falling in this age group, it may be noted from Table 1.109 that this proportion is the lowest in case of Goa (7.7 per cent) and the highest in case of Meghalaya (14 per cent). At the all India level it stands at 10.7 per cent. Evaluating various states on this scale, we have Meghalaya, Rajasthan, Uttar Pradesh, Bihar, Madhya Pradesh and Jharkhand among the high proportion states whose 12 to 14 per cent population falls in this age group. These are also mostly the states whose fotal fertility rate

TABLE 1.109

Proportion of Child Population in Age-Groups 0-4, 5-9 and 0-9 Years to Total Population by Residence—Person: India, States and Union Territories, 1991-2001

S. No.	*India/State/ Union Territory*	*Total/ Rural/ Urban*	*Percentage to Total Population*					
			2001			*1991*		
			0-4	*5-9*	*0-9*	*0-4*	*5-9*	*0-9*
1.	Jammu & Kashmir	Total	9.5	12.7	22.2	-	-	-
		Rural	10.4	13.4	24.0	-	-	-
		Urban	6.9	10.1	17.0	-	-	-
2.	**Himachal Pradesh**	**Total**	**9.2**	**10.2**	**19.4**	**11.5**	**11.7**	**23.3**
		Rural	**9.4**	**10.3**	**19.8**	**11.7**	**11.9**	**23.6**
		Urban	**7.2**	**8.9**	**16.0**	**9.5**	**10.2**	**19.8**
3.	Punjab	Total	8.7	10.9	19.6	11.5	11.6	23.1
		Rural	9.1	11.3	20.4	11.7	11.6	23.2
		Urban	8.1	10.1	18.2	11.0	11.9	22.9
4.	Chandigarh	Total	8.8	10.0	18.8	10.8	10.6	21.5
		Rural	11.0	11.0	21.9	13.6	11.0	24.6
		Urban	8.5	9.9	18.5	10.5	10.6	21.1
5.	Uttaranchal	Total	10.9	12.6	23.5	12.7	13.2	25.9
		Rural	11.9	13.2	24.7	13.2	13.6	26.7
		Urban	8.8	11.0	19.8	11.0	12.1	23.1
6.	Haryana	Total	10.8	12.4	23.2	13.1	13.5	26.6
		Rural	11.3	12.9	24.2	13.5	13.7	27.2
		Urban	9.5	11.2	20.7	11.8	12.8	24.6
7.	Delhi	Total	9.9	11.2	21.2	12.0	12.1	24.0
		Rural	11.5	12.7	24.2	14.8	14.0	28.8
		Urban	9.8	11.1	20.9	11.7	11.8	23.5
8.	Rajasthan	Total	12.8	14.3	27.1	13.5	14.6	28.2
		Rural	13.5	14.9	28.4	13.9	15.0	28.8
		Urban	10.6	12.3	22.9	12.4	13.4	25.9
9.	Uttar Pradesh	Total	12.5	15.0	27.4	13.8	14.5	28.3
		Rural	13.1	15.6	28.6	14.0	14.7	28.7
		Urban	10.2	12.8	22.9	12.6	13.6	26.2
10.	Bihar	Total	13.3	15.4	28.7	13.5	15.2	28.7
		Rural	13.6	15.7	29.3	13.6	15.4	29.1
		Urban	10.6	13.2	23.8	12.2	13.7	25.9
11.	Sikkim	Total	9.7	12.0	21.7	12.6	13.7	26.2
		Rural	10.0	12.4	22.4	13.0	13.8	26.8
		Urban	7.0	9.0	16.0	9.4	10.9	20.3
12.	Arunachal Pradesh	Total	12.6	14.8	27.3	14.6	14.2	28.8
		Rural	13.0	15.2	28.2	14.9	14.4	29.2
		Urban	10.8	13.3	24.1	13.0	13.1	26.1
13.	Nagaland	Total	9.4	12.9	22.4	11.6	12.8	24.4
		Rural	9.4	13.2	22.6	11.4	12.9	24.3
		Urban	9.5	11.9	21.4	12.5	12.5	24.9
14.	Manipur	Total	9.5	11.2	20.7	11.1	12.2	23.3
		Rural	9.7	11.6	21.4	11.4	12.2	23.6
		Urban	8.7	10.0	18.8	10.4	12.0	22.5
15.	Mizoram	Total	11.3	11.7	23.1	13.2	12.6	25.7
		Rural	12.6	12.8	25.4	13.6	13.3	27.0
		Urban	10.1	10.6	20.7	12.6	11.7	24.3

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Contd...

S. No.	India/State/ Union Territory	Total/ Rural/ Urban	Percentage to Total Population					
			2001			1991		
			0-4	5-9	0-9	0-4	5-9	0-9
16.	Tripura	Total	9.2	11.3	20.5	12.2	14.0	26.2
		Rural	9.7	12.0	21.8	12.8	14.5	27.3
		Urban	6.7	8.0	14.7	9.1	10.9	20.0
17.	Meghalaya	Total	14.0	14.5	28.5	15.8	14.2	30.0
		Rural	14.9	15.2	30.1	16.6	14.7	31.1
		Urban	10.1	11.8	21.9	12.4	11.9	24.3
18.	Assam	Total	11.4	13.5	24.9	13.4	14.7	28.1
		Rural	11.9	14.1	26.0	13.9	15.1	29.0
		Urban	7.7	9.6	17.4	9.6	11.1	20.7
19.	West Bengal	Total	9.5	11.8	21.3	11.5	13.3	24.8
		Rural	10.5	13.0	23.6	12.8	14.4	27.1
		Urban	6.8	8.8	15.6	8.1	10.3	18.5
20.	Jharkhand	Total	12.1	14.5	26.6	13.6	14.5	28.2
		Rural	12.9	15.3	28.2	14.2	14.9	29.2
		Urban	9.3	11.8	21.1	11.4	13.0	24.4
21.	Orissa	Total	9.7	11.9	21.6	11.4	13.0	24.5
		Rural	10.0	12.2	22.2	11.6	13.2	24.8
		Urban	8.0	10.1	18.1	10.2	11.9	22.2
22.	Chhattisgarh	Total	11.8	12.6	24.4	13.5	13.2	26.7
		Rural	12.3	13.1	25.3	13.8	13.4	27.2
		Urban	9.8	10.9	20.7	12.2	12.3	24.5
23.	Madhya Pradesh	Total	12.2	13.4	25.7	13.7	13.9	27.6
		Rural	13.0	14.1	27.1	14.2	14.3	28.5
		Urban	10.0	11.7	21.7	12.1	12.7	24.9
24.	Gujarat	Total	10.4	11.2	21.6	11.5	12.4	23.9
		Rural	11.3	11.9	23.3	12.0	12.5	24.6
		Urban	8.9	10.0	18.9	10.6	12.1	22.7
25.	Daman Diu	Total	9.5	9.0	18.5	11.3	11.1	22.4
		Rural	9.7	8.8	18.5	13.0	11.9	24.9
		Urban	9.0	9.4	18.4	9.4	10.1	19.5
26.	Dadra & Nagar Haveli	Total	13.3	11.6	24.9	14.8	13.0	27.8
		Rural	14.4	12.1	26.1	15.0	13.2	28.2
		Urban	11.1	9.9	21.0	11.9	10.8	22.7
27.	Maharashtra	Total	9.8	10.6	20.4	12.0	12.3	24.3
		Rural	10.5	11.2	21.7	12.7	12.9	25.6
		Urban	8.9	9.7	18.6	10.8	11.5	22.2
28.	Andhra Pradesh	Total	8.8	11.8	20.6	10.9	13.4	24.3
		Rural	9.0	12.2	21.3	11.1	13.6	24.8
		Urban	8.0	10.6	18.6	10.1	12.9	23.0
29.	Karnataka	Total	9.4	10.7	20.1	11.4	12.7	24.0
		Rural	9.7	11.2	20.9	11.9	13.1	24.9
		Urban	8.6	9.9	18.5	10.31	1.58	22.1
30.	Goa	Total	7.7	8.0	15.7	8.2	9.4	17.5
		Rural	7.6	7.5	15.1	8.2	9.3	17.5
		Urban	7.8	8.4	16.2	8.1	9.4	17.6
31.	Lakshadweep	Total	10.7	10.9	21.6	13.4	12.5	25.9
		Rural	11.8	11.4	23.2	14.0	12.8	26.8
		Urban	9.3	10.3	19.6	13.0	12.3	25.3
32.	Kerala	Total	8.7	8.0	16.7	9.2	9.9	19.1
		Rural	8.8	8.1	16.9	9.3	10.1	19.5
		Urban	8.2	7.7	15.9	8.7	9.3	18.0
33.	Tamil Nadu	Total	8.2	9.0	17.1	9.4	10.7	20.0
		Rural	8.6	9.5	18.1	9.7	11.2	20.7
		Urban	7.6	8.3	16.0	8.6	10.2	18.8
34.	Pondicherry	Total	8.7	8.6	17.3	9.7	10.4	20.2
		Rural	9.4	9.1	18.4	10.8	11.0	21.8
		Urban	8.3	16.7	9.1	10.1	19.2	
35.	Andaman & Nicobar Islands	Total	8.8	9.6	18.3	11.4	12.7	24.1
		Rural	9.2	9.8	19.0	12.0	13.4	25.4
		Urban	7.9	9.1	17.0	9.7	11.0	20.7
	INDIA	Total	10.7	12.5	23.2	12.2	13.3	25.5
		Rural	11.5	13.3	24.7	12.7	13.7	26.5
		Urban	8.9	10.4	19.3	10.7	11.9	22.6

Note : Percentages are calculated for persons to total persons, males to total males and females to total females 2. In 1991, census could not be conducted inn Jammu and Kashmir due to disturbed conditions.

Source: Report and Tables on Age, Series-1, India Census of India – 2001, Statement 2.7, pp. 29-31.

(TFR) is more than 3.5 per cent as against the all India average of 3.2 per cent. On the other extreme stands, states like Goa, Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, West Bengal and Himachal Pradesh having not more than 10 per cent of their population in this age group. Interestingly, these are also the states whose TFR is less than 2.5 per cent, that is, much below the all India average, 3.2 per cent. The state of Haryana, with its 10.8 per cent population belonging to age-group, 0-4, as such, may be ranked among the middle order states having TFR between 2.5 per cent to 3.5 per cent. These conclusions hold largely in case of proportions of population falling in composite age group, 0-9, as well.

Dependency Ratio

Dependency ratio measures the number of young (age group 0-14) as well as the old (age group 60+) per 1000 of persons in the age group 15-59 years. These ratios are presented in Table 1.110 for different states. At all India level, the combined total dependency ratio in 2001 was 752, which was to some extent higher (794) in 1991. In case of young, it was 621 and for old it was 131 in 2001 and the respective figures in 1991 were 672 and 122. This means the young dependency ratio has decreased whereas the old dependency ratio has gone up during 1991-2001. Apparently, this is due to the net effect of birth control measures and improved health facilities.

In Haryana, total dependency ratio in 2001 was 770 which was much higher (886) in 1991. In case of young, it was 637 and for old 133 in 2001 and the respective figures in 1991 were 741 and 145.This means that the young as well as old dependency ratio in the State has decreased.

Rural urban comparison shows that the dependency ratio of both young and old is high in rural Haryana than in urban Haryana and the differences are also large. In the year 2001 the total dependency ratio in rural Haryana was 827 as against 644 in urban. For the young it was 682 in rural areas and 538 in urban areas, and for the old, the respective figures are 145 and 106. Compared to 1991 figures, the dependency ratio for young has decreased while it has increased in case of all India. As regards the dynamics of this ratio in respect of different states, we find that the Dependency Ratio for old has increased in all states, as also at the all India level, except few States and Union Territories such as Haryana, Tripura, Nagaland, Daman and Diu, Dadra & Nagar Haveli. On the other side, the

Dependency Ratio for young has decreased in all states, as it has behaved at the all India level, as well, except Uttar Pradesh, Bihar and Arunachal Pradesh.

TABLE 1.110

Young, Old and Total Dependency Ratio by Residence – India, States and Union Territories: 1991-2001

S. No.	India/State/ Union Territory	Total/ Rural/ Urban	Dependency Ratio*					
			2001			1991		
			Young	Old	Total	Young	Old	Total
1.	Jammu & Kashmir	Total	623	116	739	-	-	-
		Rural	691	123	814	-	-	-
		Urban	448	99	547	-	-	-
2.	Himachal Pradesh	Total	519	151	670	635	145	780
		Rural	535	158	693	651	152	803
		Urban	387	93	480	483	86	568
3.	Punjab	Total	527	152	679	608	138	746
		Rural	559	170	729	622	151	773
		Urban	470	118	588	578	106	685
4.	Chandigarh	Total	440	76	516	502	70	572
		Rural	478	49	528	524	50	575
		Urban	436	79	515	500	72	572
5.	Uttaranchal	Total	653	138	791	706	128	834
		Rural	705	154	860	743	142	86
		Urban	520	98	618	595	86	680
6.	**Haryana**	**Total**	**637**	**133**	**770**	**741**	**145**	**886**
		Rural	**682**	**145**	**827**	**779**	**158**	**937**
		Urban	**538**	**106**	**644**	**635**	**111**	**746**
7.	Delhi	Total	521	84	605	578	78	655
		Rural	617	77	694	722	71	793
		Urban	515	84	599	563	78	641
8.	Rajasthan	Total	755	128	882	775	120	895
		Rural	808	137	944	806	128	934
		Urban	603	102	705	678	94	773
9.	Uttar Pradesh	Total	791	136	926	777	132	909
		Rural	837	146	982	795	141	935
		Urban	638	102	740	709	98	807
10.	Bihar	Total	822	130	951	801	128	929
		Rural	842	132	974	809	131	940
		Urban	665	110	775	728	105	833
11.	Sikkim	Total	589	90	679	714	83	796
		Rural	615	95	710	737	87	824
		Urban	409	57	467	514	48	562
12.	Arunachal Pradesh	Total	733	83	816	727	79	806
		Rural	771	99	870	744	88	831
		Urban	606	28	634	623	25	648
13.	Nagaland	Total	624	77	702	665	79	806
		Rural	637	85	722	674	88	831
		Urban	567	42	610	623	25	648
14.	Manipur	Total	539	111	650	611	105	716
		Rural	562	107	669	618	102	721
		Urban	481	121	602	593	112	705
15.	Mizoram	Total	598	93	691	693	87	779
		Rural	685	103	78	748	95	844
		Urban	518	85	603	632	77	710
16.	Tripura	Total	570	123	693	703	129	831
		Rural	617	125	742	746	132	878
		Urban	377	115	492	497	112	609
17.	Meghalaya	Total	798	86	884	808	85	892
		Rural	861	90	950	857	90	947
		Urban	581	73	653	619	67	686
18.	Assam	Total	660	103	764	744	99	842
		Rural	700	106	806	778	101	879
		Urban	434	88	522	512	80	592
19.	West Bengal	Total	558	119	678	645	107	752
		Rural	632	115	747	725	108	833
		Urban	394	129	523	465	103	568
20.	Jharkhand	Total	732	108	840	747	99	846
		Rural	788	116	905	774	108	82
		Urban	562	84	646	654	68	722
21.	Orissa	Total	568	141	709	632	127	760
		Rural	590	149	739	645	135	779
		Urban	457	100	557	557	85	641
22.	Chhattisgarh	Total	663	130	792	683	122	804
		Rural	699	141	840	700	132	832
		Urban	534	91	624	607	75	683
23.	Madhya Pradesh	Total	712	131	843	745	125	870
		Rural	768	141	909	779	135	914
		Urban	575	107	682	653	99	752
24.	Gujarat	Total	545	115	660	620	111	731
		Rural	597	126	723	650	12	772
		Urban	566	98	563	567	92	659
25.	Daman Diu	Total	404	75	479	600	106	706
		Rural	391	54	445	683	94	777
		Urban	429	115	544	513	120	633
26.	Dadra & Nagar Haveli	Total	581	66	647	68	76	764
		Rural	632	73	705	706	78	783
		Urban	432	45	477	521	57	578
27.	Maharashtra	Total	544	148	691	624	122	747
		Rural	612	184	796	681	145	825
		Urban	463	105	568	544	91	635
28.	Andhra Pradesh	Total	532	126	658	630	119	749
		Rural	556	138	694	646	131	777
		Urban	472	97	569	588	89	674
29.	Karnataka	Total	528	127	656	638	124	762
		Rural	566	142	708	674	137	810
		Urban	461	102	563	564	98	662
30.	Goa	Total	369	125	494	445	110	556
		Rural	361	137	498	452	120	573
		Urban	377	113	491	436	96	532
31.	Lakshadweep	Total	574	103	677	669	90	759
		Rural	612	97	709	681	82	763
		Urban	528	111	639	659	96	755
32.	Kerala	Total	411	165	576	485	144	630
		Rural	421	167	588	500	147	647
		Urban	383	160	543	446	136	582
33.	Tamil Nadu	Total	420	139	559	501	121	623
		Rural	450	148	598	524	129	653
		Urban	385	127	512	560	107	568
34.	Pondicherry	Total	417	129	546	510	118	628
		Rural	453	131	583	549	115	664
		Urban	400	128	527	489	120	609
35.	Andaman & Nicobar Islands	Total	448	75	522	606	57	662
		Rural	476	86	562	654	64	718
		Urban	394	53	446	487	39	526
	INDIA	Total	621	131	752	672	122	794
		Rural	678	141	819	710	132	841
		Urban	491	107	599	573	97	670

Note: In 1991, census could not be conducted in Jammu and Kashmir due to disturbed conditions.

* Dependency ratio is calculated as below:

Young - Number of persons in ages 0-14 per 1000 persons in age 15-59.

Old - Number of persons aged 60 and above per 1000 persons in age 15-59.

Total - Dependency ratio of young + Dependency ratio of old.

Source: Report and Tables on Age, Series – 1, India Census of India – 2001, Statement 2.6, pp. 20-21.

Urbanisation

As regards the trend of urbanisation in Haryana, the urban population was 17.67 per cent in 1971 which increased to 21.88 per cent in 1981, to 24.63 per cent

in 1991 and again to 29 per cent in 2001. The annual exponential rate of urban population was 4.67 per cent during 1971-1980 and 4.11 pre cent during 1991-2000.

In comparative terms, the urban population (as percentage of total population) of Haryana is lower as compared to Punjab (33.95 per cent), Gujarat (37.35 per cent), Maharashtra (42.40 per cent), Karnataka (33.98 per cent), and Tamil Nadu (43.86 per cent).

1.2.10 Regional Disparities

Balanced regional development of different parts of the state, extension of the benefits of economic progress to the less developed regions and widespread diffusion of industries are among the major aims of planned development. Successive Five Year Plans seek to realise these aims. Balanced regional development, as far as possible, must go together with fast economic growth if the latter has to be really meaningful. In striving for such a balance, certain inherent difficulties have to be met. Sometimes the sense of lagging behind in development may be due to inadequate or tardy development of specific fields such as agriculture, irrigation, power, industry, employment, education, etc. This is the case with the State of Haryana also where there are regions which are less developed than others.

As regards share of agriculture sector in the Net Domestic Product, there are wide inter-district disparities in the State. While in Haryana the overall share of agriculture sector to Net Domestic Product was 28.8 per cent in 2002-03, this sector's contribution in Fatehabad District was 59.9 per cent and only 9.4 per cent in Gurgaon District, 11.5 per cent in Faridabad District, 14.5 per cent in Panipat District and 14.9 per cent in Rewari District. In the districts of Rohtak, Yamuna Nagar, and Jhajjar the contribution was between 20 to 30 per cent. In Karnal, Sonipat and Mahendragarh Districts agriculture's contribution to Net Domestic Product was between 31 to 40 per cent. In Kurukshetra and Hisar Districts, agriculture contributed 42.3 per cent and 44.6 per cent, respectively. In the districts of Sirsa, Jind, Kaithal and Fatehabad, the contribution of agriculture sector to Net Domestic Product was more than 50 per cent. Similarly, there are disparities in Per Capita Income in various parts of the State. The highest per capita income of Rs.24,737 was that of Gurgaon District and the lowest per capita income of Rs.7,900 was that of Mahendragarh District in the year 2002-03.

There are regional disparities in the state as regards irrigation. During 2004-05, while in Kurukshetra and Panipat districts 100 per cent of the total cropped area is irrigated, in Panchkula district this percentage is as low as 48.9. In Karnal and Kaithal districts this percentage is 99.7. But in Mahendragarh, Bhiwani and Gurgaon districts it is only 60.6, 52.7 and 68.4 per cent, respectively. On the other hand it is 97.7 per cent in Sonipat, 97.4 per cent in Fatehabad, 91.5 per cent in Sirsa, 92.6 per cent in Jind, 91.8 per cent in Yamuna Nagar and 91.2 per cent in Ambala, 88.8 per cent in Faridabad, 85.8 per cent in Hisar, 82.3 per cent in

TABLE 1.111

Trends in Urbanisation in Haryana, 1901-2001

Census Year	*Total Number of UAs/ Towns*	*Total Population*	*Total Urban Population*	*Per cent Urban Population*	*Decennial growth*		*Annual Exponential Growth Rate*
					Absolute	*Per cent*	
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1901	53	4,623,064	574,074	12.42	-	-	-
1911	35	4,174,677	449,704	10.77	-124,370	-21.66	-2.44
1921	38	4,255,892	481,195	11.31	31,491	7.00	0.68
1931	40	4,559,917	564,743	12.38	83,548	17.36	1.60
1941	44	5,272,829	705,945	13.39	141,202	25.00	2.23
1951	56	5,673,597	968,494	17.07	262,549	37.19	3.16
1961	58	7,590,524	1,307,680	17.23	339,186	35.62	3.01
1971	61	10,036,431	1,772,959	17.67	470,000	35.58	3.04
1981	77	12,922,119	2,827,387	21.88	1,054,428	59.47	4.67
1991	90	16,463,648	4,054,744	24.63	1,227,357	43.41	3.61
2001	97	21,082,139	6,114,139	29.00	2,059,395	50.79	4.11

Source: *Census of India 2001*, Series 7, Haryana, Provisional Population Totals, Paper-2 of 2001, Statement E (i), p. 28, Director of Census Operations, Haryana.

TABLE 1.112

Urban Population in India and States/ Union Territories: 2001

Sr. No.	*India/State/ Union Territory*	*Per cent Urban Population*
	India	**27.78**
1.	Jammu and Kashmir	24.88
2.	Himachal Pradesh	9.79
3.	Punjab	33.95
4.	Chandigarh	89.78
5.	Uttaranchal	25.59
6.	**Haryana**	**29.00**
7.	Delhi	93.01
8.	Rajasthan	23.38
9.	Uttar Pradesh	20.78
10.	Bihar	10.47
11.	Sikkim	11.10
12.	Arunachal Pradesh	20.41
13.	Nagaland	17.74
14.	Manipur	23.88
15.	Mizoram	49.50
16.	Tripura	17.02
17.	Meghalaya	19.63
18.	Assam	12.72
19.	West Bengal	28.03
20.	Jharkhand	22.25
21.	Orissa	14.97
22.	Chhattisgarh	20.08
23.	Madhya Pradesh	26.67
24.	Gujarat	37.35
25.	Daman and Diu	36.26
26.	Dadra and Nagar Haveli	22.89
27.	Maharashtra	42.40
28.	Andhra Pradesh	27.08
29.	Karnataka	33.98
30.	Goa	49.77
21.	Lakshadweep	44.47
32.	Kerala	25.97
33.	Tamil Nadu	43.86
34.	Pondicherry	66.57
35.	Andaman and Nicobar Islands	32.67

Source: *Census of India 2001*, Series-7, Haryana, Provisional Population Totals, paper-2 of 2001, Statement-1, pp. XIV – XVII.

Rohtak district. While in Jhajjar district 76.5 per cent of the total cropped area is irrigated, it is only 81.6 per cent in Rewari district.

As regards industrialisation, recently the state government has declared 88 areas in the state as industrially backward. The areas declared backward are:

Ambala district:	Barara, Naraingarh and Shehzadpur.
Bhiwani district:	Badhra, Bawani Khera, Dadri-I, Dadri-II, Loharu, Tosham, Siwani and Kairu.
Faridabad district:	Hathin, Hodal, Palwal and Hassanpur.
Fatehabad district:	Bhattu Kalan, Bhuna, Fatehabad, Ratia and Tohana.
Gurgaon district:	Pataudi, Farukh Nagar, Taoru, Nuh, Nagina, Punhana and Ferozepur Jhirka.
Hisar district:	Adampur, Agroha, Narnaund, Uklana and Barwala.
Jhajjar district:	Beri, Jhajjar, Matenhel and Sahlawas.
Jind district:	Alewa, Jind, Julana, Narwana, Pillukhera, Safidon and Uchana.
Kaithal district:	Kaithal, Ghula, Kalayat, Pundri and Rajound.
Karnal district:	Assandh, Indri and Nissing.
Kurukshetra district:	Ladwa and Babain.
Mahendragarh district:	Narnaul, Nangal Choudhary, Ateli, Mahendragarh and Kanina.
Panchkula district:	Pinjore, Morni, Barwala and Raipur Rani
Panipat district:	Israna, Madlanda and Bapouli.
Rewari district:	Khol, Jatusana and Nahar.

TABLE 1.113

Share of Agriculture Sector to Gross State Domestic Product of Districts of Haryana and Per Capita Income of Districts at Constant (1993-94) Prices: 2002-03 (Provisional)

District	*Agriculture (%)*	*Per Capita Income (Rs.)*	*Rank as per Per Capita Income*
Fatehabad	59.9	13213	10
Sirsa	57.9	12932	12
Jind	52.3	11623	15
Kaithal	50.0	12106	14
Bhiwani	48.0	10805	17
Hisar	44.6	14441	8
Kurukshetra	42.3	11463	16
Mahendragarh	35.4	7900	19
Karnal	34.4	14852	6
Sonipat	31.5	13099	11
Jhajjar	30.0	10615	18
Rohtak	26.5	12123	13
Yamuna Nagar	24.7	14058	9
Panchkula	17.4	15527	5
Ambala	16.4	19637	3
Rewari	14.9	18270	4
Panipat	14.5	21410	2
Faridabad	11.5	14837	7
Gurgaon	9.4	24737	1
Haryana	**28.8**	**14712**	

Source: Economic and Statistical Organisation, Haryana.

Rohtak district:	Rohtak, Kalanaur, Lakhan Majra, Meham and Sampla.
Sirsa district:	Baragndha, Dabwali, Ellenabad, Nathusari Chopta, Odhan, Rania and Sirsa.
Sonipat district:	Kharkhoda, Gohana, Mundlana and Kathura.
Yamuna Nagar district:	Sadhaura, Chhachhrauli, Bilaspur and Mustafabad.

TABLE 1.114

Gross Area Irrigated and Total Cropped Area by Districts in Haryana during 2004-05

(Hectares)

District	*Gross irrigated Area*	*Percentage to State Total*	*Percentage of Gross Area Irrigated to State Total Cropped Area*	*Irrigation Intensity (Gross Irrigated Area x 100/ Net Irrigated Area)*	*Percentage of Gross Area Irrigated to District Total Cropped Area*
Ambala	183812	3.4	2.9	158.7	91.2
Panchkula	21697	0.4	0.3	529.2	48.9
Yamuna Nagar	186545	3.4	2.9	165.4	91.8
Kurukshetra	276931	5.1	4.3	184.1	100.0
Kaithal	375950	6.9	5.9	191.3	99.7
Karnal	387008	7.1	6.0	198.0	99.8
Panipat	185731	3.4	2.9	200.4	100.0
Sonipat	271421	5.0	4.2	193.2	97.7
Rohtak	182843	3.4	2.8	138.5	82.3
Jhajjar	178980	3.3	2.8	180.6	76.5
Faridabad	239623	4.4	3.7	204.4	88.8
Gurgaon	197074	3.6	3.1	218.2	68.4
Rewari	155770	2.9	2.4	142.3	81.6
Mahendragarh	150155	2.8	2.3	124.3	60.6
Bhiwani	429685	7.9	6.7	149.8	52.7
Jind	431215	7.9	6.7	193.4	92.6
Hisar	529933	9.8	8.2	233.5	85.8
Fatehabad	411446	7.6	6.4	200.8	97.4
Sirsa	638189	11.7	9.9	190.3	91.5
Total	5434008	100.0	84.6	183.9	84.5

Source: Director, Land Records, Government of Haryana, Chandigarh.

There are regional disparities in the industrial development of various parts of the State. While as on July 2006 there were 2564 registered working factories employing 1,84,424 workers in Faridabad District, there were only 60 such factories employing 4,250 workers in Mahendragarh District. The lowest number of industrial workers is in Kaithal District where 124 factories employed 2,715 workers. Similarly in Kurukshetra District 3,183 workers were employed in 168 working factories, in Fatehabad 3,723 workers were employed in 117 factories. On the other hand, 1,38,383 workers were employed in 1,278 factories in Gurgaon District and about 40,000 workers in 1264 factories in Yamuna Nagar District. In Panipat District 37,821 workers were employed in 742 factories, in Sonipat District 32,088 workers were employed in 561 factories and in Karnal District 28,020 workers are employed in 463 factories.

TABLE 1.115

Number of Registered Factories and Workers Employed in Haryana: July 2006

(Provisional)

District	*Number of registered working factories*	*Estimated number of workers employed in working factories*
Faridabad	2564	184424
Gurgaon	1278	138383
Yamuna Nagar	1264	40093
Panipat	742	37821
Sonipat	561	32088
Karnal	463	28020
Jhajjar	390	19951
Ambala	411	14855
Rewari	147	15008
Rohtak	265	15615
Jind	158	13105
Bhiwani	114	12835
Hisar	346	12540
Panchkula	138	11325
Sirsa	123	6857
Mahendergarh	60	4250
Fatehabad	117	3723
Kurukshetra	168	3183
Kaithal	124	2715
Total	9433	5,96,791

Source: O/o the Labour Commissioner, Government of Haryana, Chandigarh

As on 31 March 2006, there were 1271 large and medium units employing 2,20,498 workers in the state. On the one extreme was Gurgaon district with 420 units employing 52,367 worker producing goods worth Rs.21,305 crore, the other extreme was that of Kaithal, Fatehabad and Mahendragarh districts with 5,4 and 2 units, respectively.

Another indicator of regional disparities is the percentage of urban population. As is apparent from Table 1.117, 55.63 per cent population of Faridabad district lives in urban areas, followed by Panchkula (44.47 percent), Panipat (40.51 percent) and Yamuna Nagar (40 percent) districts. On the other hand the urban population of Mahendragarh district is only 13.46 percent followed by Fatehabad (17.63 per cent), Rewari (17.82 percent), Bhiwani (18.97 per cent) and Kaithal (19.36 per cent) districts.

Regional disparities can also be observed in respect of the type of house hold structures, house hold amenities and other assets in the State. While in Mahendragarh and Rewari Districts almost 94 per cent

houses have permanent structure, in Bhiwani District only 7.5 per cent houses have permanent structure. In Faridabad District almost 88 per cent houses have permanent structure followed by Gurgaon (86 per cent), Jhajjar (78 per cent), Panchkula (76 per cent), and Ambala (74 per cent) as against this the lesser equipped districts are Jind (22.6 per cent), Kaithal (38.4 per cent) and Hisar (48.5 per cent).

TABLE 1.116

District-wise Status of Large and Medium Units in Haryana: As on 31 March 2006

District	*Number of Units*	*Investment (Rs. in Crores)*	*Employment*	*Production (Rs. in Crores)*
Gurgaon	420	4729.5356	52367	21305.2124
Faridabad	254	3017.1453	57809	5791.4138
Sonipat	140	995.5950	19509	2125.0492
Rewari	91	865.7870	12815	8689.5798
Panipat	77	9655.8892	10412	5326.2058
Jhajjar	51	432.5874	7358	1321.8964
Hisar	45	873.8263	9117	1473.8652
Rohtak	32	268.6574	5637	337.3206
Panchkula	29	250.6936	8832	454.5845
Karnal	24	154.7288	3542	376.2629
Jind	22	269.5572	4453	282.1270
Bhiwani	19	263.6601	4765	335.4856
Yamuna Nagar	18	1029.1323	17559	581.4113
Sirsa	15	88.8006	2331	896.0561
Kurukshetra	13	97.2436	1946	231.5970
Ambala	10	61.3000	675	70.5636
Kaithal	5	22.6383	227	21.9991
Fatehabad	4	111.6656	1144	544.9649
Mahendergarh	2	206.00	NA	16.00
Total	1271	23190.5033	220498	50181.5952

Source: Department of Industries, Government of Haryana, Chandigarh

Regional disparities can also be observed in respect of rate of growth of population, sex ratio, population density, percentage of 0-6 years, age-group in total population, sex ratio of 0-6 years age-group of population, literacy rates and the percentage of workers in total population. This information is presented in Table 1.119. While Mahendragarh District had the lowest rate of growth of population (19.16 per cent) during the period 1991-2000, the highest rate was in Panchkula District (51 per cent) followed by Faridabad District (49 per cent) and Yamuna Nagar District (29 per cent). The highest sex ratio was recorded in Mahendragarh District (918) and the lowest in Panchkula District (823). During the same year, the lowest population density was in Sirsa District (261) followed by Bhiwani District (298). On the other hand, it was 1,020 in Faridabad District and 763 in Panipat District. In the year 2001 20 per cent of the total population in Gurgaon District was in 0-6 age-group

TABLE 1.117

Ranking of Districts by Percentage of Urban Population 1991 and 2001

District	*Percentage Urban Population*			*Rank in 1991*
	2001	*Rank in 2001*	*1991*	
Faridabad	55.63	1	48.57	1
Panchkula	44.47	2	35.82	2
Panipat	40.51	3	30.02	6
Yamuna Nagar	40.00	4	35.35	4
Ambala	35.19	5	35.44	3
Rohtak	35.06	6	32.63	5
Karnal	26.56	7	25.11	7
Sirsa	26.36	8	21.16	10
Kurukshetra	26.06	9	23.03	9
Hisar	25.90	10	23.70	8
Sonipat	25.13	11	20.14	12
Gurgaon	22.28	12	20.30	11
Jhajjar	21.98	13	13.90	18
Jind	20.34	14	16.88	14
Kaithal	19.36	15	15.43	17
Bhiwani	18.97	16	16.90	13
Rewari	17.82	17	15.59	16
Fatehabad	17.63	18	15.53	15
Mahendragarh	13.46	19	12.41	19
Haryana	29.00		24.63	

Source: *Census of India – 2001,* Haryana, Series-7, Provisional Population Totals, Paper 2 of 2001, Statement 3, p. 202.

followed by Faridabad (17.38 per cent) and Fatehabad (16 per cent). On the other hand, it was only 13.25 per cent in Ambala District, about 14 per cent in Panchkula District, 14.2 per cent in Kurukshetra District, 14.4 per cent in Yamuna Nagar District and 14.5 per cent in Rohtak District. Sex ratio wise, in the age-group of 0-6 years the lowest sex-ratio was recorded in Kurukshetra District (771) followed by Kaithal District (791). The ratio was the highest in Gurgaon District (858) followed by Faridabad District (850).

As regards the literacy rates, the highest rate was observed in Ambala District (75.31 per cent) followed by Rewari District (75.25 per cent), Panchkula District (74 per cent), Rohtak District (73.7 per cent), Jhajjar District (72.4 per cent), Sonipat District (72.8 per cent), Yamuna Nagar District (71.6 per cent) and Faridabad District (70 per cent). The lowest literacy rate of about 58 per cent was observed in Fatehabad District followed by Sirsa District (60.5 per cent), Hisar District (65 per cent) and Bhiwani District (67.4 per cent). Regional disparities in the State of Haryana can also be observed in terms of gaps in male-female literacy rates, both in rural and urban areas. From Table 1.120 it can be seen that the highest male-female literacy gap exists in Mahendragarh District (30.64 per cent) followed by Gurgaon District (28.39 per cent), Rewari District

TABLE 1.118

Data on Houses, Household Amenities and Assets

State/ District	% Distribution of households by type of structure		% Distribution of Housholds by Source of Drinking Water				% Distribution of households by source of lightening Electricity	% of households having no Latrine	% of Households by type of fuel used			% of households using Banking Facility	% of Households by availability of Assets		
	Permanent	Semi Permanent	Tap	Hand Pump	Tube Well	Well			Fire-, wood, Crop residue Cow-dung cake	LPG	Kerosene		Tele-vision	Tele-phone	Car, Jeep, Van
Haryana	**65.78**	**28.25**	**48.14**	**31.70**	**6.22**	**11.71**	**82.97**	**55.50**	**65.25**	**30.23**	**3.53**	**45.23**	**52.98**	**12.72**	**4.26**
Panchkula	76.00	17.20	80.29	8.48	1.62	5.88	87.62	43.57	36.53	52.47	10.20	60.18	67.63	29.95	15.10
Ambala	73.90	19.60	56.55	37.96	1.65	3.18	92.19	51.10	50.51	43.80	4.51	51.04	71.57	25.31	4.84
Yamuna Nagar	65.80	22.70	39.92	54.14	1.67	2.51	89.32	50.81	59.83	33.60	4.89	50.62	66.28	17.92	3.97
Kurukshetra	67.40	27.80	58.78	35.46	4.61	0.09	92.21	54.01	63.29	31.97	3.13	49.79	69.56	17.96	3.97
Kaithal	38.40	58.50	33.59	52.84	5.20	6.86	83.55	68.34	82.03	15.26	1.76	41.59	49.19	8.13	2.34
Karnal	55.30	40.00	47.39	46.31	2.98	1.40	84.25	55.45	62.16	33.85	2.81	41.18	62.03	13.70	3.94
Panipat	60.80	35.80	45.67	42.23	6.99	2.59	87.65	47.78	53.30	38.69	6.71	41.41	56.27	14.40	4.32
Sonipat	57.30	41.00	35.21	33.01	8.16	20.56	88.31	59.29	56.99	39.62	2.56	48.24	57.08	10.95	3.07
Jind	22.60	76.10	30.94	36.75	4.93	26.38	83.61	72.54	78.99	19.50	0.76	36.26	45.11	9.88	2.08
Fatehabad	56.40	29.10	46.16	40.43	8.44	1.71	77.82	51.47	82.00	15.53	1.54	32.50	41.10	8.77	3.33
Sirsa	59.30	15.70	64.43	22.67	5.72	0.41	73.94	25.19	78.61	18.04	2.42	30.97	46.98	11.21	4.23
Hisar	48.50	46.20	54.34	27.14	2.87	13.35	81.89	54.96	72.84	24.65	1.86	37.65	46.46	9.50	3.11
Bhiwani	7.50	25.60	55.44	9.22	12.41	21.55	83.19	64.52	79.74	18.53	1.17	44.44	41.19	6.92	2.34
Rohtak	57.60	40.00	36.23	27.67	2.89	31.85	90.74	54.06	59.17	38.37	1.53	44.11	54.76	13.88	3.56
Jhajjar	78.30	19.80	29.88	33.65	6.55	27.54	87.15	68.04	69.44	27.86	1.53	52.00	56.90	7.81	2.66
Mahendragarh	93.80	3.70	49.41	5.03	24.47	18.14	76.57	75.39	83.49	15.33	0.56	55.86	37.35	4.67	2.23
Rewari	93.60	3.90	57.30	16.13	10.68	11.92	81.42	65.89	69.92	26.82	2.21	61.05	48.73	7.12	2.51
Gurgaon	86.00	5.90	49.34	24.00	7.38	18.15	69.17	57.88	61.48	34.00	3.75	51.21	46.06	13.78	7.74
Faridabad	87.90	7.30	52.78	37.00	3.72	4.29	78.77	43.46	46.71	42.14	9.99	45.60	54.77	15.55	6.87

Source: *Census of India – 2001*, Haryana, Data Sheet, Directorate of Census Operations, Haryana, p. 3.

TABLE 1.119

Population Data Sheet, 2001

State/ Districts	Number of			% Decadal Variation 1991-2000	Sex Ratio	Population Density	% of Distt. Pop to State	% of 0-6 to Total Population	Sex Ratio 0-6	% of SC to Total Population	Literacy rates %			% of Total Workers to Total Population		
	Tahsils	Villages	Towns								P	M	F	P	M	F
Haryana	**67**	**6955**	**106**	**28.43**	**861**	**478**	**-**	**15.77**	**819**	**19.35**	**67.91**	**78.49**	**55.73**	**39.62**	**50.30**	**27.22**
Panchkula	2	236	4	50.91	823	522	2.22	14.09	829	15.51	74.00	80.87	65.65	38.14	54.54	18.22
Ambala	3	493	6	25.78	868	644	4.80	13.25	782	25.09	75.31	82.31	67.39	31.99	50.95	10.16
Yamuna Nagar	2	639	11	29.19	862	589	4.93	14.40	806	24.53	71.63	78.82	63.39	32.31	50.10	11.66
Kurukshetra	3	416	4	23.32	866	540	3.90	14.20	771	20.52	69.88	78.06	60.61	37.36	51.19	21.40
Kaithal	2	270	4	21.02	853	408	4.47	15.38	791	21.55	59.02	69.15	47.31	39.32	50.87	25.79
Karnal	5	434	7	23.06	865	506	6.03	15.12	809	20.99	67.74	76.29	57.97	35.74	50.18	19.05
Panipat	3	192	6	38.58	829	763	4.58	16.39	809	15.79	69.17	78.50	57.97	39.57	51.03	25.75
Sonipat	4	336	4	22.39	839	603	6.05	15.36	788	18.09	72.79	83.06	60.68	40.89	49.65	30.44
Jind	4	307	5	21.36	852	440	5.63	15.76	818	19.82	62.12	73.82	48.51	43.87	51.56	34.85
Fatehabad	3	243	4	24.76	884	318	3.81	16.09	828	27.43	57.98	68.22	46.53	45.03	54.42	34.40
Sirsa	4	325	5	23.59	882	261	5.28	15.02	817	26.65	60.55	70.05	49.93	42.59	53.05	30.73
Hisar	4	275	5	27.11	851	386	7.27	15.47	832	21.99	64.83	76.57	51.08	43.30	51.87	33.22
Bhiwani	6	444	6	22.49	879	298	6.74	15.73	841	19.61	67.45	80.26	53.00	42.76	49.24	35.38
Rohtak	2	147	3	21.00	847	539	4.45	14.51	799	19.10	73.72	83.23	62.59	39.47	49.33	27.83
Jhajjar	3	260	5	23.06	847	480	4.16	14.97	801	17.79	72.38	83.27	59.65	44.17	51.38	35.66
Mahendragarh	2	370	5	19.16	918	428	3.84	15.77	818	16.31	69.89	84.72	54.08	43.31	48.00	38.20
Rewari	3	410	4	25.34	899	480	3.62	15.23	811	18.87	75.25	88.45	60.83	43.59	49.72	36.77
Gurgaon	7	726	12	44.87	873	612	7.85	20.08	858	11.32	62.91	76.17	47.78	37.92	46.84	27.72
Faridabad	5	432	6	48.56	839	1020	10.38	17.38	850	14.16	70.03	81.52	56.31	35.80	48.32	20.90

Source: *Census of India – 2001*, Haryana, Data Sheet, Directorate of Census Operations, Haryana, p. 4.

TABLE 1.120

District-wise Literacy Rate, 2001

Districts	Literacy Rate			Female Literacy Rate			Male Female Gap in Literacy			S. C. Literacy		
	T	R	U	T	R	U	T	R	U	T	R	U
Panchkula	74.00	66.62	82.91	65.65	55.39	77.47	15.22	20.10	10.14	63.43	61.58	67.42
Ambala	75.31	69.63	85.47	67.39	60.25	80.48	14.92	17.80	9.26	63.16	61.72	68.92
Yamuna Nagar	71.63	65.35	81.67	63.39	55.32	76.37	15.43	18.81	9.89	62.88	62.18	65.62
Kurukshetra	69.88	65.88	80.86	60.61	55.64	74.51	17.45	19.37	11.81	56.94	56.80	60.96
Kaithal	59.02	55.78	72.33	47.31	43.25	63.90	21.84	22.75	15.77	44.68	43.67	50.38
Karnal	67.74	63.16	80.02	57.97	52.01	73.96	18.32	20.91	11.35	53.78	52.24	59.96
Panipat	69.17	64.23	76.24	57.97	50.48	68.84	18.32	13.46	25.33	56.69	55.80	58.99
Sonipat	72.79	70.09	80.64	60.68	56.59	72.50	22.38	24.91	15.14	62.33	61.50	65.32
Jind	62.12	58.55	75.87	48.51	43.93	65.96	25.31	27.13	18.55	48.95	47.37	57.31
Fatehabad	57.98	54.56	73.61	46.53	42.23	66.27	21.79	23.38	13.90	41.01	39.49	39.96
Sirsa	60.55	55.82	73.58	49.93	44.09	66.07	20.12	22.24	14.18	41.39	39.49	48.13
Hisar	64.83	60.16	77.77	51.08	44.54	69.31	25.59	29.00	15.65	49.83	47.84	57.34
Bhiwani	67.45	65.25	76.62	53.00	49.72	66.90	20.64	29.38	18.12	56.26	55.59	59.05
Rohtak	73.72	69.53	81.26	62.59	55.87	74.48	19.64	25.20	12.71	59.46	58.62	61.32
Jhajjar	72.38	70.36	79.42	59.65	56.72	70.10	23.62	25.42	17.02	62.51	60.88	69.08
Mahendragarh	69.89	68.57	78.19	54.08	52.18	66.35	30.64	25.42	22.47	63.64	63.27	66.49
Rewari	75.25	73.70	82.25	60.83	58.24	73.04	27.62	29.82	17.10	68.69	68.09	71.82
Gurgaon	62.91	57.09	81.71	47.78	39.79	73.77	28.39	32.52	14.84	63.98	63.19	66.37
Faridabad	70.03	58.36	78.80	56.31	39.17	69.54	25.21	35.71	15.86	55.85	54.59	57.58

Note: T = Total R = Rural U = Urban

Source: Compiled from Population Data Sheet, *Census of India-2001*, Haryana, Director of Census Operations, Haryana.

(27.62 per cent), Hisar District (25.59 per cent), Jind District (25.31 per cent) and Faridabad District (25.21 per cent). The lowest male-female gap has been observed in Ambala District (14.92 per cent) followed by Panchkula District (15.22 per cent) and Yamuna Nagar District (15.43 per cent). Similar trends can be observed in respect of rural and urban areas and other literacy rates. Wide disparities in literacy rate in the state can be observed from Table 1.120.

Lastly, it is necessary to emphasise that the sharply declining sex ratio in the State is a matter of serious concern. It is important to identify the specific areas of the State where the problem is particularly alarming. It needs to be tackled with appropriate, effective and sustainable measures. This problem cannot be approached simply in terms of raising literacy rates and providing pecuniary incentives. The Census 2001 data on sex ratio and literacy rates pertaining to 67 *Tehsils* of Haryana brings out the fact that sex ratio and literacy rate are rather, inversely related. For instance, the sex ratio has been recorded the highest in respect of *Tehsils* of Punahana (910) and Ferozepur Jhirka (902) even as these have the lowest literacy rates, 37.58 per cent and 40.61 per cent, respectively.

The data pertaining to 67 *Tehsils* of Haryana has been presented by cross-classifying these *Tehsils* by sex ratio and literacy rate in Table 1.121. The table highlights the fact that as we come across areas (*Tehsils*) of population having increasing levels of sex ratio, these areas tend to include low-literacy areas in an increasing proportion, and high-literacy areas in a decreasing proportion. This intriguing phenomenon needs to be intensively probed to find out the underlying reasons.

TABLE 1.121

Tehsil of Haryana Cross-classified by Levels of Sex-ratio and Literacy Rate

Sex Ratio	Number	Literacy Rate	
		Upto less than 65 (Low)	65 and above (High)
Upto 800	21 (100)	3 (14.29)	18 (85.71)
801-830	23 (100)	9 (39.13)	14 (60.87)
831-860	13 (100)	7 (53.85)	6 (46.15)
861 and above	10 (100)	8 (80.00)	2 (20.00)
All Tehsils	67	27	40

Note: Figures in parentheses specify percentage.

Source: Census 2001 data on sex ratios and literacy rates for 67 *Tehsils of Haryana*, Series-7, Provisional Population Totals, Paper 2 of 2001, Statement 5 (pp.204-05) and Statement 7 (pp.208-9).

In an excellent recent study, Ram and Shekhar (2006) have computed a composite index of Indian districts on the basis of the following 13 key indicators of development:

i) The proportion of population (0-6),
ii) Birth order 3 and above,
iii) Percentage of births age below 20,
iv) Female literacy rate,
v) Under 5 mortality,
vi) Percentage of households using safe drinking water,
vii) Percentage of households having toilet facility,
viii) Percentage of electrified households.

(For the estimation of these 8 indicators the data from Census of India, 2001 is used)

ix) The coverage of ante-natal check-up,
x) Percentage of women receiving at least two TT (tetanus toxoid) injections,
xi) Level of complete immunization coverage,
xii) Level of dropout from complete immunization, and
xiii) Contraceptive prevalence rate.

(For theses indicators data from District Level Household Survey, 2002-04, is used).

This composite index 'reflects a concise level of development of a district with respect of socio-economic and demographic characteristics of the population'. A district having a higher value of index gets higher rank. This ranking identifies the relative backwardness of a district in the state/country. Table 1.122 presents the ranking of the districts in relation to the state and the country. From this table the regional imbalances in the state of Haryana are crystal clear.

Among the 100 most developed districts in the country includes 3 districts (out of 19 districts) from Haryana, 12 districts (out of 17 districts) from Punjab, 23 districts (out of 30 districts) from Tamil Nadu, 6 districts (out of 9 districts) from Delhi, 3 districts (out of 24 districts) from Gujarat, 5 districts (out of 11 districts) from Himachal Pradesh, 11 districts (out of 27 districts) from Karnataka, 12 districts (out of 14 districts) from Kerala and 9 districts (out of 35 districts) from Maharashtra.

TABLE 1.122

Ranking of Districts based on Composite Index of Socio-Economic Development

Rank in India	*Rank in Haryana*	*District*	*Value of the Composite Index*
26	1	Ambala	0.79303
60	2	Panchkula	0.74723
70	3	Kurukshetra	0.74217
129	4	Yamunanagar	0.69142
131	5	Rohtak	0.68889
155	6	Karnal	0.66584
176	7	Jhajjar	0.64561
179	8	Rewari	0.64302
183	9	Panipat	0.63930
184	10	Hisar	0.63832
207	11	Sonipat	0.61799
210	12	Fatehabad	0.61657
216	13	Sirsa	0.61282
218	14	Faridabad	0.60967
245	15	Bhiwani	0.58635
263	16	Jind	0.57337
271	17	Mahendragarh	0.56588
279	18	Kaithal	0.55860
367	19	Gurgaon	0.48243

Source: Compiled from Ram and Shekhar (2006).

1.3. Conclusion

During the period 1980-2000, the State Domestic Product of Haryana grew at the highest growth rate of 7.80 per cent at constant prices in the country as against all India's 5.66 per cent. The secondary sector grew at the rate of 12.58 per cent as against all India's 6.93 per cent. The growth rate of per capita SDP at constant prices was 5.32 per cent as against all India's 3.54 per cent. Since 2002-03, Haryana's per capita NSDP at current prices has been the highest among major states of the country.

Agriculture can occasionally be a leading sector in economic growth, either on the basis of a spurt in agricultural productivity or on the basis of cash-crop exports. In the case of Haryana, agricultural productivity led growth occurred in one major historical period, the Green Revolution, dated from 1965-66 to the early 1980s. The green revolution was centered on short stemmed, high yield wheat, and to a lesser extent paddy rice, with both crops depending on irrigation and intensive application of fertiliser. Haryana, alongwith Punjab, was the epicentre of the green revolution in India.

The agricultural sector in the State has a direct bearing on over all growth, income levels and well being of the people. Changes in agricultural productivity overtime in the State is good index of the progress made in this vital sector by the State, and the consequent fall out on the State's economy. Haryana recorded very high rate of growth in land yield/ agricultural productivity. The trend in increase in agricultural productivity of the State corresponds fairly closely to the trend of rapid decrease in population below the poverty line of the State.

The high rate of economic growth in the State has been accompanied by a reduction in poverty. There has been an appreciable decline in the percentage of population below the poverty line from over 35 per cent in the 1970s to less than 9 per cent in the late 1990s. An encouraging trend that emerged between 1993-94 and 1999-2000 in the State is that rural poverty decreased much faster than urban poverty. There have been improvements in the social indicators as well. The literacy rate has increased from almost 26 per cent in 1971 to about 68 per cent in 2001. According to the Human Development Report of the Planning Commission, Haryana has been moving up steadily in the national comparative ranking of human development from 16th rank in 1991 to 5th rank in 2001.

At the time of formation of the State in 1966, Haryana had only 162 large and medium units and about 5000 small scale industries. Now in 2005-06 the large and medium industries have grown to 1260 and the small scale industries are about 80,000. The export which was only Rs.4.5 crores in 1966 has crossed Rs.20,000 crores in 2004-05.

The State of Haryana has been able to attract sizeable investment from multinational companies, large business houses, foreign investors, non-residents Indian and small scale entrepreneurs. Haryana is an investor friendly State and offers a rich reservoir of skilled, motivated and relatively low cost manpower with a good infrastructure and harmonious industrial relations.

Haryana currently produces 75 per cent of passenger cars, 60 per cent of tractors, 70 per cent of motor cycles and 50 per cent of refrigerators manufactured in the country. About 25 per cent of India's total production of sanitary ware is from Haryana. One out of every four bicycles in the country is manufactured here. The number of large and medium units in the State has increased from 162 in 1966 to 1260 in 2005 with a capital investment of Rs.220 billion while employing 2 lakhs persons and producing goods worth Rs.12800 crores.

Infrastructure investment influences agricultural productivity, non-agricultural productivity and non-agricultural employment. These, in turn, impact upon rural economic growth and wages and employment of the poor, thereby affecting their real income or consumption levels. Haryana has developed an excellent infrastructure.

The relationship between education and measures of well being is born out by theory and history. Labour is essentially the only source of income for the poor. Hence, increasing the productivity of labour through education provides sustainable means of poverty reduction. Recognizing this fact, Haryana has made significant expansion in education sector.

A reduction of gender inequality in access to resources and opportunities leads to an increase in the rate of economic growth, which, in turn, is poverty reducing. This is because greater gender equality enables women to take up income earning opportunities, and participate in the growth process. Gender disparities are very closely associated with poverty levels. For example, improving women's access to education or land in rural areas is likely to lead a significant increase in agricultural productivity. In addition, lower gender disparities increase women's power to allocate family resources. This benefits children's health and education, inducing a reduction in inter-generational poverty. Furthermore, gender equality in access to education helps to reduce infant mortality and fertility. Significant steps have been taken in this direction in Haryana and its women are much more empowered now than in the 1960s or 1970s. But the declining sex ratio in the State is of particular concern.

The infant mortality rate (IMR) is considered to be a sensitive indicator of not only the health status of the population but also the level of human development in the context of education, economic conditions, nutrition etcetera. Poverty, malnutrition, a decline in breast feeding and inadequacy or lack or sanitation are all associated with high infant mortality. High infant mortality and high fertility are related concepts. Haryana has registered declining infant mortality rates over the period 1971-2001. But there is cause for concern over the higher IMR for females than males in Haryana.

Life expectancy at birth or longevity is an overall indicator of the economic and social well being of the people. As a society advances, the life expectancy of its people also increases. Haryana is one of the top four states, after Kerala, Punjab and Maharashtra, in this regard.

Balanced regional development of different parts of the state, extension of the benefits of economic progress to the less developed regions and widespread diffusion of industries are among the major aims of planned development. Successive Five Year Plans seek to realise these aims in larger measure. Expansion of the economy and more rapid growth increase progressively the capacity to achieve a better balance between state and regional development. In striving for such a balance, certain inherent difficulties have to be met. Sometimes the sense of lagging behind in development may be due to inadequate or tardy development of specific fields such as agriculture, irrigation, power, industry, employment, education, etc. This is the case with the State of Haryana also where there are regions which are less developed than others.

But still there is much more growth potential in Haryana than has been achieved to date.

Chapter 2

Resource Assessment

2.0 Analysis of Status and Prospects of Natural Resources

Natural resource constitutes the base on which development takes place particularly at the initial stage. It is almost impossible to imagine any worthwhile development process to begin and pick-up without the availability of some natural resource. Of course, technological advancement plays a crucial role in translating the potential of any natural resource, particularly renewable resource, into development, and more significantly, sustainable development.

The success of development programmes depends, among so many things, on a correct knowledge and assessment of natural resources as well as the extent to which these can be exploited. This facilitates the setting of realistic targets. As technological advancement occurs, over time, new resource possibilities emerge and the prospects signalled by these resources increase. Thus, a review of resource endowment and its potential, from time to time, assumes significance in a fast changing knowledge scenario.

2.1 Natural Resources

The climate of the State is sub-tropical, semi-arid, continental and monsoonal and is characterised by four seasons namely dry hot summer season from March to June, rainy season from July to September, moderately warm post-monsoon season from October to mid November and cold season from mid November to February.

The State receives an average rainfall of about 650 mm. The average annual rainfall varies from less than 300 mm in the western and south western parts of Sirsa, Hisar and Bhiwani districts along the Rajasthan border to over 1000 mm in the north-eastern Shiwalik hilly tracts of Panchkula and Yamunanagar districts along the Himachal Pradesh border. Of the total annual rainfall 73 per cent to 79 per cent comes in summer monsoon season (July to September), 4 to 9 per cent in June and during March to May, 2 to 3 per cent in October to November, and 7 to 9 per cent during winter months of December to February. The receipt of rainfall is highly uncertain in time and space as the coefficient of variation even in the monthly rainfall for the monsoon months of July to August is about 50 per cent.

Average temperature in the State increases from south-west to north-east. The summer months are very hot with maximum temperature ranging from 40^{o} to 45^{o} C in May and June. Winter months are fairly cool. There are sometimes freezing temperatures during the nights of December and January. The daily and seasonal ranges of temperature are high. Occasionally frost occurs in the months of December to February. The mean monthly temprature is 20^{o} C in eight months in a year from less than 15^{o} C in January. It normally rises to 34.5^{o} C in June in the SW and above 33^{o} C in NE. Hisar and adjoining areas are the hottest in summer and the coldest in the winter season.

Owing to high temperature in the State the relative humidity remains low from March to June (41-58 per cent), high during July to September (73 per cent to 84 per cent) and medium from October to March (61 to 83 per cent). The State experiences gusty winds, dust storms and thunderstorms during March to June. The wind velocity recorded at Ambala and Hisar shows that from October to September, it is higher (6.7 to 10.6 km/h) around Hisar than around Ambala (6.1 to 7.1 km/hr) but during post-monsoon and winter season it is lower at Hisar than at Ambala.

Haryana is an agrarian State wherein about 85 per cent of its area is under cultivation, engaging about 78 per cent

of its population in agriculture. The climate of the State ranges from dry sub-humid to hot arid. Major part of the State falls under the most fertile tract of lndo-Gangetic alluvial plain. Soil temperature regime is Hyperthermic and the soil moisture regimes are ustic and aridic. Haryana has 3 main climatic regions having average annual rainfall and air temperature as under:

Climatic Region	*Mean Rainfall (mm)*	*Mean Temperature ('C)*
Hot Arid Region	300 - 500	27
Hot Semi Arid Region	500 - 750	26
Hot Sub-Humid Region	750 - 1050	24

Based on the soil, physiography, bio-climate and length of growing period, the State has been divided into eight agro-ecological zones as described below:

ZONE 1: This zone covers western parts of Sirsa district and is characterised by an Aeolian plain topography. The climate is hot and dry with annual rainfall of about 300 to 350 mm, and growing period of less than 60 days.

ZONE 2: This zone covers maximum area of the State extending over parts of Sirsa, Fatehabad, Hisar, Bhiwani and Jhajjar districts. The geomorphology of the region comprises of aeofluvial plain, having hot and dry climate. The annual rainfall varies from 300 to 450 mm with growing period of 60 to 90 days.

ZONE 3: This zone covers southern parts of the State covering districts of Mahendragarh, Rewari and Gurgaon. The topography of the region is represented by rugged hilly terrain of Aravalli ranges. The climate is hot and semi-arid with annual rainfall of about 350 to 500 mm and growing period of less than 90 to 120 days.

ZONE 4: This zone extends over parts of central and eastern Haryana covering the districts of Karnal, Kaithal, Panipat, Jind, Rohtak, Sonipat and Faridabad. Topography of the region belongs to alluvial plain with Yamuna alluvial plain covering majority of the areas along the eastern parts of the State. The climate is hot and semi-arid with annual rainfall of 450 to 600 mm and growing period of less than 90 to 120 days.

ZONE 5: This is a small zone in the alluvial plains covering parts of Kurukshetra and Karnal districts. The climate is hot and semi-arid with annual rainfall between 600 to 700 mm, and growing period of less than 120 to 150 days.

ZONE 6: This zone covers part of alluvial plain developed by river Tangri, Markanda and Yamuna and their tributaries in the districts of Ambala, Kurukshetra and Yamunanagar. The climate is dry sub-humid with annual rainfall between 700 to 1000 mm and growing period of less than 150 to 180 days.

ZONE 7: This is a narrow zone covering parts of alluvial plain and piedmont plains south of the foothill zone of Shiwalik ranges in the districts of Panchkula and Yamunanagar. The climate is dry sub-humid with rainfall between 800 to 1000 mm and growing period of less than 180 to 210 days.

ZONE 8: This zone covers northern parts of the State in the districts of Panchkula, Ambala and Yamunanagar. The area is characterised by Shiwalik ranges with dry to moist sub-humid climate. The rainfall varies between 1000 to 1200 mm and growing period 180 to 210 days.

2.1.1 Soil Conservation

Out of total geographical area of 44.23 lakh hectares in the State, about 50 per cent area is severely affected with the problems of erosion, alkalinity, salinity and water logging. Soil erosion occurs mainly due to water and wind. The soil erosion through water occurs mainly in the areas falling in Shivalik foothills and in Aravalli ranges. It is estimated that about 5.50 lakh hectare area is affected with this problem. About 12 lakh hectare area is affected with wind erosion which occurs mainly in sandy and dry belt areas of the State. An area of 2.32 lakh hectares is affected with the problem of alkalinity and 2.55 lakh hectares with salinity and water logging.

To control the menace of these problems several External/Centrally/State sponsored schemes are being implemented in the State. Under these schemes, soil conseruation measures are taken up on watershed basis. The measures include construction of check dams, water harvesting structure, gully control, percolation embankments, diversion bunds, vegetative measures, etc.

The implementation of watershed development schemes helped the farmers in checking their land to further degradation. The harvested rain water helped in providing life saving irrigation to rainfed crops. These measures also helped in conserving the moisture *in-situ* in dry belt areas. With the adoption of these measures, the under-groundwater level which is fast depleting has been checked.

The objectives of soil conservation programmes in the State are:

- To prevent the land degradation by adopting multi disciplinary integrated approach.
- To improve the land capability and moisture regime in watershed.

- To reduce the surface runs off.
- To upgrade the skills in planning and execution of land development programmes.
- To improve farm water management.
- To increase the water management.
- To conserve moisture *in-situ*.
- To restore ecological balance through scientific management of land and rainwater.
- To reclaim alkali affected soils and
- To improve soil structure by adopting soil conservation measures including gully control, percolation embankment, construction of check dams, stock ponds diversion channel, water harvesting structures by vegetative measures, etc.

Soil Conservation measures in the State include the following:

1. Vegetative measures	The vegetative cover provided to denuded soils helps in shielding the soil from water erosion.
2. Agro-forestry	Besides checking water erosion, it helps in catering the need of fodder, fuel and wood of the local community.
3. Water harvesting structure	Rainwater is harvested which helps in recharging the groundwater table. The stored water even helps in providing life saving irrigation in *rabi* crops.
4. Gully plugging, check dams, crate wire structure, loose boulder earthen structure	These measures help checking land degradation, soil erosion, bank stabilisation, reduction in run-off.
5. Land Reclamation soils helps in	Application of gypsum in alkali affected reclaiming the affected soils. High pH value of soil is brought down at normal level. Toxic salts are leached down to sub soil layer beyond the reach of crop root zone. Soils become alkali mainly due to the presence of toxic carbonates and bicarbonates of sodium and calcium salts. The electric conductivity of alkali soils ranges between 2.5 to 4 mm numbers. Whereas, the cation exchange capacity of sodium salt is more than 15 per cent.

The following schemes are in operation in Haryana:

Soil and Water Conservation

1. Scheme for subsidy on land levelling in Haryana.
2. Pilot Project for the reclamation of waterlogged area in Jhajjar and Bhiwani District (65:35).
3. Scheme for subsidy on gypsum ingredient to reclaim alkali land in Haryana.
4. Scheme for accelerated recharge of groundwater.
5. Scheme for World Bank Aided Project in Integrated Watershed Development Project.

Crop Husbandry

1. Scheme for Implementation of Oilseeds, Pulses, Oilpalm and Maize (ISOPOM) (75:25).
2. Mini Mission-II of Technology Mission on Cotton Development (75:25).
3. Scheme for Accelerated Maize Development Programme (75:25).
4. Support to State Extension Programme for Extension Reforms (90:10).

100 per cent Centrally Sponsored Scheme

1. Scheme for setting up of biogas plants.
2. Scheme for central sector scheme demonstration of newly developed agricultural equipment including Horticulture equipment and their trial at farmers field.
3. Scheme for strengthening and modernisation of pest management approach.

2.1.2 Land

Haryana State exhibits diversity in land use/land cover owing to variations in the geomorphology, soils, climate, groundwater quality and irrigation facilities etc. The land use/land cover map depicts the distribution of forest area, agricultural land, wastelands, water bodies and built up land.

Haryana being a part of fertile lndo-Gangetic Plains, the agriculture practice forms the main land use of the State. There are two main cropping seasons, namely *Kharif* and *Rabi*. Majority of the area is utilised for agriculture both during *Rabi* and *Kharif* (double crop) seasons due to better irrigation facilities in the State. Major *Kharif* crops include rice, *jowar*, *bajra*, *guar*, maize, cotton, sugarcane, groundnut and pulses. *Rabi* crops include wheat, barley, gram, rapeseed/mustard and pulses. The short period available between mid-May and July is sometimes also used for raising a third crop particularly in the areas where assured irrigation is available for watering the crop during the dry season. The total cultivable area in the State is 3.8 million hectare (m.ha.) (86 per cent of State area) of which 3.62 m.ha constitute the net cropped area. Northern portion of the State is characterised by good agricultural area due to fertile alluvial soils, marginal to good quality of groundwater, network of irrigation, canals, tubewells and relatively better natural drainage. On the contrary, south-western districts of Sirsa, Hisar, Bhiwani,

Gurgaon, Mahendragarh and Rewari, due to lack of rainfall, poor irrigation facilities, poor groundwater quality coupled with desertic terrain with sand dunes, result in relatively less cultivation during *Kharif* season.

Salt affected land, scrub land, waterlogged land, barren land and sandy area constitute the main wasteland in the State. The majority of salt-affected lands are associated with waterlogged areas. These are mainly spread over the central and southern parts of the State in the districts of Karnal, Kaithal, Panipat, Sonipat, Jhajjar, Rohtak and Gurgaon. Absence of natural drainage outlet and use of poor quality groundwater for agriculture purpose render highly fertile soils salt affected. Barren lands are generally associated with Aravalli ranges in the districts of Faridabad, Gurgaon, Mahendragarh and Rewari. Major scrublands are found in the central part of Gurgaon district, southern parts of Mahendragarh district and in the northern parts of Ambala district. Scrublands also exist at few places around townships of Gurgaon, Faridabad, Bhiwani, Hisar and Yamunanagar. In all these places, the land becomes barren with scrub due to loss of soil fertility caused by waterlogging and poor quality of groundwater. Sandy areas in the form of sand dunes are mainly located in areas bordering Rajasthan State in the south-western parts of Hisar, southern part of Sirsa and parts of Bhiwani districts. Arid climate with no irrigation facilities rendered the soil unproductive with development of barren sand dunes in these areas.

The urban built-up land constituting the major cities of the State include Faridabad, Gurgaon, Panchkula, Rohtak, Ambala, Hisar, Karnal, Sonipat, Kurukshetra, Yamunanagar, etc. In the last decade, towns of Faridabad and Gurgaon being in proximity of Delhi have grown up in the form of major residential-industrial towns whereas the town of Panchkula has emerged as a major residential city in the northern part of the State.

Water bodies in the State include the perennial Yamuna and Ghaggar rivers and other non-perennial rivers like Markanda and Tangri etc. draining the northern region of the State. All these rivers originate in the Outer Himalayan ranges except Yamuna, which originates from Yamunotri glacier in the higher Himalayan ranges of Garhwal. Few non-perennial streams namely Dohan, Sahibi and Krishnawati originating in the Aravalli hill ranges in Rajasthan drain parts of Mahendergarh, Rewari and Gurgaon districts. A number of small ponds exist in the State within the Shiwalik, Aravalli and alluvial plains. These ponds are fed by rainwater or groundwater where water table lies closer to the surface. Most of the villages in Haryana lie close to water bodies. The major ponds/*jheels* in the State include Kotiadhar lake, Sohna lake, Berkhal lake, Najafgarh Jheel, Jahajgarh Jheel, and Bramhsarowar Jheel.

Soil constitutes the most precious natural resource of the State. A variety of soils are found in Haryana due to the marked variation in the physiographic and climatic conditions. Soil of Haryana State has been classified and described under the following major physiographic units:

Soils of the Shivalik Hills: It occurs at an elevation of 300 to 900 metres above Mean Sea Level (MSL) and cover 61,800 ha (1.4 per cent) area of the State. The soils are developed on the sandstones, shales and conglomerates. Dominant soils are shallow to moderately deep, moderately to severely eroded, well to excessively drained, dark to reddish brown, loamy-skeletal occurring on moderately steep to steeply sloping hills. They have been classified as Loamy-Skeletal Typic Ustorthents.

Soil of Piedmont Plains: The soils cover 72,468 ha (1.6 per cent) area of the State. The soils are developed over mixed alluvium and colluvium. Dominant soils are deep, fine-loamy, moderately well to well drained, occuring on nearly level to very gently sloping plains. They are classified as Udic Ustochrepts.

Soil of the Alluvial Plains: These constitute the most potential soils and cover about 11,58,110 ha (25.9 per cent) area of the State. The dominant soils are deep, well to moderately well drained, mostly non-calcareous, fine loamy with or without salinity/sodicity problems. They have been broadly classified as Typic Ustochrepts and as Udic Ustochrepts.

Soils of the Old Alluvial Plains with Sand Dunes: Soils of the this unit are described under two moisture regimes: Ustic (9,47,500 ha, 21.3 per cent) and Aridic (13,934 ha, 3.1 per cent) covering an area of 11,02,662 ha (25 per cent) of the State. Dominant soils of the Ustic moisture regime are very deep, somewhat excessively drained, severely to moderately eroded and sandy in texture, classified as Typic Ustipsamments. Dominant soils of Aridic moisture regime occur as loose sand in form of dunes and is classified as Typic Torripsamments.

Soils of Recent Alluvial Plains: These are developed along the rivers Yamuna and Ghaggar and their tributaries. It covers approximately 5,38,937 ha (12.8 per cent) area of the State. They have been classified as coarse Typic Ustifluvents and coarse loamy and or fine loamy Fluventic ustochrepts.

Soils of the Active Flood Plains: They are confined along the river courses and in the filled river channels covering approximately an area of 1,19,507 ha (2.7 per cent) of the

State. The dominant soils are very deep, moderately well drained, coarse-loamy, stratified, classified as Typic Ustifluvents.

Soils of Aeofluvial Plains: These soils occur dominantly on alluvial plains modified by aeolian activity and cover an area of about 3,65,138 ha (8.22 per cent) of the State. The dominant soils are very deep, excessively drained, sandy and calcareous occurring on gently sloping plains and at places as dunes. They are classified as Typic Toripsamments and Ustic Toripsamments. Subdominant soils are very deep, well drained, calcareous and are classified as course loamy Typic Camborthids, Fluventic Camborthids and Ustochreptic Camborthids.

Soils of the Fluvio-Aeolian Plains: The Soils of this unit are of aeolian nature modified by fluvial activity and covers 3,21,611 ha (7.20 per cent) area of the State. These occur under two moisture regimes: Ustic (1,56,319 ha, 3.5 per cent) and Aridic (1,65,292 ha, 3.7 per cent). Dominant soils are very deep, excessively drained, slightly alkaline, sandy and calcareous, occurring on gently sloping plains. The soils of the Ustic moisture regimes are classified as Typic Ustipsamments while in the Aridic moisture regime as Typic Torripsamments.

Soils of the Aeolian Plains: These cover 2,58,817 ha (5.8 per cent) area of the State. Dominant soils are Typic Torripsamments, which are loose sand on dunes. The interdunal soils are well drained, calcareous, course loamy and alkaline in nature and are classified as Typic Camborthids.

The Shivalik foothills area falls in the districts of Panchkula, Ambala and Yamuna Nagar. The major problem is soil erosion through water during monsoon season when high rainfall occurs, causing havoc. The State is implementing soil conservation schemes to check the menace of soil erosion and to check the further degradation of land. The schemes taken up are National Watershed Development Project for Rainfed Areas (NWDPRA), Soil Conservation for Enhancing Productivity in Degraded lands Falling in the Catchment of Flood Prone River Ghaggar and Execution of Soil and Water Conservation works on Watershed Basis in sub-Mountainous Areas of the State. Various Soil and Moisture Conservation works like check dams, gully plugs, diversion channels, water harvesting structures, farm ponds, land levelling etc. are taken up. Agro forestry, dry land horticulture are the other components taken up under these schemes. The Shivalik Development Agency is also implementing soil conservation programmes in this area.

Central flat region of the State is bowl shaped with insufficient drainage system, which causes the problem of salinity, water logging and alkalinity. The Centrally Sponsored Scheme of Land Reclamation is in operation in the State since 1986-87. Subsidy @ 50 per cent is provided on Gypsum ingredient used on reclamation of alkali soils.

Treatment of saline and waterlogged soil are taken up on project basis. Sub-surface drainage system is laid horizontally to drain out saline water into drains.

Semi arid region of the State is dominated by sandy soils. The sand dunes are formed. The districts having sandy soils are Bhiwani, Hisar and Sirsa. The sand dunes can be stabilised through vegetation work. Rural Development Department is implementing Desert Develop Project and Drought Prone Area Programme through DRDA in this region to curb the further development of deserts.

2.1.3 Water

Drainage and Canals

Haryana is a small State situated in North West part of India. Total area of the State is 4.4 million hectares, of which about 3.9 million hectares is arable.

Topographically from drainage point of view the entire State is covered under two basins namely the Yamuna Sub Basin of Ganga Basin and Ghaggar Sub Basin of Indus Basin. Western Jamuna Canal Main Branch up to Munak and then Hansi Branch, Butana Branch, Sunder Sub-Branch and Jui Feeder divide the two drainage basins upto Bhiwani. The Ganga river basin occupies the Eastern part covering an area of about 17,700 square kilometres whereas the Western part falls under the Indus river basin by river Ghaggar. Yamuna is the only perennial river in the State, which originates in Tehri district of Uttarakhand. It forms the boundary between Haryana and Uttar Pradesh for a length of 320 kilometre.

Yamuna sub-basin comprises part of Yamuna Nagar, Karnal, Panipat, Sonipat, Rohtak, Jhajjar, Rewari, Gurgaon, Faridabad and Mewat districts and it covers about 40 per cent area out of 44,212 square kilometres of the State. This drains into river Yamuna. The Aravalli hill ranges occupying the Southern margins of the State bring a number of small rainy streams from Rajasthan side into Gurgaon, Rewari, Mewat and Jhajjar districts. Among these streams, the Sahibi Nadi and Landoha Nallah are the major ones.

The remaining about 26,500 square kilometres (60 per cent area out of 44,212 square kilometres) comprising

Panchkula, Ambala, part of Yamuna Nagar, Kurukshetra, Kaithal, Jind, Mohindergarh, Bhiwani, Hisar, Fatehabad and Sirsa districts has country slope toward river Ghaggar and is known as Ghaggar Sub Basin.

The river Ghaggar originates from the slopes of Himalayas in Sirmour district (H.P.) and enters Haryana near Pinjore in Panchkula district from the foothills of Shivalik and flows in North East direction through Haryana, Punjab and then to Rajasthan. Ghaggar river is perennial in the upper reaches and become ephemeral downstream. The important tributaries of Ghaggar river are river Tangri, Saraswati, Markanada which join Ghaggar river in Kaithal district.

Large number of drains with a length of about 4670 kilometres has been constructed to drain the excessive rain water to the main rivers. In the State a number of small ponds or lakes exists of which Ottu Lake, Bibipur Lake, Bhindawas/Jahazgarh Lake, Badkhal Lake, Surajkund Lake, Kotla Lake, Damdama Lake, etc. are the most important.

Initially the drain of the central flat area of Kaithal, Jind, Hisar, Bhiwani and Rohtak districts were made to outfall in the nearby canals but now gravity drainage system is being developed.

Canals are the most popular and important source of irrigation in Haryana due to easy supply and regular flow of water to the agriculture fields. In Haryana State, about 85 per cent of the net area sown is irrigated, out of which about 48 per cent is irrigated by canals and about 51 per cent by tube wells. Haryana State has a dense network of gravity and lift canal systems. The cumulative length of canals is about 12,980 kilometres, which includes 2,405 kilometres of main canals and branches, 10,575 kilometres of distributaries and minors. The canals network is dense in most of the districts except in the districts of Mahindergarh, Rewari and Gurgaon where Lift canal system is at development stage.

Major Canal System in Haryana

Sr. No	*Canal (River)*	*Length (Kms)*	*Capacity of Canal (cumecs)*	*Type*
1.	Western Yamuna	5680	448	Gravity
2.	Bhakra and Ghaggar	4850	213	Gravity
3.	Agra/Gurgaon	476	55	Gravity
4.	Siwani	705	12	Lift
5.	Jui	225	9.5	Lift
6.	Loharu	694	39.4	Lift
7.	Jawahar Lal Nehru	205	90.6	Lift
8.	Naggal	49	0.38	Lift

Source: Engineer-in-Chief, Irrigation Department, Haryana.

There are four irrigation systems in the State, namely, Western Yamuna Canal, Bhakra Canal, Agra Canal and Ghaggar Canal. The Bhakra and Western Yamuna Canal system are interlinked and it is difficult to separate their command areas. All the districts except Gurgaon and Panchkula fall under their commands. The Bhakra Irrigation System (which receives water from Gobind Sagar Reservoir) and the Western Yamuna Canal system irrigate the major part of the State. Western Yamuna Canal relies on the water availability in the Yamuna river because no dam has been built on the river in the recharge area to tap the water for canal feeding. Both the systems have been joined to cater to the needs of each other. With the help of these canals water to lift irrigation schemes are made available for the purpose of irrigation. The districts of Faridabad and Mewat fall under Agra Canal Command. Sirsa district is under the command of both Bhakra and Ghaggar canal systems. The topography of the State is such that the districts of Gurgaon, Mahendergarh, Rewari, and part of Bhiwani and part of Jhajjar cannot be brought under gravity canal commands. To overcome this difficulty, Lift canal system with a total length of 1665 kilometres has been developed. The total commandable area from all the canals is 3.9 M ha. The draught affected South-Western parts of the State occupied by sand dunes and Aravalli hills, and not suitable for gravity flow irrigation, are provided with lift irrigation system namely the Jui, Indira Gandhi, Jawaharlal Lal Nehru, Birendra Narayan Chakaravarti, Sahlawas and Jhajjar Lift Canals.

Hydrogeomorphology

Hydrogeomorphology is the study of the subsurface hydrological characteristics of a region based on its geological and geomorphological aspects. The entire State has been divided into 10 geomorphic units based on landforms, relief, geomorphic processes, lithology, structure and surface and subsurface water bearing characteristics. A brief description of each unit is given here.

Flood Plains: Lying adjacent to a river channel, it is characterised by flat and gently sloping unconsolidated fluvial deposits like gravel, sand, silt and clay. The zone is well recharged and forms excellent aquifers with good quality.

Alluvial Plain: Major part of the State is covered by extensive alluvial plain, which is a part of Indo-Gangetic plain. These are level or gently undulating plains consisting of clay, silt, fine to coarse sand and gravel. These form good groundwater aquifers with good quality.

Alluvial Plain Saline: The occurrence of saline soils induces the salinity in the associated groundwater. The zones of saline soils are found within the alluvial plain covering parts of Karnal, Panipat, Sonipat and Kaithal, etc. Groundwater is available in these plains but is not potable.

Aeolian Plain: It is undulating terrain comprising mainly low to moderately high dunes. The dunal sand is very fine to fine-grained whereas the aquifer material is coarse sand. The groundwater prospects in the aeolian plains are poor to moderate and the water is generally saline. The deeper aquifers yield more than the shallow aquifers and may provide good quality water.

Alluvial Plain with Stable Sand Dunes: Good prospects (may be of poor quality) of groundwater exist in this unit. Inter-dunal areas are suited best for locating aquifers in the alluvial plains.

Sand Dunes: Sand dunes are made up of coarse to very fine-grained sand and covered by small thorny bushes. Mostly dunes are continuous and separated by interdunal depression and at times by inter-dunal flats. Only the inter-dunal areas are likely to yield moderate quantity of water.

Piedmont Zone: This is gently sloping plain, about 5 to 20 km. wide, occurring between the Shiwalik hill ranges and the alluvial plains. It is developed due to the deposition of boulders, pebbles, gravels, sand and silt brought by the streams, while they enter into alluvial plains from the hills. High permeability of the zone coupled with gentle slopes results in downslope movement of water. Hence this zone gives poor to moderate prospects of groundwater with fresh water quality.

Intermontane Valley: Because of its location between the two hill ranges, the valley receives water input from both sides. The material of intermontane valley consists of colluvial and alluvial deposits like bolders, gravels, sand and silt which renders high permeability to this zone and hence good to excellent water prospects with good quality exist in this zone.

Structural Hills: These include hill ranges, showing steep slopes and consist of massive, hard rocks which exhibit structural controls in the form of joints, fractures, cleavage, faults and folds etc. They form areas of high runoff and poor percolation. Groundwater potential of this unit is therefore poor. Highly jointed rocks may form local pockets of good groundwater aquifers.

Denudational Hills: These are characterised by moderately steep slopes, exhibiting less structural control and rock hardness as compared to structural hills. High runoff and poor percolation make them poor water potential zones.

Residual Hills: These are steep sided, small, isolated, remnant hills projecting out of alluvial plain. They form areas of high runoff and hence groundwater potential are negligible.

Pediment: This unit is generally found fringing the Aravalli hills and is developed due to the erosion of the associated hills. The material consists of colluvial deposits made up of medium to fine grained sand, silt and rock debris. The thickness of the zone decreases away from the ridge. These form moderate to good, shallow aquifers of good quality, particularly close to the hard rock.

Abandoned Channels: These include the older river channels which have been left by the river due to the process of lateral shifting in due course of time. These consist of unconsolidated fluvial deposits, mainly gravel, sand, silt and clay particles of varying lithology. The high permeability and good water retention capability make these units excellent water potential zones with good quality.

Lineaments: Lineaments may be faults, fractures, joints, etc. These generally represent the zones of secondary porosity and permeability in hard rock terrain and facilitate occurrence and movement of groundwater. Generally, the zone along major lineaments and lineament intersections is found to be good groundwater potential zone.

In addition to the aforementioned 10 geomorphological units there are some artificial hydrogeomorphological characteristics developed in some parts of the State such as fresh water storage channels along unlined/lined canals with small lateral extent in Alluvial Plain Saline, this thin layer of percolated canal water flooding on saline water having low to medium potential of potable water up to low depth.

Artificially constructed dams/*bunds* on the natural channels reduce the potential of groundwater in Abandoned Channels; make these units of poor potential of good quality such as on Krishnawati and Dohan river channels.

Groundwater Quality

Groundwater quality map depicts the geographic extent of the groundwater quality zones with respect to their quality. The State has been divided into three quality zones based on the Electrical Conductivity (EC) value of the groundwater as: Fresh with EC Value < 2000 μ

mhos/cm, Marginal with 2000-6000 μ mhos/cm and Saline with 6000 μ mhos/cm and six combination of zones based on the occurrence of quality zone with respect to depth as shown on the map.

Fresh Groundwater: Fresh groundwater occurrence is more in the shallow aquifers as compared to deep aquifers wherein the water salinity becomes prominent with the increase in depth of water bearing zones. The northern, north-eastern and eastern part of the State constituting the recent and the old flood plains of river Yamuna, Ghaggar, Markanda, Saraswati and their tributaries are characterised by fresh water. Fresh water zones are also found in the southern district of the State consisting of major parts of Mahendragarh district, western and south-western parts of Rewari district. In these districts the presence of Aravalli hills, which help recharge the groundwater, and absence of canal irrigation has improved the groundwater quality.

Marginal Groundwater: Marginal groundwater is generally located around the zones of fresh water as in the majority of areas of Rewari district, southern part of Kaithal district, south-western part of the Bhiwani district, north-eastern part of Mahendergarh district, western part of Gurgaon district and central part of Faridabad district.

Saline Groundwater: Saline groundwater occurs mainly in parts of Hisar district, northern part of Bhiwani district, southern part of Fatehabad district, northern part of Jhajjar district and at a number of places in Rohtak and Jind districts. The occurrence of saline zone along the Delhi-Hisar-Sirsa alignment can be explained due to lack of drainage surface outlet. This is aggravated due to extensive canal network adding surface water to saline groundwater and non-exploitation of groundwater due to its saline quality. This has resulted in the rise of water table and waterlogging in the area. According to an estimate given by HSMITC, about 70 per cent area of the State has marginal to saline groundwater. The salinity in the upper part of the Sirsa district and south-western and south-eastern parts of Faridabad and Gurgaon districts, respectively, may be explained in terms of desiccation of water in these flat and semi-arid plains coupled with under exploitation of groundwater.

Shallow Marginal to Deep Fresh zone is found to be associated with fresh water zone as seen in Kaithal, Mahendergarh, Rewari, Gurgaon, Fatehabad and Sirsa districts.

Shallow Marginal to Deep Saline zone is generally associated with Saline zone. It is mainly located in the zone of Inland Drainage Basin, which lacks drainage outlets. This covers majority of Sonipat, Jind, Hisar, Bhiwani and Jhajjar districts, southern and northern parts of Sirsa district and south-western and south-eastern parts of Gurgaon and Faridabad districts, respectively.

Shallow Fresh to Deep Saline zone is found to be associated with Shallow Marginal to Deep Saline zone indicating that water is always saline at deeper level but may become fresh depending upon the local conditions.

Shallow Fresh to Deep Marginal zone is found to be associated with fresh or marginal zones showing fresh water availability at shallow depth, which deteriorates to marginal quality at deeper level, but overall the zone is prospective for limited water supply from shallow depth.

Shallow Saline to Deep Marginal zone is found only at few places as in north-western fringe of Mahendergarh and Rewari districts showing some local control in creating these zones of poor quality groundwater.

Based on the estimates of groundwater fluctuations for the year 1998 during pre-monsoon period (Groundwater Cell, Haryana) the percentage of area under fresh water was 42.55 per cent of the total geographical area. This increased to 52.38 per cent in the post-monsoon period. The marginal and saline groundwater zones indicated a decrease after the monsoon period from 21.68 to 13.13 per cent. Thus, monsoon has a positive impact on the availability of better quality groundwater.

Accurate mapping of groundwater zones as per their suitability for domestic, irrigation and industrial uses is highly desirable for proper management of groundwater resources and to safeguard human beings from consumption of poor quality groundwater. To check further deterioration of quality of groundwater in the State, regular monitoring of their chemical quality is necessary.

Groundwater Pollution and Quality Hazards Scenario in India

The rapid pace of urbanisation, industrialisation as well as agricultural activities has made environmental pollution a growing concern globally. Of all the receptor systems exposed to the contaminants, groundwater has received little attention in the past because of the common belief that groundwater was pristine.

Groundwater Pollution is usually traced back to four main origins: industrial, domestic, agricultural and over exploitation. The last category mainly accounts for seawater intrusion. Studies carried out in India reveal that one of the most important causes of groundwater pollution is unplanned urban development without

adequate attention to sewage and waste disposal. Industrialisation without provision of proper treatment and disposal wastes and affluent is another source of groundwater pollution. Excessive application of fertilisers for agricultural development coupled with over-irrigation intrusion due to excessive pumping of fresh water in coastal aquifers is also responsible for groundwater pollution.

With the declared objectives of providing at least the basic amenities there has been a tremendous development in India, in the agriculture and industrial sector, with concomitant pressure on the fresh water resources. The waste generated by anthropogenic activities has not only polluted the environment as a whole but had a particular detrimental effect on the quality of aquatio-envison too. Leachates from compost pits, animal refuse of garbage dumping grounds, nutrient enriched return irrigation flows, seepage from septic tanks, seepage of sewage etc. have adversely affected the groundwater quality in several parts of India. The rate of generation of wastewater in India during 1981 was estimated to be 74,529 million litre/day, that is, 27 km^3 annually, which poses a perennial danger to the potable groundwater resource. The gravity of situation can be judged from the act that in spite of sewage treatment plant, Delhi discharged 100 million gallon of untreated sewage into the Yamuna. The problem is likely to compound further with increasing rate of wastewater generation which is estimated to about 40 km^3 (110,000 million litre/day) annually by the year 2000 million tone (Vimal and Tala Shilkar, 1983). Studies on chemical composition of groundwater in phreatic zone have revealed that in many cases anomalously high concentration of nitrate potassium and even phosphate (total phosphate) are present in contrast to their virtual absence or low concentration (No.3 and K less than 10 mg/1) in semi-confined aquifers. Unsystematic use of synthetic fertilisers coupled with improper water management practices have resulted in deterioration of groundwater quality in many parts of the country.

In case of industrial units, effluent in most of the cases are discharged into pits, open ground, or open unlined drains near the factories, thus allowing it to move to low lying depressions resulting in groundwater pollution. The industries which are burgeoning at terrifying rate, daily produce about 55,000 million M^3 of waste water per day, out of which 68.5 million M^3 is discharged into river streams. Thus, the magnitude of damage caused to our water resources can be estimated from the fact that about 70 per cent of rivers and streams in India contain polluted water.

The incidence of groundwater pollution is highest in urban area where large volume of waste are concentrated and discharged into relatively small areas. The groundwater contamination, however, is detected only some time after the subsurface contamination begins.

Thirteen states in India have been identified as endemic to fluorosis due to abundance in natural occurring fluoride bearing minerals. These are Nalgonda, Rangareddy district in Andhra Pradesh, Banaskantha, Kutch, Amroli in Gujarat, Hisar, Kaithal, Gurgaon in Haryana, Augul Bolengir, Phulbani in Orissa, Bhatinda, Sangrur in Punjab, Ajmer, Bikaner, Pali, Nagur, Sirohi in Rajasthan, Chengalpattu, Madurai in Tamil Nadu, Unnao in Uttar Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Bihar and Delhi. There are nearly half a million people in India suffering from ailment due to excess of fluoride in drinking water. In some villages of Rajasthan and Amroli in Gujarat level of the fluoride goes up to 11.0 mg/litre.

Though iron content in drinking water may not affect the human system as a simple dietary overload, but in the long run prolonged accumulation of Iron in the body may result in homochromatosis, where tissues are damaged. In some districts of Assam (Barpeta, Darrang, Kamrup, Sonitpur) and Orissa (Balasore, Cuttack, Puri) groundwater have high iron content ranging from 1 to 10 mg/litre.

A total of 1,06,019 sq km area (about 31 per cent) of Rajasthan comes under saline groundwater of which 88,675 sq km area falls in western Rajasthan comprising Ganganagar, Barmer, Bikaner, Churu and Jaisalmer districts. The electrical conductivity of groundwater in western Rajasthan is over 8 ds/cm and in eastern Rajasthan over 6 ds/cm. Vast low lying alluvial tract from North-Western part of Banaskantha district through the western part of Mashing and Ahmedabad districts, western and north-eastern parts of Surendranagar district, southern part of Ahmedabad and south-western part of Kheda district is underlain by saline groundwater (EC 3.46 ds/cm). Groundwater in Sangrur, Bhatinda, Ferozpur and Faridkot districts have as high as 11.30 ds/cm salinity. About 3766 sq km area in Haryana is underlain by saline groundwater (EC6 ds/cm).

Arsenic in groundwater have been reported in a range (0.05-3.2) mglp in shallow aquifers from 61 block in 8 districts of West Bengal namely Malda, Mushirdabad, Nadia, North and South 24 Parganas, Bardhaman, Howrah and Hoogly.

The following table shows state-wise places, affected by pollutant contents:

Pollutant	*State*	*Place of Occurrences*
Salinity (Inland)	Maharashtra	Amravati, Akola
	Bihar	Begusarai
	Haryana	Karnal
	Rajasthan	Barmer, Jaisalmer, Bharatpur, Jaipur, Nagaur, Jalore and Sirohi
	Uttar Pradesh	Mathura
Salinity (Coastal)	Andhra Pradesh	Vishakapatnam
	Orissa	Puri, Cuttak, Balasore
	West Bengal	Haldia and 24 Parganas
	Gujarat	Junagarh, Kachch, Varahi, Banaskantha and Surat
Flouride	Kerala	Palghat Krishna, Anantpur
	Andhra Pradesh	Cuddapah, Guntur and Nalgonda, Nellor, Chittoor
	Gujarat	Banaskantha, Kutch and Amreli
	Haryana	Hisar, Kaithal and Gurgaon
	Orissa	Bolangir, Bijapur, Bhubaneshwar and Kalahandi
	Punjab	Amritsar, Bhatinda, Faridkot, Ludhiana and Sangrur
	Rajasthan	Nagaur, Pali, Sirohi, Ajmer and Bikaner
	Tamil Nadu	Chengalpattu, Madurai
	Uttar Pradesh	Unnao, Agra, Aligarh, Mathura, Ghaziabad, Meerut and Rai Bareili
Sulphide	Orissa	Balasore, Cuttak and Puri
Iron	Uttar Pradesh	Mirjapur
	Assam	Darrang, Jorhat, Kamrup
	Orissa	Bhubaneshwar
	Bihar	East Champaran, Muzaffarpur, Gaya,, Munger, Deoghar and Madhubani
	Rajasthan	Bikaner, Alwar, Bharatpur
	Tripura	Dharmnagar, Kailashahar, Ambasa, Amarpur and Agartala
	West Bengal	Medinipur, Howrah, Hoogly and Bankura
Maganese	Orissa	Bhubaneshwar, Athgaon
	Uttar Pradesh	Muradabad, Basti, Rampur and Unnao
Arsenic	West Bengal	Malda, Murshidabad, Nadia, 24 Pargana
Nitrate	Bihar	Patna, East Champaran, Palamu, Gaya, Nalanda, Nawada and Banka
	Andhra Pradesh	Vishakapatnam, East Godavari, Krishna, Prakasam, Nellor, Chittoor, Anantpur, Cuddapah, Kurnool, Khamam and Nalgonda
	Delhi	Naraina, Shahadara
	Haryana	Ambala, Sonipat, Jind, Gurgaon, Faridabad and Hisar
	Himachal Pradesh	Kulu Solan, Una
	Karnataka	Bidar, Gulbarga and Bijapur
	Madhya Pradesh	Sehore, Bhopal and West & Central Part of State
	Maharashtra	Jalna, Beed, Nanded, Latur, Osmanabad, Solapur Satara, Sangli and Kolhapur
	Punjab	Patiala, Faridkot, Firozpur, Sangrur and Bhatinda
	Rajasthan	Jaipur, Churu, Ganganagar, Bikaner, Jalore, Barmer, Bundi and Sawaimadhopur
	Tamil Nadu	Coimbatore, Penyar and Salem
	West Bengal	Uttar Dinajpur, Malda, Birbhum, Murshidabad, Nadia, Bankura and Purulia
Chloride	Karnataka	Dharwad, Belgaum
	Madhya Pradesh	Bhind, Shagapur and Sehore
	Maharashtra	Solapur, Satara, Amravati, Akola and Buldana
	Rajasthan	Barmer, Jaisalmer, Jodhpur and Jalore
	West Bengal	Contai, Digha, Haldia
Zinc	Andhra Pradesh	Hyderabad, Osmania University Campus
	Delhi	R.K. Puram
	Rajasthan	Udaipur
Chromium	Punjab	Ludhiana

Source: Ministry of Water Resources, Government of India, New Delhi.

Water Management in Haryana

1. Sprinkler irrigation system — The sprinkler irrigation system is a scientific technique as water saving device. The use of sprinkler irrigation system saves precious water. More area is brought under cultivation; fertiliser and pesticides can be sprayed uniformly.

2. Underground pipeline — The system is quite effective where flow irrigation is required over traditional method of flood irrigation. Water losses through evaporation and transportation are reduced to nil. The system once laid can remain effective for many years.

Schemes

(i) National Watershed Development Project for Rainfed Areas (NWDPRA)

This is a 100 per cent centrally sponsored scheme under Macro Management Mode (MMM). The criteria of selection of blocks is where assured irrigation is less than 30 per cent. At present the scheme is being implemented in 10 blocks namely; Pinjore, Barwala and Raipur Rani in Panchkula district, Shahzadpur in Ambala district, Tosham, Siwani and Charkhi Dadri in Bhiwani district, Hisar-I and Hisar-II in Hisar district and Mahendragarh in Mahendragarh district. The details of micro-watershed-wise and year-wise financial implication is given as under:

(Rs. in Lakh)

Sr. No.	*Name of Watershed*	*2002-03*	*2003-04*	*2004-05*	*2005-06*	*2006-07*	*Total*
1.	Badgodam (New)	25.89	51.78	70.69	54.90	55.67	258.93
2.	Baghwali (New)	25.83	51.66	70.52	54.76	55.53	258.30
3.	Kot Billa (New)	19.16	38.32	52.32	40.64	41.20	191.64
4.	Shehzadpur (New)	22.52	45.04	61.47	47.74	48.41	225.18
5.	Khudana (New)	60.00	120.00	163.80	427.20	129.00	600.00
6.	Khawa (New)	22.50	45.00	61.425	47.70	48.375	225.00
7.	Unn (New)	22.50	45.00	61.425	47.70	48.375	225.00
8.	Sarsana-I (Recast)	22.50	45.00	61.425	47.70	48.375	225.00
9.	Sharwa (Recast)	22.50	45.00	61.425	47.70	48.375	225.00
10.	Siwach (New)	22.50	45.00	61.425	47.70	48.375	225.00
	Total	265.90	531.80	725.925	563.74	571.685	2659.05

Source: Planning Department, Government of Haryana.

(ii) Scheme for Enhancing Productivity of Degraded Lands in the Catchment of Flood Prone River (Ghaggar)

This is a 100 per cent centrally sponsored scheme under Macro Management Mode (MMM). The scheme envisages having moderate influence on the flood situation in the State. The area of operation falls under the districts of Yamuna Nagar, Panchkula and Ambala. The Ghaggar catchment has been surveyed and delineated into privatised watersheds. As per the latest report, 94 sub-watersheds fall under the category of very high and high watershed. At present, 7 sub-watersheds are under implementation and drainage line treatment is adopted both in arable and non-arable land.

(iii) Scheme for Reclamation of Alkali Soils (USAR) in Haryana

This is a 100 per cent centrally sponsored scheme under Macro Management Mode (MMM). Subsidy on gypsum at the rate of 50 per cent is being provided to the farmers. The scheme is being implemented throughout the State. The rate of subsidy has been reduced to 25 per cent with effect from 1.4.2003.

(iv) Minor Irrigation

Sprinkler irrigation system is adopted for judicious use of available source water. Subsidy under the centrally sponsored schemes is being provided at the following rate:

a) Maximum Rs.15,000 per set in case of SC/ST and women farmers

b) Maximum Rs.10,000 per set in case of other categories of farmers

The scheme is being operated throughout the State. The rate of subsidy has been kept at the rate of 25 per cent. Cost of the set to all the categories from 2003-04 by the Government of India under its centrally sponsored schemes.

Subsidy is also available on laying of Underground Pipeline system of water conveyance at the rate of 25 per cent or maximum Rs.30,000 per beneficiary.

(v) Land Levelling

This is State Plan scheme under implementation throughout the State. Subsidy at the rate of 50 per cent to the farmers having landholding upto 3 hectares and 25 per cent to other farmers having land holding above 3 hectares taking land levelling programme.

(vi) Execution of Soil and Water Conservation Works on Watershed basis in the Sub Mountainous Area of the State

It is a State Non-Plan scheme being implemented on watershed basis in the area falling Shivalik foothills of Panchkula, Ambala and Yamuna Nagar districts and Aravalli ranges falling in Rewari, Mahendragarh, Gurgaon districts and parts of Bhiwani and Faridabad districts.

(vii) Land Use Soil Survey

Surveys of exploratory nature in command areas are undertaken. This is a State Non-Plan scheme. A separate cell under the command of Deputy Director (Soil Survey) is working at Ambala and four Soil Survey Officers are deputed to carry out the detailed soil survey works.

(viii) Soil and Water Management Scheme

(ix) Reclamation of Alkali and Saline Soils

Soil conservation staff is provided under these schemes. Scheme-wise physical and financial targets and achievements of soil conservation scheme during the last three years are given below:

Physical and Financial Targets and Achievement under Soil Conservation Schemes during 2002-03

Sr. No.	*Scheme*	*Unit*	*Target*		*Achievement*	
			Physical	*Financial (Rs. in lakh)*	*Physical*	*Financial (Rs. in lakh)*
1.	NWDPRA	Hectares	4000	65.00	726	57.63
2.	F.P.R., Ghaggar	Hectares	7180	170.00	4967	168.02
3.	Land Reclamation	Hectares	9500	412.86	9512	412.86
4.	Improved on Farm Water Management	Numbers	1375	139.50	1069	133.57
5.	Land Levelling	Hectares	400	10.00	243	5.10

2.1.4 Forests

Forest areas in the State are confined to the Himalayan ranges in Panchkula and Yamunanagar districts and Aravalli ranges in the southern districts. Small reserved forests are also found at a number of places in the districts of Yamunanagar, Kaithal, Ambala, Jind and Hisar. Majority of forests in the State belong to sub-tropical dry deciduous category whereas sub-tropical thorny forests are found only in the Aravalli hills in the southern parts of the State. Pine forests are located in the higher reaches in the protected forests of Morni Hills in Panchkula district whereas Sal forests dominate the reserve forests in the Shiwaliks of Yamunanagar district. Poplar tree plantation dominates the forest plantation in agriculture areas of Panchkula, Ambala and Yamunanagar districts. Eucalyptus, Shisham, Kikar, Jal and Jand tree plantation along the major district roads/canals also accounts for a major portion of forest cover in the State.

National Forest Policy 1988 envisages bringing one-third of the geographical area of the country under forest and tree cover. Haryana being predominantly an agricultural State (81 per cent of land under agriculture),

Physical and Financial Targets and Achievement under Soil Conservation Schemes during 2004-05

Sr. No.	*Scheme*	*Unit*	*Target*		*Achievement*	
			Physical	*Financial (Rs. in lakh)*	*Physical*	*Financial (Rs. in lakh)*
1.	NWDPRA	Hectares	2642	121.10	2043	117.63
2.	F.P.R., Ghaggar	Hectares	4825	182.20	4193	178.20
3.	Land Reclamation	Hectares	1,25,000	228.41	13,333	228.41
4.	Improved on Farm Water Management	Numbers/ Hectares	221/ 370	46.38	9/370	46.03
5.	Land Levelling	Hectares	125	9.00	155	8.67

Physical and Financial Targets for the Year 2003-04

Sr. No.	*Scheme*	*Unit*	*Target*	
			Physical	*Financial (Rs. in lakh)*
1.	Macro Management Mode Centrally Sponsored			
	a. National Watershed Development Project for Rainfed Areas.	Hectares	1000	100.00
	b. Soil Conservation for enhancing productivity in degraded land falling in the catchment of Flood Prone River-Ghaggar	Hectares	2374	120.00
	c. Improved on Farm Water Management which include under ground pipeline and purchase of laser land leveller	Numbers	1690	200.00
	d. Reclamation of Alkali Soils	Hectares	10526	200.00
2.	Scheme for execution of soil and water conservation works in Sub mountainous areas of the State (State Non-Plan)	Hectares	800	44.40
3.	Land Levelling	Hectares	450	10.00

Source: Planning Department, Government of Haryana.

it is difficult to bring one-third area under forest and tree cover. The State has only 3.52 per cent (1550 square kilometre) of its geographical area as forest land. However, due to large scale plantation undertaken by the Forest Department on *panchayat* lands, community lands, institutional lands as well as motivating people, especially farmers, to plant trees along with agricultural crops, area under forest and tree cover at present is 6.6 per cent (State Forest Report, 2003). The Forest Department envisages to bring 10 per cent area under forest and tree cover by 2010 and subsequently 20 per cent after that in a phased manner.

With the increase in population of Haryana since 1966-1967, the forest area per lakh of population has gone down from 1390 hectares in 1966-67 to 1050 hectares in 1995. Per capita forest area is 0.01 hectares as against 0.09 hectares for India as a whole. The area under forests is concentrated in the Himalayan belt and adjoining areas in Panchkula (Kalesar, Pinjore and Morni) and Yamuna Nagar and Ambala districts.

Trees are the guardians of ecological security as they play a pivotal role in maintaining ecological balance. As per National Forest Policy 1988, 33 per cent of the total geographical area should be under forest and tree cover. The total area under forests in the State of Haryana is 1.56 lakh hectares which constitutes 3.5 per cent of the total geographical area. Integration of growing tree species alongwith agricultural crops under agro-forestry, adoption of farm forestry, massive afforestation on degraded *panchayat* lands and afforestation on sand dunes with active participation of the people has resulted in increase in forest cover. The Total Forest and Tree Cover in the State is now 6.6 per cent as reported in *State Forest Report 2003*, published by Forest Survey of India. The State envisages to increase the forest and tree cover in the State from 6.6 to 10 per cent by 2010.

During 2006-07, a target of planting 4.50 crore seedlings inside and outside forest land in the State was set with a plan allocation of Rs.97.35 crore. Till December 2006, 4.32 crore seedlings have been planted, of which 1.79 crore have been planted on forest land, common land and wasteland while 2.53 crore seedlings have been supplied free of cost by the Department of Farmers, *panchayats*, educational institutions, various Departments as well as general public for planting on their lands. The remaining target will be achieved by March 2007. During 2007-08, a planting target of about 4.50 crore plants is proposed to be achieved with a Plan Outlay of about Rs.100.58 crore.

It has been decided to establish Herbal Parks in the State to promote the cultivation of medicinal-plants.

An Externally Aided Afforestation Project of Rs.286 crore is being implemented with the financial assistance of Japan Bank of International Cooperation. Under this project, 48,800 hectare of land will be brought under afforestation and the project will last for 7 years till 2011. In the year 2005-06, 5662 hectares and 7164 RKM (Road Kilo Metres) plantation target was achieved. During 2006-2007, 5340 and 7079 RKM plantation target is likely to be achieved.

In order to bring more area under forests, 83,269 hectares area and 30056 RKM area was brought under forest and 32.40 crore trees were planted during 1985-1990. In the year 1995 alone 10 crore trees were planted. A target of 8030 RKM and 120485 hectares of area was to be brought under forest during Eighth Plan (1992-97) against which 7047 RKM and 103494 hectares of area was brought under forests by the end of 1996-97.

2.1.5 Geology

Geology is defined as the study of rocks and minerals of the earth with respect to their origin, composition and mode of occurrence. The State of Haryana comprises a good assemblage of rocks belonging to Pre-Cambrian to Quaternary age. The State can be divided in three different geological domains.

Pre-Cambrian Rocks of Aravalli Mountains: These are represented by Delhi Super Group of rocks (2500 to 100 million years), which are confined to the southern part of the State. It consists of Alwar group of rocks, which are overlain by rocks of Ajebgrah group. The Alwar group of rocks are well exposed in the NE-SW hill ranges of Gurgaon district. These are represented by thickly bedded quartzites, micaceous quartzites with subordinate bands of mica schist and carbonaceous phyllite. The Ajebgarh groups of rocks are mostly developed in the form of hill ranges as well as parallel isolated hillocks in parts of Rewari, Mahendragarh and Gurgaon districts. The dominant rock types of the group include shale, slate, phyllite, pelitic schist, crystalline and impure limestone, marbles, calc-schist with intercalations of thinly bedded quartzites. Post Delhi intrusive includes meta-dolerites, granites, rhyolites and pegmatites. The rhyolites exposed in the Tosham hills of Bhiwani district belongs to Malani Igneous Suite (940 ± 20 million years). These rhyolites represent the last phase of any major igneous activity in the Delhi Super Group of rocks.

Tertiary Rocks of Himalaya: The north eastern part of Haryana is characterised by the Himalayan Palaeogene succession comprising Subathu and Dagshai formation and Neogene succession of Shiwalik Group of rocks. Subathu formation (late Paleocene to middle Eocene) consists of pisolitic laterite and shales. Overlying the Subathus, the Dagshai formation (late Eocene to Oligocene) consist of alternating sequence of grey and purple clay and hard, fine grained greenish impure sandstone. The sediments of the Shiwalik Group were derived from the rising mountain in the north and they are laid down in the alluvial plains of a series of rivers along the foot of the Outer Himalaya during the Neogene period (Mid. Miocene to Lr. Pleistocene). Based on the evidences of vertebrate fauna, the Shiwalik succession has been divided into three units *viz.* Lower Shiwalik (Mid. Miocene), Middle Shiwalik (Up. Miocene to Lr. Pliocene and Upper Shiwalik (Up. Pliocene to Lr. Pleistocene). The contact of Shiwaliks with the Indo Gangetic Plains is defined as Main Frontal Thrust, whereas the contact of Shiwaliks with the Subathu in the north is known as Main Boundary Thrust. Upper Shiwaliks occur all along the southern margin of the Shiwalik belt in Panchkula district and along the northern margin of Yamunanagar district. It is characterised by coarse boulder conglomerate and associated with alternating sequence of sandstones, grits, clays and conglomerates. Middle Shiwalik is located in the Yamunanagar district and marked by alternating sequence of massive sandstone, red shales, clay and occasional pebbly beds. Lower Shiwalik is characterised by the presence of nodular shales and is constituted by alternating sequence of dark hard sandstone, clays and red-purple shales. Rocks of the Lower Shiwaliks occupy middle slopes in Panchkula district, which are tectonically underlained by the rocks of Upper Shiwaliks to the south and by the Subathu formation to the north.

Quaternary Deposits of Indo-Gangetic Plain: It occupies nearly 97 per cent area of the State. It is formed by the deposition of alluvial sediments brought by Himalayan rivers into a deep crustal trough between Himalaya in the north and Deccan plateau in the south. The deposits range in age from Pleistocene to recent period. The thickness of the alluvium varies from a few metres to about 1200 metres. Maximum thickness of the Quaternary sediments is encountered along the northern fringes near the foredeep folded belt of Shiwalik hills. The alluvial deposits consist of sand, silt, clays, *kankar*, gravel and boulders. The sediments have been divided into the newer alluvium of Pleistocene period known as Bhangar and older alluvium is known as Khaddar. The Bhangar comprises of stream laid silt, sand, clay and calcareous nodules, comparatively occupies the higher terrain, whereas the Khaddar comprising of generally poorly sorted silt, sand, gravel and clay occurs adjacent to the river channels. The Bhanagar occupies the outer margins of the Shiwaliks. In the Holocene period, aeolian sands in the form of sand dunes and sandy deposits have been deposited over the alluvium deposits in the south-western parts of the State.

Being an alluvial formation, Haryana has very little mineral wealth. Various rocks and minerals found in the State according to definitions contained in the Mines & Minerals Act, 1957 under section 3(E), are described as "minor minerals" and remaining as minerals commonly known as "major minerals".

Minor Minerals: Minor minerals include building stones, gravel, ordinary clay, ordinary sand, boulder, shingle, chalcedony pebble, *kankar* and limestone, *murrum*, brick earth, fuller's earth, bentonite, road metal, *rehmatti*, slate and shale (used as building material), saltpetre and granite. Minor minerals are the major source of income because maximum amount of revenue is derived from the auctioning of these minerals.

Major Minerals: Almost all the industrial rocks and minerals are grouped under major minerals. Major minerals found in the State are asbestos, arsenopyrite, apatite & rock phosphate, barytes, beryl, china clay, calcite, copper, felspar, garnet, graphite, gold, glass and fondary sands, lead, zinc, tin-tungsten ores, milestones, lime, *kankar*, dolomite, manganese, mica, quartz, quartzite and slate.

Most of the minerals are found in Mahendragarh, Gurgaon, Ambala, Yamunanagar and Panchkula districts. Iron ore, limestone and slate are the only three principal minerals economically exploited at present. Other minerals are lime, *kankar*, china clay, dolomite, quartz and silica. Limestone and *kankar* are used in cement manufacturing. The Geological Survey of India has estimated the resources of crystalline limestone to be of the order of 17.5 million tonnes. Slate is found in the Rewari, Mahendragarh and Gurgaon districts. The iron ore reserves are of the order of five million tonnes. The ore is of high grade, varying from 50 per cent to 65 per cent in iron contents. Various minerals being economically exploited in the State are as under:

Building Stones: Large quantities of sand, pebbles, gravels and boulders are found in the river beds and flood plains of Ghaggar, Tangri, Markanda and Yamuna rivers. River sand is also quarried for construction material in the river beds of Sahibi, Dohan and Kasauti rivers in parts of

Mahendragarh and Rewari districts. *Badar* sand also called *bazri* is found in huge quantities in the hilly terrain of Aravallis in Faridabad and Gurgaon district. Siliceous *kankar* and Lime *kankar* occur in huge quantities in parts of Bhiwani and Jhajjar districts. Minor quantities of *kankar* are also found in parts of Rewari, Mahendragarh, Faridabad, Gurgaon and Sirsa districts. Brick earth/ ordinary clay suitable for manufacturing of bricks is available in plenty in almost every part of the State except in hilly terrain and areas covered with sand dunes. Saltpetre occurs as thin white incrustations on the surface. Its major occurrences are in Kurukshetra, Hisar, Rohtak, Jind and Sirsa districts whereas minor occurrences are in Sonipat, Karnal, Gurgaon, Faridabad and Bhiwani districts. Practically inexhaustible deposits of quartzite are found in the State, distributed within narrow, widly isolated strike ridges of Aravallis in the districts of Faridabad, Gurgaon, Rewari, Mahendargarh and Bhiwani. Limestone reserves are located in the hilly tracts of Panchkula (Morni) and Mahendragarh (Narnaul) districts. Granite deposits of ornamental building stone variety and of ordinary building stone variety occur as inexhaustible deposits around Narnaul and around Riwasa in parts of Mahendragarh and Bhiwani districts respectively. Marble in the shades of white, pink, grey and pale green coloured marble are found at a number of places around Narnaul in parts of Mahendragarh district. Huge deposits of good quality slates occurring in shades of green, black and brown exists in the district of Rewari and Mahendragarh.

Metallic Deposits: Iron ore deposits in form of magnetite with little haematite occur in calc-quartz-biotite schist of Ajabgarh rock due south of Narnaul in Mahendragarh district. Haematitic quartzite associated with quartzite and phyllite occur in Kaliana hill top in Bhiwani district. Low grade haematite and jasperoid haematite occur in Ferozpur-Jhirka area of Gurgaon district. Lead, zinc and tin mineralisation occur in granites and rhyolites of Tosham area of Bhiwani district.

A number of major minerals, though in minor quantities, are found in the State. These include arsenopyrite (Alwar quartzites of Gurgaon district), tremolite (in Ajabgarh quartzites, near Narnaul), apatite and rock-phosphate (Calc silicate rocks of Dochan, Mahendragarh and in Subathu shales of Morni Hills, Panchkula), barytes (in Ajabgarh rocks of Narnaul tehsil, Dagshai shales of Morni hills, Panchkula), beryl (in pegmatites intruding the schistose rocks of Ajabgarh group in Narnaul tehshil), china clay (in the feldspathic pegmatite veins occuring in Alwar quartzites in Faridabad and Gurgaon district), red clays (in Kona Nala area, Kalka *tehshil* of Panchkula district), calcite (in limestone and calc silicate rocks of Ajabgarh Group in Narnaul *tehshil*), copper (in calc-silicate and gneissic rocks in Narnaul *tehshil* and Alwar quartzites in Khodana hillocks in Bhiwani district), felspars (in pegmatites intruding quartzites in Narnaul tehshil and in Gurgaon district), garnet (in Garnetiferous mica schist associated with Alwar quartzites in Gurgaon district), graphite (in graphite mica schist occuring in Narnaul tehshil and Gurgaon district), gold (occurring as placer deposits in river sands of Markanda, Tangri and other rivulets in Yamunanagar district), silica sand (occur in hilly terrain of Aravalli in Gurgaon, Mahendragarh districts), foundry sand (in abandoned course of Yamuna river in Sonipat district), kyanite (in st-ky-mica schist rock in Mahendragarh district, and in metasedimentary rocks of Delhi Special Group in Gurgaon district), manganese (low grade, small deposits associated with limestones in Narnaul *tehshil*), mica (pegmatitic dykes in schistose rocks of Ajabgarh group), quartz (as intrusive veins with pegmatites in Mahendragarh, Gurgaon and Faridabad districts).

Mines and Geology Department is entrusted with the work of exploration and exploitation of the minerals in the State. For exploitation of the minerals in the State, investigation works are being done by the Geological Wing of the department. Apart from this, prospecting licences are also being granted to private entrepreneurs for this purpose. Mining leases/contracts for extraction of minerals are being given on establishment of deposits as per provisions of Mines and Minerals (Regulation and Development) Act 1957, a Central Act and Mineral Concession Rules, 1960 (Central Rules), framed by Central Government for regulating the Major Minerals. In the State of Haryana, limestone, lime *kankar*, dolomite, school slate, silica sand, China clay and quartzite and iron ore are available. Central Government has defined minerals used as building material like road metal and masonry stone, ordinary sand, saltpetre and brick earth as Minor Mineral.

The mineral concession of Minor Minerals is regulated by Punjab Minor Mineral Concession Rules, 1964, a State rule framed as per delegated powers under Section 15 of the Central Act. Mining Department also regulates stone crusher in the State. Haryana Regulation and Control of crusher Act, 1991 and rules framed thereunder regulates in operation of stone crusher in the State. The stone crushers are allowed to be installed only in the identified Crusher Zones or in the areas which fulfils the sitting parameters fixed by Environment Department and have 'NOC' of Haryana State Pollution Control Board.

As per existing provisions of State rules, mining leases for Minor Mineral are being granted by public auction instead of granting mining leases by inviting applications. The leases are granted by auction and lessees are liable to pay royalty on the mineral dispatched or minimum dead rent (fixed in open auction) whichever is more. The period of mining lease is granted for seven years. The annual dead rent is further liable to be increased by 50 per cent after expiring of every three years lease period. The policy of grant of mining leases by public auction gives equal opportunity to all interested persons by participating in the auction.

Mining leases for the Major Minerals having industrial use are granted by inviting applications as per provisions of Central Act and Rules framed thereunder. State Government is not empowered to frame rules. However, the power to grant is exercised by State Government. The applicants are interviewed by a Committee headed by Director, Mines and Geology, in order to adjudicate their suitability for grant of mining lease. The financial resources, knowledge of mining and staff employed by applicants are the main factors for deciding the matter for grant of lease.

In view of principles laid down by Central Government in a case decided by Central Tribunal in 1993, State government took a policy decision 'one area one lessee' and mining lease holders of 'Major Minerals' are being granted mining lease of minor minerals in the same area. The other mode for grant of mineral concession for the minor minerals quarries is the contracts by open auction. In case of mining contract, the quantity of mineral extracted is not linked with the contract money. Prior to March, 2005 minor mineral quarries in various districts were granted 'as one unit'. However, now on expiry of old contracts, department is auctioning the minor mineral mines by forming small zones.

2.2 Human Resources (Skill Base)

Knowledge is more important today than ever, as the twin forces of globalisation and technological advances are spurring an ongoing knowledge revolution. This revolution manifests itself in many ways: closer links between science and technology (S&T), greater importance of innovation for economic growth and competitiveness, increased importance of education and lifelong learning, and more investment in intangibles (R&D, software, and education); the latter is even greater than investments in fixed capital.

Improved knowledge has led to increasing productivity. The creation and application of new technologies has increased growth possibilities and an expanding range of products and services. It has brought revolutionary change to virtually all markets and sectors.

Education is the fundamental enablers of the knowledge economy. Well-educated and skilled people are keys to creating, sharing, disseminating, and using knowledge effectively.

Rates of literacy among the population have risen considerably in Haryana in the past ten years. The 2001 census recorded literacy rates of 67.91 per cent, as compared to 55.85 per cent in 1991. In 2001, the male literacy rate was 79.3 per cent which was 48.2 per cent in 1981 as against it the female literacy rate was 56.3 per cent which was just 22.3 per cent in 1981. The gap between male and female rates has therefore, narrowed down from 25.9 per cent in 1981 to 23.0 per cent in 2001.

Skills matter more than ever in today's competitive global market. Firms and farmers alike must be able to learn and develop new skills. While not losing sight of the need for secondary and higher education, there is the need for improving the skill and education levels of the mass of people though primary and vocational education.

Training of youths in various industrial skills is the backbone for creation of a sound industrial economy. The Industrial Training and Vocational Education Department through a network of 192 institutes (ITIs, ITIs Women, Vocational Education Institutes (VEIs), Art Schools and Footwear Institutes) is presently providing certificate courses to nearly 31,358 students all over the State. These institutes are not only supplying skilled draftsmen to the industries but also generate avenues for self-employment.

A number of 78 ITIs and ITIs (W) with a seating capacity of 15,140 and 112 VEIs with seating capacity of 16,060 students are working under this department. Art School, Rohtak with a seating capacity of 60 students and a Government Footwear Institute, Rewari with a seating capacity of 50 students, are also functioning in the State. Teacher Training Courses with seating capacity of 224 seats are being run at Ambala City, Rohtak, Bhiwani, Jind, Narnaul and Sirsa. The institutes of the Department are imparting training at certificate level. Out of the total 192 institutes, 31 institutes are meant exclusively for women while there is a facility of co-education in the remaining institutes. Further, no tuition fee is charged from women trainees in all these institutes.

During the year 2005-06, the intake capacity in Guru Jambheshwar University of Science and Technology, Hisar was 617 students. There were 40 Engineering colleges in the State where the intake capacity was 14,308 students. 33 institutions were imparting education in Master of

Business Management with an intake capacity of 2027 students. 32 institutions were imparting education for Master of Computer Application with an intake capacity of 1825 students. 17 institutions were imparting education in Pharmacy with an intake capacity of 1039 students. 43 Polytechnics were functioning in the State with an intake capacity of 90705 students. Ten institutions were imparting training for M. Tech courses with an intake capacity of 360 students. The Hotel Management institute was functioning with an intake capacity of 60 students. In this way 177 institutions have been imparting technical education with an intake capacity of 29,941 students.

The number of scholars in recognised colleges for general education has increased from 75,863 in 1980-81 to 1,94,366 in 2004-05. The number of girl students in these colleges has increased from 22,319 in 1980-81 to 92,962 in 2004-05. The gross enrolment ratio in Classes I-V was 84.24 per cent and in classes VI-VIII it was 68.24 per cent in 2002-03. The Human Development Index (HDI) for Haryana has improved from 0.360 in 1981 to 0.5505 in 2001 as per *Human Development Report* of Haryana prepared by Haryana Institute of Public Administration.

2.2.1 Work Participation in Districts

The total work participation of Haryana in the year 2001, as specified in Table 2.1, was 39.62 per cent, of which 42.93 per cent was in rural areas and 31.49 per cent in urban areas. The work participation of males was very high as compared to females in both rural and urban areas. In case of males, it was 68.22 per cent whereas for females it was 31.78 per cent. Work participation of rural males was 63.33 per cent as compared to urban males whose work participation was 84.63 per cent. For females this ratio was reverse. In rural areas 36.67 per cent females participated in work, and in urban areas 15.37 per cent females participated in work. The district-wise position of the overall work participation shows that the maximum work was observed in district Fatehabad (45.03 per cent). The minimum work participation was recorded in district Ambala (31.99 per cent). Among the rural areas, the maximum work participation was found again in district Fatehabad (48.01 per cent), and the lowest in district Ambala (31.64 per cent). But as regards the urban areas, the highest work participation was from district Panipat (36.13 per cent), and the lowest, from district Yamuna Nagar (29.51 per cent). Surprisingly, the urban areas of district Yamuna Nagar have the distinction of having the highest work participation rate for males (90.11 per cent), and the lowest, for females (9.89 per cent) among all districts and areas of the State.

TABLE 2.1

Haryana: Work Participation Rate by District, 2001

(in Per cent)

Sr.No.	*State/District*	*Area*	*Total*	*Male*	*Female*
1.	**Haryana**	**Total**	**39.62**	**68.22**	**31.78**
		Rural	**42.93**	**63.33**	**36.67**
		Urban	**31.49**	**84.63**	**15.37**
2.	Panchkula	Total	38.14	78.44	21.56
		Rural	41.79	75.98	24.02
		Urban	33.58	82.24	17.76
3.	Ambala	Total	31.99	85.24	14.76
		Rural	31.64	84.16	15.84
		Urban	32.64	87.18	12.82
4.	Yamuna Nagar	Total	32.31	83.29	16.71
		Rural	34.00	79.70	20.30
		Urban	29.51	90.11	09.89
5.	Kurukshetra	Total	37.36	73.42	26.58
		Rural	39.96	70.43	29.57
		Urban	30.00	84.69	15.31
6.	Kaithal	Total	39.32	69.80	30.20
		Rural	41.56	66.85	33.15
		Urban	30.01	86.82	13.18
7.	Karnal	Total	35.74	75.29	24.71
		Rural	37.29	72.15	27.85
		Urban	31.46	85.60	14.40
8.	Panipat	Total	39.57	70.50	29.50
		Rural	41.91	64.26	35.74
		Urban	36.13	81.11	18.89
9.	Sonipat	Total	40.89	66.05	33.95
		Rural	44.59	62.27	37.73
		Urban	29.84	82.88	17.12
10.	Jind	Total	43.87	63.44	36.56
		Rural	47.28	60.25	39.75
		Urban	30.46	82.89	17.11
11.	Fatehabad	Total	45.03	64.15	35.85
		Rural	48.01	61.21	38.79
		Urban	31.09	85.37	14.63
12.	Sirsa	Total	42.59	66.17	33.83
		Rural	46.34	61.69	38.31
		Urban	32.06	84.37	15.63
13.	Hisar	Total	43.30	64.73	35.27
		Rural	47.02	60.55	39.45
		Urban	32.66	81.96	18.04
14.	Bhiwani	Total	42.76	61.28	38.72
		Rural	45.65	58.03	41.97
		Urban	30.39	82.10	17.90
15.	Rohtak	Total	39.47	67.67	32.33
		Rural	44.63	61.93	38.07
		Urban	29.91	83.53	16.47
16.	Jhajjar	Total	44.17	62.98	37.02
		Rural	47.32	59.42	40.58
		Urban	33.10	80.82	19.18
17.	Mahendragarh	Total	43.31	57.78	42.22
		Rural	45.19	55.34	44.66
		Urban	31.21	80.44	19.56
18.	Rewari	Total	43.59	60.07	39.93
		Rural	46.50	56.41	43.59
		Urban	30.14	86.15	13.85
19.	Gurgaon	Total	37.92	65.94	34.06
		Rural	39.58	62.08	37.92
		Urban	32.14	82.55	17.45
20.	Faridabad	Total	35.80	73.37	26.63
		Rural	41.83	60.35	39.65
		Urban	31.01	87.36	12.64

Source : Director of Census operations, Haryana, available at *www.censusindia.net*

2.2.2 Occupational Distribution

The occupational distribution of persons as reported by the Live Register of Employment Exchanges in Haryana

(Table 2.2) shows that there were 3,59,255 persons in 1980 engaged in different occupations. In the year 2005 this figure rose to 10,74,703. Their occupational distribution shows that in 1980 maximum number of persons were without professional or vocational training or previous work experience. Their number was 2,20,540 which accounted for more than 61 per cent of the total. This percentage increased to 73.39 in the year 2005 with the absolute number increasing to 7,88,777. In 1980 the number of professional, technical and related workers was 35,991 (10.02 per cent), labourers, 32,251 (9.78 per cent), production and related workers, transport equipment operators, 24,869 (6.92 per cent), service workers, 22,526 (6.27 per cent), clerical and related workers, 20,927 (5.83 per cent), farmers, fishermen, hunters, loggers and related workers, 2,026 (0.56 per cent), administrative, executive and managerial workers, 70 (0.02 per cent) and sales workers, 55 (0.01 per cent). The situation was not much different in the year 2005. Persons without professional or vocational training or previous work experience in this year accounted for 73.39 per cent of the total, professional, technical and related workers accounted for 7.37 per cent, labourers, 0.108 per cent, production and related workers, transport equipment operators, 6.31 per cent, service workers, 3.90 per cent, clerical and related workers, 8.67 per cent, farmers, fishermen, hunters, loggers and related workers, 0.21 per cent, administrative, executive and managerial workers, 0.016 per cent and sales workers, 0.023 per cent.

2.2.3 Employment in Organised Sector

At the time of the inception of Haryana State the total employment was 2,16,082, which rose to 6,28,881 in the year 2005-06. During this period the distribution of employment between public sector and private sector was such that it ranged between 59 to 66 per cent in the case of public sector and between 34 to 41 per cent in the case of private sector. In the year 1966-67 the public sector accounted for 60.42 per cent of the total employed persons and the private sector accounted for 39.58 per cent. In the year 2005-06 the corresponding figures were 60.49 and 39.51 per cent, respectively. Apparently, the public sector continues to dominate in giving employment to the persons in Haryana. Out of the public sector employees, 62.94 per cent were in State Government services, 6.55 in Central Government services, and the rest were employed in local bodies and quasi-government services.

2.2.4 Agricultural Workers

Haryana is an agricultural State and a big number of its working force is engaged in this occupation. Agriculture is mainly concentrated to rural areas of Haryana and hence agricultural workers are mostly from rural areas of Haryana. The data pertaining to Agricultural Workers, as percentage of total working population, is given in Table 2.4. Agricultural Workers constituted 51.29 per cent of the total working population of the State in 2001. Males constituted 30.71 per cent and the females, 20.58 per

TABLE 2.2

Occupational Distribution of Persons on the Live Register of Employment Exchanges in Haryana

(As on 31st December)

Particulars	*1980*	*1990*	*1995*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Professional, Technical and related workers	35991	47925	49863	74432	65270	72274	80414	68495	79284
Administrative, Executive and Managerial Workers	70	72	61	258	173	188	195	155	172
Clerical and related workers	20927	45293	51671	63515	53293	64211	73755	76426	93261
Sales Workers	55	102	105	213	176	192	220	239	249
Service Workers	22526	24450	30134	32300	29205	35621	37859	44602	41974
Farmers, Fishermen, Hunters, Loggers and related workers	2026	3436	3540	2917	2654	2916	2946	2408	2301
Production and related workers, Transport equipment Operators (excluding labourers)	24869	40159	44080	61576	50917	62133	68823	65971	67826
Labourers	32251	3038	1433	2415	1065	1636	1453	1428	859
Persons without professional or vocational training or pervious work experience	220540	426948	517018	547782	461022	563410	635670	708929	788777
Total	359255	591423	697905	785408	663775	802581	901335	968653	1074703

Source: Government of Haryana (2007). *Statistical Abstract Haryana, 2005-06*. Table 24.11, p.509.

TABLE 2.3

Employment in the Organised Sector in Haryana

(As on 31st March)

Year	Public Sector						Private Sector			
	Central Government	State Government	Quasi Government		Local Bodies	Total	Act	Non-Act	Total Employment	Total
			Central	State						
1	2	3	4	5	6	7	8	9	10	11
1966-67	19980	86323	13364	-	10892	130559	-	-	85523	216082
1970-71	19566	115047	28491	-	11601	174705	-	-	105650	280355
1975-76	24069	159544	52269	-	12707	248589	136226	18339	154565	403154
1980-81	28581	195932	25162	56923	14231	320829	164484	20675	185159	505988
1985-86	32298	220195	37018	63776	15361	368648	166421	23173	189594	558242
1990-91	32667	234260	43865	69894	15381	396067	183131	22611	205742	601809
1995-96	32686	253791	42969	77606	18410	425462	215344	21903	237247	662709
2000-01	30950	253476	42535	71691	17227	415879	213311	23081	236392	652271
2003-04	27496	247886	38980	66333	14960	395655	234584	21143	255727	651382
2004-05	25212	246503	39177	64454	14367	389713	236626	21358	257984	647697
2005-06 (P)	24917	239468	38314	63148	14598	380445	227396	21040	248436	628881

Note : R: Revised P: Provisional

Prior to 1980 the information in regard to employment to State Government in Quasi-Government category was included in Central Government (Col.4)

Source: Government of Haryana (2007). *Statistical Abstract Haryana 2005-06*, Table 24.12, p.510.

cent. In rural areas agricultural workers constituted 64.83 per cent and in urban areas, only 5.93 per cent. The percentage of males was higher in both rural and urban areas. In rural areas the percentage of males was 38.67 as compared to females percentage of 26.16. In urban areas the percentage of males was 4.04 as compared to females percentage of 1.89. The maximum percentage (67.31) of agricultural workers was found in district Fatehabad and the minimum (22.97) was found in district Panchkula. Maximum percentage of agricultural workers in rural areas was noticed in district Jind (75.39) and the minimum percentage in rural areas was noticed in district Panchkula (37.07). So far as urban areas are concerned the overall percentage of agricultural workers was very low. The maximum percentage of agricultural workers in urban areas was found in district Mahendragarh (14.13) and the minimum percentage in urban areas was noticed in district Panchkula (1.09). The percentage of males in agricultural worker category was highest in the rural areas of district Sirsa (47.69 per cent), and the lowest participation was found in the urban areas of district Panchkula (24.94). Among females the maximum participation was from the rural areas of district Mahendragarh (36.50 per cent) and the lowest, was from the urban areas of district Panchkula (0.16).

2.2.5 Cultivators

Table 2.5 contains data regarding cultivators as per cent of total working population in different districts of Haryana in 2001. The total cultivators in Haryana in 2001 were 36.03 per cent of the total working population. Of all cultivators, 32.47 per cent were males and 43.67 per cent were females. Again the distribution of cultivators between urban and rural areas shows wide variations. In rural areas they were 45.86 per cent and in urban areas 3.11 per cent. The percentage of females was higher both in rural as well as in urban areas. The percentage of cultivators was found highest in district Mahendragarh (54.71 per cent) and lowest in district Kurukshetra (16.34 per cent). In rural areas the percentage of cultivators was highest (more than 59 per cent) in the districts Mahendragarh and Bhiwani. The lowest percentage in rural areas was found in district Kurukshetra (24.97 per cent). In urban areas this percentage was highest in district Mahendragarh (11.08 per cent) and lowest in district Panchkula (0.46 per cent). Among male cultivators the maximum percentage was found in the rural areas of district Bhiwani (57.58 per cent) and the lowest was found in the urban areas of district Panchkula (0.47 per cent). Among females the maximum percentage of cultivators was found in the rural areas of district Mahendragarh (65.63 per cent) and lowest, in the urban areas of district Panchkula (0.40 per cent).

TABLE 2.4

Haryana: Agricultural Workers as Percentage of Total Working Population by District, 2001

(Agricultural+Cultivators)

Sr.No.	State/District	Area	Total	Male	Female
1.	**Haryana**	**Total**	**51.29**	**30.71**	**20.58**
		Rural	**64.83**	**38.67**	**26.16**
		Urban	**5.93**	**4.04**	**1.89**
2.	Panchkula	Total	22.97	15.53	7.44
		Rural	37.07	24.94	12.13
		Urban	1.09	0.92	0.16
3.	Kurukshetra	Total	46.43	35.66	10.77
		Rural	57.17	43.87	13.30
		Urban	5.94	4.70	1.24
4.	Ambala	Total	29.36	25.78	3.58
		Rural	44.75	39.42	5.33
		Urban	1.90	1.44	0.46
5.	Yamuna Nagar	Total	33.63	30.60	3.03
		Rural	49.98	45.01	4.46
		Urban	3.49	3.19	0.30
6.	Kaithal	Total	62.84	41.18	21.67
		Rural	71.63	46.67	24.96
		Urban	12.26	9.56	2.71
7.	Karnal	Total	50.27	35.62	14.65
		Rural	63.55	44.91	18.64
		Urban	6.65	5.10	1.55
8.	Panipat	Total	37.76	22.91	14.84
		Rural	58.82	35.55	23.27
		Urban	1.91	1.41	0.50
9.	Sonipat	Total	52.97	30.10	22.88
		Rural	63.23	35.81	27.42
		Urban	7.31	4.67	2.64
10.	Jind	Total	66.45	37.72	28.72
		Rural	75.39	42.62	32.77
		Urban	11.93	7.87	4.07
11.	Fatehabad	Total	67.31	39.71	27.60
		Rural	75.16	44.13	31.03
		Urban	10.68	7.84	2.85
12.	Sirsa	Total	61.26	39.69	21.57
		Rural	73.79	47.69	26.10
		Urban	10.49	7.25	3.23
13.	Hisar	Total	58.67	33.23	25.45
		Rural	71.36	40.19	31.18
		Urban	6.41	4.57	1.84
14.	Bhiwani	Total	63.90	35.57	28.32
		Rural	71.96	39.95	32.01
		Urban	12.16	7.47	4.69
15.	Rohtak	Total	50.87	28.61	22.27
		Rural	67.63	37.87	29.76
		Urban	4.54	2.99	1.55
16.	Jhajjar	Total	57.17	30.51	26.66
		Rural	66.61	35.38	31.23
		Urban	9.77	6.04	3.74
17.	Mahendragarh	Total	65.80	32.19	33.61
		Rural	71.36	34.87	36.50
		Urban	14.13	7.29	6.84
18.	Rewari	Total	57.75	28.22	29.53
		Rural	64.93	31.64	33.29
		Urban	6.58	3.84	2.74
19.	Gurgaon	Total	40.29	22.41	17.88
		Rural	48.27	26.80	21.47
		Urban	5.91	3.51	2.39
20.	Faridabad	Total	34.18	18.68	15.50
		Rural	62.84	34.02	28.82
		Urban	3.37	2.20	1.17

Source : Director of Census operations, Haryana, available at *www.censusindia.net*.

TABLE 2.5

Haryana: Cultivators as Percentage of Total Working Population by District, 2001

Sr.No.	State/District	Area	Total	Male Cultivators	Female Cultivators
1.	**Haryana**	**Total**	**36.03**	**32.47**	**43.67**
		Rural	**45.85**	**44.34**	**48.47**
		Urban	**3.11**	**2.70**	**5.33**
2.	Panchkula	Total	16.88	14.75	24.65
		Rural	27.46	24.70	36.19
		Urban	0.46	0.47	0.40
3.	Kurukshetra	Total	16.34	18.02	6.62
		Rural	24.97	27.99	8.92
		Urban	0.94	0.85	1.53
4.	Ambala	Total	17.44	19.95	4.92
		Rural	25.80	30.86	5.91
		Urban	1.56	1.61	1.10
5.	Yamuna Nagar	Total	23.70	28.12	11.48
		Rural	29.17	36.08	12.73
		Urban	3.06	3.18	2.43
6.	Kaithal	Total	40.28	40.55	39.65
		Rural	46.08	48.14	41.92
		Urban	6.88	6.91	6.67
7.	Karnal	Total	26.57	27.79	22.87
		Rural	33.91	36.85	26.30
		Urban	2.47	2.70	1.10
8.	Panipat	Total	23.38	21.66	27.49
		Rural	36.51	37.05	35.53
		Urban	1.03	0.91	1.58
9.	Sonipat	Total	36.26	32.28	44.01
		Rural	43.72	41.14	47.97
		Urban	3.07	2.64	5.18
10.	Jind	Total	50.02	45.65	57.61
		Rural	56.92	54.50	60.57
		Urban	7.99	6.42	15.61
11.	Fatehabad	Total	44.46	41.96	48.93
		Rural	50.08	49.31	51.30
		Urban	3.87	3.93	3.49
12.	Sirsa	Total	37.43	38.45	35.43
		Rural	45.63	50.02	38.57
		Urban	4.15	4.14	4.21
13.	Hisar	Total	43.53	38.75	52.30
		Rural	53.49	50.64	57.86
		Urban	2.52	2.58	2.23
14.	Bhiwani	Total	52.40	48.31	58.87
		Rural	59.33	57.58	61.75
		Urban	7.93	6.26	15.58
15.	Rohtak	Total	38.62	32.58	51.27
		Rural	51.78	47.55	58.65
		Urban	2.26	1.89	4.14
16.	Jhajjar	Total	45.63	39.09	56.75
		Rural	53.29	48.13	60.85
		Urban	7.19	5.75	13.27
17.	Mahendragarh	Total	54.71	48.02	63.87
		Rural	59.41	54.40	65.63
		Urban	11.08	7.32	26.51
18.	Rewari	Total	44.43	38.19	53.80
		Rural	50.19	45.83	55.83
		Urban	3.34	2.55	8.23
19.	Gurgaon	Total	31.09	28.06	36.95
		Rural	37.58	35.90	40.32
		Urban	3.14	2.66	5.39
20.	Faridabad	Total	23.72	18.99	36.75
		Rural	44.13	42.61	46.45
		Urban	1.78	1.46	4.01

Source : Director of Census operations, Haryana, available at *www.censusindia.net*.

2.2.6 Agricultural Labourers

The details of the agricultural labourers as percentage of total working population in different districts of Haryana as given in Table 2.6 for the year 2001 show that 15.27 per cent of the total working population of Haryana is working as agricultural labourers. Of the total number of these workers, 12.55 per cent are males and 21.10 per cent are females. Most of them (18.98 per cent) belong to rural areas and a few (2.83 per cent) belong to urban areas. Females continue to dominate both in rural and urban areas. The maximum percentage of agricultural labourers was found in district Sirsa (23.84 per cent). The minimum percentage was found in district Panchkula (6.09). Maximum agricultural labourers from rural areas were found in district Karnal (29.64 per cent) and the minimum in district Panchkula (9.61 per cent). In urban areas the maximum percentage was found in district Fatehabad (6.81) and the minimum, in district Panchkula (0.63). The maximum percentage of male agricultural workers was from the rural areas of district Sirsa (27.28) and the minimum was from the urban areas of district Panchkula (0.66). The maximum percentage of female agricultural workers was from the rural areas of district Karnal (40.64) and the minimum was found in the urban areas of district Panchkula (0.52).

2.2.7 Non-agricultural Workers

The percentage of non-agricultural workers in the total working population in the State of Haryana in the year 2001 was 48.71 (Table 2.7). In rural areas this percentage was 35.17 and in urban areas, 94.07. It clearly shows that in rural areas people are mostly dependent on agricultural activities while in urban areas people are mostly dependent on non-agricultural activities. The percentage of male non-agricultural workers was 69.29 and that of female non-agricultural workers was 79.42. In rural areas the percentage of males was 61.33 and in urban areas it was 95.96 per cent. For females these percentages were 73.84 and 98.11, respectively. The highest percentage of people engaged in non-agricultural activities was found in district Panchkula (77.03). Also, it is to be noted that district Panchkula has the distinction of having the highest percentage of non-agricultural workers in both urban as well as rural areas. The lowest percentage has been observed in district Fatehabad (32.69). In rural areas the lowest percentage was recorded in district Jind (24.61) and in urban areas the lowest percentage was recorded in district Mahendragarh (85.87). Among males, the maximum percentage was recorded in the urban areas of Panchkula district (99.08) and the lowest percentage was recorded in the rural areas of Sirsa district (52.31). Among females the highest percentage was recorded in the urban areas of Panchkula district (99.84) and the lowest percentage was recorded in the rural areas of Mahendragarh district (63.5).

TABLE 2.6

Haryana: Agricultural Labourers as Percentage of Total Working Population by District, 2001

Sr.No.	State/District	Area	Total	Male	Female
	HARYANA	Total	15.27	12.55	21.10
		Rural	18.98	16.73	22.87
		Urban	2.83	2.07	6.97
1.	Panchkula	Total	6.09	5.05	9.87
		Rural	9.61	8.11	14.32
		Urban	0.63	0.66	0.52
2.	Kurukshetra	Total	13.03	12.23	17.64
		Rural	19.79	18.86	24.71
		Urban	0.96	0.80	2.05
3.	Ambala	Total	16.19	16.78	13.20
		Rural	23.68	25.61	16.08
		Urban	1.94	1.93	1.97
4.	Yamuna Nagar	Total	22.73	20.45	29.05
		Rural	28.00	26.21	32.26
		Urban	2.88	2.38	5.64
5.	Kaithal	Total	22.57	18.44	32.11
		Rural	25.55	21.67	33.37
		Urban	5.38	4.09	13.89
6.	Karnal	Total	23.70	19.52	36.43
		Rural	29.64	25.40	40.64
		Urban	4.19	3.26	9.68
7.	Panipat	Total	14.38	10.85	22.82
		Rural	22.31	18.27	29.57
		Urban	0.88	0.83	1.07
8.	Sonipat	Total	16.71	13.29	23.37
		Rural	19.51	16.36	24.70
		Urban	4.24	3.00	10.24
9.	Jind	Total	16.43	13.81	20.96
		Rural	18.48	16.24	21.86
		Urban	3.94	3.07	8.16
10.	Fatehabad	Total	22.85	19.93	28.07
		Rural	25.07	22.77	28.70
		Urban	6.81	5.25	15.96
11.	Sirsa	Total	23.84	21.53	28.35
		Rural	28.15	27.28	29.55
		Urban	6.34	4.46	16.49
12.	Hisar	Total	15.15	12.59	19.84
		Rural	17.88	15.74	21.16
		Urban	3.90	3.00	7.97
13.	Bhiwani	Total	11.50	9.74	14.28
		Rural	12.63	11.26	14.52
		Urban	4.24	2.84	10.62
14.	Rohtak	Total	12.25	9.70	17.60
		Rural	15.86	13.61	19.53
		Urban	2.28	1.69	5.27
15.	Jhajjar	Total	11.54	9.35	15.26
		Rural	13.32	11.42	16.11
		Urban	2.58	1.72	6.21
16.	Mahendragarh	Total	11.08	7.68	15.74
		Rural	11.95	8.61	16.08
		Urban	3.06	1.74	8.47
17.	Rewari	Total	13.32	8.79	20.14
		Rural	14.74	10.26	20.53
		Urban	3.24	1.91	11.52
18.	Gurgaon	Total	9.20	5.93	15.53
		Rural	10.69	7.27	16.30
		Urban	2.77	1.59	8.35
19.	Faridabad	Total	10.46	6.47	21.44
		Rural	18.70	13.76	26.23
		Urban	1.59	1.06	5.27

Source : Director of Census operations, Haryana, available at *www.censusindia.net.*

TABLE 2.7

Haryana: Non-Agricultural Workers as Percentage of Total Working Population by District, 2001

(in Per cent)

Sr.No.	State/District	Area	Total	Male	Female
1.	**Haryana**	**Total**	**48.71**	**69.29**	**79.42**
		Rural	**35.17**	**61.33**	**73.84**
		Urban	**94.07**	**95.96**	**98.11**
2.	Panchkula	Total	77.03	84.47	92.56
		Rural	62.93	75.06	87.87
		Urban	98.91	99.08	99.84
3.	Kurukshetra	Total	53.57	64.34	89.23
		Rural	42.83	56.13	86.7
		Urban	94.06	95.3	98.76
4.	Ambala	Total	70.64	74.22	96.42
		Rural	55.25	60.58	94.67
		Urban	98.1	98.56	99.54
5.	Yamuna Nagar	Total	66.37	69.4	96.97
		Rural	50.52	54.99	95.54
		Urban	96.51	96.81	99.7
6.	Kaithal	Total	37.16	58.82	78.33
		Rural	28.37	53.33	75.04
		Urban	87.74	90.44	97.29
7.	Karnal	Total	49.73	64.38	85.35
		Rural	36.45	55.09	81.36
		Urban	93.35	64.9	98.45
8.	Panipat	Total	62.24	77.09	85.16
		Rural	41.18	64.45	76.73
		Urban	98.09	98.59	99.5
9.	Sonipat	Total	47.03	69.9	77.12
		Rural	36.77	64.19	72.58
		Urban	92.69	95.33	97.36
10.	Jind	Total	33.55	62.28	71.28
		Rural	24.61	57.38	67.23
		Urban	88.07	92.13	95.93
11.	Fatehabad	Total	32.69	60.29	72.4
		Rural	24.84	55.87	68.97
		Urban	89.32	92.16	97.15
12.	Sirsa	Total	38.74	60.31	78.43
		Rural	26.21	52.31	73.9
		Urban	89.51	92.75	96.77
13.	Hisar	Total	41.33	66.77	74.55
		Rural	28.64	59.81	68.82
		Urban	93.59	95.43	98.16
14.	Bhiwani	Total	36.1	64.43	71.68
		Rural	28.04	60.05	67.99
		Urban	87.84	92.53	95.31
15.	Rohtak	Total	49.13	71.39	77.73
		Rural	32.37	62.13	70.24
		Urban	95.46	97.01	98.45
16.	Jhajjar	Total	42.83	69.49	73.34
		Rural	33.39	64.62	68.77
		Urban	90.23	93.96	96.26
17.	Mahendragarh	Total	34.2	67.81	66.39
		Rural	28.64	65.13	63.5
		Urban	85.87	92.71	93.16
18.	Rewari	Total	42.25	71.78	70.47
		Rural	35.07	68.36	66.71
		Urban	93.42	96.16	97.26
19.	Gurgaon	Total	59.71	77.59	82.12
		Rural	51.73	73.2	78.53
		Urban	94.09	96.49	97.61
20.	Faridabad	Total	65.82	81.32	84.5
		Rural	37.16	65.98	71.18
		Urban	96.63	97.8	98.83

Source : Director of Census operations, Haryana, available at *www.censusindia.net*.

2.2.8 Household Industries Workers

Not many people are employed in household industries. In 2001 only 2.56 per cent of the total working population was engaged in household industries (Table 2.8). In rural areas this percentage was 2.17 and in urban areas this percentage was 3.88. Males constituted 2.31 per cent and the females 3.11 per cent of the total working population. The percentage of females exceeded that of males in both rural and urban areas. The percentage of males in rural areas was 1.94 whereas the percentage of females in rural areas was 2.57. Similarly, in urban areas these percentages were 3.23 and 7.43, respectively. District Panipat has the maximum percentage of workers employed in household industries (4.62) whereas district Jind has the minimum percentage (1.67). In rural areas, the maximum percentage has been recorded in district Panchkula (3.65) and the minimum in district Jind (1.34). In urban areas, the maximum percentage is in district Panipat (7.30) and the minimum in district Panchkula (2.37). The maximum percentage of males has been reported from the urban area of Panipat (5.48) and the lowest percentage, from the rural areas of district Kaithal (1.27). Among females, the maximum percentage is from the urban areas of Panipat (15.08) and the lowest percentage, from the rural areas of district Jind (1.28).

2.2.9 Other Workers

In Haryana there is a sizeable number of other workers who earn their livelihood by working in the occupations other than mentioned above. Their percentage in the year 2001 was 46.15 in the total working population of Haryana (Table 2.9). In rural areas, this percentage was 33.00 and in urban areas, it was 90.19. Males exceeded females in this category. The percentage of males in this category was 52.68 and of females, 32.12. The number of male and female belonging to this category was 36.99 and 26.10 per cent of their corresponding total working population. For the urban areas, these figures are 92.00 and 80.27, respectively. The maximum percentage of these workers was found in district Panchkula (73.88) and the minimum was found in district Fatehabad (30.26). In rural areas, the maximum percentage was found in district Panchkula (59.28) and the minimum in district Fatehabad (22.53). In urban areas, the maximum percentage has been reported from district Panchkula (96.54) and the minimum from district Mahendragarh (81.62). In the category of males the maximum percentage is from the urban areas of district Panchkula (96.43) and the lowest from the rural areas of district Sirsa (21.08). Among females the maximum percentage has been recorded in the urban area of district Panchkula (97.04) and the minimum percentage in the

rural areas of district Jind (16.28). Thus, district Panchkula enjoys the distinction of employing maximum proportion of other workers (both males and females taken together) belonging to rural and urban categories.

TABLE 2.8

Haryana: Household Industries Workers as Percentage of Total Working Population by District, 2001

(in Per cent)

Sr.No.	State/District	Area	Total	Male	Female
1.	**Haryana**	**Total**	**2.56**	**2.31**	**3.11**
		Rural	**2.17**	**1.94**	**2.57**
		Urban	**3.88**	**3.23**	**7.43**
2.	Panchkula	Total	3.15	2.50	5.52
		Rural	3.65	2.54	7.17
		Urban	2.37	2.44	2.04
3.	Kurukshetra	Total	3.32	2.91	5.69
		Rural	3.06	2.54	5.83
		Urban	3.78	3.54	5.38
4.	Ambala	Total	3.22	2.53	6.65
		Rural	2.97	2.08	6.45
		Urban	3.70	3.29	7.42
5.	Yamuna Nagar	Total	2.08	1.73	3.03
		Rural	1.888	1.55	2.65
		Urban	2.84	2.29	5.86
6.	Kaithal	Total	1.79	1.54	2.38
		Rural	1.56	1.27	2.13
		Urban	3.13	2.69	6.02
7.	Karnal	Total	2.95	2.33	4.84
		Rural	2.70	2.02	4.47
		Urban	3.76	3.19	7.20
8.	Panipat	Total	4.62	3.80	6.58
		Rural	3.05	2.56	3.94
		Urban	7.30	5.48	15.08
9.	Sonipat	Total	2.25	2.17	2.42
		Rural	1.97	1.91	2.07
		Urban	3.48	3.01	5.79
10.	Jind	Total	1.67	1.67	1.67
		Rural	1.34	1.38	1.28
		Urban	3.65	2.93	7.14
11.	Fatehabad	Total	2.44	2.05	3.12
		Rural	2.31	1.98	2.84
		Urban	3.31	2.41	8.58
12.	Sirsa	Total	2.27	2.02	2.75
		Rural	1.85	1.62	2.23
		Urban	3.96	3.22	7.94
13.	Hisar	Total	2.37	2.18	2.72
		Rural	1.94	1.82	2.11
		Urban	4.15	3.26	8.18
14.	Bhiwani	Total	2.07	2.05	2.10
		Rural	1.74	1.74	1.75
		Urban	4.13	3.45	7.26
15.	Rohtak	Total	2.62	2.42	3.05
		Rural	2.28	2.16	2.48
		Urban	3.58	2.96	6.69
16.	Jhajjar	Total	1.99	1.80	2.32
		Rural	1.72	1.61	1.87
		Urban	3.38	2.48	7.18
17.	Mahendragarh	Total	2.24	2.47	1.94
		Rural	2.03	2.38	1.59
		Urban	4.24	3.02	9.28
18.	Rewari	Total	2.60	2.66	2.52
		Rural	2.36	2.38	2.33
		Urban	4.32	3.93	6.77
19.	Gurgaon	Total	2.70	2.24	3.61
		Rural	2.52	2.00	3.37
		Urban	3.50	3.01	5.82
20.	Faridabad	Total	3.03	2.78	3.73
		Rural	2.58	2.40	2.87
		Urban	3.51	3.06	6.64

Source : Director of Census operations, Haryana, available at *www.censusindia.net.*

TABLE 2.9

Haryana: Other Workers as Percentage of Total Working Population by District, 2001

(in Per cent)

Sr.No.	State/District	Area	Total	Male	Female
1.	**Haryana**	**Total**	**46.15**	**52.68**	**32.12**
		Rural	**33.00**	**36.99**	**26.10**
		Urban	**90.19**	**92.00**	**80.27**
2.	Panchkula	Total	73.88	77.70	59.97
		Rural	59.28	64.64	42.31
		Urban	96.54	96.43	97.04
3.	Kurukshetra	Total	67.32	66.85	70.06
		Rural	52.19	50.62	60.54
		Urban	94.32	94.81	91.04
4.	Ambala	Total	63.15	60.73	75.22
		Rural	47.56	41.44	71.56
		Urban	92.81	93.17	89.51
5.	Yamuna Nagar	Total	51.49	49.70	56.43
		Rural	40.95	36.16	52.36
		Urban	91.22	92.15	86.07
6.	Kaithal	Total	35.37	39.48	25.86
		Rural	26.81	28.91	22.58
		Urban	84.60	86.30	73.42
7.	Karnal	Total	46.78	50.36	35.86
		Rural	33.75	35.74	28.59
		Urban	89.58	90.85	82.022
8.	Panipat	Total	57.62	63.69	43.12
		Rural	38.13	42.12	30.96
		Urban	90.79	92.78	82.27
9.	Sonipat	Total	44.78	52.27	30.21
		Rural	34.80	40.58	25.26
		Urban	89.21	91.36	78.80
10.	Jind	Total	31.89	38.87	19.76
		Rural	23.26	27.87	16.28
		Urban	84.42	87.58	69.09
11.	Fatehabad	Total	30.26	36.05	19.88
		Rural	22.53	25.93	17.15
		Urban	86.00	88.41	71.97
12.	Sirsa	Total	36.47	38.00	33.47
		Rural	24.37	21.08	29.66
		Urban	85.55	88.18	71.37
13.	Hisar	Total	38.96	46.49	25.14
		Rural	26.70	31.80	18.86
		Urban	89.44	91.16	81.61
14.	Bhiwani	Total	34.04	39.90	24.75
		Rural	26.29	29.42	21.97
		Urban	83.71	87.45	66.54
15.	Rohtak	Total	46.50	55.30	28.09
		Rural	30.09	36.69	19.35
		Urban	91.88	93.46	83.90
16.	Jhajjar	Total	40.84	49.76	25.67
		Rural	31.67	38.84	21.17
		Urban	86.85	90.05	73.34
17.	Mahendragarh	Total	31.96	41.83	18.45
		Rural	26.61	34.61	16.70
		Urban	81.62	87.92	55.73
18.	Rewari	Total	39.65	50.36	23.54
		Rural	32.72	41.53	21.31
		Urban	89.10	91.62	73.48
19.	Gurgaon	Total	57.01	63.77	43.91
		Rural	49.21	54.83	40.01
		Urban	90.60	92.74	80.46
20.	Faridabad	Total	62.79	71.76	38.09
		Rural	34.58	41.26	24.45
		Urban	93.12	94.42	84.07

Source : Director of Census operations, Haryana, available at *www.censusindia.net.*

2.2.10 Marginal Workers

Marginal workers as per cent of total population of the State stood at 10.10 per cent in 2001 (Table 2.10). This percentage was higher in rural areas (12.86) as compared to urban areas (3.33). The percentage of male marginal workers in rural areas of Haryana was found to be lower as compared to females. But in urban areas the percentage of males exceeded marginally in comparison to females. Among districts, Mahendragarh has the maximum percentage of marginal workers (18.11) and district Ambala was reported to be the district with least percentage of marginal workers (4.82). So far as rural areas are concerned, the maximum percentage was found in district Mahendragarh (20.17) and the minimum percentage was found in district Ambala (6.17). In urban areas district Mahendragarh was at the top with 4.89 per cent of marginal workers and district Panchkula at the bottom with 1.78 per cent of marginal workers. Among males, maximum percentage was found in the rural areas of Mahendragarh (11.98) and the minimum percentage was found in the urban areas of district Panchkula (2.30). Among females, the maximum percentage of marginal workers was found in the rural areas of Mahendragarh (29.04) and the minimum percentage was found in the urban areas of Panchkula (1.16).

TABLE 2.10

Haryana: Marginal Workers as Percentage of Total Working Population by District, 2001

(in Per cent)

Sr.No.	*State/District*	*Area*	*Total*	*Male*	*Female*
1.	**Haryana**	**Total**	**10.10**	**6.89**	**13.84**
		Rural	**12.86**	**8.19**	**18.24**
		Urban	**3.33**	**3.70**	**2.89**
2.	Panchkula	Total	6.04	5.10	7.18
		Rural	9.46	7.28	12.19
		Urban	1.78	2.30	1.16
3.	Kurukshetra	Total	7.00	4.66	9.70
		Rural	8.54	5.41	12.13
		Urban	2.63	2.57	2.71
4.	Ambala	Total	4.82	5.72	3.78
		Rural	6.17	7.17	5.02
		Urban	2.33	3.09	1.44
5.	Yamuna Nagar	Total	5.36	5.90	4.72
		Rural	6.91	7.05	6.76
		Urban	2.79	4.03	1.34
6.	Kaithal	Total	10.98	6.54	16.18
		Rural	12.64	6.97	19.28
		Urban	4.10	4.77	3.32
7.	Karnal	Total	7.85	6.37	9.56
		Rural	9.59	7.43	12.08
		Urban	3.02	3.43	2.55
8.	Panipat	Total	9.69	5.89	14.28
		Rural	13.35	7.81	19.96
		Urban	4.34	3.10	5.84
9.	Sonipat	Total	10.91	7.82	14.60
		Rural	13.42	9.05	18.65
		Urban	3.42	4.13	2.59
10.	Jind	Total	12.60	7.80	18.23
		Rural	14.91	8.83	22.05
		Urban	3.52	3.71	3.29
11.	Fatehabad	Total	12.57	7.72	18.06
		Rural	14.28	8.30	21.03
		Urban	4.60	5.03	4.12
12.	Sirsa	Total	10.00	6.10	14.41
		Rural	12.15	6.83	18.15
		Urban	3.97	4.07	3.85
13.	Hisar	Total	9.68	5.81	14.23
		Rural	11.88	6.67	17.98
		Urban	3.38	3.35	3.41
14.	Bhiwani	Total	12.92	8.32	18.15
		Rural	14.94	9.18	21.46
		Urban	4.29	4.71	3.80
15.	Rohtak	Total	8.81	6.70	11.31
		Rural	11.90	8.22	16.27
		Urban	3.10	3.84	2.25
16.	Jhajjar	Total	12.78	9.16	17.06
		Rural	14.99	10.30	20.48
		Urban	5.05	5.24	4.83
17.	Mahendragarh	Total	18.11	10.86	26.01
		Rural	20.17	11.98	29.04
		Urban	4.89	3.84	6.07
18.	Rewari	Total	16.82	10.15	24.25
		Rural	19.55	11.32	28.60
		Urban	4.21	4.87	3.44
19.	Gurgaon	Total	9.94	6.23	14.19
		Rural	11.95	7.20	17.38
		Urban	2.89	2.86	2.92
20.	Faridabad	Total	8.02	6.01	10.43
		Rural	14.41	8.96	20.76
		Urban	2.93	3.70	2.01

Source : Director of Census operations, Haryana, available at *www.censusindia.net*.

2.3 Growth of Workforce in Major States

A comparative picture of the growth of workforce of different States is given in Table 2.11. The growth has been calculated for the year 2001 with reference to the year 1991 (both censuses based). The table shows that among all States the maximum growth in the workforce took place in the State of Haryana (2.83 per cent) followed by the State of Punjab (2.53 per cent), Rajasthan (2.28 per cent) and Gujarat (1.46 per cent). The least growth has been found in the States of Orissa (-0.81), Kerala (-0.08), Uttar Pradesh (0.11), Assam (0.13) and Andhra Pradesh (0.19). The all-India average in this regard has been 0.81 per cent. Only eight States could achieve more growth than the all-India average.

2.3.1 Change in Employment Structure

As a result of economic development, structural changes in the economy occur and the relative importance of different sectors in contributing to the State income changes. These changes are translated in good measure into employment changes as well so that percentage shares of primary, secondary and tertiary sectors change. In the course of development process, a normally expected pattern of structural change is a gradual shift from the primary and secondary sectors to the tertiary

TABLE 2.11

Growth in Workforce for Major States 1991-2001 (Census Based)

(Main Workers)

States	*Workforce Growth*
Andhra Pradesh	0.19
Assam	0.13
Bihar	0.72
Gujarat	1.46
Haryana	**2.83**
Himachal Pradesh	1.00
Karnataka	1.13
Kerala	-0.08
Madhya Pradesh	0.47
Maharashtra	1.41
Orissa	-0.81
Punjab	2.53
Rajasthan	2.28
Tamil Nadu	0.38
Uttar Pradesh	0.11
West Bengal	1.16
All India	0.81

Source: Population Census (1991 & 2001).

Our Source: Planning Commission (2002). *Tenth Five Year Plan*. p.161, Annexure 5.3B.

sector. The latter sector tends to become an increasingly predominant employment provider. This changing pattern has been observed both at the all-India level and at the level of most of the States, though in varying degrees. The relevant information as regards the gradual shift in the employment shares of different sectors has been presented for different States in Table 2.12. In 1987-88, in Haryana, the per cent shares of primary, secondary and tertiary sectors in total employment were 58.90, 12.70 and 28.40, respectively, as against the corresponding all-India average figures of 58.82, 10.85 and 30.33. This position has been observed to have altered in favour of the tertiary sector over the subsequent period. Twelve years later, in 1999-2000, the per cent shares in employment of primary, secondary and tertiary sectors stood at 45.15, 12.45 and 42.40, respectively, in Haryana and at 52.43, 10.87 and 36.71, respectively, at the all-India level. Apparently, whereas in 1987-88, the contribution of tertiary sector in Haryana was below the national average, this position changed fast to not only far exceed the average all-India level but also place Haryana among the top ranking States by enabling it move up from twelfth to sixth rank. This is a particularly impressive performance when we observe that among the three top ranking States are the smaller states of Delhi, Tripura and Pondicherry. Among the major States, Haryana (42.40 per cent) had only Kerala (49.76 per cent) and Punjab (43.22 per cent) ahead of it in this regard. This performance could be possible due mainly to substantial percentage reduction in the employment share of primary sector (23.35), over this period. Significantly, there is no other State, except Kerala and Pondicherry, which could surpass Haryana in achieving a structural change of this magnitude.

2.3.2 Unemployment Rates in Different States

A comparative position of unemployment rates (on current daily work-status criterion) is presented in Table 2.13. Following are the distinguishing features of the unemployment scenario emerging from this table. One, at the all-India level, the unemployment rate is slightly higher in urban areas (7.70 per cent) as compared to rural areas (7.20 per cent). Though this is true for males and females in these areas, in most States the unemployment rate is markedly higher particularly in case of urban females as compared to rural females. Two, Haryana with less than 5 per cent unemployment rate may be ranked among the low-level-unemployment states particularly when we compare it with states like Kerala (19 to 22 per cent), West Bengal (10 to 17 per cent), Tamil Nadu (9 to 13 per cent), Assam (7 to 12 per cent) and Bihar (7 to 10 per cent). Three, relatively speaking, the State of Rajasthan has an unemployment rate which is minimum or close to minimum not only in both rural and urban areas but also for males and females in these areas. On the opposite, Kerala has the maximum unemployment rate in both rural and urban areas and for both males and females.

Unemployment is a disease in the society. It takes a serious turn when it is very high particularly among the youths of the country. Unemployment in youths results in a two-way loss to the society. On the one hand, our precious and energetic human resources go waste and, on the other, it tends to induce the young boys and girls into anti-social and unethical life styles. The data pertaining to unemployment rate (again, on current daily work-status criterion) among youths (age 15-29) in different States of the country for the year 1999-2000 is given in Table 2.14. The following facts follow from the table. One, the all-India average unemployment rate is lower in rural areas for both males (11.10 per cent) and females (10.60 per cent) as compared to urban areas (males: 14.70 per cent, females: 19.10 per cent). On the whole, it is 11 per cent in the case of rural youth and 15.40 in the case of urban youth. Two, in Haryana the unemployment is slightly higher in urban areas (8.30 per cent) as compared to rural areas (8.10 per cent). As regards males and females, in rural and urban areas, it is higher for urban females (9.90 per cent) in comparison to rural females (2.40 per cent),

TABLE 2.12

Employment Shares (Percentage) by Industrial Sectors (Usual Principal Status)

Sl. No.	States	1987-1988				1993-1994				1999-2000			
		Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Andhra Pradesh	67.40	10.30	22.30	100.00	67.98	9.14	22.88	100.00	60.55	9.29	30.16	100.00
2.	Arunachal Pradesh	56.40	1.00	42.60	100.00	79.58	1.91	18.51	100.00	67.12	2.47	30.41	100.00
3.	Assam	69.30	3.00	27.70	100.00	71.64	3.04	25.32	100.00	57.90	3.81	38.29	100.00
4.	Bihar	75.70	6.70	17.60	100.00	76.62	4.86	18.52	100.00	73.55	7.32	19.13	100.00
5.	Gujarat	55.90	12.90	31.20	100.00	57.40	16.20	26.40	100.00	52.48	14.00	33.52	100.00
6.	**Haryana**	**58.90**	**12.70**	**28.40**	**100.00**	**46.60**	**11.00**	**42.40**	**100.00**	**45.15**	**12.45**	**42.40**	**100.00**
7.	Himachal Pradesh	75.40	5.20	19.40	100.00	71.68	3.89	24.43	100.00	60.30	5.42	34.28	100.00
8.	Jammu & Kashmir	5430	12.30	33.40	100.00	51.55	5.95	42.50	100.00	52.77	5.57	41.66	100.00
9.	Karnataka	66.80	12.00	21.20	100.00	66.37	10.64	22.99	100.00	58.40	11.52	30.08	100.00
10.	Kerala	47.90	15.90	36.20	100.00	45.36	14.90	39.74	100.00	34.67	15.63	49.70	100.00
11.	Madhya Pradesh	77.00	7.60	15.40	100.00	77.60	5.80	16.60	100.00	68.62	7.56	23.82	100.00
12.	Maharashtra	63.20	11.30	25.50	100.00	60.40	11.20	28.40	100.00	49.96	12.63	37.41	100.00
13.	Manipur	60.40	6.40	33.20	100.00	55.19	9.11	35.70	100.00	63.49	6.33	30.18	100.00
14.	Meghalaya	77.63	1.69	20.68	100.00	78.80	1.10	20.10	100.00	70.34	1.31	28.35	100.00
15.	Orissa	69.80	9.10	21.10	100.00	73.95	7.23	18.82	100.00	68.96	9.10	21.94	100.00
16.	Punjab	52.10	14.50	33.40	100.00	49.36	11.73	38.91	100.00	43.48	13.30	43.22	100.00
17.	Rajasthan	65.40	8.30	26.30	100.00	67.00	7.00	26.00	100.00	61.42	8.66	29.92	100.00
18.	Tamil Nadu	51.20	19.90	28.90	100.00	52.40	18.12	29.48	100.00	41.93	20.10	37.97	100.00
19.	Tripura	40.10	6.20	53.70	100.00	41.20	5.50	53.30	100.00	38.20	3.87	57.93	100.00
20.	Uttar Pradesh	70.20	9.20	20.60	100.00	66.97	9.57	23.46	100.00	60.19	11.87	27.94	100.00
21.	West Bengal	52.30	17.70	30.00	100.00	48.34	18.75	32.91	100.00	47.34	17.56	35.10	100.00
22.	Delhi	4.20	25.20	70.60	100.00	2.20	27.70	70.10	100.00	5.26	23.61	71.13	100.00
23.	Pondicherry	41.40	20.50	38.10	100.00	35.35	17.96	46.69	100.00	23.68	26.65	49.67	100.00
	Standard Deviation	16.16	6.16	12.47		17.89	6.46	13.14		16.26	6.60	11.97	
	Mean (23 States)	58.82	10.85	30.33		58.41	10.10	31.49		52.43	10.87	36.71	

Source: National Sample Survey Organisation, Figure for 1999-2000 is arrived at by using urban-rural ratio of population of 2001 Census.

TABLE 2.13

Unemployment Rates in Different States (1999-2000)

State/Union Territory	Unemployment Rate (Per cent of Labour Force)					
	Rural			Urban		
	Male	Female	Persons	Male	Female	Persons
1	2	3	4	5	6	7
Andhra Pradesh	8.10	8.10	8.10	7.20	8.90	7.60
Assam	6.40	12.50	7.40	9.90	21.90	11.90
Bihar	7.20	6.20	7.00	8.70	13.50	9.30
Gujarat	5.10	4.20	4.80	4.00	5.40	4.20
Haryana	**5.30**	**1.80**	**4.70**	**4.50**	**4.90**	**4.50**
Himachal Pradesh	3.40	9.00	2.40	7.00	11.90	7.80
Karnataka	4.40	4.00	4.30	5.30	5.90	5.40
Kerala	20.00	26.10	21.70	15.50	28.20	19.10
Madhya Pradesh	4.00	3.50	3.80	7.20	5.70	7.00
Maharashtra	6.30	6.90	6.50	7.70	10.00	8.10
Orissa	7.60	5.60	7.10	9.80	8.20	9.50
Punjab	4.20	1.70	3.70	4.80	5.30	4.90
Rajasthan	3.30	1.90	2.80	4.70	3.50	4.50
Tamil Nadu	14.30	12.30	13.50	9.00	8.60	8.90
Uttar Pradesh	4.00	2.10	3.60	6.30	5.00	6.20
West Bengal	15.20	25.10	17.00	10.00	13.90	10.60
All India	7.20	7.00	7.20	7.30	9.40	7.70

Source: Planning Commission (2002). *Tenth Five Year Plan*. p.165, Annexure 5.9.

and lower for urban males (8 per cent) as compared to their rural counterparts (9 per cent). Three, among Indian states Kerala has the maximum unemployment rate in rural areas (36.30 per cent) as well as urban areas (34.30 per cent). On the opposite, Rajasthan has the lowest unemployment rate in both rural areas (36.30 per cent) and urban areas (8.80 per cent). Significantly, the rate is minimum or close to minimum for both males and females of Rajasthan in rural as well as urban areas. Four, the female unemployment rate is invariably higher in urban areas as compared to rural areas in all States. This pattern is also observed in the case of urban males of most States. The only exceptions in this regard are Haryana, Kerala and Tamil Nadu where urban male unemployment rate is lower as compared to the corresponding rate in the rural areas. Lastly, and significantly, the higher unemployment rates in urban areas in case of young boys and girls are due mainly to differences in the education and skill levels/types of work-seeking youths in urban and rural areas and the relative scarcity of employment opportunities for them.

TABLE 2.14

Currently Daily Status Unemployment Rate among the Youth (Age 15-29) for Each State and Union Territory (1999-2000)

State/Union Territory	*Unemployment Rate (Per cent of Labour Force)*					
	Rural			*Urban*		
	Male	*Female*	*Persons*	*Male*	*Female*	*Persons*
1	*2*	*3*	*4*	*5*	*6*	*7*
Andhra Pradesh	10.80	8.70	9.90	14.30	16.70	14.80
Assam	12.30	24.90	14.60	22.40	42.70	26.60
Bihar	11.50	8.80	11.00	24.00	28.00	24.40
Gujarat	6.80	6.40	6.70	8.00	11.40	8.50
Haryana	**9.00**	**2.40**	**8.10**	**8.00**	**9.90**	**8.30**
Himachal Pradesh	8.10	2.80	6.10	16.80	37.50	20.50
Karnataka	6.00	5.60	5.80	10.40	10.30	10.50
Kerala	32.30	45.80	36.30	26.60	50.40	34.30
Madhya Pradesh	5.40	4.00	4.90	14.90	12.30	14.60
Maharashtra	11.30	8.90	10.40	15.60	21.10	16.50
Orissa	12.60	8.40	11.30	26.80	20.10	25.50
Punjab	8.00	3.60	7.00	8.90	13.90	9.50
Rajasthan	5.00	3.30	4.40	8.40	10.40	8.80
Tamil Nadu	19.70	15.30	18.10	15.50	15.60	15.60
Uttar Pradesh	6.80	2.00	6.10	12.40	12.70	12.50
West Bengal	23.00	39.10	26.60	23.40	27.20	24.00
All India	11.10	10.60	11.00	14.70	19.10	15.40

Source: Planning Commission (2002). *Tenth Five Year Plan*. pp.166-67.

The information presented in Tables 2.15 and 2.16 shows the distribution of rural and urban persons (per 1000 of the population) by broad usual activity for different States for the years 1997 and 2003. The following conclusions may be drawn from these tables. One, at the all-India level, in both rural and urban areas, the proportion of population which is not a part of labour force (for example children, students, sick and old persons, etc.) has been observed to have decreased over the period, 1997-2003. It came down from 57 per cent to 56.3 per cent in rural areas and from 65.2 per cent to 63.5 per cent in urban areas. Also, this proportion continues to be higher in urban areas as compared to rural areas in all States except only West Bengal. As regards the position in Haryana, this proportion continues to be well above the all-India average. In 2003, it stood at 62.3 per cent and 67.2 per cent in rural and urban areas of the State, respectively. Two, the proportion of population which may be regarded as employed (on the broad usual activity criterion) has increased in both rural and urban areas of the country as reflected in the relevant all-India average figures. It has increased from 42.6 per cent to 43.1 per cent in rural areas, and from 33.5 per cent to 35 per cent in urban areas. Also this proportion continues to be higher in rural areas as compared to urban areas in all States, again, except only West Bengal. In Haryana, this proportion continues to be much below the all-India average in both rural and urban areas. In 2003, it amounted to 37.5 per cent and 32 per cent, respectively, in the rural and urban areas of the State. Three, among the employed, in both rural and urban areas, the proportion constituted by the casual labourers has decreased, and of self-employed and wage-earners/salaried persons, increased. For casual labourers it has decreased from 15.2 per cent to 14.7 per cent in rural areas, and from 6.9 per cent to 5.8 per cent in urban areas. On the opposite, for self-employed it has increased from 25 per cent to 25.5 per cent in rural areas, and from 13.4 per cent to 15.2 per cent in urban areas. As for the wage-earners, it has increased from 2.4 per cent to 2.9 per cent in rural areas, and from 13.2 per cent to 14 per cent in the case of urban areas. As regards Haryana, the proportion of self-employed as well as wage-earners has increased in rural areas (from 22.9 per cent to 24.4 per cent in case of self-employed, and from 3.6 per cent to 5.5 per cent in case of wage-earners), and decreased in urban areas (from 15.5 per cent to 15.1 per cent in case of self-employed, and from 13.2 per cent to 12 per cent in case of wage earners. The proportion of casual labourers has decreased in rural Haryana (from 9.4 per cent to 7.5 per cent) and increased in the urban Haryana (from 4.3 per cent to 5 per cent). In comparison to all-India position, in rural Haryana, in 2003, the proportion of wage-earners stood above the average but the proportions of self-employed as well as casual labourers were below the corresponding average figures. On the opposite, in urban Haryana, the proportion of self-employed was almost equal to the all-India average but the proportions of wage-earners and casual labourers were below the corresponding all-India averages. Lastly, as regards the unemployed, whereas the position in this regard at the all-India level has remained unchanged in both rural (0.5 per cent) and urban (1.4 per cent) areas, in Haryana the unemployment proportion in 2003 has been found to be well below the all-India average in both rural areas (0.2 per cent) and urban areas (0.8 per cent).

2.4 Fiscal Resources (Finance Base)

In the area of Financial Management, Haryana is considered to be one of the best States in the country. The notable feature of State Finances is that Haryana is the first State in the country which has not availed overdraft even for a single day during 2003-04 and 2004-2005. The 12th Finance Commission of India has also commended the performance of Haryana State in the areas of revenue growth, expenditure checking and reduction of

TABLE 2.15

Per 1000 Distribution of Rural Persons by Broad Usual (Principal and Subsidiary) Activity

States	Self Employed		Wages/Salaried		Casual Labourer		All		Unemployed		Not in Labour Force	
	2003	1997	2003	1997	2003	1997	2003	1997	2003	1997	2003	1997
Andhra Pradesh	246	285	46	19	254	263	545	568	4	2	450	430
Assam	247	187	42	45	106	102	395	335	5	13	600	652
Bihar	197	197	6	9	120	134	354	340	4	9	672	652
Chhattisgarh	284	-	22	-	208	-	515	-	3	-	483	-
Gujarat	287	311	38	17	151	163	476	492	3	2	522	506
Haryana	**244**	**229**	**55**	**36**	**75**	**94**	**375**	**360**	**2**	**2**	**623**	**638**
Himachal Pradesh	376	-	74	-	41	-	491	-	3	-	506	-
Jammu & Kashmir	392	-	41	-	49	-	481	-	4	-	515	-
Jharkhand	274	-	19	-	100	-	393	-	6	-	601	-
Karnataka	280	274	30	22	214	223	524	519	4	2	472	479
Kerala	161	139	57	41	178	178	395	359	23	30	582	612
Madhya Pradesh	272	290	15	21	151	172	439	483	3	2	558	515
Maharashtra	258	239	32	33	230	220	520	491	4	5	476	503
Manipur	365	-	37	-	35	-	437	-	6	-	557	-
Meghalaya	405	-	27	-	62	-	494	-	0	-	506	-
Orissa	256	239	19	20	198	204	473	463	14	6	513	531
Punjab	289	228	45	41	100	96	433	365	7	4	559	631
Rajasthan	340	367	21	19	92	50	453	436	3	1	544	563
Tamil Nadu	216	221	57	56	242	257	515	535	9	9	476	456
Tripura	183	-	31	-	116	-	329	-	14	-	656	-
Uttar Pradesh	272	251	18	15	66	80	356	347	3	1	642	652
West Bengal	202	194	25	22	140	141	366	357	7	7	626	637
N-E States	320	284	34	40	64	76	418	399	7	2	575	599
Group of UTs	158	-	133	-	139	-	431	-	19	-	550	-
North-Western	-	309	-	51	-	53	-	412	-	2	-	585
Southern	-	130	-	99	-	134	-	363	-	40	-	597
All India	255	250	29	24	147	152	431	426	5	5	563	570

Source: *Economic Times*, June 27 2005.

TABLE 2.16

Per 1000 Distribution of Urban Persons by Broad Usual (Principal and Subsidiary) Activity

States	Self Employed		Wages/Salaried		Casual Labourer		All		Unemployed		Not in Labour Force	
	2003	1997	2003	1997	2003	1997	2003	1997	2003	1997	2003	1997
Andhra Pradesh	161	139	143	132	97	94	401	365	10	10	588	625
Assam	184	133	96	113	45	58	324	304	23	25	652	670
Bihar	156	123	76	92	38	56	270	271	18	16	712	712
Delhi	129	-	187	-	19	-	335	-	18	-	647	-
Gujarat	151	119	161	114	55	84	367	317	13	8	620	674
Haryana	**151**	**155**	**120**	**132**	**50**	**43**	**320**	**331**	**8**	**5**	**672**	**664**
Jammu & Kashmir	134	-	123	-	34	-	291	-	9	-	699	-
Jharkhand	109	-	114	-	47	-	270	-	35	-	695	-
Karnataka	144	145	157	119	83	114	385	378	13	12	603	610
Kerala	141	126	103	88	108	122	352	336	27	34	622	630
Madhya Pradesh	155	126	125	116	51	76	330	318	7	11	663	671
Maharashtra	125	117	186	164	47	57	358	338	16	17	626	645
Orissa	144	114	125	140	72	74	341	328	18	21	641	651
Punjab	176	144	157	171	34	38	367	353	11	11	621	636
Rajasthan	173	173	103	113	45	30	322	316	7	6	671	678
Tamil Nadu	133	125	186	162	72	101	390	388	21	18	588	595
Uttar Pradesh	187	156	89	99	35	38	311	292	9	8	679	700
West Bengal	164	130	114	136	89	69	367	336	18	23	615	642
N-E States	196	124	127	144	35	43	359	311	14	12	627	677
North-Western	-	118	-	189	-	45	-	352	-	9	-	639
Southern	-	105	-	180	-	97	-	382	-	34	-	585
Group of UTs	143	0	198	-	43	-	384	-	10	-	606	*
All India	152	134	140	132	58	69	350	335	14	14	635	652

Source : *Economic Times*, June 27 2005.

deficit indicators. The State Government has been focusing on the development of infrastructure in urban as well as rural areas out of its own resources. The State has also made optimum utilisation of central resources received through various channels.

2.4.1 Revenue Account

Revenue Receipts

Table 2.17 gives break up of revenue receipts of the State for the period 1990-91 through 2003-04. Total revenues of the State are composed of tax revenues and non-tax revenues. The share of tax revenue ranges from 66 per cent to 72 per cent of the total revenue. The non-tax revenue forms 28 per cent to 34 per cent of the total revenue. The break-up of tax revenue reveals that sales tax is the major source of tax revenue and it was Rs.5645.30 crores which is 59.42 per cent of the total tax revenue in 2005-06. The corresponding percentages for the years 2004-05, 2003-04, 2002-03 and 2001-02 were 59.07, 55.23, 53.33 and 54.31 per cent, respectively. During 1990-91 this percentage was 39.40. The revenue receipts from State excise is the second major source of Tax Revenue and it was Rs.1107.08 crores in 2005-06 as against Rs.1013.16 crores in 2004-05, and Rs.923.28 crores in 2003-04; that is, 10.47 per cent, 12.57 per cent and 13.29 per cent of the total tax revenue of the State in the respective years. The share in central taxes is another important source of tax revenue of the State.

In non-tax revenues the chief source of revenue are grants from the Centre, economic services and general services. During the year 2003-04, the State received Rs.810.78 crores of Grants from the Centre, Rs.780.81 crores from the economic services and Rs.596.98 crores from general services. The same figures for the year 2002-03 were Rs.717.17 crores, Rs.692.36 crores and Rs.592.66 crores respectively. In percentage terms the grants from the Centre constitute 28.36 per cent, economic services constitute 27.31 per cent and general services constitute 20.88 per cent of the total non-tax revenues of the State in 2003-04. In all the State received 76.55 per cent of its non-tax revenue from these three sources.

Revenue Expenditure

The details of various components of fevenue expenditure are given in Table 2.18 for the period 1990-1991 to 2006-07. The revenue expenditure is broadly divided under three categories:

(I) Developmental Expenditure.

(II) Non-Developmental Expenditure.

(III) Compensation and Assignments to Local Bodies and Panchayati Raj Institutions.

The developmental revenue expenditure has two components—social services and economic services. Under social services expenditure is made on 12 items. These include: (1) Education, sports and culture, (2) Medical and public health (3) Family welfare, (4) Water supply and sanitation, (5) Housing, (6) Urban development, (7) Welfare of scheduled caste, schedule tribes and other backward classes, (8) Labour and labour welfare (9) Social security and welfare, (10) Nutrition, (11) Relief on account of natural calamities, and (12) Others. The economic services contain eight items. They include: (1) Agriculture and allied activities, (2) Rural development, (3) Irrigation and flood control, (4) Energy, (5) Industry and minerals, (6) Transport and communications, (7) Science, technology and environment, and (8) General economic services.

The non-developmental expenditure includes expenditure on (A) Organs of State, (B) Fiscal services, (C) Interest payments and servicing of debt, (D) Administrative services, (E) Pensions, and (F) Miscellaneous general services.

The third component of revenue expenditure consists of compensation and assignments to local bodies and panchayati raj institutions. A detailed information about each of these broad categories is given in Table 2.18.

During the year 1990-91 the share of developmental expenditure in the total revenue expenditure was 67 per cent which decreased to 58 per cent in the year 2003-04 (R.E.). The share of non-developmental expenditure which stood at 32.46 per cent in 1990-91 rose to 40.51 per cent in the year 2003-04 (R.E.). The share of compensation and assignments to local bodies and panchayati raj institutions was negligible in 1990-91 and it remained negligible in the year 2003-04, as well. In terms of percentage it was 0.51 per cent in 1990-91 which dropped to 0.17 per cent in the year 2003-04. In absolute terms the increase in developmental expenditure was manifold. The expenditure on developmental activities was Rs.5853.28 crores in 2003-04 against Rs.1295.67 crores in 1990-91. There was a net increase of Rs.4557.61 crores over a period of 13 years. The average increase was Rs.350.58 crores per year. In percentage terms the increase in developmental expenditure was 451.75 per cent in 2003-04 over 1990-91. The average increase in percentage terms was 34.75. The expenditure on non-developmental activities which stood at Rs.627.51 crores in the year 1990-91 rose to Rs.3998.05 crore in 2003-04 registering an increase of Rs.3370.54 crore with an

TABLE 2.17

Details of Revenue Receipts of Haryana State from 1990-91 to 2006-07

(Rs. Lakh)

Items	*1990-91*	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*	*1996-97*
Total Revenues (I+II)	191342	224179	237764	348145	588241	501473	604833
I. Tax Revenues (A+B)	125544	151965	170881	187136	220500	252943	257501
A. State's own Tax Revenue (1 to 2)	106954	130020	144687	158891	188786	216896	214312
1. Taxes on Property and Capital Transactions (i to ii)	10244	9881	10607	12099	16515	24594	27553
i) Land Revenues	94	109	135	135	134	131	243
ii) Stamps and Registration Fees	10150	9772	10472	11964	16381	24463	27310
2. Taxes on Commodities and Services (i to vii)	96710	120139	134080	146792	172271	192302	186759
i) Sales Tax from (a to c)	49470	62030	67641	76851	89008	105541	138007
a) State Sales Tax	31696	399752	45473	51267	59270	60338	98109
b) Central Sales Tax	17774	2054	22106	25582	29738	45122	39896
c) Other Receipt	—	1	62	2	—	81	2
ii) State Excise	28635	34187	39384	43176	52935	55296	6413
iii) Taxes on Vehicles	3578	6847	7115	5217	4558	5282	5159
iv) Taxes on Goods and Passengers	10210	11982	14102	16152	19480	20116	25964
v) Taxes and Duties on Electricity	3436	3849	4343	3906	4800	4646	3548
vi) Entertainment Tax	783	827	880	851	952	—	229
vii) Other Taxes and Duties	598	417	615	639	538	1421	6439
B. Share in Central Taxes (1 to 4)	18590	21945	26194	28245	31714	36047	43189
1. Corporation Tax	—	—	7565	—	—	—	—
2. Income Tax	5126	6341	—	9553	10648	13941	16750
3. Estate Duty	—	—	18629	—	—	—	—
4. Union Excise Duties	13464	15604	—	18692	21066	22106	26439
II. Non Tax Revenue (C+D)	65798	72214	66883	161009	367741	248530	347332
C. State's Own Non-Tax Revenue (1 to 6)	51110	54610	46027	134055	347341	218681	313267
1. Interest receipts	12705	13979	9509	11653	47609	25693	23756
2. Dividends and Profits	39	67	85	95	702	314	453
3. General Services	15178	14946	5309	86272	259904	152098	239093
of which: State lotteries	13	13230	3351	84016	256265	148750	235566
4. Social Services (i to viii)	2047	3267	2904	4022	4137	5230	7349
i) Education, Sports, Arts and Culture	889	999	1069	1207	1236	1354	1832
ii) Medical, Public Health and Family Welfare	635	699	625	1250	900	1031	1390
iii) Housing	51	69	79	84	95	97	105
iv) Urban Development	74	784	460	310	495	720	1333
v) Labour and Employment	102	128	112	117	117	211	216
vi) Social Security and Welfare	137	349	204	152	176	283	563
vii) Water Supply and Sanitation	—	—	—	—	—	1305	1823
viii) Others	159	239	355	902	1178	229	87
5. Economic Services (i to xvii)	21141	22351	28220	32013	34989	35346	42616
i) Crop Husbandry	210	171	168	219	272	211	190
ii) Animal Husbandry	238	294	467	298	265	689	297
iii) Fisheries	35	57	57	45	58	74	137
iv) Forestry and Wildlife	861	1004	1086	1185	1336	1780	2160
v) Co-operation	122	109	244	282	226	216	1067
vi) Other Agricultural Programmes	237	229	325	269	291	277	383
vii) Major and Medium irrigation Projects	1731	1581	1796	2038	1919	2100	2430
viii) Minor Irrigations	5	7	6	6	6	6	307
ix) Village and Small Industries	1369	250	77	73	928	126	113
x) Industries @	963	1003	1560	1870	2357	2328	4381
xi) Road Transport	14613	17162	22034	25299	27197	27263	30736
xii) Tourism	141	43	3	1	7	9	4
xiii) Others *	616	441	397	428	127	267	411
D. Grant From Center (1 to 3)	14688	17604	20856	26954	20400	29849	34065
1. State Plan Schemes	4500	4015	4936	6502	7395	9246	12799
2. Centrally Sponsored Schemes	8410	1055612082		1699911712	13678	18268	
3. Non plan Grant (a to c)	1778	30333838		34531293	6925	2998	
a) Statutory Grants	246	307	284	280	495	866	840
b) Grants for Relief on account of Natural Calamities	—	—	1275	—	—	—	—
c) Others	1532	2726	2279	3173	798	6059	2158

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Items	*1997-98*	*1998-99*	*1999-2000*	*2000-01*	*2001-02*	*2002-03*	*2003-04*
Total Revenues (I+II)	589777	547869	576676	657389	76055	878191	981062
I. Tax Revenues (A+B)	290794	359966	404288	465636	542144	618733	695202
A. State's own Tax Revenue (1 to 3)	236863	311962	351761	431148	497243	560573	631227
1. Tax on Profession, Trade, Callings and Employment	—	—	—	93	124	82	90
2. Tax On Property and Capital Transactions (i to ii)	30560	29842	31421	43097	50758	59900	65550
i) Land Revenues	393	388	429	1173	1929	5900	6050
ii) Stamps and Registration Fees	30167	29454	30992	41924	48829	54000	59500
3. Taxes on Commodities and Services (i to vii)	206303	282120	320340	387958	446361	500591	565587
i) Sales Tax from (a to c)	155269	159938	196738	257339	294481	330000	379500
a) State Sales Tax	106103	111570	135386	165264	211396	230201	264731
b) Central Sales Tax	49165	48367	61346	92777	83815	99799	114769
c) Other Receipt	1	1	6	-702	-730	—	—
ii) State Excise	4963	77463	76536	84056	87539	92500	101800
iii) Taxes on Vehicles	6711	7139	8477	8569	10363	11500	12100
iv) Taxes on Goods and Passengers	33121	31581	32385	36666	49856	60000	65500
v) Taxes and Duties on Electricity	4053	4453	4608	68	2948	5006	5007
vi) Entertainment Tax	1305	1194	1076	962	799	935	1030
vii) Other Taxes and Duties	881	352	520	298	375	650	650
B. Share in Central Taxes (1 to 4)	53931	48004	52527	34488	44901	58160	63975
1. Corporation Tax	—	—	—	—	—	—	—
2. Income Tax	26141	17949	20491	—	—	—	—
3. Estate Duty	—	—	—	—	—	—	—
4. Union Excise Duties	27790	30055	32036	—	—	—	—
II. Non Tax Revenue (C+D)	298983	187903	172388	191753	217911	259458	285860
C. State's Own Non-Tax Revenue (1 to 6)	263110	151802	125906	143939	166607	187741	204782
1. Interest receipts	23707	18372	20223	23623	33287	42517	49434
2. Dividends and Profits	238	221	778	181	40	316	251
3. General Services	180981	70605	39585	47972	51834	59266	59698
of which: State lotteries	169780	57307	25510	29552	38829	45095	49977
4. Social Services (i to viii)	13937	12825	14095	13262	14614	16406	17318
i) Education, Sports, Arts and Culture	1843	1902	2121	2178	2140	2771	2854
ii) Medical, Public Health and Family Welfare	2073	1737	2479	2355	2872	3200	3350
iii) Housing	109	109	119	125	128	162	180
iv) Urban Development	7068	5929	5747	4457	5338	6000	6500
v) Labour and Employment	455	295	318	405	414	430	450
vi) Social Security and Welfare	389	583	703	724	788	400	362
vii) Water Supply and Sanitation	1929	2098	2532	2773	2870	3350	3525
viii) Others	71	172	76	245	64	93	97
5. Economic Services (i to xiv)	44247	49779	51225	58901	66832	69236	78081
i) Crop Husbandry	238	185	243	252	266	295	310
ii) Animal Husbandry	586	258	769	161	136	180	200
iii) Fisheries	110	94	111	68	75	77	124
iv) Forestry and Wildlife	1743	1917	2491	2588	2453	2575	2705
v) Co-operation	404	631	387	578	527	558	590
vi) Other Agricultural Programmes	439	331	478	322	434	250	270
vii) Major and Medium irrigation Projects	2738	6103	3830	5430	6851	7700	8085
viii) Minor Irrigations	7	8	8	10	11	—	—
ix) Power	—	30	180	213	215	189	200
x) Village and Small Industries	168	113	61	128	22	95	100
xi) Industries @	5395	6676	8485	10577	14003	12502	19502
xii) Road Transport	31960	33003	33640	37856	41074	43935	45050
xiii) Tourism	7	64	9	—	96	85	100
xiv) Others *	452	366	533	718	669	795	845
D. Grant From Center (1 to 3)	35873	36101	46482	47814	51304	71717	81078
1. State Plan Schemes	14454	12764	21918	22636	19486	18015	16493
2. Centrally Sponsored Schemes	18300	18627	21364	16364	15952	38998	49640
3. Non-plan Grant (a to b)	3119	4710	3200	8814	15866	14704	14945
a. Statutory Grants	858	761	632	1437	2094	50	50
b. Others	2261	3949	2568	7377	13772	14654	14895

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Items	*2004-05 Accounts*	*2005-06 Revised Estimate*	*2006-07 Budget Estimates*
TOTAL REVENUE (I+II)	1114907	126580	1374665
1. TAX REVENUE (A+B)	805953	954910	1068585
A. State's Own Tax Revenue (1 to 3)	744003	852755	958230
1. Taxes on Income (i+ii)	—	—	—
i) Agricultural Income Tax	—	—	—
ii) Taxes on Professions, Trades, Callings and Employment)	—	—	—
2. Taxes on Property and Capital Transactions (i to iii)	73828	96195	101960
i) Land Revenue	1170	1195	1960
ii) Stamps and Registration fees	72658	95000	100000
iii) Urban Immovable Property Tax	—	—	—
3. Taxes on Commodities and Services (i to vii)	670175	756560	856270
i) Sales Tax (a to f)	476091	552100	639000
a) State Sales Tax	369903	424670	484000
b) Central Sales Tax	106189	127430	155000
c) Sales Tax on Motor Spirit and Lubricants	—	—	—
d) Surcharge on Sales Tax	—	—	—
e) Receipts of Turnover Tax	—	—	—
f) Other Receipts	—	—	—
ii) State Excise	101316	113500	120000
iii) Taxes on Vehicles	14041	15000	16000
iv) Taxes on Goods and Passengers	70516	68000	73000
v) Taxes and Duties on Electricity	6174	5910	6120
vi) Entertainment Tax	915	1400	1500
vii) Other Taxes and Duties	1121	650	650
B. Share in Central Taxes	61950	102155	110355
II. NON-TAX REVENUE (C+D)	308953	309670	306080
C. State's Own Non-Tax Revenue (1 to 6)	254437	218828	198096
1. Interest Receipts	47241	56843	59040
2. Dividends and Profits	235	301	330
3. General Services	83800	33041	12947
of which: State lotteries	69702	19332	5
4. Social Services (i to ix)	44013	47537	41590
i) Education, Sports, Art and Culture	4018	8006	8570
ii) Medical and Public Health	4092	3570	4040
iii) Family Welfare	21	10	12
iv) Housing	166	190	200
v) Urban Development	31796	30010	23010
vi) Labour and Employment	461	794	586
vii) Social Security and Welfare	278	400	397
viii) Water Supply and Sanitation	3111	4475	4670
ix) Others	69	82	105
5. Fiscal Services	—	—	—
6. Economic Services (i to xvii)	79149	81107	84189
i) Crop Husbandry	262	288	303
ii) Animal Husbandry	501	221	231
iii) Fisheries	107	135	140
iv) Forestry and Wildlife	3158	3002	3062
v) Plantations	—	—	—
vi) Co-operation	772	820	850
vii) Other Agricultural Programmes	215	250	187
viii) Major and Medium Irrigation Projects	10333	8000	8500
ix) Minor Irrigations	7	10	12
iv) Power	184	300	310
v) Petroleum	—	—	—
vi) Village and Small Industries	253	250	260
vii) Industries @	10001	13002	13502
viii) Ports and Light Houses	—	—	—
ix) Road Transport	51317	23520	55520
x) Tourism	121	128	77
xi) Others*	1918	1181	1235
D. Grade from the Centre (1 to 5)	54516	90842	107984
1. State Plan Schemes	20081	29830	32851
of which: Advance release of Plan Assistance for Natural Calamities	—	—	—
2. Central Plan Schemes	684	15772	16389
3. Centrally Sponsored Schemes	25327	22814	33177
4. NEC/Special Plan Scheme	—	—	—
5. Non-Plan Grants (a to c)	8423	22426	25567
a) Statutory Grants	4256	—	—
b) Grants for relief on account of Natural Calamities	3706	9329	9795
c) Others	461	13098	15772

Notes: @ Includes Non-ferrous Mining and Metallurgical Industries and Other Industries.

* Includes receipts from Dairy Development, Land Reforms, Other Rural Development Programmes, Hill Area, Civil Aviation, Roads and Bridges, etc.

Source: RBI (2004). *Handbook of Statistics on State Government Finances.*

State Finances: A study of Budgets of 2006-07, Reserve Bank of India, 2006.

average increase of Rs.259.27 crore per annum. This was 637.13 per cent higher than the figures of 1990-91. The average increase in terms of percentage was 49 per annum. The amount spent on compensation and assignments to local bodies and panchayati raj institutions stood at Rs.17.01 crores in 2003-04 as against Rs.9.89 crores in 1990-91 registering an increase of Rs. 7.12 crores with an average of Rs. 0.55 crores annually. It was 172 per cent higher as compared to 1990-91.

2.4.2 Capital Account

Capital Receipts

The Haryana State receives capital funds from eight broad categories. They include: (i) Internal debt, (ii) Loans and advances from the centre, (iii) Recovery of loans and advances, (iv) Small savings, provident fund, etc., (v) Reserve funds, (vi) Deposits and advances, (vii) Suspense and miscellaneous, and (viii) Remittances (net).

Table 2.19 contains data regarding capital receipts of Haryana. In 1990-91, the maximum proportion of capital receipts were received from loans and advances from the centre (52.07 per cent). Small savings and provident funds contributed 23.52 per cent followed by internal debt (16.36 per cent). The situation in 2003-04 has been found to have completely changed. Loans and advances from the centre contributed only 11.12 per cent of the total. Most contribution came from internal debt of the state which stood at 67.40 per cent of the total. Small savings and provident funds continue to maintain its place at number two with 17.43 per cent contribution.

Capital Expenditure

The capital expenditure in the State is incurred mainly on four heads: (i) Total capital outlay, (ii) Discharge of internal debt, (iii) Repayment of loans to the centre, and (iv) Loans and advances by state government.

Total capital outlay includes expenditure on developmental and non-developmental services. Developmental services include social services (for instance, education, sports, medical and health, water supply and sanitation, etc.) and economic services (for instance, agriculture and allied activities, major and medium irrigation and flood control, energy, transport, etc.)

The details of the capital expenditure in Haryana state are given in Table 2.20. During 1990-91 the maximum share of capital expenditure was allotted to loans and advances by State government for developmental purposes. It constituted 43.86 per cent of the total capital expenditure of the year. It was followed by capital outlay for developmental purposes which accounted for 40.15 per cent of the total. Capital expenditure on account of repayment of loans to the centre constituted 14.89 per cent and the discharge of internal debts constitute 1.10 per cent of the total capital expenditure. In 2003-04 the capital outlay for developmental purposes continued to be on the priority list of the State. During this year the state allotted 50.68 per cent of the total capital expenditure for this purpose. The repayment of loans to the Centre which used to be a small fraction during 1990-1991 received about one-third of the total capital expenditure during 2003-04. It got 32.25 per cent of the total capital expenditure of the State. The allocations to loans and advances by the State government for developmental purposes declined substantially to constitute only 10.56 per cent of the total capital expenditure. The discharge of internal debt received more than before, that is, 6.51 per cent of the State's capital expenditure.

2.4.3 Surplus/Deficit on Revenue Account and Capital Account

The State has experienced a deficit on revenue account over the period 1990-91 through 2004-05, except only one year, namely, 1993-94. The Revenue Deficit of the State has reduced from the peak of Rs.1540 crores in 1998-99 to Rs.258 crores in 2004-05. In terms of percentage of GSDP, the revenue deficit has reduced from 3.5 per cent in 1998-99 to 0.31 per cent in 2004-05. On the opposite, the Capital Account had surplus over almost the entire period except only two years, 1992-93 and 1993-94. The magnitude of surplus has varied substantially from year to year. Whereas, it stood at just Rs.76.6 crores in 1990-91, in 1995-96 its magnitude was Rs.3168.3 crores, and Rs.409.93 crores, in 2006-07.

2.4.4 Over-all Surplus/Deficit

The overall surplus/deficit position during this period presents instances of both, net surplus and net deficit. The Surplus has exhibited much greater variability as compared to the deficit. The surplus stood as low as Rs.14.9 crores in 1991-92, and as high as Rs.2821.5 crores in 1995-96 and Rs.89.92 crore in 2006-07. In contrast, the magnitude of Deficit varied only over a relatively smaller range, Rs.25.6 crores in 1997-98 to Rs.310.5 crores in 2001-02. In any case, the figures of surplus or deficit cannot be regarded important by themselves as indicators of fiscal performance unless one goes into a detailed analysis of the behaviour of various items on revenue account and capital account in relation to certain aggregates, such as, gross state domestic product, or total receipts/expenditure on these accounts.

TABLE 2.18

Details of Revenue Expenditure in Haryana: 1990-91 to 2006-07

(Rs. Lakh)

Items	1990-1991			1991-92			1992-93		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
TOTAL EXPENDITURE (I+II+III)	34678	158629	193307	39268	188134	227402	43404	194530	237934
I. Developmental Expenditure (A+B)	34278	95289	129567	38763	111267	150030	42827	119321	162148
A. Social Services (1 to 11)	19695	44948	64643	21010	50030	71040	22950	58371	81321
1. Education, sports, art and culture	2466	30033	32499	3747	32601	36348	6091	36931	43022
2. Medical and public health $	2211	5982	8193	2947	6578	9525	3541	7291	10832
3. Water supply and sanitation	3590	1086	4676	4081	1987	6068	1330	4948	6278
4. Housing	65	436	501	8	444	452	47	504	551
5. Urban development	357	396	753	282	413	695	388	439	827
6. Welfare of Scheduled Caste, Scheduled Tribes and other Backward Classes	1077	564	1641	1335	616	1951	1327	576	1903
7. Labour and Labour Welfare	418	1285	1703	459	1460	1919	549	1662	2211
8. Social Security and Welfare	9343	2146	11489	7777	2607	10384	9037	2637	11674
9. Nutrition	117	858	975	283	981	1264	541	1064	1605
10. Relief on account of Natural Calamities	-	1710	1710	-	1764	1764	-	1728	1728
11. Others*	51	452	503	91	579	670	99	591	690
B. Economic Services (1 to 8)	14583	50341	64924	17753	61237	78990	19877	60950	80827
1. Agriculture and Allied Activities (i to x)	7005	8802	15807	8416	14262	22678	11205	10231	21436
i) Crop Husbandry	1636	943	2579	2572	1044	3616	5280	1133	6413
ii) Soil and Water Conservation	762	344	1106	781	363	1144	806	410	1216
iii) Animal Husbandry	448	2140	2588	523	2338	2861	516	2555	3071
iv) Dairy Development	101	89	190	67	99	166	48	109	157
v) Fisheries	184	72	256	211	79	290	229	82	311
vi) Forestry and Wild Life	3407	680	4087	3657	1006	4663	3741	906	4647
vii) Plantations	-	145	145	-	134	134	-	223	223
viii) Agricultural Research and Education	361	1427	1788	470	1761	2231	466	1870	2336
ix) Co-operation	88	2948	3036	79	7422	7501	107	2925	3032
x) Other Agricultural Programmes	18	14	32	56	16	72	12	18	30
2. Rural Development	4200	2718	6918	4360	2249	6609	3856	1235	5091
3. Irrigation and Flood Control	1306	13592	14898	1742	16648	18390	1871	19219	21090
4. Energy	42	3600	3642	49	4000	4049	17	3500	3517
of which: Power	-	3600	3600	-	4000	4000	-	3500	3500
5. Industry and Minerals (i to ii)	1252	319	1571	1412	401	1813	1679	349	2028
i) Village and Small Industries	949	122	1071	855	131	986	1218	99	1317
ii) Industries @	303	197	500	557	270	827	461	250	711
6. Transport and Communications (i + ii)	50	20790	20840	10	23143	23153	39	25932	25971
i) Roads and Bridges	50	4243	4293	10	4911	4921	39	4807	4846
ii) Others @@	-	16547	16547	-	18232	18232	-	21125	21125
7. Science, Technology and Environment	182	6	188	206	8	214	209	7	216
8. General Economic Services (i to iii)	546	514	1060	1558	526	2084	1001	477	1478
i) Secretariat – Economic Services	484	168	652	1473	195	1668	957	225	1182
ii) Tourism	45	140	185	65	112	177	25	20	45
iii) Others +	17	206	223	20	219	239	19	232	251
II. Non-Developmental Expenditure (General Services) (A to F)	400	62351	62751	505	75811	76316	577	74067	74644
A. Organs of State	-	1674	1674	-	2531	2531	-	2422	2422
B. Fiscal Services (i to ii)	6	2188	2194	7	2392	2399	6	2709	2715
i) Collection of Taxes and Duties	6	2088	2094	7	2253	2260	6	2592	2598
ii) Other Fiscal Services	-	100	100	-	139	139	-	117	117
C. Interest Payments and Servicing of Debt	-	24203	24203	-	32186	32186	-	34331	34331
of which: Interest Payments (i to iv)	-	24203	24203	-	32186	32186	-	34331	34331
i) Interest on Loans from the Centre	-	11931	11931	-	17571	17571	-	19214	19214
ii) Interest on Internal Debt	-	5468	5468	-	6011	6011	-	6347	6347
of which: Interest on market loans	-	3664	3664	-	4899	4899	-	5026	5026
iii) Interest on Small Savings, Provident Funds, etc.	-	6288	6288	-	7951	7951	-	8110	8110
iv) Others	-	516	516	-	653	653	-	660	660
D. Administrative Services (i to v)	-	15314	15708	498	17762	18260	571	20074	20645
i) Secretariat-General Services	394	744	744	-	865	865	-	1124	1124
ii) District Administration	-	971	971	-	1114	1114	-	1264	1264
iii) Police-	10222	10222	-	11705	11705	-	14408	14408	
iv) Public Works	-	1077	1471	458	1438	1896	496	569	1065
v) Others ++	394	2300	2300	40	2640	2680	75	2709	2784
E. Pensions -	18972	18972	-	8352	8352	-	10698	10698	
F. Miscellaneous General Services #	-	-	-	-	12588	12588	-	3833	3833
Of which: Payment on account of State Lotteries	-	11900	11900	-	12548	12548	-	3810	3810
III. Compensation and Assignments to Local Bodies and Panchayati Raj Institutions	—	989	989	—	1056	1056	—	1142	1142

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Items	1993-1994			1994-95			1995-96		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
TOTAL EXPENDITURE (I+II+III)	43489	296611	340100	57798	569494	627292	66714	469441	536155
I. Developmental Expenditure (A+B)	42798	132329	175127	56704	221445	278149	65483	213241	278724
A. Social Services (1 to 11)	21834	65660	87494	33175	83625	116800	36621	122382	159003
1. Education, sports, art and culture	6412	39613	46025	8603	45000	53603	13311	51819	65130
2. Medical and public health $	1790	8039	9829	5092	9184	14276	2420	10504	12924
3. Family Welfare							3082	-	3082
4. Water supply and sanitation	350	7262	7612	144	19197	19341	217	10511	10728
5. Housing	25	568	593	102	657	759	68	634	702
6. Urban development	369	489	858	805	588	1393	1319	1565	2884
7. Welfare of Scheduled Caste, Scheduled Tribes and other Backward Classes	1239	605	1844	1973	650	2623	1369	700	2069
8. Labour and Labour Welfare	571	1763	2334	742	1885	2627	1076	2052	3128
9. Social Security and Welfare	7960	3070	11030	14807	3409	18216	12515	3455	15970
10. Nutrition	602	1092	1694	768	1070	1838	1093	1101	2194
11. Relief on account of Natural Calamities	-	2488	2488	-	1265	1265	-	39042	39042
12. Others*	2516	671	3187	139	720	859	151	999	1150
B. Economic Services (1to 8)	20964	66669	87633	23529	137820	161349	28862	90859	119721
1. Agriculture and Allied Activities (i to x)	10145	9090	19235	9386	10546	19932	11321	11799	23120
i) Crop Husbandry	3909	1284	5193	2618	1528	4146	3046	1626	4672
ii) Soil and Water Conservation	927	468	1395	1155	541	1696	1756	583	2339
iii) Animal Husbandry	686	2777	3463	935	3250	4185	898	3771	4669
iv) Dairy Development	42	133	175	50	152	202	70	168	238
v) Fisheries	287	94	381	245	110	355	422	125	547
vi) Forestry and Wild Life	3663	1008	4671	3575	1116	4691	3985	1321	5306
vii) Plantations	-	222	222	-	223	223	-	271	271
viii) Agricultural Research and Education	446	2154	2600	566	2317	2883	787	2600	3387
ix) Co-operation	172	929	1101	227	1284	1511	340	1306	1646
x) Other Agricultural Programmes	13	21	34	15	25	40	17	28	45
2. Rural Development	5461	1305	6766	4589	1660	6249	3538	1905	5443
3. Irrigation and Flood Control (i + ii)	2700	19841	22541	5991	46162	52153	9401	17884	27285
i) Major and Medium Irrigation	-	-	-	-	-	-	5742	16991	22733
ii) Minor Irrigation	-	-	-	-	-	-	-	894	894
4. Energy	23	6000	6023	47	45500	45547	101	21000	21101
of which: Power	-	6000	6000	-	45500	45500	-	21000	21000
5. Industry and Minerals (i to ii)	1470	381	1851	1607	434	2041	2701	508	3209
i) Village and Small Industries	1006	105	1111	1089	125	1214	2189	142	2331
ii) Industries @	464	276	740	518	309	827	512	366	878
6. Transport and Communications (i + ii)	115	29510	29625	250	32933	33183	167	37123	37290
i) Roads and Bridges	115	4718	4833	250	5361	5611	167	6843	7010
ii) Others @@	-	24792	24792	-	27572	27572	-	30280	30280
7. Science, Technology and Environment	214	8	222	284	8	292	423	10	433
8. General Economic Services (i to iii)	836	534	1370	1375	577	1952	1210	630	1840
i) Secretariat – Economic Services	759	256	1015	1305	291	1596	1189	332	1521
ii) Tourism	60	21	81	50	24	74	-	25	25
iii) Others +	17	257	274	20	262	282	21	273	294
II. Non-Developmental Expenditure (General Services) (A to F)	691	163698	164389	1094	347384	348478	1231	255309	256540
A. Organs of State	-	2736	2736	-	4810	4810	-	4131	4131
B. Fiscal Services (i to iii)	16	3047	3063	11	3400	3411	11	3614	3625
i) Collection of Taxes and Duties	16	2946	2962	11	3209	3220	11	3424	3435
ii) Other Fiscal Services	-	101	101	-	191	191	-	190	190
C. Interest Payments and Servicing of Debt	-	42170	42170	-	48694	48694	-	55572	55572
of which: Interest Payments (i to iv)	-	42170	42170	-	48694	48694	-	55572	55572
i) Interest on Loans from the Centre	-	19355	19355	-	22554	22554	-	29339	29339
ii) Interest on Internal Debt	-	8982	8982	-	10586	10586	-	10917	10917
of which: Interest on market loans	-	6112	6112	-	7305	7305	-	8661	8661
iii) Interest on Small Savings, Provident Funds, etc.	-	11436	11436	-	12516	12516	-	14255	14255
iv) Others	-	2397	2397	-	3038	3038	-	1061	1061
D. Administrative Services (i to v)	675	22702	23377	1083	27381	28464	1220	29558	30778
i) Secretariat-General Services	-	1167	1167	-	2043	2043	-	1585	1585
ii) District Administration	-	1431	1431	-	1663	1663	-	1875	1875
iii) Police	-	15353	15353	-	17332	17332	-	19140	19140
iv) Public Works	599	1662	2261	1003	2405	3408	1140	1953	3093
v) Others ++	76	3089	3165	80	3938	4018	80	5005	5085
E. Pensions	-	12045	12045	-	13797	13797	-	16618	16618
F. Miscellaneous General Services #	-	80998	80998	-	249302	249302	-	145816	145816
Of which: Payment on account of State Lotteries	-	80959	80959	-	249227	249227	-	145749	145749
III. Compensation and Assignments to Local Bodies and Panchayati Raj Institutions	—	584	584	—	665	665	—	891	891

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Items	1996-1997			1997-98			1998-99		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
TOTAL EXPENDITURE (I+II+III)	72583	604117	676700	64500	597217	661717	76863	625026	701889
I. Developmental Expenditure (A+B)	71163	238046	309209	62628	272970	335598	74192	349803	423995
A. Social Services (1 to 12)	41711	97869	139580	38664	119004	157668	46126	162350	208476
1. Education, sports, art and culture	13235	62133	75368	10502	75016	85518	15840	106259	122099
2. Medical and public health $	3180	12017	15197	4378	14389	18767	3926	20805	24731
3. Family welfare	3370	-	3370	3541	-	3541	4437	-	4437
4. Water supply and sanitation	852	10611	11463	200	14884	15084	269	17983	18252
5. Housing	151	818	969	40	743	783	-	629	629
6. Urban development	1968	1244	3212	1956	1354	3310	2330	1959	4289
7. Welfare of Scheduled Caste, Scheduled Tribes and other Backward Classes	1449	738	2187	1130	1193	2323	758	1440	2198
8. Labour and Labour Welfare	1187	2406	3593	1337	2597	3934	2008	3463	5471
9. Social Security and Welfare	15119	3308	18427	14930	3397	18327	15864	3727	19591
10. Nutrition	1057	1040	2097	495	1379	1874	533	1636	2169
11. Relief on account of Natural Calamities	-	2595	2595	-	2913	2913	-	2863	2863
12. Others*	143	959	1102	155	1139	1294	161	1586	1747
B. Economic Services (1to 8)	29452	140177	169629	23964	153966	177930	28066	187453	215519
1. Agriculture and Allied Activities (i to x)	13141	13976	27117	9218	17319	26537	9900	23268	33168
i) Crop Husbandry	4072	1876	5948	1549	3816	5365	1883	5219	7102
ii) Soil and Water Conservation	1971	646	2617	1846	775	2621	1517	1114	2631
iii) Animal Husbandry	1245	4662	5907	883	5283	6166	1261	7406	8667
iv) Dairy Development	170	193	363	107	216	323	98	308	406
v) Fisheries	390	143	533	317	187	504	399	377	776
vi) Forestry and Wild Life	3716	1388	5104	3505	1792	5297	3827	2940	6767
vii) Food Storage and Warehousing	-	415	415	-	434	434	-	412	412
viii) Agricultural Research and Education	1221	3209	4430	785	3527	4312	639	3859	4498
ix) Co-operation	335	1414	1749	202	1255	1457	248	1597	1845
x) Other Agricultural Programmes	21	30	51	24	34	58	28	36	64
2. Rural Development	3493	2310	5803	3855	2715	6570	2754	3531	6285
3. Irrigation and Flood Control (i to ii)	9729	18172	27901	8519	20457	28976	12043	17838	29881
i) Major and Medium Irrigation	5083	17555	22638	5869	19463	25332	8612	17469	26081
ii) Minor Irrigation	-	617	617	-	994	994	80	369	449
4. Energy	33	63245	63278	35	67994	68029	50	84715	84765
of which: Power	-	63245	63245	-	67994	67994	-	84715	84715
5. Industry and Minerals (i to ii)	2132	525	2657	1414	601	2015	1472	2361	3833
i) Village and Small Industries	1591	142	1733	783	144	927	608	168	776
ii) Industries @	541	383	924	631	457	1088	864	2193	3057
6. Transport and Communications (i + ii)	113	41174	41287	133	44077	44210	37	54571	54608
i) Roads and Bridges	113	7223	7336	130	7452	7582	33	14256	14289
ii) Others @@	-	33951	33951	3	36625	36628	4	40315	40319
7. Science, Technology and Environment	263	12	275	189	22	211	288	37	325
8. General Economic Services (i to iii)	548	763	1311	601	781	1382	1522	1132	2654
i) Secretariat – Economic Services	525	378	903	563	407	970	1418	595	2013
ii) Tourism	-	66	66	-	30	30	-	39	39
iii) Others +	23	319	342	38	344	382	104	498	602
II. Non-Developmental Expenditure (General Services) (A to F)	1420	365327	366747	1872	324197	326069	2671	275174	277845
A. Organs of State	-	4656	4656	-	5579	5579	-	6767	6767
B. Fiscal Services (i to ii)	12	4281	4293	19	4996	5015	36	7472	7508
i) Collection of Taxes and Duties	12	4045	4057	19	4659	4678	36	7047	7083
ii) Other Fiscal Services	-	236	236	-	337	337	-	425	425
C. Interest Payments and Servicing of Debt	-	71590	71590	-	82033	82033	-	99699	99699
of which: Interest Payments (i to iv)	-	71590	71590	-	82033	82033	-	99699	99699
i) Interest on Loans from the Centre	-	39323	39323	-	44177	44177	-	52682	52682
ii) Interest on Internal Debt	-	13355	13355	-	16334	16334	-	20747	20747
of which: Interest on market loans	-	10500	10500	-	12459	12459	-	14991	14991
iii) Interest on Small Savings, Provident Funds, etc.	-	17686	17686	-	20180	20180	-	24849	24849
iv) Others	-	1226	1226	-	1342	1342	-	1421	1421
D. Administrative Services (i to v)	1408	32892	34300	1853	38393	40246	2635	50657	53292
i) Secretariat-General Services	-	1902	1902	-	1999	1999	-	2677	2677
ii) District Administration	-	2203	2203	-	2525	2525	-	3449	3449
iii) Police-	22167	22167	-	25714	25714	-	35346	35346	
iv) Public Works	1314	2236	3550	1810	3422	5232	2588	2945	5533
v) Others ++	94	4384	4478	43	4733	4776	47	6240	6287
E. Pensions -	24384	24384	-	25755	25755	-	53071	53071	
F. Miscellaneous General Services #	-	227524	227524	-	167441	167441	-	57508	57508
Of which: Payment on account of State Lotteries	-	227441	227441	-	167304	167304	-	57307	57307
III. Compensation and Assignments to Local Bodies and Panchayati Raj Institutions	-	744	744	-	50	50	-	49	49

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Items	1999-2000			2000-01			2001-02		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
TOTAL EXPENDITURE (I+II+III)	90135	605070	695205	99169	618968	718137	119757	745892	865649
1. Developmental Expenditure (A+B)	87636	317231	404867	96418	308493	404911	116367	397593	513960
A. Social Services (1 to 12)	55340	170379	225719	66320	184310	250630	72977	199501	272478
1. Education, sports, art and culture	18703	106204	124907	18025	115037	133062	21072	126543	147615
2. Medical and public health $	3633	20483	24116	4576	21110	25686	4773	21748	26521
3. Family welfare	4277	-	4277	3405	-	3405	4920	-	4920
4. Water supply and sanitation	205	22004	22209	1532	20409	21941	190	25565	25755
5. Housing	59	819	878	25	876	901	-	971	971
6. Urban development	2760	2815	5575	1372	5174	6546	2960	1359	4319
7. Welfare of Scheduled Caste, Scheduled Tribes and other Backward Classes	1302	1437	2739	1908	1461	3369	2325	1589	3914
8. Labour and Labour Welfare	1713	3377	5090	1823	3546	5369	1800	3627	5427
9. Social Security and Welfare	21886	4706	26592	33043	4977	38020	34300	5150	39450
10. Nutrition	496	2034	2530	348	2294	2642	438	2713	3151
11. Relief on account of Natural Calamities	-	4939	4939	-	7986	7986	-	8703	8703
12. Others*	306	1561	1867	263	1440	1703	199	1533	1732
B. Economic Services (1to 8)	32296	146852	179148	30098	124183	154281	43390	198092	241482
1. Agriculture and Allied Activities (i to x)	11169	21614	32783	11261	24557	35818	13213	26052	39265
i) Crop Husbandry	2085	5371	7456	2474	5325	7799	2880	5458	8338
ii) Soil and Water Conservation	1575	1077	2652	2154	1109	3263	2907	1203	4110
iii) Animal Husbandry	1742	7366	9108	1728	7178	8906	1589	7439	9028
iv) Dairy Development	114	295	409	124	314	438	164	322	486
v) Fisheries	460	280	740	570	277	847	387	299	686
vi) Forestry and Wild Life	3689	2350	6039	3005	2629	5634	3860	2703	6563
vii) Food Storage and Warehousing	-	584	584	-	558	558	-	501	501
viii) Agricultural Research and Education	1169	2716	3885	995	5407	6402	1173	6389	7562
ix) Co-operation	304	1525	1829	178	1704	1882	213	1688	1901
x) Other Agricultural Programmes	31	50	81	33	56	89	40	50	90
2. Rural Development	8451	3570	12021	4912	4007	8919	9412	4134	13546
3. Irrigation and Flood Control (i to ii)	10029	20803	30832	10270	22274	32544	13404	29072	42476
i) Major and Medium Irrigation	7735	20056	27791	6321	21644	27965	7300	27177	34477
ii) Minor Irrigation	80	747	827	138	629	767	108	1895	2003
4. Energy	59	41310	41369	58	14023	14081	2619	76504	79123
of which: Power	-	41310	41310	-	14023	14023	2537	76504	79041
5. Industry and Minerals (i to ii)	1238	1252	2490	1228	1304	2532	1042	1384	2426
i) Village and Small Industries	368	123	491	400	156	556	213	166	379
ii) Industries @	870	1129	1999	828	1148	1976	829	1218	2047
6. Transport and Communications (i + ii)	5	57149	57154	1077	56747	57824	2249	59559	61808
i) Roads and Bridges	-	13589	13589	1047	10750	11797	2094	12123	14217
ii) Others @@	5	43560	43565	30	45997	46027	155	47436	47591
7. Science, Technology and Environment	275	30	305	336	30	366	310	35	345
8. General Economic Services (i to iii)	1070	1124	2194	956	1241	2197	1141	1352	2493
i) Secretariat – Economic Services	1016	573	1589	920	527	1447	1020	593	1613
ii) Tourism	-	76	76	-	79	79	-	151	151
iii) Others +	54	475	529	36	635	671	121	608	729
II. Non-Developmental Expenditure (General Services) (A to F)	2499	287793	290292	2751	308982	311733	3390	345229	348619
A. Organs of State	-	8487	8487	-	6997	6997	27	8247	8274
B. Fiscal Services (i to ii)	20	8616	8636	20	8497	8517	645	8761	9406
i) Collection of Taxes and Duties	20	8298	8318	20	8175	8195	645	8233	8878
ii) Other Fiscal Services	-	318	318	-	322	322	-	528	528
C. Interest Payments and Servicing of Debt	-	135741	135741	-	149191	149191	-	162447	162447
of which: Interest Payments (i to iv)	-	135741	135741	-	149191	149191	-	162447	162447
i) Interest on Loans from the Centre	-	63822	63822	-	66360	66360	-	68974	68974
ii) Interest on Internal Debt	-	28491	28491	-	42043	42043	-	52207	52207
of which: Interest on market loans	-	17843	17843	-	20122	20122	-	23690	23690
iii) Interest on Small Savings, Provident Funds, etc.	-	41739	41739	-	38953	38953	-	39244	39244
iv) Others	-	1689	1689	-	1835	1835	-	2022	2022
D. Administrative Services (i to v)	2479	49174	51653	2731	56055	58786	2718	60088	62806
i) Secretariat-General Services	-	2792	2792	275	2662	2937	92	2797	2889
ii) District Administration	-	3390	3390	-	3561	3561	-	3818	3818
iii) Police-	36327	36327	-	39333	39333	-	45553	45553	
iv) Public Works	2467	519	2986	2136	4324	6460	2346	1410	3756
v) Others ++	12	6146	6158	320	6175	6495	280	6510	6790
E. Pensions -	58736	58736	-	57084	57084	-	65705	65705	
F. Miscellaneous General Services #	-	27039	27039	-	31158	31158	-	39981	39981
of which: Payment on account of State Lotteries	-	27009	27009	-	31129	31129	-	39951	39951
III. Compensation and Assignments to Local Bodies and Panchayati Raj Institutions	-	46	46	-	1493	1493	-	3070	3070

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Items	2003-04 (Revised Estimates)			2004-05 (Accounts)		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
TOTAL EXPENDITURE (I+II+III)	133199	853635	986834	145270	995439	1140709
I. Developmental Expenditure (A+B)	129388	455940	585328	141844	499884	641728
A. Social Services (1 to 12)	81189	225013	306202	84285	237536	321821
1. Education, sports, art and culture	22892	140189	163081	20754	146750	167504
2. Medical and public health $	8651	23956	32607	5520	26972	32492
3. Family welfare	5139	-	5139	5581	-	5581
4. Water supply and sanitation	1141	31376	32517	265	30887	31152
5. Housing	-	975	975	-	1216	1216
6. Urban development	4310	1240	5550	4798	1331	6129
7. Welfare of Scheduled Caste, Scheduled Tribes and other Backward Classes	2739	1688	4427	2695	2216	4911
8. Labour and Labour Welfare	878	4694	5572	916	6388	7304
9. Social Security and Welfare	34480	6678	41158	42717	5396	48113
10. Nutrition	901	3537	4438	830	4300	5131
11. Relief on account of Natural Calamities	-	8989	8989	-	10189	10189
12. Others*	58	1691	1749	208	1891	2099
B. Economic Services (1 to 8)	48199	230927	279126	57559	262348	319907
1. Agriculture and Allied Activities (i to x)	14525	30657	45182	13266	33068	46334
i) Crop Husbandry	2970	6098	9068	3061	6376	9437
ii) Soil and Water Conservation	2980	1309	4289	2167	1499	3666
iii) Animal Husbandry	3774	9131	12905	1058	10805	11863
iv) Dairy Development	247	342	589	98	109	207
v) Fisheries	561	319	880	612	361	973
vi) Forestry and Wild Life	3223	4248	7471	5327	4130	9456
vii) Food Storage and Warehousing	65	398	463	-	481	481
viii) Agricultural Research and Education	537	6888	7425	628	7271	7898
ix) Co-operation	167	1838	2005	316	1958	2274
x) Other Agricultural Programmes	1	86	87	-	79	79
2. Rural Development	8241	4473	12714	9240	7184	16424
3. Irrigation and Flood Control (i to ii)	16580	45211	61791	13535	31033	44569
i) Major and Medium Irrigation	10511	39424	49935	8131	30659	38790
ii) Minor Irrigation	-	5787	5787	-	375	375
4. Energy	4865	84153	89018	10070	110510	120580
of which: Power	4795	84139	88934	9954	110495	120449
5. Industry and Minerals (i to ii)	2186	1582	3768	2717	1581	4298
i) Village and Small Industries	612	310	922	2106	176	2282
ii) Industries @	1574	1272	2846	612	1404	2016
6. Transport and Communications (i + ii)	55	63394	63449	6631	77412	84043
i) Roads and Bridges	-	13179	13179	6526	16267	22793
ii) Others @@	55	50215	50270	105	61146	61251
7. Science, Technology and Environment	400	42	442	545	50	595
8. General Economic Services (i to iii)	1347	1415	2762	1554	1510	3064
i) Secretariat – Economic Services	1263	618	1881	1505	665	2170
ii) Tourism	-	158	158	-	162	162
iii) Others +	84	639	723	49	683	732
II. Non-Developmental Expenditure (General Services) (A to F)	3811	395994	399805	3427	486384	489810
A. Organs of State	386	8509	8895	134	10155	10289
B. Fiscal Services (i to ii)	239	9676	9915	23	10341	10364
i) Collection of Taxes and Duties	239	9121	9360	23	9950	9972
ii) Other Fiscal Services	-	555	555	-	392	392
C. Interest Payments and Servicing of Debt (1 + 2)	-	197443	197443	-	228637	228637
1. Appropriation for Reduction or Avoidance of Debt	-	600	600	-	5187	5187
2. Interest Payments (i to iv)	-	196843	196843	-	223450	223450
i) Interest on Loans from the Centre	-	69698	69698	-	45533	45533
ii) Interest on Internal Debt	-	84282	84282	-	137970	137970
of which: a) Interest on market loans	-	25026	25026	-	35285	35285
b) Interest on NSSF	-	-	-	-	59601	59601
iii) Interest on Small Savings, Provident Funds, etc.	-	40722	40722	-	37840	37840
iv) Others	-	2141	2141	-	2107	2107
D. Administrative Services (i to v)	3186	63588	66774	3270	76803	80073
i) Secretariat-General Services	170	2870	3040	-	3461	3461
ii) District Administration	-	4177	4177	-	4742	4742
iii) Police	-	47319	47319	-	59271	59271
iv) Public Works	2676	2545	5221	3193	259	3452
v) Others ++	340	6677	7017	77	9070	9147
E. Pensions	-	73164	73164	-	90193	90193
F. Miscellaneous General Services #	-	43614	43614	-	70254	70254
Of which: Payment on account of State Lotteries	-	43497	43497	-	70154	70154
III. Compensation and Assignments to Local Bodies and Panchayati Raj Institutions	-	1701	1701	-	9171	9171

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Items	2005-06 (Revised Estimates)			2006-07 (Budget Estimates)		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
TOTAL EXPENDITURE (I+II+III)	211549	1113364	1324913	223387	1183278	1406666
1. DEVELOPMENTAL EXPENDITURE (A+B)	207956	616743	824699	219569	664298	883866
A. Social Services (1 to 12)	133510	289677	423187	150683	299132	449815
1. Education, Sports, Art and Culture	33081	179184	212265	40547	191758	232305
2. Medical and Public Health	11146	29521	40667	17987	30340	48327
3. Family Welfare	5195	-	5195	6345	-	6345
4. Water Supply and Sanitation	1197	34039	35236	1200	35780	36980
5. Housing	-	1330	1330	-	764	764
6. Urban Development	5533	6427	11960	10364	6523	16887
7. Welfare of Scheduled Caste, Scheduled Tribes and Other Backward Classes	5804	2341	8145	6324	2409	8733
8. Labour and Labour Welfare	2935	9239	12174	3219	9377	12596
9. Social Security and Welfare	61847	8049	69896	57873	6997	64871
10. Nutrition	6322	47	6369	6310	46	6357
11. Relief on account of Natural Calamities	-	17134	17134	-	13093	13093
12. Others*	450	2368	2818	514	2042	2556
B. Economic Services (1 to 8)	74446	327066	401512	68885	365166	434051
1. Agriculture and Allied Activities (i to xi)	20193	37059	57252	21690	38940	60630
i) Crop Husbandry	3820	6911	10731	4362	7214	11576
ii) Soil and Water Conservation	856	1581	2437	710	1662	2372
iii) Animal Husbandry	2209	12127	14336	3240	12741	15981
iv) Dairy Development	215	107	322	263	117	380
v) Fisheries	996	390	1386	1041	409	1450
vi) Forestry and Wild Life	9844	4130	13974	9935	4375	14310
vii) Food Storage and Warehousing	-	553	553	-	542	542
viii) Agricultural Research and Education	818	9107	9925	818	9573	10390
ix) Agricultural Finance Institutions	-	-	-	-	-	-
x) Co-operation	1435	2064	3499	1321	2214	3535
xi) Other Agricultural Programmes	-	88	88	-	94	94
2. Rural Development	17825	10934	28760	17568	10637	28205
3. Irrigation and Flood Control	18500	46860	65360	18900	49803	68703
of which : i) Major and Medium Irrigation	10900	45851	56751	11100	48724	59824
ii) Minor Irrigation	-	1009	1009	-	1079	1079
iii) Flood Control and Drainage	-	-	-	-	-	-
4. Energy	3791	139527	143318	1700	165593	167293
of which: Power	3391	139510	142901	1300	165575	166875
5. Industry and Minerals (i to iii)	10731	1609	12341	5342	1629	6971
i) Village and Small Industries	8449	178	8627	3376	183	3558
ii) Industries @	2283	1431	3713	1967	1446	3413
iii) Others **	-	-	-	-	-	-
6. Transport and Communications (i+ii)	105	89392	89497	205	96782	96987
i) Roads and Bridges	-	21250	21250	-	27327	27327
ii) Others @@	105	68142	68247	205	69455	69660
7. Science, Technology and Environment	885	52	937	780	56	836
8. General Economic Services (i to iv)	2415	1633	4048	2700	1727	4427
i) Secretariat – Economic Services	2200	694	2894	2465	753	3218
ii) Tourism	-	187	187	-	181	181
iii) Others +	215	753	968	235	793	1028
II. NON-DEVELOPMENTAL EXPENDITURE (General Services) (A to F)	3593	471627	475220	3819	491498	495316
A. Organs of State	156	12659	12815	201	11871	12072
B. Fiscal Services (i + ii)	28	11635	11663	54	13026	13080
i) Collection of Taxes and Duties	28	11196	11224	54	12565	12619
ii) Other Fiscal Services	-	439	439	-	461	461
C. Interest Payments and Servicing of Debt (1+2)	-	223471	223471	-	245118	245118
1. Appropriation for Reduction or Avoidance of Debt	-	4758	4758	-	5100	5100
2. Interest Payments (i to iv)	-	218713	218713	-	240018	240018
i) Interest on Loans from the Centre	-	25701	25701	-	24557	24557
ii) Interest on Internal Debt	-	147685	147685	-	167508	167508
of which : a) Interest on Market Loans	-	41757	41757	-	45609	45609
b) Interest on NSSF	-	79824	79824	-	89043	89043
iii) Interest on Small Savings, Provident Funds, etc.	-	43077	43077	-	45563	45563
iv) Others	-	2250	2250	-	2389	2389
D. Administrative Services (i to v)	3409	96652	100061	3564	105552	109116
i) Secretariat – General Services	-	5957	5957	-	3694	3694
ii) District Administration	-	5142	5142	-	5413	5413

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Items	2005-06 (Revised Estimates)			2006-07 (Accounts)		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
iii) Police	-	70609	70609	-	72227	72227
iv) Public Works	3348	5159	8507	3504	13913	17417
v) Others ++	61	9785	9846	60	10306	10366
E. Pensions	-	105561	105561	-	115117	115117
F. Miscellaneous General Services	-	21648	21648	-	814	814
of which : Payment on account of State Lotteries	-	19563	19563	-	23	23
III. Compensation and Assignments to Local Bodies and Panchayati Raj Institutions	-	24995	24995	-	27483	27483

Notes: $ Includes family welfare for the period 1994-95.

\# Included under 'Pensions'.

* Includes expenditure on Information and Publicity, Secretariat-Social Services, Other Social Services, etc.

@ Includes expenditure on Non-Ferrous Mining and Metallurgical Industries.

@@ Includes expenditure on Port and Light Houses, Civil Aviation, Road Transport, Inland Water Transport, etc.

\+ includes expenditure on Foreign Trade and export Promotion, Census, Survey and Statistics and Other General Economic Services.

+ + Includes expenditure on Public Sector Commission, Treasury and Accounts, Administration, Jails, Supplies and Disposal, Stationery and Printing, Other Administrative Services, etc.

Source: *Handbook of Statistics on State Government Finances 2004*.

TABLE 2.19

Details of Capital Receipts of the State Haryana from 1990-91 to 2006-07

(Rs. Lakh)

Items	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Total Receipts (I to VIII)	54034	49990	53685	68204	112835	393818	152269
I. Internal Debt* (1 to 6)	8842	5378	10366	19212	8441	11986	18543
1. Market Loans	5395	6654	7939	7934	10895	12918	14593
2. Loans from L.I.C.	2216	-	1407	1454	-	-	-
3. Loans from S.B.I. and Other Banks (net)	203	-2270	-	8450	-5800	-2650	-
4. Loans from NABARD #	-	443	121	500	-	2308	3090
5. Loans from national Co-operative Development Corporation	612	421	526	874	3346	-1375	-643
6. Others @	416	130	373	-	-	785	1503
II. Loans and Advances from the Centre (1 to 4)	28135	26384	25512	30395	41241	80567	53160
1. State Plan Schemes	8719	9368	11968	15540	17256	21572	27292
2. Central Plan schemes	2	1	2	1	-	2	-
3. Centrally Sponsored Schemes	96	143	459	80	175	223	3399
4. Non plan (i to ii)	19318	16872	13083	14774	23810	58770	22469
i) Share of Small Savings	18210	15663	11765	14172	23767	28713	22430
ii) Others	1108	1209	1318	602	43	30057	39
III. Recovery of Loans and Advances (1 to 9)	2353	3050	3102	3196	39932	2881	46051
1. Housing	77	190	136	255	291	292	432
2. Urban Development	35	14	58	11	104	67	39
3. Crop Husbandry	100	62	80	70	74	51	34
4. Co-operation	433	1160	559	807	-	62	46
5. Power Projects	77	-	-	-	37313	-	42330
6. Village and Small Industries	12	18	28	36	49	67	284
7. Industries and Minerals	-	64	49	-	-	-	-
8. Government Servants, etc.+	985	1041	1259	1349	1770	2279	2500
9. Others **	634	501	933	668	331	63	386
IV. Small Savings, Provident Funds etc. (net) (1+2)	12708	13481	13235	17028	19934	22168	24612
1. State Provident Funds	12259	13038	12750	16566	19494	21768	24253
2. Others	449	443	485	462	440	400	359
V. Reserve Funds (net) (1 to 4)	1790	-63	976	2587	626	1322	1557
1. Depreciation/ Renewal Reserve Funds	865	800	935	1797	1152	1629	1179
2. Sinking Funds	-	-	3	3	-	37	1
3. Famine Relief Funds	-	3	-	-	-	-	-
4. Others	925	-866	38	787	-526	-344	377
VI. Deposits and Advances (net) (1 to 4)	2828	-172	1667	-1976	1132	3446	7998
1. Civil Deposits	1046	1087	1818	-1861	1171	2758	5269
2. Deposits of Local Funds	1030	-948	-130	-31	-145	139	2605
3. Civil advances	-	-3	2	-	-4	-6	-
4. Others	752	-308	-23	-84	110	555	124
VII. Suspense and Miscellaneous @@ (net) (1+2)	-2821	2430	-1429	-735	434	271986	-338
1. Suspense	-2832	2688	-1822	-525	686	-3191	-262
2. Others	11	-258	393	-210	-252	275177	-76
VIII. Remittances (net)	199	-498	256	-1503	1095	-538	686

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Items	*1997-98*	*1998-99*	*1999-2000*	*2000-01*	*2001-02*	*2002-03*	*2003-04*
Total Receipts (I to VIII)	188212	302987	255810	254163	281731	309414	319528
I. Internal Debt * (1 to 7)	26006	40292	128040	114210	180244	182322	215351
1. Market Loans	18268	17379	31755	23600	29286	56605	60401
2. Loans from S.B.I. and Other Banks (net)	540	21060	23920	22980	52001	-3500	7700
3. Loans from NABARD #	5393	1439	2311	6355	10973	11406	15567
4. Loans from national Co-operative Development Corporation	1805	299	2644	321	763	611	954
5. Special Securities Issued to NSSF	-	-	67410	60954	87021	115000	126500
6. Others @	-	115	-	-	200	2200	4229
II. Loans and Advances from the Centre (1 to 4)	80192	100561	35014	31850	33859	38740	35531
1. State Plan Schemes	28416	28803	34876	31846	32023	36977	33891
2. Central Plan schemes	6	8	3	2	32	-	-
3. Centrally Sponsored Schemes	98	246	97	2	345	320	440
4. Non plan (i to iii)	51672	71504	38	-	1459	1443	1200
i) Share of Small Savings	51618	71462	-	-	-	-	-
ii) Others	54	42	38	-	1459	1443	1200
III. Recovery of Loans and Advances (1 to 10)	52235	55331	23319	6951	8471	9760	11106
1. Housing	276	163	166	153	164	158	158
2. Urban Development	37	36	39	231	-195	4	4
3. Crop Husbandry	34	28	18	15	18	34	50
4. Food Storage and Warehousing	-	-	-	-	17	-	-
5. Co-operation	236	195	213	220	363	320	323
6. Power Projects	47993	48264	18000	87	-	143	143
7. Village and Small Industries	452	508	916	1870	3062	3376	5020
8. Industries and Minerals	-	2518	-	-	-	-	-
9. Government Servants, etc.+	3117	3567	3892	4140	4928	5212	5367
10. Others **	90	52	75	235	114	513	41
IV. Small Savings, Provident Funds etc. (net) (1+2)	30864	74445	56553	49866	40523	51190	55690
1. State Provident Funds	30556	74216	56452	49856	40615	50560	55061
2. Others	308	229	101	10	-92	630	629
V. Reserve Funds (net) (1 to 4)	2633	2916	5045	6550	-2613	-10708	-902
1. Depreciation/Renewal Reserve Funds	925	2722	1347	69	-65	-212	-242
2. Sinking Funds	1	1	1	14	-	500	-500
3. Famine Relief Funds	-98	-	-	-	-	-	-
4. Others	1805	193	3697	6467	-2548	-10996	-160
VI. Deposits and Advances (net) (1 to 4)	-2724	24360	-6126	-975	29802	18110	22752
1. Civil Deposits	341	18378	-4424	-2278	27543	18110	22752
2. Deposits of Local Funds	-2545	12	33	33	49	-	-
3. Civil advances	-	-5	-2	-8	-23	-	-
4. Others	-520	5975	-1733	1278	2233	-	-
VII. Suspense and Miscellaneous @@ (net) (1+2)	-2501	3880	14497	42969	-6668	30000	-20000
1. Suspense	-2368	4246	14385	42676	-6553	30000	-20000
2. Others	-133	-366	112	293	-115	-	-
VIII. Remittances (net)	1507	1202	-532	2742	-1887	-	-

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(Rs. Lakh)

Items	*2004-05 Accounts*	*2005-06 Revised Estimate*	*2006-07 Budget Estimates*
TOTAL CAPITAL RECEIPTS (I to XIII)	4215133	10127833	10035763
TOTAL CAPITAL RECEIPTS (Net of Public Accounts)	443712	328585	431941
I. External Debt #		-	--
II. Internal Debt (1 to 8)	417838	321825	336944
1. Market Loans	103871	52081	58499
2. Loans from L.I.C.	-	-	-
3. Loans from S.B.I. and Other Banks	78600	70000	110200
4. Loans from National Bank for Agriculture and Rural Development	16780	23000	27750
5. Loans from National Co-Operative Development Corporation	913	1330	1460
6. WMA from RBI	-	10000	10000
7. Special Securities issued to NSSF	212871	159664	120045

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	Items	2004-05 Accounts	2005-06 Revised Estimate	2006-07 Budget Estimates
	8. Others @	4803	5750	8990
	of which : Land Compensation and other Bonds	-	-	-
III.	Loans and Advances from the Centre (1 to 6)	29612	5469	36660
	1. State Plan Schemes	26472	4919	36070
	of which : Advance release of Plan Assistance for Natural Calamities	-	-	-
	2. Central Plan Schemes	-	-	-
	3. Centrally Sponsored Schemes	364	400	440
	4. Non-Plan (i to ii)	2775	150	150
	(i) Relief for Natural Calamities	-	-	-
	(ii) Others	2775	150	150
	5. Ways and Means Advances from Centre	-	-	-
	6. Loans for Special Schemes	-	-	-
IV.	Recovery of Loans and Advances (1 to 12)	15710	17911	18378
	1. Housing	66	155	159
	2. Urban Development	24	24	17
	3. Crop Husbandry	6	6	22
	4. Food Storage and Warehousing	75	350	376
	5. Co-Operation	177	338	522
	6. Minor Irrigation	-	-	-
	7. Power Projects		759	--
	8. Village and Small Industries	7470	7876	8403
	9. Industries and Minerals	-	410	440
	10. Road Transport	-	-	-
	11. Government Servants, etc.*	6873	7568	8293
	12. Others*	259	1186	147
V.	Inter-State Settlement	-	-	-
VI.	Contingency Fund		-	--
VII.	Small Savings, Provident Funds etc. (1+2)	104022	108079	109814
	1. State Provident Fund	103086	107121	108846
	2. Others	936	958	968
VIII.	Reserve Funds (1 to 4)	19604	49283	24365
	1. Depreciation/Renewal Reserve Fund	5169	5212	5465
	2. Sinking Funds	3687	4758	5100
	3. Famine Relief Fund	-	-	-
	4. Others	10748	39314	13800
IX.	Deposits and Advances (1 to 4)	227784	167476	201526
	1. Civil Deposits	107471	110000	113000
	2. Deposits of Local Funds	942	1400	1450
	3. Civil Advances	8975	4000	6000
	4. Others	110397	52076	81076
X.	Suspense and Miscellaneous (1 to 4)	3217490	9307790	9158075
	1. Suspense	59474	1540400	1650075
	2. Cash Balance	3150654	-	-
	3. Deposits with RBI	-	7759320	7500000
	4. Others	7362	8070	8000
XI.	Appropriation to Contingency Fund	-	-	-
XII.	Miscellaneous Capital Receipts	-	-	-
	of which: Disinvestment	-	-	-
XII.	Remittances	183074	150000	150000

Notes : * Excludes Ways and Means Advances and Overdrafts from the Reserve Bank of India.

\# It was called loans from National Agricultural Credit Fund of Reserve Bank of India from the period 1990-91 to 1999-2000.

@ Includes Land Compensation Bonds, Loans from Khadi and Village Industries Commission, CWC, etc.

\+ Comprise recovery of loans and advances to Government Servants for housing, purchase of conveyances, festivals, marriages, etc.

** Includes recovery of loans and advances for Education, Art and Culture, Social Security and Welfare, Fisheries and Animal Husbandry, etc.

@@ Excludes Cash Balance Investment Account.

Source: *Handbook of Statistics on State Government Finances 2004*.

2.4.5 Gross Fiscal Deficit

The gross fiscal deficit (GFD) is the difference between aggregate disbursements net of debt repayments and recovery of loans, and sum of revenue receipts and non-debt-capital receipts. As such, it consists of revenue deficit, capital outlay and net lending. On deducting interest payments from GFD, we have primary deficit.

TABLE 2.20

Details of Capital Expenditure of Haryana State from 1990-91 to 2006-07

(Rs. Lakh)

Items	1990-1991			1991-92			1992-93		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
TOTAL DISBURSEMENTS (I+II+III+IV)	34683	11684	46367	39057	6224	45281	44547	13120	57667
I. Total Capital Outlay (1+2)	16627	1989	18616	19206	-4607	14599	22602	232	22834
1. Developmental (a+ b)	15931	1986	17917	18455	-4609	13846	22043	229	22272
a) Social Services (1 to 7)	2442	-	2442	2951	-	2951	6181	-	6181
1. Education, Sports, Art and Culture	698	-	698	1269	-	1269	1358	-	1358
2. Medical and Public health $	518	-	518	857	-	857	1406	-	1406
3. Water supply and sanitation	-	-	-	-	-	-	2404	-	2404
4. Housing	943	-	943	483	-	483	578	-	578
5. Welfare of SCs, STs and other backward classes	152	-	152	56	-	56	183	-	183
6. Social Security and Welfare	7	-	7	104	-	104	70	-	70
7. Others *	124	-	124	182	-	182	182	-	182
b) Economic Services (1 to 6)	13489	1986	15475	15504	-4609	10895	15862	229	16091
1. Agriculture and Allied Activities (i to vi)	782	1960	2742	321	-4556	-4235	616	183	799
i) Crop Husbandry	30	-4	26	10	-6	4	-	-2	-2
ii) Dairy Development	98	-	98	105	-	105	88	-	88
iii) Forestry and Wild Life	20	-	20	-	-	-	-	174	174
iv) Food Storage and Warehousing	46	1953	1999	41	-4550	-4509	-	-	-
v) Co-operation	588	3	591	165	-	165	528	-	528
vi) Others@	-	8	8	-	-	-	-	11	11
2. Major and Medium Irrigation and Flood Control	8239	5	8244	10048	20	10068	9819	10	9829
3. Energy	-146	-	-146	-76	-93	-169	-98	-	-98
4. Industry and Minerals (i to ii)	1436	-	1436	845	-	845	1270	-	1270
i) Village and Small Industries	38	-	38	37	-	37	36	-	36
ii) Others #	1398	-	1398	808	-	808	1234	-	1234
5. Transport (i + ii)	3007	21	3028	4186	20	4206	4120	36	4156
i) Roads and Bridges	1638	-	1638	2098	-	2098	2075	-	2075
ii) Others * *	1369	21	1390	2088	20	2108	2045	36	2081
6. General Economic Services	171	-	171	180	-	180	135	-	135
of which: Tourism	171	-	171	180	-	180	135	-	135
2. Non-Developmental (General Services)	696	3	699	751	2	753	559	3	562
II. Discharge of Internal Debt (i to v)	-	511	511	-	563	563	-	2208	2208
i) Market Loans-	5	5	-	2	2	-	1513	1513	
ii) Loans from L.I.C.	-	145	145	-	153	153	-	210	210
iii) Loans from NABARD	-	125	125	-	134	134	-	170	170
iv) Loans from national Co-operative Development Corporation	-	176	176	-	198	198	-	219	219
v) Others	-	60	60	-	76	76	-	96	96
III. Repayment of Loans to the Centre	-	6902	6902	-	7416	7416	-	8124	8124
IV. Loans and Advances by State Governments (1+2)	18056	2282	20338	19851	2852	22703	21945	2556	24501
1. Developmental Purposes (a + b)	18043	1384	19427	19851	1475	21326	21945	1368	23313
a) Social Services (1 to 3)	1642	-	1642	1553	305	1858	2542	-	2542
1. Housing	1140	-	1140	1016	-	1016	1432	-	1432
2. Government Servants (Housing)	172	-	172	143	305	448	434	-	434
3. Others	330	-	330	394	-	394	676	-	676
b) Economic Services (1 to 4)	16401	1384	17785	18298	1170	19468	19403	1368	20771
1. Co-operation	365	888	1253	334	510	844	118	465	583
2. Power Projects	15840	-	15840	17745	-	17745	18943	-	18943
3. Village and Small Industries	58	-	58	49	-	49	194	-	194
4. Others	138	496	634	170	660	830	148	903	1051
2. Non-Developmental Purposes (a + b)	13	898	911	-	1377	1377	-	1188	1188
a) Governmental Servants (Other than Housing)	-	893	893	-	1377	1377	-	1188	1188
b) Miscellaneous	13	5	18	-	-	-	-	-	-
A. Surplus (+)/Deficit (-) on Capital Account			7667			4709			-3982
B. Surplus (+)/Deficit (-) on Revenue Account			-1965			-3223			-170
C. Overall Surplus (+)/Deficit (-) (A+B) Financing of Surplus (+)/Deficit (-)			5702			1486			-4152
D. Increase (+)/Decrease (-) in Cash Balances			2586			6198			-5744
a) Opening Balance			-8799			-6213			-15
b) Closing Balance			-6213			-15			-5759
E. Withdrawals from (-)/Additions to (+) Cash balance Investment Account (net)			3116			-4712			1592

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Items	1993-1994			1994-95			1995-96		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
TOTAL DISBURSEMENTS (I+II+III+IV)	51454	19348	70802	53083	10807	63890	63856	13130	76986
I. Total Capital Outlay (1+2)	25156	5136	30292	24143	-3485	20658	34359	-5771	28588
1. Developmental (a+ b)	24475	5133	29608	23522	-3488	20034	33540	-5774	27766
a) Social Services (1 to 8)	7046	-	7046	9061	-	9061	9416	-	9416
1. Education, Sports, Art and Culture	1316	-	1316	1487	-	1487	1120	-	1120
2. Medical and Public health	1821	-	1821	1154	-	1154	472	-	472
3. Family Welfare	-	-	-	-	-	-	191	-	191
4. Water supply ad sanitation	2633	-	2633	4743	-	4743	5623	-	5623
5. Housing	870	-	870	1291	-	1291	1500	-	1500
6. Welfare of SCs, STs and other	153	-	153	160	-	160	200	-	200
7. Social Security and Welfare	40	-	40	24	-	24	103	-	103
8. Others *	213	-	213	202	-	202	207	-	207
b) Economic Services (1 to 6)	17429	5133	22562	14661	-3488	10973	24124	-5774	18350
1. Agriculture and Allied Activities (i to v)	593	5069	5662	696	-3542	-2846	3161	-5799	-2638
i) Animal Husbandry	3	-	3	-	-	-	-	-	-
ii) Dairy Development	9	-	9	-1	-	-1	100	-	100
iii) Food Storage and Warehousing	-	5069	5069	-	-3546	-3546	-	-5799	-5799
iv) Co-operation	581	-	581	708	-	708	3061	-	3061
v) Others@	-	-	-	-11	4	-7	-	-	-
2. Major and Medium Irrigation and Flood Control	11047	16	11063	8788	13	8801	13127	-	13127
3. Energy	87	-	87	99	-	99	64	-	64
4. Industry and Minerals (i + ii)	702	-	702	655	-	655	2167	-	2167
i) Village and Small Industries	31	-	31	23	-	23	13	-	13
ii) Others #	671	-	671	632	-	632	2154	-	2154
5. Transport (i + ii)	4820	48	4868	4033	41	4074	5193	25	5218
i) Roads and Bridges	2309	-	2309	2246	-	2246	2471	-	2471
ii) Others * *	2511	48	2559	1787	41	1828	2722	25	2747
6. General Economic Services	180	-	180	190	-	190	412	-	412
of which: Tourism	180	-	180	190	-	190	412	-	412
2. Non-Developmental (General Services)	681	3	684	621	3	624	819	3	822
II. Discharge of Internal Debt (i to v)	-	2352	2352	-	889	889	-	945	945
i) Market Loans	-	1542	1542	-	3	3	-	1	1
ii) Loans from L.I.C.	-	277	277	-	364	364	-	340	340
iii) Loans from NABARD	-	185	185	-	188	188	-	-	-
iv) Loans from national Co-operative Development Corporation	-	231	231	-	232	232	-	262	262
v) Others	-	117	117	-	102	102	-	342	342
III. Repayment of Loans to the Center	-	9222	9222	-	8663	8663	-	9246	9246
IV. Loans and Advances by State Governments (1+2)	26298	2638	28936	28940	4740	33680	29497	8710	38207
1. Developmental Purposes (a + b)	26298	1360	27658	28940	2947	31887	29497	6467	35964
a) Social Services (1 to 3)	2678	-	2678	1339	235	1574	1285	230	1515
1. Housing	1636	-	1636	388	-	388	-	-	-
2. Government Servants (Housing	437	-	437	308	235	543	565	230	795
3. Others	605	-	605	643	-	643	720	-	720
b) Economic Services (1 to 5)	23620	1360	24980	27601	2712	30313	28212	6237	34449
1. Co-operation	901	180	1081	408	-	408	441	-	441
2. Major and Medium Irrigation, etc.	22171	830	23001	-	-	-	-	-	-
3. Power Projects	-	-	-	27189	2712	29901	26036	6237	32273
4. Village and Small Industries	340	-	340	-	-	-	1733	-	1733
5. Others	208	350	558	4	-	4	2	-	2
2. Non-Developmental Purposes	-	1278	1278	-	1793	1793	-	2243	2243
of which: Governmental Servants (Other than Housing)	-	1278	1278	-	1793	1793	-	2243	2243
A. Surplus (+)/Deficit (-) on Capital Account			-2598			48945			316832
B. Surplus (+)/Deficit (-) on Revenue Account			8045			-39051			-34682
C. Overall Surplus (+)/Deficit (-) (A+B) Financing of Surplus (+)/Deficit (-)			5447			9894			282150
D. Increase (+)/Decrease (-) in Cash Balances			-3429			5494			4164
a) Opening Balance			5759			-9188			-3695
b) Closing Balance			-9188			-3694			469
E. Withdrawals from (-)/Additions to (+) Cash balance Investment Account (net)			8876			4400			277986

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Items	1996-1997			1997-98			1998-99		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
TOTAL DISBURSEMENTS (I+II+III+IV)	79687	26711	106398	85905	32921	118826	100170	55997	156167
I. Total Capital Outlay (1+2)	48182	-3517	44665	48112	1109	49221	86630	15946	102576
1. Developmental (a+ b)	46414	-3520	42894	45812	1109	16921	83835	15946	99781
a) Social Services (1 to 8)	19380	-	19380	12974	-	12974	14884	-	14884
1. Education, Sports, Art and Culture	437	-	437	1234	-	1234	2305	-	2305
2. Medical and Public health	630	-	630	787	-	787	1169	-	1169
3. Family Welfare	36	-	36	158	-	158	461	-	461
4. Water supply ad sanitation	17160	-	17160	10246	-	10246	10375	-	10375
5. Housing	763	-	763	205	-	205	340	-	340
6. Welfare of SCs, STs and other	259	-	259	155	-	155	25	-	25
7. Social Security and Welfare	17	-	17	63	-	63	5	-	5
8. Others *	78	-	78	126	-	126	204	-	204
b) Economic Services (1 to 6)	27034	-3520	23514	32838	1109	33947	68951	15946	84897
1. Agriculture and Allied Activities (i to iv)	880	-3558	-2678	196	1068	1264	37	15885	15922
i) Dairy Development	-1	-	-1	-2	-	-2	-1	-	-1
ii) Food Storage and Warehousing	-	-3557	-3557	-	1068	1068	-	15885	15885
iii) Co-operation	881	-	881	198	-	198	38	-	38
iv) Others@	-	-1	-1	-	-	-	-	-	-
2. Major and Medium Irrigation and Flood Control	20788	-	20788	26414	-2	26412	30315	-	30315
3. Energy	-2	-	-2	77	-	77	32500	24	32524
4. Industry and Minerals (i + ii)	660	-	660	965	-	965	533	-	533
i) Village and Small Industries	9	-	9	19	-	19	22	-	22
ii) Others #	651	-	651	946	-	946	511	-	511
5. Transport (i + ii)	4342	38	4380	4783	43	4826	5213	37	5250
i) Roads and Bridges	2466	-	2466	2115	-	2115	2203	-	2203
ii) Others * *	1876	38	1914	2668	43	2711	3010	37	3047
6. General Economic Services	366	-	366	403	-	403	353	-	353
of which: Tourism	366	-	366	403	-	403	353	-	353
2. Non-Developmental (General Services)	1768	3	1771	2300	-	2300	2795	-	2795
II. Discharge of Internal Debt (1 to 5)	-	1199	1199	-	2921	2921	-	6178	6178
1. Market Loans	-	3	3	-	1536	1536	-	3947	3947
2. Loans from L.I.C.	-	343	343	-	339	339	-	336	336
3. Loans from NABARD	-	267	267	-	432	432	-	941	941
4. Loans from national Co-operative Development Corporation	-	296	296	-	401	401	-	736	-
5. Others	-	290	290	-	213	213	-	218	218
III. Repayment of Loans to the Center	-	21073	21073	-	22855	22855	-	24634	24634
IV. Loans and Advances by State Governments	31505	7956	39461	37793	6036	43829	13540	9239	22779
1. Developmental Purposes (a + b)	31505	5558	37063	37793	6036	43829	13540	5931	19471
a) Social Services (1+ 3)	983	203	1186	1063	3113	4176	1130	327	1457
1. Housing	-	-	-	3	-	3	-	-	-
2. Government Servants (Housing)	510	203	713	702	3113	3815	754	327	1081
3. Others	473	-	473	358	-	358	376	-	376
b) Economic Services (1 to 5)	30522	5355	35877	36730	2923	39653	12410	5604	18014
1. Co-operation	1231	-	1231	11	-	11	62	-	62
2. Power Projects	25380	5355	30735	28740	2923	31663	6270	3000	9270
3. Village and Small Industries	3510	-	3510	5845	-	5845	6066	-	6066
4. Other Industries and Ministries	-	-	-	-	-	-	-	2604	2604
5. Others	401	-	401	2134	-	2134	12	-	12
2. Non-Developmental Purposes	-	2398	2398	-	-	-	-	3308	3308
of which: Governmental Servants (Other than Housing)	-	2398	2398	-	-	-	-	3308	3308
A. Surplus (+)/Deficit (-) on Capital Account			45871			69386			146820
B. Surplus (+)/Deficit (-) on Revenue Account			-71867			-71940			-154020
C. Overall Surplus (+)/Deficit (-) (A+B) Financing of Surplus (+)/Deficit (-)			-25996			-2554			-7200
D. Increase (+)/Decrease (-) in Cash Balances			-7884			-3604			-4949
a) Opening Balance			469			-7415			-11019
b) Closing Balance			-7415			-11019			-15668
E. Withdrawals from (-)/Additions to (+) Cash balance Investment Account (net)			-17472			410			-410
F. Increase (-)/Decrease (+) in Ways and Means Advances and Overdrafts from RBI (net)			-640			640			-1841

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Items	1999-2000			2000-01			2001-02		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
TOTAL DISBURSEMENTS (I+II+III+IV)	104199	36472	140671	109053	88697	197750	106682	100516	207198
I. Total Capital Outlay (1+2)	88601	808	89409	91390	53126	144516	90197	56515	146712
1. Developmental (a+b)	85877	806	86683	88383	53125	141508	85130	56515	141645
a) Social Services (1 to 9)	16449	-	16449	14268	-	14268	19119	-	19119
1. Education, Sports, Art and Culture	1571	-	4571	385	-	385	351	-	351
2. Medical and Public health	941	-	941	704	-	704	746	-	746
3. Family Welfare	61	-	61	32	-	32	5	-	5
4. Water supply ad sanitation	13202	-	13202	12594	-	12594	17388	-	17388
5. Housing	454	-	454	322	-	322	369	-	369
6. Urban development	-	-	-	-	-	-	56	-	56
7. Welfare of SCs, STs and other	30	-	30	45	-	45	70	-	70
8. Social Security and Welfare	42	-	42	43	-	43	21	-	21
9. Others *	148	-	148	143	-	143	113	-	113
b) Economic Services (1 to 10)	69428	806	70234	74115	53125	127240	66011	56515	122526
1. Agriculture and Allied Activities (i to iii)	-749	751	2	307	60459	60766	331	56481	56812
i) Food Storage and Warehousing	-	751	751	81	60459	60540	-	56481	56481
ii) Co-operation	-749	-	-749	-74	-	-74	331	-	331
iii) Others@	-	-	-	300	-	300	-	-	-
2. Major and Medium Irrigation and Flood control	31328	-	31328	32246	-	32246	35468	-	35468
3. Energy	34987	-	34987	26483	-	26483	3831	-	3831
4. Industry and Minerals (i + ii)	119	-	119	445	-	445	56	-	56
i) Village and Small Industries	6	-	6	2	-	2	5	-	5
ii) Others #	113	-	113	443	-	443	51	-	51
5. Transport (i + ii)	3543	55	3598	14434	-7334	7100	25955	34	25989
i) Roads and Bridges	2774	-	2774	6758	-	6758	25039	-	25039
ii) Others * *	769	55	824	7676	-7334	342	916	34	950
6. General Economic Services	200	-	200	200	-	200	370	-	370
of which: Tourism	200	-	200	200	-	200	370	-	370
2. Non-Developmental (General Services)	2724	2	2726	3007	1	3008	5067	-	5067
II. Discharge of Internal Debt (i to v)	-	6025	6025	-	5786	5786	-	8015	8015
i) Market Loans	-	3776	3776	-	1724	1724	-	3268	3268
ii) Loans from L.I.C.	-	336	336	-	331	331	-	328	328
iii) Loans from NABARD	-	1196	1196	-	2973	2973	-	3619	3619
iv) Loans from national Co-operative Development Corporation	-	499	499	-	540	540	-	557	557
v) Others	-	218	218	-	218	218	-	243	243
III. Repayment of Loans to the Centre	-	16606	16606	-	19241	19241	-	22352	22352
IV. Loans and Advances by State Govt. (1+2)	15598	13033	28631	17663	10544	28207	16485	13634	30119
1. Developmental Purposes (a + b)	15598	9246	24844	17663	6028	23691	16485	9351	25836
a) Social Services (1 + 2)	727	983	1710	1292	2034	3326	1050	3842	4892
1. Government Servants (Housing)	385	983	1368	655	1961	2616	645	3842	4487
2. Others	3425	-	342	637	73	710	405	-	405
b) Economic Services (1 to 6)	14871	8263	23134	16371	3994	20365	15435	5509	20944
2. Food Storage and Warehousing	-	-	-	83	326	409	-	520	520
3. Major and Medium Irrigation, etc.	371	-	371	394	-	394	275	-	275
4. Power Projects	6842	2763	9605	7468	1500	8968	6815	389	7204
5. Village and Small Industries	7628	-	7628	8401	-	8401	8298	-	8298
6. Others	30	5500	5530	25	2168	2193	47	4600	4647
2. Non-Developmental Purposes (a + b)	-	3787	3787	-	4516	4516	-	4283	4283
a) Governmental Servants	-	3787	3787	-	4516	4516	-	4283	4283
(other than housing)			115139			56413			74533
A Surplus (+)/Deficit (-) on Capital Account									
B. Surplus (+)/Deficit (-) on Revenue Account			-118529			-60748			-105595
C. Overall Surplus (+)/Deficit (-) (A+B) Financing of Surplus (+)/Deficit (-)			-3390			-4335			-31062
D. Increase (+)/Decrease (-) in Cash lances			-868			-12893			25021
a) Opening Balance			-15968			-16836			-29729
b) Closing Balance			-16836			-29729			-4708
E. Withdrawals from (-)/Additions to (+) Cash balance Investment Account (net)			6578			-			-
F. Increase (-)/Decrease (+) in Ways and Means Advances and Overdrafts from RBI (net)			-9100			8558			-56083

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Items	2002-03 Plan	2002-03 Non-Plan	2002-03 Total	2003-04 Plan	2003-04 Non-Plan	2003-04 Total
TOTAL DISBURSEMENTS (I+II+III+IV)	86906	98002	184908	107711	108832	216543
I. Total Capital Outlay (1+2)	80233	9272	89505	98003	11749	109752
1. Developmental (a+b)	73823	9272	83095	90177	11746	101923
a) Social Services (1 to 8)	20990	-	20990	28892	-	28892
1. Education, Sports, Art and Culture	860	-	860	1593	-	1593
2. Medical and Public health	1313	-	1313	2035	-	2035
3. Family Welfare	15	-	15	-	-	-
4. Water supply ad sanitation	16423	-	16423	22522	-	22522
5. Housing	2000	-	2000	2000	-	2000
6. Welfare of SCs, STs and other	70	-	70	70	-	70
7. Social Security and Welfare	149	-	149	322	-	322
8. Others *	160	-	160	350	-	350
b) Economic Services (1 to 10)	52833	9272	62105	61285	11746	73031
1. Agriculture and Allied Activities (i to iii)	1225	9216	10441	1209	11690	12899
i) Food Storage and Warehousing	-	9216	9216	-	11690	11690
ii) Co-operation	1025	-	1025	959	-	959
iii) Others@	200	-	200	250	-	250
2. Major and Medium Irrigation and Flood Control	10489	-	10489	12700	-	12700
3. Energy	12607	-	12607	16017	-	16017
4. Industry and Minerals (i + ii)	160	-	160	65	-	65
i) Village and Small Industries	10	-	10	10	-	10
ii) Others #	150	-	150	55	-	55
5. Transport (i + ii)	28102	56	28158	30994	56	31050
i) Roads and Bridges	27000	-	27000	30000	-	30000
ii) Others * *	1102	56	1158	994	56	1050
6. General Economic Services	250	-	250	300	-	300
of which: Tourism	250	-	250	300	-	300
2. Non-Developmental (General Services)	6410	-	6410	7826	3	7829
II. Discharge of Internal Debt (1 to 5)	-	9279	9279	-	-	14087
1. Market Loans	-	4125	4125	-	-	7921
2. Loans from L.I.C.	-	326	326	-	-	326
3. Loans from NABARD	-	3990	3990	-	-	4288
4. Loans from national Co-operative Development Corporation	-	611	611	-	867	867
5. Others	-	227	221	-	685	685
III. Repayment of Loans to the Centre	-	54243	54243	-	69843	69843
IV. Loans and Advances by State Governments (1+2)	6673	25208	31881	9708	13153	22861
1. Developmental Purposes (a + b)	6673	20754	27427	9708	8300	18008
a) Social Services (1 + 2)	823	4700	5523	780	4800	5580
1. Government Servants (Housing)	500	4700	5200	520	4800	5320
2. Others	323	-	323	260	-	260
b) Economic Services (1 to 6)	5850	16054	21904	8928	3500	12428
1. Crop Husbandry	-	-	-	4	-	4
2. Food Storage and Warehousing	-	150	150	-	-	-
3. Co-operation	393	-	393	591	-	591
4. Power Projects	5438	-	5438	8188	-	8188
5. Village and Small Industries	1	-	1	-	-	-
6. Others	18	15904	15922	145	3500	3645
2. Non-Developmental Purposes	-	4454	4454	-	4853	4853
of which: Governmental Servants (Other than Housing)	-	4454	4454	-	4853	4853
A. Surplus (+)/Deficit (-) on Capital Account			134506			102985
B. Surplus (+)/Deficit (-) on Revenue Account			-108643			-92028
C. Overall Surplus (+)/Deficit (-) (A+B) Financing of Surplus (+)/Deficit (-)			25863			10957
D. Increase (+)/Decrease (-) in Cash Balances			-32637			10957
a) Opening Balance			-4708			-37345
b) Closing Balance			-37345			-26388
E. Increase (-)/Decrease (+) in Ways and Means Advances and Overdrafts from RBI (net)			58500			-

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Items	2004-05 (Accounts)			2005-06 (Revised Estimates)			2006-07 (Budget Estimates)		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
TOTAL EXPENDITURE (I TO XII)	125246	4046567	4171813	136857	9931220	10068076	164146	9840772	10004918
TOTAL CAPITAL DISBURSEMENTS (Excluding Public Accounts) $	125246	178236	303482	136857	49985	186841	164146	66643	230789
1. Total Capital Outlay (1+2)	114190	-24497	89693	129752	-6701	123051	161686	-8988	152698
1. Developmental (a+b)	108377	-24497	83880	120693	-6701	113992	153435	-8988	144447
(a) Social Services (1 to 9)	28696	-	28696	34349	-	34349	46113	-	46113
1. Education, Sports, Art and Culture	610	-	610	2222	-	2222	2560	-	2560
2. Medical and Public Health	1140	-	1140	1540	-	1540	1906	-	1906
3. Family Welfare	1	-	1	-	-	-	-	-	-
4. Water Supply and Sanitation	25302	-	25302	28196	-	28196	38983	-	38983
5. Housing	565	-	565	548	-	548	728	-	728
6. Urban Development	-	-	-	-	-	-	-	-	-
7. Welfare of Scheduled Caste, Scheduled Tribes and Other Backward Classes	75	-	75	240	-	240	300	-	300
8. Social Security and Welfare	743	-	743	1277	-	1277	922	-	922
9. Others*	260	-	260	326	-	326	714	-	714
B. Economic Services (1 to 10)	79681	-24497	55184	86344	-6701	79643	107322	-8988	98334
1. Agriculture and Allied Activities (i to xi)	141	-24548	-24407	971	-6932	-5961	247	-9049	-8802
(i) Crop Husbandry	-	-	-	-	-	-	-	-	-
(ii) Soil and Water Conservation	-	-	-	-	-	-	-	-	-
(iii) Animal Husbandry	-	-	-	-	-	-	-	-	-
(iv) Dairy Development	-	-	-	-	-	-	-	-	-
(v) Fisheries	-	-	-	-	-	-	-	-	-
(vi) Forestry and Wild Life	-	-	-	-	-	-	-	-	-
(vii) Plantations	-	-	-	-	-	-	-	-	-
(viii) Food Storage and Warehousing	-	-24548	-24548	-	-6932	-6932	-	-9049	-9049
(ix) Agricultural Research and Education	-	-	-	-	-	-	-	-	-
(x) Co-operation	141	-	141	971	-	971	247	-	247
(xi) Others @	-	-	-	-	-	-	-	-	-
2. Rural Development	-	-	-	-	-	-	-	-	-
3. Special Area Programmes	-	-	-	-	-	-	-	-	-
of which : Hill Areas	-	-	-	-	-	-	-	-	-
4. Major and Medium Irrigation and flood Control	26254	-	26254	31500	-	31500	35700	-	35700
5. Energy	23335	-	23335	27545	-	27545	41800	-	41800
6. Industry and Minerals (i to iv)	223	-	223	563	-	563	335	-	335
i) Village and Small Industries	1	-	1	13	-	13	31	-	31
ii) Iron and Steel Industries	-	-	-	-	-	-	-	-	-
iii) Non-Fermous Mining and Metallurgical Industries	-	-	-	-	-	-	-	-	-
iv) Others #	222	-	222	550	-	550	304	-	304
7. Transport (i + ii)	29178	51	29229	24765	231	24996	28440	61	28501
(i) Roads and Bridges	28420	-	28420	21000	-	21000	22500	-	22500
(ii) Others **	758	51	809	3765	231	3996	5940	61	6001
8. Communications	-	-	-	-	-	-	-	-	-
9. Science, Technology and Environment	-	-	-	-	-	-	-	-	-
10. General Economic Services (i to iv)	550	-	550	1000	-	1000	800	-	800
i) Tourism	550	-	550	1000	-	1000	800	-	800
ii) Others @@	-	-	-	-	-	-	-	-	-
2. Non-Development (General Services)	5813	-	5813	9059	-	9059	8251	-	8251
II. Discharge of Internal Debt (1 to 8)	-	187187	187187	-	110281	110281	-	166428	166428
1. Market Loans	-	10981	10981	-	13389	13389	-	13389	13389
2. Loans from L.I.C.	-	321	321	-	321	321	-	317	317
3. Loans from SBI and other Banks	-	108444	108444	-	70500	70500	-	110200	110200
4. Loans from NABARD	-	5908	5908	-	7834	7834	-	8769	8769
5. Loans from National Co-operative Development Corporation	-	607	607	-	753	753	-	755	755
6. WMA from RBI	-	-	-	-	10000	10000	-	10000	10000
7. Special Securities issued to NSSF	-	60242	60242	-	6313	6313	-	10292	10292
8. Others	-	684	684	-	1171	1171	-	12706	12706
of which : Land Compensation Bonds	-	-	-	-	-	-	-	10111	10111

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Items	2004-05 (Accounts)			2005-06 (Revised Estimates)			2006-07 (Budget Estimates)		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
III. Repayment of Loans to the Centre (1 to 7)	-	114240	114240	-	12227	12227	-	13351	13351
1. State Plan Schemes	-	111308	111308	-	9838	9838	-	11129	11129
of which : Advance release of Plan Assistance for Natural Calamities	-	-	-	-	-	-	-	-	-
2. Central Plan Schemes	-	191	191	-	191	191	-	191	191
3. Centrally Sponsored Schemes	-	144	144	-	134	134	-	122	122
4. Non-Plan (i to ii)	-	607	607	-	343	343	-	355	355
(i) Relief for Natural Calamities	-	-	-	-	-	-	-	-	-
(ii) Others	-	607	607	-	343	343	-	355	355
5. Ways and Means Advances from Centre	-	-	-	-	-	-	-	-	-
6. Loans for Special Schemes	-	-	-	-	-	-	-	-	-
7. Others	-	1990	1990	-	1721	1721	-	1554	1554
IV. Loans and Advances by State Government (1+2)	11056	9750	20806	7105	14678	21783	2460	16054	18514
1. Developmental Purposes (a+b)	11056	6152	17208	7105	6900	14005	2460	7901	10361
(a) Social Services (1 to 7)	793	5992	6785	620	6300	6920	520	6301	6821
1. Education, Sports, Art and Culture	-	-	-	-	-	-	-	-	-
2. Medical and Public Health	-	-	-	-	-	-	-	-	-
3. Family Welfare	-	-	-	-	-	-	-	-	-
4. Water Supply and Sanitation	273	-	273	-	-	-	-	-	-
5. Housing	-	-	-	-	-	-	-	-	-
6. Government Servants (Housing)	520	5992	6512	620	6300	6920	520	6300	6820
7. Others	-	-	-	-	-	-	-	1	1
(b) Economic Services (1 to 10)	10263	160	10423	6485	600	7085	1940	1600	3540
1. Crop Husbandry	-	-	-	-	-	-	-	-	-
2. Soil and Water Conservation	-	-	-	-	-	-	-	-	-
3. Food Storage and Warehousing	-	-	-	-	-	-	-	-	-
4. Co-operation	260	-	260	363	-	363	450	-	450
5. Major and Medium Irrigation etc.	-	-	-	-	500	500	-	1500	1500
6. Power Projects	2243	-	2243	3564	-	3564	1400	-	1400
7. Village and Small Industries	7673	-	7673	2468	-	2468	-	-	-
8. Other Industries and Minerals	-	-	-	-	-	-	-	-	-
9. Rural Development	87	-	87	90	-	90	90	-	90
10. Others	-	160	160	-	100	100	-	100	100
2. Non-Developmental Purposes (a+b)	-	3598	3598	-	7778	7778	-	8153	8153
(a) Government Servants (other than Housing)	-	3598	3598	-	7778	7778	-	8153	8153
(b) Miscellaneous	-	-	-	-	-	-	-	-	-
V. Inter-State Settlement	-	-	-	-	-	-	-	-	-
VI. Contingency Fund	-	-	-	-	-	-	-	-	-
VII. Small Savings, Provident Funds, etc. (1+2)	-	75601	75601	-	74249	74249	-	76021	76021
1. State Provident Funds	-	74295	74295	-	72912	72912	-	74806	74806
2. Others	-	1306	1306	-	1337	1337	-	1215	1215
VIII. Reserve Funds (1 to 4)	-	12202	12202	-	46260	46260	-	22750	22750
1. Depreciation/Renewal Reserve Funds	-	4750	4750	-	1262	1262	-	3790	3790
2. Sinking Funds	-	3687	3687	-	4758	4758	-	5100	5100
3. Famine Relief Fund	-	-	-	-	-	-	-	-	-
4. Others	-	3765	3765	-	40240	40240	-	13860	13860
IX. Deposits and Advances (1 to 4)	-	203497	203497	-	152176	152176	-	191326	191326
1. Civil Deposits	-	89749	89749	-	95000	95000	-	103000	103000
2. Deposits of Local Funds	-	888	888	-	1100	1100	-	1250	1250
3. Civil Advances	-	8989	8989	-	4000	4000	-	6000	6000
4. Others	-	103871	103871	-	52076	52076	-	81076	81076
X. Suspense and Miscellaneous (1to 4)	-	3284057	3284057	-	9378050	9378050	-	9213831	9213831
1. Suspense	-	29204	29204	-	1528067	1528067	-	1535075	1535075
2. Cash Balance Investment Accounts	-	3247564	3247564	-	-	-	-	-	-
3. Deposits with RBI	-	-	-	-	7841306	7841306	-	7670306	7670306
4. Others	-	7289	7289	-	8677	8677	-	8450	8450
XI. Appropriation to Contingency Fund	-	-	-	-	-	-	-	-	-
XII. Remittances	-	184531	184531	-	150000	150000	-	150000	150000

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	Items	2004-05 (Accounts) Plan	Non-Plan	Total	2005-06 (Revised Estimates) Plan	Non-Plan	Total	2006-07 (Budget Estimates) Plan	Non-Plan	Total
A.	Surplus (+) /Deficit (-) on Capital Account			140231			141743			201151
B.	Surplus (+) /Deficit (-) on Revenue Account			-25804			-60333			-32001
C.	Overall Surplus (+) / Deficit (-) (A+B) Financing of Surplus (+)/Deficit(-) (C=D+E+F)			114426			81410			169150
D.	Increase (+) /Decrease(-) in Cash Balance			114426			81410			169150
	(a) Opening Balance									
	(b) Closing Balance			17516			-576			-1156
E.	Withdrawals from(-)/Additions to (+)			-21386			-3870			-4446
	Cash balance investment Account (net)			-3870			-4446			-5602
F.	Increase (-)/Decrease(+) in Ways and Means Advances and Overdrafts from RBI (net)			96910 -			81986 -			170306 -

Notes: # Includes outlay on Cement and Non-Metallic Industries, Petro-Chemical Industries, Petro-Chemical Industries, Engineering Industries, Telecommunication and Electronic Industries, Consumer Industries, Atomic Energy Industries, Other Industries and Minerals, etc.

* Includes expenditure on Information and Publicity, Secretariat-Social Services, Other Social Services, etc.

@ Includes expenditure on Non-Ferrous Mining and Metallurgical Industries.

@@ Includes expenditure on Port and Light Houses, Civil Aviation, Road Transport, Inland Water Transport, etc.

Source: *Handbook of Statistics on State Government Finances 2004*.

TABLE 2.21

Haryana's Surplus/Deficit on Revenue Account and Capital Account

(Rs. Crore)

Year	Revenue Account			Capital Account		
	Revenue Receipts	Revenue Expenditure	Surplus (+)/ Deficit (-)	Capital Receipts	Capital Expenditure	Surplus (+)/ Deficit (-)
1990-91	1913.4	1933.1	-19.7	540.3	463.7	76.6
1991-92	2241.8	2274.0	-32.2	499.9	452.8	47.1
1992-93	2377.6	2379.3	-1.7	536.9	576.7	-39.8
1993-94	3481.5	3401.0	80.5	682.0	708.0	-26.0
1994-95	5882.4	6279.9	-390.5	1128.3	638.9	489.4
1995-96	5014.7	5361.5	-346.8	3938.2	769.9	3168.3
1996-97	6048.3	6767.0	-718.7	1522.7	1064.0	458.7
1997-98	5897.8	6617.2	-719.4	1882.1	1188.3	693.8
1998-99	5478.7	7018.9	-1540.2	3029.9	1561.7	1468.2
1999-2000	5766.8	6952.1	-1185.3	2558.1	1406.7	1151.4
2000-01	6573.9	7181.4	-607.5	2541.6	1977.5	564.1
2001-02	7600.6	8656.5	-1055.9	2817.3	2071.9	745.4
2002-03	8657.02	9342.13	-685.11	3014.4	1849.1	1165.3
2003-04	9843.48	10117.19	-273.71	2650.82	2814.97	-164.15
2004-05	11149.06	11407.10	-258.04	1617.33	1104.99	512.34
2005-06 (RE)	12645.80	13249.13	-603.33	2226.96	1448.32	778.64
2006-07 (BE)	13746.55	14066.66	-320.01	2122.04	1712.11	409.93

Notes: RE - Revised Estimates.
BE - Budget Estimates

Source: Reserve Bank of India (2004). *Handbook of Statistics on State Government Finances* and Finance Department, Government of Haryana.

TABLE 2.22

Over-all Surplus/Deficit of Haryana

(Rs. Crore)

Year	Capital Account Surplus(+)/ Deficit(-)	Revenue Account Surplus(+)/ Deficit(-)	Over-all Surplus(+)/ Deficit(-)
1990-91	+76.6	-19.7	+56.9
1991-92	+47.1	-32.2	+14.9
1992-93	-39.8	-1.7	-41.5
1993-94	-26	+80.5	+54.5
1994-95	+489.4	-390.5	+98.9
1995-96	+3168.3	-346.8	+2821.5
1996-97	+458.7	-718.7	-260.0
1997-98	+693.8	-719.4	-25.6
1998-99	+1468.2	-1540.2	-72.0
1999-2000	+1151.4	-1185.3	-33.9
2000-01	+564.1	-607.5	-43.4
2001-02	+745.4	-1055.9	-310.5
2002-03	+2065.4	-685.11	+979.0
2003-04	-164.15	-273.71	-437.86
2004-05	512.34	-258.04	254.30
2005-06 (RE)	778.64	-603.33	175.31
2006-07 (BE)	409.93	-320.01	89.92

Notes : RE - Revised Estimates.
BE - Budget Estimates.

Source : Reserve Bank of India, (2004). *Handbook of Statistics on State Government Finances* and Finance Department, Government of Haryana

Haryana's GFD was Rs.385.7 crores in 1990-91. It reached the peak level of Rs.2739.6 crores in 2001-02 and came down to Rs.1848.3 crore in 2006-07. As a proportion of gross state domestic product, it has varied from around 5 per cent to 2 per cent. Over a 13-year period it has increased about six times which implies an increase at the compound rate of 15 per cent per annum. In the same table, the figures show that the State's primary deficit stood at Rs.143.7 crores in 1990-1991. It was converted into a moderate surplus of Rs.551.85 crore in 2006-07. The behaviour of primary deficit has been much more irregular as compared to the GFD.

TABLE 2.23

Haryana's Gross Fiscal Deficit and Primary Deficit

(Rs. Crore)

Year	*Revenue Deficit*	*Capital Outlay*	*Net Lending*	*Gross Fiscal Deficit (2+3+4)*	*Primary Deficit*
1	*2*	*3*	*4*	*5*	*6*
1990-91	19.7	186.2	179.8	385.7	143.7
1991-92	32.2	146.0	196.5	374.7	52.8
1992-93	1.7	228.4	214	441.1	100.8
1993-94	-80.5	302.9	257.5	479.9	58.2
1994-95	390.5	206.6	-62.5	534.6	47.7
1995-96	346.8	285.9	353.3	986.0	430.3
1996-97	718.7	446.7	-66.0	1099.4	383.5
1997-98	719.4	492.2	-84	1127.6	307.3
1998-99	1540.2	1025.8	-325.6	2240.4	1243.4
1999-2000	1185.3	894.1	53.1	2132.5	775.1
2000-01	607.5	1445.2	212.6	2265.2	773.3
2001-02	1056.0	1467.1	216.5	2739.6	1115.1
2002-03	-685.11	435.80	350.13	1471.04	
2003-04	-273.71	385.65	2273.74	2933.10	-820.45
2004-05	-258.04	896.90	51.00	1205.94	-1028.58
2005-06 (RE)	-603.33	1230.50	38.71	1872.54	-314.59
2006-07 (BE)	-320.01	1526.97	1.35	1848.33	-551.85

Notes: RE - Revised Estimates.
BE - Budget Estimates

Source: Reserve Bank of India (2004). *Handbook of Statistics on State Government Finances* and Finance Department, Government of Haryana.

Financing of fiscal deficit is one of the major issues before any State government. It is done from three sources—net loans from the centre, net market borrowings and other sources. Data pertaining to financing of GFD of Haryana state is given in Table 2.24. In the past, the net loans from the Centre were the major source of financing the GFD until the year 1995-96. In 1995-96, this source of financing was at the peak level of 72.33 per cent but thereafter it gradually declined to around 4 per cent in 2001-02. During the years 2002-03 and 2003-04, it was even a case of repayment to the Centre. The table shows that the share of net market borrowings remained roughly between 10 to 25 per cent. It was only in the year 1998-1999 that it was at the unusually low level of 6 per cent. On the whole, this source of financing exhibits a moderately upward trend, over time. As regards other sources, they were mostly the second major constituents of financing the GFD in the past but since 1996-97 they have gradually come to contribute in increasing proportion, rather almost the entire GFD. In 2002-03 more than 83 per cent of the GFD of the State was financed from this source alone. But in 2003-04, financing of GFD from other sources declined significantly to 3.15 per cent but increased many times to 21 per cent in 2004-05. The budget estimate in this regard for the year 2006-07 is 4.86 per cent.

2.4.6 Outstanding Liabilities

The outstanding liabilities of the State, since 1990-91, have increased about seven times at an annual compound rate of around 16 per cent. These stood at Rs.37,456 crore in 2006-07 as compared to Rs.2,821 crores in 1990-1991. As a percentage of GSDP, Haryana's outstanding liabilities constituted 19.74 per cent of its GSDP upto 1997-98 but thereafter this percentage gradually increased to 36.27 per cent in 2004-2005. As regards the composition of liabilities, the share of Loans and Advances from the Centre has gradually declined from 58.17 per cent in 1990-91 to 6.4 per cent in 2006-07. On the opposite, the share of both internal debt and other sources (for example provident fund) has increased. The share of internal debt has increased substantially from 17.61 per cent in 1990-91 to 50.56 per cent in 2006-07. In comparison to internal debt, the share of other sources like provident fund increased at a moderate rate. It stood at 24.21 per cent in 1990-91 and after attaining the peak level of around 30 per cent during the period 1998-2000 it came down to 15.79 per cent in 2006-07.

2.4.7 Own Tax and Non-Tax Revenue

The own tax revenue of the state stood at Rs.9,582 crore in 2006-07 (BE) in comparison to Rs.1069.5 crores in 1990-91. As a percentage of GSDP, the own-tax revenue has increased from its earlier level of around seven per cent to its present level of little more than eight per cent.

The own non-tax revenue (which comprises mainly receipts from interest, road transport, miscellaneous

TABLE 2.24

Financing of Gross Fiscal Deficit in Haryana

Year	*Net Loans from the Centre (Rs.Crore)*	*Net Marketing borrowing (Rs.Crore)*	*Others (Rs.Crore)*	*GrossFiscal Deficit (Rs. Crore)*	*Col 2 as percentage of Col 5*	*Col 3 as percentage of Col 5*	*Col 4 as percentage of Col 5*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1990-91	212.4	53.9	119.4	385.7	55.06	13.97	30.95
1991-92	189.6	66.5	118.6	374.7	50.60	17.74	31.65
1992-93	173.9	64.3	205.9	444.1	39.15	14.47	46.36
1993-94	211.8	63.9	204.2	479.9	44.13	13.31	42.55
1994-95	325.8	108.9	99.9	534.6	60.94	20.37	18.68
1995-96	713.2	129.2	143.6	986.0	72.33	13.10	14.56
1996-97	320.9	145.9	632.6	1099.4	29.18	13.27	57.54
1997-98	573.4	167.3	387.0	1127.6	50.85	14.83	34.32
1998-99	759.3	134.3	1346.8	2240.4	33.89	5.99	60.11
1999-2000	184.1	279.8	1668.6	2132.5	8.63	13.12	78.24
2000-01	126.1	218.8	1920.4	2265.2	5.56	9.65	84.77
2001-02	115.1	260.2	2364.3	2739.6	4.20	9.49	86.30
2002-03 (RE)	-155.0	524.8	1832.9	2202.7	-7.03	23.82	83.21
2003-04	-1106.20	4131.47	92.26	2933.10	-37.72	140.86	3.15
2004-05	-1411.61	2871.48	254.28	1205.94	-117.05	238.14	21.09
2005-06 (RE)	-93.63	2141.48	175.31	1872.54	-5.00	114.63	9.36
2006-07 (BE)	207.04	1731.21	89.92	1848.33	11.20	93.66	4.86

Notes : RE - Revised Estimates.
BE - Budget Estimates

Source : Reserve Bank of India (2004). *Handbook of Statistics on State Government Finances* and Finance Department, Government of Haryana.

TABLE 2.25

Composition of Outstanding Liabilities of Haryana

Year	*Internal Debt (Rs. Crore)*	*Special Securities Issued to NSSF (Rs. Crore)*	*Loans and Advances from Central Government (Rs. Crore)*	*Provident Funds etc. (Rs. Crore)*	*Total Debt. (Rs. Crore)*	*Col. 2 as percentage of Col. 6*	*Col. 3 as percentage of Col. 6*	*Col. 4 as percentage of Col. 6*	*Col. 5 as percentage of Col. 6*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1990-91	497	-	1641	683	2821	17.61		58.17	24.21
1991-92	545	-	1831	815	3191	17.07		57.38	25.54
1992-93	629	-	2005	945	3579	17.57		56.02	26.40
1993-94	798	-	2216	1117	4131	19.31		53.64	27.03
1994-95	874	-	2542	1317	4733	18.46		53.70	27.82
1995-96	984	-	3256	1538	5778	17.03		56.35	26.61
1996-97	1158	-	3577	1785	6520	17.76		54.86	27.37
1997-98	1388	-	4150	2093	7631	18.18		54.38	27.42
1998-99	1748	-	4910	2838	9496	18.40		51.70	29.88
1999-2000	3059	674	5094	3403	11556	26.47	5.83	44.08	29.44
2000-01	4058	1284	5220	3902	13179	30.79	9.74	39.60	29.60
2001-02	6341	2154	5335	4307	15983	39.67	13.47	33.37	26.94
2002-03 (RE)	7487	3304	5180	4819	17486	42.81	18.89	29.62	27.55
2003-04	12191.45	5433.45	3695.51	4953.95	26274.36	46.40	20.68	14.07	18.85
2004-05	15063.28	7525.07	2283.90	5238.16	30110.41	50.03	24.99	7.59	17.40
2005-06 (RE)	17204.76	9084.63	2190.27	5576.46	34056.12	50.52	26.68	6.43	16.37
2006-07 (BE)	18935.98	10208.20	2397.31	5914.39	37455.88	50.56	27.25	6.40	15.79

Notes: RE - Revised Estimates.
BE - Budget Estimates

Source: Reserve Bank of India (2004). *Handbook of Statistics on State Government Finances* and Finance Department, Government of Haryana.

general services, non-ferrous mining and metallurgical industries, other administrative services and major and medium irrigation) amounted to Rs.1981.8 crore in 2006-2007 as compared to Rs.511.1 crores in 1990-91. In contrast to own tax-revenue, the own non-tax revenue has exhibited a highly irregular behaviour. It was Rs.511.1 crores in 1990-91, declined to Rs.460.2 crores in 1992-93, and then increased to Rs.1340.7 crores in 1993-94, Rs.3473.5 crores in 1994-95, came down to Rs.2186.8 crores in 1995-96 and again rose to Rs.3132.6 crore in 1996-97. From this level it more or less gradually declined to Rs.1981.8 crore in 2006-07. As a proportion of GSDP, it has fluctuated between little less than three per cent to as far as 13 per cent over this period, and exhibited a downward trend on the whole.

TABLE 2.26

Own Tax and Non-Tax Revenue of Haryana

(Rs. Crore)

Year	*Own Tax Revenue*	*Own Non-Tax Revenue*
1990-91	1069.5	511.1
1991-92	1300.2	546.2
1992-93	1446.9	460.2
1993-94	1588.9	1340.7
1994-95	1887.8	3473.5
1995-96	2168.9	2186.8
1996-97	2143.1	3132.6
1997-98	2368.6	2631.2
1998-99	3119.7	1518.0
1999-2000	3517.6	1259.1
2000-01	4311.5	1439.4
2001-02	4972.4	1666.1
2002-03	5739.32	1807.85
2003-04	6348.05	2223.06
2004-05	7440.15	2544.37
2005-06 (RE)	8527.55	2188.28
2006-07 (BE)	9582.30	1980.96

Notes: RE - Revised Estimates.
BE - Budget Estimates.

Source: Reserve Bank of India (2004). *Handbook of Statistics on State Government Finances* and Finance Department, Government of Haryana

2.4.8 Interest Payments

Haryana's interest payments have increased, over time, and over the recent four or five years these have assumed alarming magnitude. In 1990-91, interest payments amounted to Rs.242 crores and these gradually increased to Rs.997 crores by the end of 1998-99 (Table 2.27). It implied an increase of Rs.755 crores in eight years, that is, an average increase of less than Rs.100 crores per annum. If we compare it, with the increase over the last five years, we find that there has been an annual increase of Rs.250 crores approximately in the interest payments since 1998-99. Expressing interest payments as a proportion of GSDP and revenue receipts, we find that these constituted little less than 2 per cent of GSDP at the lowest level and 3 per cent at the peak level. Overtime, this percentage has shown an upward trend. When we look at the interest payments in terms of their share (per cent) in revenue receipts, we observe that these have constituted a share which ranged from about 8 per cent to little more than 22 per cent. Over time, this percentage has also exhibited an upward trend. For the year 2006-07, interest as a proportion of revenue receipt is estimated to be 17.46 per cent.

TABLE 2.27

Haryana's Interest Payments

(Rs. Crore)

Year	*Revenue Receipts*	*Interest Payments*	*Interest as a Proportion of Revenue Receipts*
1990-91	1913.4	242.0	12.64
1991-92	2241.8	321.9	14.35
1992-93	2377.6	343.3	14.43
1993-94	3481.5	421.7	12.11
1994-95	5882.4	486.9	8.27
1995-96	5014.7	555.7	11.08
1996-97	6048.3	715.9	11.83
1997-98	5897.8	820.3	13.90
1998-99	5478.7	997.0	18.19
1999-2000	5766.8	1357.4	23.53
2000-01	6573.9	1491.9	22.69
2001-02	7600.6	1624.5	21.37
2002-03	8657.02	1945.97	22.48
2003-04	9843.48	2112.65	21.46
2004-05	11149.06	2234.50	20.04
2005-06 (RE)	12645.80	2187.13	17.29
2006-07 (BE)	13746.65	2400.18	17.46

Notes : RE - Revised Estimates.
BE - Budget Estimates.

Source : Reserve Bank of India (2004). *Handbook of Statistics on State Government Finances* and Finance Department, Government of Haryana.

2.4.9 Share in Transfer of Resources from the Centre

From Table 2.28 it can be seen that over time the transfer of resources from the Centre has increased from Rs.614.2 crores in 1990-91 to Rs.2550.8 crore in 2006-07 (BE). But when we look at the resource transfer position as a percentage of GSDP, we find that the percentage stood little less than four per cent in 1990-91 and around two and a half per cent presently, although this was not a position of continuous decline, over time. In the years 1995-96, 1997-98 and 1998-99, the transfer figures were around four per cent of GSDP.

Another significant aspect of transfer position emerging from the Table relates to changes in composition of resource transfer. Earlier, loans used to constitute a relatively higher share of the total resource transfer as compared to other components. This share amounted to between 35 to 55 per cent and this position continued upto 1997-98. But thereafter, there has been a decline in this share and it declined to about 20 per cent level by 2003-04. In its place, grants from the Centre came to occupy the major share. And share in Central taxes were at the position next only to the grants. The share of grants constituted about 42 per cent and the share in Central taxes constituted about 43 per cent of the total resource transfer from the Centre, in the year 2006-07.

TABLE 2.28

Haryana's Share in Transfer of Resources from the Centre

(Rs. Crore)

Year	*Share in Central Taxes*	*Grants from the Centre*	*Loans from the Centre*	*Gross Devolution and Transfer of Resources from the Centre*
1990-91	185.9	146.9	281.4	614.2
1991-92	219.4	176.0	263.8	659.2
1992-93	261.9	208.6	255.1	725.6
1993-94	282.4	269.5	303.9	855.8
1994-95	317.1	204.0	412.4	933.5
1995-96	360.5	298.5	805.7	1464.7
1996-97	431.9	340.7	531.6	1304.2
1997-98	539.3	358.7	801.9	1699.9
1998-99	480.0	361.0	1005.6	1846.6
1999-2000	525.3	464.8	350.1	1340.2
2000-01	344.9	478.1	318.5	1141.5
2001-02	449.0	513.0	338.6	1300.6
2002-03	566.95	542.89	249.17	1359.01
2003-04	598.36	671.62	420.59	1690.57
2004-05	619.38	545.16	296.12	1460.66
2005-06 (RE)	1021.55	908.42	54.69	1984.66
2006-07 (BE)	1103.55	1079.84	366.60	2549.99

Notes: RE - Revised Estimates.
BE - Budget Estimates.

Source: Reserve Bank of India (2004). *Handbook of Statistics on State Government Finances* and Finance Department, Government of Haryana.

2.4.10 Fiscal Indicators

The fiscal performance of a State may be evaluated by looking into how and where from its fiscal resources come and how these are utilised particularly in relation to developmental and social sector related activities, and lastly, how far it is debt ridden. The relevant revenue and expenditure items, in this context, are expressed as a proportion of GSDP or total revenue/expenditure. An important aspect of this standard practice is that it not only duly accounts for inflationary effects; it also makes sense by accepting GSDP as the target variable. Also, it is useful way of comparing the fiscal performance of different states.

Table 2.29 shows the performance of Haryana over the ten year period, 1993-94 through 2003-04, in terms of various fiscal indicators. The deficit position of the State is depicted in terms of gross fiscal deficit (revenue deficit) and primary deficit each represented as a percentage of GSDP. The GFD as a proportion of GSDP has remained around three per cent and even less. In this regard the State's position is much better than most other states as we shall see while comparing its fiscal performance with other states, subsequently. As regards the primary deficit, it has varied from 0.2 to 2.8 per cent upto 2002-03. Since 2003-04 there is surplus on this count. Similarly, the revenue deficit has varied from 0.3 to 3.5 per cent of GSDP and, 9.33 to 73 per cent of GFD (except the surplus year 1993-94). The fact that the revenue deficit as a percentage of GFD constituted between half to three-fourth of the GFD over a greater part of this period duly emphasises the need for greater, concerted efforts to put down things, particularly on the revenue account, in good shape. Specifically, there is an urgent need for bringing down the revenue expenditure. For instance, the revenue deficit as a percentage of GFD and revenue receipts (RR) stood at 17.31 and 2.33, respectively in 2006-07 (BE). In this case, a one per cent reduction in revenue expenditure (RE) may be expected to induce a decline of as much as five per cent points in the RD/GFD ratio.

The own tax revenue (OTR) and own non-tax revenue (ONTR) position, as a proportion of GSDP, is shown in Table 2.29. The OTR/GSDP ratio has been observed to lie between 7.2 to 8.4 except the years 1996-1997 and 1997-98 when it stood at 6 and 6.1, respectively. Over the last three years a significant increase is seen in this ratio. On the opposite, the ONTR/GSDP ratio has fluctuated over the ten year period substantially. It assumed a value of 2.6 at its bottom level, and 13.2 at its peak level. On the whole, a downward trend is seen to its value.

In the same Table, it can be observed that the current transfer (CT) have constituted between 1.6 to 2.5 per cent of GSDP. The position as regards the developmental and non-developmental expenditure (as percentage of GSDP) is also shown in this table. Whereas the former accounted for 9.2 to 12 per cent over this period, the latter constituted between 5.7 to 13.3 per cent of the GSDP. It is satisfying to note that the non-developmental expenditure ratio is seen to display more or less, declining trend in its value.

As regards other fiscal indicators, the social sector expenditure (SSE) has been found to have fluctuation

TABLE 2.29

Fiscal Indicators of State of Haryana (1993-94 to 2006-07)

Year	*GFD/ GSDP*	*RD/ GSDP*	*PD/ GSDP*	*RD/ GFD*	*RD/ RR*	*OTR/ GSDP*	*ONTR/ GSDP*	*CT/ GSDP*	*DEV/ GSDP*	*NONDEV/ GSDP*	*SSE/ GSDP*	*CO/ GSDP*	*DEBT/ GSDP*	*IP/ RR*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
1993-94	2.2	0.4	0.3	-16.8	2.4	7.2	6.1	2.5	9.3	7.5	4.3	1.4	18.7	12.1
1994-95	2	1.5	0.2	73	6.6	7.2	13.2	2	11.4	13.3	4.8	0.8	18	8.3
1995-96	3.3	1.2	1.4	35.2	6.9	7.3	7.3	2.2	10.3	8.6	5.7	1	19.4	11.1
1996-97	3.1	2	1.1	65.4	11.9	6	8.8	2.2	9.9	10.3	4.5	1.3	18.3	11.8
1997-98	2.9	1.9	0.8	62.8	12.2	6.1	6.8	2.3	9.2	8.5	4.4	1.3	19.7	13.9
1998-99	5.1	3.5	2.8	68.8	28.1	7.2	3.5	1.9	12	6.4	5.1	2.4	21.8	18.2
1999-2000	4.4	2.4	1.6	55.6	20.6	7.2	2.6	2	10.1	6	5	1.8	23.6	23.5
2000-01	4.1	1.1	1.4	26.8	9.2	7.8	2.6	1.5	9.9	5.7	4.8	2.6	24	22.7
2001-02	4.5	1.8	1.8	38.6	13.9	8.2	2.8	1.6	10.8	5.9	4.8	2.4	26.4	21.4
2002-03	3.3	1.6	0.4	49.3	12.4	8.4	2.8	2	10.1	6.1	4.9	1.4	26.3	22.4
2003-04	3.9	0.37	-1.11	9.33	2.78	8.58	3.01	0.81	7.71	5.91	4.05	3.66	35.52	21.46
2004-05	1.45	0.31	-1.24	21.4	2.31	8.96	3.07	0.75	7.73	5.9	3.88	3.85	36.28	20.04
2005-06 (RE)	2.01	0.65	-0.34	32.22	4.77	9.17	2.35	1.1	8.87	5.11	4.55	4.32	36.63	17.29
2006-07 (BE)	1.78	0.31	-0.53	17.31	2.33	9.2	1.9	1.06	8.49	4.76	4.32	4.17	35.97	17.46

Notes: (-) : Indicates surplus; CT : Current Transfers from the Centre (Share in Central Taxes plus Grants form the Centre); GSDP : Gross State Domestic Product; RD : Revenue Deficit; GFD : Gross Fiscal Deficit; DEV : Development Expenditure; OTR : Own Tax Revenue; NONDEV : Non-Development Expenditure; ONTR : Own Non-Tax Revenue; SSE : Social Sector Expenditure; CO : Capital Outlay; DEBT : Debt; IP : Interest Payments; RR : Revenue Receipts; PD : Primary Deficit

Source: Reserve Bank of India (2004). *State Finances: A Study of Budgets of 2004-05*, Table XXVB, p. 37, December

around five per cent level of GSDP. With SSE at this low level, the state does not compare well with other states as we shall see subsequently. Another matter of concern for the state is the low level of capital outlay which has remained below two per cent of GSDP over most part of this period. Lastly, as regards the position of State's outstanding liabilities and burden of interest payments, Table 2.29 brings out a position of continuously mounting debt and increasing burden of interest payments. Though State's debt (as percentage of GSDP) has increased from 18.7 per cent in 1993-94 to 36.3 per cent in 2006-07 (BE), the State is still in a much better position as compared to most other States. As regards interest payments (as percentage of revenue receipts), these stood at 12.1 per cent in 1993-94 and 17.46 per cent in 2006-07 (BE). This is also another area about which the State has performed better as compared to most other States as we shall see subsequently.

2.4.11 A Comparative Evaluation

Table 2.30 presents a comparative view of fiscal indicators in respect of different States of India for the year 2003-04 only. For purposes of comparison, we will here concentrate only on the non-special category States. The following conclusions follow from this table:

As regards the deficit position, the State of Haryana has, on the whole, performed much better as compared to most other States. With its GFD/GSDP ratio equal to just 1.8 per cent, it stands at the top among all States. Similarly, with regard to PD/GSDP ratio, it is the only State which has a negative value for this ratio. As regards the other deficit ratios, the State occupies fifth position on the basis of RD/GSDP ratio and sixth position on the RD/ RR ratio criterion. In sharp contrast to these achievements, it stands among the bottom three States when compared on the RD/GFD ratio basis. Its revenue deficit position is a matter of serious concern and requires greater, concerted action particularly on the expenditure side of the Revenue Account.

As regards the State's own tax and non-tax revenue position, it ranks among the top six States on the ONTR/ GSDP ratio criterion, and bottom four States on the OTR/ GSDP ratio basis. On the whole, considering both own tax and non-tax revenue together, the State figures among the

TABLE 2.30

Fiscal Indicators—2002-03 to 2004-05 (Average)

(Per cent)

States	Deficit Indicators						Revenue Performance			Expenditure Pattern				Debit Position		
	GFD/ GSDP	RD/ GSDP	PD/ GSDP	PRB/ GSDP	RD/ GFD	RD/ RR	OTR/ GSDP	ONTR / GSDP	CT / GSDP	DEV/ GSDP	NON-DEV/ GSDP	SSE/ GSDP	CO/ GSDP	DEBT/ GSDP	IP/ RR	R-G
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Non-Special Category																
1. Andhra Pradesh	4.3	1.6	0.6	-2.1	37	11.1	7.7	2	4.5	12.3	6.7	7	2.4	35.7	25.6	1.7
2. Bihar	6.4	1.6	0.3	-4.5	-3.2	7.5	5.8	0.7	18.5	17.6	13.9	12.1	2.9	79.5	24.8	1.9
3. Chhattisgarh	4	0.6	1.2	-2.2	9.6	3.6	7.4	3	6.5	14.4	6	8.8	2.8	30.6	16.2	-0.8
4. Goa	4.7	1.5	1.5	-1.7	32.7	8.2	7.4	8.6	2.1	15	7.7	7.2	3.1	40.6	17.8	-0.6
5. Gujarat	4.9	2.3	1.4	-1.1	48.5	20.1	6.9	2.2	2.6	10.9	5.8	5.6	2	39.4	29.8	-3.8
6. Haryana	2.5	0.6	-0.3	-2.3	25.8	4.3	8.6	2.9	1.7	9.9	6.1	4.1	0.8	30.4	21.3	-0.6
7. Jharkhand	6.2	1	3.9	-1.3	12.4	5.9	5.8	2.8	10	17.3	7.4	12	4.2	34.7	12.2	-2.3
8. Karnataka	3.4	0.5	0.7	-2.2	5.4	4.2	9.8	2.1	3.9	12.4	6.7	6.4	2.7	30.8	17.5	-1
9. Kerala	5.6	4.3	1.9	0.6	77.1	32.4	9	0.9	3.4	10.7	8.2	7.2	0.8	43.6	27.5	-2
10. Madhya Pradesh	6.2	1.4	3	-1.9	21.2	10.5	7.3	2.6	6.8	15.4	6.9	7.6	3.5	39.3	19.9	2.8
11. Maharashtra	5.1	2.8	2.6	0.3	55.3	26.3	7.8	1.2	1.6	9.7	6	5.5	1.9	31.9	23	-2.8
12. Orissa	5.1	2.4	-0.7	-3.5	44.7	12.7	6.6	2.2	10.1	13.5	10.6	8.5	1.9	64.9	30.9	-2.7
13. Punjab	5.5	4.4	0.9	-0.1	80.8	29.3	7.7	5.8	1.7	9	11.7	4.2	0.7	55.2	30.1	1.6
14. Rajasthan	6.6	3.3	1.8	-1.5	48.6	21.4	7.3	1.9	6.2	13.8	8.4	9.1	2.9	54.9	31	1.5
15. Tamil Nadu	3.5	1.5	0.9	-1.2	37.5	10.8	9.7	1.2	3.3	10.6	6.5	6.8	1.9	29.3	18.8	0.6
16. Uttar Pradesh	6	4.7	1.6	0.3	73.1	31.9	6.5	1.1	7.4	13.3	9	6.6	2.9	55.5	29.6	-0.2
17. West Bengal	6.1	4.7	1.4	0	76.7	51.9	4.6	0.5	4.1	7.6	7.7	4.9	0.6	48.8	52.2	0.9
18. NCT Delhi	2.7	-2.9	1	-4.6	-121.2	-31.2	7.5	1.1	0.6	8.7	3.3	4.6	1.3	18.5	17.9	0.7
Special Category																
1. Arunachal Pradesh	11.9	-3.6	6	-9.5	-35.9	-6	1.8	5.1	51.9	51.8	19	23.7	15.4	45.7	10	5.6
2. Assam	3.6	1.1	0.2	-2.3	32.6	5.5	5.5	2.2	12.3	16.2	8.6	9.6	2.6	35.7	17	2.1
3. Himachal Pradesh	12.2	7.9	4.4	0.1	64.9	35.3	5.7	1.9	14.9	21.2	13.6	12.2	4.3	78.6	34.8	1.4
4. Jammu and Kashmir	3.9	-7.1	-2	-13	3765.9	-15.9	6.1	2.3	35.3	28.3	19.4	14	10.7	58.5	13.8	1.6
5. Manipur	8.7	0.5	2.1	-6.1	10	1.5	1.9	1.6	36.5	30.8	18	18.1	8	58.9	16.5	6.3
6. Meghalaya	4.6	-0.9	1.2	-4.3	-26.2	-3.1	3.6	2.4	23.1	22.8	11.3	13.4	4.6	40.9	11.8	1.1
7. Mizoram	11.5	-0.7	5.2	-7	-12.8	-0.8	1.3	2.4	47.1	44.5	18.7	24.6	11.5	89.6	12.4	-6.3
8. Nagaland	3.3	-3.1	-0.8	-7.1	100.2	-8	1.2	1	29.9	20.1	15.4	10.7	6.4	40.5	13	-7.6
9. Sikkim	5.5	-12.9	-1.3	-19.7	-805.7	-10.1	8	70.1	51.6	54.9	80.4	29.6	18.4	78.7	5.5	-2.9
10. Tripura	5.4	-1.7	0.8	-6.3	-60	-5.3	3	2	25.6	22.5	12.9	14.2	7.1	51.8	14.9	0.3
11. Uttranchal	8.2	4	4.5	0.3	49.8	19.5	7	2.4	11.3	19.4	9	11.5	3.6	47.1	17.9	-5.2

Note: 1. Outstanding debt for the composite State of Bihar as on March 2000, was bifurcated in the population ratio of 74.71 per cent and 25.29 per cent for Bihar and Jharkhand respectively. Similarly, for Madhya Pradesh and Chhattisgarh the proportion of 73.3739 per cent and 26.6203 per cent, respectively has been applied and for Uttar Pradesh and Uttranchal a proportion of 94.9676 per cent and 5.0324 per cent, respectively were applied.

2. Minus (-) sign indicates surplus in deficit indicators.

3. Figures in bold indicate the median State for the given indicator

4. Average interest rate (R) of liabilities is worked out by dividing interest payment of the current year by outstanding liabilities of the previous year.

5. The median State is the middle-most State for an indicator after the States have been arranged in the ascending/descending order.

GSDP : Gross State Domestic Product — GFD : Gross Fiscal Deficit — PD : Primary Deficit

RD : Revenue Deficit — OTR : Own Tax Revenue — ONTR : Own Non-Tax Revenue

CT : Current Transfers — DEV : Development Expenditure — NON-DEV : Non-Development Expenditure

SSE : Social Sector Expenditure — CO : Capital Outlay — DEBT : Debt

IP : Interest Payment — RR : Revenue Receipts — PRB : Primary Revenue Balance

R-G : Average interest rate (R) on debt minus rate of growth of GSDP (G) — Avg. : Average

Source: RBI (2006). *State Finances: A Study of Budgets of 2006-07*.

TABLE 2.31

Fiscal Indicators—2005-06 (RE)

(Per cent)

States	Deficit Indicators						Revenue Performance			Expenditure Pattern				Debit Position		
	GFD/ GSDP	RD/ GSDP	PD/ GSDP	PRB/ GSDP	RD/ GFD	RD/ RR	OTR/ GSDP	ONTR / GSDP	CT / GSDP	DEV/ GSDP	NON-DEV/ GSDP	SSE/ GSDP	CO/ GSDP	DEBT/ GSDP	IP/ RR	R-G
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Non-Special Category																
1. Andhra Pradesh	3.9	0.5	0.8	-2.6	12.7	3.1	8.8	2	5.3	13.9	6.2	7.4	3.2	36.9	19.5	-2.2
2. Bihar	8.3	0.3	2.3	-5.7	3	0.8	6.5	0.5	24.6	24.4	15.6	15.7	5.5	84.1	19	1.5
3. Chhattisgarh	3	-1.8	0.7	-4.1	-59.5	-8.3	9.3	3	8.9	17.8	5.7	11.6	4	30.8	10.8	-1.9
4. Goa	6.1	0.6	2.7	-2.8	10.1	3.2	8.5	7.4	3.3	18	7.4	8.2	5.4	45.2	17.5	-0.4
5. Gujarat	3.2	0.2	0.1	-3	5	1.3	7.4	1.5	3.3	9.9	5.7	5.5	2.8	38.7	25.8	-5
6. Haryana	2	0.7	-0.3	-1.7	32.2	4.8	9.2	2.4	2.1	10.3	5.3	5.3	1.3	29.9	17.3	-2.3
7. Jharkhand	10.2	3.2	8.7	1.7	31.6	18.9	6	2.9	8.2	20.2	7.1	12.8	4.6	38.5	8.8	-5.7
8. Karnataka	2.9	-0.7	0.6	-3	-24.9	-4	11.7	2.2	3.9	13.2	6.7	7.2	3.4	30.9	12.9	-4.2
9. Kerala	5.3	4	1.8	0.5	76.5	27.1	10.5	0.8	4.9	11.7	8.5	8.6	0.7	45	23.6	-2.2
10. Madhya Pradesh	4.4	0	1	-3.4	0.5	0.1	8.2	2.1	9.3	18	7.5	8.8	6.3	44.4	17.3	2.5
11. Maharashtra	3.9	0.3	1.7	-1.9	8.6	2.7	9	1.3	2.2	10.9	5.4	6.2	2.7	34.2	17.9	-5
12. Orissa	2.2	0.8	-3.4	-4.8	36.5	3.7	7.3	2.1	13	13.4	11.3	9.5	1.7	59.3	25.2	3
13. Punjab	3.7	1.7	-0.3	-2.3	46.8	9.6	8.8	4.7	4.8	10.5	11.2	4.9	2	54.6	22.4	-3
14. Rajasthan	5	0.7	0.7	-3.6	14.3	4.2	8	2.1	6.9	14.6	7.4	9.3	3.8	55.1	25.2	-2.3
15. Tamil Nadu	2.6	0.2	0.4	-2.1	6.6	1.1	10.7	1.2	4	11.3	6.6	7.3	2.3	29.7	14.3	-1.2
16. Uttar Pradesh	5.1	1.2	1.2	-2.7	23.8	6.7	7.7	0.9	9.6	13.7	8.8	8.4	3.8	57.2	21.6	-1.6
17. West Bengal	4.9	3.8	0.5	-0.7	76.6	34.9	4.9	0.5	5.4	8.4	7.5	5.5	0.8	49.7	41	-0.8
18. NCT Delhi	1.5	-2.6	-0.2	-4.4	-180.7	-26.9	8	1.3	0.5	8.3	3	5.1	1.6	19.3	17.3	-0.2
Special Category																
1. Arunachal Pradesh	12.4	-8	6.6	-13.8	-64.8	-11.5	3.5	8.1	57.8	63.3	18.5	26.3	20.3	65.4	8.4	3.4
2. Assam	6.5	0.7	2.3	-3.5	10.9	2.3	7.1	2.9	20.2	25.6	11.3	14.4	5.4	37.4	13.7	4.2
3. Himachal Pradesh	4.2	0.4	-3.3	-7	10	1.5	6.3	2.8	19.2	19.2	13.4	11.8	3.7	77.7	26.4	-1.2
4. Jammu and Kashmir	6.9	-7.9	1.3	-13.6	-114.4	-15.7	7.4	3.2	39.7	39.1	18.1	17.5	14.6	60.8	11.3	0.5
5. Manipur	7.4	-11.2	1.7	-16.9	-150.9	18.9	2.2	2.7	54.3	45	21.6	23.2	17.2	77	9.6	2.3
6. Meghalaya	3.8	-2.3	0.2	-5.8	-60.6	-6.5	4	2.7	28.3	28	11.1	16	5.5	43.9	10.1	0.4
7. Mizoram	10	-5.5	3.7	-11.8	-55.1	-9.6	1.3	3.3	52.7	49.7	18.4	23.6	15	88.1	10.9	-6.4
8. Nagaland	3.5	-5.6	0	-9.1	-163.1	-17.9	1.4	1	29.2	22	13.2	10.9	9.1	32.6	11	-6.8
9. Sikkim	16.2	-11.6	10.5	-17.4	-71.3	-9.9	6.6	56.9	53.7	64.2	69.3	32.8	27.9	78.4	4.9	-3.9
10. Tripura	5.8	-5.9	1.5	-10.2	-101.3	-16.7	3.2	0.6	31.5	26.3	14.4	15.8	11.7	52.7	12.2	-1
11. Uttranchal	10.4	1.8	6.6	-2	17.4	6.6	7.9	2.6	17	26.7	10.7	14.8	8.1	55.1	13.9	-6.8

Source : RBI (2006). *State Finances: A study of Budgets of 2006-07.*

top four States which is a measure of its relatively satisfactory performance in the direction of achieving self-reliance in source generation.

In respect of non-development expenditure, the State may be said to be among the top five States which are spending a relatively lesser proportion of their GSDP for non-developmental purposes. But as regards development expenditure, the State's performance is highly disappointing as it ranks among the two States at the bottom. The same is true in respect of social sector expenditure and capital outlay, as well where it has all States ahead of it.

Lastly the State figures among the top three states showing excellent performance on the basis of DEBT/ GSDP ratio. It is ranked among the top seven States which are spending a relatively lesser proportion of their revenue receipts for interest payments as compared to other States.

The expenditure on wages and salary from 1990-91 to 2006-07 (BE) has been specified for 19 States. The average expenditure of these States amounts to 30.3 per cent in 2006-07. There are only two States which are using a lesser proportion of their revenue expenditure for payment of wages and salary relatively to the average

TABLE 2.32

Expenditure on Wages and Salary

(Rs. Crore)

Sr. No.	*States*	*1990-91*	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*1997-98*	*1998-99*	*1999-2000*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06 (RE)*	*2006-07 (BE)*
1		*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*
1.	Andhra Pradesh	2048 (37.2)	2470 (38.3)	2732 (38.0)	3083 (38.5)	3622 (38.1)	3773 (35.5)	4219 (29.3)	4768 (32.8)	5936 (35.0)	6668 (37.0)	7612 (33.0)	7791 (31.5)	8108 (31.1)	8718 (29.2)	8825 (28.2)	11129 (29.8)	12058 (26.6)
2.	Bihar $	2410 (49.3)	2640 (46.0)	3024 (46.0)	3262 (44.6)	3448 (44.6)	3833 (45.3)	4047 (49.0)	4561 (50.9)	5321 (50.1)	6686 (41.5)	7129 (49.7)	5276 (42.0)	5073 (36.2)	5020 (34.3)	5005 (34.2)	7372 (38.3)	7831 (36.0)
3.	Chhattisgarh	-	-	-	-	-	-	-	-	-	-	-	1806 (36.8)	1841 (33.3)	1937 (29.3)	2103 (29.6)	2589 (30.1)	3043 (31.7)
4.	Gujarat	636 (15.6)	765 (14.6)	890 (14.3)	917 (13.2)	1049 (13.9)	1299 (14.8)	1345 (13.1)	1547 (12.7)	2124 (13.6)	2116 (12.1)	2229 (10.1)	2310 (10.2)	2460 (11.5)	2548 (11.6)	-	-	-
5.	Haryana	687 (35.5)	774 (34.0)	881 (37.0)	980 (28.8)	1171 (18.7)	1369 (25.5)	1597 (23.6)	1827 (27.6)	2703 (38.5)	2627 (37.8)	2687 (37.4)	2920 (33.7)	3156 (33.8)	3143 (31.1)	3455 (30.3)	3946 (29.8)	4274 (30.4)
6.	Himachal Pradesh	-	-	-	-	646 (40.0)	769 (40.4)	879 (40.9)	1053 (39.0)	1412 (42.3)	1578 (41.3)	1683 (38.5)	1877 (41.0)	2062 (40.1)	2148 (38.4)	2198 (37.9)	2411 (37.5)	2459 (36.3)
7.	Karnataka@	1289 (32.5)	1431 (28.9)	1657 (29.6)	1941 (31.3)	2213 (30.5)	2481 (29.2)	2871 (28.1)	3365 (30.9)	3810 (30.6)	4576 (30.0)	4630 (27.7)	5030 (27.0)	4941 (26.3)	5323 (25.0)	5392 (21.6)	5932 (20.8)	7186 (20.9)
8.	Kerala	1683 (59.6)	1384 (43.0)	1419 (38.8)	1836 (42.8)	2194 (43.3)	2230 (38.3)	2617 (38.5)	2842 (34.5)	3298 (35.7)	4566 (39.5)	4561 (38.4)	4263 (36.6)	4745 (32.2)	5136 (33.1)	5417 (31.6)	5682 (26.9)	8141 (33.2)
9.	Madhya Pradesh	-	2461 (45.4)	2638 (42.8)	3048 (40.5)	3308 (42.4)	3815 (41.8)	4257 (37.1)	4795 (40.9)	6440 (45.3)	7012 (43.5)	6015 (40.1)	4934 (34.3)	5310 (36.5)	4987 (26.6)	6200 (34.4)	6504 (30.4)	7176 (31.9)
10.	Maharashtra	3848 (44.0)	4908 (48.8)	5548 (48.0)	6216 (47.4)	6837 (46.2)	7899 (46.0)	8890 (42.6)	10074 (44.0)	11125 (43.4)	16089 (54.5)	18188 (48.6)	18475 (48.3)	18499 (45.7)	19627 (46.0)	20678 (40.5)	23593 (44.0)	24729 (42.0)
11.	Mizoram	89 (29.3)	104 (32.4)	127 (34.1)	147 (35.1)	172 (37.1)	204 (36.0)	240 (38.7)	262 (39.6)	280 (40.5)	393 (43.9)	443 (43.4)	480 (42.6)	494 (43.7)	514 (39.9)	562 (40.3)	606 (35.6)	163 (10.5)
12.	Manipur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	878 (42.6)	753 (37.7)
13.	Orissa	906 (41.4)	991 (37.6)	1157 (38.0)	1274 (36.6)	1427 (35.4)	1798 (38.3)	2209 (43.2)	2814 (50.8)	3091 (45.3)	3741 (44.2)	3569 (40.4)	3511 (35.5)	3610 (36.0)	4068 (37.5)	3742 (30.2)	4149 (28.3)	4142 (26.0)
14.	Rajasthan	-	-	-	-	-	-	3089 (36.7)	3395 (37.8)	4737 (40.9)	5043 (37.6)	5101 (33.9)	5298 (33.2)	5282 (31.0)	5745 (30.5)	6081 (30.5)	6840 (31.6)	7376 (30.7)
15.	Tamil Nadu	2350 (41.6)	2350 (29.1)	2869 (33.6)	3235 (36.9)	3603 (37.4)	4136 (37.9)	4818 (36.9)	5559 (37.2)	7469 (42.2)	8295 (40.0)	8251 (37.9)	8262 (38.3)	7980 (31.1)	7966 (31.5)	8507 (29.2)	9556 (28.7)	12102 (30.4)
16.	Tripura @	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1239 (48.4)	1353 (49.0)
17.	Uttar Pradesh	2569 (26.9)	2585 (24.9)	3291 (25.9)	3492 (26.3)	3628 (23.6)	4066 (23.2)	4670 (24.3)	6033 (27.2)	6389 (24.5)	7054 (24.5)	7420 (23.9)	6703 (21.1)	7154 (21.7)	7778 (15.5)	8145 (18.3)	9884 (19.8)	11571 (21.0)
18.	West Bengal	-	-	-	-	-	-	-	5386 (47.6)	7098 (49.8)	9842 (50.5)	9600 (43.4)	9297 (39.7)	9270 (40.0)	9451 (36.7)	9801 (34.8)	10769 (32.4)	11699 (33.4)
19.	NCT Delhi #	-	-	-	-	-	-	-	761 (32.8)	962 (33.9)	1012 (28.7)	1064 (28.8)	1106 (21.9)	1172 (25.5)	1275 (25.1)	1441 (24.7)	1630 (22.7)	1840 (24.4)
	Total	18515 (37.3)	23,042 (35.2)	26,234 (35.5)	29,431 (35.6)	33,317 (34.3)	37,673 (34.4)	45,746 (33.3)	59,044 (35.9)	72,196 (37.0)	87,297 (37.9)	90,181 (35.3)	89,340 (33.1)	91,159 (32.0)	95,387 (29.4)	97,552 (30.2)	1,14,711 (30.5)	1,27,896 (30.3)

Notes: 1. Figures in brackets are percentage to total revenue expenditure of the respective State Governments.

2. Figures for Chhattisgarh from 2001-02 to 2003-04 relate to salary expenditure whereas from 2004-05 onwards relate to wages and salary.

BE : Budget Estimates

RE : Revises Estimates

- : Not available

@ : Relates to salary expenditure.

$: Figures since 2001-02 relate to bifurcated Bihar. Data relate to salary expenditure.

: Figures since 1999-2000 relate to compensation of employees.

Source: Reserve Bank of India (2006). *State Finance: A Study Budgets of 2006-07,* Statement 45, p. 174.

figure. Haryana stands at the eleventh position in order of percentage expenditure of States on wages and salary. The large share of wages and salary (nearly one-third) in total revenue expenditure is one of the primary factors underlying the downward rigidity in revenue expenditures. Haryana needs to curtail this expenditure sufficiently in order to put Revenue Account in good shape.

The indices of fiscal self reliance and improvement given by the 11th and 12th Finance Commissions are given in Table 2.33 and Table 2.34, respectively. From these tables it can be observed that on the basis of its fiscal performance during the period 1990-99 Haryana was placed at the 11th rank by the 11th Finance Commission. But the assessment of its performance over the period 1993-2003 by the 12th Finance Commission placed the State at the first rank. This shows excellent performance of the State in achieving fiscal self-reliance and improvement since 1993.

The component indices for the fiscal performance index, and the composite fiscal performance index, both prepared by Dholakia (2005) are given in Table 2.35 and Table 2.36, respectively. It is clear that Haryana is placed at the top since 2000-01. This again shows excellent fiscal performance by the State.

2.5 Conclusion

Being an alluvial formation, the State has very little mineral wealth. Forest area in the State is mainly confined to the Himalayan ranges in Panchkula and Yamuna Nagar districts and Aravalli ranges in the southern districts. During pre-monsoon period, the percentage of area under fresh water is about 42 per cent of the total geographical area of Haryana. This increases to about 25 per cent in the post-monsoon period. Accurate mapping of groundwater zones in the State needs to be done for proper management of groundwater resources.

During the year 2008-09, there are 112 engineering colleges in the State with an intake capacity of 33,745 students for BE and B. Tech. degrees. Eighty eight institutions are imparting management education with an intake capacity of 5,770 students for MBA degree. Forty on e institutions are imparting higher education in computer applications with an intake capacity of 2,605 students for MCA degree. Thirty one institutions are imparting eductation in pharmaceuticals with an intake capacity of 1845 students. Ninety two polytechnics are functioning in the state with an intake capacity of 32,916 students. Three hotel management institute are also functioning in the state with an intake capacity of 180 students.

TABLE 2.33

Indices of Fiscal Self Reliance and Improvement (FSRI) Given by Eleventh Finance Commission

	States	*ORR/OREX*		*ORR/OREX*		*Index of Fiscal Reliance*		*Index of Improvement*	
		1990-93		*1996-99*		*1990-93*	*1996-99*	*1990-99*	
		Ratio	*Rank*	*Ratio*	*Rank*	*Index*	*Index*	*Index*	*Rank*
1.	Andhra Pradesh	0.597	8	0.561	9	1.062	1.034	97.40	10
2.	Bihar	0.343	15	0.354	14	0.611	0.652	106.82	3
3.	Goa	0.525	11	0.670	6	0.935	1.235	132.18	1
4.	Gujarat	0.830	2	0.785	2	1.477	1.447	97.97	9
5.	Haryana	0.795	3	0.739	4	1.416	1.362	96.14	11
6.	Karnataka	0.727	4	0.742	3	1.295	1.368	105.61	4
7.	Kerala	0.571	9	0.604	8	1.017	1.114	109.56	2
8.	Madhya Pradesh	0.601	7	0.555	10	1.070	1.022	95.53	12
9.	Maharashtra	0.836	1	0.801	1	1.488	1.477	99.26	7
10.	Orissa	0.381	14	0.342	15	0.678	0.630	92.95	14
11.	Punjab	0.674	5	0.674	5	1.200	1.243	103.52	6
12.	Rajasthan	0.560	10	0.512	11	0.997	0.943	94.58	13
13.	Tamil Nadu	0.638	6	0.647	7	1.136	1.193	104.96	5
14.	Uttar Pradesh	0.399	13	0.378	13	0.710	0.697	98.22	8
15.	West Bengal	0.500	12	0.424	12	0.890	0.782	87.88	15
	All India	0.562	-	0.542	-	1.000	1.000	100.00	-

Note: ORR-Own Revenue Receipts; OREX-Own Revenue Expenditure

Source: Dholakia, Archana (2005). "Measuring Fiscal Performance of States: An Alternative Approach", *Economic and Political Weekly:* 3423, July 30, Table 3.

TABLE 2.34

Indices of Fiscal Self Reliance and Improvement (FSRI) Given by Twelfth Finance Commission

States	ORR/OREX		ORR/OREX		Index of Fiscal Reliance		Index of Improvement	
	FSRI as per							
	1993-96		2000-03		1993-96	2000-03	1993-2003	
	Ratio	Rank	Ratio	Rank	Index	Index	Index	Rank
1. Andhra Pradesh	0.592	9	0.595	6	1.04	1.18	114	3
2. Bihar	0.342	16	0.248	16	0.60	0.49	82	15
3. Goa	0.779	3	0.734	2	1.37	1.47	108	5
4. Gujarat	0.796	2	0.588	7	1.40	1.17	84	14
5. Haryana	0.755	4	0.776	1	1.32	1.55	117	1
6. Karnataka	0.736	5	0.615	5	1.29	1.23	95	12
7. Kerala	0.637	8	0.542	10	1.12	1.08	97	10
8. Madhya Pradesh	0.567	10	0.488	11	0.99	0.97	98	9
9. Maharashtra	0.801	1	0.675	3	1.40	1.34	96	11
10. Orissa	0.376	15	0.343	14	0.66	0.68	104	7
11. Punjab	0.696	6	0.577	9	1.22	1.15	94	13
12. Rajasthan	0.520	12	0.458	12	0.91	0.91	100	8
13. Tamil Nadu	0.686	7	0.646	4	1.20	1.29	107	6
14. Uttar Pradesh	0.426	14	0.415	13	0.75	0.83	111	4
15. West Bengal	0.507	13	0.322	15	0.89	0.64	72	16
16. Chhattisgarh	0.567	10	0.582	8	0.99	1.16	117	1
All India	0.507	-	0.502	-	1.00	1.00	100	-

Note: ORR-Own Revenue Receipts; OREX-Own Revenue Expenditure

Source: Dholakia, Archana (2005). "Measuring Fiscal Performance of States: An Alternative Approach", *Economic and Political Weekly:* 3423, July 30, Table 3.

TABLE 2.35

Component Indices for the Fiscal Performance Index (FPI)

States	1990-95			1997-98			1998-99			1999-2000		
	DI	OREI	EXDBTI	DI	OREI	EXDBTI	DI	OREI	EXDBTI	DI	OREI	EXDBTI
1. Andhra Pradesh	75.6	50.0	61.4	66.8	48.1	56.3	43.0	44.0	55.3	60.5	50.9	51.4
2. Bihar	50.1	17.9	45.9	63.2	11.4	46.2	47.8	17.8	42.4	38.8	15.0	40.5
3. Gujarat	78.1	66.2	64.1	65.4	62.3	60.0	46.2	55.0	59.4	43.4	51.1	60.5
4. Haryana	74.1	76.2	59.0	54.1	68.2	51.8	43.5	54.8	52.7	47.9	57.7	50.8
5. Karnataka	86.5	60.2	63.5	83.2	59.1	60.3	62.5	55.7	58.8	49.7	48.2	57.1
6. Kerala	54.6	45.8	52.5	48.0	47.6	50.9	34.6	41.7	47.6	22.6	33.3	39.8
7. Madhya Pradesh	85.3	44.2	62.0	86.1	42.6	55.0	37.1	32.9	53.2	38.1	36.5	55.2
8. Maharashtra	84.0	68.8	65.6	58.1	65.9	61.2	50.2	57.8	52.1	47.0	60.7	61.2
9. Orissa	72.7	20.0	49.4	50.9	17.2	35.1	29.4	10.5	32.2	27.0	8.9	44.8
10. Punjab	43.4	56.6	49.6	44.6	59.3	46.1	29.4	43.6	31.0	25.4	50.1	46.7
11. Rajasthan	87.0	41.8	55.2	82.2	41.5	44.7	36.5	29.6	39.8	32.5	29.2	37.9
12. Tamil Nadu	45.6	47.6	66.5	65.2	52.8	61.1	37.4	47.1	58.3	29.9	45.1	54.5
13. Uttar Pradesh	52.8	26.3	46.1	36.4	19.0	35.1	22.9	17.4	30.0	32.3	21.9	31.7
14. West Bengal	47.9	33.2	53.2	34.9	26.6	37.8	19.8	17.3	32.3	7.9	9.0	30.8

Contd...

...contd...

States	2000-01			2001-02			2002-03		
	DI	*OREI*	*EXDBTI*	*DI*	*OREI*	*EXDBTI*	*DI*	*OREI*	*EXDBTI*
1. Andhra Pradesh	48.1	43.8	51.1	56.2	48.9	48.5	57.5	50.4	46.6
2. Bihar	37.1	5.6	41.9	40.9	0.8	30.4	44.6	0.4	26.5
3. Gujarat	33.5	42.5	64.1	25.2	43.9	53.8	32.4	42.9	35.8
4. Haryana	66.5	71.3	55.1	58.2	67.2	57.4	54.7	66.2	52.4
5. Karnataka	56.8	51.3	57.0	45.0	44.7	54.1	50.5	45.5	45.8
6. Kerala	26.6	39.9	37.8	31.2	40.5	35.1	44.5	47.1	32.0
7. Madhya Pradesh	57.6	33.6	50.5	38.8	27.3	47.8	63.7	31.3	46.6
8. Maharashtra	43.1	56.1	67.8	36.3	56.0	55.6	42.0	56.5	37.3
9. Orissa	36.8	13.5	28.6	28.7	12.8	19.7	49.8	16.8	31.6
10. Punjab	42.4	56.3	45.9	26.4	49.3	34.9	35.3	52.7	33.2
11. Rajasthan	43.3	30.5	37.1	36.8	28.6	34.8	38.5	29.9	38.0
12. Tamil Nadu	43.7	51.4	53.7	50.7	55.2	51.3	33.6	46.5	34.0
13. Uttar Pradesh	40.6	24.2	30.6	42.7	19.9	26.1	39.6	19.5	28.4
14. West Bengal	20.4	13.0	30.2	16.6	11.3	19.8	16.8	14.0	11.0

Notes: DI = Deficit Index; OREI = Own Revenue Effort Index; EXDBTI = Expenditure and Debt Repayment Index

Source: Dholakia, Archana (2005). "Measuring Fiscal Performance of States: An Alternative Approach", *Economic and Political Weekly:* 3426, July 30, Table 5.

TABLE 2.36

Composite Fiscal Performance Index (FPI)

States	1990-95		1997-98		1998-99		1999-2000		2000-01		2001-02		2002-03	
	Index	*Rank*	*Index*	*Rank*	*Index*	*Rank*	*Index*	*Rank*	*Index*	*Rank*	*Index*	*Rank*	*Index*	*Rank*
Andhra Pradesh	62.34	6	57.07	7	47.44	6	54.25	2	47.65	6	51.20	3	51.52	2
Bihar	37.94	14	40.26	11	36.01	9	31.43	11	28.18	12	24.00	12	23.81	13
Gujarat	69.46	4	62.58	2	53.56	2	51.68	4	46.67	8	40.95	6	37.05	9
Haryana	69.75	3	58.06	6	50.34	4	52.10	3	64.30	1	60.92	1	57.77	1
Karnataka	70.04	2	67.52	1	59.01	1	51.68	5	55.04	3	47.91	5	47.29	3
Kerala	50.97	9	48.85	10	41.29	7	31.91	10	34.76	10	35.60	9	41.20	6
Madhya Pradesh	63.81	5	61.21	4	41.04	8	43.26	6	47.25	7	37.94	7	47.20	4
Maharashtra	72.80	1	61.72	3	53.38	3	56.32	1	55.66	2	49.27	4	45.24	5
Orissa	47.36	11	34.45	12	24.05	12	26.89	13	26.29	13	20.40	13	32.74	11
Punjab	49.86	10	49.99	9	34.69	11	40.74	8	48.18	5	36.86	8	40.40	7
Rajasthan	61.34	7	56.15	7	35.28	10	33.21	9	36.99	9	33.41	10	35.46	10
Tamil Nadu	53.21	8	59.72	5	47.58	5	43.17	7	49.61	4	52.41	2	38.02	8
Uttar Pradesh	41.76	13	30.15	14	23.42	13	28.64	12	31.83	11	29.57	11	29.19	12
West Bengal	44.75	12	33.13	13	23.14	14	15.87	14	21.18	14	15.89	14	13.93	14

Notes: (i) Calculated by converting eight indicators into indices and then combining them.

(ii) Best values for all indicators have been changed by one unit to aid calculations.

Source: Dholakia, Archana (2005). "Measuring Fiscal Performance of States: An Alternative Approach", *Economic and Political Weekly:* 3426, July 30, Table 6.

The revenue deficit of the State has reduced from the peak of Rs.1540 crores in 1998-99 to Rs.258.00 crores in 2004-05. In terms of percentage of gross state domestic product (GSDP), the revenue deficit reduced from 3.5 per cent in 1998-99 to 0.31 per cent in 2004-05. The Fiscal Deficit has reduced from 5.1 per cent of GSDP in 1998-99 to 1.4 per cent in 2004-05. The Tax-GSDP Ratio has improved from 7.83 per cent in 2000-01 to 8.96 per cent in 2004-05. The notable feature of state financial management is that Haryana is the first state in the country which has not availed ways and means advances and overdraft facility even for a single day since 2002. The 12th Finance Commission placed the State at the first rank on the basis of fiscal performance during 1993-2003.

Chapter 3

Identification of Critical Issues and the Newly Emerging Areas

3.0 Introduction

On the basis of the analysis in Chapter 1 and Chapter 2 we identify the critical issues in the traditional as well as newly emerging areas of Haryana's economy.

3.1 Sectoral Issues for Sustainable Development

Sustainable development is a process of simultaneously ensuring continuation of the economic, social and ecological basis of human life. In Chapter 1, we have discussed the comparable trends in the development of the economy of the State *vis-à-vis* other States in terms of generally accepted development indicators. On the basis of the analysis of the growth process in Haryana during last four decades, the following sectoral issues emerge:

The growth rates of Haryana in aggregate as well as sectoral have been slightly less than the targeted growth rates. The decadal growth trends suggest that the momentum of growth has increased in the past or even may increase in future. The contribution of primary, secondary, and tertiary sector to gross domestic product in Haryana has been higher than their contribution to gross domestic product in India since 1980-81 onwards. The developments in growth of per capita income in Haryana during the past and present period indicate that economic growth in the State has been welfare oriented if we take per capita income as an indicator of development. However, an analysis of social indicators in Haryana reveals that there exist wide disparities with respect to gender and class equalities, women empowerment and poverty alleviation in the State.

On the basis of the criteria developed for measuring the sustainable development in the State, it can be said that as far as material growth is concerned (in terms of state domestic product and per capita income) the performance of the State has been among the first five States in India. The important issue here is to find out whether the growth rate achieved in per capita income can further be increased keeping in view the sustainability of different sectors of Haryana economy.

The sectoral shift in Haryana has been constantly moving in favour of tertiary sector *vis-à-vis* secondary and primary sector. The most emerging challenge in the State is to provide productive and gainful employment to its inhabitants through agriculture and industry whose shares are constantly declining.

Not only this, the relevant and more important sectoral issue is to achieve an optimum balance among the three sectors. In order to identify the critical sectoral issues our strategy would be to discuss the progress and weakness of each specific economic activity.

TABLE 3.1

Growth Rates of Change in Share by Industry to SDP in Haryana: 1993-94 to 2005-06

Description	*Period*
	1993-94 to 2005-06
Growth rate of change in share of Primary Sector to SDP at Current Prices	-4.864
Growth rate of change in share of Primary Sector to SDP at Constant Prices	-3.979
Growth rate of change in share of Secondary Sector to SDP at Current Prices	0.976
Growth rate of change in share of Secondary Sector to SDP at Constant Prices	0.489
Growth rate of change in share of Tertiary Sector to SDP at Current Prices	3.724
Growth rate of change in share of Tertiary Sector to SDP at Constant Prices	3.513

Source : Growth rates for three sector has been calculated from the data from *Statistical Abstract of Haryana* (Various Issues, Published by Government of Haryana, Chandigarh).

As far as the agriculture and allied activities are concerned, the expenditure on agriculture has increased at an average annual rate of 9.50 per cent during 4th plan period, whereas the share of expenditure on agriculture has declined at a rate of 1.06 per cent per annum. This paradoxical situation implies that the relative share and importance of agriculture in Haryana's economy is declining.

In raising the productivity of wheat, rice, maize, cotton or any other crop for that purpose the role of high yielding variety and other related critical inputs such as fertilisers, technology and water happens to be important. The State has been providing necessary policy-initiatives and inputs for the Green Revolution and its spread to all the regions of State. The wheat-rice cropping pattern in the State has led to many environmental problems in the State, though some of the problems can be attributed to geographical characteristics of the State and digging up of canal system in the State. In personal interviews with the farmers, in the nearby villages of Kurukshetra, Karnal and Kaithal, we have found that farmers are well aware of the environmental problems arising out of cultivating more of rice on their fields. As a consequence of this, the water level has gone down which may cause problems for future generations. The diversification of crops is not taking place because of lack of innovative marketing techniques so essential for funding the market for alternative crops to rice and wheat.

The analysis of all the data, related with agriculture and allied sector reveals that there are the following sectoral issues for sustainable development which need to be thoroughly examined for making a suitable policy for this sector:

(i) The expenditure on agriculture needs to be accelerated in order to achieve sustainable agricultural development in Haryana. From the analysis it is clear that Government has been neglecting agriculture as the relative expenditure on agriculture in total expenditure has been falling persistently.

(ii) The wheat-rice cropping pattern needs to be diverted in favour of meaningful and viable diversification of agriculture and allied sectors in Haryana. If the same trend continues, it might result into serious ecological problems making the achievement of sustainable development in agriculture a distant dream.

(iii) Though the net irrigated area has increased, this cannot be said to be increasing at a desired rate. Government of Haryana should step up its efforts in providing more irrigation facilities to the farmers in Haryana. Water being a critical input may affect the agricultural productivity adversely in future.

(iv) Another area of concern seems to be growing use of fertilisers by the farmers in the State. In the present age of globalisation, SPS clauses under WTO trading regime are being enforced on the trading system of the developing countries. The greater emphasis on the application of fertilisers in raising the agricultural productivity is not desirable as the advanced countries may impose severe restrictions based on SPS clauses of WTO on the exports of agricultural products from Haryana in particular and India in general. In future, with the conclusion of agreement on agriculture, the prospects for agricultural exports from Haryana are bright. This will depend on the compliance of the WTO rules related with SPS, certification and standards. This issue will further be examined in greater detail in section 3.2.5.

(v) In addition to this, marketing of agricultural produce should be given a priority by the policy makers in the State. The State should also look into the financial requirements of the farmers arising out of introduction and implementation of latest technologies in agriculture in order to raise agricultural productivity in the State.

In a nutshell, application of latest technology and the adoption of latest marketing techniques along with sound financial management for meeting the agricultural requirements of the State are the new emerging areas related with Agriculture and allied sector in the economy. The knowledge of the WTO trading regime, that is, rules related with SPS, certification and standardisation of agricultural products is also of vital importance in achieving sustainable sectoral development.

The well-being of villages in Haryana in the category of large States comes in the top spot along with Kerala, Tamilnadu, Andhra Pradesh and Maharashtra. After the inception of the State in 1966, the successive Governments in Haryana seem to have given priority to rural development. As a consequence of this, the poverty in rural area has come down to 8.27 per cent in the year 1999-2000 whereas the overall poverty line of the total population in the State happens to be 8.74 per cent. This does not imply that the government did not pay attention to urban areas. The people living below poverty line in urban areas also have been only 9.9 per cent. Such a low

percentage of people living below poverty line in rural area itself speaks about the pace of the rural development which has been achieved during the plan periods from Fourth to Tenth Five Year plan. If the same trends of growth rates on rural development further continue, Haryana is likely to achieve an optimum level of rural development with 0 per cent people living below poverty line by the year 2012.

The most important issue involved in this is related to the improvement in quality of life for which the State should spend more money on the social sector variables of the economy. In future, the State should encourage a private initiative that is the participation of the private sector in the overall development of the economy. This issue will be dealt at length in Chapter 4.

The development in the State cannot be sustainable if it is not accompanied by adequate and proper irrigation facilities. Not only this, the floods in the State should also be controlled. Haryana does not seem to have made satisfactory progress in providing irrigation facilities to the State farmers as the growth rate during the period 1967 to 2001 has been less than 2 per cent per annum. It is only through other sources that the farmers in the State have been able to get water for their crops that is through diesel sets and electric sets (their personal tubewells and pumping sets) etc. For ensuring better irrigation facilities as well as power to the secondary and tertiary sector, the State Government needs to develop a visionary and Comparative advantage favouring strategy for the generation and distribution of electricity.

The performance of energy sector in the State has been good during the period but there appears a certain gap which needs to be filled by the State in order to achieve sustainable development in the energy sector. Though, overall framework of the development of this sector depends upon the policy of the Central Government and also the developments at the International level, there is a clear role for the State Government to optimise its resources in this sector.

Another crucial sector of the economy is the transport sector. The developments in this sector have been positive but the efficiency of this sector is very crucial in exploiting the advantages of Location Theory which have not been fully exploited by the State. Theory of Location is instrumental in reaping the advantage of globalisation.

The manufacturing sector in the State has performed very well in terms of first indicator that is multilateral. total factor productivity in registered manufacturing sector is based on value-added function. The data in chapters 1 and 2 show that manufacturing sector in the State has grown at an increasing rate during the period since 1980-1981. On the basis of the four indicators of growth of manufacturing sector, it can be concluded that manufacturing sector has made progress in the State but this progress cannot be said to be impressive. A critical review of different industrial policies of the State since its inception reveals that manufacturing sector has not got adequate attention of the State in creating proper investment climate in the State which served as a constraint on its potential growth. The relative share of secondary sector in the State *vis-à-vis* tertiary sector is not at optimum level. It needs to be further increased as the total factor productivity growth occurs more in this sector which provides impetus to overall growth in the State.

The Centre as well as the State(s) should introduce reforms in service sector to make growth human development oriented. Ensuring basic health and education facilities is the responsibility of the State. Only a big budget is not enough: a larger proportion of the budget of the State should be spent on education and common man. As revealed by data in Chapter 1, the growth of education at all levels that is primary, secondary and higher has been significant. The scope of technical education has also been widened. But, the quality of education, its funding, linkages with industry and other sectors of the economy needs to be improved and strengthened. The educational institutions in the State should be developed with the collaboration of private sector. Women in the State should be empowered by providing more health and education facilities. They should also be provided with employment opportunities. All this will help in raising the sex ratio in the State.

The overall literacy rate was 23.2 per cent in 1961 in Haryana which became 55.85 per cent in 1991 and further rose to 67.91 per cent in 2001. The female literacy rate was only 11.1 per cent. Still Haryana has to travel a long way in achieving 100 per cent rate of literacy in both the sexes. Almost 50 per cent of the women are still illiterate in the State and this is a big constraint in achieving sustainable development in the State. The education policy of the State needs to be ambitious and visionary as education is crucial in making Haryana number one State of the Indian federation.

Another very important issue is improving the performance of existing SEZs and development of new SEZs. The acquisition of land for establishing SEZs has become a political issue and the negotiations with farmers have come to a stalemate which needs to be resolved at the earliest. Of late, the government of Haryana is

emphasising the establishment of new SEZs in the economy which is a very good step but efforts should be made to improve their performance so that these can contribute to the employment and equitable distribution of income among the masses. For this, new policy initiatives are required keeping in view the international trends.

3.2 Developmental Issues in Upcoming Areas

Under this sub-heading, we would analyse and discuss in detail the developmental issues in newly emerging areas in the 21st century in which State has a big potential, keeping in view the latest changes in technology, methods of organisation and more importantly the advancing stock of knowledge related to these areas. The analysis reveals that Haryana in order to become number one State in the country should follow the 'Comparative Advantage Following' strategy of Development to enhance its competitive edge nationally or even internationally. It implies that the production of goods and services should be in accordance with the principle of comparative advantage as it leads to optimum allocation of resources in the State/regions.

3.2.1 Tourism (Heritage Tourism, Health Tourism, etc.)

Tourism in the modern times has emerged as one of the potent economic activity that not only supplements the conventional mode of economy but also brings plenty of opportunities for the cultures and its people to improve their material standards. It is this consideration that sought greater emphasis on tourism development in Haryana. Haryana can be described as a late entrant on the tourism map of the country. Despite that, whatever has been created and developed in the name of tourism has left remarkable precedents owing mainly to utilisation of strategic highways and close proximity to Delhi—the major tourist market for the State.

The other consideration that necessitates tourism development in the State is growing stagnation mainly in the agriculture sector. The tourism development is viewed to supplement the rural income by thrusting on the concept of rural tourism and farm tourism. Though the development of tourism in the State is no less than an achievement keeping in view the fact that now the State has 43 vacation spots or holiday stopovers where there was none in the early seventies (Dharmarajan and Seth, 1997) but with the advent of socio-economic changes particularly after the nineties the achievement is no longer a solace provider.

Tourism Development

The tourism development in the State, in view of above stated background, is to be judged on the basis of two major parameters. Firstly, its capability to produce the tourists, and secondly, the attractions it inherits having the potential to attract the tourists. The first parameter seeks to explore the specific kind of living conditions in an area that impels or motivates the people to go for travel. Industrialisation, urbanisation, business growth, disposable incomes and time, stressful and tense living conditions and styles prepare a market of the tourists who are anxious to visit the places which can provide them some pleasant experiences which hitherto were not available in the beat area. The industrialisation in Haryana has witnessed a polarised growth mainly in the areas of Gurgaon and Faridabad districts whereas the other districts, despite government's concerted efforts, could not evoke the same response. The 'Delhi factor' i.e. close proximity of these areas to Delhi metropolitan put them in advantage over other areas. Delhi, being a highly urbanised and industrialised centre qualifies to be treated as the potential tourist producing market and the Haryana tourism has been greatly benefited by this character of Delhi. In a nutshell, these areas are forming a second ring of industrialisation around the Delhi Metro becoming eligible as tourist producing market. The other parts of the State too are gradually receiving the percolation of impacts of industrialisation like Rohtak and Sonipat who are next to the Gurgaon-Faridabad ring (Boora, 2002).

The G.T. Road, besides the 'Delhi factor', is another lifeline to the State's development with the growth of major towns like Panipat, Karnal and Ambala. Though the metro-like character of these cities is yet to come but for being centres of trade, culture and administration they have developed as hub of economic activities. Though nearly similar pattern exists in other cities as well, mainly the cities along the sides of State highways but have limited trade or the economic opportunities as compared to the cities along the G.T. Road. Broadly, three layers of development of the cities can be seen in Haryana. First, areas around Delhi, secondly the areas (cities) on the G.T. Road and thirdly, the cities on the State highways. Though all these areas or the population in these areas qualify to be included in the middle class—a class of potential tourists, but all are not contributing in the same weight and size to form a tourist producing market. Despite the economic similarities, the differences in the living conditions and the styles distinguish Delhi and adjoining areas from other areas in the State. Overall,

Haryana has to remain dependent on Delhi to ensure the supply of the tourists.

Tourism Types and Resources

Highways

Since highway tourism is the most popular type of tourism in Haryana, the major resource for that comes in the form of highways passing through the State. Five most important National Highways pass through the Haryana State covering 1468 km. and crossing 15 of the 20 districts of Haryana. 3000 km of state highway network crisscross the State.

NH No.1 in Haryana is 180 kms long, 4 lane metalled all weather road, entering Haryana from Delhi at Kundli Border and going upto Punjab border crossing Panipat, Karnal, Kurukshetra, and Ambala. This is the lifeline of Haryana and single entry point to the States of Punjab, J&K, Himachal and UT of Chandigarh.

NH No.2 in Haryana is 74 kms in length crossing Faridabad District and going towards the world famous city of Agra crossing Mathura-Vrindavan twin towns—birth place of Lord Krishna and Radha.

NH.No.8 in Haryana is also around 101 kms in length, 4 lane crossing three districts of Gurgaon, Rewari and Narnaul going towards the Pink City of Jaipur—the land of Forts and *Rajas*.

NH No.10 in Haryana is the longest, covering 313 kms from Bahadurgarh to Dabwali in Sirsa district crossing districts of Rohtak, Hisar and Fatehabad in between and going upto Abohar Fazilka, the border district of Punjab and Pakistan.

These Highways are emerging as centres of development in the State because of increase in traffic on them and resulting in complex interplay of a number of economic factors. Technically, the Highway tourism is not consistent with the conventional definition of tourism, which is primarily based on the components of accessibility, accommodation and attraction. Rather Highway tourism signifies the availability of certain facilities for the tourists who commute between two destinations. These facilities range from food, entertainment, recreation, roadside attractions to shopping Malls, petrol stations, medical facilities etc. In a way, these Highways are emerging as the new mini markets or the destinations, the driving on which is becoming an attraction. Highways are no longer the roads made for the purpose of transportation but are becoming the central points around which a number of economic activities take place.

Thus, it can be said that the main strength of Haryana tourism is the Highway tourism, which is spread over the entire State providing vacation spots or recreation spots to the tourists. The network of the Highway tourism comprises nearly 43 tourist complexes offering a variety of services to the tourists. The various entertainment and recreational facilities offered by Haryana tourism at its complexes include the swimming pool, boating, angling, zoo, children's park, meditation hall, golf course, music and dance programmes, sauna bath, and camel ride etc.

Cultural Tourism and Resources

In Haryana, the cultural resources comprise religious and historical places, fairs and festivals, etc. The cultural tourism in the State primarily rests upon three cultural festivals, namely, Surajkund Craft Fair, Mahabharata Festival at Kurukshetra and Kartik Festival at Ballabhgarh. The Surajkund craft fair has formed a niche for itself in the tourism market while the other two are yet to attain the desired status. The Surajkund Craft Mela began in 1987 with a rural ambience. The scheme to play up a *Mela* theme started in 1989 and continues till today. More than five lakh people visit the *Mela* that, in turn, brings good amount of revenue to the State. The Kartik festival is organised in the premises of Nahar Singh Fort at Ballabhgarh in district Faridabad. The fort is magnificently constructed and carefully renovated and offers a distinct experience to the tourists. Various cultural activities like dance, music, puppetry, etc. are performed in the festival. The Mahabharata Utsava is celebrated on the banks of holy Brahma Sarovar. It is around one-week celebration and lakhs of people pay visit to the festival and enjoy the specially organised musical evenings besides other entertaining activities.

Besides, there are a number of dances of Haryana that can enthrall and rejuvenate the tourists on different occasions. One of the important dances of Haryana is the *Phag* dance, which is performed on the eve of *Holi*—the festival of colours—by men and women together on the sounds of *Tasha*, *Nagara* and *Dhol*. The Loor dance is performed mainly by the women around Holi festival and is more popular in the regions of *Bangar* and *Bagar*. *Jhoomar* is another popular dance of Haryana, which has a closer resemblance with the 'giddah' of Punjab. It is performed throughout the State. *Khora* dance, like *Jhoomar*, is performed exclusively by women folks on the occasion of wedding festival and harvesting. Another dance i.e. *Daph* dance is a mixed dance performed to the beats of *daph*—a one-sided drum. It is associated with harvest and spring. Another important dance of Haryana is the *Gugga* dance, which is a ritualistic dance, performed in the memory of

Gugga *pir* (saint) who is worshipped not only in Haryana but in Rajasthan, Punjab and Himachal Pradesh also. *Ghumar* dance, which is popular also in Rajasthan, is quite popular in some parts of Hisar and Bhiwani districts of the State. The women devotees while on their way to temple perform it.

Apart from culture, religion too provides scope for the growth of pilgrimage tourism in the State. The most important pilgrimage destination in Haryana is Kurukshetra whose fame and divinity has spread across the country. The divine aura of Kurukshetra covers an area of 48 *kosas* (92 sq. km), which hides in its fold 360 places of pilgrimage. It was on this land that Lord Brahma created man and this universe, says legends. It was at Kurukshetra that Lord Krishna gave the sermon of holy Bhagwad Gita and where the battle of Mahabharata was fought between the Kauravas and Pandavas. Jyotisar is another important attraction in the vicinity of Kurukshetra and is the fountainhead of Gita philosophy. It is considered as the most sacred spot reminiscent of the great battle of Mahabharata. Pehowa, known as 'Prthu-dak' in the ancient scriptures, is a great centre of pilgrimage and is associated with many legendary personalities of our ancient times like Rishi Vishwamitra, Vashishtha, Sukra and Manu. Pandu-Pindara village in district Jind, is another important centre of pilgrimage where it is believed that Pandavas solemnised *shraddha* for all their kinsmen and others who sacrificed their lives during the battle of Mahabharata. Kapal Mochan is another place of religious and historical significance in district Yamunanagar. Besides Hindus, the place is revered by the Sikh pilgrims also. Mansa Devi temple in district Panchkula is located on a hill top, in the picturesque surrounding of Shiwalik ranges. Another religious place is Agroha. Besides the pilgrimage centres discussed above, plenty of other important pilgrimage centres exist in Haryana belonging to different religions like Islam, Sikhism etc.

Adventure Sports

Haryana tourism catapulted into the arena of adventure sports with the forming of its Adventure Club in 1991. The club brought in a promise of rock climbing at Surajkund and Morni Hills, canoeing and kayaking in large water bodies at Surajkund, Badkhal Lake, Damadama lake and Tilyar lake, cycling expeditions in the Kalesar forests, camping at Hathnikund, the Kalesar forest, Damdama and Tajewala, white water river rafting down the Yamuna, mountaineering and parasailing at Pinjore.

Farm Tourism

Haryana Tourism has taken the initiative to introduce the concept of farm tourism in India. This is first-of-its-kind in India. The Department of Tourism, in partnership with 20 farm owners in Haryana, is offering special country holiday packages in these chosen farms. The farms are located in the lap of mother nature near Delhi and offer their mystical beauty and charm to sooth away modern day bruises and burnouts. One can experience the lifestyle of a real India rich in age-old traditions, ethnic arts and crafts. A brief account of these farms with their locations and activities offered, will give an understanding of the concept of this form of tourism.

The Surjivan Farm is located Opposite "Classic Golf Resort" off New Delhi—Jaipur Highway. The activities offered here are visits to Herbal Garden, Nakshatra Vatika, Organic Farming, Vermi Compost and Bee Keeping, Cattle Feeding, Cow milking, *Tambola*, *Gilli Danda*, *Kanche*, *Pitthoo*, Archery, Tug-of-war, etc. Golden Dunes Retreat is located in village Chandu, near Sultanpur Bird Sanctuary. The activities offered are croquet and golf, Splash Pools, Cow milking, Archery, Kite flying; rides of Tractor/Bullock cart/Camel/Horse and games like Vegetables hunt, Flower hunt, Adventure sports, Volley ball, Hurdles and Treasure hunt.

Kalki Mysticis is located in village Garhi Harsu near Sultanpur Lake Tourist Complex, district Gurgaon. It offers participation in village visit, visit to a special tomb destination of pious "Pir Baba'' and Mata ka Mandir, Cow milking, Kite flying etc. Rides of Tractor/Bullock cart are also available. Herambh Aushadh is located in village Kanwarsika, Sohna, district Gurgaon. It offers education tour to herbal medicine manufacturing plant and activities like Parasailing, Village sight seeing, Crafts, Dairy farms and poultry farms. Anugrah vatika is located in village Binola near Gurgaon on Delhi Jaipur Highway and provides visit to the Village Cattle farm, Poultry farm, Mushroom farm and Honey bee farming. In addition, rides of Tractor/Bullock cart are available along with Painting, Kite flying.

Sheilma Farm is in village Khori Jamalpur, 1 km off Ballabgarh-Sohna road near BSA Institute of Engineering & Technology, District Faridabad and attraction offered are village visit, small Swimming Pool Rides, bullock cart/ tractor rides, kite flying, marbles and bonfire.

Golden Creeper is in village Chandu near Sultanpur Bird Sanctuary and provides activities like Splash Pool, Croquette, Golf putting, Cow milking, Kite flying, Tractor ride/Bullock cart/Camel ride/Horse ride, Vegetables/ Flower/Treasure hunts, and Volley ball, Hurdles, Table tennis, Baseball, Tug-of-War, Tambola, *Gilli-danda*. *Prakriti* Farm, Village Gailpur, Palwalnuh Road offers a number of activities mainly village sight seeing, Bullock cart/Tractor/

Horse Rides, Kite flying, Bonfire, Fishing etc. YMCA Rural Centre is located on the outskirts of Hodal, district Faridabad. It gives access to village visit, visit to the Stud farms, Agriculture/Animal husbandry demonstration, Rural sports such as Volley ball and wrestling, visits to local *melas*, heritage sports and village rituals, and rides of Tractors/Bullock carts.

Banni Khera Farm located at village Samar Gopal Pur in district Rohtak, offers activities like visit to old temples, prawns breeding ponds experiencing practically the village traditional activities/craft making/farm activities like harvesting games boating view. Besides, activities such as Rowing, Cycling, Kite flying, Tractor/ Horse ride, Milking cows are also offered. Similar activities are offered at number of farmhouses in the State falling in the districts of Gurgaon, Faridabad, Hisar, Ambala and Panchkula.

Tourism Trends

The tourism trends in the State, in the background of the limited tourist potential, reveal a mixed status but certainly cannot be described as encouraging. As Stated above, the tourism in the State mainly revolves around the tourism complexes and the trends, discussed here. The tourist arrivals in the Haryana tourist complexes were 18,08,730 in 1980-81 that increased to 60.8 lakh in 2004-05. The trends do not show the consistent patterns, rather present an aberrant display of tourist traffic, as shown in Table 3.2.

This uneven graph of tourist traffic becomes more emphatic since 1995-96 owing mainly to the government's policy of Prohibition. The policy adversely influenced the visitors' traffic to the Haryana tourist complexes and caused a rapid decline in the revenues from tourism complexes. There exists unanimity that the Policy of Prohibition proved dearer to the State economy and fell heavily on the tourism in general and the HTC complexes in particular.

The average occupancy rate of the Haryana Tourism Complexes marks a decline after following certain fluctuating trends. In 2004-05, the average occupancy rate of the complexes comes merely to 62 per cent, which, indeed, is not a welcome proposition. But all the tourism complexes do not show the poor occupancy rate. The data up to 1996-97 shows that certain complexes have performed better in comparison to others. The varied performances of the complexes are shown in the following Table 3.3.

TABLE 3.2

Tourist Trends (Actual and Projected) in Haryana from 1986-87 to 2011-12

(In Lakh)

Year	*No. of Domestic Tourists*	*No. of Foreign Tourists*	*Total*	*Avg. Occupancy Rate*
1986-87	28.9	1.4	30.3	77.0
1987-88	34.8	1.1	35.9	81.7
1988-89	41.6	1.5	43.1	75.0
1989-90	47.8	1.5	49.3	73.0
1990-91	41.6	1.3	42.9	67.0
1991-92	46.8	1.5	48.3	75.0
1992-93	56.4	1.6	58	78.0
1993-94	63.7	2	65.7	81.0
1994-95	71.1	2.5	73.6	75.0
1995-96	70.9	1.4	72.3	79.0
1996-97	63	0.8	63.8	63.0
1997-98	58.8	0.6	59.4	61.0
1998-99	66	0.7	66.7	58.0
2000-01	53	1.4	54.4	57.0
2001-02	63.5	1.1	64.6	59.0
2002-03	63.6	0.9	64.5	59.0
2003-04	58	0.7	58.7	58.0
2004-05	60.1	0.7	60.8	62.0
2005-06	61.98	0.72	62.70	64.6
2006-07	63.92	0.74	64.66	67.2
2007-08	65.91	0.77	66.68	70.0
2008-09	67.97	0.79	68.77	72.9
2009-10	70.10	0.82	70.91	75.9
2010-11	72.29	0.84	73.13	79.0
2011-12	74.55	0.87	75.42	82.3

Note: Projections have been made by the exponential trend with Formula $Y = Y_0 e^{mT}$

Source: *Statistical Abstracts Haryana*; Various issues published by Government of Haryana, Chandigarh.

TABLE 3.3

Occupancy Percentage of Haryana Tourism Complexes: 1986-87 to 1996-97

Year	*Occupancy Percentage*			
	100+	*80-99*	*60-79*	*Less than 60*
1986-87	4	4	9	8
1987-88	4	4	11	10
1988-89	5	3	11	13
1989-90	4	4	8	18
1990-91	4	4	10	19
1991-92	5	5	9	18
1992-93	6	6	11	14
1993-94	4	8	13	13
1994-95	4	8	11	16
1995-96	4	12	9	16
1996-97	3	3	14	21

Source: *Statistical Abstracts Haryana*; Various issues published by Government of Haryana, Chandigarh.

The performance of the tourism complexes in terms of their average occupancy rate gives a varied occupancy scenario. There are only three tourism complexes that showed more than one hundred per cent occupancy in 1996-97 (being six in 1992-93). The decline in the second category i.e. the occupancy rate between 80-99 per cent falls drastically from 12 complexes in 1995-96 to only 3 in 1996-97. There is increase in the number of complexes where the occupancy lies between 60-79 per cent, which

can be termed as a moderate performance. On the same pattern, the number of complexes having less than 60 per cent occupancy also increases. The overall patterns reflect the declining trends in the occupancy rate in the Haryana Tourism Complexes.

On the basis of the performance, shown in the above table in terms of occupancy percentage, the following observations, which are put into three categories, can be made:

A Tourist complexes around or in close proximity to Delhi that mainly comprise Surajkund, Gurgaon, Badkhal, Faridabad, and Bahadurgarh show the occupancy percentage of more than 100 per cent.

B Tourist complexes falling on the national and State highways like Delhi-Chandigarh, Delhi-Jaipur, Delhi-Agra, Delhi-Alwar and Delhi-Ferozpur. The main complexes on these routes are Ambala, Hisar, Rohtak, Panipat, Sohna etc. The occupancy percentage in this category falls between 80 to 99 per cent.

C The complexes in the interior of the State, which could garner a very low average occupancy rate generally coming to less than 60 per cent.

Financial Implications

The study of trends hints to the declining fortunes for tourism in Haryana. The falling occupancy rates influenced the income from tourism. Table 3.4 below gives a glimpse of the financial results of Haryana Tourism Complexes.

TABLE 3.4

Financial Results of Haryana Tourism Corporation (HTC)

Year	*Profit/Loss (In Lakhs)*	*Year*	*Profit/Loss (In Lakhs)*
1986-87	32.0	1994-95	101.5
1987-88	5.1	1995-96	95.6
1988-89	9.3	1996-97	-314.0
1989-90	16.8	2000-01	-135
1990-91	43.3	2001-02	44.74
1991-92	29.4	2002-03	124.40
1992-93	46.5	2003-04	93.97
1993-94	76.2	2004-05	125.0

Source: *Statistical Abstracts Haryana*; Various issues published by Government of Haryana, Chandigarh

The Table shows the unstable character of earnings from the tourism. The situation is more alarming in 1996-97 where the earnings made a nose-dive. A number of factors can be held responsible for performing below the desired extent. The government has done a good job in the development of tourism infrastructure in the State but lack of a consistent and concerted policy on tourism prevented it from making optimum use of good infrastructure. Moreover, absence of professionalism in running the complexes has compounded the problem. In recent times, a number of private resorts came up at nearly all the major locations that offer better services and customer satisfaction and poses a serious challenge to the erstwhile monopoly of the Haryana Tourism complexes.

The Accommodation Sector in Haryana

In 2003, Haryana had 638 rooms in the approved category of hotels out of which 72 rooms were in the five-star category and 566 rooms were in 3-star category. The overall room capacity in Haryana is 817 (STD, 2003). The following table gives detail of the status of accommodation sector in India.

Strategies for the Future

The response of the government to tackle the challenges being faced by tourism in the State rests upon two major considerations. The first consideration is to revitalise the Complexes of Haryana tourism, and secondly to promote attractions to attract the tourists to the State. The earlier consideration may seek a release in the concept of privatisation, which is in tune to the existing treatments to deal with such ailments. The government has so far not spelled out the modalities of privatisation that either the management of services is to be given into the private hands or the government intents to sell its properties. Both these aspects have different implications for the State economy in general and tourism in particular.

The second consideration acknowledges the promotion of attractions to attract the tourists to the State. The government is keenly poised to promote Kurukshetra (KDB Report, 2000) and Morni Hills by promoting historical and pilgrimage tourism at Kurukshetra and adventure tourism at Morni Hills. Undoubtedly, it will reduce the dependence of tourism sector solely on the highway tourism. Kurukshetra, unquestionably, possesses the spiritual magnificence to shower peace and tranquility to the exhausted souls of the material world. A careful planning and a professional outlook along with adequate finances will determine the fate of Kurukshetra as an international destination. The State's keenness and Centre's cooperation in the development of Kurukshetra as an attractive destination may turn the wheel of fate in favour of tourism. Besides, the State is yet to acquire the image of a tourism State as in the case of Rajasthan, Maharashtra, and Kerala etc.

TABLE 3.5

Status of Accommodation in Haryana

Town	*Dist*	*Facility*	*Rooms*	*Occy 99-01*	*Food Revenue 2001-02 (Avg. Lac)*	*Bvg. Revenue 2001-02 (Avg. Lac)*	*Room Revenue 2001-02 (Avg. Lac)*	*2001-2002 activity*	*Proposed Plan Outplay 2002-07*	*Proposed Spend 2002-03*
Amabala	Amabala	Kingfisher '86	16	64%	46.41	13.09	20.95		30	
Bhiwani	Bhiwani	Red Robin 84	4	41%	9.64	13.14	3.16		50	25
Badkhal	Faridabad	69	41	74%	57.25	14.20	91.00	Renovation	85	10
Faridabad	Faridabad	Golf course	7	46%	15.44	6.42	8.39		60	10
Faridabad	Faridabad	Magpie '75	27	83%	81.53	27.07	79.38		20	
Hodal	Faridabad	Dabchick '74	22	36%	42.80	9.07	16.69		10	
Surajkund	Faridabad	Raj Hans 82 Hermitage '88 Sunbird '70	78 165 19	37120 66%	140.53 17.26 21.26	9.61 5.53 10.56	120.05 211.90 142.71	Renovation of Room	80	20
Fatehabad	Fatehabad	Papiha '99	2	44%	2.83	2.18	1.98		5	
Damdama	Gurgaon	Saras '89	15	55%	17.55	3.70	21.26		15	
Gurgaon	Gurgaon	Shama '74	20	105%	31.04	25.07	61.14		10	
Sohna	Gurgaon	Shona '73	16	67%	23.16	4.73	27.43		15	
Sultanpur kund	Gurgaon	Rosy Pelican '72	12	85%	9.13	3.09	20.44		See	Hathni
Hansi	Hisar	Black Bird '99	6	20%	4.17	2.08	2.61		5	
Hisar	Hisar	Flamingo '73	6	49%	8.88	17.78	7.02		20	
Hisar	Hisar	Blue Bird '96	14	62%	31.43	13.81	22.87		20	
Jind	Jind	Bulbul '72	6	37%	11.16	10.55	4.16		10	
Narwana	Jind	Harial '87	6	26%	5.72	1.33	3.01			
Kaithal	Kaithal	Koel '84	6	56%	22.73	9.98	6.21		40	
Uchana	Karnal	Karna lake Oasis	25	61%	53.07	16.11 163.43	25.42 13.79	Kitchen + 0.00	40 toilets	60
Jyotisar	Kurukshetra	Jyotisar '94	2	75%	1.36	0.00	2.18		10	
Kurukshetra	Kurukshetra	N.K.Dham '87	31		18.84	0.00	19.23			
Pehowa	Kurukshetra	Anjan '99	10	24%	5.48	1.45	4.73			
Pipli	Kurukshetra	Parakeet ,72	16	34%	24.26	9.09	12.23		20	
Mansa Devi	Panchkula	M.D.Yatrika '97	8		2.65	0.00	7.62			
Morni Hills	Panchkula	Mountain Quail '99	12	12%	6.60	0.85	3.45			
Panchkula	Panchkula	Red Bishop '93	14	82%	90.43	13.44	34.69	Renovation	40	
Pinjore	Panchkula	Yadavindra Gardens	26	44%	39.93	6.72	28.52	Kitchen +	40 toilets	15
Panipat	Panipat	Kala Amb '95	4	26%	1.37	0.00	2.22			
Panipat	Panipat	Skylark '76	21	34%	84.66	14.45	13.81	Fast fd ctr	20	
Samalka	Panipat	Blue Jay '72	9	62%	13.80	8.32	11.87		10	
Dharuhera	Rewari	Jungle Babbler '74	13	30%	11.12	9.68	9.47		10	
Dharuhera	Rewari	Fast Food			4.43	0.00	0.00			
Rewari	Rewari	Sandipiper '82	10	23%	9.46	14.63	14.73		10	
Bahadurgarh	Rohtak	Gauriyya '90	15	120%	19.52	11.08	36.61		40	5
Rohtak	Rohtak	Tilyar Lake '99	20	40%	54.42	16.91	14.83		20	5

Contd...

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Town 2002-03 2002-07	Dist	Facility	Rooms	Occy 99-01	Food Revenue	Bvg. Revenue 2001-02	Room Revenue 2001-02 (Avg. Lac)	2001-2002 activity 2001-02 (Avg. Lac)	Proposed Plan (Avg. Lac)	Proposed Spend Outplay
Rohtak	Rohtak	Myna '75	9	57%	21.00	22.06	12.63		10	
Asakhera	Sirsa	Shikra '84	6	27%	3.74	0.85	2.16		10	
Ottu	Sirsa	Cotton Teal '01	2		0.70	0.00	0.33		100	10
Sirsa	Sirsa	Surkhab '80	7	37%	5.93	4.47	4.46		10	
RAI	Sonipat	Ethnic India '00	20	78%	21.11	10.44	36.93	Rest + Bar + kitchen + 10room	50	
Hathnikund/ Kalesar	Yamuna Nagar								15	
Yamuna Nagar	Yamuna Nagar	Grey Pelican '84	9	44%	16.57	10.57	8.88		20	10
Delhi									200	
Dundahera		New Complex							30	5
Faridabad	Faridabad	Food Craft Inst							20	5
Panipat	Panipat	Catering Institute								
Buses										
Shops										

Source: Final Report or *20 Year Perspective Plan for Sustainable Tourism Development in Haryana*; March, 2003. Available on Official Website of Ministry of Tourism, Govt. of India: www.tourism.gov.in

Future Directions for Tourism Development in Haryana

In the absence of very rich natural or cultural tourist resources, Haryana has to develop attractions and activities that leverage its road network and its proximity to Delhi. It can well promote modern forms of tourism for both international and domestic tourists. The prominent ones can be medical tourism, business tourism (MICE).

Medical Tourism

India is fast emerging as one of the centres for medical tourism with government setting the target of $2.1 billion in revenues by 2012. Haryana has a rich potential to be part of it by promoting modern medical facilities at cities of Gurgoan and Faridabad near Delhi and at Panchkula on the other end. Both places are well connected and hospitals by big well known chains will automatically bring patients. Even an area can be developed as health city. It can further extend the theme by promoting wellness tourism for alternate therapies like Yoga and Ayurveda at cities like Kurukshetra that already attract religious tourists but do not have long stay in the absence of activities.

Business Tourism

Globally it will change the future of tourism, as it is less seasonal. Organisation of meetings, incentive travel, conventions and exhibitions is its upcoming segment. Cities nearer to Delhi can be developed and promoted as MICE destinations. After Vigyan Bhavan and Pragati Maidan, in Delhi, similar facilities do not exist in North India. Haryana can fill this vacuum.

Sports Tourism

Haryana may or may not organise sports on a big scale but Delhi being capital will always be host to games. The forthcoming Common Wealth Games at Delhi in 2010 will demand large accommodation facilities. The State can contribute to it by offering required accommodation. In future it may think of hosting sport events as well.

Tourism Hubs around Delhi

It can develop tourism centres in the cities adjoining Delhi to cater to complete recreational and residential needs of tourists. These hubs can be developed into complete recreation centres with variety of activities. Since the capital cannot expand further, Haryana can cash this

opportunity. It can even develop its properties in Delhi for this purpose.

Eco Tourism

It is the buzz word in tourism globally. To promote eco tourism in the State its understanding has to be changed. If it is taken as sustainable tourism developed for nature based areas then the scope is limited, but if it is taken as an approach to all forms of tourism, it definitely needs to be taken on priority to prolong the life of all other forms of tourism mentioned above.

All the above may require initial concessions regarding land availability and tax holidays. But later it will pump the economy. Eco tourism shall be given more incentives as it initially increases the costs for the consumer but saves resources for future generations.

Problems of Tourism Development in Haryana

The State begun well by positioning itself in highway tourism through Haryana Tourism Corporation but with the development of the more and better highways, consumers have been shifting towards private facilities. It is evident from the falling occupancy figures of the tourism corporations and increase in the number of private service providers on the highways. But overall tourism has been growing in the State. The major problems of tourism development in the State are:

Absence of Long Term Plan on Tourism

A plan is required projecting the attractions and activities to be promoted, visitors expected, and marketing plans to ensure visitors, well defined role of public and private players. A policy statement and action plan is urgently needed.

Absence of Measurement of Tourists

The tourist arrival figures are based on visits to Haryana Tourism Complexes and taking it as tourist arrivals is too far fetched. A mechanism to estimate number of tourists is needed for developing tourism plans. As per the figures of NHAI toll bridge at Karnal, 30,000 vehicles cross it every day. Out of this 15,000 are cars and similar vehicles and, 15,000 buses, trucks etc. If a part of it comes as tourists the numbers would be impressive. But more precise calculations are required at major points.

Absence of Assessment of Impacts of Tourism

The impacts and costs associated with tourism are not properly assessed for lack of adoption of tourism satellite accounting systems. This is being promoted by World Tourism Organisation and is being adopted the world over. Government of India too is encouraging its adoption. If used, this can provide fairly accurate idea of contribution of tourism to the economy and can then get appropriate weightage.

Non-Participation of Locals in Tourism

Active involvement of local population is critical for the success of tourism venture like rural and farm tourism. Proposed Rural tourism project at Jyotisar is yet to take off and a Kerala like model to empower local bodies can go long way in adopting similar projects and in integrating it with other economic activities.

No field can progress without research and it applies to tourism too. Continuous research is required to find the changing tastes and behaviour of tourists. Internet search gives access to only one detailed research by Ministry of Tourism, Govt of India in 2001. More research is required to highlight potential areas of development in the State. Haryana Government should take initiative to establish a research institute for the full exploitation of tourism potential in the State.

There is an isolated growth of tourism in the State that has prevented tourism to grow as a significant economic activity. Intensive and extensive work plan to utilise the cultural and commercial character of the region for tourism is the need of the time. The further strengthening of Highway tourism, proper grooming and marketing of its three major festivals i.e. Surajkund, Kartik and Geeta Jayanti festivals, a planned, professional and comprehensive development of Kurukshetra and Morni Hills, development of spots exclusively for recreation and pleasure—all can pave way to contribute significantly to the State's economy.

3.2.2 IT Kiosks

We are in the beginning stage of IT revolution. It will take decades before any significant number of households can afford an Internet connection in the country. If we succeed in developing the content or knowledge bases that are useful to our farmers and peasants, small businesses, weekly markets, dairies, and handicrafts, then just as the public telephone is helping people to communicate globally, so will the private and public Internet connections enable our people to access the millions of 'electronic libraries'. The use of information and communication technology (ICT) in the rural areas is a strategic move to overcome many of planning and implementation problems. It is generally observed that information asymmetries

amongst bargainers lead to costly delays and stalemates in modern economic set-up. Market forces, as have been evolved, generally succeed in bringing together certain interests at specific levels but they fail when the transaction costs are high. Investment in ICT infrastructure can help to reduce these transaction costs for those who cannot pay them. So the knowledge can become a means of power if coalitions or networks of relevant actors evolve.

Computerisation of *mandal* revenue offices in a specific State such as in Andhra Pradesh, and application of information and communication technology for postal services and health care system in rural areas and Honey Bee-Network database are some of the examples of specific attempts of computerisation made in the recent past. Moreover, since 1995 the All India Society for Electronics and Computer Technology has been implementing an All India Coordinated Programme to set up multipurpose electronics and computer centres in rural and tribal areas of the country. Considering the use of information and communication technology and its application in rural areas, such as in decision to support public administration, improving services to citizens and empowering citizens to access information and technology, the style of public administration has changed substantially. Public administrators now focus primarily on improving planning and monitoring development programmes. The emphasis has been more on automating the process of delivering services to citizens and to bring about transparency in the system. The use of ICT can provide up to date information on various aspects of rural development programmes and can help in increasing the bargaining power between the consumers and producers. This would, in effect, reduce the role of the middleman on one hand and improve productivity on the other. A large number of innovations in farm practices, tool designs and use of indigenous methods do not diffuse beyond local boundaries because of the constraint of communication. The use of ICT and web technologies now would make visible the benefits of indigenous technologies to large cross section of rural communities.

There is another area in which the impact of ICTs is being felt is the social sectors such as health, education and rural development in India. The technological convergence of information technology, tele-communication and entertainment electronics can open up new vistas in the life of common man and the rural-urban differences can be reduced to a minimum.

In a supra-national space, due to the impact of globalisation, developing economies are increasingly at the mercy of the international organisations who sometimes profess to act as a countervailing force to international trade and financial interests and at times undermine the role of representative local bodies. This has brought about the problems of accountability of the institutions. With the necessary political orientation and support, ICT now definitely form part of the developmental planning to bridge the gap that may exist between different levels of relations. The State should help to build up the infrastructure required and assist in every possible manner for changes in technology and organisation that are needed for broad based processes of social and economic transformation. The extended scientific activity would enable the State to meet many of the objectives of 'decentralised development planning'.

ICT can enhance the capability of the poor and help to strengthen local level institutions by making them more autonomous and less dependent on the State-coordinated bodies. It can also help in increasing the bargaining power between the producers of different goods and services and can play an important role in extension education and transparency in government expenditure, in improving the health care system and in many other areas. But the job would remain incomplete unless the demands are made from below and local level institutions are strengthened to behave in more responsible manner to solve the problems of the poor who are constrained structurally by different social and geographical conditions.

The State must be supportive in implementing the redistribute policies more effectively by responding to the needs of different communities. For instance, the conditions of the poor in the tribal belt of hill-forest regions are different from the conditions of poor people who reside in the plain areas and therefore, there is a need to organise ICT programmes keeping in view the needs of different communities. Under these circumstances, giving more voice to the poor and inducing them to get involved in local self-governing institutions for management of the local resources seem to be the only choice. Technologies accompanied by institutional reforms would help realising this objective and then the scope of democracy would not be limited to voting but would be extended to enable the citizens 'to enjoy the conditions for effective participation, enlightened understanding and the setting of the political agenda'.

The Central Government plans to roll out 'common service centres' or IT kiosks in one lakh villages across the country by 2007 as part of the National e-Government Plan. The National e-Government Plan is aimed at improving the quality, accessibility and effectiveness of government services to citizens and businesses with the

help of ICT (information and communication technologies). It has eight components and 26 mission mode projects to be executed over a four-year period. Mission mode projects comprise projects under the Central Government, the State departments, and integrated projects which involve multiple ministries, departments or agencies. The Central Government projects cover programmes such as national ID, central excise, income tax, DCA-21, passports/visa and immigration, pensions, banking and insurance, while the State level projects include land records, property registration, transport, agriculture, municipalities, *gram panchayats*, commercial taxes, treasuries, police and employment exchange. The integrated projects include e-business, common service centres, India portal, e-procurement and e-courts.

People living in far-flung villages will soon be able to avail themselves of a slew of services ranging from procuring land records to getting caste certificates for jobs at the click of a mouse. The Department of IT will move a proposal to the Cabinet on the approach and modalities for the e-government plan including the implementation framework, the types of services to be offered and the roll-out plan for these kiosks for an integrated delivery of government services.

The plan is to establish such kiosks in one lakh villages in a 'honeycomb model', which means one out of every six villages will house a common service centre where people can avail themselves of a host of services including searching for land records, getting grievances addressed, procuring caste certificate for jobs or even checking their children's results online.

In the first phase, a State Wide Area Network (SWAN) shall be set up and a sum of Rs. 3,300 crores has been allotted by the Planning Commission. Over 17 States including Tamil Nadu, Karnataka, West Bengal and Uttarakhand have started implementing it and most of them have been allocated the funds. SWAN is a digital link on which the services will ride. It can be used to assign a unique identity for individuals in BPL families to better target the delivery of government welfare and other programmes for the poor.

The State can take lessons from Rajiv Internet Village Programme by Andhra Pradesh, Bhoomi Programme of Karnataka, Bangalore, the Karnataka Government's E-Governance Initiative, and other low-cost small projects for rural communication like Akshaya project in Kerala or DakNet, ITC's e-Choupal effort, The Telemedicine project Gyandoot, The Hole in the wall experiment by NIIT etc. Various recommendations from these programmes are given further.

The objective is to enhance Internet usage in villages for providing a range of services useful to the farmers, rural poor and downtrodden sections of the society. The programme will improve the quality of life of rural people by providing them with IT enabled education, health care, and better governance. The technology shall be useful for rural citizens in increasing their agricultural yields, enhancing their income levels, and to lead a comfortable and decent life.

The IT Kiosk programme for Haryana should have three broad components:

a. Electronic delivery of services through at least 1000 rural kiosks, that is, for every six villages there should be one IT Kiosk centre.

b. Computer literacy to at least one person in each family in rural areas

c. Broadband connectivity up to all villages by 2007

Rural kiosks should deliver a host of services related to Agriculture, Health, Education, *Gram Panchayats*, Rural development and welfare schemes and collection of power bills, taxes etc., The wide usage of hindi in Information Technology should be promoted. Establishment of IT kiosks shall be a profitable business. The setup cost of the kiosks can be recovered in less than one year. The profitability increases with increase in number of databases attached with the kiosks. They can also create number of jobs for the data entry operators if the creation of databases is outsourced to the external agencies. Thus it is a means of livelihood as well a channel for delivery of Government services and information. These kiosks can render immense benefit to rural citizens like:

a. Easy access to information on agriculture, education, health etc.,

b. Market prices, cropping pattern, weather forecast, agriculture extension

c. Agricultural marketing: getting better prices for produce

d. Examination results, Computer assisted learning

e. Health extension and immunisation through UNICEF, telemedicine with the help of hospitals etc.,

f. Access to all forms, copies of land records, applications, certificates etc.

g. Collection of bills: electricity, telephone, power, water, phone bills, property tax, RTO, etc.,

h. Registration of vehicles certificates

i. Private insurance services

j. Proof of ownership of landholding from computerised land records

k. A disaster recovery service, and a third party audit, besides the air-conditioned ambience with a TV set, coffee vends, an ATM and a library,

l. New services such as railway reservations, filing income-tax, cinema tickets, matrimonials, and bus passes.

The motivation and commitment to telemedicine in developing countries is very strong. This motivation is often backed by a willingness to pay for systems which are expected to improve health outcomes and lower medical costs in the long run. Telemedicine services may be perceived as more of a necessity in developing countries than they are in the industrialised countries, resulting in a greater willingness among the former to change established methods of doctor-patient interaction and health care administration.

The establishment of IT kiosks is a profitable business for the governments also. The profitability increases with more and more number of databases attached to the IT kiosk centers. The governments are generally slow in preparing the databases that leads to the increase in project completion time causing increased costs and seriously hurts the viability of business. Haryana government should outsource all activities of preparing and maintaining of databases to private parties. Even the services to the citizens should also be provided by the private parties. The government officials can be used for validating and authenticating the information sold to the users. Strict quality standards should be established for providing easy, timely, cost-effective and reliable service to the IT Kiosk users.

E-Governance Initiatives in Haryana

Government of Haryana has taken the following steps in the year 2006 to promote E-Governance in the State:

(i) Major e-governance Applications Implemented in Haryana

State Government Mission Mode & Other Important e-Governance Projects:

Land Records: HALRIS: Haryana Land Records Information System at all districts, On-line Nakai Services (Copy of Records-Of-Right) through HALRIS launched on http://jamabandi.nic.in.

Property Registration: HARIS: Haryana Registration Information System at 100 per cent sites.

Commercial Taxes: VATMaCS: Value Added Tax Monitoring, Assessment & Collection System at all districts. Integration of VAT system with treasuries and multiple bank branches.

Gram Panchayats: BPL census survey, Web site of Rural Development Department, Web enabled rural soft for DRDA schemes, MIS, IT Plan of *Panchayat* Department. MPs Local Area Development Scheme MIS.

Municipalities: HACIS: House Tax Assessment & Collection Information System and Birth & Death Certificates Issuing System. Software for Base Line Survey under total sanitation campaign.

Treasuries: OTIS: On-line Treasuries Information System at 100 per cent treasuries.

Road Transport: Driving Licence Software/"Sarthi" & Vehicle Registration Software/"Vahan" at 30 locations.

Agriculture: DACNET projects and AgRIS project. AGMARKNET projects at all 106 *mandies*, 135 officials of Market Committees trained under AGMARKNet project. Visiting South African delegation appreciated AGMARKNET in Haryana. Web Portal for HSAMB.

Police: Suite of seven application software packages for police network completed and 150 police personnel trained on suite.

Employment Exchange: Registration & Vacancy Booking System implemented.

Health Care: Suite of Software packages under of e-Health Net implemented at CMOs.

Social Welfare: HaPPIS: Haryana Pensions Processing & Information System for more than 12 lakh pensioners. Interactive web portal. IGDS Scheme Monitoring, Web portal of Women & Child Development, IT Plan of WGD department

Education: Technical: Students Information & Examination System, Web enabled MIS for Polytechnics, Interactive website, Secondary: Transfer Requests monitoring with integration to teachers PIS, 7th All India Education Survey, Web enabled all School exams results, admit cards, provisional certificates & result through binocular. GGG-CAPES, Engineering Admissions Counseling, ICT consultancy to universities.

Administration: Standard Suite of G2G Packages (PIS, Payroll, Oak, Court Cases, Budget Control), CefMaTIS:

Centralised File Movement and Tracking Information System,

CORD: Computerisation of Revenue Department Suite of G2G packages. Integrated web enabled Rooms Reservation System for Haryana Bhawan .

Haryana Assembly Elections 2005: Duty Assignment and Randomisation of Polling booths implemented for all 90-assembly constituencies in Haryana. Extensive ICT support to Haryana Panchayat Elections and Municipalities elections. Dynamic websites of Haryana Vidhan Sabha and Websites for State Election Commissioner, CEO Haryana.

HI-FI.Net: Haryana Integrated Finance Network. Budget Preparation & Releases System for Annual Budget 2006-2007 in a workflow environment implemented, Web enabled Loan & Advances Monitoring System, POL (Petrol, Oil, Lubricants) Monitoring System, and Daily Ways and Means Position Monitoring system.

e-Food Net: Web Enabled Food grains Procurement & Storage Monitoring System.

Chief Minister's Office: The Public Demands Tracking System, Announcements Implementation System, Transfer Requests Processing System, Oak Monitoring System, Centralised File Movement & Tracking Information System, Public Grievances Tracking & Monitoring System implemented.

Web enabled Labour Court Cases Software got developed and implemented.

Advocate General Office Court Cases Tracking & Monitoring System.

PWD Works Monitoring System as a web enabled application, including Letter of Credit (LaC) MIS

(ii) Integrated Services Projects

E-DISHA: Ekal Seva Kendra G2C information and Transactional services project has been initiated at all districts. The Urban E-DISHA centrals (around 80-100) have been planned across the State in major towns/cities through PPP "Model. CSCs Project: Common Services Centres will be established at cluster of villages under the CSC scheme of Govt of India. The e-readiness assessment of the State for the CSCs has been completed.

Web Services: Integrated Public services on official web portal of Haryana *www.haryana.qov.in.Maintenance*_of web sites of all districts and various departments/organisations. The Haryana Government portal is being enhanced and re-designed to add content management features.

Employees Portal: Dynamic web portal *http://aqhrv.nic.in* for serving the retired and in-service government employees. Around 125 lakh live records for 2.93 employees.

E-Procurement: State has planned to introduce the web based e-Procurement system in a phased manner. The adoption of the model suggested by Cabinet Secretariat and Administrative Reforms Department Gal has been approved by the State IT-PRISM. The business model is being finalised.

(iii) ICT Infrastructure at State Capital and Districts

ICT Infrastructure & Network Services: The NIC has established an Intranet at the Haryana Capital Chandigarh with more than 1000 nodes. The Maintenance, Management & Operations activities of LANs at 06 sites in Chandigarh (Civil Secretariat, New secretariat, 30 Bays Building, CM Office, Vidhan Sabha, High Court, Finance Department), MAN at Chandigarh based on Wireless RF Network & leased lines of BSNL, and dedicated Internet gateways (WAN) based on VSATs & leased lines at State Hq and FTDMNDirecway VSATs at all Districts are managed on day-to-day basis.

ADHAAR (SWAN): The State Wide Area Network is being established in the State through the funding from DIT, MCIT, Govt of India on BOOT model. The RFP has been prepared and the same is under finalisation. The Vertical POPs and Horizontal Connectivity requirements are being finalised for SWAN RFP. The RFP will be released to press by the end of June 2006.

Haryana State Data Centre: SAN based Haryana State Data Centre, with two TB storage capacity, has been established at Haryana Civil Secretariat. Its operations are managed on 7 days basis.

DAM A Based VC setup at Haryana Civil Secretariat.

NIC Centre has been established at new District Mewat (Nuh). Now the district IT centres are operational at 100 per cent districts of Haryana.

E-Mail & Telecommuting Services: Around 3500 e-mail accounts on http://hry.nic.in e-mail server and HODs services. E-mail services at districts through RAS continued. All activities of e-mail server and users on network managed. Extensive support on E-mail/lnternet and Telecommuting services to HODs, Administrative Secretaries and field functionaries.

(iv) Capacity Building and e-Governance Road Map

Around 3000 officials imparted Basic IT Awareness

Training and G2G Suite of packages operations training during year 2005-06. The training is an on-going activity.

The Capacity Building Road Map has been prepared for the State and submitted to GoL

The e-Governance future Road Map has been prepared for the State and submitted to GoL

(v) Software Export

Haryana has been rated as an Aspiring Leader in e-Governance Readiness Index of the Country.

The exponential growth has been recorded in IT/ITES exports up from about Rs. 400 Crore during 1998-1999 to Rs. 7300 Crore during 2004-05. There has been around 33 per cent increase in the export of IT/ITES during the year 2006-07 over the last year. The State has been ranked third after Karnataka and Tamilnadu in IT/ITES exports turnover.

(vi) Centre Government Mission Mode and Other Important e-Governance Projects being implemented in Haryana

Passport: Network management and operations at Regional Passport Office, Chandigarh being managed by NIC Haryana. The PCIS (Passport Control and Issuing System) and PIRS (Passport Index Retrieval System). Centralised Passport Applications Acceptance System (Web Pass) is being implemented at all districts. Web Enabling of Passport Information System for acceptance of on-line applications through Internet.

Customs & Excise: The system for on-line submission of export papers by exporters and Import software implemented at ICT Ballabhgarh.

E-Courts: District Courts: Workflow based Sub Ordinate Courts Judicial Information System (SOCJIS) at Panchkula and Ambala Standard, suite of legacy packages at 14 district courts. Punjab & Haryana High Court Project: New website of High Court *http://hiqhcourt.chd.nic.in* launched by Hon'ble Chief Justice of Punjab & Haryana High Court.

Planning: DISNIC-PLAN Phase-II pilot project at Jhajjar.

IISFM (Integrated Information System for Finance Management) for FCIs. All India Education Survey Project completed successfully.

PMGSY: Prime Minister Gramin Sarak Yojna Monitoring at 21 locations, Rural Habitations—Drinking Water Mission Project *(www.ddws.nic.in)*.

CIPA project implementation is being coordinated for 22 Police stations

AgRIS project initiated for Rohtak District. The AgrisNet project proposal is being prepared for Agriculture department.

Department of Science & Technology Haryana organised one day conference on Science & Technology for overall development on 17.02.2006

In this conference, the following areas were identified for inviting proposals from Universities/Institutions/ Organisations for grant-in-aid:

1. Biotechnology

- Conservation of germ plasm of endangered/ special species of plants.
- Promotion of Bio-Nanotechnology and its application.
- Promotion of rural and conventional Biotechnology.
- Tissue culture of datepalm, *mehndi*, jojoba etc.
- Promotion of neutraceuticals.
- Cataloguing the genetic diversity among plants, microbes and animals.
- Screening of Indian herbs for potential therapeutic use like anti viral and anticancer.
- Survey of Haryana for ascertaining the infection rate of Hepatitis B & C and liver cancer deaths.
- Bioremediation.
- Promotion & popularisation of Bio-pesticides and Bio-fertilisers.
- Projects on Nanotechnology
- Biogeography

2. Health

- Production of diagnostic and testing kits.
- Promotion of telemedicines through mobile/STD booths.
- Genomics basic information/promotion in colleges.
- Development of rapid diagnostic kits for detection of adulterants/micro-organisms/toxins/chemical residues in roods, milk and milk products, cereal products and, animal feeds etcetera.

3. Food Processing

- Food Processing, fortification, preservation, transportation and general health foods.

4. Waste Management

- Waste Management.
- Post harvest management practices, checking of waste.

5. Environment and Energy

- Conservation of water through water harvesting, recycling, remediation and water quality management. Double flush system may be made compulsory.
- Environment impact assessment (includes total energy and environment).
- Energy audit of industry, buildings etc. and energy conservation, standardisation of equipments to save energy.
- Fly ash utilisation techniques for specific product developments.
- Popularising effective air-cooling system for houses without the use of power supply.

6. Other Emerging Areas

- Technology for the promotion of sports.
- Summer internship at labs to science toppers.
- Setting up of Herbal Parle
- Training and extension programmes on new and emerging technologies and science competition/ Olympiads.
- Government-Industry-Institute linkage on exchange basis.
- Integrated planning for roads.
- Plantation of Jatropha besides railway tracks and roads.
- Promotion of Science and Technology for physically challenged.
- An advertisement is published in the leading newspapers and Research & Development proposals are invited from various universities/ institutions/organisations in Haryana and Delhi.

The Department of Science & Technology Haryana has prepared a comprehensive plan document which is submitted to State Government for consideration. This plan will be of great use for number of departments of the State like revenue, rural development, DRDAs, PWD (PH), PWD (B&R), Local Bodies, HUDA, HSIDC, Agriculture, Education, Power etc.

Haryana State Council for Science and Technology (HSCST) is engaged in planning, implementing and monitoring policies for promotion of Science and Technology in the State. Haryana State Remote Sensing Application Centre (HARSAC), Hisar, is a premier agency for utilisation and applications of satellite data in various economic sectors of the State.

3.2.3 Pharmaceuticals

The Indian pharmaceutical industry, with US $4 billion in domestic sales and over US $3 billion in exports, has been showing steady and satisfactory growth in terms of infrastructure development, technology base and product use. The industry now produces bulk drugs belonging to all major therapeutic groups requiring complicating manufacturing processes and has also developed excellent 'good manufacturing practices' (GMP) oriented facilities for the production of drugs by following cost-effective technologies in the shortest possible time without compromising on quality. This has happened due to country's strengths in organic synthesis and process engineering. The country is now well known as a low cost producer of anti retroviral and supplier of the same to international organisations and more importantly to the needy patients in Africa. The Department of Chemicals and Petrochemicals is also working on the price management of the drugs, including life saving drugs. Government of India is also focusing on the R&D effort to encourage the development of new molecules. The international pharmaceutical industry is also very keen and hopeful to see India playing a big role in the world's pharmaceutical industry because of the modifications/ amendments in the Indian Patents Act, 1970 through an ordinance on December 26, 2004. This was done for the third time (the earlier two amendments were enacted in 1999 and 2002) to introduce product patents for drugs, food and chemicals.

By doing so, government has adhered to the January, 2005 deadline for implementation of the Product Patent Regime, in conformity with the Trade Related Intellectual Property Rights (TRIPS) agreement of the World Trade Organisation (WTO).

Table 3.6 reveals that growth of exports of pharmaceuticals in world's exports has been more pronounced than trade in manufactures, chemicals and all other chemicals. The value of world's exports in

pharmaceuticals has been US$ 200 billion during the period 2003 whereas the value of world's exports in manufactures and chemicals have been US$ 5437 billion and US$ 794 billion respectively. The annual percentage change of world's exports has been much higher i.e. 23 per cent as compared to manufactures and chemicals in 2003. Most of the world export and imports are concentrated in developed countries, that is, 90 per cent and 80 per cent respectively. In comparison to this, India's exports of pharmaceuticals has been USD 2 billion in value in 2003 and it has a growth with an annual percentage change of 10.7 in 1990-2000 and 17.2 per cent in 2000-03. The imports of pharmaceuticals have been US$ 1 billion in value in 2003 and their percentage annual change was 4.0 in 1990-2000, and 18.4 per cent in 2000-03. Due to the elimination of tariffs in pharmaceutical products in Uruguay Round in all major producing markets, the dynamic growth has taken place in the world trade in this industry.

TABLE 3.6

World Exports of Chemicals as Manufactured Goods (Billion US $ and Percentage Change)

2000-2003

	Value 2003	*Annual Percentage Change*			
		2000-03	*2001*	*2002*	*2003*
Manufactures	5437	5.0	-3.8	5.2	14.5
Chemicals	794	10.7	2.6	11.0	19.0
Pharmaceuticals	200	23.0	22.4	26.3	20.3
All other chemical products	594	7.5	-1.8	6.7	18.6

Note: Pharmaceutical products are defined as SITC Rev. 3 division 54.
Source: UNSD Coin trade database: WTO

It is in this background that we are to discuss the critical issues involved in this industry in Haryana and its future prospects as a new emerging area.

The pharmaceutical industry is located only in Panchkula and Gurgaon. Moreover, the Industrial Policy of the State does not seem to be enthusiastic about the development of pharmaceutical industry. This industry can not be an emerging area for future, even when pharmaceuticals share in world's exports are rising much faster than world merchandise trade and trade in chemical products. The global pharmaceutical sales rose by nearly 50 per cent over the 2000-03 period, or three times faster than global GDP growth. The sale of pharmaceuticals in world trade has increased due to strong demand growth which has been sustained by the factors such as the aging of the populations and the increased importance of 'Life-style' drugs.

All the factors except government policy are externally determined in case of promotion of this industry in Haryana. Therefore it is beyond the reach of the policy-maker(s) to concentrate on the development of pharmaceutical industry. Moreover, the network which ensures the certification and standards required under the WTO Trade Regime is also not fully developed in the State.

3.2.4 Export Promotion

The Indian government's liberalisation and economic reforms programme introduced in 1991 aims at rapid and substantial economic growth and harmonised integration with the global economy. The changing global and domestic environment requires reorientation of the development vision in recognition of the new paradigms that put the industrial policy initiatives in the context of an over arching economic development policy. The total value of exports in India was US $73 billion, whereas the value of world's exports was USD 8880 billion in 2003, that is, 82 per cent of the world's exports. The Chinese share in world's exports in 2004 was 6.67 per cent of world's exports and this to some extent may be attributed to Export-Promotion. The four East Asian Tigers share in world's export in the same year was 7.17 per cent and these were the first countries to embrace export-orientation in 1960s.

Keeping in view the developments at center, the State government in its industrial policy Statement of 1992 had focused on providing incentives for attracting investment in the industrial sector at a time when the de-licensing and reduction in controls had unlashed growth momentum in the economy. The subsequent changes in the industrial policy of the State reflected latest thinking about the development process by emphasising infrastructure led growth, Web Technology and Information Technology (IT) Policy (2000).

The industrial policy initiative seeks to consolidate the part progress and lay the foundation of a vibrant economy that focuses on improving the quality of life of its residents. It also aims at promoting industrial growth in the context of overall economic development of the State by creating an investor friendly environment that facilitates the industry to move strongly to the front ranks of global competition. The policy to promote integration of private initiative in the developmental process of the State.

Exports in Haryana were 4.5 crores in 1967-68, increased to more than Rs. 1800 crores during the year

1994-95, to Rs. 4163 crores in the year 1998-99, to Rs. 7000 crores in 2001. The total exports of Haryana have crossed Rs. 20,000 crores in 2004-05.

This phenomenal growth in exports in Haryana can be attributed to the setting up 100 per cent export-oriented units (EOUs) during the period, August 1991-May 2001. The number of EOUs in Haryana is 206, which is 5.59 per cent of the total EOUs in India. The highest number of EOUs is in Maharashtra (563), followed by Tamil Nadu (547) and Gujarat (458), that is, 15.28 per cent, 14.84 per cent; and 12.43 per cent respectively. The main products which are being exported from the State include motor cars, two-wheelers, bicycles, auto-parts, chemicals and allied products, electrical and electronic goods, handloom and leather goods, scientific instruments including laboratory equipments, slate stone, readymade garments, rice, *gur*, pickle etc.

More than 600 units of the State are engaged in the export of goods. The products are exported to more than 70 countries of the world which include USA, U.K., France, etc. The composition and direction of Haryana's exports is changing and expanding every year in the international market as the State government is making all possible efforts to promote exports and an Export Promotion Board has also been established. The grievances of exporters are being looked into and for this a system has been introduced at the highest level of administration.

Table 3.7 indicates the structure of exports of Haryana and their origin by districts/corporation wise from 1996-97 to 1998-99. The structure reveals that there exists a vast potential for export-expansion in the State if the agricultural exports are encouraged by the State in accordance with the WTO trading regimes by implementing SPS clauses in the Food Processing industry and introducing certification and standardisation of the products to capture the international market. Among districts the performance of Gurgaon is excellent, followed by Panipat, Karnal, Faridabad and Sonipat.

A review of the steps taken by the government suggest that creation of special economic zones as envisaged in the government of India scheme in the major sectors *viz*. agro and food processing, biotech, pharmaceutical, and garments, Agro-parks/Food Parks; Satellite Freight City and incentives for the exporting units etc., particularly the reimbursement of ISO 9000 certification expenses upto Rs. 50,000 or 50 per cent incurred in acquiring ISO 9000 or equivalent certification will go a longway to increase the export-potential of the State.

TABLE 3.7

Haryana's Exports: 1996-97 to 1998-1999

(Rs. in Lakh)

Sr. No.	*Item*	*1996-97*	*1997-98*	*1998-1999*
1.	Agriculture Implements	1177.47	892.57	1545.18
2.	Autoparts & Accessories	3899.93	4156.90	444.33
3.	Chemical & Allied Products	1768.14	2257.31	990.66
4.	Drugs & Pharmaceutical	2434.06	5275.23	1196.74
5.	Electrical Goods	4203.71	4506.20	6564.75
6.	Electronic Goods	7068.74	11059.35	14314.33
7.	Glass & Ceramic Products	714.72	1179.00	2183.75
8.	Guargum Products	9266.13	16600.50	34169.57
9.	Hand/Machine Tools	1158.24	1206.35	1662.68
10.	Handloom & Handicraft	46621.00	48432.63	66912.44
11.	Leather & Sports Products	13207.58	15725.65	16663.25
12.	Machinery & Parts	2720.23	2547.73	3961.73
13.	Metal ware/Utensils	0.00	60.00	0.00
14.	Moped, cycle and Parts	1179.33	1210.15	639.08
15.	Motor Car & Parts	59159.98	78556.55	46350.57
16.	Motor Cycle & Parts	4604.00	5412.00	43100.00
17.	Pickle	158.00	85.72	268.00
18.	Raw Cotton	1114.00	441.18	0.00
19.	Readymade Garments	13205.26	11627.71	41428.00
20.	Rice	48648.24	50634.67	109777.40
21.	Rubber Products	2769.60	9818.23	3660.86
22.	Sanitary Wares	785.02	325.16	362.00
23.	Scient. Inst. & Lab. Equip	1373.41	3218.66	3420.40
24.	State Stone & Mineral	1017.60	1025.00	1020.35
25.	Tractor & Parts	711.00	3750.45	510.90
26.	Misc.	16470.17	17150.00	14173.99
27.	Jewellery	0.00	0.00	0.00
Total	Rupees	245435.56	296155.00	416320.96

Source: Department of Industries, Government of Haryana, Chandigarh

TABLE 3.8

District/Corporation wise Export from Haryana during the Year 1996-97 to 1998-99

(Amount Rs. in Lakh)

Sr. No.	*District/ Corporation*	*1996-97*	*1997-98*	*1998-1999*
1.	Ambala	1006.19	1581.54	3491.40
2.	Bhiwani	10401.60	30031.00	34433.46
3.	Faridabad	20541.99	20380.24	31736.46
4.	Fatehabad	0.00	0.00	4.70
5.	Gurgaon	83516.02	114081.35	104140.10
6.	Hisar	3132.86	4368.80	2834.04
7.	Jind	4.00	62.26	42.90
8.	Jhajjar	0.00	0.00	1896.84
9.	Kaithal	7364.00	10647.00	17675.00
10.	Karnal	34131.30	36650.58	40596.25
11.	Kurukshetra	295.31	315.75	217.62
12.	Narnaul	183.13	198.00	0.00
13.	Panipat	40859.79	41064.00	59684.00
14.	Panchkula	924.73	8477.80	8270.50
15.	Rewari	15192.55	17021.98	46087.69
16.	Rohtak	9263.79	5003.00	4328.95
17.	Sirsa	0.00	0.00	112.82
18.	Sonipat	16047.19	4014.42	59823.02
19.	Yamuna Nagar	1485.82	1725.95	883.59
20.	HSSI & EC LTD.	44.29	90.15	56.44
21.	Hafed	1114.00	441.18	0.00
Total	Rupees	245435.56	296155.00	416320.96

Source: *http://www.indiainbusiness.nic.in/indian-states/haryana/exportpolicy.htm*

The Government of Haryana has taken many bold and appropriate steps for the promotion of exports. These steps are as follows:

(i) Special Economic Zones

Special Economic Zones (SEZs) will be set up in the State under Government of India's scheme in the major sectors *viz.*, agro and food processing, biotech, pharmaceuticals and garments. The basic idea to establish the SEZs is to provide such facilities to exporters which will make the import and exports free from all encumbrances, rules and regulations etc. The movements of goods to and from SEZs would be unrestricted and without hindrance.

Private sector would be fully involved to set up SEZs in the State. The State would also consider to set up Rice Zone, Dairy zone, Mushroom zone and Herbal zones at strategic locations.

(ii) Agro Parks/Food Parks

State Government has decided to set up four Agro parks/Food parks at Narwana, Dabwali, Saha and Jhajjar. In these Food Parks, integrated services shall be provided to food processing units with special emphasis on exporting units.

(iii) Satellite Freight City

Government of India will be approached for setting up a Satellite Freight City near International Airport, Delhi. The city will be developed in collaboration with Airport Authority of India and Foreign airlines. This will further facilitate faster clearance of air cargo from the northern region.

(iv) Inland Container Depot

It will be the endeavour of the State Government to strengthen facilities in existing Inland Container Depot (ICD) and also to set up new ICDs at different locations through Haryana Warehousing Corporation and Private Sector to facilitate transportation of exportable items to Cargo complexes/ports. This shall supplement the already existing facilities at Panipat, Rewari and Faridabad and the planned venture at Murthal.

The following incentives and concessions have been provided to the Export units in the State:

(i) Preference in Allotment of Plots

Ten per cent of plots in newly developed industrial estates, are reserved for Export Oriented Units having atleast 33 per cent export commitment and units having minimum foreign equity of 33 per cent.

(ii) Power Connection

Preference would be given for release of electric connection and to provide electricity without any cuts.

(iii) Conversion Charges

No conversion charges would be levied for change of land use for the setting up of 100 per cent Export Oriented Units.

Export Promotion Assistance Scheme (per unit annually)

Participation in Foreign Trade Fairs/Exhibitions not only enlighten the entrepreneurs of the demand/ requirements of foreign markets, but also helps them to absorb foreign technologies. The State Government would provide the following assistance to SSI export Oriented units for participation in foreign trade fairs/exhibitions:

(i) 50 per cent of stall charges upto a maximum of Rs. 50,000/-.

(ii) 50 per cent of the air fare upto a maximum of Rs. 15000/- for one person.

Note: Both these above-mentioned schemes will be applicable to those units, which come into commercial production after 1.11.2001.

(iii) Rs. 50,000/- or 50 per cent of the total expenses, whichever is lower, for launching website.

(iv) Rs. 25,000/- or 50 per cent of the expenses, whichever is lower on air fare/counter charges for sending samples to exporters.

(v) Rs. 50,000/- or 50 per cent of cost, whichever is lower would be re-imbursed as assistance for obtaining ISO-9000 or ISO-14000 certification.

Transport Assistance Scheme

Haryana is a land-locked State. As a result, the cost of transport of export cargo to the ports affects their competitiveness adversely. In order to offset this disadvantage the State Government will extend assistance to subsidise export freight cost in respect of selected export products. The exemption will be grants on freight charges paid from Inland Container Depot (ICD)/ Container Freight Stations (CFS) to the gateway airport. The exemption on Airway Bill would be Re. 1 per kg subject to maximum of Rs. 50,000/- per unit annually for a period 5 years.

Purchase Tax

Purchase tax will not be levied on raw material and packing material used in export production.

Market Fee

Abolition of 'Market Fee' in respect of raw materials, for export production will be considered.

Entrepreneurship Development

State Government would organise Entrepreneur/ Management Development courses with specific emphasis on exports. Rs. 10,000 or 50 per cent of Tuition fee (excluding boarding and lodging charges) whichever is minimum shall be reimbursed to exporting SSI entrepreneurs for attending courses on Technology, Productivity, Quality, Management and other related courses.

Export Award

With a view to honour exporting units, a scheme of State Export Award has been instituted by the State Government. Export Award is given to exporters declared as First, Second and Third in each category, that is, Large and Medium and Small Scale sector:

A number of consolation Awards are also given to the next exporting units men-wise. Export Awards are granted to the manufacturer exporters engaged in the manufacture of items relating to the following trades:

i) Engineering.

ii) Food and Fruit processing, Agro Industries and Floriculture.

iii) Chemical, Mineral and Rubber Goods.

iv) Textiles, Handloom and Readymade Garments.

v) Scientific Appliances including Electronics.

vi) Leather Goods, Ceramics and Handicrafts.

Trade Fairs/Buyer–Seller Meets

Export/exportable products shall be provided priority in exhibiting at National/International Trade Fairs. Export Promotion Board shall organise exhibitions and trade fair in the State and outside including trade exhibition abroad. Stalls for display of exhibits will be provided at concessional rates to exporting SSI Units.

Labour Laws

In order to prevent labour problems in 100 per cent Export Oriented Units, the State Government has brought all the 100 per cent EOUs under Public Utility. The State Government would further review the Labour Laws and make necessary amendments in order to remove bottlenecks in the way of export growth. Procedure of hiring contract labour for seasonal industries would be streamlined and simplified.

The visits of inspectors to industrial units have been reduced to a bare minimum statutory requirement. The State Government would encourage self regulatory in EOUs. The inspection of industrial unit is now being done after prior intimation to the Deputy Commissioner concerned. Exporter's Industries Associations shall be invited to suggest measures for removal of further bottlenecks for EOUs.

To facilitate hassle free interaction with senior Government functionaries, the Government will issue Gold Card to Chairman/MDs of the 100 per cent Export Oriented Units, and Silver Card to the CEO of other exporting units. The Card holders will be entitled to enter Haryana Civil Secretariat without any hassle of gatepass and meet any officer of any department on priority. The Card holders correspondence will be replied within one week and references will be disposed off within a period of one month.

Haryana Warehousing Corporation is setting up a Cargo Handling facility at Kandla port in collaboration with APEDA.

State Government has decided to pay special attention to the growth of exports in traditional areas *viz*., Handloom products and carpets, scientific instruments, metal ware and utensils, ceramics etc. Steps would be taken to modernise the production process, providing facilities for design development and quality upgradation, encourage production diversification in accordance with the changing demand in importing countries, establishment of trade centres with integrated facilities, set up special institutes to meet training needs in the areas and providing quality testing facilities etc.

Mega Projects having investment of Rs. 30 crores and above will be offered customised package of incentives by the High Powered Committee instituted under Industrial Policy, 1999.

Rebate equivalents to 20 per cent of the land cost shall be given if the industrial units starts commercial production within 3 years of offer of possession of industrial plots allotted by HSIDC/HUDA.

Escort services and single desk clearance for obtaining easy clearances and approvals of various Government Departments shall be facilitated to those units which export 33 per cent of their production. Online clearances and support network will be established linking all the related departments/organisations. The IAG shall coordinate approvals and facilitations.

The time schedule shall be framed for various departments for giving necessary sanctions/approvals to reduce time frame for project completion.

In addition to all these measures, certain institutional changes need to be incorporated in the economy. Firstly, a research cum administrative institution should be established by the State to constantly review the requirements of WTO Trading Regime in order to make our exports standardised and certified in the World Market. This should be done by involving the private sector and academician in the universities.

Secondly, investor-friendly environment along with latest infrastructural facilities be created in the State.

Thirdly, the 'effective cities' should be developed in the State as they will be helping to export the advantages of globalisation.

Fourthly, the time has come when the Government of Haryana should create excellent marketing facilities for agricultural products and these products should be standardised, keeping in view SPS clauses of WTO.

Finally, we are confident that by investing in agriculture related industries and telecommunication and infrastructure in the State, the export potential of the State will increase manifold by the year 2015.

3.2.5 Strengthening of Certification, Safety and Quality Networks In the Context Of WTO Regime

The GATT has become the WTO's umbrella agreement and applies in all cases. The additional specific agreements that address specific aspects of trade have been negotiated. The Agreement on Technical Barriers to Trade (TBT) is the most relevant agreement for standards and certification programmes. The TBT applies the MFN and NT principles to technical assessment procedures. If note is that the TBT comes before the GATT in the hierarchy of the WTO agreement.[1]

The Agreement on Technical Barriers to Trade (TBT) aims to ensure that technical regulations, standards and conformity assessment procedures do not create unnecessary obstacles to trade. The Agreement encourages members to use international standards where these are available but it does not regime countries Members to harmonise their domestic regulations and standards upwards or downwards as a result of international standardisation activities. It is subject to the same principles as the GATT, that is, Articles I and III are the cornerstone of it, and exceptions or Article XX also apply to the TBT Agreement. It incorporates a Code of Good Practices that has been developed on a 'best endeavour' basis for voluntary standards.

Many developing countries find it difficult to participate effectively in the standardisation process due to lack of technical expertise and/or financial constraints. Even though 89 per cent of all countries fall in the category of developing and least developed countries and since most of them are unable to attend the meetings of the standardisation Committees, the developed countries fix standards which are often difficult for developing countries to comply with. This is because of the better understanding of the role of Codex Alimentarius Commission, upgrading of prediction and post-harvest technologies, large investments and also education among producers, processors and reporters.

There is no comprehensive body for setting SPS standards in India. The existing standards which correspond to SPS standards operate under the following:

(i) Prevention of Food Adulteration (PFA) Act 1954.

(ii) AGMARK standard which is a voluntary grading system operated by the Directorate of Marketing Inspection under Ministry of Agriculture.

(iii) Bureau of Indian standards, and

(iv) Export Inspection and Quality Control among others.

The Government of India has set up a National Codex Committee under the Department of Health, Ministry of Health and Family Welfare which has identified six major areas namely Fish and Marine Products, Meat and Meat Products, Fruits and Vegetables, Spices and Condiments, Milk products and Cereals, Nuts and Oil Seeds.

Multifarious actions like institutionalised training in areas of HACCP, GMP (Fisheries, Fruits and Vegetables); revision of PFA standards based on grade specification for export (spices and condiments) including parameters for microbial limits; maximum tolerance limit/MRLs for pesticide residue and aflatoxin; physical characteristics and cleanliness; allocation of food identifier codes (spices); strengthening of analytical laboratories in all food sectors; improving existing laboratories to reach BIS levels; harmonisation of maximum tolerance limits for different pesticides for different food groups/foods under PFA and codex; multi centric study on use of edible colours in food products (CFTRI and NIN). Shadow Committee on

1. This means that in the event of a conflict with provision of GATT the TBT Agreement will prevail. Bourgeois, Berrod (eds.). *The Uruguay Round Results: A European Lawyers' Perspective*. pp. 70-71.

general principles, Steering Committee for setting up standards for organic foods etc. have also started work.

In all major agricultural crops, especially in chemical and microbiological areas, these standards are comparable with international standards. The standards followed by certain sectors like spices/marine are compatible with international standards. Now Government of India is attempting to develop national standards encompassing all areas of operation. But the pace of its formulation and implementation is necessarily slow because coordination between various Ministries becomes difficult at times. Though there are a number of laws on food standards, enforcement remains a critical problem. The departments responsible to enforce it often do not have adequate resources, testing facilities or trained personnel. The penalty provisions also do not have the desired deterrent effect. The standardisation required for the implementation of SPS clauses should be extended to SMEs through institutional changes in the regional and national bodies.

The national standards and certification needs to be correlated with regional standards etc. in all the regions/States to boost India's exports to the neighbourhood trading-partners in addition to traditional partners in trade. The South American, African and transitional economies should also be explored for increasing export potential.

In addition to this, the national standard bodies initiative needs to be replicated across the board. In some areas national standards are inferior (food quality) with the result that bilateral export bans have been imposed. Similarly, national labour laws (affecting wages, health and safety) are out of sync with international social standards. In other areas there are no national laws but these are needed in flagrantly extractive practices, such as in the forestry and fisheries sector. This is also an advantage as when a policy decision is taken to institute them, such laws can be based on international standards pertaining to sustainable trade. The resources and standardisation activities in India has been inadequate and low as compared to other countries. India is a member of ISO. The staff directly employed by India is only 1996 and the annual budget is only 23,844 Swiss Francs. The number of standards published as on 31 December 2004 was 17,764. The voluntary standards in per cent of total number of standards was 99; and the number of international standards adopted as national standard was 1070 as on 31 December 2002, whereas in case of China it was 8931. The institution for standardisation and certification in India are less as compared to the countries like China and other European countries. It is also vital to understand the difference between SPS clauses and TBT. SPS clauses differ from TBT in three important aspects, that is:

First, while the TBT Agreement requires that product regulations be applied on a MFN basis, the SPS permits members to impose different sanitary and phytosanitary requirements on food, animal or plant products sources from different countries, provided that they 'do not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail'. The rational for this is due to differences in climate, pests or diseases and food safety conditions. Second, the provisions of the SPS agreement explicitly permit governments to choose not to use international standards. National standards which are higher than international standards are allowed and should they result in a greater restriction of trade, the government may be asked to show scientific justification for the measure, or they could demonstrate that the international standard would not result in the level of health protection it considers appropriate. Third, the SPS Agreement introduces the precautionary approach and permits member countries to adopt SPS measures on a 'provisional basis', in cases where 'relevant scientific evidence is insufficient' by taking into account 'pertinent information' that may be available from them or from other members or from the relevant international organisations.

After discussing the relationship between standards and international trade, we are now in a position to evaluate the importance of standardisation system which is almost absent in developing economies and transitional countries. Like other developing countries, the participation of private sector in international standardisation in India too needs to be extended and improved. The synthesis between national and global welfare maximisation, consumer preferences and scientific evidence, the role of international standards and the process of enforcing standards in the multilateral trading system are crucial questions to be examined and answered for the future growth of exports in India as well as in the State of Haryana.

The strengthening of standardisation and certification is a great challenge for both. For this, the central government should enhance its resources and involve the private sector in its adoption to the various products domestic as well as exports. Haryana can simply implement the 'standardisation' developed by the national government. In addition to this, agricultural scientists in the State should focus in understanding and devising SPS standards in conformity with WTO trading system. This will boost agricultural exports from the State for which vast potential

exists. The State should encourage research in certification, standardisa-tion and quality networks in the universities and technical institutes. This will help the producers and exporters in the State in understanding the relationship between Standardisation and International Trade.

3.2.6 Reoriented Approach to Governance

The phenomenon of governance is the new system of governance resulting from the growing trends towards globalisation, privatisation and liberalisation. In the process, the old system of governance has to part with its power used in the name of development. Since last decade or more the concept of new system of governance has been experimented by many developed and developing countries with the aim of achievement of overall development goals in the country. The main objective of the new system of governance is to drive the results from growth potentials of the economy with required adjustments, keeping in view market forces, in the economy. The adjustments were also needed in the then prevailing control on power and resources of the country. This demanded new system of governance and policies to achieve the desired results. The sectoral development such as heavy industries, infrastructure and agricultural development along with the participation of private sector in driving near to the achievement of developmental goals including the goal of reduction in poverty and deprivation amongst the poor of the country.

New Governance—Concept and Characterisation

The World Bank in its document discusses two approaches, (a) broader approach and (b) narrow approach, for achieving the better development in a country by exercising the powers in the right manner (The World Bank, 1994). The approach with broader sense indicates exercise of power in right manner for economic development. And also helps in promoting the enhanced participation in attainment of development. In doing so, the role of other players becomes more important and the centrality of power looses its importance. In other words the contribution of other players like market, civil society etc. become more significant for the development.

Therefore, in the new system of governance, different players such as different governments at Centre, State and local level, in the market, local traders along with national and international companies, and most significant is civil society covering community based organisations, NGOs—local, national and international. Hence, it will not be incorrect to say that in the new paradigm of governance, multiplicity or plurality of institutions play an important role in attainment of development at all levels. The World Bank, UNDP, DFID, etc. have also supported new system of governance with plurality of institutions from the international agencies.

The World Bank's objective of good governance is to achieve sustainable socio-economic development. It has advocated for better economic management instead of changing the form of political system in the country. The major areas of concern for achievement of good governance as discussed by the Bank are (a) improving the public sector management, (b) ensuring accountability of public and private sectors, c) creating appropriate legal framework for development, and (d) promoting transparency and information. For the establishment of good governance it is necessary that all these four pillars of good governance must work mutually. Good governance requires such a democratic system which encourages inclusive and participatory institutions and promotes transparent and accountable societies.

Therefore, to achieve the desired results of sustainable development, legitimacy and capacity of governance assumes more importance.

Recently, the Government of India (GoI) has also recognised the importance of new system of governance (GoI, 2002).[2] In this context the GoI has recognised and accepted some of the important features of good governance by bringing improvement in its administration on the lines of transparency, equality, participation and accountability. Good governance in the Indian context is to achieve the goals of human development. This can be done through the introduction of multiple institutions. Therefore the system of good governance should be managed through the active participation of its players like, State, market, civil society etc.

In this new system of good governance to achieve the goals of development, it has identified three strategies. The new concept of participation, decentralisation and the involvement of civil society and voluntary organisations are the constituents of these strategies. The effective decentralisation through local self government, involvement of civil society and voluntary organisations would help in enhancement of socio-economic development,

2. Government of India has come out with its approach to governance under the framework developed for implementation of the *Tenth Five Year Plan (2002-07)* in the country.

Government's Role in New Paradigm of Governance

In view of the World Bank,[3] the government is more powerful to institute and monopolise rule making. The need for intervention by the government in economic development arises due to various reasons. Only government is powerful to establish the legal and institutional system which can facilitate production and exchange. Ensuring macro-economic stability through appropriate fiscal and monetary policy is another important area of government's intervention.

At the time of failure of market economy, it is government's responsibility to intervene and provide basic services like health, road, and education. It also helps in bringing about equitable distribution of wealth through redistributive measures. In the provision of sustainable development for the future generation also, the role of government is very important. Some of these arguments are contradicted by many scholars.[4]

Civil Society and Right to Information

The challenges facing universal elementary education in a country of the size of India are many and diverse. This is more so when it relates to issues of access of the girl child to education. Over the last decade, there has been a significant rise in public awareness, political will and an augmentation of national capacity, which is highlighted by the wide variety of governmental polices which have been introduced in the field of education. A remarkable aspect of all this has been civil society-level mobilisation in literacy campaigns. The 93rd Constitutional Amendment is perhaps the most recent high point of the political response to the popular demand for education (Banerjee, 2001), initiated by civil society and primarily led by NGOs. It is one of the very few items of legislation on education that came into being due to massive civil society mobilisation. In fact, one observer who participated in the civil society gathering before Parliament in November 2001 termed it 'the largest ever social mobilisation in Indian history, post-independence for one single cause', partly due to the fact that it brought together a wide variety of civil society actors and organisations (NGOs, judges, lawyers, teachers, parents, children, trade unions, religious bodies, *panchayats*, etc.) under one roof. What was even more commendable about this initiative was that it was rights-based—in which the failure of the government to deliver on its responsibilities prompted a voluntary mobilisation of civil society to lobby the government for the realisation of this right.

Governance and Gender at Local Level

In Netherlands, a development organisation produced a manual on gender and local governance. In this model, particular attention is paid to women's interest. Without women's needs and interests being taken into account, without opportunity for them to participate in and influence decision-making, development interventions and planning will not achieve sustainable results. For reasons of justice, efficiency and diversity, and to change the political system, women's active participation is essential. With a more human and gender-sensitive political approach, citizens get more confidence in politics.

Good Governance and Financial Sector

For the achievement of goals of socio-economic development and the reform in real sector, the mechanism of new system of governance was introduced in the financial sector. The main objectives of this mechanism was: (a) reversal of excessive government control, (b) plurality of actors, (c) autonomy of financial institutions, (d) prescription of prudential norms, (e) continuation of directed credit, (f) governance of the co-operative banking system, (g) governance of the micro-finance sector; (h) governance of the rural insurance intervention etc. From the new system of governance, the human development point of the rural finance sector is very important and crucial, which is being discussed below.

Decentralised Democracy and Good Governance

The basic features of clean governance are: (a) decentralised democracy at the grassroots level, (b) right to information, and (c) organised local committees at an economic level. Stressing the need for transparency in governance, good governance agenda requires special commitment, transparency in its primary institution of governance—the public administration. Governments can no longer afford to support rigid, bureaucratic, reactive, rules driven administrative organisations. Rather today's administra-tive system ought to be flexible, consultative, result-oriented and proactive, at the same time encouraging and supporting creativity and innovation from the bottom to the top in order to govern and provide services to the citizens at large.

During the last century, there has been a considerable rethinking on the ways the governments conduct their business. They are now looking more and more towards innovative solutions to respond to an increasing number of new and complex environmental and global problems and pressures, which are further accentuated in a

3. See, The World Bank (1997a; 1997b).

4. Some of the problems of State intervention as identified by Nicholas Stern (Meier and Rauch, 2000).

developing, multi-linguistic, and a multi-cultural country like India, having diversity of social and religious systems and tremendous ecological, cultural and external constraints.

Decentralisation and Democratic Local Government

Decentralisation of government roles and powers associated with democratic local government can be an important means of improving the effectiveness of services and enabling ordinary citizens to participate in the management of their own communities. The democratic dimension in decentralisation is a necessary element of a process of sharing resources, power and responsibility. However, without special attention to the empowerment of the poor, decentralisation will do little to correct inequities and reduce poverty. The same applies for enhancing the role of women in the conduct of community affairs at local government level. Checks and balances are essential through, *inter alia*, accountability of the actors at different levels to the people.

Democratic decentralisation is more likely to succeed where certain conditions are in place. These include the commitment of the political leadership; a political environment based on pluralism, with a role for civil society; an appropriate legal framework and adequate capacities. Furthermore, the advantages must be perceived at all levels: central government, local government, and individuals.

Experience has shown that even if most of the prerequisites are in place and resources are available, the process of democratic decentralisation requires facilitation and training in a new style that is demand-driven. Good governance can be said to be equivalent to purposive and development oriented governance with organisational effectiveness and commitment to improving the quality of life of the people in a transparent, participatory, just and equitable manner approaches, rather than pre-designed package.

Good governance and transparency will definitely enhance credibility of NGOs. In India, in general, NGOs have become another name for self-employment programmes, sometimes even shameless plundering at the expense of public exchequer or private charities.

Governance is a process by which the executives, managers and field level functionaries can effectively and meaningfully participate in the management and administration of programmes to ensure maximum efficiency, in accordance with the objectives of the organisation.

Good governance is a way of creating and delivering services that are required by citizens. Good governance is a form of government in which government and citizens collaborate as equal partners. A democracy works where there is delivery of required services to all at affordable price.

Good Governance in Haryana

Rural Development and Panchayats

The State of Haryana is known for its green, white and industrial revolutions since its incarnation. The Government is very keen for development of rural areas, specifically creation and upgradation of rural infrastructure. The State is very actively implementing various centrally and State sponsored schemes related to poverty eradication and employment generation in rural areas. The State has proposed to incur expenditure of Rs 16 crore during 2005-06, for the implementation of Swaranjayanti Gram Swarozgar Yojana (SGSY) focusing on all aspects of self-employment. For the welfare of marginalised people in the backward areas, it has implemented a new centrally sponsored scheme of Rashtriya Sam Vikas Yojana (RSVY) in the backward districts.

Decentralisation and Governance

The State of Haryana has gone ahead in implementing the decentralisation in rural as well as urban areas. With objective of enhancement in the development process and to strengthen the democratic system a good number of powers (administrative and financial) along with the funds, have been delegated to Panchayati Raj Institutions (PRIs) and the Urban Local Bodies (ULBs). To achieve this, it has proposed to provide a substantial financial assistance during 2005-2006 to these bodies. During this fiscal year, for the implementation of various development programmes in the rural areas, the State government has made the provision of Rs 277.49 crore.

Decentralised Governance and Urban Development

The State of Haryana is growing fast in urban areas. About 29 per cent of its people reside in urban areas. The urban development would improve the quality of citizens in urban centres. The government is very keen in integrated development in urban areas and the welfare of urban people. For the provision of basic civic amenities to its citizens, the financial position of urban governance should be very strong. With the limited inelastic sources of revenue available with these bodies, the fiscal health of the governance at local level remained meagre. These constraints prohibit the efficient and adequate provision of basic services in urban areas. The State government is keen and coming forward to financial status of municipal bodies. In the absence of such support it becomes difficult

to carry out any development. The State has proposed to provide an annual grant of Rs 18.20 crore during 2005-2006, based on Twelfth Finance Commission recommendations. This grant would be used for the development work in urban areas. In addition to this, Urban Renewal Mission, a financial assistance of Rs 47.30 crore has proposed to be provided for strengthening the urban infrastructure in urban areas.

At the State level, under the provision of Article 243 I and 243 Y of the 73rd and 74th Constitutional Amendment Act (CAA), the State has implemented the recommendations of 1st State Finance Commission Report. It has provided substantial amount for the enhancement of urban development in the urban areas. Similarly, under the mandatory provision, the 2nd SFC has proposed to grant an amount of Rs 50 crore on *ad-hoc* basis to urban bodies.

Urban Governance and Housing for the Poor

Under the information and technology sector, the main thrust is on the provison of citizen centric services for transparency and efficient service delivery. A comprehensive IT policy has been formulated by the IT department. This would help in setting up of the Technology Parks and Technology Cities. It would facilitate and attract the private investors for the investment in the IT sector in the State.

Governance and the Welfare of the Poor

"The poverty is a measure evil of the society. The government of Haryana has been constantly making efforts to eradicate poverty in the state by assisting people living below poverty line through various schemes. The poorest of the poor have been identified and pink colored ration cards have been issued under the Govt. of India scheme of Antyodaya Anna Yojana. Under this scheme, 35 kg wheat per family per month is being supplied to the Antyodaya families at a rate of Rs. 2 per kilogram. The transportation and dealers margin is born by the state government at the rate 50 paisa per kilogram amounting to Rs. 3.81 crore per annum.

In the case of welfare of backward classes, handicapped persons, destitute women and weaker sections, state has taken several initiatives. It has adopted a policy of one job for one family, permits to unemployed for operating Maxi-Cab. For the scavenger from their traditional occupation of manual removal of night soil, and scheme of "Sulabh Shauchalayas" introduced by the state.

With regard to the shelter to the poor, an amount of Rs. 2215.56 lakhs has been incurred under "Indira Awas Yojana (New construction). Under the scheme 8845 houses were constructed and 651 houses were in progress for members of Scheduled Castes and also Non-scheduled Castes rural poor living below the poverty line during the year 2004-05.

For the provision of additional wage employment opportunities to he rural poor, under "Sampooram Grameen Razgar Yojana (SGRY)", a total fund of Rs. 7496.76 lakhs were made available for the year 2004-05. Against the available funds, an amount of Rs. 6794.28 lakh has been utilised for generating 70.12 lakh mandays in rural areas.

Swarna Jayanti Shahari Rozgar Yojana (SJSRY) aimed at gainful employment to the urban unemployed and under-employed poor beneficiaries. The provision of employment opportunities were made through setting up of self-employment ventures providing wage employment through skill development training. At the closing of 2005 fiscal year an amount of Rs. 162.41 lakh in the form of loan and subsidy were been provided to about 1845 beneficiaries. Though, the above programs show the good intentions of the state to promote welfare of the poor people but this can not be achieved without good governance.

3.2.7 Involvement of NGOS in the Development Process

Historically, the evolution of NGOs can be traced back in Western political thought. Civil society has only recently reemerged as a central issue in debates encompassing distinct subjects of inquiry such as the 'State' 'economic development' and democratic political theory (Dahendorf, 1995; Leftwich, 1993; Peet and Watts, 1993 and Calhonu, 1993). The renewed and latest interest in civil society is a direct product of popular widespread concern about the failure of political regimes and economic strategies, that characterised the 1980s. As Batista (1994) has observed, civil society is "an appealing concept at a transitional historic moment", and it has been both theoretically and practically approached in various political traditions and contexts. Interestingly, as Seligman (1992) reminds us, "much like today, the emergence of the idea of civil society in the later seventeenth century was the result of a crisis in social order and a breakdown of existing paradigms of the idea of order". Civil society has become inventible in 1990s due to its successful struggles with different forms of totalitarian regimes of both capitalist and socialist variety.

The existence of strong civil societies has also been pointed out as significant by aid donors and multilateral development agencies such as the World Bank and the

International Monetary Fund as a necessary condition for sustainable economic development (Landell–Mills, 1992). Nevertheless, according to Leftwich (1993), it was not until recently that these agencies started to display a serious or consistent interest in promoting either good governance of democracy in the nations in which they operated projects. Leftwich sees a relationship between the rise of pro-democracy movements in the developing world and the collapse of official communist regimes, the experience of structural adjustment lending and the resurgence of neo-liberalism in the West, with a rising interest among multilateral development agencies on civil society. Williams and Young (1994) point out that the roots of these agencies' interest in civil society seem to arise from their recognition that a "neutral and effective State, cannot be sustained without a corresponding liberal public sphere."

In addition, as a concomitant and interwoven phenomenon, there has been increased recognition of non-governmental organisations (NGOs) as institutions that are essential for the construction of strong civil societies, especially in developing countries. NGOs are so deemed because they are believed to enhance the access of disparate segments of the citizenry to governance and development processes (Ritchey-Vance, 1991; Clark, 1991).

Expressing the views of the World Bank, Landell-Mills (1992) claims that a strong civil society can play a key role in balancing the power of the State, facilitating accountability, and underpinning popular democracy. Landell-Mills identifies four ways in which civil society might be nurtured: (1) by facilitating the dissemination of information, (2) by strengthening the rule of law, (3) by expanding education and the capacity of self-expression and (4) by generating surplus resources to support associational activities without compromising their autonomy. Robinson (1995) observes that donor assistance has encompassed all four areas cited by Landell-Mills. However, according to Robinson, given the fact that the overall objectives of foreign political aid are often multi-faceted are rarely altruistic, it would be difficult to assess the impact of interventions designed to strengthen civil society. On the other hand, different authors analysing the recent utilisation of civil society by the World Bank as a tool for improving governance, argue that such utilisation is often tied to the goal of decreasing the presence of the State in the economy, opening the way for the growth of private enterprises (Williams and Young, 1994). Williams and Young contend that the World Bank's definition of civil society, informed by its own brand of economic orthodoxy, targets for destruction those affective communities and their native visions of development. In the case of Africa, these types of community ties have been considered critical for the development of the associational life that is so critical for the full development of a strong civil society (Azaraya, 1994).

White (1994) enumerates four complementary ways that the growth of civil society can contribute to democratic governance by: (1) altering the balance of power between State and society to achieve a balanced opposition in favour of the latter, (2) enforcing standards of public morality and improving the accountability of politicians and State officials, (3) transmitting the demands of organised groups, and in the process providing an alternative sphere of representation, (4) instilling and upholding democratic values, (5) disseminating information, and (6) generating a wide range of interests that may cross-cut the principal polarities of conflict.

Diaz-Albertini (1993) suggests that in the case of weakly institutionalised societies in the Third World (i.e., societies where pluralist and democratic practices are not the rule and where political institution building is still an ongoing process), the organisations of civil society, especially those that are development-oriented, must face an additional task: to create channels of communication, negotiation, and bargaining among the different political actors, in both the State and civil society.

According to Ritchey-Vance, the NGO universe includes community-based grassroots organisations, popular movements, and professional or technical support institutions. Nevertheless, the term NGO is nowadays commonly utilised in many studies about the contribution of civil society's organisations to the economic development process (Diaz-Albertini, 1993; Clark, 1991; Fisher, 1993; Lehman, 1990; Williams, 1990). Frantz (1987) observes that many NGOs have emerged either out of the process of facilitating the aims of a social movement or out of the institutionalisation of that same movement.

Landim (1987) stresses that NGOs' actions are guided by a basic characteristic which is an orientation to the strengthening of civil society as whole. This would take on special meaning when dealing with societies that have strong authoritarian traditions and which traditionally exclude most of the population from access to participation, cultural expression, and minimal material living conditions. Accordingly, Weyers (1981) suggests that NGOs in developing countries help to bring development down to the grassroots. Weyers argues that NGOs can mobilise popular participation in self-help projects, promote the development of national culture, and link resources available at the national level with

TABLE 3.9

District-wise Distribution of NGOs in Haryana in 2000

Sr. No.	District	I	II	III	IV	V	VI	VII	Total
1.	Ambala	2	4	7	2	8	5	12	40
2.	Bhiwani	6	4	2	1	5	-	-	18
3.	Faridabad	1	1	6	1	-	1	-	10
4.	Fatehabad	1	-	-	1	-	-	1	3
5.	Gurgaon	4	4	8	-	2	3	2	23
6.	Hisar	3	1	4	-	1	3	9	21
7.	Jind	1	2	-	1	-	6	9	19
8.	Jhajjar	2	2	1	-	-	-	2	7
9.	Kaithal	3	-	1	-	1	5	14	24
10.	Karnal	3	2	5	-	4	12	16	42
11.	Kurukshetra	2	-	1	-	1	1	4	9
12.	Narnaul	1	-	2	-	-	1	5	9
13.	Panipat	6	7	-	2	-	9	15	39
14.	Panchkula	6	-	3	1	1	1	9	21
15.	Rewari	1	1	1	-	2	2	5	12
16.	Rohtak	5	4	2	3	4	1	11	30
17.	Sirsa	-	3	3	-	-	2	6	14
18.	Sonipat	1	3	2	2	9	2	5	24
19.	Yamunanagar	1	2	4	-	2	1	32	42
	Total	49	40	52	14	40	55	157	407

Source: Voluntary Organisations in Haryana, Directory 2000 published by Director, Social Justice & Empowerment Department, Haryana, Chandigarh.

needs in marginal communities. Meanwhile, the World Bank (1996) has identified a set of roles for NGOs participating in Bank supported projects that resembles the roles proposed by Weyers. For the Bank, NGOs are important tools for channeling development resources to community-based service delivery organisations, providing services or technical resources, and the strengthening of grassroots organisations institutional capacity.

Concomitantly, there is an effort by different authors to identify the different types of NGOs and their potential roles in economic development. Carrol (1992), for example, suggests that NGOs involved in the economic development process can be divided into two major groups: membership support organisation (MSO) and grassroot support organisation (GSO).

In evaluating the role of NGOs in economic development three questions are needed to be raised. The questions are:

1) To what extent is the autonomy of local NGOs compromised by their interaction with State and financial institutions, and international NGOs in the regional development process?

2) Do NGOs actually have the institutional capacity to fully influence development in which they participate?

The role of NGOs in the development process of Haryana in the light of the questions raised above. The Department of Social Justice and Empowerment deals with NGOs. According to voluntary organisations Directory 2000, there were 407 such organisations which can be classified in seven categories i.e. (i) child welfare, (ii) women welfare, (iii) handicapped welfare, (iv) aged welfare, (v) training and education, (vi) medical aid, and (vii) miscellaneous.

The district-wise distribution of seven-category of voluntary organisations in Haryana has been shown in Table 3.9.

Out of total 407 voluntary organisations, 47.4 per cent are only of five districts, that is, Ambala, Karnal, Panipat, Rohtak and Yamunanagar. 38.5 per cent of the total NGOs are of miscellaneous nature whereas medical aid related are only 13.5 per cent. Training and Education related are only 9.8 per cent. Child welfare related were 12.03 per cent followed by women welfare related 9.8 per cent. Aged welfare related institutions are only 3.43 per cent in the State. The multiplicity of agencies in a particular field of social welfare and absence or inadequacy of such agencies in other field may not be conducive for the social welfare in the State as the most needy groups may remain neglected and the efforts to ensure integrated development consequently suffer. It is also expected that limited financial resources are put to best use in order to increase the utility of the social welfare programmes. According to some empirical studies, the position of NGOs related with woman's welfare and empowerment in rural areas is not good. It is clear from the record of concerned Nehru Yuva Kendra and Block Development Office that the number of such NGOs were inadequate and even most of them were either breaking up, dead or not so active. This is happening due to several factors such as illiteracy and poverty; excessive domestic work and other responsibilities; male dominated society; Purdah System; lack of knowledge regarding rules & regulations/training programme; lack of technical knowledge; lack of creative movement(s) by women at local level; and lack of income generating activities or programmes etc. Similarly all other types of NGOs also suffer from such shortcomings. One role of NGOs in the Development Process centres around three major issues.

(i) their reliability in representing the political and economic interests of their constituencies in the development process;

(ii) the degree to which NGO autonomy was compromised by their interaction with State and financial institutions and transnational NGOs;

(iii) the actual effectiveness of NGOs in influencing the development process towards the interests of their named constituencies.

Theoretical and empirical studies do not entirely reflect the experience of NGOs participation in development programmes; they do point out some of the important difficulties surrounding the partnership between NGOs, local State and the World Bank. The growing inclusion of civil society organisations in the implementation programmes reflects the assumption by the multilateral development banks, especially. The World Bank, that both local NGOs and local State have the social trust and social capital necessary to conduct this type of partnership advocating and emphasising the adoption of Participatory Approach to Development Through NGOs—which can also be termed as Community Based Development (CBD) which takes into account the local and community needs and expectations in development process. The evidence gathered in such studies on NGOs in developing countries including India and Haryana is no exception to it indicates that NGOs were ineffectual in their attempts to influence the process of policy-making. In addition to this, they even seemed unable to maintain channels of political accountability to their constituencies. The NGOs participating in the development process exhibited the same institutional weakness of the State that they were trying to hold accountable. Moreover, most NGOs did not have financial autonomy and were heavily dependent on State funds to function.

These studies also reveal that the participation of NGOs in Development had very little effect on engaging the grassroots segments of civil society. The lack of grassroots engagements left the NGOs isolated in an internal struggle with the programme governing organs. As a consequence of this, NGO representatives were outnumbered by the State officials; they were technically ill-prepared, and did not have the social leverage to obtain meaningful concessions from the State government and other donor agencies.

The NGOs leadership in developing countries/regions seemed to have increasingly become adjusted to the institutional arrangements proposed by the World Bank. Meanwhile, the intervention of transnational actors (i.e. The World Bank and Transnational NGOs) seemed to pose additional challenge for the autonomous development of both the local State's and civil society's institutions.

After discussing all this, it can be concluded that the participation of NGOs cannot be considered a penance for deficient popular involvement in the implementation of development programmes. Nevertheless, it is also necessary to resist the temptation of "throwing the baby out with bath water". Strong State and civil society institutions should be established and encouraged to improve the conditions for democratic governance. Panchayati Raj institutions should be strengthened in the State by giving them financial autonomy and providing technical knowledge so that they can prepare and present their case(s) of local development needs. This will also increase the employment potential of the village economy of Haryana by expanding and strengthening, the service sector. This will also motivate the village-youth to technical and computer education—inevitable for fulfilling Haryana Vision-2015.

However, their (NGOs) present institutional weaknesses in Haryana leave such a potential unfulfilled. In addition, there are no indications that local NGOs will be able to become financially autonomous. Furthermore, it is necessary to indicate that, given the present institutional reality in both State and civil society, achieving a more participatory process of development in Haryana will not be a quick process. However, to make the participatory approach an integral part of the development process, Government of Haryana should concentrate on the following policy-reforms:

(i) The targets of development should be realistic reflecting the strength of the existing social and political institutions.

(ii) The government must recognise the need to structure the participation of NGOs in its programmes according to the specific realities of each case. The model of participation should be sensitive to the social and ethnic diversity of the programmes beneficiaries. The identification of institutional capability of both State and civil society organisations must be a priority during the design of economic development programmes.

(iii) The government should have clear targets regarding the development of democratic and administrative capacities in both the State and civil society. Among these capacities, the State should aim at developing conflict management systems and channels of political accountability at the grassroots as components of its participatory models.

(iv) Finally, policy reforms should also be embraced by the NGOs. Local NGOs should focus on the strengthening of their own democratic channels, which could allow their named constituencies to become fully engaged in the economic development process.

Chapter 4

Policy Directions

4.1 Achievement of Projected Growth Targets (Aggregates and Sectoral)

As per the latest data, Haryana has come up at first rank according to the per capita income in its 40th year after establishment in 1966. The decadal growth of Gross State Domestic Product (GSDP) at constant prices has increased from 5.5 per cent (in 1960-61 to 1969-70) to 6.71 per cent (in 1990-91 to 1999-2000) steadily. In the same period, the decadal growth of per capita Net State Domestic Product has increased from 2.6 per cent to 4.42 per cent. Clearly the momentum of growth has been increasing with greater force in Haryana in all the four decades.

During the period 1995-2004 also the average growth rate of GSDP has been 6.65 per cent. In the first three years of the Tenth plan, Haryana has been able to achieve only 6.3 per cent growth rate of GSDP whereas the target set by Planning Commission is 7.9 per cent. We are lagging in all the sectors, especially far behind in primary sector where the State has achieved only 2.9 per cent growth against 4.1 per cent set by the Planning Commission.

To achieve the target growth rate with incremental capital output ratio fixed at 3.58 at least 28.64 per cent of the GSDP need to be invested every year. At current prices, an amount of Rs. 23,618 crore will be required in the fourth year of the Tenth Plan and, after that the amount should be increased at a rate of 10 per cent to clear the backlog. The total capital developmental expenditure of the State has been only Rs.1019 crore, which is only 4.31 per cent of the required investment. It means that most of the investment has to be in the form of private or foreign investment. However, huge investment opportunities are available in agriculture, construction, urbanisation, transport, communication, banking, retail and information technology. The State government will have to act strategically to attract the investment. In the forthcoming paragraphs, some policy interventions have been recommended sector-wise.

4.1.1 Primary Sector

The growth rate in the primary sector during 1990-2000 has been 4.07 per cent. But average growth rate at constant prices during 1995-2004 in this sector has slipped down to just 2.69 per cent. In the first three years of the Tenth Plan, this growth has been only 2.97 per cent at average. To achieve the growth target of 4.1 per cent as fixed by Planning Commission, at least 8.16 per cent of the share of primary sector in GSDP should be invested every year. This will need an investment outlay of Rs. 6235 crore every year. The share of State expenditure on agriculture to total has been falling by 2.196 per cent per annum during 1990-2005. The major causes of sluggish growth of agriculture in recent years have been fall in investment, increase in the number of small and marginal landholdings, repetition of the cropping cycle, fall in the underground water level, soil erosion, increasing salinity in the soil, excessive use of chemical fertilisers and pesticides/insecticides. Clearly the State needs a second Green Revolution. For this, there is a need to augment investment in the agriculture research and development.

The most important factor affecting agriculture output is the availability of water. The length of main canals increased only by 42 miles between 1981-1991 and this increase was just 24 miles between 1991-2001. This declining trend is a serious matter. However, the pace of increase in distributary canals have been at a satisfactory level. The net area under irrigation became highest in year 2001 (2958 thousand hectares), and has been falling thereafter till 2004. Each additional irrigated hectare of

land gives employment to eight additional labourers. If the State gets its due share of water, one lakh hectares of additional area can be brought under irrigation. Thus, State may be able to produce additional grain worth Rs.1000 crore. Southern Haryana is still starving for water. The matter of SYL canal has taken a political colour and does not seem to have any solution in near future. It will not be prudent to increase the total area under cultivation with more land, low-capital, low-labour, less water strategy; rather we should focus on efficient use of water. Since the State is not able to do maintenance work of miners in a cost-effective manner, investment must be diverted to use pipelines for carrying water instead of miner canals with user-charges. This will not only control the seepage but will also reduce the salinity and water logging problems. One time subsidy can also be given to the farmers for installing drip or sprinkler irrigation systems.

Encouraging cultivation under green house sheds and thus reducing all kind of weather risks can increase the agricultural productivity. The optimal size of a greenhouse shed is one canal. It requires an investment of Rs. 5 lakh including shed, system for controlling temperature and humidity, irrigation, etc. A number of vegetables, flowers and fruits can be grown under greenhouse shed to get high yield. Some private companies provide consultancy, know-how, seeds and marketing facilities with purchase contract. This is known as high capital-low land-low labour-low inputs-high yield strategy. The payback period for such agriculture is presently less than one year. The 22 per cent of landholdings by numbers (and 63 per cent by area) are of more than 3 hectares. It means 3,78,362 number of farmers can build up a greenhouse shed with the help of financial institutions, State agriculture and horticulture departments and private agro-marketing companies. Thus, there exists an opportunity of investing minimum Rs. 18,918 crore. Since this investment will be highly safe any financial institution can lend for such purposes easily. The State can take lead to create a conducive environment for such cultivation. Even if the prices of farm outputs go down, subsidies are slashed or payback period increases, the profits will surely be generated. This type of farming can also generate quality employment of 12 lakh persons in supervision, packing and transport of farm output. The greatest advantage is that the quantity of farm inputs in terms of water and chemicals shall diminish and then decrease, saving the environment. The only input that will increase is the electricity, but farmers will be happily ready to pay for the electricity bills with high yields. They can install their own generator sets also which could be run by bio-diesel or power generated from bio-mass in future. The share of agriculture exports from the State will also go up. The future of the farmers lies in cultivation of fruits, vegetables, flowers, herbs and organic foods.

The chemical fertiliser subsidies are more beneficial to the fertiliser companies, government, bureaucrats, politicians and big farmers. The government imposes a very heavy customs duty on the imported feedstock and thus earns money out of it. Thus, the cost of the feedstock rises and government provides the subsidy(ies) to the companies to cover the cost. The government fixes the costs, prices and even dictates about the standard costs. The fertiliser company has little scope to innovate. Besides this, Y.K. Alagh committee has found that most of the fertiliser plants have concealed capacity and thus they are producing more than the declared capacity to earn subsidy. The objective of the fertiliser industry is not to minimise cost; but to maximise production as they have fixed profits.

A study of the data regarding the farm subsidies and foodgrains productivity in certain selected countries would help us to show that the quantum of subsidy in terms of US $ (as value of agricultural production) per capita and per hectare of arable land is very much less as compared to that of some of the advanced countries. However, a developing country like India cannot afford to spend huge amounts by way of subsidy. It is obvious that in the interest of overall agricultural development and to keep the fiscal deficit within manageable limits, there would have to be a ceiling on quantum of subsidy. In fact, the level of subsidy on fertilisers has reached a level of Rs.13,975 crore (Budget Estimate for 1999-2000). Total food grain subsidy in 2004 was around Rs. 25,000 crore. This level of subsidy does not seem to be any more sustainable.

The government should abolish all subsidies for chemical fertilisers in a specified period of time. Simultaneously, it should allow the fertiliser manufacturers to buy fuel, oil, naphtha and natural gas at international prices with zero customs duty. The import of fertilisers should be eased so that our companies can compete with the best ones in the world. Even if the prices of fertilisers increase and the farmers are not able to purchase required chemical fertilisers they can be paid the subsidy directly in cash against a simple purchase bill. This will be a much cheaper way of providing subsidies to the farmers and the government will be in a position to track the beneficiaries to steer its policy in the future.

In fact as per the provisions of WTO, the indirect subsidies should be given to promote agriculture. For example there can be provision of subsidies to promote the efficient use of water in irrigation methods like drip or sprinkler systems or crops, which need less water. All direct subsidies should be converted in the indirect ones such as agricultural research and irrigation or water harvesting or water shed management infrastructure or soil conservation or environmental protection or bio-fertilisers to be in the "Green Box".

Panchayats need to be strongly encouraged by subsidies to build and maintain water-harvesting structures, especially in view of the continuing deterioration in the condition of ponds/water tables. Wherever additional water resources are still available, the success of the pilot tube well groups programmes suggests that this may be the way of the future. Under this programmes the wells are dug with public money and then a beneficiary group of small and marginal farmers is formed and assigned responsibility for repair and maintenance of the tube well.

In order to increase crop yields and reduce pesticide use, there are also significant gains possible from moving towards integrated pest management (IPM), which uses information about the life cycle of crops and their pests to determine the type and degree of crop protection needed in local contexts. The subsidies should be redirected to promote use of organic fertilisers, bio-catalysts and bio-sprays. The global demand for organic coffee, cotton, honey and wheat is increasing. There is a need to establish testing laboratories and certifying mechanism to promote the cultivation of these products. Farmers need help to create websites to showcase their products. Roads are needed for the foreign buyer to visit the fields.

There is a need to establish a new public sector undertaking—Indian Organic Exports Promotion Corporation—to promote these exports, and subsidies should be provided on such exports. This will spontaneously help the small farmer as he will grow these products, which require intensive labour management. The subsidy given for electricity, diesel and chemical fertilisers should be reoriented in this direction. This will lead to increased price of these inputs but he will be compensated by the subsidies on organic produce. He will be benefited by the access to growing market. The net effect on the small farmer will be zero-plus but on the big farmer it will be negative and there will not be any need to tax his agricultural income.

4.1.2 Secondary Sector

The decadal growth of secondary sector has slowed down from 15.08 per cent during 1981-1990 to 8.37 per cent during 1991-2000 in Haryana. It was 7.02 per cent during 1995-2004 and has been still less at 6.1 per cent during the first three years of the Tenth Plan against the target of 9.6 per cent. However, the share of secondary sector increased from 11 per cent to 24.6 per cent to 28.6 per cent in the decades of 80's, 90's and thereafter respectively increasing at a meagre rate of 0.489 per cent and then started decreasing, now it stands at just 27.8 per cent. Clearly, it is the tertiary sector, which is responsible for the growth in the State. To achieve the targeted growth rate with ICOR 7.77 at least 20.71 per cent of GSDP must be invested in the sector. This will require an investment outlay of Rs.17,411 crore per annum at current prices.

The total factor productivity in the manufacturing sector based on value-added Function as well as on Gross output function has been increasing during 1992-93 to 1999-2000. The index of industrial production has also been increasing by a rate of 5.99 per cent during 1998 to 2003. In the first three years of the Tenth Plan it has increased at an average growth rate of 6.1 per cent.

The annual plan expenditure on energy has been growing at a rate of 5.365 per cent during 1980-2005. The per capita consumption of electricity has been increasing at a rate of 6.36 per cent. The share of electricity consumption in industrial and commercial sector has been falling. More connections are being given to the domestic sector as they are better payers or to the agriculture sector as a political compulsion. The industrial sector has been suffering as far as power is concerned. However, the quality of electricity supply is very poor in the rural area and farm sector. This is the main reason that farmers are not willing to pay the power bills. There has been a number of hidden costs in the form of more farm supervision, damage to the water pumps, burning of transformers and increased uncertainty. Since most of the farmers have a flat rate system, thus there is no chance of overuse of the electricity by the farmers. However, this leads to the cultivation of water intensive crops. The SEBs impute all power losses and thefts of all sectors including their own corruption and inefficiencies on the farmers which is not the reality. In last few years due to partial reforms in the power sector the reporting of T&D losses has improved. There is a huge investment opportunity in the power sector due to ever increasing consumption and paying capability of the users.

Although the ICOR ratio in this sector is very high but the safe returns can be ensured by the introduction of

power reforms with proper blend of market mechanism, strict punishment to the power thieves and reasonable charges for the users. It is recommended that the State should use the distributed power production model. The electricity farming by solar power not by photo-voltaic method but by focusing of sun rays by a concave mirror, wind-mills, bio-mass energy (using dung), biodiesel or solid plastic wastes generated from urban areas should be the new methods of power generation. The people i.e. farmers, co-operatives, municipal bodies, private parties and shopkeepers should be allowed to produce electricity by any method. The State should focus only on the mechanism to ensure minimum support price to the producers and regulate the emission norms to contain air pollution. The small producers can absorb the costs of overheads very easily and the power can be produced at almost negligible marginal cost in some cases (like solar energy). The Power Trading Corporation can purchase it at a rate of Rs. 2.5 per unit. This will convert the farmers into power producers who will get the bill and will not be blamed for not paying the bills.

If every producer is allowed to produce 3000 units per month, that is, around four units per hour it will ensure an income of Rs. 7500 per month to him. The technology can be imported from a Canada based company SolarGen Inc. or can be developed indigenously. One such unit shall not cost more than Rs. 1 lakh. The average population of villages in Haryana is 1830, which implies that there are around 366 families in each village. Thus, a maximum of around 90 families can take production of power, even if they have to sell it to their own village. Thus, total 6,08,708 power production units can be installed to provide electricity only to the rural area. This can absorb safe investment of Rs. 6087 crore. Even if 20 families in each village are engaged in such a distributed power production system, Rs. 1353 crore may be invested. Even if extra power is generated it can also be sold to the industries or to the other States. Such a production system will take care of the equal distribution of income. This will increase the demand for batteries, inverters, electrical appliances and white goods in the rural areas.

The ICOR in the construction is very low i.e. at just 0.99. The construction sector can also employ large number of unskilled and semiskilled workers. It (sector) is also related with the urbanisation strategy. The trends of urbanisation show that population growth rate in the urban areas of Haryana is increasing at a rate of 2.62 per cent against the overall growth rate of 1.668 per cent. The expected number of urban areas by year 2020 will be 111. In 2001, 29 per cent of the total population was living in urban areas; and this percentage will reach to 43.38 per cent by 2010. It means that every year around 1.61 lakh persons are adding to the cities. This requires additional 32 thousand houses every year to be constructed. Even if each house costs between 3 to 10 lakh rupees, it will require an investment Rs. 960 crore to Rs. 3206 crore by the household sector only.

It should be understood that the prices of properties increase by provision of roads, electricity, water and sanitation by more than 40 to 80 times. The Haryana Government should plan all the cities in such a way that they are connected to a hub of villages by circular ring roads with fast transport and connectivity system. The existing 97 urban areas can be connected to the villages by an average peripheral road of 60 kilometres so that even the farthest villager can reach to the city and come back within one hour. This will require building good quality roads of 6500 kilometres. With this kind of strategy, the industrial manufacturers will be induced to start their production units in the rural areas; and the congestion, pollution and rise in property prices and slum areas in the cities will be controlled. The production process will shift from urban to rural areas which can absorb more pollution. The cities will become the centres of services, maintenance, R&D, art and culture, education and science. The fast connectivity shall ensure the supply of skilled labour in both the areas in time. Such a system shall also be highly conducive for growth of ITES like BPOs and KPOs in the suburban areas as the youth living there will demand less wages and will be more loyal.

The Haryana Government is planning to take the advantage of NCR by developing three new cities near Kharkhoda, Badli and Samalkha. In Bahadurgarh an industrial shoe park and Rajiv Gandhi Education City shall be developed in Kundli. A Haryana highway circumventing Delhi shall be laid from Palwal to Sonipat connecting four National Highways. On other side, HSIDC has decided to develop two modern industrial cities in Sonipat and Rewari. To attract the investment in the State, four big private companies have been allotted the land also. It is to be cautioned that all these activities can take heavy toll on the eco-balance. Earlier, the expansion of Delhi has seriously damaged the Ridge and southern forests and now the expansion of Gurgaon is threatening the greenery of Aravallis. So, whatever is being done in the State for the development, extreme care should be taken to save the ecology. The investment in Haryana can be attracted easily because of its proximity to NCR and it will not be difficult to invest about Rs. 2 lakh

crore in next five years, generating employment to 10 lakh persons by the construction activities and the process of urbanisation alone.

4.1.3 Tertiary Sector

The decadal growth rate of GSDP in Haryana has been 8.38 per cent in 1990 to 2000. The share of tertiary sector has increased from 30.2 per cent to 37.8 per cent between 1980 to 2000. Presently, this share stands at 42.7 per cent in 2004. The average growth rate of tertiary sector at constant prices during 1995 to 2004 has been 9.83 per cent. In the first three years of the Tenth Plan it has been 9.07 per cent against the targeted 10.3 per cent. To meet the target there should be an investment of Rs. 6130 crore every year in the tertiary sector.

There are huge investment opportunities in the retail, communication and financial services. The Indian retail sector is the most attractive one in the world. It is around 10 per cent of the GDP. Using same assumption about Haryana there exists a market of Rs. 7497 crore. If this grows at a rate of 8 per cent per annum and the ICOR in the trade is 0.91 shall mean that only trading can absorb investment of Rs. 546 crore per annum. There is a possibility of opening at least 6 big shopping malls and 30 super markets in Haryana State. Each mall can be of minimum 5000 square metres. Even if top ten companies decide to enter in Haryana in the retail sector there is potential of investing Rs. 6000 crore. But this investment may spread over next 7 to 10 years.

The ICOR in the communication is comparatively high, fixed at 8.33, that is, there is approximate return of 12 per cent per annum. The demand for the land line telephones and mobile phones is increasing. Haryana ranked at ninth place according to teledensity among 16 major States in 2000 and it was just 3.35 per cent. In Haryana 12.72 per cent households have a telephone. The top nine districts (and also above Haryana average) according to percentage of families having a telephone are Panchkula (29.95), Ambala (25.31), Kurukshetra (17.96), Yamunanagar (17.92), Faridabad (15.55), Panipat (14.4), Rohtak (13.88), Gurgaon (13.78) and Karnal (13.7). One of the objectives of the New Telecom Policy-99 was to provide reliable telecom facility to all villages by 2002, but out of 6,07,491 villages only 3,74,566 villages had village public telephones in February 2000 (Mid-term appraisal of the Ninth Plan, Planning Commission, New Delhi 2002). But the all-India rural teledensity is only 1.278, compared to an overall teledensity of 66.13 for the US, 14.26 for the world, and 2.2 for the whole of India. The NTP-99 also proposes to increase rural teledensity to four by 2010. The data related with rural teledensity in Haryana is not available but what is true about all-India can be said about Haryana also. It is a good sign that instead of land line phones the mobile phones are fast penetrating rural India. Out of 2 million BSNL mobile connections, 50 per cent are in rural India. If we assume that 80 per cent of the families use the telephone services in Haryana, a total market potential of more than Rs. 1214 crore per annum will be spent on such services as a conservative estimate. This will be 1.62 per cent of the GSDP at current prices. There is an investment potential of Rs. 10,000 crore in Haryana. If this is spread over next ten years then every year Rs. 1000 crore of investment is possible in Haryana.

Another big opportunity to invest in Haryana is in financial services. The ICOR for this sector is very lucrative standing at 1.56. The interest rates are generally high in the informal sector particularly for the farmers. It is observed that more than 60 per cent of the farmers pay their interests/principals or installments of loans in time. This figure is as low as 40 per cent in case of businessmen. Still the banks are not able to meet the targets of farm-lending. The investment in agriculture with new technologies can reduce not only the variable costs of farm outputs in short-run but also the risks of farming. On the other hand it is big opportunity for bankers to increase their scope.

4.2 Optimum Use of Natural Resources

4.2.1 Forests

The forest area in Haryana increased at a rate of 0.76 per cent during 1966-67 to 2000-01. The covered forest area was highest in 1991 (1,69,000 hectares); after that it began decreasing, and is presently 1,15,000 hectares, which is 2.6 per cent of the total land area in Haryana. It is clear that the phase of development after the globalisation process has taken its toll and has seriously affected the environment. It has also been reported that the quality of the covered forest area has been deteriorating continuously. The roads where the width was increased or doubled, the trees were felled down but forest department has not shown the decreased forest area in its papers. The permanent pasturelands have also been decreasing at the rate of 1.874 per cent per annum. However, in the last ten years the area has increased by 12,000 hectares. The forest cover can be increased by using barren and non-cultivable land (102 thousand hectares), cultivable but barren land (18,000 hectares),

and fallow land (232 thousand hectares). It means that forest covered area can be increased by maximum of 1.9 per cent more. However, persuading the farmers to increase agro and farm forestry can increase the private forest covered area. The State should declare the minimum support price for the farm forest output and introduce adequate competition in the timber merchants.

The public policy in case of the protection of the forest and environmental resources has failed due to inherent problems of command and control regime. It has been proved by Ronald Coase that effective property rights of the natural resources given to the people can protect the environment in an optimal way. The State can act as a better regulator but may not be effective in protection or maintenance of the resources. Wherever possible, the protection and maintenance of the forests, pastures, common properties should be handed over to people with strict regulation and clear property rights. This can generate a number of employment opportunities also which have been discussed in Section 4.3.

4.2.2 Soil

The quality of the soil in Haryana has been found deteriorating. In 1978, Haryana was at third rank according to the quality of the soil index. Now the organic matter in the soil has reached below 0.2 per cent in many districts as a result of intensive farming, overuse of insecticides and pesticides and burning of wheat husk by the farmers. It has been reported that decreasing fertility of the soil is resulting into decreased quality of the fodder and food crops. In future not only the fertility of the soil but that of animal and human being may also be seriously affected. Due to this, production of milk may be affected, which is the source of livelihood and employment for large number of rural people.

The productivity of the wheat and rice has plateaued and further increase may not be possible. Total cropped area increased at the marginal rate 0.72 per cent during 1966-67 to 2002-03. The net sown area has been decreasing marginally. The per hectare consumption of fertiliser increased at the rate of 9.89 per cent during 1966-67 to 2003-04, but due to decreased fertility the marginal productivity of fertiliser has been halved. The negative effects of the green revolution have come up. As now the farmers do not leave the land uncultivated even for ten days. Therefore, there has been problem of increased threats of insects and pests. The farmers are also not prudent in the use of agro-chemicals. It was found that the farmers have not been spraying the insecticides and pesticides rather they pour them in the farms. The farmers generally do not get their soil tested and use excessive nitrogenous fertilisers, but the requirements of the phosphates and potassium fertilisers remain unmet. A serious policy intervention is required to promote the use of organic, bio/compost fertilisers, organic sprays and integrated pest management practices. In a village in Andhra Pradesh, farmers were able to save Rs. 30 Lakh by using mixture of *neem* leaves and chilli powder to control the insects instead of using chemical insectides. There is lot of indigenous knowledge, which should be strengthened.

4.2.3 Industrial Pollution

The challenge before the policy makers is to switch from the Command and Control regime to that of a mixed instruments based regime. The Command and Control regime suffers from a number of inherent limitations. The standards related with pollution control are source specific, either technology based or performance based. The CAC policy gives very little options to the polluters to search for cleaner technology or improved abetment technologies. The penalties for non-compliance with the standard are not related to the compliance costs. The prosecution decisions and even court decisions are based on compliance or non-compliance and not on the extent of compliance. The fines are very nominal and are independent of the quantity and quality of the emissions. The Haryana State Pollution Control Board does not have adequate trained manpower and equipments to detect violations and prepare the cases. The judicial system is characterised by lack of expertise on the part of the judges on environmental matter, long delays in delivering judgments. There is no viable alternative dispute settlement or consolation mechanism or other channels for enforcements. Like adverse publicity affecting farm's market prospects, innovative auditing procedures and involvement of the local people, agencies, in monitoring have not been tried. The ambient and the source standards are laid down independently unrelated to the volume of pollution generation activities. Hence, it is quite understandable, quality of environment continues to deteriorate even with a high degree compliance. Following policy measures have been recommended:

1. The State Pollution Control Board should be held accountable for any damage to the environment. Its performance should be audited by an independent agency like Centre for Science and Environment (CSE) or TATA Energy Research Energy Institute (TERI) or National Environmental Engineering Research Institute (NEERI).

2. The Board should collect detailed data on production, assimilation and dispersion of pollution for different areas. The marginal costs of pollution abetments should be computed with the help of economists for all industries, for all kind of pollutions for air, water and solid waste.

3. Water is an exhaustible but renewable resource but depletes. Any kind of subsidy given to the users (households, farmers or industrialists) leads to overuse of resources. All kind of subsidies should be slashed slowly in phases. The water provided through canals should be priced according to the marginal productivity of water for the crops. It has been found that in many districts in Haryana the underground water level has gone below even more than 200 feet. Even the third layer of the water has been exploited. The economic sense suggests that extraction rate of water should be less than or equal to recharge rate. Many geologists have opined that even if the total rain water is harvested, still the underground water level recharge rate cannot match the extraction rate. The crisis is hovering on us, and there is only one solution, that is, to decrease the consumption of water. The farmers will have to diversify into the crops which require less irrigation. However, it does not seem to be politically viable to increase the water charges as farmer lobby is strong in Haryana. The technology can be the answer to the problem. Dip irrigation system and sprinkler systems can minimise the use of water.

   The consumption of water in the urban area for domestic use has also been rising. Every urban authority and local bodies providing water supply service should install effluent treatments plants (ETPs). The cost of operating ETPs is very high due to high energy use. So their maintenance, repair and operating may become unviable in long run. Instead of power run ETPs, we can use various bio-intermediation processes and corral cultivation for water purification.

   A proper pollution tax should be imposed on the industries comprising of a lump sum tax, tax on volume of water used, tax on volume of effluent generated and separate tax for concentration of the pollutants in the effluent water.

4. For controlling the air pollution, the tradable permit system should be introduced. The firms can decide to buy a permit for pollution, pay a tax or can pollute and face the litigation. If the firms have a choice, they will minimise their costs by choosing the right method. This will improve the innovation in the pollution abatement technology. Over a period of time the firms will reduce the costs and pollution both. Theoretically, it can be proved that the marginal cost of pollution abatement becomes equal to pollution tax and equal to the price of permit in an efficient system. Most of the air pollution is vehicular in nature. It is a major problem of the cities. The environmental laws should be strictly implemented. Generally the motorists and vehicle owners get the pollution-checked certificate after paying a fee. The authorities use the fees as a source of revenue generation not as a tool of pollution control. The fee charged from the vehicle owners should be according to the level of emissions. This will force the vehicle owner to use additional pollution control equipments or to purchase less polluting vehicles.

5. The solid waste generated from the households can be used for recycling, to make compost fertilisers, energy production, bio-fuel production or landfilling. The urban citizens should be persuaded to keep three types of dustbins—one for recyclable wastes, second for biodegradable wastes and third for plastic wastes. This segregated solid waste can generate a lot of employment. According to one report, Haryana is one of those States where everyday 30 gm per capita plastic waste is produced. It can make 86,000 litres of diesel every day from the urban plastic wastes. It is also estimated that 3000 tonnes of compost fertilisers can be prepared everyday in Haryana. The solid waste is money lying unnoticed in the garbage.

6. For sustainable development, the State should follow Hartwick-Solow approach. It suggests that the stock of capital could be held constant by reinvesting all hotelling rents from non-renewable resources extraction in manmade capital. Therefore, the State should ensure investment equal to value of extracted mineral every year in the search of new minerals.

7. It is found that there is a possibility of substitution within the different natural capitals. The manmade capitals are also substitutable for each other but there is little possibility of substitution between manmade and natural capitals. So with every developmental

project, there is a definite loss of natural environmental assets. To contain this loss, the State should invest in a shadow project with strong sustainability constraints.

8. The harvest levels of renewable resources should be set less than or equal to population growth rate for some pre-determined population size. For all degradable pollutants assimilating capacity for receiving eco-system should be established. The waste discharges should be maintained below the assimilation rates. The discharge of the accumulative pollutants should be set close to zero. All the earnings from non-renewable extraction should be divided into an income stream and an investment stream. The investments stream should be invested on renewable resources.

The polluters pay principle (PPP) should guide the policy for consumers, producers and distributors. The polluters should have a choice of either purchasing a pollution permits or to pay the pollution tax or to use a technology to abate the pollution. If any of these three does not help in compliance or meeting the standards, the pollution control board should use CAC methods. The State should train the environmental NGOs in pressure making tactics on local bodies, politicians, corrupt industries and bureaucrats. A number of research studies have shown that there is positive correlation in the environment quality and training of environmental NGOs. The public action is the most effective deterrent to the colluding corrupt bureaucracy and polluting industries.

4.3 Sustainable Development and Gainful Employment of Human Resources

One of the most important roles of the State is to create conditions in which people can find right kind of employment according to their skills and knowledge. The income earning of the people depends upon their basic abilities, acquired skills, knowledge and education and experience. It is also implied that the services of labour have to be combined with appropriate capital—natural, manmade, physical capital or financial for production of goods and services. The employment is a right to participate in the production process. How this right can be assured to the individuals is the basic question before us?

Out of total population of 2.108 crore in 2001 of Haryana, 31.24 per cent, that is, around 65.43 lakh is between the age group of 20-39 years which we can call the employable youth. If we assume they are growing at a rate of 1.67 per cent per annum now this figure should be roughly 71.08 lakh. By the year 2012 around 79.82 lakh people should be employed. The percentage of population between age group 20-59 in 2001 was 45.62 that is around 96.17 lakh of which 39.62 per cent, that is, 83.52 lakh were already employed. It means that there was a gap of 12.65 lakh in 2001. Thus out of total employable persons, 19.33 per cent persons were unemployed in 2001. Say if we want to reduce the unemployment rate up to 4 per cent in the economy, then Haryana will have to generate employment for 15.33 per cent, that is for around 10 lakh to clear the back log and then every year around 17 thousand new jobs should be created to give sustainable employment. It is worth noting that Haryana has been at first rank among 16 major States during 1991-2000 according to growth of workforce rate (2.83 per cent) of main workers. In 2003 there were 9 lakh registered unemployed persons in the Live Register of Employment Exchanges in Haryana.

The average growth rate at constant prices of Haryana in the first three years of Tenth Plan has been just 6.63 per cent. This has to be increased up to 8 per cent in the current plan. The share of primary sector in GSDP is 26.4 per cent and 51.29 per cent workers are employed in the agriculture and 45.15 per cent in total primary sector. The share of the primary sector in GSDP has been falling at a rate of 3.979 per cent at constant prices. The share of employment also has decreased by 23.35 per cent during 1987-88 to 1999-2000 in the primary sector. The share of secondary sector in GSDP is 30.9 per cent and has been increasing at a marginal rate of just 0.489 per cent annually from 1993-94 onwards at constant prices. The number of workers employed in non-agriculture sector are 48.71 per cent of the total working population. Out of this only 2.56 per cent are employed in household industries and 10.10 per cent are marginal workers. It is very sad that the share of employment in the secondary sector has also been falling during 1987-88 to 1999-2000 at a rate of 1.96 per cent and 12.45 per cent persons were employed in the secondary sector in 2000. The share of tertiary sector in GSDP in 2004 was 42.7 per cent increasing at a rate of 3.513 per cent and the share of employment in this sector is 42.4 per cent. The share in employment in tertiary sector increased by 49.31 per cent during 1987-88 to 1999-2000.

The standard of living of the people can be raised by increasing their income. Not only income, but the distribution of income is also very important. It is observed that 45.2 per cent of people in primary sector are getting only half the share of GSDP. 42.4 per cent people in tertiary sector are getting almost equal to their share in GSDP. Thus, there is a need to shift a

big percentage of people around 25 per cent from primary to secondary sector. The secondary sector in Haryana, has been growing at a rate of 7.02 per cent at constant prices in the first three years of Tenth Plan. The number of registered factories in Haryana have increased by 1.63 per cent and the workers employed in these factories have increased by 3.52 per cent during 2000-2003. Presently, 5.52 lakh workers are employed in the registered factories. Only 19.11 thousand workers are employed in the Cotton/Man-made Fibre Textile Mills (Non-SSI) in Haryana state, and this employment is falling at a rate of 1.189 per cent due to large inefficiencies and the competition in the sector. The 66.64 thousand workers are employed in Khadi and Village Industries and it is growing at a rate of 5.23 from 1967 onwards. The important highlight is that the employment in this sector has increased by 43.12 per cent in the current plan, and this provides tremendous opportunities for employment. If the growth of industrial sector can be maintained with same employment elasticity as at present, the per annum employment requirement can easily be taken care. But serious intervention is required in the policies to clear backlog and to improve quality of employment.

The employment in the organised sector in Haryana increased three-folds from 1966-67 to 1995-96. The increase was 3.25 times in the public sector, including Central Government, State Government, Quasi Government, and local bodies' employees comprising 64 per cent of the total employees in the organised sector. After 1996, the employment in the public sector has been steadily decreasing at an average rate of 2.46 per cent. The decreased employment in the public sector has been partly compensated by increase in the private sector at a rate of 6.26 per cent per annum after 1996. Still, the total employment in 2004 was less than that of in 1996. The total employment in the organised sector in year 2004 was 6,51,382, that is, 3.14 per cent of the population and 7.93 per cent of the total employment. This implies that 92.07 per cent workers are in the unorganised sector.

It is also reported by a number of sources that the casual, *ad hoc* and contractual jobs are increasing as a result of economic reforms and competition resulting from globalisation. It seems very difficult to increase the jobs in public sector. The employment elasticity of growth in the private sector is also very low. The third sector i.e. NGOs could be another area where large number of jobs can be created. However, the biggest opportunity to create employment lies in self-employment in Haryana. An alternative strategy has been presented with clear guidelines in the forthcoming paragraphs.

We can call this strategy as Employment Through Assets or ETA. The ETA strategy. It assumes that every individual—illiterate or educated, skilled or unskilled, rural or urban, belonging to any caste—seeking employment knows his potential best and he/she should be given an opportunity to realise it. The food we eat depends on how old we are. Similarly, the input a State or a household family needs for development depends on the level of its economic development. In case of a nation, to begin with, development will be primarily based on material assets, then on skilled labour, and later on, accumulated capital and ultimately on technological prowess. The families also can develop, grow and raise their standard of living by self-employment, if they have some minimum natural endowment, some minimum skill level, some minimum access to health facilities and some minimum education. Those who are already better off are buying education from private schools. The government has failed to provide quality education to the poor in Haryana. Even those who are getting education in government schools are not satisfied. Same is the case with the provision of health facilities. It is generally felt that people are more interested in purchasing health and education from private institutions. Therefore, the need of the hour is to provide income to the people not the health or education by the government. The self-employment can generate the income, provided people have the assets (properties) they can exploit with their existing skills. So, it is recommended that State should help people in acquiring the permanent assets through which they can generate income. The assets can be physical (natural and man-made), financial or knowledge based (education, training, skills or intellectual).

1. The State has 102 thousand acres of non-cultivable and barren land. It can allocate a considerable portion of this land to unemployed youth for cultivation of biodiesel plants (Jatropha, Pongamia or Karnzia) or horticulture. A one time subsidy on the purchase of implements and drip irrigation systems can also be given if possible up to 100 per cent.
2. The forest department of the State can allocate the forest area along with the roads which is around 58 per cent of the total forests area (1,15,000 hectares) to rural poor, landless farmers or scheduled caste persons for growing vegetables with the strict conditions that there

should not be any damage to the trees. Of course, the cultivators should not be allowed to keep animals, make permanent constructed buildings (house or shop). Their property rights should be clearly defined so as there is no harm to the environment.

3. Some politicians have been found making money in the contracts of extracting sand and crushed stone from rivers. The State can give access to extract sand or stone from river beds to poor unemployed youth with strict conditions complying environmental laws.

4. The State should enact a law, which recognises the contract between crop raiser and landowners. This contract should be considered a valid and sufficient document to provide farm-credit or kisan credit card by the banks and the crop insurance agencies. This will lower the production costs of landless farmers substantially. Thus, a buoyant market for farm lands will be developed in Haryana. The land reforms, redistribution of land and providing land to landless by purchasing from other farmers are difficult options and are not politically viable. But landless farmers can have access to the land resource by market-mechanism and can have all the benefits as big farmers have by this legal contract.

5. The State can also hand over various public parks to unemployed youth who know gardening to grow flowers in 40 per cent area with strict conditions, certain rights and responsibilities. In this way, the municipal corporations, Haryana Urban Development Authority and other local bodies can save costs and even earn some revenues and provide environmental amenities to public.

6. In the suburban areas or some big villages, where people have the ability to pay, the water supply systems can be handed over to private parties with strict conditions that if they do not invest certain percentage in rain water harvesting, water purification or do not provide good service to the people, the State has the right to change the service provider. All initial cost should be borne by the State, but no recurring subsidy on the variable costs should be given.

7. There is a serious problem of shortage of latrines in Haryana villages. In every village, the government should make best quality latrines and hand over them freely to people who can run them and can recover variable costs. The village people like to go outside for latrine in the morning. If they are situated outside the village, their need for morning walk shall also be satisfied. The latrine facility shall be of great utility for women, as many times, they have to wait for dusk to make it. Thus, most of the villagers shall happily pay for such facilities.

8. There is a great opportunity of generating employment in the rural areas by production of electricity. People should be allowed to produce electricity using bio-mass (dung), biodiesel, solar energy or wind mill. A small bio-mass plant does not cost more than Rs. 40 thousand and can give employment to four unskilled persons. The State can provide training, and the banks can give loans through micro-finance institutions. At this stage, production of electricity using biodiesel may not be economic. However, who are using generator sets in cities can use bio-diesel and the farmers can earn by selling seeds of biodiesel. The reputed company Reliance Energy is thinking of entering into cultivation of jatropha using high technology, more investment and better irrigation facilities. This is a signal that in coming years, the yields of jatropha can increase and costs/prices can go down the economies of scale in extraction of bio-diesel from seeds in next five years. At that time, people may think of producing electricity from biodiesel. The aforementioned Canadian firm Solar Gen Inc. has developed a device, which captures solar energy using a concave mirror and produces electricity by generating steam. It does not use the photo-voltaic cells which are costly to produce. If sun rays can be captured for 24 minutes, it can supply electricity for one-hour. The amount of energy generated depends upon the size of the mirror. The cost of producing one unit is around Rs. 0.40. We are far more richer than Canada in terms of solar rays for most part of the year. In some parts of the year, the Sun is available for more than 14 hours. Even if we produce a device half efficient to the Canadian one, we will be able to fulfill our energy needs. The extra cheap energy generated in this way will lead to increase in the demand for electrical, electronic and consumer durable goods. Many people will get employment in production, repairing and maintenance of these goods. Each electricity producer should be allowed to produce around 3000 units of

electricity per month using any method. This power should be purchased from him by Power Trading Corporation (PTC) and sold to other consumers in the cities. This will lead to increase in the quality employment in the rural areas. The banks should provide loans to the farmers for purchasing the biodiesel engines and the PTC should give a counter guarantee to the banks to purchase electricity from the farmers. The banks can give even 100 per cent finance to the farmers for this against the cost of the diesel engine. The banks can also increase their business by financing the companies making diesel engines. The problem of recovering the power bills, power thefts, increasing subsidies and ever-sick SEBs will be permanently solved. The politicians will also feel very much free from the burden of providing free electricity. The direct and indirect employment in the power generation, power equipments manufacturing and repairing shall be more than seventy lakh. The agricultural diversification shall increase and thus, the farmers will stop politicising the power and MSP issues. The farmers will have the option to use their own produced cheap electricity or to sell it to the PTC. Thus, they will use this own asset very prudently and this will automatically promote the efficient use of water resources. It is also visualised that a village should be centre of production not only for primary goods but also for secondary goods including electricity. The cities should be centres of services, higher education, knowledge based firms, art, culture and architecture with high connectivity with rural areas. They need to be freed from the pollution generated by industrial production. Villages have more potential to assimilate the pollution. With this vision, we propose that farmers should be allowed to produce electricity not only with bio-diesel but also with other possible methods.

9. The feeling of having no asset is a major cause of the poverty and biggest hindrance in starting of a small business for self-employment. It is the time that new kind of private assets are created, and given to the unemployed free of cost if possible instead of starting doubtful schemes like Rural Employment Guarantee Scheme (REGS). There are 6764 villages in Haryana, each village can have a mini cinema theatre for which a DVD player, a flat screen TV, a generator set, a table, some chairs and space will be required. All this will not cost more than Rs. 70,000 and can give employment to two persons thus generating total 13,000 jobs. The State can finance it 100 per cent in one time subsidy instead of distributing doles in the form of REGS.

10. The mobile PCOs can be another asset that can be given to people. It will comprise one cart, an electricity storage device (battery), a bill printing machine and a mobile phone. All this will not cost more than Rs. 15,000 and can generate employment for 8000 persons. Such a system can be financed by banks through MFIs or by the State with some subsidy. A survey/research should be conducted to identify the assets which can be given to the poor for self employment.

11. A number of rural labourers go to nearby urban areas in search of employment. The unskilled ones or those who do not have their own implements get less wages. The State should provide implements to a targeted number of workers every year. It should be done with little caution as too much supply of skilled labour shall decrease their wages and the producers of implements will be unnecessary benefited. The low skilled ones can also be absorbed in trading. If they are provided with a cart and a weighing machine they can sell farm products in the urban areas. It is reported that many small vegetable vendors pay an interest of 10 per cent per day for buying vegetables from *sabzi-mandi* for a small sum of Rs. 500 to Rs. 1000. The MFIs can help such vendors by introducing a proper system. The vendors can also add value to their farm products by washing, or drying, cutting or packaging. The poor vendors coming from rural areas without having a shop can be trained by NGOs for value-addition and marketing of farm products.

12. The Barefoot Engineering College in Rajasthan is an example of raising income level of poor women by providing training to them for repairing stoves, gases, solar batteries and some other items. This experiment can be replicated in Haryana also. Simultaneously, a research should be conducted to identify the skills which people can learn even without formal education. If along with such skills people need some complementary assets, they should be financed by the State in the form of subsidy or with cheaper credit by MFIs.

13. A number of employment opportunities are emerging in the health services. In fact, each

village and even the cities can have health centres, which can provide health services like physiotherapy, naturopathy, acupressure, gymnasium, ayurvedic medicines, etc. It means that services related with pro-active health can be provided by non MBBS and other than allopathy based systems. This has already happened in many cities of Haryana as several persons have taken franchisee from Haridwar based Swami Ramdev. In future, they may even start earning foreign exchange by providing services to foreign tourists.

14. Private education is also an important area of self-employment. The State should encourage the individuals to start coaching at institutes, computer centres, private libraries/information centres or internet cafés or student hostels. Any enterprise promoting skills, education or training should be given sufficient incentives in the form of easy credit and non-commercial electricity. Since, the health and education are part of State duties, the State should not levy any tax on the enterprises providing such services. However, the State can use them for certain social programmes like Pulse Polio Drive.

15. As we have discussed in Chapter 3 that installation of 1000 IT Kiosks can also provide around five thousand jobs in Haryana and each IT Kiosk can be run profitably in a sustainable way.

16. The Employment Exchanges should be professionally managed. They should hire private consultants to prepare and update their databases. The exchanges can cater to the needs of public as well as private sector. They should not limit themselves as only the record keepers. Rather they should assess the potential of each unemployed coming to them on the basis of his education, experience, skills, family background and already existing earning assets by conducting a deep interview using a standardised schedule irrespective of the caste or category. For this, the staff of the employment exchanges should be trained and empowered. The recommendations given by the exchange after interview should be honoured by different State agencies to provide the required asset as mentioned in earlier points. The interview committee should have knowledge and experience of business, industries, service sector, agriculture and social development.

17. The State should train the NGOs to understand objectives related with health, nutrition, sanitation, education, environment, gender issues, employment, social justice, child labour, legal empowerment, consumer protection, religious harmony, disaster management, promotion of art and culture, care for weak, elders, Dalits, women, minorities etc. The district authority can also train the NGOs to make proposals for projects and can persuade them to source the funds from international agencies. Since, the funds are routed generally through district authorities, so there is a scope for corruption. To curb it, an advisory body of intellectuals, teachers, lawyers, doctors of the district should audit the Statement of use of funds to the NGOs. The NGOs offer a big employment opportunity. In Europe, there are many NGOs, which provide inspection, testing, certification and grading services to the producers for quality and eco-friendliness. They compete with each other for making their good reputation and are able to earn money also. They are corruption free, give better services than the governments and consumers as well as producers both are benefited. The training of NGOs along with the Right to Information Act can create so much of pressure on the service providers that quality of all the services can go up. It can be the most effective way of containing the corruption and infusing responsibility in employees.

18. All the schemes of providing incentives to own private assets for self-employment can be connected with family planning schemes. Those who are unemployed and unmarried should be given the asset with the condition that if they have more than two children in future the State can take the asset back. Of course, it may be exempted in case of girl child as Haryana has a poor sex ratio. For example, in Uttar Pradesh, in one district a policy of giving a gun licence to those who have only one child was adopted. Allotting a gun licence does not cost anything to the State but sends the right signal in masses. In Haryana also, the district authorities can issue weapon licences to unemployed youth who can act as security guards in private and public organisations or can work as night watchmen in cities, sub-urban areas and big villages having dense population. The local police station can act as a regulator of the private security guards in their identification, verification, monitoring and collection of

monthly dues from residents. A part of the collection should be given as an incentive to the local police station employees. The per month charges to be paid to the watchmen should be decided by the elected local bodies like *panchayats*, municipal councils or resident welfare associations. The security needs are growing in Haryana as crime rate is increasing and these will become highly important as Haryana becomes more integrated with the capital to take advantage of NCR. Such security needs can generate large employment without no additional expenses at all.

19. The protection of environment can also generate a lot of employment opportunities. The investment in rainwater harvesting structures, community based ponds/*johars*, etc. should be enhanced.

The Tourism Departments in the University and colleges can enter into a contract with the Haryana Tourism Corporation to run the State tourist destinations on a co-operative basis by the students. The students doing professional courses like Bachelor in Tourism Management, Master in Tourism Management, Hotel Management etc. can convert the motels and tourism lodges into Eco-lodges. They may prepare their websites, innovate by adding cultural programmes as regular features, may develop competencies by marketing the typical Haryanvi food of *saag*, *sattu*, *rabri*, *pattisa*, *lassi*, *maize roti*, *bajra khichri*, etc. In this way they can provide excellent services at a low cost and can also earn while learning for themselves as well as for HTCs. This experiment has been quite successful in Uttarakhand. It can be replicated in Haryana.

4.4 IT and Employment

There is a big challenge before the State to provide jobs to the educated youth. The basic education is must for everyone. In the earlier pages, most of the suggested strategies relate to the employment of less educated ones. The emerging areas of employment for the highly educated youth are in the Information, Communication, and Entertainment Economy, IT Enabled services, finance, insurance, banking and related services. Next paragraphs are devoted to the important issues and conditions related with IT Development.

There are certain essential conditions required to be successful in the competitive international IT markets. Let us have a broad look at the important factors which could prove critical in spreading the business area and use of IT for developmental purposes.

In 1995-96, Haryana was at fifth place in software exports among all States and exported just Rs. 62.99 crore worth of software. During the period August 1991 to August 2004 a total of Rs. 38,433 crore has been invested in Haryana which is 2.9 per cent of the total investment in all States. Out of this, Rs. 3875 crore have come through foreign direct investment which is 1.6 per cent of the total foreign direct investment in India. But it should be understood that much of the foreign direct investment in Haryana has come in only Gurgaon district and was approved in Delhi and it is the result of proximity to the capital. Haryana ranked at ninth place according to tele-density among 16 major States in 2000 and it was just 3.35 per cent. Table 1.118 shows the data on houses, household amenities and assets. It reveals that in Haryana 12.72 per cent households have a telephone. The top nine districts (and also above Haryana average) according to percentage of families having a telephone are Panchkula (29.95), Ambala (25.31), Kurukshetra (17.96), Yamunanagar (17.92), Faridabad (15.55), Panipat (14.4), Rohtak (13.88), Gurgaon (13.78) and Karnal (13.7). From Table 1.118 it is also revealed that 52.98 per cent households have a television set. Ambala District has the highest percentage (71.57) and Mahendergarh has the lowest (37.35) percentage of television sets. It means that even in the poorest district every one out of three families have a television set. Although the expected convergence of telephone, television, cable-network and internet has not taken place in our country still the penetration of televisions in households can be very important from the mass communication point of view for development. If Haryana takes the lead in promoting the convergence of mass communication technologies, it can have a cutting edge advantage over other States.

Though the telecom sector has witnessed substantial growth in the last decade, the spread of telecommunications on a per capita basis has been slow, in comparison with other developing countries. In contrast with the urban areas, where costs of service are lower and returns assured, investments in rural areas represent higher risks and lower returns. This is, in fact, one of the main reasons for the poor penetration of telecommunications in rural India—less than 0.2 per hundred inhabitants.

High speed, inexpensive, reliable and secure broadband telecommunication links to global destinations are a must. Telecoms had been a monopoly of the Government of India. They had been very highly priced and international links for private companies were rarely provided on the fear that the security of the

country could be compromised. Through a series of intellectual and educational campaigns, the monopoly and the obsessive fear with regard to safety was ended in the late 1990s. International bandwidth, first through communications satellites and then undersea cables, is now available abundantly from competing carriers. Recently, competition was also introduced worldwide, therefore the prices have now fallen to about one-fourth of what they were during monopoly times; they would fall further because of almost limitless bandwidth becoming available inexpensively in optical fibre cables laid on the ocean beds to link countries and continents. It is believed that every one kilometre of the optical fibre cable laid down shall provide job to 10 persons. In the mid-1990s, the bandwidth used to constitute about 25 per cent of the cost of an IT contract delivered offshore. We can, therefore, see what a relief it is and what a boost to competition the reduced costs as a result of liberal policy, are and their contribution to the competitiveness of Indian IT and software companies. Now companies like Reliance Infocom has opened its centres named WEBWORLD in many districts of Haryana with high speed internet.

World class IT and software professionals should be available in abundance. About five years ago, there was hardly any effort in the government or established universities to produce IT and software engineers and professionals with Masters in Computer Applications. It was the private sector companies that had been training tens of thousands of IT professionals. The private sector effort in computer education is admirable. The top 2-3 of these companies have come to be recognised as university grade by global companies. From Table 1.73 and 1.74 we observe that Haryana has 7 universities/deemed universities and 70 professional education institutes. There are total 41 engineering colleges which have a total capacity of 10,631 students. These colleges produce 2735 graduates of computer engineering and 2719 of electronics and communication. It has been noticed that IT and telecom companies also hire the students from mechanical, electrical and instrumentation streams. If we include the BCAs, B.Sc. and M.Sc. (Comp. Sc.), MCSs, MCAs, PGDCAs and the students doing three year courses at private institutions then the total workforce knowing computers is increasing by approximately around 10,000 numbers every year.

Infrastructure by way of power, international airline connections, education facilities, hospitals and roads and residential accommodation are necessary for global companies to locate their development centres in India and also to source their requirements to Indian companies. It is clear that Haryana is weak on this front but Gurgaon and Faridabad can take this advantage as they are in the NCR region.

Progressive States like Andhra Pradesh stepped up the training of engineers (engineering colleges went up from 35 in 1997 to 215 in 2002) by permitting scores of new colleges to be started for engineering, MCA and MBA to provide skilled people and not necessarily software engineers; a bachelor's course in computer application (BCA) was also started. The State government broke new ground by establishing the first non-government funded International Institution of Information Technology (IIIT), not from its financial resources but by getting a number of private companies to come together and found the institute, conferring upon it a deemed university status. The Government of India took this example and resolved to put up 50 such institutes either by itself or in the private sector. Governments built huge buildings to provide for IT companies to start business within seven days of their registration. For example, the Cyber Towers in the Hitec city in Madhapur, Hyderabad, provided 8,50,000 sq ft of office space in record time. High speed, broadband telecom connection was part of the building facility. The ingenuity of the government was such that it did not put up any cash but it took equity position equal to the value of the land that was made available for the joint venture, with the private companies. This became a model for several other governments.

Another allied business is the IT-enabled services from call centres which canvass and conclude business for, say, insurance or building loans, bank accounts or tourism, for markets anywhere in the world. They operate using telecommunications. The IT industry requires engineers and masters in computer applications, IT-enabled services require English-speaking graduates with PC skills. Any graduate can be turned into an IT-enabled service employee within six months and Haryana has thousands of such people coming out from the universities every year. It has been noticed that big call centre companies operating in metro cities are facing problems with the employees as they keep on switching to other employers for a promotion. These companies can find more loyal and equally competent employees in cities like Ambala, Panchkula, Panipat, Karnal, Kurukshetra, Yamunanagar, Rohtak and Hisar. The State should encourage big companies to invest in BPOs and KPOs in these cities.

Indian call centres may lose their competitive advantage if they do not upgrade their skills and do not diversify into more value-added services like consulting, analytics and consumer research. To improve topline and to provide better career to the people working in call centres, the Indian companies will have to move from passive call receivers to the active consulting job. Haryana can prepare itself for such emerging new opportunities by preparing students with MBA and IT.

It is not possible for us to compete with China and Korea and even Malaysia in the production of goods. All these countries have highly skilled and well-educated labour, amenable to the discipline of the market. India is saddled with laws made for socialism turning out workers into labour-lordism. The innumerable rules and regulations made for the permit-licence-quota-raj have emasculated enterprise as well as competitiveness. The cost of money (interest rate) is very high. We have acceded to the World Trade Organisation and all customs duties and quantitative restrictions on imports are coming down fast. Indian industries, whether they be steel or aluminium or motorcars or any other goods, are costlier than imports, especially from China. In such a situation, how do we find employment? It cannot be much in the industrial, that is, goods production sector. We therefore, have to turn to the intellectual sector, that is, where knowledge-workers are required, like those in IT and software and telecommunications, biotechnology, architecture, consulting, health and legal services. That is where we can show our prowess. All these require world-class excellence to be competitive and to dominate markets. It is in this area that India has a comparative advantage. So we need to foster the best education, especially in electronics, communications, information technology, biotechnology and health services. Governments are becoming increasingly conscious of this development and are designing yet more incentives to promote the IT industry.

Besides IT, Haryana universities can prepare its students to take advantage of communication and entertainment economy. Out of the total students studying in the universities hardly five per cent are employable. The poor communication skills, lack of command on language, inability to use computers and weak mathematical and analytical skills are the main hindrances in their employment in the private sector. A number of courses like economics, management, commerce, tourism, history, political science, languages, fine arts and many others can be redesigned to cater to the needs of TV channels, newspapers, magazines and other media companies.

4.5 Management of Fiscal Health

During the Tenth Plan, State level fiscal reforms have played a crucial role in launching Indian economy to the higher growth trajectories. The States have now become key players in the process of development. The recent macroeconomic management regime has meant that whereas on the one hand they are expected to increasingly assume newer responsibilities, on the other, they have to look after themselves when it comes to raising resources. The predominant role in allocation and cooperative role in distribution makes States' fiscal operations critical for macroeconomic stabilisation as well. Thus, sound fiscal health of the States is important from the viewpoint of both microeconomic allocative efficiency and macroeconomic stability.

The State of Haryana continues to be a relatively high per capita income State. This is evident from the fact that up to the year 1990-91, the growth rate of Haryana's Net Domestic Product was above the all-India growth rate. However, this scenario has changed when after 1993-94 the rank of Haryana State in terms of growth started falling down. This change may be attributed to the onset of liberalisation in the country after which the onus of providing direction to the States' economies has come on the State governments. Consequently, the States' operations have been thrown open to market forces and each of the State felt the need to redefine its unique selling proposition. This leads to a paradigm shift from fiscal concession war to the superior infrastructure, better administration and a win-win policy package to attract investment.

The newly emerged situation obviously forced Haryana State government also to spend dearly on physical and social sectors. Given the availability of funds, it led to a deteriorated fiscal position. The deterioration got further aggravated due to the prohibition policy during 1996-1998 and the implementation of fifth pay commission recommendations. Although, State government took many steps to consolidate its fiscal position e.g. withdrawal of prohibition policy, implementation of VAT, recourse to market borrowings, power sector reforms, etc., yet more policy changes on behalf of State government are required to meet the emerging challenges. In the following pages, the fiscal health of Haryana State has been assessed through various indicators and an attempt has been made to suggest

some concrete policy directions so as to improve the fiscal position of the State.

4.5.1 An Overview of the Fiscal Scenario

The three major fiscal indicators i.e. fiscal deficit (FD), revenue deficit (RD) and primary deficit (PD) are shown in Table 4.1. It shows that the Gross Fiscal Deficit (GFD) of Haryana was at 2.31 per cent of GSDP in 1991-92. The ratio showed a steadily increasing trend and peaked at 5.13 per cent in 1998-99 in the wake of implementation of fifth pay commission report. As the State's capacity to borrow is limited, so, the higher fiscal deficit puts pressure on the capital and maintenance expenditure, thereby adversely affecting the infrastructural facilities and productivity. This fact has been supported by the data contained in Table 4.2 where the capital expenditure is showing a declining trend particularly during later years.

Primary deficit which is GFD net of interest payments is a very significant indicator as it nets out interest burden which is a very legacy of the past and thus suggests the extent of fiscal imbalance which is being currently incurred. Primary deficit for Haryana as a proportion of State Domestic Product stood at 0.33 in 1991-92. It has been rising during late nineties but finally settles down in the later years. It is noteworthy here that the interest payments has been more or less rising since 1991-92 but the Primary deficit has been declining after 1998-99. This again shows the strain on

TABLE 4.1

Fiscal, Revenue and Primary Deficit of Haryana State

(*Per cent of GSDP*)

Year	*Fiscal Deficit*	*Revenue Deficit*	*Primary Deficit*
1986-1991	2.95	-0.26	1.14
1991-1992	2.31	0.2	0.33
1992-1993	2.43	0.01	0.55
1993-1994	2.17	-0.36	0.26
1994-1995	2.04	1.49	0.18
1995-1996	3.31	1.16	1.44
1996-1997	3.08	2.02	1.08
1997-1998	2.92	1.86	0.79
1998-1999	5.13	3.53	2.85
1999-2000	4.36	2.42	1.58
2000-2001	4.11	1.1	1.4
2001-2002	4.6	1.75	1.9
2002-2003	3.35	1.65	0.35
2003-2004	2.86	1.23	-0.13
2004-2005	1.45	0.31	-1.24
2005-2006RE	2.01	0.65	-0.34
2006-2007BE	1.78	0.31	-0.53

RE : Revised Estimate

BE : Budget Estimate

Source: *Handbook of Statistics on State Government Finances*, Reserve Bank of India, 2004.

Statistical Abstracts Haryana, various issues published by Government of Haryana, Chandigarh, 2006-07.

TABLE 4.2

Trends in State Finances

(*Per cent of GSDP*)

	1990-91	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*1997-98*	*1998-99*	*1999-00*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06RE*	*2006-07BE*
1. Revenue Expenditure	13.3	14.00	13.02	15.37	23.90	18.00	19.00	17.12	16.1	14.21	13.1	14.3	14.9	14.31	13.7	14.24	13.5
a. Social services	4.45	4.38	4.45	3.95	4.45	5.34	3.92	4.08	4.78	4.61	4.56	4.50	4.61	4.43	3.87	4.55	4.32
b. Economic services	4.46	4.87	4.42	3.96	6.15	4.02	4.76	4.60	4.94	3.66	2.80	4.00	4.20	3.91	3.85	4.31	4.16
c. Interest payments	1.66	1.98	1.88	1.90	1.85	1.86	2.01	2.12	2.28	2.77	2.71	2.68	2.97	3.00	2.75	2.40	2.35
d. Others	2.73	2.79	2.27	5.56	11.45	6.78	8.31	6.32	4.08	3.17	2.94	3.13	3.07	2.97	3.01	3.15	3.18
2. Capital Expenditure																	
a. Capital disbursements	1.28	0.90	1.25	1.37	0.79	0.96	1.25	1.27	2.35	1.83	2.63	2.42	1.35	1.46	1.65	1.89	2.06
b. Net loans by State	1.91	1.89	1.90	1.83	1.65	1.62	1.73	1.80	1.23	1.05	0.97	1.00	1.43	1.42	1.35	1.26	1.39
3. Revenue Receipts	13.16	13.80	13.01	15.73	22.41	16.83	16.97	15.26	12.60	11.79	12.00	12.60	13.20	13.08	13.80	13.59	13.20
a. Own tax revenue	7.36	8.02	7.92	7.18	7.19	7.28	6.01	6.13	7.15	7.19	7.84	8.22	8.43	8.42	8.95	9.17	9.20
b. Shared taxes	1.28	1.35	1.43	1.28	1.21	1.21	1.21	1.39	1.10	1.07	0.63	0.74	0.87	0.85	0.74	1.09	1.05
c. Grants	1.01	1.08	1.14	1.22	0.78	1.00	0.95	0.93	0.83	0.95	0.87	0.85	1.08	1.08	0.65	0.97	1.03
d. Own non-tax revenue	3.52	3.37	2.52	6.06	13.23	7.34	8.79	6.81	3.48	2.57	2.62	2.75	2.82	2.73	3.06	2.35	1.90
4. Capital Receipts	3.72	3.08	2.94	3.08	4.30	13.22	4.27	4.87	6.94	5.23	4.62	4.65	4.65	4.26	4.63	4.89	4.37
a. Internal debt	0.60	0.33	0.57	0.87	0.32	0.40	0.52	0.67	0.92	2.62	2.08	2.98	2.74	2.87	2.74	2.33	2.45
b. Loans from central govt.	1.93	1.63	1.66	1.37	1.57	2.70	1.49	2.07	2.30	0.71	0.58	0.56	0.58	0.47	0.55	0.61	0.69
c. Provident fund	0.87	0.83	0.72	0.77	0.76	0.74	0.69	0.80	1.70	1.16	0.91	0.67	0.77	0.74	0.85	0.92	0.96

Source: Computed on the basis of data obtained from State Budget and State Income (GSDP).

capital outlay. Revenue deficit is the third and the most crucial deficit indicator in State finances as it is a measure of the fiscal profligacy being indulged in by the State government. In Haryana, Revenue deficit emerged for the first time in 1991-92. The State experienced revenue surplus again in 1993-94, but after that the Revenue deficit has become a regular and somewhat serious problem in Haryana. RD further moved to new high peaks during later 90s along with fiscal deficit. However, after 1998-99 the State showed some signs of fiscal consolidation as the revenue, Fiscal and Primary deficits have been shrinking. Rationalisation of the sales tax to bring in VAT, introducing information technology in revenue administration and signing up of various MoUs with the central government to avail funds (MoU with Central government on medium term fiscal reforms, power sector reforms etc.) are some of the welcome steps taken by the State government in this regard.

After examining the broad trends in resource gaps, we now turn to examining the trends in two policy instruments i.e. expenditure and receipts.

4.5.2 Expenditure Management

Expenditures are incurred by the government under two broad heads i.e revenue expenditure and capital expenditure. Revenue expenditures are incurred on goods and services for current consumption and do not results in creation of assets while expenditures on capital account result in creation of durable assets. Revenue expenditures are, however, politically sensitive and difficult to prune. This has resulted in the Capital expenditures being slashed under a fiscal crunch situation. This is the general pattern of all the States in India and Haryana is no exception to it. Table 4.3 clearly depicts that the proportion of Revenue expenditure in Total expenditure has been much greater than the capital expenditure.

TABLE 4.3

Expenditure Analysis of Haryana State Finance

Year	*Revenue Expenditure/ Total Expenditure*	*Capital Expenditure/ Total Expenditure*
1991-92	83.39	16.61
1992-93	80.49	19.51
1993-94	82.77	17.23
1994-95	90.76	9.24
1995-96	87.44	12.56
1996-97	86.41	13.59
1997-98	84.77	15.23
1998-99	81.8	18.2
1999-00	83.17	16.83
2000-01	78.41	21.59
2001-02	80.69	19.31
2002-03	84.22	15.78
2003-04	83.21	16.79
2004-05	91.17	8.83
2005-06RE	90.14	9.85
2006-07BE	89.15	10.85

RE : Revised Estimate
BE : Budget Estimate
Source: Same as Table 4.2.

The Revenue expenditure as a proportion of GSDP in Haryana has been shown in Table 4.2. It is very

TABLE 4.4

Composition of Revenue Expenditure in Haryana

(*Per cent of Total RE*)

	1990-91	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*1997-98*	*1998-99*	*1999-00*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06BE*	*2006-07RE*
1. Social Services	33.44	31.20	34.17	25.72	18.62	29.65	20.62	23.82	29.70	32.47	34.90	31.50	31.00	30.96	28.20	31.94	32.00
a. Education	16.81	16.00	18.92	13.53	8.54	12.14	11.14	12.92	17.4	17.97	18.50	17.10	16.50	16.92	14.70	16.02	16.50
b. Health	4.24	4.19	4.76	2.89	2.27	2.41	2.24	2.83	3.52	3.47	3.57	3.06	3.30	3.14	3.33	3.46	3.88
2. Economic Services	33.58	34.70	33.97	25.76	25.72	22.33	25.07	26.89	30.70	25.77	21.50	27.90	28.30	27.35	28.00	30.30	30.90
a. Agriculture	8.17	9.97	9.00	5.65	3.17	4.31	4.00	4.01	4.72	4.71	4.99	4.53	4.58	4.47	4.06	4.32	4.31
b. Irrigation	7.71	8.08	8.86	6.62	8.31	5.09	4.12	4.38	4.26	4.43	4.53	4.90	6.26	5.82	3.90	4.93	4.88
c. Transport	10.78	10.20	10.91	8.71	5.29	6.95	6.10	6.68	7.78	8.22	8.05	7.14	6.43	6.17	7.42	6.75	6.89
3. General Services	32.46	33.60	31.37	48.33	55.55	47.85	54.19	49.28	39.60	41.75	43.40	40.30	40.50	41.39	42.90	35.86	35.20
a. Interest payments	12.52	14.20	14.43	12.40	7.76	10.36	10.58	12.40	14.20	19.52	20.80	18.80	20.00	20.91	20.00	16.86	17.40
b. Administrative services	8.12	8.03	8.67	6.87	4.54	5.74	5.07	6.08	7.59	7.43	8.18	7.25	6.77	6.57	7.01	7.55	7.75

Source : See Chapter 2.

much clear that the Revenue expenditure did not follow any pattern as such during 90s. RE/GSDP was highest in 1994-95 which may be attributed to above average expenditure on irrigation and energy. Since 1996-97, the revenue expenditure has been declining continuously for four years but thereafter it again started rising. The composition of revenue expenditure has been summarised in Table 4.4. The three major categories of revenue expenditure—social services, economic services and general services accounted for 33 per cent each in 1990-91. With the passage of time, the share of general services has been rising at the cost of both social and economic services. Table 4.4 reflects it very clearly that the share of general services is rising more than the other two.

Expenditure on general services is increasing unabated as it contains debt service and interest payment and mostly salary expenditure which cannot be contained in the short run. Expenditure on social service is almost constant as it is very difficult to reduce it mainly because education and health sectors have high salary component. This leaves the economic services to bear the burden of fiscal correction. Merely 2.8 per cent of GSDP has been spent on these services during 2000-01 (Table 4.2). There is a need to restructure the expenditure on economic services through public-private partnership particularly in the areas of public transport, roads and power sector, etc. An initiative on the part of the government has already been taken in this regard and it needs to be further

TABLE 4.5

Composition of Capital Expenditure in Haryana

(*Per cent of Total CE*)

	1990-91	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*1997-98*	*1998-99*	*1999-00*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06RE*	*2006-07BE*
1. Social Services	13.11	20.2	27.07	23.26	43.86	32.94	43.39	26.36	14.5	18.4	9.87	13.00	23.50	26.32	32.00	27.91	30.20
a. Education	3.75	8.69	5.95	4.34	7.20	3.92	0.98	2.51	2.25	5.11	0.27	0.24	0.96	1.45	0.68	1.80	1.67
b. Health	2.78	5.87	6.16	6.01	5.58	1.65	1.41	1.60	1.14	1.05	4.87	0.50	1.47	1.85	1.27	1.25	1.24
c. Water supply	n.a	n.a	10.53	8.69	22.96	19.67	38.42	20.82	10.10	14.76	8.71	11.90	18.40	20.52	28.8	23.36	26.00
2. Economic Services	83.13	74.6	70.47	74.48	53.12	64.18	52.64	68.97	82.80	78.55	88.00	83.50	69.40	66.54	61.50	64.72	64.40
a. Agriculture	14.73	-29.00	3.50	18.69	-13.8	-9.22	-6.00	2.57	15.50	-35.04	42.00	38.70	11.70	11.75	-27.20	-4.84	-5.76
b. Irrigation	44.28	69.00	43.04	36.52	42.60	45.92	46.54	53.66	29.60	35.04	22.30	24.20	11.70	11.57	29.30	25.60	23.40
c. Industry	7.71	5.79	5.56	2.32	3.17	7.58	1.47	1.96	0.52	0.13	0.03	0.03	0.18	0.05	0.24	0.46	0.22
d. Transport	16.26	28.80	18.20	16.07	19.72	18.25	9.80	9.80	5.12	4.02	17.70	17.70	31.5	28.29	32.60	20.31	18.70
e. Energy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.70	39.13	2.61	2.61	14.10	14.59	26.00	22.38	27.4

Source: Table 2.20.

TABLE 4.6

Composition of Revenue Receipts

(*Per cent of total RR*)

	1990-91	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*1997-98*	*1998-99*	*1999-00*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06RE*	*2006-07BE*
1. Own Tax Revenue	55.9	58.00	60.85	45.64	32.09	43.25	35.43	40.16	56.90	61.00	65.60	65.40	63.80	64.34	66.70	67.43	69.70
a. Sales tax	25.85	27.70	28.45	22.07	15.13	21.05	22.82	26.82	29.2	34.11	36.10	38.70	39.60	39.68	42.70	43.66	46.50
b. State excise	14.96	15.30	16.56	12.40	9.00	11.02	1.06	0.84	14.10	13.27	12.80	11.50	10.50	10.38	9.08	8.97	8.73
c. Stamp duty & regn.	5.30	4.36	4.40	3.44	2.78	4.88	4.51	5.11	5.37	5.37	6.38	6.42	6.15	6.06	6.51	7.51	7.27
d. Motor vehicle tax	1.87	3.05	3.00	1.50	0.77	1.05	0.85	1.14	1.30	1.47	1.30	1.36	1.31	1.23	1.25	1.18	1.16
2. Shared Tax	9.71	9.79	11.01	8.11	5.39	7.19	7.14	9.14	8.76	9.11	5.25	5.91	6.62	6.52	5.55	8.07	8.02
3. Own non-tax Revenue	26.71	24.40	19.36	38.50	59.05	43.60	51.79	44.61	27.70	21.83	21.90	21.90	21.40	20.87	22.80	17.30	14.40
a. Interest payments	6.64	6.23	4.00	3.35	8.09	5.12	3.93	4.02	3.35	3.50	3.59	4.38	4.84	5.04	4.25	4.51	4.31
b. Transport	7.64	7.65	9.26	7.27	4.62	5.44	5.08	5.42	6.02	5.83	5.76	5.40	5.00	4.59	4.60	4.23	4.03
c. Irrigation	0.90	0.70	0.75	0.58	0.33	0.42	0.40	0.46	1.11	0.66	0.82	0.90	0.87	0.82	0.92	0.62	0.61
d. Social services	1.07	1.46	1.22	1.15	0.70	1.04	1.21	2.36	2.34	2.44	2.02	1.92	1.87	1.76	3.94	3.75	3.02
e. Others	10.46	2.42	2.72	2.02	1.75	1.92	2.22	3.56	4.43	4.98	5.21	4.21	3.67	3.57	4.52	5.31	4.85
4. Grants from Centre	7.68	7.85	8.78	7.75	3.47	5.96	5.64	6.09	6.59	8.06	7.27	6.75	8.17	8.27	4.89	7.18	7.85

Source: Table 2.17.

strengthened. The expenditure on social services should be raised further as the Tenth Plan of Haryana has declared the development of social infrastructure as its main focus of strategy. The composition of capital expenditure has been shown in Table 4.5.

It shows that the major share of capital expenditure goes to economic services in Haryana followed by the social services. The existing composition reflects that very less amount has been left for disbursement to State Public Sector Undertakings (SPSU). The present scenario of rising deficits also urgently demands that the government should discourage the practices of sanctioning and disbursing loans to SPSUs, which are not having much economic justification. These undertakings require huge Capital expenditure to exist thereby leaving very less for the needy section of the society. In economic services, the share of irrigation has been declining and that of transport has been rising. Energy has also become an important segment since 1998-99. To curtail the rising capital expenditure on transport and energy the government should come forward and invite private participation in these sectors. It will help the State to develop and maintain better roads, better transport facilities and an efficiently run State Electricity Boards.

4.5.3 Revenue Management

On the receipts front, the broad classification is into Revenue receipts and Capital receipts. Table 4.2 shows that Revenue receipts as a ratio of GSDP declined from 22.41 per cent in 1994-95 to 11.95 per cent in 2000-01. The State's own tax revenue (SOTR) was between 7-8 per cent of GSDP during 1990-91 to 1995-96. In the next two years i.e. 1996-97 and 1997-98, it came down to 6.01 per cent and 6.13 per cent of GSDP due to prohibition policy. However, after the withdrawal of prohibition policy, State's own tax revenue again started rising and in the later years, it even crossed 8 per cent of GSDP. State's own non-tax revenue (SONTR) did not show any particular trend. It was 2-3 per cent of GSDP between 1990-91 and 1992-93. It reached to 13.23 per cent of GSDP in 1994-95 when the revenue from State lotteries alone contributed 9.76 per cent of GSDP. Table 4.2 clearly shows that SONTR/ GSDP ratio has been falling continuously. In fact, since 1999-2000, this ratio has been oscillating within a very narrow range. The percentage of shared taxes and grants-in-aid on GSDP was very low (around 1-1.25 per cent) and it further declined to below 1 per cent of GSDP in the later years. This is quite understandable as Haryana is a relatively rich State and its dependency upon central resources should be less.

The composition of Revenue receipts has been shown in Table 4.6. It is very much evident from this table that the major share of Revenue receipts comes from State's own tax revenue. Except for five years i.e. from 1993-94 to 1997-98, SOTR contributed more than 50 per cent of total Revenue receipts. This percentage has strengthened further after 1999-2000, when it was moving within a range of 61-66 per cent. Within the SOTR, sales tax contributed the largest followed by State excise duty. Further, the share of sales tax in total Revenue receipts has been continuously rising since 1994-95. It reached to 46.48 per cent in 2006-07, as compared to 15.13 per cent in 1994-95 i.e. a rise of 207 per cent. The share of State excise came to a halt in 1996-97 and 1997-98 and the prohibition policy of the State was alone responsible for that. It recovered smartly after withdrawal of this policy and reached to 14.14 per cent in 1998-99. However, after that it has been declining continuously mainly because of the rationalisation and reduction in Central and State excise duty rates. Stamp duty and registration fees showed marginal increase over a period of time. The share of State's own non-tax revenue (SONTR) has been declining overtime as it is politically difficult to raise user charges. In such a situation, tax reforms can only work. Government of Haryana had made some efforts in this direction e.g. simplification and rationalisation of State's taxation system which resulted into the implementation of VAT w.e.f. April 1, 2003, expansion of the scope of self assessment etc.

Some of the other taxes like stamp duties and registration fees, motor vehicle taxes, entertainment tax etc. remained out of the tax reform process in Haryana. So, an urgent need is there to reform these taxes also. Stamp duties and registration fees have shown high tax buoyancy (Table 4.7) due to the boom in real estate market.

TABLE 4.7

Tax Buoyancy in Haryana: 1993-94 to 2002-03

Tax	*Buoyancy*
State's own tax revenue	1.30
Taxes on property and capital	1.59
Stamps and registration	1.47
Land revenue	5.82
Taxes on commodity and services	1.34
M	1.78
State excise duty	1.17
Taxes on vehicles	0.63
Taxes on goods and passengers	1.23
Taxes and duty on electricity	-3.55
Entertainment tax	-0.76
Sugar purchase tax	-1.33

Source : *Statistical Abstracts Haryana*, various issues published by Government of Haryana, Chandigarh.

Because of high rates of stamp duties and registration fees, most of the traded properties in Haryana tend to get undervalued. The tax rates were quite high and could have easily led to large scale evasion (NIPFP, 1996). So, there is a need to reduce these rates substantially so as to encourage more accurate declaration of the value of transactions. Some anti-evasion measures may also be adopted e.g shifting the tax base to "fair market value" from "actual declared value'.

Land revenue have shown highest buoyancy which is an indication of the fact that Haryana can augment revenue on this front. Presently, the land revenue has almost become defunct, partly due to not undertaking of regular settlement operations. The State government should urgently look into the matter. The rates of motor vehicle taxes on goods vehicles in Haryana are relatively low than in other comparable States. However, much scope has not been there to raise such rates as the buoyancy is quite low. Another possibility for better revenue management lies in the rationalisation of passenger tax on contract carriages. Presently, it is levied on the basis of a number of variables for each vehicle. It may be rationalised into a fixed annual additional tax which will also lead to simplification of tax system in Haryana.

Having noticed the rising own tax revenue and declining non-tax revenue, some measures to capture the extent of dependence of Haryana State can be constructed. The Dependency Ratio (DR) as used by Pethe and Lalvani (2001) is one such measure, which is defined as:

$$DR = \frac{Total\ Expenditure - Own\ Income\ (Tax + Non - Tax)}{Total\ Expenditure}$$

Table 4.8 contains the dependency ratio of Haryana State from 1980-81 to 2003-04. The position of Haryana seems to be fairly good as the DR varies within a range of 22.43 per cent to 45.95 per cent. Table 4.8 shows two major declining trends. First is between the years 1982-83 to 1994-95, when DR declined from 45.83 per cent to 22.43 per cent. Another is since 1998-99, when it has been declining continuously. It was only between 1998-99 when the DR has been rising and that is due to the prohibition policy and the implementation of Fifth Pay Commission report.

During the last 25 years, the dependency ratio declined in 17 years. It shows that Haryana's dependence on Central government for funds is less and the State is generating its own resources to finance expenditures. It is a good sign as it will help the State in keeping the deficits under control.

TABLE 4.8

Dependency Ratio of Haryana State Finance

Year	*DR*
1980-81	41.88
1981-82	38.44
1982-83	45.83
1983-84	43.2
1984-85	44.65
1985-86	42.21
1986-87	42.84
1987-88	38.26
1988-89	37.81
1989-90	36.07
1990-91	34.05
1991-92	32.3
1992-93	35.48
1993-94	28.69
1994-95	22.43
1995-96	28.97
1996-97	32.64
1997-98	35.95
1998-99	45.95
1999-00	42.86
2000-01	38.21
2001-02	37.12
2002-03	36.14
2003-04	35.18
2004-05	28.19
2005-06RE	27.09
2006-07BE	26.72

RE : Revised Estimate
BE : Budget Estimate
Source : *Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh, 2006-07.

TABLE 4.9

Ratio of Public Debt to GSDP in Haryana

Year	*Debt/GSDP*
1990-91	19.4
1991-92	19.67
1992-93	19.58
1993-94	18.67
1994-95	18.03
1995-96	19.39
1996-97	18.29
1997-98	19.74
1998-99	21.75
1999-00	23.62
2000-01	23.97
2001-02	26.42
2002-03	26.31
2003-04	26.29
2004-05	26.89
2005-06RE	27.65
2006-07BE	27.23

RE : Revised Estimate
BE : Budget Estimate
Source : *Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh, 2006-07.

4.5.4 Debt Management

Public debt constitutes three major categories i.e. internal debt (consisting of market borrowings and other borrowings from financial institutions), loans and advances from Central government and provident fund. The total indebtedness of Haryana under these three categories was 19.4 per cent of GSDP in 1990-91 which has risen to 27.23 per cent of GSDP in 2006-07. During this period, a steady debt/GSDP ratio has been noted. As far as the composition of debt is concerned, the share of internal debt has been rising while that of Central government loans has been declining (Table 4.9). The debt service ratio has also been increasing over time, however, the repayment of principal amount is not rising that much. Together, it may be characterised as a potentially difficult public debt scenario. In the future as lower repayments now imply greater debt accumulation and hence higher debt servicing costs in future. An urgent need is there to use the debt resources efficiently so as to significantly raise the real growth rate of the economy.

However, the Government of Haryana had resorted to certain policy measures that will help the State in managing its debt position. These include the constitution of a Consolidated Sinking Fund to meet the debt obligations, a Guarantee Redemption Fund to meet the payment obligation of State guarantees, swapping arrangement of central government loans through switching over to cheaper market loans. These will help the State government to meet its repayment schedule in time and in lowering the liability due to higher interest charges. On the whole, the measures taken are quite satisfactory.

Interstate Fiscal Analysis

In order to evaluate the fiscal performance of Haryana *vis-à-vis* 13 major States of India, some performance indices are formed here. The index is computed as follows:

$$Index = \frac{PM(I)_{JT}}{PM(I)_{OT}}$$

Where, PM (I) JT = Performance measure I for State J in time period T.

PM (I) OT = Average performance measure I for all 14 States in time period T.

The indices are framed for each of the years between 1991-92 and 2004-05 for the purpose of convenience, clubbing of time periods has been done i.e. 1991-92 to 1995-96, 1996-97 to 1999-2000 and 2000-01 to 2004-2005. An index equal to 1 implies that State J follows the average pattern of the major States. On the basis of indices, the States have been ranked. Rank 1 is assigned to the State performing best as per the interpretation of the particular performance measure. The following indices have been constructed:

$$Equity\ Index = \frac{Expenditure\ on\ Social\ Services}{Total\ Expenditure}$$

Expenditure on social services like education, health etc. is relatively more targeted towards the poor, so it can be used as an index of equity in the State. An index > 1 implies that the State is performing better as compared to the average trend.

$$Efficiency\ Index(I) = \frac{Total\ Expenditure - Own\ Income\ (Tax + Non - Tax)}{Total\ Expenditure}$$

If the State has lower dependency ratio as compared to the average ratio, it will be called relatively better performance. So an index <1 is a measure of good performance.

$$Efficiency\ Index\ (II) = \frac{Own\ Tax\ \text{Re}venue}{Total\ Expenditure}$$

If the tax effort of the State is greater than the average, the State would be termed as more efficient. So, an index >1 shows the above average performance by the State.

The results of above mentioned three measures are contained in Table 4.10 and 4.11.

TABLE 4.10

Equity Index of States in India

State	*1991-92to 1995-96*	*1996-97to 1999-00*	*2000-01to 2004-05*
Andhra Pradesh	1(9)	1.02(9)	0.86(11)
Bihar	1.08(5)	1.08(4.5)	1.01(7)
Gujarat	0.96(11)	0.95(11)	0.83(14)
Haryana	0.83(13)	0.76(13)	0.91(10)
Karnataka	1.02(8)	1.04(8)	1.03(6)
Kerala	1.15(1)	1.05(7)	1.23(1)
Madhya Pradesh	1.08(5)	1.08(4.5)	0.84(12.5)
Maharashtra	0.98(10)	0.98(10)	1.22(2)
Orissa	1.05(7)	1.09(3)	0.93(9)
Punjab	0.73(14)	0.72(14)	0.84(12.5)
Rajasthan	1.08(5)	1.14(1)	1.11(3)
Tamil Nadu	1.14(3)	1.10(2)	1.06(4)
Uttar Pradesh	0.86(12)	0.89(12)	0.94(8)
West Bengal	1.14(2)	1.06(6)	1.04(5)

Note: Figures in parentheses show ranks.

Source: *RBI Bulletin*, Various Issues.

TABLE 4.11

Efficiency Index of States in India

	Dependency Ratio			*Own Tax Revenue*		
	1991-92 to 1995-96	*1996-97 to 1999-00*	*2000-01 to 2004-05*	*1991-92 to 1995-96*	*1996-97 to 1999-00*	*2000-01 to 2004-05*
Andhra Pradesh	1.03(9)	1.01(8)	1.04(7)	0.98(8)	0.99(8)	1.04(8)
Bihar	1.33(13)	1.31(13)	1.52(14)	0.57(14)	0.54(14)	0.41(14)
Gujarat	0.78(3)	0.84(5)	1.11(8)	1.20(4)	1.18(4)	1.24(4)
Haryana	0.67(1)	0.68(1)	0.69(1)	1.23(1)	1.21(1)	1.27(1)
Karnataka	0.84(4)	0.80(3)	0.90(5.5)	1.13(5)	1.10(6)	1.12(7)
Kerala	0.93(7)	0.92(7)	0.90(5.5)	1.08(7)	1.10(7)	1.15(6)
Madhya Pradesh	0.97(8)	1.03(9)	1.15(9.5)	0.88(11)	0.88(11)	0.84(11)
Maharashtra	0.73(2)	0.76(2)	0.73(2)	1.21(3)	1.23(1)	1.26(2.5)
Orissa	1.38(14)	1.36(14)	1.38(13)	0.64(13)	0.68(13)	0.80(12)
Punjab	0.86(5)	0.88(6)	0.86(4)	1.22(2)	1.21(3)	1.26(2.5)
Rajasthan	1.15(11)	1.10(10)	1.15(9.5)	0.91(10)	0.95(9)	0.93(9)
Tamil Nadu	0.86(6)	0.83(4)	0.84(4)	1.10(6)	1.13(5)	1.16(5)
Uttar Pradesh	1.28(12)	1.25(11)	1.31(11)	0.78(12)	0.77(12)	0.74(13)
West Bengal	1.10(10)	1.26(12)	1.35(12)	0.95(9)	0.90(10)	0.87(10)

Note: Figures in parentheses show ranks.

Source: *RBI Bulletin,* Various Issues.

Based upon the equity index, it was found that the position of Haryana has not been satisfactory. On the one hand, the index value in all the three sub-periods was less than 1, while on the other hand, the rank of the State was also very bad. The State ranked 13 in first two sub- periods, however, a marginal improvement has been noticed during the last sub-period with a rank 10. It is an indication of the fact that the State has not been very serious about the poor section of the society. Keeping in view the importance of social infrastructure in an economy, the State should give top priority to expenditure on social services.

The efficiency indices reflect a very rosy picture of the fiscal health of Haryana State. The State has been successfully maintaining its first rank in all the three sub- periods and in both the efficiency measure. It indicates the excellent tax efforts made by the State because the State has been generating its own sources to finance expenditures thereby reducing the dependence upon the central government.

4.6 Ideal Mix of Public/Private Sectors Partnership

Property Rights and privatisation are the heart of the incentive structure of market economies. They determine who bears risk and who gains or loses from transactions. Does it matter whether property is public/ private or something in between? Does privatisation improve performance?

An extensive survey of empirical literature on privatisation since 1980s, comparing public and private enterprises in industrial market economies concludes generally, but not uniformly, that private firms show higher productivity and better performance than public enterprises. More recent analysis of performance before and after privatisation in industrial and developing countries reach stronger conclusions in favour of private ownership. For example, an analysis of 61 privatised companies in 18 countries (6 developing and 12 industrial) showed, in at least two-thirds of the divestitures, post privatisation increases in profitability, sale, operating efficiency, and capital investment—all this, surprisingly, with no evidence of falling market economies and middle to high income developing economies there is little doubt that private ownership is a significant determinant of economic performance.

The enterprise surveys in Poland in 1993 and Russia in 1994 prove that new private firms behave differently from, and better than, State firms, showing more dynamism and generating higher profits. In China also the non-State sector has grown much faster than China's State enterprises despite an imprecise property rights framework that is quite different to Western legal traditions. The township and village enterprises in

China have been developed as a halfway form of industrial enterprise that are neither State owned in the classic sense nor privately owned in the capitalist sense. They are owned by local governments/citizens. These mainly produce consumer goods for domestic and international markets. The growth and performance of these township and village enterprises have been extraordinary.

In India too the private sector is growing and its importance in economic matters has been rising. The private sector is also needed to achieve sound fiscal management at central and State levels. The issue of ideal mix of public/private sectors partnership is linked with fiscal sustainability. In Haryana, gross fiscal deficit and revenue deficit has been much below the centre level since 1996-97. In comparison to States, the fiscal deficit is higher and the revenue deficit is lower in 2001-02. The revenue expenditure is rising since 1980-81 in comparison to revenue receipts, turning the surplus 59.2 crore in 1980-81 to the deficit of Rs. 920.3 crore in 2003-04. The revenue and capital expenditure as a percentage of GSDP has risen from 13.3 per cent and 3.19 per cent in 1990-91 to 14.24 per cent and 3.15 per cent respectively in 2005-06. Similarly, revenue and capital receipts as a percentage of GSDP has increased respectively from 13.16 per cent and 3.72 in 1990-91 to 13.59 per cent and 4.89 per cent in 2005-06. All this being in terms of efficiency index, Haryana occupies rank one among all the States of Indian federation. The actual level of Sustainable Fiscal deficit for Tenth Plan in Haryana has been less than the projected level.

The analysis of data related with Government Finance in Haryana also reveals inadequacy of funds for education, health and other social sectors. The revenue expenditure is alarmingly rising. This needs to be curbed as indicated in the Tenth Plan. For achieving this, the participation of private sector in economic activity in the State should be increased. This is happening in health and education—the number of private centres/institution is bypassing the number of the public centres/institutions. This trend is most welcome as the performance of private sector units is always better than the public units as revealed by the empirical surveys of the study on public/private units performance.

TABLE 4.12

State-wise Sustainable Fiscal Deficit for Tenth Plan

(*As % GSDP*)

	State	*Debt/GSDP 2001-02*	*Sustainable Fiscal Deficit*	*GFD 2001-02*
1.	Andhra Pradesh	30.7	3.8	6.0
2.	Arunachal Pradesh	69.8	8.1	8.2
3.	Assam	36.9	4.3	7.9
4.	Bihar	46.8	4.7	5.5
5.	Delhi	11.9	1.9	1.2
6.	Goa	28.1	3.8	4.4
7.	Gujarat	30.6	4.5	7.5
8.	**Haryana**	**27.1**	**3.7**	**4.1**
9.	H.P.	75.5	11.0	14.5
10.	J&K	58.5	6.1	4.6
11.	Karnataka	23.7	3.5	4.3
12.	Punjab	44.2	4.0	6.0

Source: Adopted from Planning Commission, Govt. of India, New Delhi, *Tenth Five Year Plan*, 2002-2007, Vol. I.

The ideal mix of this public-private partnership would be that which will release adequate funds for the government to spend on social sector—for example, education, health, housing and sanitation. Government of Haryana, through series of innovative policy-frameworks are engaging the private sector in agriculture, industry and service. The success of all these efforts depends on the creation of institutions needed for the strengthening of market mechanism in the State as it bring the optimum allocation of resources.

4.7 Market Mechanism

As discussed in Chapter 3, three fundamental questions related with economic problems in all societies/nations are being increasingly answered by market mechanism. In liberalised economies, market mechanism means elimination of price controls and relaxing trade protection in a few heavily regulated or protected sectors. It (liberalisation) also means freeing entry into production services, and trade, including the freedom to open a new business, to expand or break-up an existing business, and to change product mix, suppliers, customers, or geographical base. As compared to 1980s, the market mechanism and reforms related to it, became more wide-spread and were adopted during 1990s. Their speed and scope have varied greatly among developing and transition economies, as initial conditions and political developments have constrained governments' economic policies and influenced their reform choices. There are two paths of market mechanism oriented reforms i.e.: (i) comprehensive reforms, and (ii) partial or phased reforms. The comprehensive or all-out approach aims to replace central planning with the rudiments of market economy in a single burst of reforms. Elaborating the market-oriented reforms further include determined stabilisation programme to restore or maintain price-stability; a quick move to current account convertibility; the immediate opening of markets to entry by new

private businesses; and initiating, at least, a wide range of other changes, such as the privatisation of State-owned companies, the demonopolisation of industry, and the reforms of accounting standards, the fax system, the legal system, the financial sector, and the civil service.

Poland's rapid reform in 1990, and many of the programmes launched elsewhere in Central Eastern Europe (CEE) and after 1992, in the Newly Independent States (NIS) have approximated this comprehensive model. The unification of East Germany with West Germany provided an example of the instant transition. But even in comprehensive model approach, the reforms can be shown such as developing market supporting institutions related with legal and financial systems may take years, even decades, because it involves such a fundamental change in skills, organisations, and attitudes. Complexity and politics can usually impede the process, as often happens in reforming social programmes.

The second model, of piecemeal and phased reform, might start with localised experiments, which are expanded as perceived, successes emerge. This model has been adopted by Hungary, China, Vietnam, India etc. Free-market reforms began explicitly since 1991. The East Asia and South-East Asia because of their special conditions embraced the piecemeal and phased reform approach in adopting market-mechanism.

Many empirical studies reveal that in India, the market mechanism was not allowed to function because of planned economic development strategy adopted in 1951. This lesson of giving priority to market forces through demand and supply construct has been ignored by the planners and policy-makers. It is only in the Tenth Plan (2002-2007) Volume-I that Planning Commission of India has realised the importance of market mechanism in achieving national objectives when it States, "The Tenth Plan provides an opportunity, at the start of the new millennium, the build upon the gains of the part and also to address the weaknesses that have emerged. There is a growing impatience in the country at the fact that a large number of our people continue to live in abject poverty despite five decades of planning. To meet this challenge squarely, the Tenth Plan must learn from past experiences. It must strengthen what has worked well, and at the same time also avoid repeating past mistakes. There must be willingness to modify policies and institutions based on past experience, keeping in mind the changes that have taken place in the Indian economy and in the rest of the world."

This observation of the Planning Commission does confirm the belief that 'Market Mechanism' has not been allowed to be in operation in the Indian economy during 1960s and 1970s and onwards till the introduction of economic reform in 1991 due to faulty and incorrect policies. One such correction was done when the role of the government was redefined in the Tenth Five Year Plan document. The document states, "An important aspect of the redefinition of strategy that is needed relates to the role of government. This redefinition is necessary both at the Central and State government level. It is now generally recognised that government in the past tended to take on too many responsibilities, imposing severe strains on its limited financial and administrative capabilities and also stifling individual initiative. An all-pervasive Government role may have been necessary at a stage where private sector capabilities were undeveloped, but the situation has changed dramatically in this respect. Now, India has a strong and vibrant private sector. The public sector is much less dominant than it used to be in many critical sectors and its relative position is likely to decline further as government ownership in many existing public sector organisations is expected to decline substantially. It is clear that industrial growth in future will depend largely upon the performance of the private sector and the policies must, therefore, provide an environment which is conducive to such growth."

Orientation towards 'markets' does not imply the absence of government or no role to be played by the government. Governments—at Central as well as State levels do have roles for the social sector, infrastructure development, rural infrastructure, road development. In economic services like telecommunications, power, ports, etc. the private sector can play a much greater role, provided an appropriate policy framework is in place. In these sectors, the role of government needs to change to facilitate such investment as much as possible while still remains a public sector service provider for quite some time.

In all these areas, the role of the government as a regulator ensuring a fair deal for consumers, transparency and accountability, and a level playing field is also extremely important.

Adoption of more market-friendly policies are rewarded with resumed or accelerated growth in output and productivity. China's contrasting initial conditions and strong macro economic control enabled it to take a more gradual and phased approach to transition. But the main engines of rapid growth in China have been

the same as in the successful CEE countries and NIS: rapid entry of new firms, including in service sector, and growth in exports. Market-mechanism has also been applied to housing sector, education, saving, investment, health, banking and prudent fiscal management.

The success of market-mechanism depends upon building market-institution that promote growth and reduce poverty. Effective institutions are needed to make markets work. The effective institutions can be created through good governance of firms, financial, political, judicial system and land system. The promotion of domestic as well as international competition is also necessary. As a consequence of adopting market-friendly policies, product market competition and labour-market flexibility has increased in India after 1990s. In Haryana also the number of firms has increased from 1168 in 1966 to 9047 in 2003.

During 1990 to 2003, it has increased more than double. The number of firms was 4843 in 1990 which rose to 9047 in 2003, implying increased competition in the State. Therefore, it can be said that the State has become market-oriented after the introduction of economic reforms; and this increased market-mechanism has led to the attainment of higher and faster growth rate of State Domestic Product during 1990s. Though, the analysis of the data in social sector services and agriculture-related sectors reveal that this has not been applied there in the solution of sectoral problems. Thus, what is needed that in the remaining period of Tenth Five Year Plan and even after that, the Government of Haryana should be committed in extending and strengthening the market mechanism in the State. This will certainly help in achieving the Sustainable Development in the State by bringing a balance between the material growth and social welfare growth.

4.8 Improvement in Plan Implementation and Delivery Mechanism

To achieve desired objectives of any plan, there are two important factors, which play the major role. The first and foremost is the availability of resources. The other important factor is the implementation of the programmes. The attainment of goals of the Plan also depends on quality of design and effectiveness of the Plan programmes. The success and failure of the Plan programmes largely depend on the design and implementation of the programmes. Presently, India is going to complete its Tenth Five Year Plan (2002-2007) by the end of 2007. The Eleventh Five Year Plan would commence from 2007 to 2011. Before going ahead, it would be very important to assess the success and failure of the plan implementation and the delivery mechanism. It would help in bringing improvement in the delivery mechanism, which in turn helps in achieving intended objectives of the Plan programmes. The past experience indicates that there were a few drawbacks due to which the desired goals couldn't be achieved in its full strength. In some of the Plans, objectives like launching development projects couldn't be achieved due to inadequacies in design and implementation. Another important factor is the delivery mechanism. Due to inefficient delivery system, many a times the time and cost overruns have been witnessed. It was widespread and substantial in public sector infrastructure and investment projects. The failure of the Plan programmes occurred because of the intended benefits of the programmes have not reached to the targeted people in general and the poor in particular. It happened more in the social sector. Services like literacy, basic health and the shelter programmes have not enjoyed the fruits of the success. Therefore, it becomes very important to assess the failures and successes of the past plans, their implementation and the delivery mechanisms. Another drawback was the poor administrative planning and delivery mechanism. Therefore, in the Ninth Plan, an area of the priority was to improve planning and implementation of the development projects. This would help in reaching the intended benefits to the beneficiaries and also reduce the overruns of time and cost of the project.

There are many ways to improve the implementation of the plan and the delivery mechanism. The World Bank in its report has investigated these questions and provided certain measures to bring the improvements in the delivery mechanism. In the following section these measures have been discussed in detail.

4.8.1. The Concept of User (Clients) and Service Providers

For the improvement in the delivery mechanism of the services provided to the public in general and the poor in particular, the World Bank (2004a) in its report discussed the concept of clients and providers. The following para discusses this aspect with respect to the provision of services such as housing, food supplies and the health to the poor people of the society.

One of the basic objectives of the good governance is look into welfare of the poor people by efficient delivery of the services provided by to them. The value

of the public policy and the expenditure is generally assessed in terms of amount of welfare received by the poor people from the basic needs of shelter, food and the health. If these services are not reaching to the targeted section of the society and they are bypassed in favour of private clinics, then the expenditure on these services is waste.

The performance of delivery mechanism can be improved to a larger extent if the poor people are given due importance and should be treated as purchasers, monitors, and as co-producers. The active role of this section of the society can help in improving the implementation and delivery mechanism of the services.

The public policy can help poor people by providing better services to the poor; by increasing the demand, because the providers' income would also depend on the demand for the services; by enhancing the income of the poor, which in turn raise the purchasing power of the poor; by providing better information and a more competitive environment for better performance. Another important factor, which can be very crucial, is the action on the complaints registered by the poor.

In the past, in the developing as well developed countries the role of poor client was largely neglected by both, the government as well as the donors. In present era of globalisation and decentralisation the role of poor clients has been recognised. It is only in the recent time the initiatives have been begun to increase the participation of the communities and the civil society in the service delivery mechanism.

Empowering of the poor people can influence the service potential. It can be done by increasing purchasing power of the individuals; by organising them into the groups to increase their collective power; by providing the information which would develop their capabilities and entitlement to increase their aspirations.

The recognition to social capital is increasingly assuming importance in some of the developed/ developing countries. In these countries some settlements do constitute communities which have norms to protect the poor, mutual trust and ability to mobilise the information to act collectively.

The service provider accountability largely depends on the meeting of needs and desires of the clients. In some of the services, the payment can have four kinds of beneficial effects. These are: (a) improving the behaviour of the service provider; (b) enhancement of supply and the sustainability; (c) Increasing vigilance and stake in receiving better service from each transaction; (d) making better choices about which services to demand.

There are some obstacles such as discourtesy, social distance, abruptness of care, discrimination against women and ethnic minorities, service characteristics mismatched to individuals tastes, preferences and needs, which impedes the efficient delivery mechanism. The service providers should take care of these factors while delivering the services. This may enhance the purchasing powers of the clients. Many studies conducted in the countries such as Bangladesh, China, India, Lao PDR, Thailand, and Vietnam indicate that the above mentioned factors do matter and influence the service delivery. It is observed that in some of the services, the preference is tilted towards the private sector than public sector. The factors such as courtesy, caring and convenience of the private sector have advantage over the public sector. It is observed from the findings of many studies that the private service providers render the services conveniently and take care of the time hours, whereas limited hours facilities are provided by the public sector.

To improve the service delivery in the public sector, there is a need of not only the training but also the motivation, which is lacking in the public sector (for example in the case medical services, the doctor who is serving in the public sector is generally not easily and conveniently available. The medication is also not satisfactory, besides, everything is done in a brusque manner. At the same time if this doctor is in private sector, he would be transformed into a well mannered and capable doctor seeing patients with full care and more friendly behaviour. Similarly, the support staff also behaves in the same manner because they are paid salaries all the same, irrespective of their attitudes toward patients. There is no incentive left for the efficiency and sincerity.

In some of the public services which are also free of cost, the discrimination takes place against the ethnic minorities, women and the social distance. In the case of artificial scarcity of free services (the medicines), there would be excess demand and the rationing would be through social status, personal connection and ethnicity. In the process, poor people are always sufferers (the extreme for example, the prostitutes are denied of the HIV/AIDS medicines/treatment, whereas they are the part of the battle against these problems. The scarcity of commodities of low price results into illicit sale of materials. Sometimes due to under payments for the scarce commodities/services, the free service becomes more expensive.

The scarcity of the commodities leads to corruption. The degree and level of corruption varies across the countries. There are many such examples where the rampant corruption is prevailing in the supply of free public services. For instance, in Eastern Europe, the health services are more prone to corruption. It occupies higher rank among major services. It is observed that in many cases there are underhand dealings and the free medicines are sold to open markets. The quantum of corruption prevailing in different public services indicates that the health service is the second highest corrupt service next to legal and police.

In India, particularly in deep rural areas (desert areas), where commuting between school and home is lengthy and tiresome, the female teachers make use of a proxy after bribing the education officials. Similarly, to raise the female enrollment in the school, the girls are exempted from paying the fees. And the girl students are paid scholarship and the school kits too. In such cases the chances of misuse of funds are enormous. The 'mid-day meal' schemes of Government of India, have both the stories of success as well as failure. There is need to design the scheme in such a way that should reduce the misappropriation of funds and enhance the efficiency in the delivery of services.

In girls' education, there are some instances wherein the absence of facilities, the enrollment of girl students is diverted from public to private schools. In Bangladesh, the single sex girls' school with toilet facilities has diverted the enrollment from public to private service providers.

4.8.2 Quality of Service and the Improvement in Delivery

The quality of service becomes more important when poor people pay for them. They ensure the quantity and quality of the goods and service they are purchasing. If they are paying for the service, they ensure that the money should go to that fund. There are some instances, for example, in Zambia, the truck drivers pay for the road fund and ensure its use for that purpose. In another instance of successful service delivery is of Rio de Janeiro, where the slum dwellers pay the water bills with proud. It makes them happy as they are included in the main society and they have the right over the services. Similarly, it was observed in case of farmers of Andhra Pradesh, where they feel their right on the irrigation services after paying their dues for the services. If we compare the farmers of Haryana and Andhra Pradesh we notice that the farmers of Andhra Pradesh are much poorer than the farmers of Haryana, but they pay more (four times) for water. They are happy because now the irrigation department is much more accountable to them. They are happy because now the irrigation department is much more accountable to them. They know where the money goes and they have a say in how it is spent. They will refuse to pay more, only if the irrigation department makes some changes.

The preference for private service provider over the public sector as observed in a detailed study is reproduced below.

A study of consumer and producer attitude was conducted in 6 districts in Andhra Pradesh. The study included 72 in-depth interviews and 24 focus groups. It showed that the private doctors enquire about the health of the patients in more details, look after everyone equally and treat better as compared to the government doctors but charge more.

4.8.3 Benefiting the Poor through Competition

In the sphere of education or higher education which is very expensive for the poor, if the numbers of private institutions are allowed to provide the services, the number of students enrolling in there would go up and the poor students in the public institution can be benefited by the subsidised education system. For instance, in Jordan, the entry of private institutions was restricted. On granting the permission to private universities, the enrollment in these has gone up and accounted for about one third of the total enrollment.

4.8.4 Improvement through Information

There are good as well as bad service providers in private and public sectors. In the case of medical services, both good and bad doctors are providing services to the masses. There is need to provide detailed information about the quality of services available in private as well as public sector. This important role can be played by the NGOs. This would increase the choice of the users. The information about the service providers would improve the choice of the people.

4.8.5 Community Participation and the Service Delivery Mechanism

The increase in participation of the people, community, and the poor people in the implementation of the development projects would help in increasing the efficiency of the delivery mechanism and also results in the reduction of corruption. For instance, in one project in Rangareddy district in Andhra Pradesh, a

group of people constituting the monitoring community, supervised the construction activity in the local area. The active involvement of the people has resulted in reduction of cost of construction through minimising the overrun of time and the use of quantity and quality of material. Similarly, the World Bank in its report laid the emphasis on the strengthening of participation. It is quoted "Strengthening participation along the client-provider link can fix problems in the long route of government provision. So the community groups that take on complaining, monitoring, and other means of making sure the things work properly would be expected at some point to become institutionalised within the government (more likely local government), or possibly to be supplemented by government as it improves. The local knowledge and inputs would definitely improve the delivery mechanism of the services provided."

4.8.6 Local Services, Users' Participation and the Delivery Mechanism

In some of the local services such as irrigation, forestry management, and other local problems, the local social capital's role assumed great significance. After the introduction of decentralisation, the government has started to fund the development projects in the local areas where the projects are implemented by the user groups and the community participation. In the case of water supply and sanitation projects, the special-purpose user groups are implementing the projects efficiently and the benefits of the development projects started reaching to the targeted people. Among the many examples of success, the story of Cote d'Ivoire is worth mentioning. In this place, when the delivery of the water supply in rural areas has shifted from central government to user groups, the delivery of the service has improved, breakdown has reduced. The cost of service has also declined. These models have brought improvement in the delivery mechanism through improvement in the accountability and increasing efficiency.

In another example, in West Bengal, the operation and maintenance of irrigation pumps have been transferred from State government to local governments (*Panchayats*), the delivery system has improved and achieved a great success.

4.8.7 Improvement in Delivery Mechanism through Local Governments

Withdrawal of better and skilled staff/officials (administrators) at the local level can help in monitoring the fund and use it efficiently to achieve the desired goals of the development projects implemented by the local government. Therefore, the improving of local government's capacity would also help in improving the implementation of Plan programmes and the delivery mechanism. This would result in reaching the benefits of the projects to the intended people in general and the poor in particular.

4.8.8 Delivery Mechanism and the Sustainability

The sustainability of the improved delivery mechanism is very important in all the services but more particular in local services such as water supply and sanitation etc. In the water projects, the maintenance of equipments is most crucial thing. Therefore, the community participation is the most needed requirement in maintaining the sustainability.

An assessment of central sector projects and some of the major projects implemented by the Department of Programme Implementation indicates that the factors responsible for the time overrun cost are: poor project formulation due to inadequate field investigation, lack of adequate data, inadequate analysis of environmental and rehabilitation implications, changes in prices and exchange rate regimes, etc.; delays in clearance from various regulatory agencies in land acquisition and in procurement of materials (such delays are primarily due to poor coordination and project planning, as these problems are not explicitly considered or taken into account at the planning stage), changes in design or scope of projects midway through execution; inability of the project management to take prompt decisions on various aspects of these projects even when the objective circumstances warrant such decisions; management problems such as personnel, labour and contractor disputes, mismatch of equipments; inadequate and untimely release of funds; and unforeseeable factors such as adverse geo mining conditions and natural calamities.

A review of the Ninth Five Year Plan has observed that due to lack of adequate database, local situation and time and resource constraints, the programmes/ projects are designed on the basis of certain assumptions. There is a strong need to have in-depth fieldwork before designing of the project. This would help in implementation of the projects. The past experiences should be utilised to remove the inadequacies in design and implementation of the projects mid-term and concurrent evaluation of the project would also help in effective implementation of the projects.

4.9 Slums in Haryana

Generally, slum is defined as a settlement having a number of poorly built tenements of temporary nature. Squatter Slum is an area developed into an unauthorised settlement with unauthorised structures put up by "Squatters". Squatter settlements are the slum like settlements, which do not have the stipulated number of 20 households to be classified as a slum. These slums are commonly known as *"Jhuggi-Jhonpari"*, whereas in Mumbai *"Jhopadpatti"* or *"Chawls"* are the names for slums. In Kanpur, these are known as *"Ahatas"*, *"Bustees"* in Kolkata, *"Cheris"* in Chennai and *"Keris"* in Bangalore. The areas with at least 20 households are termed as "non-notified slum". If these areas are notified by any authority such as municipal corporation or municipalities or development authorities they are considered as "notified slums". These slums are usually crowded with inadequate civic needs such as sanitary and drinking water. Due to acute shortage of civic amenities, the living conditions in these slums become suboptimal and unhygienic and it results in higher incidences of communicable diseases such as air and water borne diseases for the poor masses/slum dwellers living in the slums.

TABLE 4.13

Statewise Urban Population, Population of Cities/Towns Reporting Slums and Slum Population in Slum Areas

*State/Union Territory**	*Number of cities/ towns Reporting Slums*	*Total urban Population of State/UT*	*Population of Cities/ Towns Reporting Slums*	*Total Slum Population*	*Percentage of Slum Population to Total*	
					Urban Population of States/Uts	*Population of Cities/ Towns Reporting Slums*
Above National Average						
Maharashtra	61	41,100,980	33,635,219	11,202,762	27.3	33.3
Andhra Pradesh	77	20,808,940	16,090,585	5,187,493	24.9	32.2
Haryana	**22**	**6,115,304**	**4,296,670**	**1,420,407**	**23.2**	**33.1**
Chhattisgarh	12	4,185,747	2,604,933	817,908	19.5	31.4
Meghalaya	1	454,111	132,867	86,304	19.0	65.0
West Bengal	59	22,427,251	15,184,596	4,115,980	18.4	27.1
Delhi *	16	12,905,780	11,277,586	2,029,755	15.7	18.0
Madhya Pradesh	43	15,967,145	9,599,007	2,417,091	15.1	25.2
INDIA	640	283,741,818	184,352,421	42,578,150	15.0	23.1
Below National Average						
Punjab	27	8,262,511	5,660,268	1,159,561	14.0	20.5
A & N Islands *	1	116,198	99,984	16,244	14.0	16.2
Chandigarh *	1	808,515	808,515	107,125	13.2	13.2
Uttar Pradesh	69	34,539,582	21,256,870	4,395,276	12.7	20.7
Orissa	15	5,517,238	2,838,014	629,999	11.4	22.2
Pondicherry *	3	648,619	513,010	73,169	11.3	14.3
Jammu & Kashmir	5	2,516,638	1,446,148	268,513	10.7	18.6
Tamil Nadu	63	27,483,998	14,337,225	2,866,893	10.4	20.0
Gujarat	41	18,930,250	12,697,360	1,866,797	9.9	14.7
Rajasthan	26	13,214,375	7,668,508	1,294,106	9.8	16.9
Uttaranchal	6	2,179,074	1,010,188	195,470	9.0	19.3
Karnataka	35	17,961,529	11,023,376	1,402,971	7.8	12.7
Bihar	23	8,681,800	4,814,512	531,481	6.1	11.0
Tripura	1	545,750	189,998	29,949	5.5	15.8
Jharkhand	11	5,993,741	2,422,943	301,569	5.0	12.4
Assam	7	3,439,240	1,371,881	82,289	2.4	6.0
Goa	2	670,577	175,536	14,482	2.2	8.3
Kerala	13	8,266,925	3,196,622	64,556	0.8	2.0

Note: Himachal Pradesh, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Daman & Diu, Dadra & Nagar Haveli and Lakhadweep have not reported any slums in 2001.

Source: Census of India 2001.

TABLE 4.14

Slum Population in Million Plus Cities

Sl. No.	Name of the City	Total Population			Slum Population			Slum Population (Per cent)		
		Persons	Males	Females	Persons	Males	Females	Persons	Male	Female
1	2	3	4	5	6	7	8	9	10	11
	Total	70,813,906	38,063,450	32,750,456	16,565,459	9,101,993	7,463,466	23.39	23.91	22.79
1.	Greater Mumbai	11,914,398	6,577,902	5,336,496	5,823,510	3,291,655	2,531,855	48.88	50.04	47.44
2.	**Faridabad**	**1,054,981**	**580,548**	**474,433**	**491,131**	**273,392**	**217,739**	**46.55**	**47.09**	**45.89**
3.	Meerut	1,074,229	571,074	503,155	471,316	251,796	219,520	43.87	44.09	43.63
4.	Nagpur	2,051,320	1,058,692	992,628	726,664	372,668	353,996	35.42	35.20	35.66
5.	Thane	1,261,517	674,660	586,857	420,276	231,266	189,010	33.32	34.28	32.21
6.	Kolkata	4,580,544	2,506,029	2,074,515	1,490,811	825,334	665,477	32.55	32.93	32.08
7.	Ludhiana	1,395,053	789,868	605,185	314,759	178,760	135,999	22.56	22.63	22.47
8.	Pune	2,540,069	1,325,694	1,214,375	531,337	276,155	255,182	20.92	20.83	21.01
9.	MCD (Urban)	9,817,439	5,378,658	4,438,781	1,854,685	1,042,032	812,653	18.89	19.37	18.31
10.	Chennai	4,216,268	2,161,605	2,054,663	747,936	380,472	367,464	17.74	17.60	17.88
11.	Hyderabad	3,449,878	1,773,899	1,675,979	601,336	309,649	291,687	17.43	17.46	17.40
12.	Surat	2,433,787	1,372,307	1,061,480	406,018	241,524	164,494	16.68	17.60	15.50
13.	Indore	1,597,441	839,843	757,598	259,577	136,455	123,122	16.25	16.25	16.25
14.	Jaipur	2,324,319	1,239,711	1,084,608	350,353	185,137	165,216	15.07	14.93	15.23
15.	Kanpur	2,532,138	1,354,581	1,177,557	368,808	198,805	170,003	14.57	14.68	14.44
16.	Nashik	1,076,967	579,638	497,329	142,234	73,918	68,316	13.21	12.75	13.74
17.	Pimprichinchwad	1,006,417	543,436	462,981	129,357	68,500	60,857	12.85	12.60	13.14
18.	Varanasi	1,100,748	584,514	516,234	138,183	73,218	64,965	12.55	12.53	12.58
19.	Ahmedabad	3,515,361	1,863,886	1,651,475	439,843	237,582	202,261	12.51	12.75	12.25
20.	Haora	1,008,704	547,969	460,735	118,235	66,522	51,713	11.72	12.14	11.22
21.	Agra	1,259,979	674,902	585,077	121,890	66,003	55,887	9.67	9.78	9.55
22.	Bhopal	1,433,875	755,685	678,190	126,346	66,273	60,073	8.81	8.77	8.86
23.	Vadodara	1,306,035	684,130	621,905	107,289	56,936	50,353	8.21	8.32	8.10
24.	Bangalore	4,292,223	2,240,956	2,051,267	345,200	177,172	168,028	8.04	7.91	8.19
25.	Kalyan-Dombivli	1,193,266	633,395	559,871	34,854	18,904	15,950	2.92	2.98	2.85
26.	Patna	1,376,950	749,868	627,082	3,511	1,865	1,646	0.25	0.25	0.26

Note: In Lucknow M.C. no slum population has been reported.
Source: Office of the Registrar General of India, 2002.

4.9.1 Estimates of Slums—NSSO Survey

During 2002, the National Sample Survey Organisation (NSSO) has conducted a survey covering about 692 slums and examined the conditions of urban slums in the country. It has investigated the condition of slum dwellers in notified and non-notified slums. The coverage and conditions of the slums as observed by the survey reveal that the total estimated slums are 52,000 in the country. The number of slums in Haryana is second largest in the country only next to Maharashtra. Since last five years, a significant improvement has observed with respect to basic amenities provided in the slums. This happened as a result of effective involvement and untiring efforts made by NGOs and the government policies.

4.9.2 Estimates of Slum Population

Prior to Census 2001, no estimates were available about the total number of slums in the country. For the first time, an attempt has been made during the Census of India, 2001. An exercise to collect detailed data about slum areas of the country by adopting certain criteria has been carried out.

According to the census estimates, the States of Punjab, Haryana, Delhi, Rajasthan, Gujarat, Karnataka and Madhya Pradesh have reported more than 1 million slum dwellers each in the cities and towns in 2001. As percentage of the total urban population, Maharashtra has the highest proportion of slum population (27.3 per cent) followed by Andhra Pradesh (24.9 per cent) and Haryana (23.2 per cent). Kerala has the lowest percentage of slum population in the urban areas at 0.8 per cent. In terms of percentage of slum population to the total population of cities/towns reporting slums, Meghalaya has the highest proportion (65.0 per cent), followed by Maharashtra (33.3 per cent), and Haryana

(33.1 per cent), Kerala (2.0 per cent) has the lowest proportion of urban population living in slums.

(i) Slum and Non-Slum Population in Million Plus Cities

The census figure reveals that 48.88 per cent of the population of Greater Mumbai Municipal Corporation live in slums, which is the highest among the cities followed by Faridabad (46.55 per cent) and Meerut (43.87 per cent). Patna (0.35 per cent) has the lowest proportion of slum population.

(ii) Scheduled Castes and Scheduled Tribes Population in the Slums

The slum areas of Chandigarh have the highest percentage of Scheduled Castes (39.1 per cent) followed by Punjab (28.6 per cent). In slum areas of Chandigarh, Uttarakhand, Rajasthan, Assam, Gujarat, Karnataka, Tamil Nadu and Pondicherry, the percentage of the Scheduled Castes population is almost twice that of the total urban population.

(iii) Sex Composition of the Slum Population

The lowest sex ratio in case of slum population has been recorded in the slums of Union Territory of Chandigarh (707). A glance at the distribution of population by sex in the slums of million plus cities (Municipal Corporations) reveals that Surat Municipal Corporation has recorded the lowest sex ratio of 701 followed by Ludhiana (759), Greater Mumbai (770), Haora (779), Faridabad (795) in Haryana and Delhi (780).

(iv) Urban Child Population in Slum and Non-slum Areas

More than 25 per cent of the urban children live in slums in the States of Maharashtra (30 per cent), Andhra Pradesh (26.8 per cent) and Haryana (25.7 per cent). In other words, every fourth child living in the urban area of these States is a slum dweller. The highest proportion of population (20.9 per cent) in this age group is in the slum areas of Chandigarh. The proportion of child population in these cities brings out that more than 50 per cent child population of Greater Mumbai (62.8 per cent) and Faridabad (50.6 per cent) are living in slum areas.

4.9.3 Slums in Haryana—Cause of Concern

The growth in slums takes place due to rapid urbanisation and the industrialisation in any area of State. The proliferation of slums are generally affected by the factors such as shortage of land for housing, high prices of lands, migration of rural folks to the urban centre in wake of job. The rapid growth of slums in urban areas put tremendous pressure on existing level of basic needs of urban masses which in turn increases the financial burden of the urban local bodies.

The NCR comprises parts of Haryana, Rajasthan, UP and Delhi. The Haryana sub-region in the NCR includes the districts of Faridabad, Gurgaon, Rewari, Jhajjar, Rohtak, Sonepat and Panipat. To control the problem of growing slums in the State, the Government of Haryana has also enacted the Slum Clearance Act, also known as Punjab slum area (improvement and clearance) Haryana amendment act, 1990.

As a result of urbanisation and industrialisation, the State of Haryana is also facing the problems of growing slums in its urban areas. The growth in slums is taking place in the major urban towns such as Faridabad, Rewari, Panipat, Sonepat, Bahadurgarh and Rohtak. Data reveals that one in every four urban persons in Haryana lives in a slum. It is observed from the census estimates of the total population of the 22 major towns about 32.47 per cent lives in slums, while in the case of urban population the figure is 23.25. Particularly, in the case of towns falling in the jurisdiction of NCR the percentage rises to 30.38. Amongst the major towns the highest slum population has recorded in the town of Rewari (51.27 per cent) which is followed by Faridabad (46.55 per cent), Hansi (42.49 per cent), Panipat (38.25 per cent) and Jagadhri (37.39 per cent). The towns recorded the lowest slum population was Ambala Sadar (6.29 per cent) followed by Palwal, (15.50 per cent). The highly industrialised towns with higher growth of urbanisation have attracted more slum population. Thus the concentration of slum population has grown more in the towns of Faridabad, Panipat and Rohtak. The growth of slums in Faridabad is a matter of serious concern. Therefore, it is the need of the hour that the reforms in urban development should be directed in such manner so that the check can be put on this alarming problem of growing slums in the State. The planners and administrators should take the problem of slums more seriously and initiate to design the long term policy to eliminate the problem completely.

The declining sex ratio in the State of Haryana is itself a serious problem. It has further aggravated by the poor sex ratio in slum areas. The overall sex ratio in slums is 824. The municipal council of Ambala Sadar has recorded highest sex ratio of 894, followed by Ambala (municipal council). On the other hand Panchkula has the lowest sex ratio of 752. The industrialised towns of Faridabad and Panipat have recorded a very low sex ratio of 796 and 798 respectively.

TABLE 4.15

Percentage of Slum Population to Total Population in Haryana: 2001

Sr. No.	*Name-MCL*	*Total Population*	*Slum Population*	*Per cent*
1.	Panchkula	140992	25140	17.83
2.	Ambala	139222	22043	15.83
3.	Ambala Sadar	106378	6693	6.29
4.	Yamunanagar	189587	40202	21.21
5.	Jagadhri	101300	37878	37.39
6.	Thanesar	122704	50400	41.07
7.	Kaithal	117226	28276	24.12
8.	Karnal	222017	58949	26.55
9.	Panipat	268823	102813	38.25
10.	Sonipat	225151	75454	33.51
11.	Jind	136089	37279	27.39
12.	Sirsa	160129	51892	32.41
13.	Hisar	263070	77757	29.56
14.	Hansi	75730	32174	42.49
15.	Bhiwani	169424	41443	24.46
16.	Rohtak	294537	90645	30.78
17.	Bahadurgarh	126746	39478	31.15
18.	Narnaul	62091	11279	18.17
19.	Rewari	100946	51754	51.27
20.	Gurgaon	201759	33570	16.64
21.	Faridabad-M Corp.	1054981	491131	46.55
22.	Palwal	100528	15589	15.51
	All MCs	4379430	1421839	32.47
	Total-Haryana	6114139	1421839	23.25

Source : Census of Haryana, Various series and papers.

The overall literacy in the 7+ age group in slum areas, reported as 73.91 per cent. The highest literacy rate is in Gurgaon. (The details regarding the percentage of slum population, sex ratio and the literacy across the municipal councils and Faridabad Municipal Corporation are placed at Tables 4.15 and 4.16).

4.9.4 Haryana Slums and Basic Amenities: Some Initiatives

Considering the basic problem of civic needs of the urban poor, the Centre has come forward to help this vulnerable section of the society. It is decided to provide very essential basic amenities such as toilets, sewerage, water supply, streets, drainage, electricity and houses for the urban. The JNNURM, a flagship programme of Government of India has one important sub-mission oriented towards the urban poor. Similarly, many ministers of have also earmarked separate fund to provide some relief to the urban poor.

The Government of India has suggested another model project for Municipal Council, Ambala Cantonment, which had been approved by the government. Under this project, a full-fledged new slum colony would be constructed with all modern facilities near Dussehra Ground, Ambala Cantonment. It has been

TABLE 4.16

Slum Population, Sex Ratio and Literacy in Haryana: 2001

S. No.	*Name of MCL*	*Slum Population-Total*			*Slum Population-0-6*			*Slum Population-Literates*			*Sex Ratio*	*Literacy Rate 7+*
		Persons	*Male*	*Female*	*Persons*	*Male*	*Female*	*Persons*	*Male*	*Female*		
1.	Panchkula-UE	25140	14352	10788	5232	2801	2431	9559	6796	2763	752	48.02
2.	Ambala Sadar	6693	3534	3159	904	493	411	4061	2335	1726	894	70.15
3.	Ambala MCL	22043	11646	10397	2673	1518	1155	15068	8465	6603	893	77.79
4.	Yamunanagar	40202	22137	18065	5381	3007	2374	27112	15935	11177	816	77.86
5.	Jagadhri	37878	20944	16934	5042	2792	2250	24975	14720	10255	809	76.06
6.	Thanesar	50400	27376	23024	6791	3812	2979	31476	18593	12883	841	72.18
7.	Kaithal	28276	15265	13011	4373	2410	1963	16024	9756	6268	852	67.04
8.	Karnal	58949	31933	27016	8258	4524	3734	34891	20598	14293	846	68.83
9.	Panipat	102813	57175	45638	15286	8359	6927	63142	38102	25040	798	72.14
10.	Sonipat	75454	40719	34735	10872	6232	4640	50676	30003	20673	853	78.47
11.	Jind	37279	20390	16889	5883	3296	2587	22063	13928	8135	828	70.27
12.	Hisar	77757	42520	35237	11497	6224	5273	49459	30441	19018	829	74.64
13.	Hansi	32174	17305	60452	4709	2617	2092	20257	12024	8233	859	73.76
14.	Bhiwani	41443	22247	9927	5603	3074	2529	27139	16165	10974	863	75.72
15.	Rohtak	90645	48442	-6999	12104	6569	5535	61290	35336	25954	871	78.04
16.	Bahadurgarh	39478	21692	68953	6095	3368	2727	26411	16086	10325	820	79.12
17.	Narnaul	11279	6058	33420	1780	982	798	6852	4256	2596	862	72.13
18.	Rewari	51754	27793	-16514	6782	3695	3087	36618	21541	15077	862	81.42
19.	Sirsa	51892	27866	23888	8101	4353	3748	28040	16917	11123	862	64.03
20.	Gurgaon	33570	18492	15078	4921	2743	2178	23687	14126	9561	815	82.68
21.	Faridabad	491131	273392	217739	78105	41692	36413	306720	193976	112744	796	74.26
22.	Palwal	15589	8385	7204	2684	1418	1266	7829	4991	2838	859	60.67
	Total-Haryana	1421839	779663	642176	213076	115979	97097	893349	545090	348259	824	73.91

Source: Census of Haryana, various Series and Papers.

reported that under this scheme, 192 houses would be constructed at a cost of Rs. 3.17 crore and 192 families would be benefited. The government also is initiating such measures which would help in improving the living conditions of the urban poor in slum areas.

4.9.5 Plan to Relocate Slums in Haryana Districts on Cards

Expressing its deep concern about this problem the Ministry for Housing and Urban Poverty Alleviation has suggested another remedial measure in this direction and has approved an amount of Rs. 65.77 crore plan for the district to create a slum-free State. Under this project about 13 colonies having a population of nearly 50,000 have been identified for the rehabilitation of slums under the Integrated Housing and Slum Development Programme of the ministry. Most of these slums are occupying prime locations and have become an eyesore in the otherwise fast developing city. The minister has also indicated that there is no dearth of money with the ministry. The Government of India is open to projects by State governments aimed at uplifting the standards of the poor. The ministry has cleared similar projects for Ambala city and cantonment and Naraingarh to the tune of Rs. 40 crore. Also, fund-allocation to change the way slums in Bhiwani look is on the cards. The projects cleared by the ministry are lying now with the State government. The moment it gets a nod from them, it will give them 25 per cent of the amount. It further stressed that the relocation of slums should not be impractical for the slum-dwellers in the State.

With respect to the allotment of land, it is the State decision. The land chosen for the reallocation of slums should not be too far off from the city or their place of work, something that the slum-dwellers are likely to reject. It would be far better if the places are given a facelift at their present place of residence.

4.9.6 Health Project for Slum Dwellers

Good health is an important aspect of every person's life. Most of the slum-dwellers are affected by the poor health, adult in general and children in particular. In this direction, the government of Haryana has initiated some measures to extend the health benefits to the slum dwellers in Haryana cities through a unique health project. The health project entails involving private practitioners for making child health care and family planning services accessible to the urban poor. A pilot project is likely to be launched in four districts of Ambala, Panipat, Hisar and Rewari. With central financial assistance, the State government is assigned the responsibilities to run this project. It was further mentioned that nursing homes would be given responsibilities of 1000 to 1500 families. Hospitals having maternity home and child health services will be chosen for the project. The private hospitals will provide primary health care, emergency obstetrics and neo-natal care. A survey has already been carried out in this regard.

Under the project, a nominal sum of Rs. 100 per family member a year will be given to the private practitioner. Two auxiliary nurses/midwife will have to be provided for the project by the nursing home. Nurses will regularly visit the families and medical consultants will also visit them.

In case of minor ailments families, living in slums will be provided medicines. The health project beneficiaries would be able to avail subsidised medical tests. The slum-dwellers who are eligible for the health project would be issue health cards. The adolescent girls would be given special attention. The slum dwellers would be provided with special primary health care service package, including referral support at fixed costs.

The provision would be made for good quality and low-cost diagnostic services and essential medicines, contraceptives, vaccines and other supplies. Under the project, the services for mothers would include immunisation, ante-natal care and identification of maternal complications, delivery by trained personnel and management of obstetric emergencies. The special facilities of vaccination, vitamin A prophylaxis and integrated management of childhood illness would be provided for the slum children.

4.9.7 Slum Women to Get Better Healthcare

Janani Suvidha Yojana Under the scheme of "Janani Suvidha Yojana" an amount of Rs. 1 crore has been earmarked for Janani Suvidha Yojana which would be implemented through NGOs. The benefits such as ante-natal care and free delivery services would be provided to the urban poor in slum areas. The State government would pay the bills on behalf of the clients availing services of primary healthcare.

The scheme is specially dovetailed to extend the benefits to enable women living in urban slums to avail of services like ante-natal care, free delivery services and immunisation of children from selected qualified doctors or nursing homes within their own residential areas through pre-paid vouchers. The financial assistance in the form of Rs. 1 crore had been earmarked for the scheme

which would be implemented through non-government organisations working in the State. A resident woman of the slum area would be selected as a link worker between clients and private health care provider. She would be given a performance-based honorarium. It is important to note that the following schemes initiated by the State government will benefit the women living in slums:

The State government has declared 2006 as "Girl Child Year". In this year the State government has planned to extend the following benefits to the girl children:

(i) The EDUSAT connectivity would be provided to all the 222 Government Girls Senior Secondary Schools in the State this year;

(ii) The facilities of electricity connections would be given to 1,500 Government Girls Primary Schools. Presently only a few girls' schools have electricity connections;

(iii) Separate toilets would be provided for girls in about 4,000 Government schools;

(iv) It had been decided to institute an award of Rs. 1 lakh for those *panchayats*, which would achieve 100 per cent enrollment of girls in age group of 6-14 years, which in turn help in enhancement of enrollment and retention in schools;

(v) The facility of health check-up would be provided to every girl child and it would include immunisation coverage, treatment of anaemia, de-worming, testing of eyes and dental check-up.

(vi) Health counseling sessions would also be held and recorded in health cards to be issued to all girls up to the age of 18 years.

(vii) Mass publicity campaign would be launched to enhance awareness against female foeticide to check declining sex ratio.

(viii) The government would provide reservation for girls in all ITIs and Technical Education Institutions to the tune of 25 per cent.

Urbanisation, industrialisation, poverty, and slums are integrated components of the growing economic development in any country. The urban slums are not going to go away in next quarter century or so. Reversal of this phenomenon will begin after sufficient economic progress had been made. Indian economy with ten per cent growth has a sign of prosperity. However, rapid growth in urban slums is a major cause of concern. With fast growth in country's economy *vis-à-vis* in the State of Haryana there is a good chance that the new and upcoming generation may stay away from slum dwelling. There would be all possibility of slum-free nation as well as slum-free State of Haryana.

4.10 Self-Sustained Development of Urban Local Bodies

In the era of globalisation, liberalisation and privatisation, the concept of sustainable development has become the cause of concern at national and international level. Sustainable urban development mainly focuses on the areas such as urban development and management, environment, and quality of life. With the growth of population, urbanisation become inevitable. Sustainable growth requires an understanding of the way urban areas carry out their activities such as resource use and the movement of goods and people. The physical infrastructure in addition to social and economic processes must be evolved to meet the challenges of growth.

Sustainable development has been defined as development that meets the needs of the present generations without compromising the ability of future generations to meet their own needs. However, sustainable urban development implies a process by which sustainability can be attained by emphasising improvement, progress and positive change, in environmental and social dimensions.

Sustainable urban development also highlights the need for reform. The market mechanisms is needed to achieve environmental goals and balance with social and economic considerations such as a change in the quality of growth; the conservation and minimisation of the depletion of non-renewable resources; a merging of economic decisions with those of the environment, and a strong consideration of the needs of future generations.

Over the period of time, several themes common to all definitions of sustainable urban development have emerged. The urbanisation of society is part of the development process, as cities generate 60 per cent of gross national product. Cities should be healthy, providing basic housing needs and employment opportunities.

Local governments are increasingly caught between rising expectations that development initiatives be sustainable as more and more services are being

transferred to the municipal committee. Therefore, local bodies should take initiative, in promoting sustainable development in cities.

4.10.1 Urbanisation in India

The growth of urban population in India has been increasing rapidly during the course of this century. While the total population of India has grown by more than three times since 1901 its urban population has also increased substantially during the same period. The share of Class I cities (with population 100,000 and above) to total urban population has also increased during this period. The concentration of population in the 'million plus' cities has been particularly striking. Well-being of the urban areas is very important. The cities in India, could contribute more effectively to the country's economic growth and poverty reduction if they did not suffer from severe infrastructure bottlenecks, service deficiencies, distorted land and factor markets, weak finances, and poor local governance.

4.10.2 Resources and Urban Development

Expanding human requirements and economic activities are putting ever increasing pressures on land resources by creating competition and conflicts and resulting in to suboptimal use of both land and land resources. If, in the future, human requirements are to be met in a sustainable manner, it is essential to resolve these conflicts and move towards more effective and efficient use of land and its natural resources.

Rapid urban population growth and industrialisation are putting severe strains on the water resources and environmental protection capabilities of many cities. Special attention needs to be given to the growing effects of urbanisation on water demand and usage and to the critical role played by local and municipal authorities in managing its supply, use and overall treatment of water. Scarcity of freshwater resources and the escalating costs of developing new resources have a considerable impact on national, industrial, agricultural, and human settlement development and economic growth. Better management of urban water resources, including the elimination of unsustainable consumption patterns, can make a substantial contribution to the alleviation of poverty and improvement of the health and quality of life of the urban and rural poor. A high proportion of large urban agglomerations are located around estuaries and in coastal zones. Such an arrangement leads to pollution from municipal and industrial discharges combined with overexploitation of available water resources and threatens the marine environment and the supply of freshwater resources.

4.10.3 Human Settlements

In industrialised countries, the consumption patterns of cities are severely stressing the global ecosystem while settlements in the developing world, need more raw material, energy, and economic development to overcome basic economic and social problems. Human settlement conditions in many parts of the world, particularly the developing countries are deteriorating mainly as a result of the low levels of investments in the sector attributable to the overall resource constraints in these countries. While urban efficiency has a significant and direct bearing on the country's overall economy, few cities are able to provide the kinds of urban services required on a regular and sustainable basis. The initiatives such as strengthening of the Urban Local Bodies (ULB) by continuing the decentralisation process through delegation of powers from State level bodies and expansion of the capacity building programmes would help in achieving the desired results.

Mobilise resources on a sustainable basis for urban infrastructure investments through private financing by linking ULBs to the financial markets through the intermediation of the Urban Development Fund and providing investment incentives in low income neighbourhoods through the use of supporting capital grants. It would provide a successful model for other municipalities. Presently, there are few credit lines available to urban municipalities such as those provided by the Tamil Nadu Urban Development Fund, a financial intermediary structured as a public private partnership.

The Government of India's Tenth Plan (2002-2007) emphasises urban reform as critical to growth and poverty alleviation. The World Bank continues to support India's urban reform agenda, which urges a broader decentralisation framework, strengthening citizens' empowerment, urban management, governance and resource mobilisation.

The Human Development Report reveals that the HDI (Human Development Indicator) for the country has improved significantly between 1980 and 2001, by nearly 26 per cent in the eighties and another 24 per cent in the nineties (Planning Commission, 2002). Though the rural-urban gap in the level of human development continues to be significant, it has declined during the period. The index of gender inequality measuring human development indicators for females as a proportion of that of males has also improved. On the

whole, gender disparities across the States have declined over the period.

4.10.4 Environment and Local Government (Public-Private Partnership)

In an unusual first-time effort to incorporate citizens' partnership in governance, the Delhi government has initiated the Bhagidari programme in 2002. Literally meaning "collaborative partnership", Bhagidari involves the participation of citizens, civil society organisations and public representatives from Delhi in various social activities. In another first, the programme has won the United Nations Public Service Award for 2005 for improving transparency, accountability and responsiveness in public service.

Major initiatives undertaken by the Bhagidari Scheme during the year 2002 were water conservation and water harvesting by Delhi Jal Board and Urban Development Department, anti-plastic and anti-littering campaign by Department of Environment and Forests, preferential treatment to senior citizens, reforms in hospital management and quality control by Health and Family Welfare Department, Student Welfare Committee for Government schools, and development of industries.

Among the environmental management efforts, Solid Waste Management (SWM) projects dominate the scene. Some local governments have tried to elicit the support of communities, NGOs and private agencies for such projects. In both Ahmedabad and Mumbai, a private company is contracted to compost part of the city waste; in Bangalore and Chennai, NGOs are involved in the collection and disposal of waste on behalf of the government; in Pune the government has encouraged housing colonies to decompose their organic waste.

In the 10th Five Year Plan, the National Urban Renewal Mission (NURM) was designed to meet the challenge of rapid urbanisation in seven mega-cities and 28 smaller cities. The initiative has been allocated a sum of Rs. 5,500 crore in the country's annual budget 2005-2006. The substantial increase in the budgetary allocation for the social sector reflects the government's strong commitment to sustainable development in rural and urban areas. The combined efforts of the government, private sector, NGOs and private individuals will surely go a long way in making the world a better place to live in.

4.10.5 Urban Transport

It was not recognised that the development programmes in urban transportation were critical to the sustainability of the urban systems. This basic need has been acknowledged now as the rapidly deteriorating transport systems have been seen to affect the urban lifeline.

It is now widely recognised that as cities grow in population and size, the demand for transport increases more than proportionately. A good network of roads, coupled with an efficient mass urban transport system makes a substantial contribution to the working efficiency of the cities and enables them to become catalysts of economic, social and political development. An efficient transportation system is, thus, critical for productivity and economic growth in cities

4.10.6 Delivery Mechanism of ULBs

The growing concentration of urban population in larger towns is another urban concern. The tasks are challenging, for it is mainly in the mega and metro cities that land is a major constraint for undertaking development work. A large part of civic amenities, particularly water supply, sanitation and sewerage, are managed with assets that have outlived their operational efficiency. The required massive upgradation and renovation of these assets, is constrained by high population density and concentrated commercial activities at the locations where these service assets are installed. The lack of comprehensive urban planning in the past to promote regular upgradation and renewal has resulted in a large backlog of development activities.

The key urban concern is the growing gap between demand and supply of basic services. While there has been a steady growth in the housing stock, infrastructure and services, the gaps between demand and supply have been rising, even in terms of conservative norms. Private sector participation in construction and maintenance of water supply and sanitation schemes, to the extent possible be encouraged/mobilised. Adoption of improved low cost technology be encouraged to save cost of construction and maintenance.

The delivery and management system has to be strengthened. In the light of the Constitution (74th Amendment) Act, while State agencies may continue to plan and implement capital works, the responsibility of distribution may be progressively decentralised to local bodies, and where feasible, to the private sector, within the policy guidelines of the State governments. While this process will be initiated with distribution works, in due course capital works may be decentralised. Concerted efforts should be made to enhance the

capacity of the municipalities to bridge the gap between their resources and commitments. At the same time, city agencies may continue in mega and metro cities, as long as they operate on sustainable basis.

Among the major legislative contributions was the Constitution (74th Amendment) Act, 1992, also known as the Nagarpalika Act, which was passed by Parliament in 1992 and received the assent of the President on April 20, 1993. This landmark legislation provides a common framework for the structure and mandate of ULBs for effective democratic decentralisation. The Act provided a period of one year to amend or modify the existing municipal laws to bring them in conformity with the provisions of the Nagarpalika Act. The State and UT Governments have taken measures to establish State Finance Commissions (SFCs) and State Election Commissions (SECs). All States have established the 1st and 2nd generation of SFCs. Almost all States have implemented the reports of 1st and 2nd SFCs. As per the mandatory statutory provision some of the States have initiated further in this direction and constituted 3rd SFC in the States. Similarly, the elections have also been conducted regularly with 5 years of intervals. The responsibilities and functions along with the funds have also been transferred in many States. The District Planning Committees have been set up in most of the States. However, the laws related to the DPCs have not been framed and made operational in all the districts of the States. In none of the States has the government notified an area as a metropolitan area for the purposes of the amendment.

4.10.7 Devolution of Resources by Central Finance Commission

Under the constitutional provision, for strengthening the decentralisation across the States, the central Finance Commission has recommended devolution of resources for the ULBs in the States. Accordingly, the Tenth Finance Commission, Eleventh Finance Commission and Twelfth Finance Commission have recommended Rs. 1000 crore, Rs. 2000 crore and Rs. 4000 crore for the ULBs in the States.

The Town Planning, Municipal and urban Development Authority and other State Parastatals Acts and regulations should be speedily amended and legal framework strengthened to assign the planning and development functions to the urban local bodies, facilitate planning reforms, permit schemes like land adjustment, for example, to promote the use of land as a resource and include all the emerging needs of planning and development in the light of the Constitution (74th Amendment) Act. The municipal/city/town development plan will form a key component of plan financing at the local level and seek to maximise the linkages between infrastructure, land use, urban growth and economic growth.

As a follow up of 74th Constitution Amendment Act, most of the State governments are likely to entrust the responsibility of operation and maintenance of urban water supply and sanitation systems to local bodies and therefore it would be necessary for the State Finance Commission to explicitly indicate the norms and other financial implications make a realistic assessment of requirement of funds and also to make suitable recommendations for provision of finances by different categories of towns.

The Mega City Scheme, introduced in 1993-94, covers five megacities of Mumbai, Calcutta, Chennai, Bangalore and Hyderabad. This macro approach to mega city planning is essential to decide upon the projects that may be undertaken under the Mega City Scheme and those that may have to be marketed for implementation by other agencies and sources of financing, including the private sector. It is also necessary to break up the massive activities during the Ninth Plan and thereafter into a well-defined time schedule, to ensure the completion of the total infrastructure development on which the sustainability of the mega city depends.

Slum Development is another major activity taken up to upgrade the urban environment and see that the proliferation of slum and squatter settlements does not further deteriorate it. In the past, several schemes have been introduced to improve the living conditions in the slums, where an increasing proportion of the urban poor and migrants live and often work. Recognising the poor populations access to basic urban services in these settlements, the UBSP and EIUS have been provided some specific Plan support to improve the access to basic services.

The priority concern is not only to stop the growing deterioration in the urban environment, reflected in key urban indicators on housing conditions, pollution levels, traffic congestion, informal sector, among others, but to positively change the trend and ensure an improved, healthy and congenial environment. The wide gap between the demand and supply of basic civic amenities like potable water, sanitation, transport and housing, which has shown an increasing trend over the last five decades, will be reduced, through creation of new assets, upgradation and renewal of existing assets, attaining better operational and management efficiency

and stimulating flow of resources into all urban development activities.

The massive tasks of development and renewal of housing, urban infrastructure and civic amenities requires their integration into the urban and metropolitan planning system as well as in the broader State and city economic and financial plans. There should be complete integration of spatial, economic and financial planning at the city and regional levels.

Within this macro framework, an integrated urban planning approach would require integration of planning and development of interdependent infrastructure components such as, for example, water supply, sewerage and sanitation, and wastes collection and disposal, which in their totality, determine the quality of the urban environment. A total package should be prepared, which would also facilitate the financing of the programme as it would have a judicious mix of projects that have the potential to provide commercial returns, recover full-cost user charges and provide zero return on certain critical social services. While the commercial projects would not be eligible for any subsidy, the user-charge projects should recover O&M and debt servicing cost, though subsidy through the financial package and other facilities may be provided on case-to-case basis, related to the extension of the services to the disadvantaged groups in the urban society.

The massive urban growth and the resource constraints would, together, result in a situation where the availability of funds would not keep pace with the growing demand. The State government's efforts would have to be supplemented with larger participation by the private sector. Financing of urban infrastructure is bound to pose new challenges to the different constituents of the financing system. Innovative mechanisms and practices will have to be encouraged and supported to stimulate the flow of finances such as the municipal bond system, municipal financial reforms, fiscal and monetary incentives for the creation of investment-friendly environment, specialised infrastructure development and financial institutions, participation of cooperatives, community groups and NGOs, and public-private partnership in the development and management of urban services and social infrastructure facilities.

4.10.8 Financial Resource Mobilisation

The wide range of activities that have to be undertaken in the sectoral programmes relating to urban development, housing, water supply, sanitation and transport would require not only a large quantum of financial resources but also their mobilisation on varying terms with respect to their cost and servicing conditions. The funds should be available in such a quantum and on terms that would meet the capacity/ potential of the user sectors in absorbing and servicing them. In some cases, such as housing development and urban transport, there is a strong case for mobilising funds at market cost and then adopting a strategy of cross-subsidisation through different market segments. The lower end of the housing market would need subsidised funds, which should be provided through cross-subsidisation within the housing market. A large part of the rental housing market is also in a position to absorb market-sourced funds. Fiscal incentives such as income tax and property tax would, of course, be a good stimulant.

TABLE 4.17

Growth of Urban Population and Number of Towns in Haryana

Year	*No. of Towns*	*Total Population*	*Decennial Growth (%)*	*Urban Population*	*Decennial Growth (%)*
1951	62	56.74	-	9.69	-
1961	61	75.91	33.79	13.08	34.98
1971	65	100.36	32.21	17.73	35.55
1981	81	129.22	28.76	28.27	59.45
1991	94	164.63	27.40	40.54	43.40
2001	106	210.83	28.06	61.14	50.79

Source: Census of Haryana, Various series and papers.

In the case of other sectoral activities like those relating to water supply, some portion of the funds may have to be mobilised at less than market cost, especially for augmentation of capacity of water supply, but for distribution, which generates immediate income flows, market-sourced funds are likely to be a feasible proposition. This is an activity suitable for privatisation and for accessing funds from the private sector.

The implementation of the Constitution Amendment Acts that empower urban local governments has to be followed up by reviewing the resource-base of the urban local governments, improving tax/revenue administration and rationalising some of the major income sources that have not kept in tune with developments in their areas as well as other economic realities. Active participation of the people in the planning and management of the sectoral programmes is also likely to improve the financial management system and thereby contribute to generation of internal funds for investment.

4.10.9 Self-sustainable Urban Local Bodies in Haryana

The State of Haryana has witnessed a tremendous growth in its urban population during last two decades. In 1981, there were about 28.27 lakh people residing in urban areas, which have grown over the period and reached to the figure of 61.14 lakh in 2001. The growth of urban population and the number of towns are shown in Table 4.17.

The two factors, rapid industrialisation and the proximity to the National Capital–Delhi are responsible for this high growth of urbanisation in the State. The increasing urbanisation has put additional pressure on the existing infrastructure. It has resulted in the increased demand for basic infrastructure, housing and the provision of basic civic amenities. The shifting of polluting industries from Delhi to Haryana has aggravated the problem. Another important factor putting extra burden of the civic amenities provided by the Urban local Bodies is the floating population. The urban local bodies, with their limited available resources, are not able to provide minimum level of basic services to their citizens.

4.10.10 Structure and Composition of Urban Local Bodies

The State of Haryana has a long history of local governments. The first Municipal Committee of Gohana in Haryana was established in 1885. The number of municipal bodies at the time of re-organisation of the State was 56, which has increased to 68. In the post-independence period after its incarnation, "The Haryana Municipal Act, 1973" was promulgated in 1973. The main task as envisaged in the Act was to regulate composition, responsibilities, financial powers and other related matters to urban local bodies. The Act, has a number of Rules and Bye-laws to facilitate the municipal bodies regarding matters such as, maintenance of municipal accounts, delimitation of wards, management of municipal properties and the building activities. Earlier the ULBs in the State were classified as A, B & C types of municipalities. The present Act has categorised them (ULBs) into (i) Municipal Committee (transitional area with population not exceeding 50,000, (ii) Municipal Council (smaller urban areas with population of 50,000 to 5 lakh, and (iii) Municipal Corporation (larger urban areas with population of five lakhs and more, governed by a separate Municipal Act (Faridabad Municipal Corporation is the only Municipal Corporation in the State). The composition of ULBs with average population and the area is depicted in Table 4.18. These ULBs are providing civic amenities to about 61 lakh inhabitants covering 68 towns and nearly 29 per cent of the total population.

TABLE 4.18

Composition of Urban Local Bodies in Haryana

Urban Local Bodies	*No.*	*Average Population Covered (in Lakh) as on 1.4.2001 (as per Census 2001)*	*Average Area Covered (sq.kms.) as on 1.4.2001 (as per Census 2001)*
Municipal Corporation	1	10.55	204
Municipal Councils	21	1.58	16
Municipal Committees	46	0.31	5

Source : *Various issues of Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh.

The number of urban local bodies across all the States are 109 Municipal corporations, 1432 Municipalities and the ULBs in transitional areas are 2182 *Nagar Panchayats*.

Prior to 74th CAA, the civic bodies were discharging their responsibilities related to the basic civic needs of the people residing in urban areas. With the introduction of 74th CAA and incorporation of the functions enlisted in Twelfth Schedule in the Haryana Municipal Act, 1994, the vast areas of responsibilities have been assigned to the ULBs in the State. These civic bodies meet the increased demand of the basic needs. These functions vary from urban planning to planning for economic and social development, drinking water supply, public health, sanitation and solid waste management, urban forestry, safeguarding interest of weaker section of the society and the slum improvement and upgradation and urban poverty alleviation. The other functions include promotion of cultural, education and aesthetic aspects, provision of urban amenities like parks, garden and playgrounds, cattle ponds and prevention of cruelty to animals, burial grounds, maintenance of vital statistics such as registration of birth and deaths, and the most important assignment of public amenities such as street lightings, bus stops and public conveniences.

Under the provision of the Act, 1994, ULBs are armed with a number of taxation powers to raise the resources for meeting the financial requirements in discharging the responsibilities assigned to them. They are empowered to levy obligatory as well as discretionary taxes. The ULBs shall impose the taxes as enlisted in Section 69 of the Haryana Municipal Act,

1973. The ULB may impose the discretionary taxes, if deemed fit and circumstances so permit to do that. The major obligatory taxes are: (a) tax on the owner of land and buildings, (b) duties on immovable properties. Another important tax is Octroi. The Government has abolished this tax and paying compensation in lieu thereof. In the category of discretionary taxes, there is a large number of taxes the ULBs may impose. The important amongst them are: (a) a tax on profession, trades, callings, and employments, (b) a tax on vehicles, toll on vehicles, (c) a show tax, (d) a tax on consumption of electricity, (e) tax on consumption of electricity, (f) a fee on pilgrimage. However, in practice, the ULBs are not levying a reasonable number of taxes. They are imposing only obligatory taxes and a few discretionary taxes.

The financial position of ULBs in State is discussed in the following section in details. As discussed, the ULBs are not exploring their full financial potential by realising adequate revenue through resource mobilisation. The financial position of these bodies is very precarious. It was observed that most of the resources (about 85 per cent) are spent on establishment and a very little amount is left for the development works. This resulted in lack of resources available for the provision of civic amenities to its citizens. Sometimes, in the case of small municipalities, the payment of salaries to its employees becomes difficult. The revision of pay scale had given big jolt and the conditions had further deteriorated.

TABLE 4.19

Revenue Composition of Urban Local Bodies in Haryana

(*Rs. Crore*)

Year	*Own Revenue*			*Other Revenue*			
	Tax	*Non-Tax*	*Total*	*Devolution*	*State-Grants*	*Total*	*Total Revenue*
1997-98	79.56	52.67	132.23		27.96	27.96	160.19
1998-99	87.69	49.49	137.18		32.00	32.00	169.18
1999-2000	20.29	82.32	102.61		31.94	31.94	134.55
2000-01	49.03	67.48	116.51	42.37	54.08	96.45	212.96
2001-02	65.41	100.7	166.11	20.14	25.99	46.13	212.24

Source: Government of Haryana, Finance Department.

The ULBs in aggregate raised total revenue of Rs. 160 crore in 1997-98 which increased to Rs. 212 crore for the year 2001-02. In total revenue the contribution of own revenue was more than 82 per cent, declined to 78 per cent for the same period. On the other hand the yield from other sources, i.e. devolution from CFC and State grants increased from 17 per cent to 22 per cent. It indicates the dependency of ULBs has increased over time but the contribution of other revenue in total income is still much below in comparison to other States. For instance, the ULBs in some of the State like Rajasthan, mobilise less than half of its income from its own sources and proportion of income from other sources such as devolution and grants contribute significantly in total revenue. This gives indication of less dependency of ULBs on the higher level of governments. From this analysis no inference can be drawn regarding the healthy financial position of the ULBs in the State. The analysis of expenditure incurred on basic services by the ULBs in comparison to the ULBs in other States would perhaps give the complete picture of healthy finances of ULBs in the State of Haryana.

4.10.11 Financial Position of ULBs (Municipal Corporations, Municipal Councils)

The data on the financial position of various levels of ULBs were not available. However, some information on total revenue and expenditure were available. On the basis of this overall surplus/deficit were worked out. It can be observe that the municipal corporation (Faridabad only) was in surplus till 2000-01 and later on its financial position deteriorated and became deficit. On the other hand, all ULBs in aggregate were in surplus for the entire period. The level of services provided by these ULBs can only indicate the healthy financial position of the ULBs. Sometime (in Rajasthan ULBs) it was found that the ULBs have to keep three months staff salary in reserve. This would always show ULBs in surplus. But this is not a true indication of sound financial position of the ULBs to carry out the detailed and meaningful exercise. The detailed data of revenue and expenditure at various levels of ULBs are required. In the absence of these details it is difficult to arrive at any conclusion about the financial position of the Urban Local Bodies in the State.

In the case of all ULBs, about 80 per cent of the expenditure was financed by revenue resources. For the municipal corporation there was a fluctuation, whereas the municipal councils were meeting their expenditure obligations to the extent of about 60 to 100 per cent.

As per the information supplied by the GoH regarding the future requirement of grants from the CFC, it is expected that the expenditure would be rising steadily while the income would not be keeping pace with expenditure resulting into huge gap over the period. This would require additional resources for the

ULBs to meet the increased demand for the basic minimum services. This in turn would need large amount of financial resources to be available with the ULBs. The financial position of the ULBs can be solved in three ways. First by enhancing the revenue resources of the ULS, second by expenditure compression and third, efficiency in delivery mechanism through public-private partnership in the provision of various services. All the approaches towards these measures for improving the financial resources of the ULBs are discussed at length in the following section.

4.10.12 Approaches to Self-Sustainable Development of Urban Local Bodies (ULBs) in Haryana

The Urban Local Bodies in Haryana can achieve self sustainable development by focusing on the following approaches:

(i) Resources Mobilisation by the ULBs

For the self-sustainable functioning of the ULBs, there is greater need of the financial autonomy of these bodies. This would reduce the over dependency of ULBs on the transfers from the higher authorities (may be national or State governments). Therefore, to raise more revenue, the elastic sources of revenue should be provided to these bodies. In the case of Haryana, the ULBs are not provided (in practice) adequate elastic sources of revenue even if these are there. The ULBs are not able to explore the revenue potential to the full. It should also be kept in mind that the vulnerable section of the society which are not able to pay its due share should not face any hardship and thus, also not to be deprived of the basic services provided by the ULBs. The tax resources of the ULBs should be strengthened.

(i) *Octroi*—The ULBs in Haryana are empowered to levy certain taxes. The important amongst them are Octroi and the Property tax. The ULBs were raising good amount of revenue from Octroi. After its abolition, it has lost an elastic source of revenue and are only getting grants *in lieu* of octroi. The compensatory grants *in lieu* of octroi given by the State are not adequate. The State has not provided an alternative elastic source of revenue to the ULBs. This has deteriorated the already meager financial position of the ULBs in the State.

(ii) *Property tax*—The ULBs are levying the tax on land and buildings for long. This is not a progressive tax. It is levied on the rateable value of the building, which is almost obsolete now. The various exemptions granted to different properties should be withdrawn. Most of the ULBs in many States have switched over from annual rateable method to area linked method. The neighbouring State of Delhi has adopted the Unit Area Method. There are other models, such as AP model, Patna and Ahmedabad models which can be experimented in some of the ULBs in the State and if found suitable, can be adopted and extended to all the ULBs.

Another important aspect of revenue mobilisation is the revision of rates and fees. In most of the cases, the rates of taxes and fees have not been revised for long. The revision of rates would result in more yield, which in turn improve the weak financial position of the ULBs, and thus, help in achieving the self-sustainability to large extent.

(ii) Expenditure Compression and Privatisation of Municipal Services

The municipal services provided by the ULBs in almost all the States are not to the desired standard and these don't satisfy the users' need. This is perhaps due to the poor financial position of the ULBs. The pressure of demand for these services is increasing continuously. It has been further aggravated in the post decentralisation period, wherein these bodies have assigned additional responsibilities. Some of the ULBs are not in a position to even provide the core civic services. Considering the precarious financial condition of ULBs, and on the other hand increased demand for these services, there is a need for involvement of private sector for making the provision and maintenance of certain services. While privatising the services, the ULBs enter into an agreement (contract) with the private organisations for the operation and maintenance of a particular service for a specified period. The contract would also involve cost of the maintenance of the service which would be paid by the ULBs. The practice of contracting out the certain specified services have been adopted in many ULBs in various States.

The more popular services which have gone for privatisation include solid waste management, sanitation, development and maintenance of parks, gardens, and recreational places. The other important services such as maintenance of street lighting and the roads, have also been privatised in many ULBs. Some of the municipal corporations and municipalities have successfully implemented the privatisation of select services. The example of Rajkot municipal corporation

which has gone for privatisation of service of street lighting, solid waste removal, cleaning of public latrines and maintenance of gardens and parks is being generally quoted. The privatisation of these services in Rajkot municipal corporation has resulted in the savings of expenditure in the range of 15-70 per cent of the original cost. Therefore, the privatisation of select services can be adopted by the ULBs in Haryana as it would also help in self-sustainable functioning of ULBs.

(iii) Strengthening Municipal Administration and Capacity Building

With the implementation of new municipal Act in conformity of 74th CAA, the responsibilities of the ULBs in the State have increased substantially. The extensive list of functions as enlisted in 12th Schedule includes the important responsibilities of urban planning and the development. This requires high level of skill, education and training for discharging such important responsibilities. It also requires high level guidance, direction and support. The higher level of staff has to be fully equipped to perform the crucial functions assigned to them. Considering the plethora of responsibilities assigned to these ULBs, there is a need of high level training and reorientation programmes to be conducted for the municipal staff, so that they may have to update themselves and discharge the crucial and important tasks assigned to them.

(iv) Community Participation and the Role of NGOs

In the new era of decentralisation, where many responsibilities are assigned to the ULBs, the community participation and the role of NGOs assume great importance. The involvement of Residential Welfare Associations (RWAs) in the "Bhagidari Scheme" of Delhi government has many success stories. Under the scheme, the RWAs' role become very important. It (RWAs) acts as watch dog in the maintenance of many civic services. In solid waste management, the RWAs is playing an important role. The monitoring and accountability by the citizens has also played a bigger role in achieving self-sustainability of the ULBs.

Thus, we conclude that the self-sustainability of ULBs can be achieved with the measures such as resource mobilisation, privatisation of select municipal services, involvement of RWAs and NGOs along with the community participation.

Chapter 5

State Perspectives for 2012

5.1 Haryana in National Perspective (With Reference to Monitorable Targets Specified in the National 10th Plan Document)

The Tenth Five Year Plan includes challenges and opportunities for Haryana and represents another step in moving forward outpacing many other States. Ever since its coming into existence, the State has consistently shown its capacity to meet challenges and transform them into exemplary events of successes. In the period ahead, the State is to tread on the path of progress keeping in mind the realities of national and global market scenarios and the need for ensuring equitable distribution of benefits of progress. Achieving an accelerated growth by fully exploiting the resource potential of the State with emphasis on eradication of poverty and ensuring welfare of weaker sections are the major objectives of the development policy of the State. Strengthening economic and social infrastructure and ensuring world-class standards in these areas, as far as possible, by involving much greater participation of the private sector in this endeavour under the present re-aligned public-private role model together while maintaining strict fiscal discipline for optimum resource utilisation constitute the core elements of the strategy for achieving these objectives.

5.1.1 Poverty

In the area of poverty eradication, Haryana has displayed outstanding performance as compared to many other States. It has always ranked among the top performing States of India if we look at this problem in a comparative historical context. Among the Indian States, Haryana is found to rank mostly next only to Punjab and Himachal Pradesh throughout the period 1973 to 2000. The poverty ratio of the State stood at 8.74 per cent in 1999-2000 with rural ratio 8.27 per cent and urban ratio 9.99 per cent. Bringing down this ratio to 2 per cent level by 2007 and eliminating poverty almost totally by 2012 are challenging, but feasible, targets. In order to eliminate poverty in the State an accelerated growth rate (GSDP) of about 10 per cent is required.

5.1.2 Employment

Unemployment is one of the major concerns of the State. The State is conscious of the magnitude of this problem. The annual growth rate of employment is not sufficient even to absorb the additions to the labour force, let alone reducing the piling backlog. The population growth rate continues to be high. Growth rate of workforce is a matter of grave concern. It is much above the corresponding all India rate. During 1991-2000, it was 2.83 per cent as against the national average rate of 0.81 per cent. Although the unemployment rate (as percentage of labour force) in Haryana, 4.7 per cent (rural) and 4.5 per cent (urban), is much less than the all India rates of 7.20 per cent (rural) and 7.70 per cent (urban). The problem appears to be still more serious when we take note of the unemployment rate among the youth (age 15-29). It was 8.10 per cent (rural) and 8.30 per cent (urban) in 1999-2000 as compared to the corresponding all India rates of 11 per cent and 15.40 per cent. People in this age group represent that part of the population which is mostly expected to shoulder the responsibility of looking after many others in the families. With total dependency ratio in the State being as high as 770 (in 2001), the unemployment among this segment of population becomes still a matter of greater concern.

Traditionally, primary sector, with agriculture as its major component, had been the major source of employment in the past. Over time, its contribution has gradually declined and the continuously expanding tertiary sector has emerged as a source of increasing employment opportunities. Such structural changes in employment are

a naturally expected phenomenon in the course of development process and are important from the point of view of shaping employment approach and deciding priority areas for policy intervention.

The State recognises the urgent need to not only arrest the rising trend of unemployment, but to actually reduce it. Accordingly, rapid growth of sectors having large employment potential, greater emphasis on vocationalisation of education at secondary school stage, expansion of job-oriented technical and professional courses at the college stage, adequate provision of infrastructural facilities, particularly in terms of financial and marketing support for the promotion of non-wage avenues of employment are to be the major planks of the State's employment strategy. Special emphasis will have to be laid on the promotion of employment-intensive activities and non-traditional avenues of employment. Agro-based industries, irrigation, construction, tourism, transport (including roads and bridges), small-scale industries, retailing, and IT communication-enabled services have huge employment potential. These should receive due attention for their promotion. Efforts should be made to set up public investment in extended agriculture in terms of accelerating the switch from cereals to oilseeds and pulses, horticulture, floriculture, fishery, bee keeping, and cultivation of medicinal and energy plants.

Since tertiary sector holds the promise of being the major source of employment generation, it should be the endeavour of the State policy to accord special priority to the fullest exploration of its employment potential. The performance of the tertiary sector has been quite satisfactory during the Tenth Plan period. It recorded a growth rate of 10 per cent (2002-03), 8.9 per cent (2003-2004) and 11.8 per cent (2004-05) which is quite close to the targeted growth rate of 10.3 per cent fixed under the Plan. Given the vast growth potential of this sector, it appears quite within the reach of the State to push this rate to much above 12 per cent (by 2012) which incidentally happens to be the nearest proximation of the highest rate fixed under the Tenth Plan for Karnataka, the top leading State in this respect.

On the whole, it may be said that with appropriate sectoral focus and well directed policy interventions and path-breaking employment initiatives, such as Prime Minister's vision of creating 10 million employment opportunities annually (for India as a whole), and State's policy of opening greater and newer areas for investment participation of private sector, it would be possible to generate substantially more employment opportunities than arising merely out of the growth process. It will not only take care of additions to the labour force but also reduce the backlog of unemployment.

5.1.3 Education

In Haryana, 75.25 per cent of the children in the age-group 6-11 and 65.51 per cent in the age group 11-14 were enrolled in schools in 2003-04. The participation of female children in school-stage education stood at about 77.31 per cent (age group 6-11), and 62.40 per cent (age group 11-14). Over time, the enrollment participation rates of females children, in particular, have gone up remarkably, from 35 per cent (1966-67) to 77.30 per cent (2003-04) in case of age group 6-11, and from 16 per cent to 62.40 per cent in case of age group 11-14 over the same period.

Indeed, these participation rates are still not very encouraging. The State appreciates the significance of ensuring substantial, fast improvement in this regard. It is committed to providing at least primary level education to almost each child in the school going age group by according still greater priority to primary education in the matter of State expenditure on education with special emphasis on education of girl children and children form weaker sections. The Sarva Shiksha Abhiyan is expected to play a significant role in extending education to children especially those belonging to weaker sections, in the age-group 6-14 by providing them free books and cycles.

5.1.4 Literacy

Haryana's literacy rate showed an appreciable increase of 12 per cent points over the decade of the 90s, increasing from 55.85 per cent in 1991 to 67.91 per cent in 2001, and outpacing the corresponding rates for India as a whole (52.21 per cent in 1991, and 64.84 per cent in 2001). The literacy rate of the State, at its present level, is regarded still very low particularly when it is looked at sex-wise. In 2001, female literacy rate was just 56.3 per cent as against the male literacy rate of 79.3 per cent. The State should make greater directed attempts to raise this rate close to 75 per cent by the year 2007, with special focus on the literacy of women belonging to rural areas and weaker sections.

5.1.5 Gender Disparity

Gender gaps in literacy and wage rates are indicators of neglect and exploitation of women, particularly belonging to weaker sections in the society. These gaps need to be brought down substantially. In 1981, Haryana's female

literacy rate (22.3 per cent) was even less than half of the corresponding rate for males (48.2 per cent), and much less than the all India rate (29.8 per cent), thus with more or less identical gender gap at both State and the all India level. Overtime, the literacy situation has improved for both males and females of Haryana. In 2001, the male and female literacy rates were 79.3 per cent and 56.3 per cent, respectively, and these were higher than the corresponding rates at the all India level of 75.9 per cent (males) and 54.2 per cent (females) with more or less the same gender gap, again.

The State of Haryana realises that these gender gaps constitute another priority area for more concerted and effective policy intervention if the situation is to improve substantially and the gender gaps are to be brought down by at least 5 per cent points in the immediate future.

5.1.6 Population Growth

Haryana is one of the few States in India whose decadal growth rate of population has showed almost a negligible change over the last three decades. It is a matter of great concern for the State and requires an in-depth analysis of its socio-economic genesis. The State's decadal growth rate was 28.75 per cent during 1971-81, 27.41 per cent during 1981-91, and 28.43 per cent during 1991-2001. The other States, which fall in this category, are Jammu and Kashmir and Maharashtra with variation in the decadal growth rate of just about 2 per cent over this period. It is widely believed that the high growth rate of population is due mainly to poverty and illiteracy of people, and significantly, highly son-oriented psyche of most parents belonging even to well-off educated families. As such, the problem is, in fact, of long-term nature and requires policy shift from short term, populist approach relying mostly on casual and superficial pecuniary and non-pecuniary initiatives to a long term hard, sincere and realistic approach. The problem needs to be tackled through change of mindset of parents, spread of education, eradication of poverty, greater participation of females in education and labour market, and their socio-economic empowerment.

5.1.7 Infant Mortality Rate

Infant mortality rate and life expectancy at birth are among the basic indicators that are used to evaluate health status in a State. As regards life expectancy at birth, Haryana's performance has been satisfactory, and on this count, Haryana is placed only after Kerala, Punjab and Maharashtra among major States of India. But as regards infant mortality rate, the situation has so far remained less than satisfactory. Although there has been a continuous decline in the infant mortality rate in Haryana, from 94 in 1961 to 52 in 1981, and further to 62 in 2001, yet it has remained below the all India rate throughout, and continues to be still too high. In comparison to many other States, including neighbouring States of Punjab and Himachal Pradesh, Haryana ranks much behind so far as bringing down the infant mortality rate is concerned. The State realises the significance of the problem for a concerted and vigorous campaign on a war-footing level. The various health initiatives such as, immunisation against BCG, DPT, Polio and Measles, and programmes of supplementary nutrition, health check up and health-education (particularly for popularisation of breast-feeding) under the on going Integrated Child Development Services scheme are introduced to bring down the infant mortality rate substantially close to 50, at least by 2007.

5.1.8 Forest and Tree Cover

The total area under forest cover including trees grown on agricultural land for commercial purposes is about 3.6 lakh hectares, which constitutes 8.1 per cent of the total area of the State. This is far less than what has been prescribed under the National Forest Policy increasing forest cover to 25 per cent by 2007 and 33 per cent by 2012. But this is to be seen in the context of the fact that Haryana is one of the very few States which are predominantly agricultural having a much greater proportion of their land under agricultural use to meet not only the growing food demand of its own people but also of the country.

With the increasing population of Haryana since it came into existence as a separate State in 1966, the forest area per lakh of population has been continuously falling due to increasing trend of urbanisation, escalating pressure on land for growing more food, large-scale cutting of trees to meet growing demand for timber and fuel. The forest area today stands at about 1100 hectares (per lakh of population), as compared to about 1400 hectares in 1966-67. Per capita forest area is 0.01 hectares as against 0.09 hectares for India as a whole.

Whatever the reasons for relatively much lower level of forests and trees in Haryana, the importance of forests for the ecology of a State cannot be overlooked. In order to increase the forest and tree cover and restore ecological balance in the State, a rigorous campaign for plantation of trees on a large scale on available lands wherever possible —highway roadside stretches; waste lands; schools, colleges and other public and private premises; and even on agricultural land. Equally, more important is ensuring

their proper care and growth and protecting the existing forests against indiscriminate onslaught. These measures have to be the main planks of the forest policy of the State.

5.1.9 Potable Drinking Water

Safe drinking water is an essential requirement for health and improvement of quality of life and enhancement of productivity of people. In this regard, Haryana has made tremendous progress, over time *vis-à-vis* most other States. Whereas in 1966, only 170 villages out of a total 6759 villages were provided with safe drinking water supply, by 1992 drinking water supply extended to all the villages. At present, there are about 1800 villages in the State where water allowance is less than the desired norm of 40 lpcd. Efforts are being made to augment the drinking water facilities under various schemes such as, PMGRY, Accelerated Rural Water Supply Programme, Desert Development Programme and various NABARD assisted projects. It is expected that the problem will be solved substantially by the end of the 10th Plan.

5.2 Projection of Gross State Domestic Product and its Sectoral Composition

The Gross State Domestic Product of Haryana has been projected with certain assumptions about policies and parameters. If we want to double the PCI of people in Haryana by 2012 then a seven per cent growth rate is required for achieving this objective. With existing population growth rate assuming a decline in the TFR from 3.3 in 1998 to 2.1 in 2007, the Haryana economy shall have to attain 10.10 per cent target growth rate consistently till 2011-12. Now this growth rate has been distributed over primary, secondary and tertiary sectors. The growth rate of agriculture sector shall be increased gradually up to 5.17 per cent by 2009-10 and policies will be made to sustain it.

In 2000, the primary sector had 45.15 per cent of employment with 33.90 per cent share in Gross State Domestic Product. Now in 2005, as the share of primary sector in Gross State Domestic Product has decreased to 28.37 per cent and the tertiary sector has almost equal share in employment and Gross State Domestic Product, there is a need to shift around 17 per cent persons from primary sector to secondary sector which has a larger share in Gross State Domestic Product (28.86 per cent) and smaller in employment (12.45 per cent). Now people from agriculture cannot be expelled to manufacturing, but manufacturing sector can attract labour from agriculture by expansion in investment and output. It is easier for people to switch jobs between manufacturing and services but shifting of people from agriculture to manufacturing requires a lot of Human Resource Development effort. The share of services is increasing itself with its own underlying strengths. The tertiarisation of the economy without increasing industrial output is not sustainable and would lead to poor quality jobs. Hence, it is high time that the investment in secondary sector is increased to have a higher growth rate as projected.

TABLE 5.1

Projected Composition of Gross State Domestic Product by Broad Sectors at Constant (1993-94) Prices

Year	*Per Capita Income*	*Gross State Domestic Product at Constant Prices (Rs. Crore)*	*Targeted Percentage Increase in GSDP over the Previous Year*	*Targeted Growth Rate of Primary Sector*	*Targeted Growth Rate of Secondary Sector*	*Targeted Growth Rate of Tertiary Sector*
2006-07	19259	52649	10.10	4.10	12.05	12.47
2007-08	20607	57966	10.10	4.46	11.43	12.42
2008-09	22050	63821	10.10	4.81	10.89	12.37
2009-10	23593	70267	10.10	5.17	10.41	12.32
2010-11	25244	77364	10.10	5.17	10.25	12.28
2011-12	27012	85178	10.10	5.17	10.09	12.24

Source: Based on Various issues of *Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh, and Tenth Five Year Plan Document

So, after fixing the targeted growth rate of agriculture, the share of tertiary sector, which behaves according to the national average, has been fixed. The shares of sectors in Gross State Domestic Product and their growth rates have been estimated simultaneously in the Tables 5.1 and 5.2. The financial requirements to achieve the targeted growth rates for each sector have been estimated in the next step.

TABLE 5.2

Projected Shares of Broad Sectors

Year	*Primary*	*Secondary*	*Tertiary*
2005-06	26.83	29.46	43.71
2006-07	25.37	29.99	44.65
2007-08	24.06	30.35	45.59
2008-09	22.91	30.57	46.53
2009-10	21.88	30.65	47.46
2010-11	20.90	30.69	48.40
2011-12	19.97	30.69	49.34

Source: Based on Various issues of *Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh, and Tenth Five Year Plan Document

TABLE 5.3

Correlation Matrix (a)

	AREA	*BEAGR*	*CEAGRI*	*GRPRIMARY*	*MILK*	*IAP*	*REAGRI*	*TEAGR*	*YEAR*	*YIELD*
AREA	1.00	0.64	0.43	-0.07	0.69	0.67	0.75	0.78	0.75	0.15
BEAGR	0.64	1.00	0.36	-0.23	0.67	0.54	0.59	0.61	0.60	0.04
CEAGRI	0.43	0.36	1.00	-0.09	0.50	0.50	0.35	0.52	0.53	0.11
GRPRIMARY	-0.07	-0.23	-0.09	1.00	-0.01	0.35	-0.02	-0.04	-0.07	0.38
MILK	0.69	0.67	0.50	-0.01	1.00	0.86	0.93	0.95	0.97	0.65
IAP	0.67	0.54	0.50	0.35	0.86	1.00	0.82	0.85	0.87	0.68
REAGRI	0.75	0.59	0.35	-0.02	0.93	0.82	1.00	0.98	0.94	0.62
TEAGR	0.78	0.61	0.52	-0.04	0.95	0.85	0.98	1.00	0.96	0.58
YEAR	0.75	0.60	0.53	-0.07	0.97	0.87	0.94	0.96	1.00	0.63
YIELD	0.15	0.04	0.11	0.38	0.65	0.68	0.62	0.58	0.63	1.00

Source: Based on Statistical Abstracts of Haryana and Tenth Five Year Plan Document

5.2.1 Estimated Investment Requirements for Primary Sector

Here, first of all index of agriculture production (IAP) has been estimated for the years 2005-06 to 2011-12 using the past data. The IAP has been taken as the function of a trend (YEAR) and growth rate of primary sector. The financial requirements for achieving the required growth rate in the primary sector have been computed using the ICOR set by the planning commission in Tenth Plan. To estimate the total expenditure to be incurred by the State on agriculture following correlation matrix was constructed with variable total cropped area (AREA), budgetary expenditure on agriculture (BEAGR), capital expenditure (CEAGR), growth rate of primary sector (GRPRIMARY), milk production (MILK), index of agriculture production (IAP), revenue expenditure on agriculture (REAGR), total expenditure on agriculture (TEAGR), trend (YEAR) and yield (YIELD).

Now it is clear from the correlation matrix Table 5.3 that IAP is a suitable variable to predict the TEAGR leaving trend. Therefore, IAP has been used to predict the future values of TEAGR with a linear regression model. After estimating the TEAGR, the REAGR has been estimated as a dependent variable of TEAGR as they were found highly correlated in the correlation matrix (r = 0.98). Now, CEAGR has been computed as a difference between TEAGR and REAGR. It has been assumed that remaining investment requirements shall be met from private investments, which is a difference between third and fifth column in the following table.

TABLE 5.4

Estimated Investment Requirements for Primary Sector

Year	*Index of Agriculture Production (Base 1993-94)*	*Investment Requirements for Primary Sector according to ICOR set by Planning Commission for Tenth Plan (Rs. Crore)*	*Total Expenditure on Agriculture and Allied Activities by Haryana State Government (Rs. Crore)*	*Expected Capital Expenditure by the State (Rs. Crore)*	*Private Investment Requirements (Rs. Crore)*
2006-07	242.53	1090	3466	330	760
2007-08	246.86	1237	3672	353	884
2008-09	251.20	1400	3877	376	1024
2009-10	255.54	1581	4083	398	1183
2010-11	259.35	1663	4263	418	1245
2011-12	263.16	1749	4444	438	1311

Source: Based on Various issues of *Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh, and Tenth Five Year Plan Document

5.2.2 Estimated Investment Requirements for Secondary Sector

First of all a correlation matrix has been constructed with variables capital expenditure by Haryana government on industry (CEXP), growth rate of secondary sector (Gross State Domestic Product), index of industrial production (IIP), share of secondary sector (SHSEC), State Domestic Product of secondary sector (SHESEC) and trend (YEAR). Now IIP has been projected with State Domestic Product of secondary sector (SHESECDP) or gross manufacturing State domestic product as the independent variable.

The total investment requirements have been computed using ICOR set by the Tenth Plan estimates. The expected State expenditure on industry has been projected using IIP as the independent variable.

TABLE 5.5

Correlation Matrix (b)

	CEXP	GRGSDP	GSDP	IIP	SHSEC	SHSECSDP	YEAR
CEXP	1.000	-0.578	0.616	0.632	0.397	0.587	0.635
GRGSDP		1.000	-0.747	-0.758	-0.619	-0.745	-0.778
GSDP			1.000	0.996	0.778	0.992	0.993
IIP				1.000	0.820	0.996	0.998
SHSEC					1.000	0.849	0.826
SHSECSDP						1.000	0.994
YEAR							1.000

Source: Based on Various issues of *Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh, and Tenth Five Year Plan Document

TABLE 5.6

Estimated Investment Requirements for Secondary Sector

Year	*Index of Industrial Production (Base 1993-94)*	*Investment Requirements for Secondary Sector according to ICOR set by Planning Commission for Tenth Plan (Rs. Crore)*	*Expected State Expenditure on Industry (Rs. Crore)*	*Private Investment Requirements (Rs. Crore)*
2006-07	298.98	14787	306	14481
2007-08	338.12	15619	326	15293
2008-09	385.82	16501	346	16155
2009-10	444.13	17429	366	17063
2010-11	511.11	18909	386	18523
2011-12	588.05	20497	406	20091

Source: Based on Various issues of *Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh, and Tenth Five Year Plan Document

5.2.3 Estimated Investment Requirements for Tertiary Sector

First of all the total expenditure on services (TES) by the State has been projected using a regression model taking PCI and gross contribution of tertiary sector to Gross State Domestic Product as independent variables. Now estimated ICOR of major services has been computed and has been used to determine the total investment requirements to achieve the targeted growth rate for the sector. The expected capital expenditure on services by the State has been projected by using the TERSDP as the independent variable. The private investment requirements are the difference between second and fourth column. In Section 4.3, the investment opportunities for generating gainful employment have already been discussed.

TABLE 5.7

Estimated Investment Requirements for Tertiary Sector

Year	*Investment Requirements for Tertiary Sector according to ICOR=1.497 (Rs. Crore)*	*Total Expected State Expenditure on Services (Rs. Crore)*	*Expected Capital Expenditure on Services by State (Rs. Crore)*	*Private Investment Requirements (Rs. Crore)*
2006-07	3160	12364	945	2215
2007-08	4104	13853	1062	3042
2008-09	5175	15356	1194	3981
2009-10	6397	16863	1341	5056
2010-11	7401	18365	1505	5896
2011-12	8553	19847	1690	6863

Source: Based on Various issues of *Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh, and Tenth Five Year Plan Document

TABLE 5.8

Total Investments Required for Eleventh Plan and Expected Capital Expenditure by the State at Constant Prices (Base 1993-94)

Year	*Total Investment Requirements for Forecasted GSDP according to ICOR=3.58 (Rs. Crore)*	*Total Expected State Expenditure (Rs. Crore)*	*Expected Capital Expenditure by State (Rs. Crore)*	*Private Investment Requirements (Rs. Crore)*
2006-07	19037	17851	1581	17456
2007-08	20959	19579	1741	19219
2008-09	23076	21312	1916	21160
2009-10	25407	23014	2105	23302
2010-11	27973	24697	2309	25664
2011-12	30798	14468	2534	28265

Source: Based on Various issues of *Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh, and Tenth Five Year Plan Document

TABLE 5.9

Total Investments Required and Expected Capital Expenditure by the State for Sustainable Growth of Primary, Secondary and Tertiary Sectors at Current Prices for Eleventh Plan

Year	*Expected CPI of Haryana Base Year 2003-04*	*Expected per capita Income in Haryana at Constant Prices with base year 2003-04 (Rs.)*	*Total Investment Requirements for Forecasted GSDP according to ICOR=3.58 (Rs. Crore)*	*Expected Capital Expenditure by State (Rs. Crore)*	*Private Investment Requirements (Rs. Crore)*
2006-07	117	22489	22229	1846	20383
2007-08	121	25023	25450	2114	23337
2008-09	126	27801	29096	2416	26680
2009-10	131	30846	33218	2752	30466
2010-11	135	34182	37876	3126	34750
2011-12	140	37833	43136	3549	39588

Source: Based on Various issues of *Statistical Abstracts Haryana* published by Government of Haryana, Chandigarh, and Tenth Five Year Plan Document

5.3 Equitable Regional Development

Balanced regional development of different parts of the State, extension of benefits of economic progress to the less developed regions and widespread diffusion of industries are among the major aims of the development strategy programmes of the State of Haryana. Accelerated development loses its meaning if it does not cater to the welfare of people living in different parts of the State. Regional disparities do exist in Haryana. The State has been striving hard to reduce these disparities and has achieved much success in this regard. It is determined to pursue its efforts in this direction with still greater zeal and determination in terms of strengthening development infrastructure necessary for supporting the growth of agriculture and/or industries in these areas.

An essential element in the strategy for promoting equitable regional development is the recognition of the fact that all regions are not equally placed as regards their suitability for growth of agriculture and various other industries. Climatic conditions, soil fertility, topography, water table, forest cover, mineral resources, etc. are the natural factors which widely differ from one place to another within the State. The objective of State's strategy for equitable regional development is to exploit the resource potential of different areas to the maximum possible extent together with efforts to extend to them the benefits of education, health care, housing, employment, empowerment of weaker sections and other welfare measures. This is, indeed, an arduous task. But the State is determined to accomplish it with appropriate policy measures, in particular, encouraging the participation of the private sector and the NGOs wherever possible and desirable.

The State of Haryana is already known for its performance in the field of agriculture. As regards industrialisation also the State, on the whole, can be termed as an industrially advanced State. The State had already implemented many schemes for improving irrigation facility in agriculturally backward parts. Recognising its importance in the economy of the State, this initiative needs to be carried forward with still greater hope and determination in future. In respect of industrialisation, recently the Government of Haryana has declared 88 areas, covering each and every district of the State, as industrially backward. A special focus will be on strengthening necessary infrastructure for promotion of industrial activities in these areas.

5.3.1 Infrastructure

(i) Irrigation

The State is according high priority to the provision of adequate irrigation facilities for the prosperity of farming community, as agriculture is the mainstay of Haryana's economy. Concrete steps have been taken to ensure equitable distribution of water to the farmers of the State and accordingly water supplies to Southern Haryana have been enhanced.

To ensure equitable distribution of canal water, the State has taken up the construction of BML-Hansi Branch-Butana Branch Multipurpose Link Channel of 2,000 Cs. capacity. The channel will help in improvement of sub-soil water level in the area through which it will pass. To utilise the surplus water of river Yamuna during the monsoon season, the Dadupur-Shahabad-Nalvi Canal is being constructed. This will recharge ground water in its command area of 92,532 hectares of district Yamuna Nagar, Ambala and Kurukshetra districts besides providing irrigation facilities to an area of 46,250 hectares and relief to tube well operations during the kharif season. Construction on the ground water recharge project for Masani Barrage in Rewari district has also commenced. Similarly more such projects/schemes have also been prepared and approved for Rewari and Mahendragarh districts to recharge ground water and to provide irrigation facilities.

The State is giving top priority to the conservation and better management of surface water, rainwater harvesting, recharging of groundwater and equitable distribution of available water. All the canals are cleared of weed and silt wherever required before the start of every sowing season to ward off the shortage of water at tails. Replacement of old irrigation structures, lining of canals and repair of old lined watercourses are being carried out to check the seepage and leakage of water.

The State has undertaken numerous schemes for increasing capacity of canals, lining of canals, rehabilitation of old lined water courses and improvement in the functioning of the Lift Canals. NABARD aid is being utilised for executing the schemes of extension and construction of minors and drains and rehabilitation of pumps on various Lift Canal Systems. The Command Area Development Authority is vigorously pursuing the programme for water conservation through lining of field channels and is also taking up a bio-drainage project in order to reclaim some waterlogged areas of the State.

In an endeavour to harness the rivulets flowing through Haryana during the monsoon season and prevent loss to property by floods, the State has prepared three project reports for low height cascade dams on river Ghaggar and its tributaries at Kaushlya, Dangrana and Dewanwala. The projects have already been submitted to Central Water Commission for appraisal and clearance. The State is also pursuing the

construction of upstream storages on river Yamuna vigorously with the Government of India.

(ii) Energy

Energy in one form or the other is the most important input for any development and directly determines the pace of economic growth. Haryana has limited availability of natural sources of energy. There is no hydro generation potential in the State and even the coal mines are located far away from the State. Wind velocity prevailing in the State is also not sufficient for power generation. Although, the solar intensity is relatively higher, the land area limitation does not encourage big scale harnessing of this resource as well. Therefore, the State has been depending on the limited thermal generation capacity installed within the State and on hydropower from the jointly owned projects. The State's efforts have been supplemented by the Central Generation Projects from where the State gets its share on the formula evolved by the Government of India for such projects.

The total installed capacity available to the State at present is 4033.30 MW. It includes 1587.40 MW from State's own projects, 937.50 MW from jointly owned projects and the balance as share in Central projects and independent private power projects. The power availability from these sources during the year 2004-05 was 21,713.6 million units.

Considering the need for maximising power availability in the State, various short term and long term measures such as addition in capacity generation, improvement in operational efficiency, rehabilitation and extension of distribution network etc. need to be taken. A massive programme needs to be undertaken to add the generation capacity in the State, through State as well as private sector participation.

The Department of Renewable Energy is responsible for formulating policies and programmes necessary for popularising the applications of various non-conventional and renewable sources of energy in the State. It is implementing various schemes concerning utilisation of solar energy, biogas, micro hydel, and biomass energy etc.

The Integrated Rural Energy Programme (IREP) is being implemented in 38 cluster of villages of the 19 districts. Under this programme, various types of renewable energy and energy efficient systems like solar cookers, solar lanterns, compact fluorescent lamps, SPV home lighting systems, energy efficient motors etc. are being promoted through financial incentives, demonstration and extension activities in the selected cluster of villages of IREP for helping rural people to meet their cooking, heating and lighting energy needs by adopting these systems.

Ministry of Non-Conventional Energy Sources, Government of India is providing assistance to the State nodal agencies for setting up of renewable energy parks in the educational institutes to demonstrate the working of various types of renewable energy based systems to the public, particularly the students to educate them about the clean and environment friendly technologies which they can use in their daily life. As much as 13 energy parks have been set up in the State so far. Besides this, a State level energy park is being set up at Gurgaon. It is proposed to set up district level energy park in every district of the State.

For meeting heating and cooking energy requirements through solar energy, HAREDA is implementing solar water heating and solar cookers (both box and dish type) schemes with the financial assistance of State/Central government. For meeting the hot water requirements in the domestic, industrial and institutional sector, the solar water heating technology is being promoted by creating awareness.

The State has also formulated a policy for promoting generation of electricity through renewable energy sources on 23rd November 2005. Under this policy, various incentives like wheeling, banking, power purchase agreement for 20 years or more depending upon the plant life, exemption of local area development tax and no conversion charges for setting up of plants in the agricultural zones etc. have been provided to encourage the independent power producers (IPP) to set up power projects based on renewable energy in the State.

(iii) Roads and Bridges

Roads are the basic means of communication for the development of any economy. In order to further strengthen the road network and making it more efficient as per traffic requirements, the main emphasis is on the improvement and upgradation of road network, construction of roads, bye passes, bridges and road over bridges.

A programme for improvement of roads by way of widening, strengthening, reconstruction, raising, constructing of cement concrete pavements and blocks, premix carpet, construction of side drains and construction of culverts and retaining walls etc. need to be taken.

During the year 2005-06, the State government has decided to take up the following five roads on built-operate-transfer (BOT) basis:

1. Yamuna Nagar Ladwa Karnal Road
2. Buria Khadri Deodhar Road
3. Gurgaon Faridabad Road

4. Ballabhgarh Pali Dhoj Road

5. Chandimandir Jallah Road

The State has proposed two roads as interstate corridors during the year 2005-06, *viz* (i) Kotputli Mahendragarh Dadri Bhiwani Jind Kaithal Road and (ii) Saharanpur Yamuna Nagar Radaur Pipli Pehowa Road upto Punjab Border.

The department has prepared master plan for construction of railway over bridges (ROBs) to curtail delay and to increase the safety of passengers. Nine railway over bridges are in progress. The detail of ROBs identified in master plan is as under:

• ROBs in pipeline on State highways 8	
• Identified on State highways	51
• ROBs in pipeline on national highways	4
• Identified on national highways	14
Total:	77

Nine railway over bridges (ROBs) were sanctioned on 1st April 2005. It has been targeted that five ROBs will get completed during the year 2005-06.

Development of roads and bridges leading to Kundli-Manesar-Palwal expressway and upgradation of roads in the National Capital Region of the State need to be undertaken.

Total length of metalled roads including national highways, State highways, major district roads (MDRs) and other district roads (ODRs) in Haryana is 22,992 kilometers as on 31st January 2006.

(iv) Railways

Railways are an extremely efficient form of transportation. The energy consumption for a given freight movement on railways is about one quarter of the consumption required for trucks. In addition, the railways generate less pollution and involve fewer accidents. If we consider the growth of rail route length over the period 1980-81 to 1996-97 we find that whatever increases took place at the all India level, only 0.87 per cent of that is accounted by Haryana. Therefore, the railways density in the State needs to be increased. Special emphasis should also be given to electrify the railway routes.

(v) Dry Ports

An Inland Container Depot (ICD) is a common user facility with public authority status equipped with fixed installations and offering services for handling and temporary storage of import/export laden and empty containers carried under customs control and with customs and other agencies competent to clear goods for home use, warehousing, temporary missions, re-export, temporary storage for onward transit and outright export. Trans-shipment of cargo can also take place from such stations.

The first ICD (dry port) of Haryana is set up by the Haryana Warehousing Corporation at Rewari. It provides single window clearance to the importers/exporters of Haryana, Rajasthan and western Uttar Pradesh. The ICD has State of the art equipment with modern communication systems like electronic data interchange. All formalities relating to import and export are completed at Rewari itself. The initial capacity of the ICD is to handle 50,000 containers per annum and it takes full advantages of the latest developments in freight technology, communication and computerisation of operations.

(vi) Civil Aviation

Civil Aviation Department, Haryana has got five Civil Airstrips/Aerodromes in the State at Karnal, Hisar, Bhiwani, Narnaul and Pinjore in addition to two Defence Aerodromes at Ambala and Sirsa. The proposal for making an International Cargo Airport at Bahadurgarh in District Jhajjar is already taken up with the Ministry of Civil Aviation, Government of India to promote the export of processed agri-products etc. from the northern region including State of Haryana. The proposal for making an airstrip at village Lakhan Majra and Chandi in district Rohtak has also been taken up with the Ministry of Civil Aviation, Government of India. In addition, following development plans have been projected for the aerodromes at Karnal, Hisar and Pinjore in 11th Five Year Plan (2007-2012):

Karnal	(Rs. in Crore)
Extension of runway from 3000 feet to 4000 feet, construction of boundary wall, re-carpeting of runway, construction of new administrative block, ATC and residential quarters.	Rs.6.50
Hisar	
Extension of runway from 4000 feet to 6000 feet, construction of boundary wall, re-carpeting of runway, construction of new administrative block, ATC and residential quarters.	Rs.5.50
Pinjore	
Extension of runway from 3000 feet to 4000 feet, construction of boundary wall, re-carpeting of runway, construction of new administrative block, ATC and residential quarters.	Rs.7.50

The fund of Rs.7.00 crore has also been projected for providing night landing facilities at the aerodromes at Karnal, Hisar and also for updating the navigational facilities at all the aerodromes in the State. Presently three flying training centres are being run at Civil aerodromes, Karnal, Hisar and Pinjore by the State government. Keeping in view the shortage of pilots in the country, setting up of Flying Training Academy by private parties at civil aerodromes, at Hisar, Narnaul, Bhiwani and Pinjore are also under active consideration.

Civil aviation in Haryana has never been given the attention it deserves. It has never been considered a real indicator of economic development. Passenger traffic is just one part of the aviation revolution. Cargo is another big opportunity.

Big corporates like Bharati and Reliance are now planning to invest huge money in agri-business. The only way to get value-addition is to move the produce quickly to foreign markets. In Haryana, there is a need to develop more than one airport. There should be an aviation grid for the whole country. The national aviation map should look like a power transmission grid map.

5.4 Reoriented Development of Agriculture and Allied Activities

At national level, with a 20.2 per cent contribution to the Gross Domestic Product, agriculture still provides livelihood support to about 2/3rd of the country's population. The sector provides employment to 56.7 per cent of country's workforce and is the single largest private sector occupation. It accounts for about 14.7 per cent of total exports earning and provides new materials to a large number of industries. Besides, the rural areas are the biggest markets for low-priced and middle-priced consumer goods, including consumer durables and rural domestic products, which are an important source of resource mobilisation. In the last 55 years, the agricultural development in the country has taken place in four phases that is increase in net sown area, increase in foodgrain products due to High Yielding Varieties and use of technologies, use of minimum support prices for the procurement and the liberalisation and globalisation of agriculture as a consequence of the establishment of WTO.

Despite all this, the share of Agriculture in GDP at National and State level has been continuously declining. In Haryana, during the period 1993-94 to 2003-04 this share has declined at an average rate of – 3.97 per cent at constant prices. During the Tenth Five Year Plan, the overall growth rate of State Domestic Product in Haryana was fixed at 7.9 per cent as compared to 4.1 per cent during the Ninth Plan. In comparison to this the agricultural growth rate during the Tenth Plan was fixed at 4.07 per cent, which needs to be further increased if we make projections of sectoral composition of State Domestic Product in Haryana. According to the projections, the targeted growth rate of primary sector needs to be 5.17 per cent which can be achieved only through reoriented development of agriculture and allied activities such as contract farming, organic farming, and diversification of agriculture, agro-forestry and agro-based industries.

5.4.1 Contract Farming

Contract farming is basically seen as an effective way of generating supplies for processing industries and exports with a substantial potential of additional value to agriculture in India. In view of this potential and its wide spread practice in regions all over the world, the State governments in India have also started promoting contract farming to strengthen their agriculture base. Under this type of farming tomatoes, chillies, seed multiplication, sugarcane and other commercial crops are being produced in Punjab, Haryana Karnataka, Andhra Pradesh, Uttar Pradesh etc. In some States such as Punjab, it has also been used as a means of crop diversification, marketing and providing financial support in terms of loans and advances to the farmers.

In brief, it provides a promising alternative to the farmers of different States because it reduces uncertainties and prevailing risk and market imperfections in agricultural sector. It also helps the farmer in facing the challenges of liberalisation and globalisation in agriculture but the perspective of contract farming depends upon certain favourable conditions and it is more applicable to the areas such as seed multiplication, organic foods, vegetables, fruits and exotic produce/plants, export crops, aromatics, herbal and medicinal plants etc. The successful model for contract farming must be based on new measures and regulated markets in which sponsored issues for action must be clear. Contract farming must clearly specify: quantities involved, delivery schedule, points of delivery, modes and responsibilities of grading, packing and transport and costs, prices, payment modalities, incentives based on quality and/or time performance, advances and their recoveries, insurance, market fee and other related costs.

5.4.2 Organic Farming

The Government of India in 2001 accepted the *Report of the Task Force on Organic Farming*, constituted by the

Department of Agriculture and Cooperation. Organic farming implies the use of organic farm waste and Municipal Solid Waste for increasing agricultural productivity as the possibility of increasing agricultural output through Net Sown Area (NSA) almost seems to be exhausted in Haryana and other States of India. It has been estimated that for about 356 mt. crop, 170 mt. is soil incorporated and about 136 mt. is available for manuring. Moreover the technologies are available for pelletisation and methanisation by which municipal solid waste can be used for generating energy and manure. Vermi-compost, which is rich in nutrients, could also be made from the organic farm waste. The adoption of organic farming can supplement the use of fertilisers in crop production. Use of such composts will also improve the health of soil by providing organic matter for the required biological activities in addition to improving the physical condition of the soil.

The orientation of farmers towards the production of organic food for domestic use and exports will certainly the government should encourage the Bird conservation develop waterways, canals and plant tree rows along these. This will increase the ecological wealth of the State and would ensure conservation of forests, wildlife etc. The village ponds should also be maintained. In Haryana, the application of chemical pesticides and fertilisers is increasing despite the fact that farmers are aware of their dangerous side effects. Many birds die of poisoning in Sonepat and other districts in the State. The farmers should be educated to resort to biological control and provided incentives for organic farming for sustainability of agriculture in the State. Integrated plant nutrient management of inorganic organic fertilisers, bio-fertilisers and vermi-composts for sustained soil health and crop productivity should be encouraged by the government.

5.4.3 Diversification of Agriculture

The Tenth Plan targets a 3.97 per cent growth in agriculture through the regionally differentiated strategy based on agro climatic conditions and natural resources envisaged for the Ninth Plan, for increasing the pace of growth in every region of the country. The target growth rate of agriculture in Haryana was fixed at 4.07 per cent during the Tenth Plan period. Diversification to high value crops/activities and increasing cropping intensity have been among the thrust areas for the Tenth Plan. Although, Indian agriculture is moving rapidly towards commercialisation-most farmers, especially small and, marginal farmers tend to give a prime place to cereals in the cropping system due to food scarcity, low risk and easy market access for such produce. In order to increase farmers' income the diversification towards high value and more remunerative crops considering the agro-climatic conditions, endowment of land and water resources and demand conditions is urgently needed. The emphasis should be on fruits, vegetables, flowers, agro forestry, tree-farming, dairying, etc.

In Haryana, the cropping pattern has moved in favour of rice and wheat by replacing gram, *bajra*, barley, millets and pulses. The cropping pattern in the State has unnecessarily become energy intensive and is affecting the static balance of the underground water resources. The growth of infrastructure, irrigation and other technological factors are responsible for a major shift in cropping pattern in favour of wheat and rice in the State. The total crop area under maize has declined significantly during 1967-2003, whereas in cotton and oil seeds it has increased during the same period. Still, there is a vast scope for diversification of agriculture in Haryana in order to tackle the problem of falling water tables in some parts of the State, sustainable agricultural development and for the improvement in income and employment opportunities in the State.

5.4.4 Agro-Forestry

The Government of India initiated an Agro-Forestry programme as an integrated sustainable land management system on June 2, 1992. It announced the National Conservation Plan in order to tackle multidimensional agricultural problems facing the nation today. The forest affects soil and water in many ways, leaves and branches decrease wind strength, after the absorption of solar radiation, increase the surface area for evaporation. The roof growth and the decomposition of plant organic matter by soil fauna and microbes, modify soil texture and structure, affecting water penetration and drainage. Changes in vegetation cover can therefore have significant influence on hydrological cycle and climatic system. In Haryana Agro-forestry is needed as the forest cover is lowest in Haryana. Only 3.8 per cent of Haryana was under forest cover in 1986-87, and 2.6 per cent in 2000-01. Many studies in recent years have indicated that the establishment of agro forest processing is required on regional basis rather than on a State basis. The problem of marketing forest products, particularly wood in the absence of such industries within the region discourages individual producers from undertaking this activity. Horticulture also needs to be integrated with agriculture in Haryana where its area is very small (less than 10 per cent) but increasing due to the efforts of the State government. Since the Forests and Agriculture have much common characteristics, both of them should be

developed in an integrated way in the form of farm forestry and agro-forestry under which crop productivity and fertility of soil and environment improve. The two sectors are ecologically and economically irreparable. In Haryana, the government should encourage traditional as well as modern agro forestry techniques such as agri-silviculture (Taungya system); farm agricultural crops; silvipastural combined tree, shrub and animal production; home-garden systems (agri-silvipasture); and alley cropping etc.

In brief, Haryana should prepare itself to exploit the opportunities provided by Agro-Forestry by solving the issues involved in it through NGOs and more inputs from science and technology.

5.4.5 Agro-based Industries

In generating new employment opportunities the role for labour-intensive sectors has been adequately emphasised in the Tenth Plan. Agriculture and Allied activities hold substantial potential for employment generation. Horticulture, farm management programmes, agri-clinics and seed production etc. are other potential areas for employment generation.

Haryana is one of the largest contributors of food grains out of total production of 13.069 million metric tonnes. Haryana is endowed with varied agro-climatic conditions ranging from scanty rainfall areas with sandy soil to high rainfall areas with loamy to heavy soils. Due to this, all horticultural crops can be grown suiting the agro-climatic conditions of the region. The area under fruit and vegetable cultivation has grown to 66,825 hectares. The agro-based industries in the State can derive maximum benefits by processing horticultural products being in close proximity to the city of Delhi, which is a big market for perishable commodities and also the main terminal for supply of goods to domestic as well as export markets. Haryana has a big potential for the exports of agro-based industrial products and the government should take initiatives in exploiting its close proximity with Delhi.

Having varied agro-climatic conditions and strategic location near NCR, Haryana can be one of the most competitive centres of agro-based industries in the country. Floriculture, mushroom, herbal medicines, cereal based industry, cotton based industry and forest produce based industries etc. may be easily developed in the State provided imaginative policy-initiatives related with finance, energy, marketing and market-oriented institutions are taken by the government in the State. Better infrastructure facilities and collaborations with foreign firms must be encouraged by the State. In addition to this, weather-based support systems for enhanced production and improvement in agro-met advisory services, agro-eco-zone specific diversification of agriculture and hi-tech production systems, enhancing of fertiliser, water monetary and non-monetary means should also be encouraged and provided by the State.

Above all this, the government should ensure appropriate increase in public and private investment in agriculture.

The investments in rural infrastructure that supports agricultural and allied activities must be enhanced. Government should also encourage the development and dissemination of agricultural technologies to the farmers in the State. The research in agriculture with emphasis on bio-technology should be strengthened, and new institutions needed for agricultural development to enhance its competitiveness may be created by the government in the State.

5.5 Rural Infrastructure

To any growing economy, the availability of infrastructure is very important. The provision of such facility attracts investments in the sectors such as industry, business and the services. More and more investments in these sectors help in bringing the development in the economy. The growth in the economy largely depends on these factors. India, since its independence, is trying to achieve adequate level of infrastructure through the Five Year Plans. Different Plans were targeted to achieve the desired level of infrastructure in specific area. Recently, the Government of India has initiated a major step through the 'Bharat Nirman' programme, for the upgradation of infrastructure, particularly in rural areas.

Amongst the various components of the infrastructure, the roads in the rural areas have assumed great importance. The development of roads in rural areas would not only provide the basic facility to the villagers but also help in reaching the rural India in its true sense. The rural economy which in other sense is agro-economy and the construction of rural roads would provide a major incentive for the development of rural sector, that is, both farm and non-farm sectors. The recent programme of PURA (provision of urban amenities in rural areas) is also an important initiative by the Government of India, in this direction.[1]

1. The President, Dr. Abdul Kalam, has emphasised on the rural infrastructure while delivering his Presentation at the National Workshop on Vision 2020 on November 12-13, 2005, at Indian Institute of Technology, Delhi.

5.5.1 Rural Infrastructure (Rural Roads), an Initiative towards 'Bharat Nirman'

For the upgradation of the basic lifeline of rural areas, that is rural roads, the Government of India has initiated a major time-bound flagship programme for the country. The basic objective of the programme is to explore the latent potential of the country which is hidden in its rural areas. Through this programme it is aimed to provide all weather rural road in every village with a population of 1000 or 500 in hilly and tribal areas, by the end of 2009 financial year. The target of 1.46 lakh kms with a provision of Rs 48 thousand crore is set to achieve by the end of 2009. This would connect about 67 thousand unconnected rural habitants of the country as well as provide farm to market connectivity.

In addition to this, many new initiatives which aimed to achieve highest quality of rural infrastructure connected to this programme of Rural Roads are:

(a) *District Rural Roads Plan*—To give the complete picture of all the roads in rural areas, a complete 'District Rural Roads Plan' has been prepared. In this network, all the village roads, major district roads, State roads, and the national highways have been included. This would help in giving the priority of construction of work as well as the allocation of fund for the maintenance of the roads.

(b) *Road Vision Document*—A document is planned to prepare, which would give perspective plan of rural roads for the coming 20 years. The Indian Road Congress has been assigned to complete this task by the year end.

(c) *Participation of Local Public Representatives*—The local *panchayat* representatives have been involved in PMGSY (Prime Minister Gram Sadak Yojana) of the Government of India. The public representatives from *Panchayats* to Parliament have been consulted for achieving the target of annual proposals, in this regard.

(d) *Rural Road Manual*—With the help of Ministry of Rural Development, three Committees have been constituted to prepare a Rural Roads Manual. The Committee would go in-depth about the construction of rural roads and its various related aspects. All the works related to the construction of rural roads under the PMGSY would be undertaken as per this manual.

(e) *Standard Data Book*—For the standardisation of contracts and the estimation, Standard Data Book on Rural Roads has been prepared.

(f) *Standard Bidding Documents*—For the standardisation of tendering process under the PMGSY a Standard Bidding Document has been prepared.

(g) *Rural Roads-Online management*—For the management of rural roads throughout the country, the online programme for the management of rural roads have been prepared. With the help of special software (C-DAC), the road proposals under the PMGSY and the construction of rural road works, the progress and the monitoring would be done online. The participation and suggestions by any citizens would be welcome through the use of this programme.

(h) *Capacity Building*—The various actors/players such as contractors and the technocrats would be imparted training under this programme.

(i) *New Technology and the Rural Roads*—So far such an important sector of rural roads have been ignored. Under the PMGSY, efforts have been made to use the new technology along with the new methodology and the materials have been persuaded. The non-recyclable wastes (plastic) have also been included in the material to be used for the construction of rural roads.

(j) The quality of rural roads have been given due importance. A three tier quality control system has been planned for quality control and the management. This would ensure the high standard quality of rural roads. A specification hand book of quality control has also been prepared for this purpose.

(k) For the successful management of the programme at the national level, the public-academia partnership has been brought under this concept. The Principal Technical Agency (at the national level) and the State Technical Agency (at the State level) would be working in coordination.

(l) The quality coordinator of PMGSY has been included in the Council of District Rural Road Safety Committee. This would ensure the rural road safety in the rural areas.

(m) Maintenance—The most important is the maintenance of rural roads. Under the PMGSY, the State governments are assigned this task. They have been asked to allocate separate fund in their budget for the provision of maintenance of rural roads in their respective States.

5.5.2 Rural Communication (Telecom)

The second most important component of rural infrastructure is the Rural Telecommunication. After the rural roads, the telecom connectivity forms the most crucial part of the rural connectivity. It connects rural (agro) economy with the rest of the economic development of the country. In this context also, the Government of India has initiated important measures. The telecom constitutes an important part of the effort to upgrade the rural infrastructure. Under this programme of 'Bharat Nirman', the efforts would be to connect about 67 thousand revenue villages spread across the country. Under this programme it would be ensured to provide Village Public Telephone (VPT) to every village by the end of 2007. About 14 thousand remote and far flung villages would be covered by digital satellite phone terminals.

5.5.3 Irrigation

With the limited and scarce irrigation facility, the irrigation potential has not been realised so far. There is enormous potential to be explored in this sector. The wide gap between potential and actual realisation of irrigation is prevailing across the entire rural areas. The 'Bharat Nirman', component of irrigation aimed to focus on the creation of additional 1 crore hectare in the coming four years, that is by the end of 2008-09. Under this programme, about 42 lakh hectare potential areas are planned to be covered through medium and major projects. The Bharat Nirman programme has also targeted to cover about 10 lakh hectare potential irrigation areas through various water development and management projects.

Under the renovation and modernisation of minor irrigation scheme, it is planned to cover additional 10 lakh hectare of potential areas. The unutilised ground water resources would be used for this purpose.

5.5.4 Shelter-Rural Infrastructure (Rural Housing)

The basic requirement of the rural masses is shelter. For the survival of the human beings, housing is most needed. The housing for the poor in rural areas is most crucial. It provides a dignified living standard and ensures the security to the rural masses. To narrow the gap of housing shortage, it is also covered under the Millennium Development Goal of the UNDP. As per the 2001 census, there is housing shortage of about 148 lakh. The gap has been identified and recognised by the 'Bharat Nirman' programme. Under this programme, it is aimed to construct and provide about 60 lakh houses in the coming four years. Such effort would help in reducing the gap and put end to shelterlessness. The Ministry of Rural Development is implementing the rural housing programme 'Indira Awaas Yojana' across the entire country. Under this programme, the cost is shared between Centre and the States in the ratio of 75:25. The priority is also given to the weaker and marginalised section of the society in the rural areas. The District Rural Development Agency (DRDAs) have been assigned to release the fund for the purpose. The importance of such shelter requirement is duly recognised by the many State governments. They have accorded top priority amongst the development programmes. The effective implementa-tion of the programme is monitored by the extensive network of National, State and District level machinery.

5.5.5 Rural Energy (Rural Electrification)

Power (energy) is the most crucial component of the infrastructure in the rural area. The adequate supply of energy attracts investments, which in turn help in the establishments of various industries in the rural areas. For the upgradation of this component of rural infrastructure, the Government of India has introduced 'Rajiv Gandhi Grameen Vidhyuttikaran Yojana' in the fiscal year of 2005. Under this programme it is planned to provide electricity in all the villages and the habitants in the rural areas, in the coming four years. Presently, this progamme is proposed to be implemented under the programme of 'Bharat Nirman'. Under this it is aimed to provide access to electricity to all rural households in the country. Under the programme it is proposed to establish distribution infrastructure called 'Rural Electricity Distribution Backbone (REDB). The basic objective of the programme is to provide Village Electrification Infrastructure with at least a distribution transformer in a village or hamlet. And where the grid supply is not feasible, standalone grids with generation capacity would be provided.

The provision of such (energy) rural infrastructure would help in farm as well as non-farm activities in the rural areas. It would also help in the activities of irrigation pumpsets, small and medium industries, *khadi* and village industries, cold chains, health care and the education facilities. This facility assumed great importance in the overall development in the rural areas, which in turn would provide employment generation and would also help in rural poverty reduction—one of the major Millennium Development Goal of the UNDP. The Rural Electrification

Corporation Limited (REC) has been assigned the primary responsibility of the implementation of the scheme in the rural areas.

5.5.6 Rural Infrastructure in Haryana

Similar to measures adopted by the Government of India for the development of rural infrastructure in the country, the Government of Haryana has also initiated many developmental programmes and the schemes related to the Rural Infrastructure in the State. Moreover, in Haryana, it is most required to develop the rural infrastructure for the overall development of the State, whose economy is dependent on the rural sector to the large extent. The Green and the White Revolutions in the State had changed the economy in the past. In the modern era of globalisation and liberalisation, it becomes the need of the hour for the State to go for development of rural infrastructure. Accordingly, the Government of Haryana has implemented many schemes and programmes in this regard. Some of the important development measures are discussed in the following section.

5.5.7 Rural Energy (Bio-Gas Plants)

For the provision of clean and unpolluted energy to the rural masses, the programme of biogas plant has been introduced in the State. The programme was initiated with the two folds objectives. One was to provide energy for the domestic purposes and the second important objective was to generate enriched manure for the use in the agricultural activities. This would be used as supplement to the chemical fertilisers, increasingly used for the crop production. In the last two years, about 2770 biogas plants have been installed in the State.

Rural Power (Energy)

The use of electricity as a source of energy for various development activities in the State is quite common and has become very important. In last few years the role of electricity has assumed great importance in all the sectors of development of agriculture, industrial, business and the domestic. The State of Haryana doesn't have the potential for the generation of hydro energy. Due to non-availability of coal mines in the State, and insufficient wind power the generation of energy through these sources is also not possible. In the circumstances of limited generation capacity and the increasing demand the State has to depend on the power share from the Central Generation Projects which is based on the formula evolved by the Government of India. To keep pace with the increasing demand for power, there is need to enhance power availability in the State. In this regard, the State government has taken various short term and long term measures. In addition to enhancing the availability, it has also initiated other measures for the improvement in operational efficiency. The State has also undertaken reform in the power sector, which has increased the power generation capacity of the State. With increased power availability, it would be possible for the State to meet the increased demand of all the consumers in the State.

5.5.8 Renewable Energy

The State has also implemented various programmes and policies for the exploration of energy through non-conventional and renewable sources. There are many programmes and schemes related to solar energy, biogas, micro hydel and biomass, the State has initiated measures to explore the energy through these sources.

In the State of Haryana about 38 clusters of villages in 19 districts are proposed to get benefited under the scheme of Integrated Rural Energy Programme (IREP). The basic objective of the scheme is to provide efficient system of energy, like solar cookers, solar lanterns, compact fluorescent lamps, home lighting systems, water pumping systems, street lighting systems and energy efficient motors, through incentive schemes to the villagers. The implementation of the IREP would help the rural masses in their cooking, heating and lighting requirements.

For meeting the requirements of farmers in the agriculture sector (irrigation needs), the Government of India has initiated a programme through Ministry of Non-Conventional Energy Sources. The Central Ministry also providing central assistance for water pumping sets. Similarly, the Government of Haryana has also initiated important measures for this purpose.

In the Annual Plan 2005-06, the Central Ministry (Ministry of Non-Conventional Energy Sources) is also providing assistance to the State Nodal Agencies for setting up of renewable Energy Parks in the educational institutes to demonstrate the working of various types of renewable energy based systems to the public, particularly the students to educate them about the clean and environment friendly technologies. Under this programme, about 13 such parks have been set up in the State. With the assistance of Central Ministry, a State level energy park was proposed to be set up. Similarly, the HUDA has also been assigned the responsibility of infrastructure development in the

State. With the help of central financial assistance, it is also proposed to set up two district level energy parks in the State. The HAREDA is also implementing the schemes of solar water heating and solar cookers with the central assistance.

For meeting the hot water requirements in the domestic, industrial and institutional sector, the solar water heating technology is being promoted by creating awareness.

The Central Ministry has also tried to fulfill the requirements of the people living in cities and towns. A new scheme of solar generator, has been launched by the GOI, MNES. The scheme is also supported by the central subsidy to the extent of about 40 per cent. The State government is also requested to provide the matching subsidy. This would enhance the popularity of the programme amongst the people.

5.5.9 Rural Roads

The rural roads are the basic requirement of rural infrastructure for the development of any economy of the country. These are the basic means of communication in the rural areas. The improvement and the upgradation of road network in rural areas, construction of by passes, bridges/culverts etc. are required to be strengthened for the future development of the economy.

For strengthening of the rural road network in the country and the State, in the year 2004-2005, a programme for improvement of roads has been undertaken and proposed to be completed in the scheduled time.

The NABARD has also approved a loan of Rs 21 crore for the project of 'Rural Infrastructure Development Fund (RIDF-VIII). Another project for the improvement of roads in Haryana, under the NABARD scheme has been approved with an amount of Rs 160 crore.

For the improvement of roads under the PMGSY, the Central Government is providing assistance continuously since 2000 onwards. Under the Central Road Fund Scheme, the State of Haryana was provided with Rs 34 crore during 2003-04. In the next financial year an amount of Rs. 53 crore was spent for the roads in the State.

Similarly, for the improvement of State Highways in the State of Haryana, the HUDCO has also sanctioned loans of more than Rs. 350 crore. The execution responsibility of this work was assigned to Haryana State Roads and Bridges Development Corporation Ltd. About 215 kms length of roads has been improved under this scheme.

A well planned and efficient network of transport is an essential component for a developing economy. The Transport Department, Haryana is committed to provide safe, adequate, well co-ordinated, economical, comfortable and efficient transport services to the people of the State.

5.5.10 Rural Infrastructure and the Panchayati Raj Institution

The role of Panchayati Raj system has also assumed significant importance in the rural infrastructure development in the State. The financial and administrative powers assigned to PRIs would ensure social security, equality and social justice for the people in the rural areas.

The active involvement of people through the people's participation has been initiated in the State. The concept of Gram Vikas Samities has been implemented in the States. These bodies are assigned responsibilities of execution of development works in the rural areas.

For the efficient execution of the development works in rural areas, the Haryana Rural Development Fund Administration Board has been constituted in the State.

Another scheme of 'Nirmal Gram Puraskar' has been launched by the GoI for full sanitisation and open-defecation-free *Gram Panchayats* in the State. Under the Restructured Rural Sanitation Scheme the government has provided individual toilets and sanitary complex facilities for the women in the rural areas.

5.5.11 Rural Infrastructure and the Institutional Finance

For any development programme, the provision of finances through the mechanism of institutional finance is very essential. In the State of Haryana, the Government has been persuading to the banking institutions to give importance to the Agricultural and Allied Sector, particularly to poverty alleviation programmes. The Institutional Finances are made available through Commercial Banks, Cooperative Banks and other term lending institutions. This method of finance reduces pressure on the budgetary resources of the State government to great extent.

For the provision of credit facilities to the agricultural credit societies, the Haryana Co-operative Apex Bank is providing financial assistance to these societies. The NABARD provides financial assistance to Apex Bank in the State. At the end of 2004-05 financial year, an assistance amounting to the order of Rs 3312 crore was provided by this Apex Bank in the State.

5.6 Industries—Small, Medium and Large

Haryana State has been able to attract sizeable investment from multinational companies, large business houses, foreign investors, non-resident Indians and small scale entrepreneurs. Haryana is an investor friendly State and offers a rich reservoir of skilled, motivated and relatively low-cost manpower with a good infrastructure and harmonious industrial relations. Having occupied just 1.37 per cent of the country's geographical area and 1.97 per cent of the country's total population, the State claims to have highest per capita income in the country. Haryana currently produces two third of passenger cars, 50 per cent of tractors, 60 per cent of motor cycles and 50 per cent of refrigerators manufactured in the country. About 25 per cent of India's total production of Sanitary-ware is from Haryana. One out of every four bicycles in the country is manufactured here. The number of large and medium units in the State has increased from 162 in 1966 to 1212 today with a capital investment of Rs.225 billion while employing 2 lakhs persons and producing goods worth Rs.12,800 crore.

Haryana has fast developed into an industrial State, where already 200 projects having foreign technical collaboration have been set up and a number of other project proposals have been received from several multinational companies, big Indian industrial houses and leading NRIs. Foreign collaborated projects like Maruti Udyog Limited, Hero Honda, Modi Alcatel, Escorts, Sony India, VXL India, Whirlpool Industries, Wipro Ltd., Perfitti India, DCM, Benetton, TDT Copper Ltd, Asahi India Safety Glass etc. have already been operational in the State. Some major public sector units in the State are HMT Ltd, National Fertiliser Ltd, Indian Drugs and Pharmaceutical Ltd, Bharat Electronics Ltd, IBPL etc. The latest addition to this group is the Rs.4200 crore oil refinery set up by Indian Oil Corporation in Panipat district. New project proposals from multinational companies such as United Development Incorporated Panama, Tecumesh Products, USA, JELD Wen Inc USA, Scholler GMBH (Germany), NHK Springs Co. Japan, Casio Computer, Japan are in pipeline. During the last 6 years, 2962 Industrial Entrepreneur Memoranda have been filed with Government of India for setting up projects in Haryana which would require an investment of Rs. 309 billion and 3.40 lakh persons will get employment.

Small industries in the State have also been growing very fast. Their number has increased from 4500 in 1966 to 80,000 today. Their level of output is worth Rs.4500 crore per annum and they are generating employment for 8.7 lakh persons. 20 per cent of the country's total export of scientific instruments, 60 per cent of the demand of ammunition boxes of the country's defense forces and 62 per cent of the total demand of woollen blankets of the Indian Army are met by small units of Haryana. Small Scale Sector of the State also manufactures the largest number of electrical mixies and gas stoves in the country. Exports from the State have crossed 200 billion mark in the year 2004-05. The dominant export items are software, guargum, pickles, handloom products, scientific instruments, garments, automobiles and automotive components, electrical appliances, rice etc.

5.6.1 Agro-based Industries

Haryana is one of the largest contributors of foodgrains out of total production of 13.069 million metric tonnes. The State also produces about 90 lakh tonnes of sugarcane, 8.74 lakh bales of cotton and 6.53 lakh tonnes of oilseeds. Cash crops are being given much emphasis on diversification grounds. Haryana is blessed with varied agro-climatic conditions ranging from scanty rainfall areas with sandy soils to high rainfall areas with loam to heavy soils. As a result of which all horticultural crops can be grown in the State. The Industries can derive maximum benefits by processing horticultural produce, being in close proximity to the city of Delhi, which is a big market for perishable commodities and also the main terminal for supply of goods to domestic as well as export markets.

5.6.2 Floriculture and Herbal Medicines

Many floriculture firms have entered into collaborations with foreign companies. Some projects have already started production and export. The climate of Haryana is suitable for growing a number of flower crops namely marigold, roses, tube-roses, gladioli, coronation, etc. The flowers of these crops are needed for homely consumption and export. The Haryana Agricultural University has developed several crops like *isabgol, mulahatti, sadabahar, mentha* and lemon grass etc. which can be successfully cultivated in Haryana. Some other possible investment areas in agro-industry include guar products, bakery products, mustard powder, high protein flour from cotton seeds, fruit concentrates, weaning food, cattle feed, chilli oleoresin, dialdehyde starch, dehydrated potato chips. Tomato ketchup and vegetable sauce, menthol, sunflower oil, sugarcane wax, building boards, edible and non-edible rice bran oil, rice bran stabiliser, amylose, amyloglucosidase, glucosidase,

pectionilytic enzymes, poultry feed, furfural enzyme, fungal acid protease, lactic acid, oxalic acid, etc. The Government should take initiatives to boost its own and private sector investment in these areas.

Cereal, Cotton and Rice Based Industry

Haryana is a leading cereal, cotton and rice producing State contributing 25 per cent of the national production. There are 73 spinning mills and 2 composite mills in the State. Haryana is exporting good quality of rice. Efforts can be made to increase rice milling capacity.

5.6.3 Automobile Industry

The State of Haryana is producing 60 per cent of the tractors, 75 per cent of cars and 70 per cent of motor cycles. Haryana's automobile industry is manufacturing a wide range of vehicles and original equipments. Out of major automobile companies in India manufacturing passenger cars, trucks, buses, tractors, 2-3 wheelers, 8 are located in Haryana and out of 250 large and medium units manufacturing original equipment, about 50 are located in Haryana. Further, there are more than 3000 units in small scale sector which are manufacturing automobile components.

5.6.4 Electronic and Information Technology

The existing electronics industry in the State is manufacturing products covering almost the whole spectrum namely components, consumer electronics, communications, computers and control instrumentation. The Electronic Industry in the country is growing very fast in Haryana because the State is an ideal location to invest because of excellent infrastructure and also proximity to Delhi and international airport. A Precision Mechanical Design and Facility Centre has been established by Haryana State Electronics Development Corporation with UNDP assistance of US$ 2 million at Gurgaon. The project is of institutional building nature and aims at providing mechanical design and tooling facility for electronics industry.

5.6.5 Scientific Instruments, Consumer Goods and Medical Equipments

Due to proximity to Delhi, Haryana has always been a natural choice for locating the consumer goods industries in this part of the country. Production of domestic electro-mechanic appliances, consumer electronic items, high-class leather and handloom, products and cosmetics can be fruitfully initiated from Haryana. Ambala district is known world over for its scientific instruments industry.

5.6.6 Vision 2012

The development of industrial infrastructure is a must to facilitate economic development. The government should follow an integrated approach to develop industrial infrastructure thereby ensuring private participation in this area. The main focus should be on developing the industrial estates in the State of Haryana. To achieve this aim HSIDC should be given the prime role to identify the potential sites for industrial hubs and make all possible efforts to convert that site into an industrial estate. Manesar model township has been a very good example where HSIDC played a leading role. More such industrial towns should be developed in future to meet out the projected industrial growth rate in Haryana. To give boost to private sector investment in industrial sector special economic zones should be formulated. It will help the State to encourage foreign direct investment in these SEZs. Haryana has an edge to set up industrial parks in Panipat and Gurgaon. It should be set up with all civic facilities so that downstream industries can develop in such an area.

Haryana, being an agriculture based State, should concentrate upon agro-based industries. To encourage private sector investment in these industries, government has already identified four sites to set up food parks. More such efforts are required to develop agro and food processing industries in the State. On the same lines, gems and jewellery parks, apparel parks and leather parks should be developed in the areas having better cost and labour conditions. Again HSIDC should be given the task to identify such areas in Haryana.

Power has always been a key factor in industrial development. Although State government has promised to add 3000 mw power generation capacity during Tenth and Eleventh Five Year Plans, yet it does not seem adequate, keeping in view the projected growth rates. To ensure sustainable power supply to the industrial sector, the State should enter into power supply contracts with surplus States besides establishing its own stations. The plant load factor should also be increased through renovation and modernisation of existing power stations. In the industrial parks, SEZs and other industrial estates, private sector should be given a free hand in the generation and supply of electricity. Alongwith power, transport infrastructure should be developed to support the industrial growth in the State.

Surface transport should be given high priority and more expressways should be developed along the lines of Kundli-Manesar-Palwal expressway.

The State government should strengthen the institutional mechanism to promote investment in the industrial sector. To identify sectors for domestic and foreign investment and to promote investment activities in industries an Investment Promotion Board should be set up. This board will work as a nodal agency to guide the government in investment activities besides recommending and appraising various potential industrial projects in the State. To win over the confidence of the private sector, some nominees of this sector should also be on the board and a joint task force type entity should be built.

In the present WTO regime, small and medium industries are more prone to risk. To encourage SME sector the State government should come up with some schemes. It may be the setting up of small and medium industries renewal fund or the setting up of competitiveness center to guide and help this sector in modernisation so as to reap the benefits of the free trade regime. So far cluster development activities of the State have been quite satisfactory and it should continue with it. Due to financial constraints, small and medium sector has been facing problems in product development and promotion activities. State government should take care of this fact and help this sector by providing cheap loans for these activities so that they can compete at the global level. To diversify the economic activity in rural areas and to reduce the pressure on the mainland, rural industrialisation should be taken up in the State. *Khadi* and village industries board can play a key role in this regard. Proper incentive mechanism should be there for those who set up or shift industries in rural or backward areas.

5.7 Tertiary Sector

The performance of tertiary sector in Haryana during the Tenth Plan period has been more than satisfactory. Only seven States have the targeted service sector growth rates higher than Haryana during the Tenth Plan. These States/UTs are Goa, Delhi, West Bengal, Arunachal Pradesh, Karnataka, Sikkim and Chandigarh. On the basis of the assumption that per capita income at constant prices shall be increased at a rate of 7 per cent per annum in Haryana during the years 2006-07 to 2011-12, we have estimated the targeted growth rate of tertiary sector which varies from 12.24 per cent to 12.52 per cent which incidentally happens to be nearest approximation of number one State of Goa in the Tenth Plan document. The share of tertiary sector in State Domestic Product will reach upto 49.34 per cent by the year 2011-12. Here the million dollar question can be raised. Is it desirable to have consistently increasing share of tertiary sector in the State Domestic Product and secondly what is the relationship between sectoral growth and overall growth rate in an economy. In order to answer the first question, let us first discuss the relationship between the sectoral growth and the overall growth in the economy. Koldor (1967) writes "Fast rates of growth are almost invariably associated with the fast rate of growth of the secondary sector, mainly manufacturers." Many other studies also conclude that industrial sector is the engine of growth and that the manufacturing sector plays the key role in the process of economic development.

The studies in case of developing as well as developed countries have indicated that there exists a strong correlation between the industrial growth and the overall growth rates. The same results we get in case of services sector. This means that Kaldor hypothesis may not be applicable in case of developing countries. And the trend of rising share of tertiary sector appears to be good for the economy, but if we think in terms of productivity growth rates and the overall growth, the literature suggest that there exists strong positive relationship between productivity growth in the manufacturing sector and the overall growth in the economy. The famous Verdoorm's Law establishes a positive relationship between overall growth and productivity growth in the manufacturing sector. The empirical studies undertaken at various times tend to support this law particularly in the industrial sector—productivity growth in developing countries can also be associated with the output growth. The law does not hold well for non-industrial sectors even in developing countries.

Therefore, in order to justify the increasing share of tertiary sector in Haryana's economy one has to analyse the productivity growth in this sector. Although no empirical studies have been undertaken yet, on the basis of observations regarding the salaries and output growth in the tertiary sector it can be suggested that the increasing share of tertiary sector in the economy should be viewed cautiously and Government of Haryana should take policy initiatives in raising the productivity growth in the manufacturing sector. In absence of highly productive manufacturing sector, growth of tertiary sector in the economy appears to be a bubble which can vanish at any time. It is also

suggested that Government of Haryana should take positive steps in raising the productivity growth in the tertiary sector of the economy.

5.8 Science and Technology and Environment

For the socio-economic development of any country, the role of science and technology (S&T) is very important. In India, since Independence, the development of S&T in the country has been recognised and assumed great importance. Since then the efforts were made to go for S&T in a major way with full support. The results achieved were quite encouraging. In the beginning, it had a very narrow base but as of now it has developed its S&T infrastructure in big way. Many laboratories, research and development (R&D) institutions have been developed covering wide range of activities. Over the years, the country has achieved growth in many high technology areas, such as nuclear and space science, electronics and defence. The efforts have also been made to develop new areas of S&T, such as microelectronics, informatics/telematics, biotechnology, renewable energy sources, non-conventional energy sources, ocean sciences and many other areas of basic research in S&T. Though the country has achieved substantial growth in S&T, there is still a lot more to be done. The future research in S&T should work on the areas of alternative strategies for utilisation of infrastructure and technical manpower generated during last many years. The country should do more efforts to help India, become a global technical power. The development in the S&T should also influence the growth in agriculture, industry and the infrastructure and the services. The overall development in these sectors would enhance the income of the country which in turn will make the economy more competitive across the world.

The new development of the S&T sector must focus on the requirements and challenges of the other sectors such as economic, industrial, trade etc. The new development should not only benefit the richer class but also benefit the poorest/weakest sections of the society. The S&T research and development done in the earlier period were focused more on the areas of interest to the limited section of the society. Now the challenges have to meet the benefits of the large section of the society, which is none other than the rural masses. At the same time the interest of the urban people also need to be take care of.

India has a treasure of knowledge of traditional science. Its contribution has been recognised in variety of disciplines of science in the past history. Now this knowledge has to be transmitted to the younger generation of the country. This would ensure the creativity and excellence amongst the youth and the future of the country. It should also contribute to the future discoveries and inventions, useful for the humankind across the world.

Till recent past the country was facing the challenges in many areas related to the daily life and its requirements. The growing population in the country poses many challenges regarding the food availability (food security), economic growth and the social problems of basic education/literacy and the health. These mounting economic and social problems have affected the growth of the economy, adversely. The research and development in S&T should be aimed in such a way that it should help in meeting these challenges. Keeping these challenges in view, the research programmes should be re-oriented and re-structured in this direction. Therefore, there is need to sensitise the policy makers in the government about the importance of S&T in the overall development of the country. For the encouragement of research and development in S&T, there is need to have a very conducive atmosphere for such research and development. The exceptional and capable scientists should be encouraged and the full support should be extended within the country comparable to international standards. This can be done by creating more and more centres/institutions of excellence in the area of S&T. These centres would provide places of higher learning in S&T and would produce and supply S&T manpower for the future requirements in the country. Since the research and development in S&T is a continuous process, therefore, the existing infrastructure facilities and the scientists of high calibre could be utilised for the future planning and development programmes in science and technology. Over the years it has been felt that hierarchical bureaucracy in S&T should be minimised. More and more professionalism should be brought in the S&T research and development.

For effective implementation of planning and development programmes in S&T there is need to introduce the decentralisation of decision making powers and accountability of decision makers and the administrators. The evaluation of targets and the achievements also need to be introduced. For the development of science as such the role of administrators and the government officials should be minimised as facilitators of science and technology. The main task of the administrators is to ensure the smooth functioning,

management, promotion and development of the science and technology institutions.

Another aspect the science and technology is the marketing of the S&T infrastructure. The linkages should be established between industry and the research institutions and the laboratories. The Private participation may also be encouraged so that the private investor can also join in setting up of new institutions of S&T research and development. The selection of the new institutions should be done carefully to avoid any duplication. There should be enough freedom and flexibility in working of the newly set-up research and development centres. The basic objective of these institutions is to encourage and strengthen the exchange of ideas and the more and more interactions amongst the research and development institutions of S&T and the final users of the research products.

The standard of these institutions should be very high and able to meet the global competitions and the domestic needs. They should be able to draw the attention of private financial institutions and the industry to get financial support from them.

These new R&D institutions should concentrate and develop the competitive strength in such a way that they should be able to convert technological capabilities into commercial strengths.

The new institutions should select the key areas of research and development of S&T where the competitive strength can be developed and the final research product can be marketed through commercial strength.

Keeping these requirements in view, there is need to develop the long term policy in this context. Each government department should prepare the long term S&T profile keeping in view the aims and the objectives of the *Technology Vision 2020 Document*.[2]

The basic objective of these profiles is to integrate their plans with efficiency and productivity of the concerned departments. These are also aimed to bring the improvement in the existing infrastructure. Such measures as adopted would help in enhancing the economic growth and social benefits to the society at large. Therefore, for the wide societal benefits, the interaction between the S&T system and the various ministries/departments needs to be strengthened. For the achievement of these objectives, it is essential that each department should earmark separate budget for the research and development programmes in S&T. The technology should ensure that there should be greater emphasis on eco-friendly technology with zero toxicity and zero environmental impact for sustainable development.[3]

The new technology must ensure clean and healthy environment. The pollutants generated by one industry can be used as the input for the other industry. The establishment of such arrangement would helps in development of industrial pollution free atmosphere.

Another important issue is to develop conducive atmosphere of R&D in the educational institutions for the development of creative skills and innovative capabilities amongst the young generation of the society. The emphasis should be on the issues of management techniques, technology marketing and the intellectual property rights. The efforts should be made to generate maximum resources for R&D from the sectors such as production and the services. These efforts can be linked to the incentives.

Qualitative growth in the S&T is the most important factor. The scientific and the technical education should be oriented towards developing creative skills and innovative capabilities. This would help in creating a conducive environment for developing the R&D in educational institutions. The emphasis should be on capacity building and training of scientists in modern management techniques. The issues related to the technology marketing and intellectual property rights that should also form part of the training programmes. The industries should be encouraged for R&D in the creativity, in the productivity and the quality. This would help in engaging the human resources (irrespective of the skills) available in the industry effectively.

The research and development in S&T should assign greater responsibilities to its manpower for the development of energy efficient and environment-friendly processes.

The automation and artificial intelligence along with the fiscal and material resources can be used to achieve the desired objectives.

For the exchange of ideas and in-depth interaction amongst the S&T personnel, the mobility amongst various R&D organisations, academic institutions and industries needs to be encouraged. The appropriate

2. The Technology Vision 2020 Document is prepared by the Technology Information Forecasting and Assessment Council (TIFAC).
3. This was done in consonance with the principles of Agenda-21, adopted by member countries at the United Nations Conference on Environment and Development (UNCED), held in Rio de Janerio in June, 1992

incentives for careers in scientific and technological research should also be provided to draw the attention of young scientists.

5.8.1 State and Union Territories Participation and the Science and Technology Activities

To take the locational advantage, the R&D programmes in S&T in the States and UTs should be encouraged to carry out the location specific R&D programme for providing the S&T inputs in the key sectors of socio-economic development by increasing the demands from States and the UTs. The joint innovative programmes with the industries and the NGOs should also be encouraged.

For the effective implementation of the programmes, the institutional framework needs to be reformed. It was suggested that a three tier national apex level S&T mechanism comprising of Cabinet Committee on S&T, Science Advisory Committee to the Cabinet and the Committee of Secretaries for S&T can be used for the development of R&D in S&T.

In addition to the efforts made by the government in the promotion of R&D programmes in S&T infrastructure, the incentive efforts should be made to generate maximum resources for the sectors such as production and the services.

5.8.2 Prioritisation of S&T Research and Development

The S&T areas of national and international interests should receive highest priority. The departments such as Atomic Energy, Biotechnology, Agriculture and the related products need to be at the top priority. There is need to have huge investment in the R&D in these sectors.

5.8.3 WTO and the S&T

In the era of globalisation and the competitive economy, the research and development programmes in S&T have greater responsibilities. India's capability in building nuclear reactors, communication and remote sensing satellites and guided missiles, just to mention a few, has been clearly demonstrated. In the wake of recent developments and the new demands that are being placed on the S&T system, it is charged with significantly new responsibilities and has a major role to play in the country's development.

5.8.4 Science and Technology-Education and Research

Starting from the early 1970s, there has been a significant increase in the government support for science and technology. India today has a wide base of infrastructure for R&D. There are 200 universities, about 400 national laboratories and 1300 in-house R&D units of industries. As a result of this and other endowments, India has become internationally competitive in a number of areas. This progress must be maintained and improved upon through appropriate training of manpower in the emerging technologies with infrastructural development as the basic input and earmarking of funds for higher education by the scientific departments in the form of direct support to identified centres in the universities.

The academic community should gradually motivate the faculty to do research by giving them a sense of empowerment and autonomy of functioning within the university system.

A major problem today is to find ways and means to attract the most talented youngsters to basic science at a young age. For this obviously, both the image of a career in science and the available educational opportunities must be attractive enough as compared to other more lucrative options. This calls for a multi-pronged approach like revival of the National Science Talent (NST) Scheme.

The industry can also play an active role in the process of promoting S&T education and basic research. There are some good quality research centres run by the industry in some areas like pharmaceuticals.

A number of mission mode programmes can be formulated, based on Technology Vision 2020 programme, with inputs from a wide cross-section of economic ministries and in line with the criteria laid down for prioritisation. The first is the Missions of Technological Significance in the areas such as energy, lasers, optics, drugs etc. The second is the Missions of Societal Significance. These can be in the areas of female health care, medical systems, AIDS education, transport systems etc.

5.8.5 Science and Technology and the Social Development

Efforts should be made for the development and application of appropriate technology packages for rural areas with active participation of voluntary agencies; development of rural enterprises through science and technology intervention and complementary development of rural infrastructure through application of science and technology.

In formulating such a strategy, the first consideration is the unit of operations at the grass root level. As the village or a *Panchayat* is too small to

undertake a project, the Block has emerged as a viable and stable administrative unit catering to the development needs of about 1,00,000 people. Originally, the development emphasis in a Block was on the welfare and on the provision of minimum social infrastructure. At the second stage, the focus shifted to area development. At present, the concern is towards poverty alleviation. Since the S&T inputs so far in all these stages have been only marginal, in the next stage, the focus must be on technology.

Voluntary organisations, which have a strong science and technology base and high level of professionalism, have to play a very important role in implementing development projects with S&T inputs.

Special emphasis will be given to the promotion of research and development and adaptation of technologies for improving the life, working conditions and opportunities for gainful employment of women, especially in the rural areas.

One of the challenges before the S&T establishments is to build the local capability to identify local priorities, plan for solutions and participate as partners. In this, the voluntary organisations, which have a strong science and technology base and high level of professionalism, have to play a very important role in implementing development projects with S&T inputs. Their role would be to help local Governments/*Panchayats* in ensuring S&T inputs in the development plans being finalised by the District Planning Committees. As the number of such voluntary organisations is very limited at present, there is a need to have more such S&T field groups. The necessary technical backup for the development activity can be ensured by formulating collaborative programmes with the involvement of S&T institutions, working scientists, technologists and the State S&T Councils.

Another aspect that should be taken care of, under S&T application for societal development, is the improvement of traditional technologies which have the potential of employment generation and upgradation of the quality of life of the common man. Special emphasis will be given to the promotion of research and development and adaptation of technologies for improving the life, working conditions and opportunities for gainful employment of women, especially in the rural areas. Efforts should be made to have a complete documentation of traditional knowledge, specially in the areas like health care, medicinal plants, nutrition, agriculture, water harvesting, building technologies, metallurgical practices, non-farm occupations, etc. Regional centres for promoting research and documentation in traditional sciences and technologies may be set up in the existing institutions around eminent experts/scientists to study documentation, validation, upgradation and diffusion of traditional knowledge.

5.8.6 Science and Technology in the States and Union Territories

The State level S&T machinery has to take the role of a major 'prime mover', while the Centre can play a catalytic and advisory role in encouraging this initiative.

The focus should be on programmatic support through strengthening the linkages/interaction between the State S&T Councils and the Central S&T agencies by suitably dovetailing each other's programmes.

The State governments should be activated much more to bring about a rapid socio-economic development through the application of science and technology through strengthening the linkages/ interaction between the State S&T Councils and the Central S&T agencies by suitably dovetailing each other's programmes.

5.8.7 S&T and Employment

When one is concerned with aspects such as technological innovations, implementation of newly developed technologies and finding solutions to problems of modernising and developing a society, especially in the context of the process of liberalisation, the S&T manpower assumes a special significance and will be required in considerable strength—supply of S&T personnel in general and of those in the specialised areas, in particular, especially an assessment of training requirements. The aspects that need consideration in such an estimation process pertain to the out turn and stock of S&T personnel and their training needs.

5.8.8 Environment and Forest

For a healthy life there is need to have healthy environment. The essential constituents for the healthy sustainable environment are clean air, pure water, and conservation of forests and wild life and generations of adequate greenery. The provision of these basics is compulsory. In addition, it should also be ensured that there is prevention of degradation of land, control of floods and droughts, prevention desertification, conservation of fragile eco-system, prevention of deforestation, conserviation bio-diversity and mitigation of water and air pollution. These are the challenges for the policy makers, which have been recognised in the past as well as in the present.

For the balanced and sustainable economic development Tenth Five Year Plan had set the targets for the environment and forest sector. These are: increase in forest and tree cover to 25 per cent by 2007 and 33 per cent by 2012 as against the baseline cover of 23.03 per cent in 2001. Cleaning of major polluted rivers by 2007 and other notified stretches by 2012.[4] It is unfortunate that despite afforestation programmes (1.1 million hectares covered under the programme) the total covered area remained inadequate.

Due to limited resources available for this sector, the air and water quality monitoring programme are implemented in limited number of towns. This has also affected the air quality, which remained below the normal standard.

Of the total tenth plan outlay allocated for programmes related to environmental concerns, forestry development, wild life protection, river and lake conservation and animal welfare, 20.19 per cent was earmarked for the environment sector, 35.32 per cent for forestry and eco-development, 13.45 per cent for wildlife protection and 28.09 per cent for river and lake conservation, and 2.94 per cent for animal welfare

5.8.9 Healthy Environment and the Quality of Air and Water

As per the Central Pollution Control Board, the sanitation status reports on Class-I and II towns found that only 38 per cent of the sewage water is treated while the remaining is discharged without any treatment. The increasing urban population on the bank of rivers makes the task more difficult. Additional resources are needed to cover all the remaining areas. The CPCB also prepares action plans for pollution control, which is implemented by the State Pollution Control Boards (SPCBs).

For streamlining the management of bio-medical waste, the GoI has introduced the Bio-medical Waste (Management and Handling) Rules, 1998, which were amended in 2003, has to be implemented effectively.

To create the awareness amongst the youngsters, there is strong need to expand the environmental education awareness programme throughout the country. The eco-club concept should be popularised in the schools and the colleges.

5.8.10 Environment—Training and Education

To impart education and training, a scheme of Centre for Excellence in Environment was started in the 80s. In order to strengthen awareness, research and training in the priority areas of environmental science and management, the scheme was further strengthened. Accordingly, more number of these centres were started in many cities and supported by Ministry of Environment and Forests to the large extent.

5.8.11 Environment and Hazardous Industrial Waste

According to Hazardous Wastes (Management and Handling) Rules, 1989/2000 and 2003, all hazardous wastes are required to be treated and disposed off in the manner prescribed. Maharashtra, Gujarat and Tamil Nadu account for over 63 per cent of the total hazardous wastes generated in the country. There is an urgent need to provide the solution to this problem. As per one of the objectives of the Tenth Plan it was decided to set up 15 common TSDFs (Treatment, Storage and Disposal Facilities) in the Tenth Plan period for the safe management of industrial hazardous waste. Five TSDFs have already been commissioned and are working satisfactorily. Four more are in an advanced stage of commissioning in West Bengal, Karnataka, Haryana and Punjab.

5.8.12 Environment and the Public Private Partnership

The State government must ensure efficient operation and maintenance of such assets to make them effective. Public Private Partnership (PPP) efforts could be considered to bring improvements in the scheme. While the government will make the investment in creating assets, the responsibility for operation and maintenance could be entrusted to private agencies. The necessary revenue could either be generated with appropriate user charges levied on the households in the command area or leasing out vacant land for conversion into public park. Improving the finances of the urban local bodies (ULBs) through collection of appropriate user charges and other measures is essential for the sustainability of the programme. This may call for greater coordination between the municipal bodies and the environmental departments of the State government. The Ministry of Environment and Forests should coordinate with Ministry of Urban Development and a proper policy framework should be put in place. It may be necessary to link the Central assistance to a reform platform meant for improving urban governance.

4. See Tenth Five Year Plan Document Volume I and II (2002-2007)

5.8.13 Forest and Environment and Panchayats

The combined outlay of the Centre and States in forestry and wildlife for the Tenth Plan is Rs.14,344.34 crore. These resources need to be judiciously used to maximise increase in forest and tree cover. Programmes are initiated to launch a national mission on Bamboo Technology and Trade Development, a national mission on Bio-diesel and introduction of community forest development by Panchayati Raj Institutions. Problems of gregarious flowering of Muli Bamboo will be addressed and peoples' involvement ensured for greening areas and rationalising forest laws. Urban development Planning has to have inbuilt greening programme and forest development plan will be integrated with tribal development projects for ensuring development of fringe villages.

5.8.14 Joint Forest Management (JFM)

Joint Forest Management (JFM) strategy for management of forests with participation of communities was started in 1990. It involves empowering communities to plan and implement forest protection and conservation programmes. Sharing of benefits is the basis of participation, and mechanisms differ from State to State. Participation of women and poorer sections of society has to be ensured. Andhra Pradesh, Madhya Pradesh and Chhattisgarh have been able to demonstrate benefits of sharing forest resources through empowerment of communities. Joint Forest Management (JFM) is one of the thrust areas of the Tenth Plan and communities in all the 1.73 lakh villages situated near forests were to be involved in managing them. Twenty-eight states have adopted JFM so far. Till January 2004, 17.33 million hectare forest area had been brought under 84,632 JFM committees.

5.8.15 Non-Timber Forest Produce (NTFP) Including Medicinal Plants

Non-timber forest produce (NTFP) has emerged as a potentially significant source of income of the tribal people. Under the 73rd Amendment of the Constitution, NTFP has been allocated to the PRIs. Sustainable management of this resource, with the development of value addition chains, will improve the income of the PRIs as well as that of the primary collectors. Medicinal plants constitute an important component of NTFP. Use of medicinal value of wild plants caters to the rural health needs of most of the forest dwellers. While the Department of AYUSH in the Ministry of Health and Family Welfare deals with the cultivation and propagation of medicinal plants in modern medicines, conservation of wild resources for ensuring availability of seed stock/mother tissues for nurseries and harvesting of available wild material on a sustainable basis should be the primary concern of forest management.

5.9 Human Resource Development

An economy's human resources are a vital component in stimulating rapid economic growth. Human resources are of critical importance in bringing about structural and technological transformation required for industrialisation and agricultural development and raising per capita incomes rapidly. People, not machines, make the crucial decisions that result in improved allocation of resources and implementation of new technology.

Investment in health and education, empowerment of weaker sections including women and ensuring their fullest gainful employment in the development process are the core elements in human resource development strategy. From this point of view, the State of Haryana recognises the importance of strengthening social welfare but, more significantly, as an essential ingredient of human approach to the development process.

5.9.1 Health and Nutrition

The State of Haryana is committed to provide quality health services to its people. Improvement in the health status of the population has been one of the major thrust areas in social development programmes of the State. It is the endeavour of the State government to achieve success in this regard through improving access to, and utilisation of health, family welfare and nutrition services with special focus on weaker sections of the population. Merely establishing a network of even fully equipped hospitals, dispensaries, primary health centres and family welfare centres etc. is not sufficient for improving health conditions in the State. It is equally important that doctors, nurses and the technical and administrative staff responsible for operating this network are competent, dedicated and sensitive to the sufferings and pains of patients under their care. This is an important area for necessary, rather radical, policy action. Also in resource allocation a much greater priority needs to be given to health, which has been denied to it so far.

In Haryana, expenditure on health, as a percentage of total public expenditure, is almost the lowest among States of India. The only other State lagging behind Haryana is Sikkim. This distortion in resource allocation needs to be corrected. It may be regarded

largely responsible for Haryana's moderate performance on the health front. The infant mortality rate continues to be too high as compared to most other States. Overtime, life expectancy at birth has improved but at its present level it is still low relatively to States like Kerala, Punjab and Maharashtra. As regards bringing down the population growth rate, the State has yet to achieve a real success. Total fertility rate is high and needs to be brought down from around three per cent level (1998) to about two per cent level by 2007. Sadly, Haryana is one of the few States in India whose decennial growth rate of population has undergone almost no change over the last three decades. This problem is the source of many other acute socio-economic problems. It requires an in-depth analysis to identify its socio-economic causes for a meaningful, effective policy action. A related matter of still more serious concern is the State's falling sex ratio. Haryana's sex ratio is the lowest among Indian States. It is a reflection not only on the mindset of parents but also, to some extent, on the adequacy and functioning of family welfare services and the State of population, education, and more seriously, the use of pre-natal diagnostic facilities in the State.

There are a number of programmes and schemes going on in the State for improving the health status of the people. The Revised National Tuberculosis Control Programme (RNTCP) has been implemented in the State to control the problem of tuberculosis. The entire population of the State is covered under this programme which includes a network of more than 5000 Directly Observed Treatment (DOT) Centres, 204 Microscope Centres, and 45 TB Units. The State of Haryana has made a national record for the fastest expansion of DOT centres, and has been appreciated by the World Health Organisation in this regard.

Efficient and effective implementation of the pulse polio programme is another area in which the State has performed well. Similarly, vigorous campaign on school health programme is also being carried out in the State. The reproductive and child health programme (Phase-II) has been implemented since April 2005 to provide 24 hours delivery services and emergency obstetric care, and child-care related other services.

The centrally sponsored Integrated Child Development Services (ICDS) scheme has been functioning well in the State. It is an early childhood programme which provides a package of services such as supplementary nutrition, immunisation, health check up, referral services and nutrition and health education under ICDS, a vast network of Anganwari Centres provides supplementary nutrition to a large number of children (6 months to 6 years of age), and pregnant and nursing mothers. Recently, two new schemes, namely "Improving Infant and Young Child Feeding" and "Best Mother Awards" have been started to eradicate mal-nutrition among children. National Programme for Nutritional Support to Primary Education, a centrally sponsored mid-day meal scheme, launched in the State from 15th August 2004, is another effort in the direction of eradication of malnutrition among young children going to primary classes (I to V) in government, local bodies and private-aided schools in the State.

5.9.2 Education

The system of education has a determining influence on the rate at which economic progress is achieved and the benefits can be derived from it. Education develops critical faculties of the people and thereby enables them to properly comprehend the various aspects of the socio-political and economic phenomena around them, and make correct judgements. For economic development, various skills and right type of values and attitudes are necessary. Education plays an important role in developing these skills and shaping values and attitudes of individuals. In fact, education is not merely a way of cultural enrichment of individual's personality but more significantly, it is an engine of socio-economic transformation of the economy.

Children represent the future of the country. From this point of view, educating them is perhaps the most essential responsibility of any State. This cannot be achieved merely in terms of opening schools and colleges. No less important is to ensure their access to these institutions and create necessary conditions so that the incidence of drop out is minimum possible. Educational policy should concentrate on expanding and strengthening educational network, recruiting competent and dedicated teachers capable of motivating the students and developing their potential to the fullest possible extent, linking the content of education to the needs of the society and making it relevant to local conditions and conducive to intellectual and moral aspects of personality development.

In simplest terms, the status of education in a State is mostly evaluated in terms of some broad indicators such as expenditure on education, rates of literacy and enrollment ratios. Obviously, these indicators are important to identify, at least in quantitative terms, the direction and extent of required changes in respect of priorities and thrust areas of educational policy.

Haryana's expenditure on education as a proportion of total public expenditure constituted 14.50 per cent (1998-1999) that was less than many other States. Even the neighbouring States spent a higher proportion on education: Rajasthan (19.53 per cent), Uttar Pradesh (18.31 per cent), Himachal Pradesh (16.83 per cent) and Punjab (15.76 per cent). Apparently, varying levels of expenditure in case of different States would normally be reflected in the behaviour of literacy rates and enrollment ratios. This is, what emerges when we have a comparative assessment of Haryana's performance in the field of education.

The literacy rate of Haryana has been continuously increasing. It stood at 25.71 per cent in 1971, increased to 37.13 per cent by 1981, to 55.85 per cent by 1991, and to 67.91 per cent by 2001. At its present level, though it is higher than the all-India literacy rate, it is still lower as compared to States like Kerala (90.86 per cent), Goa (82.01 per cent), Maharashtra (76.88 per cent), Himachal Pradesh (76.48 per cent) and Punjab (69.65 per cent). From the point of view of socio-economic upliftment of the society, education of females and their active participation in the development process is of utmost importance. Comparing Haryana's performance in respect of female literacy rate, we find that the State is yet to match many other States leading in this respect. Haryana's female literacy rate stood at 56.3 per cent in 2001. As compared to this it was much higher in States like Kerala, Mizoram and Maharashtra. It was higher even in neighbouring States of Himachal Pradesh (68.1 per cent) and Punjab (56.23 per cent). As regards the male literacy rate, Haryana (79.3 per cent) occupies more or less the same position relatively to other States as in case of female literacy. These figures, on the whole, imply that raising literacy level in the State by at least 10 per cent by 2012, with special focus on female literacy, should be the most basic guiding principle of State policy.

In Haryana, gross enrolment (class 1 to 8) in case of both boys and girls in the school going age-group (6-14), as a proportion of their population, is lower relatively to many other States including some of the neighbouring States. It is lower than even the all-India average. Considering the enrolment position of boys during 2003-2004, we find that it was 71.53 per cent in case of Haryana as compared to corresponding all India average of 88.02 per cent, and of neighbouring State of Himachal Pradesh 103.62 per cent and Rajasthan's 103.65 per cent. Similarly, for girls it was 71.49 per cent in case of Haryana in comparison to all India average of 81.51 per cent and 102.61 for neighbouring State of Himachal Pradesh. More or less same position emerges when we consider enrolment ratios in the case of scheduled caste students *vis-à-vis* some other States including neighbouring States of Punjab, Rajasthan, Himachal Pradesh and Uttar Pradesh. This is a matter of policy introspection. There is an urgent need for devising realistic and effective measures for attracting greater proportion of children to schools and ensuring that most of them continue in the school until the completion of their education.

On the whole, the enrolment position of the State, through improving overtime, has yet to achieve success levels already attained by some other States. Raising the enrollment ratios significantly, particularly of girls in general, and students belonging to scheduled castes, should be given due priority in the educational policy of the State.

5.9.3 Gender Parity and Empowerment

Gender parity and empowerment are important aspects of human resource development policy. If a large segment of population remains neglected in terms of its involvement in the development process, and is discriminated against in many crucial matters pertaining to its socio-economic upliftment and participation in decision making, then the progress of society cannot be expected to result into a higher social welfare level. The social sector development policy should include ensuring gender parity and empowerment (of weaker sections including women) as its foremost aims.

Gender disparities adversely affect the average achievement level of a State, measured by human development index (HDI), in respect of some basic parameters (namely, life expectancy at birth, adult literacy rate, enrollment ratios and per capita gross domestic product). In Haryana gender disparities do not exist in large measure reflected in the behaviour of these parameters between males and females. Table 5.10 shows the extent of gender disparities in Haryana.

The table contains relevant information as regards disparity between male and female rates pertaining to various aspects of human development. The broad conclusion that may be drawn from this information is that though Haryana has yet to go a long way for eliminating gender disparities, its position in this regard, on the whole, is still better relatively to India as a whole. As far as its performance in human resource development is concerned, it is one of the few States in the country having human development index (HDI) more than 0.5 and falling in the range of 'medium' human development; most States fall in the 'low' range and no State falls in the 'high' range. Except its slightly lower performance

level in respect of enrolment ratios of boys and girls (age group 6-14), the State's position with regard to literacy rates, life expectance at birth and work participation rates compares well with that of India as a whole. Haryana has not only higher achievement levels in respect of these parameters but, on the whole, somewhat lesser gender disparities, too. Health and education are the most basic dimensions of human resource. Literacy, longevity, work productivity and earnings are closely linked with the status of health and education. An accelerated pace of directed policy action in these areas may be expected to usher in a substantially improved State of human resource development.

TABLE 5.10

Gender Disparities in Haryana

Human Resource Development Indicator	*Haryana*		*All India*	
	Male	*Female*	*Male*	*Female*
Enrolment Ratio (Age 6-14) 2003-04	71.53	71.49	88.02	81.51
Literacy rate (2001)	79.30	56.30	75.90	54.20
Life Expectancy at Birth (2002-06)	64.64	69.30	63.90	66.90
Work Participation Rate (2001)	68.22	31.78	51.90	25.70

Source: Director of Census operations, Haryana, available at *www.censusindia.net*

5.10 Urban Development

There has been a continuous increase in the share of urban population in State's total population. This share was 21.88 per cent in 1981. It increased to 24.63 in 1991 and to 29 per cent in 2001. As a result, urban areas of the State are exposed to the burden of supporting an increasing proportion of State's population additions, decade after decade. The 1991 census figures show that the increase in urban population, as percentage of the increase in State's total population, constituted around 35 per cent during 1981-90. This increase went up to 44.59 per cent during 1991-2000. These urbanisation trends can be seen from an inspection of the information presented in Table 5.11.

There are only a few States having a higher percentage of urban population as compared to Haryana (29 per cent). The all India percentage is slightly less (27.78 per cent) than that of Haryana. The higher urban percentage States include Punjab (33.95 per cent), Karnataka (33.98 per cent), Gujarat (37.35 per cent), Maharashtra (42.40 per cent) and Tamil Nadu (43.86 per cent). Significantly, these are the States (including Haryana) whose per capita incomes are mostly higher than any other State. As such the increasing trend of urbanisation may be interpreted as symbol of growing prosperity and opportunities, which attracts rural people to migrate to these areas in search of green pastures. But at the same time it also puts a severe strain on the scarce resources and amenities available in urban areas.

TABLE 5.11

Urbanisation Trends in Haryana

Census	*Total Population*	*Urban Population*	*Urban Population as Percentage of Total Population*	*Increase in Population**
1971	10,036,431	1,771,959	17.67	-
1981	12,922,119	2,827,387	21.88	36.54
1991	16,463,648	4,054,744	24.63	34.66
2001	21,082,139	6,114,139	29.00	44.59
All India (2001)	-	-	27.78	-

Note: * As percentage of total decennial increase in State population.

Source: Census of India 2001, Series 7, Haryana, Provisional Population Totals, Paper-2 of 2001, Director of Census Operations Haryana.

In order to cope with an increasing burden of growing population there is a need to give due priority to urban development in terms of strengthening social and economic infrastructure. This can be achieved through greater quality provision of facilities as regards housing, electricity, education, health care, drinking water, sanitation, sewerage, metalled roads and street lighting in a well planned way. The State of Haryana has all of these requirements on its priority agenda. There is a commendable attempt on the part of State government particularly in respect of provision of dwelling units and residential plots in well planned colonies especially for the households belonging to weaker sections, and low and middle income groups mainly through its own agencies, such as Haryana Urban Development Authority (HUDA) and Haryana Housing Board. The State is also encouraging the participation of private sector and cooperative housing societies in this endeavour in a significant way.

5.11 Poverty

Poverty reduction has been one of the most important objectives of the development policy of the State ever since it came into existence in 1966. Indeed, the true measure of the growth performance of a State lies in its ability to translate growth into substantial reduction in its poverty levels. In this regard the State of Haryana has exhibited appreciable performance as compared to many other States. It has always ranked

among the top performing major States of India if we look at the poverty reduction performance of different States historically. If we leave aside the small States and union territories (Goa, Chandigarh and Delhi), we find that Haryana ranked mostly next only to Punjab and Himachal Pradesh throughout the period 1973 to 2000 for which poverty estimates are available as can be seen from Table 5.12.

Empirically, a strong relationship between poverty index, mean consumption expenditure and distribution has been brought out by many studies in India. Datta (1998) has made a pioneering attempt in this respect. We have analysed this relationship in case of Haryana by using the data created at the World Bank based on the NSSO rounds. This time-series (1957-58 to 1993-94) data set is in respect of mean consumption expenditure, Gini coefficient and head count ratio of poverty for 15 States of India and it has been reported in Datta (1998). So far as our purpose in concerned, the data exists in composite form for both Punjab and Haryana taken together.

Still, we have used it considering the fact that the two States do not vary much from each other as regards their income and consumption behaviour and poverty levels in both urban and rural areas.

To ascertain the relationship of poverty level with per capita real consumption (hence per capita income), we have computed rank correlations and estimated regression equations for rural and urban areas. For rank correlation purposes we have considered the cross-

TABLE 5.12

Percentage of Population Below Poverty Line (Arranged in Decreasing Order of 1999-2000)

Sr. No	*States*	*1973-74*	*1977-78*	*1983*	*1987-88*	*1993-94*	*1999-2000*
1.	Jammu and Kashmir	40.83	38.97	24.24	23.82	25.17	3.48
2.	Goa	44.26	37.23	18.90	24.52	14.92	4.40
3.	Chandigarh	27.96	27.32	23.79	14.67	11.35	5.75
4.	Punjab	28.15	19.27	16.18	13.20	11.77	6.16
5.	Himachal Pradesh	26.39	32.45	16.40	15.45	28.44	7.63
6.	Delhi	49.61	33.23	26.22	12.41	14.69	8.23
7.	Haryana	35.36	29.55	21.37	16.64	25.05	8.74
8.	Kerala	59.79	52.22	40.42	31.79	25.43	12.72
9.	Gujarat	48.15	41.23	32.79	31.54	24.21	14.07
10.	Rajasthan	46.14	37.42	34.46	35.15	27.41	15.28
11.	Lakshadweep	59.68	52.79	42.36	34.95	25.04	15.60
12.	Andhra Pradesh	48.86	39.31	28.91	25.86	22.19	15.77
13.	Dadra and Nagar Haveli	46.55	37.20	15.67	67.11	50.84	17.14
14.	Mizoram	50.32	54.38	36.00	27.52	25.66	19.47
15.	Karnataka	54.47	48.78	38.24	37.53	33.16	20.04
16.	Andaman & Nicobar Islands	55.56	55.42	52.13	43.89	34.47	20.99
17.	Tamil Nadu	54.94	54.79	51.66	43.39	35.03	21.12
18.	Pondicherry	53.82	53.25	50.06	41.46	37.40	21.67
19.	Maharashtra	53.24	55.88	43.44	40.41	36.86	25.02
20.	All India	54.88	51.32	44.48	38.86	35.97	26.10
21.	West Bengal	63.43	60.52	54.85	44.72	35.66	27.02
22.	Manipur	49.96	53.72	37.02	31.35	33.78	28.54
23.	Uttar Pradesh	57.07	49.05	47.07	41.46	40.85	31.15
24.	Nagaland	50.81	56.04	39.25	34.43	37.92	32.67
25.	Arunachal Pradesh	51.93	58.32	40.88	36.22	39.35	33.47
26.	Meghalaya	50.20	55.19	38.81	33.92	37.92	33.87
27.	Tripura	51.00	56.88	40.03	35.23	39.01	34.44
28.	Assam	51.21	57.15	40.47	36.21	40.86	36.09
29.	Sikkim	50.86	55.89	39.71	36.06	41.43	36.55
30.	Madhya Pradesh	61.78	61.78	49.78	43.07	42.52	37.43
31.	Bihar	61.91	61.55	62.22	52.13	54.96	42.60
32.	Orissa	66.18	70.07	65.29	55.58	48.56	47.15

Note : Poverty Line of Himachal Pradesh and expenditure distribution of Jammu and Kashmir are used to estimate poverty ratio of Jammu and Kashmir.

Source: Planning Commission, Government of India.

TABLE 5.13

Poverty and Per Capita Rural Consumption in Punjab (including Haryana)

NSS Round	*Survey Period*	*Rural*		*Urban*	
		MC	*H*	*MC*	*H*
13	September 1957 – May 1958	74.74	33.39	71.80	39.57
14	July 1958 – June1959	81.82	28.09	76.62	35.21
15	July 1959 – June 1960	73.37	32.79	73.55	35.51
16	July 1960 – Aug 1961	82.06	32.00	83.71	26.25
17	September 1961– July 1962	83.45	31.36	70.93	41.57
18	February 1963 – January 1964	70.87	33.92	78.61	38.99
19	July 1964 – June 1965	72.10	36.12	71.35	37.59
20	July 1965 – June 1966	70.43	38.43	65.08	47.13
21	July 1966 – June 1967	68.03	38.64	65.45	43.14
22	July 1967 – June 1968	61.31	44.22	65.58	37.07
23	July 1968 – June 1969	71.40	32.38	68.39	39.15
24	July 1969 – June 1970	72.30	35.57	73.73	33.72
25	July 1970 – June 1971	72.89	31.73	80.37	28.61
27	October 1972 – September 1973	81.14	25.47	82.08	27.03
28	October 1973 – June 1974	69.13	35.08	71.55	36.40
32	July 1977 – June 1978	81.90	25.46	82.28	32.11
38	January 1983 – December 1983	82.89	21.52	87.51	25.29
42	July 1986 – June 1987	85.39	22.96	89.80	16.71
43	July 1987 – June 1988	85.87	20.00	86.78	19.25
45	July 1989 – June 1990	82.18	14.16	96.74	15.91
46	July 1990 – June 1991	82.17	18.55	92.57	13.44
48	January 1992 – December 1992	88.41	18.14	87.31	16.02
50	July 1993 – June 1994	79.23	25.23	100.34	11.42

Note: 1. Mean Consumption (MC) is expressed in Rupees per month at 1973-74 prices

2. Head Count ratio (H) refers to percentage of population below poverty line

Source: Datta, G. (1998). "Poverty in India and Indian States: An Update", *The Indian Journal of Labour Economics*, 41(2), Table A15.

TABLE 5.14

Average per Capita Real Consumption and Poverty Levels of Indian States (1990-91 to 1993-94)

State	*Rural*				*State*	*Urban*			
	H	*MC*	*Rank*			*H*	*MC*	*Rank*	
			H	*MC*				*H*	*MC*
Punjab	20.64	83.27	1	1	Assam	11.95	97.75	1	2
Jammu and Kashmir	31.20	70.70	2	3	Punjab and Haryana	13.63	93.41	2	3
West Bengal	31.51	68.13	3	5	Jammu and Kashmir	14.01	99.36	3	1
Kerala	33.01	73.32	4	2	West Bengal	23.79	92.80	4	4
Orissa	34.66	66.32	5	6	Rajasthan	29.50	75.90	5	11
Andhra Pradesh	35.89	68.34	6	4	Andhra Pradesh	30.59	78.66	6	8
Uttar Pradesh	41.72	62.57	7	8	Kerala	30.62	89.53	7	5
Gujarat	41.77	59.27	8	11	Tamil Nadu	31.87	84.14	8	6
Tamil Nadu	41.80	63.93	9	7	Karnataka	34.09	79.13	9	7
Rajasthan	45.79	60.02	10	10	Gujarat	37.33	68.27	10	14
Karnataka	46.88	57.69	11	13	Maharashtra	37.47	74.18	11	9
Assam	49.33	52.63	12	14	Madhya Pradesh	38.17	71.80	12	12
Madhya Pradesh	49.79	60.56	13	9	Uttar Pradesh	39.35	70.63	13	13
Maharashtra	50.50	58.76	14	12	Bihar	42.39	67.22	14	15
Bihar	63.20	48.60	15	15	Orissa	43.31	75.06	15	10

Note: 1. Mean Consumption (MC) is expressed in Rupees per month at 1973-74 prices.
2. Head Count ratio (H) refers to percentage of population below poverty 'line.

Source: Datta G. (1998). "Poverty in India and Indian States: An Update", *The Indian Journal of Labour Economics*, 41(2), Table 3 and 4.

section data pertaining only to the period 1990-91 to 1993-94 and computed average poverty levels (head count ratio) and per capita consumption levels of these States during this period.

In Table 5.14, 15 States have been ranked in decreasing order of average poverty level (HCR) and increasing order of per capita consumption (MC). The top performing State on each criterion has been assigned rank 1, and the bottom State rank 15. A close inspection of the rank positions of the States, on the rural side, would show that the six top ranking States in the matter of poverty reduction also occupy the top six ranks on the per capita consumption basis. Similarly, on the urban side, the top four ranks, on either criterion, are begged by the same set of States. Happily, Haryana together with Punjab may be seen to occupy rank 1 in both rural and urban categories (as regards MC it occupies rank 1 in rural category and rank 2 in urban category). Mostly other lower ranking States too show not much difference in their rank positions on either criterion. *Prima facie*, thus there appears to exist a positive high correlation between the two ranks. The computed rank correlations show a value of 0.9 (rural), and 0.81 (urban). Obviously, this implies that poverty level (to which the corresponding rank is negatively related) and per capita consumption (to which the corresponding rank is positively related) are highly negatively correlated.

For regression analysis we have used the time-series data (1957-58 to 1993-94). The estimated regression equations are:

Rural: $\ln(HCR) = 14.3 - 2.524 \ln(MC)$
$(8.36) \quad (-6.41)$
$R^2 = 0.66$, df=22

Urban: $\ln(HCR) = 16.392 - 2.991 \ln(MC)$
$(13.84) \quad (-11.03)$
$R^2 = 0.85$, df=22

(Income distribution is an important variable having substantial effect on mean consumption. Its inclusion in the regression equation could have improved the explanatory power of the model and resulted into a higher value of R^2. As the available data is deficient with regard to information on Gini Coefficient, the estimated values need to be interpreted in the light of this constraint)

Where

HCR: Head Count Ratio (poverty index)

MC: Mean Consumption (real)

These equations strongly bring out the fact that poverty is negatively related to per capita real consumption. Since all variables are in log form, we have the partial elasticity of HCR with respect to MC measured directly by the regression coefficient: it is

equal to (-) 2.524 and (-) 2.991 for rural and urban areas of the State, respectively. What it means is that a one per cent increase in per capita real consumption reduces the poverty ratio by as much as 2.524 per cent in rural areas, and 2.991 per cent in urban areas. If per capita consumption grows, say, at the rate of four per cent per annum, the poverty ratio would decline by about ten per cent in rural areas and 12 per cent in urban areas. The poverty ratio corresponding to different growth rates of per capita consumptions are indicated in Table 5.15 for the terminal year 2006-07 and 2011-12, given the rural-urban poverty ratios, 8.27 per cent and 9.99 per cent for the year 1999-2000, and assuming there is no change in income distribution over this period.

So far as Haryana is concerned, the monitorable targets set in the 10th Five Year Plan (2002-2007) specify that the poverty ratio is to be brought down to two per cent level by 2007 and almost zero level by 2012. These targets can be realised only if the per capita real consumption of the State grows at a rate not less than seven per cent per year. This means the growth rate of per capita real income would have to be larger than seven per cent. Apparently, this requires that the GSDP growth rate should be at least 10 per cent per annum so that after allowing for the effect of population growth and price increase, we are in a position to be somewhere close to these poverty reduction targets as demonstrated by the projected poverty ratios corresponding to seven per cent growth rate of per capita consumption.

TABLE 5.15

Projected Poverty Ratios for Haryana

Assumed Growth Rate of Per Capita Real Consumption	*Rural*		*Urban*		*Combined*	
	2006-07	*2011-12*	*2006-07*	*2011-12*	*2006-07*	*2011-12*
4	3.93	2.30	4.09	2.16	3.97	2.26
5	3.22	1.64	3.21	1.43	3.22	1.58
6	2.62	1.15	2.50	0.93	2.59	1.09
7	2.12	0.80	1.93	0.59	2.07	0.74

Note: Combined poverty ratio represents the weighted average of the corresponding rural–urban ratios with weights 0.73 (rural) and 0.27 (urban). These weights are based on the latest available rural–urban poverty ratios for the year 1999-2000.

5.12 Employment

The projection of higher growth rates of State domestic product in Haryana as indicated in section 5.2.1 has serious implication for generating employment opportunities. In future at national level, the tenth-plan document indicates the implications of achieving 8 per cent growth rate. At this rate of growth, the percentage of unemployed will grow upto 11.0 per cent at the end of tenth plan, giving a total unemployed labour force of 45.56 million persons. This type of growth is not acceptable on any socio-economic or political ground. In Haryana, the unemployment rate of male persons has been 9 per cent in rural areas whereas this percentage is 2.40 in case of female workers during the period 1999-2000. In urban areas, the unemployment rate per cent of labour force has been 8.0 per cent and 9.90 per cent for male and female worker respectively during the same period. The rate of growth of workforce during the 1991-2001 population sensex has been 2.83 per cent in Haryana giving it the first rank among all the Indian States. This requires particular efforts on the part of the government to absorb this tremendous workforce growth into productive and gainful employment opportunities. In terms of percentage change in share of employment by industry during the period 1987-88 to 1999-2000, the employment in primary sector has declined to 23.35 per cent in Haryana whereas secondary sector employment level has declined by -1.96 per cent. The share of tertiary sector employment has increased upto 49.31 per cent.

TABLE 5.16

Growth in Workforce for Major States 1991-2001 (Main Workers)

States	*Workforce Growth*	*Rank*
Haryana	2.83	1
Punjab	2.53	2
Rajasthan	2.28	3
Gujarat	1.46	4
Maharashtra	1.41	5
West Bengal	1.16	6
Karnataka	1.13	7

Source: Census Data

TABLE 5.17

Percentage Change in Percentage Share in Employment 1987-88 to 1999-2000)

Sr. No.	*States*	*Change in Percentage Share*		
		Primary	*Secondary*	*Tertiary*
1.	Andhra Pradesh	-10.16	-9.8	35.25
2.	Arunachal Pradesh	19.01	146.93	-28.61
3.	Assam	-16.44	26.9	38.23
4.	Bihar	-2.84	9.33	8.68
5.	Gujarat	-6.12	8.52	7.44
6.	Haryana	-23.35	-1.96	49.31

Source: Based on Tenth Five Year Plan, Planning Commission, 2002

TABLE 5.18

Per cent Distribution of Employment by Industrial Sectors

	Primary	*Secondary*	*Tertiary*
1987-88	58.9	12.7	28.4
1993-94	46.6	11	42.4
1999-2000	45.15	12.45	42.4

Source: Based on Chapter 1 of SDR, Haryana

The implication of all the statistical analysis revealed in the tables above suggest that Government of Haryana should take policy initiatives in increasing the role of labour-intensive technology in agriculture as well as manufacturing sector. For generating more employment in agriculture, the reforms should be initiated and amount of private and public investment should be increased. The government should also give incentive for the establishment of food processing industry in the State. Similarly, the incentive should also be provided for the growth of manufacturing sector and government should adopt a liberal foreign investment policy so that the NRIs can invest in Haryana. The Government of Haryana should also provide incentives to the tertiary sector for providing productive employment and for this the liberalisation should be extended and increased to this sector. In addition to this, the market oriented institution should be established in the State so that the people employed in different sectors, that is, primary, secondary and tertiary may be competitive at global level.

TABLE 5.19

Share of Haryana in Total Labour Migrated from India

Year	*Number of Persons Emigrated*	*% Change over the Previous Year*	*Share of Haryana in Total Labour Emigrated from India (%)*
2004	1267	1.7	0.27
2003	1246	193.9	0.27
2002	424	175.3	0.12
2001	154	196.2	0.06
2000	52	-81.9	0.02
1999	288	-83	0.27
1998	1692		0.27
1998-2004	5123		0.12

Source: Based on Chapter 1 of SDR, Haryana

The rural employment guarantee scheme is an excellent scheme as it is demand driven, fixes accountability and ensures the empowerment of people. It is meant for the poorest of poor. It ensures that no family will sleep without food. It is the only scheme backed by an act. The scheme has been offered only in two districts of Haryana. The scheme does not discriminate between APL/BPL or caste categories. Till March 2006, 60,000 job cards had been issued but no one came to ask a job. The government has to be very creative in designing the jobs so that people may be benefited.

TABLE 5.20

Current Daily Status Unemployment Rates for Haryana (1999-2000)

	Unemployment rate (per cent of labour force)		
	Male	*Female*	*Persons*
Rural	5.3	1.8	4.7
Urban	4.5	4.9	4.5
Age(15-29) R	9	2.4	8.1
Age(15-29) U	8	9.9	8.3

Source: Based on Chapter 2 of SDR, Haryana

TABLE 5.21

Per 1000 Distribution of Rural Persons by Broad Usual (Principal and Subsidiary) Activity

	1997M	*2003M*	*1997F*	*2003F*	*1997P*	*2003P*
Self employed	296	298	152	186	229	244
Wages/Salaried	66	99	1	8	36	55
Casual labourer	134	111	47	37	94	75
All	496	507	200	230	360	375
Unemployed	4	3	0	0	2	2
Not in L force	500	490	800	770	638	623

Source: Based on Chapter 2 of SDR, Haryana

TABLE 5.22

Per 1000 Distribution of Urban Persons by Broad Usual (Principal and Subsidiary) Activity

	2003M	*1997M*	*2003F*	*1997F*	*2003P*	*1997P*
Self employed	249	238	44	155	151	155
Wages/Salaried	195	207	39	132	120	132
Casual labourer	71	59	27	43	50	43
All	514	504	110	331	320	331
Unemployed	15	9	0	5	8	5
Not in L force	471	487	889	664	672	664

Source: Based on Chapter 2 of SDR, Haryana

Haryana has been at the first rank in growth of work force among major States between 1991-2001 with 2.33 per cent growth rate. There were 9.01 lakh unemployed persons on live registers of employment exchanges in Haryana. The work participation rate (WPR) in rural areas is more than urban areas for all persons in aggregate, main work, agriculture workers, cultivators, agricultural labourers and marginal workers. But WPR is lower in rural areas for all persons in non

TABLE 5.23

Occupational Distribution of Persons on the Live Register of Employment Exchanges in Haryana (As on 31 December 2003)

Particulars	*1980*	*1990*	*1995*	*2000*	*2001*	*2002*	*2003*
Professional, Technical and Related Workers	35991	47925	49863	74432	65270	72274	80414
Administrative, Executive and Managerial Workers	70	72	61	258	173	188	195
Clerical and Related Workers	20927	45293	51671	63515	53293	64211	73755
Sales Workers	55	102	105	213	176	192	220
Service Workers	22526	24450	30134	32300	29205	35621	37859
Farmers, Fishermen, Hunders, Loggers and related workers	2026	3436	3540	2917	2654	2916	2946
Production an Related Workers, Transport equipment Operators (excluding labourers)	24869	40159	44080	61576	50917	62133	68823
Labourers	32251	3038	1433	2415	1065	1636	1453
Persons without Professional or Vocational Training or Pervious Work Experience	220540	426948	517018	547782	461022	563410	635670
Total	359255	591423	697905	785408	663775	802581	901335
Growth Rate	3.4419039						

Source: Director of Employment, Haryana

agricultural work, household industries and other workers. Females have been largely kept out of the main work but they constitute more as cultivators, agricultural labourers, non agriculture labourers, household industries workers and marginal workers.

The employment elasticity of output in all the sectors is decreasing but it is comparatively higher in manufacturing than the agriculture and service sector. The investment in industry having backward linkages will solve the problems of unemployment and decreasing share of agriculture. The introduction of contract farming, organic farming, precision farming, collaboration with all agents of supply chain management in the agri-business, non-exploitative vertical and horizontal integration, market reforms, demand led diversification, extensive and intensive use of IT for real time communication across the chain, liberal lending to the proprietary and partnership firms, creation and transfer of private assets to people/ artisans, creative use of NGOs, promotion of SEZs, generation of electricity by households can generate ten to twelve lakh of jobs in Haryana by 2012.

In the year 2006-07, we observe a reversal in the declining trend of employment in the organised sector. However, unemployment is also increasing due to falling share and productivity in the agriculture. Too much dependence on the informal sector for employment can be dangerous as most of the persons

TABLE 5.24

Work Participation Rate by Economic Activity in Haryana

	Area	*Total*	*Male*	*Female*
Work Participation Rate	Total	39.62	68.22	31.78
	Rural	42.93	63.33	36.67
	Urban	31.49	84.63	15.37
Main Work Participation Rate	Total	29.52	23.33	6.19
	Rural	30.07	22.79	7.28
	Urban	28.16	24.65	3.51
Agricultural Workers as % of Total Working Population (Agricultural + Cultivators)	Total	51.29	30.71	20.58
	Rural	64.83	38.67	26.16
	Urban	5.93	4.04	1.89
Cultivators as % of Total Working Population	Total	36.03	32.47	43.67
	Rural	45.85	44.34	48.47
	Urban	3.11	2.7	5.33
Agricultural Labours as % of Total Working Population	Total	15.27	12.55	21.1
	Rural	18.98	16.73	22.87
	Urban	2.83	2.07	6.97
Non-Agricultural Workers as % of Total Working Population	Total	48.71	69.29	79.42
	Rural	35.17	61.33	73.84
	Urban	94.07	95.96	98.11
Household Industries Workers as % of Total Working Population	Total	2.56	2.31	3.11
	Rural	2.17	1.94	2.57
	Urban	3.88	3.23	7.43
Other Workers as % of Total Working Population	Total	46.15	52.68	32.12
	Rural	33	36.99	26.1
	Urban	90.19	92	80.27
Marginal Workers as % of Total Working Population	Total	10.1	6.89	13.84
	Rural	12.86	8.19	18.24
	Urban	3.33	3.7	2.89

Source: Director of Employment, Haryana

engaged in this sector are not satisfied with their current remuneration and working hours. The expectations of the people have also gone down due to poor remuneration. A boost to small and medium enterprises is required to generate more employment.

5.13 Fiscal Perspective

In the area of fiscal management, Haryana is considered to be one of the best-managed States in the country. A notable feature of State's finances is that Haryana is the first State in the country which did not avail overdraft even for a single day during 2003-04 and 2004-05. The 12th Finance Commission as also some other studies have commended the performance of the State in the areas of revenue growth, expenditure checking and reduction of deficit indicators. On the whole, it has been ranked as number one State in fiscal self-reliance and improvement. It is satisfying for the State to note that it has been focusing on the development of infrastructure in urban as well as rural areas out of its own resources and making optimum utilisation of resources received from the Centre.

The State looks at its fiscal achievements as a source of motivation for still better fiscal discipline in future. It is determined to pursue fiscal goals of greater self-reliance and maximum possible curtailing of non-productive expenditures with still greater invigorated spirit. A major objective of observing stricter fiscal discipline by the State would be to make a concerted attempt at curtailing revenue deficit substantially mainly through compressing expenditure on wages and salaries. In order to push the State forward on the path of fiscal self-reliance, efforts would also be directed at fully exhausting the prospects of tax-revenue generation by fine tuning its tax surveillance and mobilisation network.

Chapter 6

Conclusions and Recommendations

6.1 Conclusions

The State of Haryana came into existence on 1 November 1966. Since then it has been achieving an all round development. Its importance lies in the fact that 30 per cent of its total area, comprising the districts of Faridabad, Mewat, Gurgaon, Rewari, Jhajjar, Rohtak, Sonipat and Panipat, falls into the National Capital Region (NCR) of India. Differently stated, 40 per cent of the total area of the National Capital Region (NCR) is that of Haryana.

In the 60s Haryana progressed rapidly with a growth rate of 5.5 per cent per annum against the all India's growth rate of 3.0 per cent. In the 70s, while the national average annual rate of growth increased from 3.0 per cent in the 60s to 3.6 per cent, in case of Haryana it declined from 5.5 per cent to 4.8 per cent. Haryana progressed rapidly during the 1980s with an average annual growth rate of 6.68 per cent as against all India's growth rate of 5.60 per cent. In the 1990s Haryana grew at an average annual rate of 6.71 per cent as against all-India's growth rate of 6.03 per cent per annum. It is interesting to note that during the overall period from 1980-81 to 1990-2000, Haryana recorded the highest growth rate of 7.80 per cent per annum in the country as against all India's growth rate of 5.66 per cent per annum. In the years 2000-01, 2001-02, 2002-03, 2003-04, 2004-2005 and 2005-06 the rate of growth in the State has been 6.8, 5.4, 5.0, 8.6, 8.4 and 8.5 per cent, respectively.

The State of Haryana achieved the fastest acceleration in secondary sector growth during 1980s with an average annual growth rate of 15 per cent. However, in the 1990s, this annual growth rate declined to 8.37 per cent. During the period 1981-2000, as a whole, the fastest acceleration in the secondary sector growth in India took place in Haryana with an average annual growth rate of 12.58 per cent. In the years 2000-01, 2001-02, 2002-03, 2003-04, 2004-05 and 2005-06 the rate of growth in the secondary sector has been 5.7, 5.7, 4.1, 7.7, 8.1 and 8.3 per cent, respectively.

As regards the tertiary sector, in the 1980s Haryana had an average annual growth rate of 7.49 per cent. In the subsequent decade of 1990s it increased to a growth rate of 8.38 per cent. In the years 2000-01, 2001-02, 2002-03, 2003-04, 2004-05 and 2005-06 the rate of growth in the tertiary sector has been 11.4, 9.3 10.0, 8.9, 11.8, and 12 per cent, respectively.

Haryana's per capita SDP at constant prices (1993-94) increased significantly during the 1980s and 1990s. In the 1980s, it grew by an annual average rate of 4.12 per cent as against all India's rate of 3.36 per cent. In the 1990s, it grew by 4.42 per cent per annum as against all India's rate of 4.07 per cent. It is interesting to note that since 2002-03, with the exception of such small States as Goa, Delhi, and Pondicherry, Haryana has been recording the highest per capita NSDP in the country. In the years 2000-01, 2001-02, 2002-03, 2003-04 and 2004-05 the rate of growth in the State has been 4.1, 2.7, 3.4, 7.1 and 7.1 per cent, respectively.

The economy of the State has undergone major structural changes. There has been a shift from the primary sector to secondary and tertiary sectors. At constant (1993-94) prices, the share of primary sector has declined from 42.5 per cent during 1993-94 to 28.2 per cent during 2004-05. The share of secondary sector has increased from 26.2 per cent to 27.4 per cent over the same period. Likewise, the share of tertiary sector has increased from 31.3 per cent to 44.4 per cent.

The high rate of economic growth in the State has been accompanied by a reduction in poverty. There has been an appreciable decline in the percentage of

population below the poverty line from over 35 per cent in the 1970s to less than nine per cent in the late 1990s. An encouraging trend that emerged between 1993-94 and 1999-2000 in the State is that rural poverty decreased much faster than urban poverty. The population below poverty line in rural Haryana has significantly declined from 28.02 per cent in 1993-94 to 8.27 per cent in 1999-2000 as against all India's average figure of 27.09 per cent. There have been improvements in the social indicators as well. The literacy rate has increased from almost 26 per cent in 1971 to 68 per cent in 2001.

Agriculture can occasionally be a leading sector in economic growth, either on the basis of a spurt in agricultural productivity or on the basis of cash crop exports. In the case of Haryana, agricultural-productivity-led growth occurred in one major historical period, the Green Revolution, dated from 1965-66 to the early 1980s. The Green Revolution was centered on short stemmed, high yield wheat, and to a lesser extent paddy rice, with both crops depending on irrigation and intensive application of fertiliser. Haryana, alongwith Punjab, was the epicentre of the Green Revolution in India.

The agricultural sector in the State has a direct bearing on overall growth, income levels and well-being of the people. Change in agricultural productivity overtime in the State is a good index of the progress made in this vital sector by the State, and the consequent fall out on the State's economy. Haryana recorded very high rate of growth in agricultural productivity. The trend in increase in agricultural productivity of the State corresponds fairly closely to the trend of rapid decrease in population below the poverty line of the State.

The agricultural production index in Haryana has increased from 106.37 in 1980-81 to 243.42 in 2004-05. Apparently, the increase in production was due almost entirely to increase in yield. The yield index almost doubled over this period. Whereas the non-food grains index increased from 104.72 to 318.73, the index of food grains increased from 107.02 to only 217.72, over the period 1980-2005. And, within food grains, the index of cereals grew up sharply from 103.89 to 245.20 and of pulses declined steeply from 125.54 to 27.50 over this period. As a result of higher production of foodgrains the State of Haryana is one of the largest contributors of foodgrains to the central pool. In 2005-06 the contribution of Haryana in the procurement of wheat was 30.60 per cent of the total procurement made in the country and it was next only to Punjab whose share was 60.90 per cent. Similarly, Haryana has also been significantly contributing in the procurement of rice in the country. Whereas the all India average yield per hectare in respect of wheat and rice during 2003-04 was 2713 and 2077 kilograms, respectively, in Haryana the corresponding yield was 3937 and 2749 kilograms.

Haryana is emerging very fast as one of the leading States in the field of Horticulture. The main thrust is being given for the development on floriculture and mushroom apart from fruits and vegetables. In 1990-91, the area under fruits stood at 12,640 hectares producing 99.8 thousand tonnes. These figures increased to 24,071 hectares and 247.6 thousand tonnes, during 2004-05. Likewise, during this period the area under vegetables increased from 55,360 hectares in 1990-91 to 2.08 lakh hectares in 2004-05, and the production increased from 8.02 lakh tonnes to 27.67 lakh tonnes. The area under floriculture has also increased from 50 hectares in 1990-1991 to 4810 hectares in 2004-05. This period also witnessed remarkable growth in mushroom production which increased from 850 tonnes to 6163 tonnes.

A matter of serious concern today is that the agriculture scene in Haryana is dominated by paddy-wheat rotation. It is causing degradation in soil fertility and further fall in the underground water level. No significant achievement has been made in respect of crop diversification.

The livestock sector by contributing milk, eggs and meat to the food basket plays a critical role in fulfilling the animal protein requirement of the people. Livestock is one of the important components of primary sector of the economy and there still exists a substantial scope for growth in this sector. Haryana is the milk pail of India and is famous for its breed of "Hariana Cows" and "Murrah Buffaloes". The State government is laying emphasis on increasing the production capacity of the animal through genetic improvement of the animals. Great stress is being laid on the improvement of breed of the cattle and buffaloes to increase the milk yield through artificial insemination with exotic and other improved semen.

Salt affected land, scrub land, waterlogged land, barren land and sandy area constitute the main wasteland in the State. The majority of salt-affected lands are associated with waterlogged areas. These are mainly spread over the central and southern parts of the State. Absence of natural drainage outlet and use of poor quality ground water for agriculture purpose render highly fertile soils salt affected. Barren lands are generally associated with Aravalli ranges. Land becomes barren with scrub due to loss of soil fertility caused by waterlogging and poor quality of ground water. Sandy areas in the form of sand dunes are

mainly located in areas bordering Rajasthan State. Arid climate with no irrigation facilities rendered the soil unproductive with development of barren sand dunes. About 70 per cent area of the State has marginal to saline ground water.

Canal water is main source of irrigation as well as domestic supplies to the State. The availability of water from both the sources, that is, surface and sub surface, is much below the requirement. Whereas the supply of surface water is more or less constant with a small variation depending upon water level in the Bhakra and Pong reservoirs and the flow of water in river Yamuna, the availability of sub surface water is declining due to more withdrawal than its recharging. Canal irrigated area in Haryana in 2004-05 has been 48 per cent of the total net area irrigated. The share of tubewells in total irrigated area has been increasing continuously. It was 50.5 per cent of total net area irrigated in 2004-05. The area under irrigation, as percentage of gross area sown was 84 per cent in 2004-05.

Being an alluvial formation, the State has very little mineral wealth. Iron ore, limestone and slate are the only three principal minerals economically exploited at present. Other minerals are lime, *kankar*, china clay, dolomite, quartz and silica. Limestone and *kankar* are used in cement manufacturing. The Geological Survey of India has estimated the resources of crystalline limestone to be of the order of 17.5 million tonnes. Slate is found in Rewari, Mahendragarh and Gurgaon districts. Iron ore reserves are of the order of five million tonnes. The ore is of high grade, varying from 50 per cent to 65 per cent in iron contents.

The proximity of villages to the administration centres enhances their growth potential. The inconveniences, if any, faced by the villagers are readily reported and consequently the probability of introducing corrective measures is usually higher. The access to various places of the economy determines substantially the performance and efficiency of the government. Absence of access signifies prevalence of a self-reliant village economy having little development opportunities and low growth potential. Increasing access augments the possibility of diversification and higher growth. The villages located in Haryana are most effectively connected with rest of the economy. The infrastructure level of the villages, both social and physical, is extremely important in the realisation of development potential. In this regard Haryana is among the best performing large States.

At the time of formation of the State, Haryana had only 162 large and medium indutrial units. Now, by the end of 2005, this number has grown to 1260. At present, these units are operating with capital investment of more than Rs.22,000 crore, employing more than 2 lakh persons and producing goods worth Rs.12,800 crores. The export amount which was only Rs.4.5 crores in 1966 has crossed Rs.20,000 crore in 2004-05. During the period August 1991-May 2001, as many as 206 fully export-oriented units were established in the State alone which constituted 5.59 per cent of the total such units in the country. Industrial Model Township, Manesar near Gurgaon has already become the destination of many multinational companies. The area between Kundli and Sonipat town falls under a highly industrialised zone. A multi-functional complex is also being developed at Kundli. It is in this complex that export promotion industrial park, food park, cold chain complex have been developed by the HSIIDC. Industrial Growth Centre at Bawal has also emerged as the destination of multi-national companies.

Haryana's index of industrial production is far above the all India average. Haryana today produces more than 50 per cent of passenger cars, 25 per cent of tractors, 50 per cent of motor cycles and 50 per cent of refrigerators manufactured in the country. About 25 per cent of India's total production of sanitary-ware is from Haryana. One out of every four bicycles in the Country is manufactured here.

The number of large and medium units in the State has increased from 162 in 1966 to 1290 by June 2006. The growth of small industries in the State has also been phenomenal. Their number has increased from 4500 in 1966 to 80,000 today. They are producing goods worth Rs.4500 crore per annum while generating employment for 8.7 lakh persons. 20 per cent of the country's total export of scientific instruments, 60 per cent of the demand of ammunition boxes of the country's defence forces and 60 per cent of the total needs of woolen blankets of the Indian army are met by small units of Haryana. Haryana's small scale sector also enjoys the reputation of manufacturing the largest number of electrical mixies and gas stoves in the country. Engineering goods, chemicals, software, handloom products, agro-based lamps, scientific instruments, leather products, automobiles and tractors are exported from Haryana.

State Government has formulated new industrial policy in June 2005. The basic objective of the policy is to develop and promote industries and to create employment opportunities in the manufacturing and service sector. This policy has three pronged strategy. The first is to

develop infrastructure, the second is to provide incentives and concessions to the industry in backward/rural areas in order to check exodus of rural population to the urban areas and the third is to simplify the rules and regulations making investment procedure easy and hassle free.

Under the Government of India Schemes, three cluster development projects, Panipat for textiles, Gurgaon for Automobiles and Faridabad for Light Engineering are under consideration. Government is considering to set up Central Institute of Plastic and Engineering Technology in collaboration with the Government of India to promote and develop plastic industry in Haryana. State Government has approached the Government of India, Ministry of Food Processing for establishing National Institute for Food Technology Management besides one mega food park in Haryana. This will boost agro-based food processing industry in the State. Also, in the private sector the first irradiation food park has been set up at Bahalgarh in district Sonipat. This food park would prove a boon for exporters and the farmers as the agricultural products, food items, vegetables, fruits, onions, potatoes, pulses, *basmati* rice, wheat flour and other edible products would be preserved by using irradiation technology.

In an excellent recent study Veeramani and Goldar (2005) place various States under three distinct categories of investment climate (IC) scenarios for the purpose of determining total factor productivity (TFP) estimates in the manufacturing sector in these States. The TFP estimates have been based on both value added function as well as, gross output function. In this study Haryana has been classified under the 'good investment climate' category alongwith States like Gujarat, Andhra Pradesh, Karnataka and Punjab. It is satisfying to note that Haryana occupied no less than second position for most part of the period, 1980-81 to 1999-2000, in respect of TFP performance. This adequately brings out the extent of efficiency prevailing in the manufacturing sector of the State.

The State of Haryana has been able to attract sizeable investment from multinational companies, large business houses, foreign investors, non-resident Indians and small scale entrepreneurs. Haryana is an investor friendly State and offers a rich reservoir of skilled, motivated and relatively low cost manpower with a good infrastructure and harmonious industrial relations. The State has about 1000 projects with foreign technical financial collaboration.

Technical manpower is essential input for industrialisation, modernisation, promotion of trade and business. Technical manpower is also required for research and development. Technically qualified persons can also set their own business and get self-employed. By the end of year 2001-02, there were 29 degree level Engineering Institutions and 29 diploma/post diploma level Institutions. In 2004-05 there were 124 institutions offering Engineering /MBA/MCA/BHM and CT and M.Tech Programmes with an annual intake of 18,834 students. The number of Polytechnics was 38 with annual intake capacity of 8,640 students. The intake capacity in degree courses in engineering colleges in the State was 10,631 students.

The Human Development Index (HDI) for the country as a whole has improved from 0.302 in 1981 to 0.472 in 2001. The HDI for Haryana has improved from 0.360 in 1981 to 0.509 in 2001. As per HDI Haryana was ranked at 15 in 1981, 16 in 1991 and 5 in 2001.

A reduction of gender inequality in access to resources and opportunities leads to an increase in the rate of economic growth, which, in turn, is poverty reducing. This is because of the fact that greater gender equality enables women to take up income earning opportunities, and participate in the growth process. Gender disparities are very closely associated with poverty levels. For example, improving women's access to education or land in rural areas is likely to lead to a significant increase in agricultural productivity. In addition, lower gender disparities increase women's power to allocate family resources. This benefits children's health and education, inducing a reduction in inter-generational poverty. Furthermore, gender equality in access to education helps to reduce infant mortality and fertility. Significant steps have been taken in this direction in Haryana and its women are much more empowered now than in the 1960s or 1970s. The State has been implementing various schemes for the socio-economic advancement and development of women in the State to eliminate all types of discrimination against women and the girl child and ensure empowerment and gender justice for them. But the declining sex ratio in the State is of particular concern.

Improvement in the health status of the population has been one of the major thrust areas in social development programmes of the State. This was to be achieved through improving access to health services with special focus on under developed and under privileged sections of the society. The infant mortality rate (IMR) is considered to be a sensitive indicator of not only the health status of the population but also the level of human development in the context of education, economic conditions, nutrition, etc. Poverty, malnutrition, a decline in breastfeeding and inadequacy or lack of sanitation are all associated with

high infant mortality. High infant mortality and high fertility are related concepts. Haryana has registered declining infant mortality rates over the period 1971-2001. But there is cause for concern over the higher IMR for female children than for male children in Haryana.

Life expectancy at birth or longevity is an overall indicator of the economic and social well-being of the people. As a society advances, the life expectancy of its people also increases. Haryana is one of the top four States, after Kerala, Punjab and Maharashtra, in this regard.

The decadal growth rate of population of Haryana was 28.43 per cent in 2001. This growth rate of population continues to be high for the State. The population situation calls for urgent attention. However, this higher growth rate can be attributed to some extent to substantial migration as well.

A total fertility rate (TFR) = 2.1 is considered to be the replacement level of fertility, which needs to be achieved in all States for population stabilisation. In case of Haryana, TFR was 3.3 in 1998 which is much higher than most of the States in the country.

In Haryana total dependency ratio in 2001 was 770 which was much higher (886) in 1991. In case of young, it was 637 and for old 133 in 2001 and the respective figures in 1991 were 741 and 145. This means that the young as well as old dependency ratio in the State has decreased.

The total work participation rate of Haryana in the year 2001 was 39.62 per cent, of which 42.93 per cent was in rural areas and 31.49 per cent in urban areas. Agricultural workers constituted 51.29 per cent of the total working population of the State in 2001. Cultivators constituted 36.03 per cent of the total working population. Agricultural labour constituted 15.27 per cent of the total working population. The percentage of non agricultural workers in the total working population was 48.71. This percentage was 35.17 in rural areas and 94.07 in urban areas. It clearly shows that in rural areas people are mostly dependent on agricultural activities while in urban areas people are mostly dependent on non-agricultural activities.

In 1987-88, in Haryana, the per cent shares of primary, secondary and tertiary sectors in total employment were 58.90, 12.70 and 28.40, respectively, as against the corresponding all-India average figures of 58.82, 10.85 and 30.33. This position has altered in favour of the tertiary sector over the subsequent period. 12 years later, in 1999-2000, the per cent shares in employment of primary, secondary and tertiary sectors stood at 45.15, 12.45 and 42.40, respectively, in Haryana and at 52.43, 10.87 and 36.71, respectively, at the all-India level. Apparently, whereas in 1987-88, the contribution of tertiary sector in Haryana was below the national average, this position changed fast to not only far exceed the average all India level but also place Haryana among the top ranking States by enabling it move up from twelfth to sixth rank. This is a particularly impressive performance when we observe that among the three top ranking States are the smaller States of Delhi, Tripura and Pondicherry. Among the major States, Haryana (42.40 per cent) had only Kerala (49.76 per cent) and Punjab (43.22 per cent) ahead of it in this regard.

Haryana with less than 5 per cent unemployment rate may be ranked among the low level unemployment States particularly when we compare it with States like Kerala (19 to 22 per cent), West Bengal (10 to 17 per cent), Tamil Nadu (9 to 13 per cent), Assam (7 to 12 per cent) and Bihar (7 to 10 per cent).

Balanced regional development of different parts of the State, extension of the benefits of economic progress to the less developed regions and widespread diffusion of industries are among the major aims of planned development. Successive Five Year Plans seek to realise these aims. Balanced regional development, as far as possible, must go together with fast economic growth if the latter has to be really meaningful. In striving for such a balance, certain inherent difficulties have to be met. Sometimes the sense of lagging behind in development may be due to inadequate or tardy development of specific fields such as agriculture, irrigation, power, industry, employment, education, etc. This is the case with Haryana also where there are regions which are less developed than others. There are regional disparities in the State as regards irrigation. Recently the State Government has declared 88 areas in the State as industrially backward.

There are regional disparities in the industrial development of various parts of the State. While in 2003 there were 2567 registered working factories employing 1,86,638 workers in Faridabad district, there were only 60 such factories employing 4,250 workers in Mahendragarh district. The lowest number of industrial workers is in Kaithal district where 124 factories employed 2,710 workers. Similarly in Kurukshetra district 3,163 workers are employed in 164 working factories, in Fatehabad 3,723 workers are employed in 117 factories. On the other hand, more than one lakh people are employed in 1,031 factories in Gurgaon district and about 40,000 workers are employed in 1238 factories in Yamuna Nagar

district. In Panipat district 35,813 workers are employed in 741 factories, in Sonipat district 29,440 workers are employed in 528 factories and in Karnal district 27,879 workers are employed in 449 factories.

Another indicator of regional disparities is the percentage of urban population. In Faridabad district 55.63 per cent population live in urban areas, followed by Panchkula (44.47 per cent), Panipat (40.51 per cent) and Yamuna Nagar (40 per cent) districts. On the other hand the urban population of Mahendragarh district is only 13.46 per cent followed by Fatehabad (17.63 per cent), Rewari (17.82 per cent), Bhiwani (18.97 per cent) and Kaithal (19.36 per cent) districts.

The State of Haryana seems to be a late entrant on the tourism map of India. Though the development of tourism in the State is not less than an achievement keeping in view the fact that now the State has 43 vacation spots or holiday stop-overs where there was none in the early seventies but with the advent of socio-economic changes particularly after the 90s the achievement is no longer a solace provider.

The industrialisation in Haryana has witnessed a polarised growth mainly in the areas of Gurgaon and Faridabad districts whereas the other districts, despite government's concerted efforts, could not evoke the same response. The 'Delhi factor' i.e. close proximity of these areas to Delhi metropolitan put them in advantage over other areas. Delhi, being a highly urbanised and industrialised center qualifies to be treated as the potential tourist producing market and the Haryana tourism has been greatly benefited by this character of Delhi city. Highway tourism is the most popular type of tourism in Haryana, the major resource for that comes in the form of Highways passing through the State. Five most important National Highways pass through the State.

These highways are emerging as centres of development in the State because of increase in traffic on them and resulting in complex interplay of a number of economic factors. Technically, the highway tourism is not consistent with the conventional definition of tourism, which is primarily based on the components of accessibility, accommodation and attraction. Rather highway tourism signifies the availability of certain facilities for the tourists who commute between two destinations. These facilities range from food, entertainment, recreation, roadside attractions to shopping malls, petrol stations, medical facilities etc. In a way, these highways are emerging as the new mini markets or the destinations, the driving on which is becoming an attraction.

Further, Haryana has also been promoting Cultural tourism through Surajkund Craft Fair, Mahabharat Festival at Kurukshetra and Kartik Festival at Ballabgarh. Tourists in the State are being enthralled by various dances such as *Phag*, *Loor*, *Jhoomer*, *Khora*, *Daph*, *Gugga* dance, etc. Pilgrimage tourism at many places like Jyotisar, Pehowa, Pandu-Pindara, Kapal Mochan, etc. are also attracting tourists in the State.

The establishment of IT Kiosks is a profitable business. The profitability increases with more and more number of databases attached to the IT Kiosk centres. The governments are generally slow in preparing the databases that leads to the increase in project completion time causing increased costs and seriously hurts the viability of business. Haryana government should outsource all activities of preparing and maintaining of databases to private parties. Even the services to the citizens should also be provided by the private parties. The government officials can be used for validating and authenticating the information sold to the users. Strict quality standards should be established for providing easy, timely, cost-effective and reliable service to the IT Kiosk users.

The State of Haryana has decided to set up four Agro parks/food parks at Narwana, Dabwali, Saha and Jhajjar. In these food parks integrated services shall be provided to food processing units with special emphasis on exporting units.

Haryana has decided to pay special attention to the growth of exports in traditional areas *viz*. handloom products and carpets, scientific instruments, metal ware and utensils, ceramics, etc. Steps would be taken to modernise the production process, providing facilities for design development and quality upgradation, encourage production diversification in accordance with the changing demand in importing countries, establishment of trade centres with integrated facilities, set up special institutes to meet training needs in the areas and provide quality testing facilities etc.

The State of Haryana has gone ahead in implementing the decentralisation in rural as well as urban areas. With the objective of enhancement in the development process and to strengthen the democratic system a good number of powers (administrative and financial) along with the funds, have been delegated to Panchayati Raj Institutions (PRIs) and the Urban Local Bodies (ULBs).

The State is not far behind in putting its effort for the efficient delivery of services and transparency in the system. The tool of e-governance is being utilised for the

socio-economic development in the State. Therefore, the State government is making all its efforts for the promotion of Information Technology sector.

In the area of financial management, Haryana is one of the best managed states in the country. The notable feature of State finances is that Haryana is the first State in the country which has not availed of overdraft even for a single day during 2003-04 and 2004-05. The 12th Finance Commission of India has also commended the performance of Haryana in the areas of revenue growth, expenditure checking and reduction of deficit indicators. The State has been focusing on the development of infrastructure in urban as well as rural areas out of its own resources.

As regards the deficit position, Haryana has, on the whole, performed much better as compared to most other States. With its GFD/GSDP ratio equal to just 1.8 per cent, it stands at the top among all States. Similarly, with regard to PD/GSDP ratio, it is the only State which has a negative value for this ratio. As regards the other deficit ratios, the State occupies fifth position on the basis of RD/GSDP ratio and seventh position on the RD/RR ratio criterion. In sharp contrast to these achievements, it stands among the bottom three States when compared on the RD/GFD ratio basis. Its revenue deficit position is a matter of serious concern and requires greater, concerted action particularly on the expenditure side of the revenue account.

As regards the State's own tax and non-tax revenue position, it ranks among the top six States on the ONTR/GSDP ratio criterion, and bottom four States on the OTR/GSDP ratio basis. On the whole, considering both own tax and non-tax revenue together, the State figures among the top four States which is a measure of its relatively satisfactory performance in the direction of achieving self-reliance in resource generation.

In respect of non-developmental expenditure, the State may be said to be among the top five States which are spending a relatively lesser proportion of their GSDP for non-developmental purposes. But as regards developmental expenditure, the State's performance is highly disappointing as it ranks among the two States at the bottom. The same is true in respect of social sector expenditure and capital outlay as well where it has all States ahead of it.

Haryana figures among the top three States showing excellent performance on the basis of DEBT/GSDP ratio. It is ranked among the top seven States which are spending a relatively lesser proportion of their revenue receipts for interest payments as compared to other States.

The indices of Fiscal Self Reliance and Improvement given by 11th Financial Commission and the 12th Financial Commission show that during the period 1990-1999 Haryana was placed at 11th rank. But during the period 1993-2003 Haryana attained the first rank in the country. This shows excellent performance by the State in achieving fiscal self-reliance and improvement.

But still there is much more growth potential in Haryana than has been achieved to date.

6.2 Recommendations

1. The NCR area of the State needs to be extended to the radius of 125 kilometers or so from the border of Delhi State and within this area world class infrastructure needs to be created.
2. In order to improve the conditions of farmers the State economy needs to be diversified with progressive shift of population from agriculture to secondary and tertiary sectors; policy of corporatisation of agriculture through contract farming be introduced; and big corporations in agro-business be involved. The farming community needs to be involved through cooperative activities in agriculture production, processing and marketing. In order to eliminate poverty in the State an accelerated growth rate (GSDP) of about 10 per cent is required
3. To realise Haryana State's full share of Ravi-Bias water, the Satluj-Yamuna Link (SYL) canal needs to be completed at the earliest. Necessary steps need to be taken for the conservation and better management of surface water, rain water harvesting, and recharging of ground water and improvement of sub-soil water level in the State. Steps should also be taken to popularise drip irrigation system particularly for quality improvement and early ripening of horticultural produce. Necessary steps need to be taken to bring the entire sown area under irrigation
4. Since the existing paddy-wheat rotation in the agriculture sector in the State is causing degradation in soil fertility and further fall in the ground water level, there is an urgent need of crop diversification in the State. The cultivation of Jatropha and the setting up of Jatropha based bio-diesel units in the State should be given priority. The State should also promote agro-based

industries. Efforts should be made to set up public investment in extended agriculture in terms of accelerating the switch from cereals to oilseeds and pulses, horticulture, floriculture, fishery, bee keeping, and cultivation of medicinal and energy plants.

5. Accurate mapping of ground water zones as per their suitability for domestic, irrigation and industrial uses is highly desirable for proper management of ground water resources and to safeguard human beings from consumption of poor quality ground water. To check further deterioration in the quality of ground water in the State, regular monitoring of their chemical quality is necessary.

6. Infrastructure in the State, be it irrigation, power, roads, dry ports, airports or any other sector, needs the massive overdose of restructuring and investments. In order to bridge the demand-supply gap of electricity, necessary steps need to be taken to set up power generation plants. Steps need to be taken for the electrification and construction of new rail tracks and ring rail along the Kundli-Manesar-Palwal (KMP) Expressway in the State. There is a necessity for four laning of all the State and national highways passing through the State and strengthening and widening of all link roads in the State. Special emphasis should also be given for the construction of fly overs and rail over bridges. Airports and dry ports need to be set up and developed in the State.

7. The State should take necessary steps for the metro rail links from Delhi to Faridabad, Delhi to Gurgaon, Delhi to Bahadurgarh, Delhi to Kharkhoda and Delhi to Sonipat. Kharkhoda town, which is only seven kilometers from Delhi, needs to be fully developed as a modern residential and industrial town. Kharkhoda is full of development potentials.

8. Highly specialised courses at post graduate/under graduate/diploma level need to be introduced in emerging areas like Nano Science and technology, VLSI Design and embedded systems, Integrated product Design and Manufacturing, Print and Graphic communication, Optical Engineering, Product Design, Mechotronics and Aircraft Maintenance Engineering, etc.

9. Since tertiary sector holds the promise of being the major source of employment generation, it should be the endeavour of the State policy to accord special priority to the fullest exploration of its employment potential. The performance of the tertiary sector has been quite satisfactory during the Tenth Plan period. It recorded a growth rate of 10 per cent in 2002-03, 8. 9 per cent in 2003-2004, and 11.8 per cent in 2004-05, which is quite close to the targeted growth rate of 10.3 per cent fixed under the Plan. Given the vast growth potential of this sector, it appears quite within the reach of the State to push this rate to around 12 per cent (by 2012) which incidentally happens to be the nearest proximation of the highest rate fixed under the Tenth Plan for Karnataka, the top leading State in this respect. There is a need to take necessary steps to boost the service sector including information technology, biotechnology and tourism.

10. Haryana is one of the few States in India whose decadal growth rate of population has showed almost a negligible change over the last three decades. It is a matter of great concern for the State and requires an in-depth analysis of its socio-economic genesis.

11. The sharply declining sex ratio in the State is a matter of serious concern. It is important to identify the specific areas of the State where the problem is particularly alarming. It needs to be tackled with appropriate, effective and sustainable measures. This problem cannot be approached simply in terms of raising literacy rates and providing pecuniary incentives. The Census 2001 data on sex ratio and literacy rates pertaining to 67 *Tehsils* of Haryana brings out the fact that sex ratio and literacy rate are rather inversely related. For instance, the sex ratio has been recorded the highest in respect of *Tehsils* of Punahana (910) and Ferozepur Jhirka (902) even as these have the lowest literacy rates, 37.58 per cent and 40.61 per cent, respectively. As we come across areas of population having increasing levels of sex ratio, these areas tend to include low literacy areas in an increasing proportion, and high literacy areas in a decreasing proportion. This intriguing phenomenon needs to be intensively probed to find out the underlying reasons.

12. The State pollution control board should be held accountable for any damage to the environment. Its performance should be audited by an independent agency like Centre for Science and

Environment (CSE) or Tata Energy Research Institute (TERI) or N.E.E.R.I. The board should collect detailed data on production, assimilation and dispersion of pollution for different areas. The marginal costs of pollution abetments should be computed with the help of economists for all industries, for all kind of pollutions—air, water and solid waste.

13. Water provided through canals should be priced according to the marginal productivity of water for the crops. In many districts in Haryana the underground water level has gone below even more than 200 feet. Even the third layer of the water has been exploited. Extraction rate of water should be less than or equal to recharge rate. Even if the total rain water is harvested, still the underground water level recharge rate cannot match the extraction rate. The crisis is hovering on us, there is only one solution that is to decrease the consumption of water. The State needs to diversify into the crops which require less irrigation. The technology can be the answer to the problem. Dip irrigation system and sprinkler systems can minimise the use of water.

14. The consumption of water in the urban areas for domestic use has also been rising. Every urban authority and local bodies providing water supply service should install effluent treatments plants (ETPs). Bio-intermediation processes and corral cultivation for water purification can also be used.

15. A proper pollution tax should be imposed on the industries comprising of a lumpsum tax, tax on volume of water used, tax on volume of effluents generated and separate tax for concentration of the pollutants in the effluent water.

    For controlling air pollution, the tradable permits system should be introduced. The firms can decide to buy a permit for pollution, pay a tax or can pollute and face the litigation. If the firms have a choice, they will minimise their costs by choosing the right method. This will improve the innovation in the pollution abatement technology. Over a period of time, the firms will reduce the costs and pollution both. Theoretically, it can be proved that the marginal cost of pollution abatement becomes equal to pollution tax and equal to the price of permit in an efficient system. Most of the air pollution is vehicular in nature. It is a major problem of the cities. The environmental laws should be strictly implemented. Generally the motorists and vehicle owners get the pollution-checked certificate after paying a fee. The authorities use the fee as a source of revenue generation not as a tool of pollution control. The fee charged from the vehicle owners should be according to the level of emissions. This will force the vehicle owner to use additional pollution control equipments or to purchase less polluting vehicles.

16. The solid waste generated from the households can be used for recycling, to make compost fertilisers, energy production, bio-fuel production or land-filling. The urban citizens should be persuaded to keep three types of dustbins—one for recyclable wastes, second for bio-degradable wastes and third for plastic wastes. This segregated solid waste can generate a lot of employment.

17. For sustainable development the State should follow Hartwick-Solow approach. It suggests that the stock of capital could be held constant by reinvesting all Hotelling rents from non-renewable resources extraction in manmade capital. Therefore, the State should ensure investment equal to value of extracted mineral every year in the search of new minerals.

18. There is possibility of substitution within the different natural capitals. The manmade capitals are also substitutable for each other but there is little possibility of substitution between manmade and natural capitals. So with every developmental project, there is a definite loss of natural environmental assets. To contain this loss, the State should invest in a shadow project with strong sustainability constraints.

19. The harvest levels of renewable resources should be set less than or equal to population growth rate for some pre-determined population size. For all degradable pollutants assimilating capacity for receiving eco-system should be established. The waste discharges should be maintained below the assimilation rates. The discharge of the accumulative pollutants should be set close to zero. All the earnings from non-renewable extraction should be divided into an income stream and an investment stream. The investments stream should be invested on renewable resources.

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