NINTH FIVE YEAR PLAN
1997-2002

VOLUME I

Development Goals, Strategy and Policies

Government of India
Planning Commission
New Delhi

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FOREWORD

The Ninth Five Year Plan spans a momentous period in the history of our nation. It has been launched in the Fiftieth year of our Independence, and will see the country not only into the next century but into the next millennium.

Planning has been one of the pillars of our approach to economic development and growth since independence, and has stood us in good stead. Our collective faith and belief in the institution of planning has never before been demonstrated as clearly as in the present case. Although the finalisation of the Ninth Five Year Plan Document has been delayed by two years due to various events, it represents the continuity of governance in the country and the convergence of views on our development strategy among most political parties. The preparatory work towards the Ninth Five Year Plan was initiated in 1995 by a Congress Government, it was developed in large measure by the United Front Government, and brought to finalisation by the present Government.

Although the leadership has been provided by different political parties at different times, the transparency of the planning process has been maintained and all the background material are available for reference. A review of the background documentation reveals the remarkable convergence and continuity that has existed over this three year period. This convergence of views is cause for a great deal of confidence in the course of our future economic development since it implies that this Plan Document does represent the collective aspirations of our people, cutting across wide ideological and political spectra.

As we look back over the past 50 years of our development as an independent nation, we can take justifiable pride in having successfully reversed the worst inequities of our colonial heritage and building a nation of considerable economic strength in a framework of democracy and federalism. We cannot, however, overlook our shortcomings or to the magnitude of the challenges that lie ahead of us. Despite all our achievements, one third of our citizens still live below a modestly defined poverty line. Our social indicators, although much improved, are still unacceptably low. It is my belief that no nation can be strong and confident until each and every one of its citizens is filled with a sense of pride in himself and his nation. This is the task that we must set for ourselves, and the Ninth Plan is but one step to this end.

The conditions that exist today demand a decisive break from the past. The Government had taken on itself too many responsibilities with the result that it not only encouraged a dependency syndrome among our people, but also imposed severe strains on the financial and administrative capabilities of the Government. The limits have now been reached. Our people have conclusively demonstrated over the past fifty years their ability to function effectively in a political democracy in an independent, mature and self-confident manner. There is no reason why they should not be able to manage equally effectively in the economic sphere.

The Ninth Plan is based on the explicit premise that growth and development cannot take place in the absence of adequate economic decentralisation, whereby freedom is given to every citizen of this country to bring to full flowering the latent, productive and entrepreneurial talents that exist and which may have been suppressed by excessive governmental involvement in economic matters. Private initiative, whether individual, collective or community-based, forms the essence of the development strategy articulated in the Plan.

It is recognised, however, that due to historical and sociological reasons there are segments of our society which are inadequately equipped to participate effectively in a competitive environment. Adequate attention has to be paid to removing these disadvantages as early as possible. This is one of the main functions that the government will have to perform in the coming years.

The other area, in which the involvement of the government is inescapable in the near future, is in the provision of many of the basic infrastructural facilities. Experience has shown that economic growth has not necessarily led to commensurate improvements in the social indicators, which are a measure of the quality of life of our citizens. Such social infrastructure needs to be provided by the government as a part of its social responsibilities. But in these areas as well, decentralisation is of the essence for effective and responsive delivery of the services.

Economic infrastructure too is an area where we lag behind to a significant extent. Although we have gradually moved away from the view that such facilities have to be necessarily provided in the public sector, the conditions are not yet ripe for the private sector to fully shoulder the responsibility for their provision. Much more vigorous action needs to be taken in creating the environment for greater private investment in these sectors. Until such time, the major burden will have to continue to be borne by the government.

The Ninth Plan, therefore, marks a period of transition - a transition we cannot hope to conclude successfully without complete commitment to the ultimate vision and full cooperation of all segments of our society. It is, therefore, heartening that the Ninth Plan has received unanimous approval of the National Development Council, which represents the collective aspirations of our people. I believe that the Planning Commission, with all the changes that have taken place during the interim, has done a commendable job in articulating a vision of our future and the development strategy to attain that vision which is widely shared by the Nation. I congratulate the Deputy Chairman, Members and officers of the Planning Commission on this achievement. I would also like to express my deep appreciation of the contribution made by a wide cross-section of our political leadership, representatives of civil society, academics, industrialists, and individuals from various walks of life in this national effort.

A B Vajpayee

(Atal Behari Vajpayee)
Prime Minister of India, and
Chairman, Planning Commission

New Delhi
April 5, 1999

PREFACE

The Ninth Five Year Plan is unique in a number of ways. Although the Ninth Plan has commenced from April 1, 1997, the formal Ninth Plan document finally received all the necessary approvals and was adopted only on February 19, 1999. This delay of nearly two years in the finalisation of the document has been a point of some criticism to the effect that such delays negate the value of five year plans. There have been other times in the past when it has not been possible to present the five year plans in time due to various factors, political and otherwise. The four year interregnum between 1966 and 1969, the year 1979 and the two year period 1990 to 1992, were such periods, and each of them was declared as a "plan holiday". This option was available this time as well, but the government deliberately chose to continue with the development strategy that had been articulated by a previous government and endorsed by the National Development Council (NDC).

The choice was predicated on the belief that a 'plan holiday' is detrimental to development processes. A 'plan holiday' essentially means that no financial commitment can be made by the government for more than one year at a time. As a result, projects which have relatively long gestation periods cannot be started with any assurance. In addition, during a plan holiday there is considerable uncertainty about the future policy stand of the Government, which creates problems for private investors as well. In recognition of these implications, the present Government took a considered decision to continue with the Plan that had been formulated by the previous Government so that there was no disruption in the process of economic development of the country. It underlines our commitment to continuity of governance and to a development strategy that has been approved by the National Development Council. It is our belief that political considerations should not be allowed to disturb the process of growth and development of the economy. In my opinion this decision is the highest affirmation of this Government's belief in and commitment to planning.

However, every Government has the right to decide on areas of priority within the broad objectives laid down by the NDC. In the

National Agenda for Governance, this Government too has identified certain areas that it considers critical. These areas were further clarified by the Prime Minister. As a result, the Plan lays special emphasis on : (a) primary education; (b) primary health; (c) agriculture; (d) water resources; and (e) information technology. In these areas, Special Action Plans (SAPs) have been formulated which have both an actionable time-bound programme for implementation and will also receive adequate ear-marked financial resources. Such an approach was designed to ensure that these special areas of focus would receive greater attention so as to enable the flow of intended benefits to the common man.

The delay in approving the Plan has had other effects as well. In 1996-97, when the bulk of the work relating to the formulation of the Plan was undertaken, the economy was in the middle of an unprecedented boom. At that point in time expectations were high, in hindsight perhaps unrealistically so, and any target growth rate of GDP of less than 7 per cent per annum appeared almost unthinkable. As a consequence, while approving the Approach Paper to the Ninth Five Year Plan in January 1997, the National Development Council (NDC) directed the Planning Commission to chart out a strategy for sustaining an average growth rate of 7 per cent during the Ninth Plan period. Subsequent events, however, have led to a sharp decline in growth expectations. Nevertheless, the NDC has decided that the target growth rate should be revised to 6.5 per cent for the Plan, implying an average of 7 per cent per annum for the remaining three years of the Plan period, which reflects a commitment to adoption of the required policy changes outlined in the Plan at the highest level.

The second unique feature of the Plan lies in its recognition of the changed economic circumstances of the country. In the past, circumstances were such that all earlier Plans have been based on the view that economic growth in India is restricted primarily by the availability of investible resources in the economy, and higher growth rates can become feasible only through augmentation of such resources. The Ninth Plan has pointed out that the problem of economic growth and development in the country at the present time is not only the availability of total resources for investment but also the ability of the economic system to absorb these resources effectively and efficiently. Therefore, it is possible to accelerate the growth rate by adopting measures for improving absorption and deployment of the available resources. There are a number of dimensions to this issue which have been enumerated in the Plan.

The first and most significant factor which may retard the level of investment in the country is the availability of and access to investible resources by the Government for investment in the social and economic infrastructure. In earlier years, public access to investible resources was not considered to be a significant problem. At the present time, however, the budgets of the central and almost all state governments are under tremendous pressure so that they are being forced to borrow even for meeting their current expenditures, such as, salaries and wages, interest payments and subsidies. As a result there are insufficient funds for making the investments which are essential for the development of the economy. The pressures on government finances have become so acute that the share of public investment in total investment in the country, which was targeted to be about 46 per cent during the Eighth Plan, has fallen to less than 30 per cent in the closing years of the Eighth Plan.

This would perhaps not matter very much if private investment could be expected to rise sufficiently to absorb the resources available in the economy and thereby compensate for the reduced share of public investment. However, private investment demand is susceptible to a number of factors, both market and policy related, and it is necessary that the economic environment should be made conducive to high and sustained levels of private investment, particularly in such areas of infrastrucure where public resources are inadequate. The Plan has identified three main areas of concern.

First, all productive activities require adequate availability of infrastructure. It has become increasingly apparent that the state of economic infrastructure in the economy is inadequate to support rapid growth of GDP. Although efforts have been and are being made to augment infrastructure availability through private participation, the requisite policy framework is yet to be entirely in place. As a consequence, over-all private investment in the short term will be dependent upon public investment in infrastructure, and in the medium run on the success achieved in creating an attractive environment for private involvement in infrastructure development and on the response of the private sector in taking advantage of the emerging opportunities.

Second, no private investor will be willing to invest in a situation of inadequate aggregate demand. This point has been driven home with some force during the past two years. Therefore, attention has to be paid to generating and maintaining high levels of aggregate demand in the economy without compromising on the over-all level of savings or on the rate of inflation. If public investment, one of the main components of aggregate demand, is constrained by fiscal considerations, greater reliance will have to be placed on the other components, particularly on rapid growth of exports. Sustained growth of exports is not only determined by the state of international markets, but perhaps even more importantly by the domestic policy regime, which powerfully affects entrepreneurial behaviour. It is necessary therefore to ensure that there is no anti-export bias in our policy regime. This must form a major component of our future agenda.

The third factor that may retard private investment demand in the country is the present state of the financial sector. It is increasingly being realised that even if there is adequate availability of investible resources in the form of domestic savings and external capital inflows, the actualisation of these resources in terms of real productive investment would be influenced by the efficiency of the financial intermediation activity in the economy. With greater reliance on private investment, however, an inefficient or fragmented financial intermediation system can be a drag on the economy. Despite a fair degree of progress having been achieved in financial sector reforms in recent years, the Indian financial sector needs to become more integrated in order to adequately handle the demands that will be placed on it in the future. As private investment in infrastructure and heavy industries, which require long-term commitment of funds, begins to gather momentum, sources and modalities of long-term finance will have to be evolved.

The emphasis given to the above three factors in the Plan indicate the efforts made by the Planning Commission in re-orienting its approach from a system characterised by the dominance of public investment, on the one hand, and a significant degree of control on private investment, on the other, to planning for an economy in which private investment will play a greater role within a more market-oriented framework. In the immediate future, however, there does not appear to be any option but to arrest the slide that has taken place in public investment in the very recent past. This cannot come about without tackling the fiscal problems of the Central and State Governments on a war-footing. Fiscal consolidation will require difficult and painful decisions; and these have been clearly spelt out in the Plan.

Increasing revenues is clearly the first task. As the Plan points out, we have yet to tap a number of revenue sources in adequate measure, and it is unnecessary to elaborate on this. One important issue that deserves to be highlighted, however, is the deleterious effect of inter-State tax competition which is becoming increasingly acute. It is necessary for us to harmonise our tax systems in a manner that benefits us all, at the Centre and the States. The second point that should be emphasised is that there is wide variation in the level of fiscal effort in the different States of the country. Each State needs to benchmark its tax performance to the best performing State in the country in order to ensure that loopholes are plugged and tax administration is made more efficient. In addition to tax revenues, user charges are extremely important. We cannot continue to undercharge for power and irrigation, tolerating large losses on these accounts. Despite all these measures, our developmental resources are unlikely to increase significantly unless we can control the growth in our non-developmental expenditures.

It, therefore, becomes essential that the Government gradually shifts its expenditure patterns away from providing non-transparent and non-targeted subsidies. Unfortunately, the beneficiaries of the present system of subsidies are much more organised and politically more vocal than the vast majority of our common citizens who silently suffer the lack of even the basic amenities of a decent and healthy existence. It is the responsibility of the Government to ensure that this silent majority is not lost sight of, and this is what the National Agenda for Governance and the Ninth Five Year Plan have set out to do. For such action political will is imperative, and we will have to collectively resolve to eschew competitive populism.

Finally, the Plan explicitly recognises that public resources are being used relatively inefficiently, and that a much greater impact could be made even with existing resources provided that the methods of implementation and delivery mechanisms for public services are improved. There is one point in particular that should be highlighted. We believe that services which are of a local nature, such as primary education, primary health and drinking water, are best managed by local bodies. This ensures not only that such programmes are designed to suit local needs but also ensures better management control and accountability. It is for this reason that the Ninth Plan lays a great deal of emphasis on decentralisation of a number of programmes to the Panchayati Raj Institutions. It is recognised of course that the panchayat system does not function as effectively in some parts of the country as in others. This calls urgently for greater focus on improving the functioning of the panchayat bodies in these areas. Greater transparency and accountability in the implementation of government programmes is also critical. This can be done through a process of democratic decentralisation, sharing of information with the public and Gram Sabhas and through operationalisation of the scheme of social audit. Another element is the concept of joint monitoring, which requires close interaction between the various tiers of Government in a spirit of cooperative federalism.

The short point, therefore, is that achievement of a sustained average growth rate of GDP of 7 per cent per annum is feasible provided action is taken across a wide range of policy issues. It is nobody's case that such decisions are either easy or can be carried out within a short period of time. But time is indeed short. The biggest challenge facing the country in the coming years is to provide employment for our growing work-force and to eradicate poverty and other forms of deprivation from the face of our country. The Ninth Plan draws attention to the stark fact that despite a decline in the expected growth rate of population, labour force growth reaches a peak level of 2.5 per cent per annum during the Ninth Plan period - the highest it has ever been and is ever likely to attain. This presents both a challenge and an opportunity. If we can provide adequate employment opportunities to our people over the next ten years, we would have made a significant dent on the incidence of poverty in the country. In order to achieve this, the economy will not only have to grow at over 7 per cent per year in a sustained manner, but the structure of growth should answer the needs of the emerging work-force. Failure on this front will lead to growing unemployment, with all its attendant consequences.

There is also a regional dimension to this problem which we cannot ignore. Certain regions of the economy are likely to experience population and work-force growth considerably in excess of the national averages. It has to be our objective to ensure that work opportunities are created in these locations and are commensurate with the skill profile of the emerging work force. This is but one dimension of the objective of balanced regional development, which has always been an essential component of our development strategy since independence. Since not all parts of the country are equally endowed with social and physical infrastructure to take advantage of growth opportunities and since historical inequalities have not been eliminated, intervention in the future is required to ensure that such regional imbalances are not aggravated. With the greater freedom in choice of location that is available in the present development strategy, and given the many market imperfections that exist, it is quite likely that comparatively better-off States will be able to attract more investment than others. There is a strong probability that under market-based growth, many less-developed regions may remain outside the mainstream of development and fail to get the benefits of the higher growth tempo. Therefore, the Plan has to ensure improved opportunity for public and private investment in social and physical infrastructure by appropriate policies in favour of weaker States and those which are likely to face greater pressures from the emerging demographic trends. It also needs to be appreciated that the problem of imbalance is an issue which operates not only at an inter-State level, but also has intra-State dimensions. Therefore, there is a need to address each aspect in a framework which is more flexible than the political and administrative boundaries of the individual State.

It is in this context that mention must be made of another feature of the Ninth Five Year Plan which distinguishes it from earlier plans. A number of earlier plans have explicitly recognised that the sector which has the greatest employment potential is agriculture. The Ninth Plan goes further and asserts that agricultural growth also has the highest potential for both poverty reduction and reduction in regional imbalances. A number of developed and developing countries like Australia, New Zealand, Malaysia and Taiwan, and also our own state of Punjab, demonstrate that highly productive agriculture can lead to just as high standards of living as high levels of industrialisation, with more favourable impact on poverty. In India the level of agricultural productivity, particularly in those areas characterised by high poverty, is so low that it invites attention to the sizeable scope and opportunity for increasing agricultural output, and thereby rural incomes, across a wide geographical area. Such growth, however, will not come about unless close attention is paid to the needs of agricultural development. Not only does this mean that more water, fertilisers or high yielding variety of seeds have to be used, it must also be recognised that modern agriculture is just as much a high technology activity as any industry. Therefore, a focused approach to agriculture would also require providing the appropriate education and training to our agriculturists, developing ways to provide technical information to every farmer, and to provide the appropriate kinds of infrastructure and institutions for both agricultural production and marketing of the produce, including agro-processing.

In many ways, therefore, the Ninth Plan represents a perceptible departure from the past. It demands bold policy decisions. It challenges the courage and commitment of our political and economic leadership. The fact that this challenge has been taken up by the NDC through its unanimous approval of the Plan is cause for both gratification and optimism. I am certain that we shall collectively work towards converting the challenges to opportunities; dreams to reality. We owe our people no less.

KC Pant

(K. C. Pant)
Deputy Chairman
Planning Commission

New Delhi
April 5, 1999

NINTH FIVE YEAR PLAN (1997-2002)

VOLUME I

Contents

CHAPTER 1

OBJECTIVES, STRATEGY AND PERSPECTIVES OF DEVELOPMENT

1.1 The Ninth Five Year Plan, launched in the 50th year of India's Independence, will take the country into the new millennium. Much has happened in the fifty years since independence. The people of India have conclusively demonstrated their ability to forge a nation united despite its diversity, and their commitment to pursue development within the framework of a functioning, vibrant and highly pluralistic democracy. In this process democratic institutions have put down firm roots and flourished and development has also taken place on a wide front. As the millennium draws to a close, the time has come to redouble our efforts at development, especially in the social and economic spheres, so that the country will realise its full economic potential and the poorest and the weakest will be able to shape their destiny in an unfettered manner. This will require not only higher rates of growth of output and employment, but also a special emphasis on all-round human development, with stress on social sectors and a thrust on eradication of poverty.

1.2 The Approach Paper to the Ninth Five Year Plan, adopted by the National Development Council, had accorded priority to agriculture and rural development with a view to generating adequate productive employment and eradication of poverty; accelerating the growth rate of the economy with stable prices; ensuring food and nutritional security for all, particularly the vulnerable sections of society; providing the basic minimum services of safe drinking water, primary health care facilities, universal primary education, shelter, and connectivity to all in a time bound manner; containing the growth rate of population; ensuring environmental sustainability of the development process through social mobilization and participation of people at all levels; empowerment of women and socially disadvantaged groups such as Scheduled Caste, Scheduled Tribes and Other Backward Classes and Minorities as agents of socio-economic change and development; promoting and developing people's participatory bodies like Panchayati Raj institutions, co-operatives and self-help groups; and strengthening efforts to build self-reliance. These very priorities constitute the objectives of the Ninth Plan.

1.3 Some specific areas from within the broad objectives of the Plan as laid down by the NDC have been selected for special focus. For these areas, Special Action Plans (SAPs) have been evolved in order to provide actionable, time-bound targets with adequate resources. Broadly, the SAPs cover specific aspects of social and physical infrastructure, agriculture, information technology and water policy.

1.4 The Ninth Plan is based on a careful stock taking of the strength of our past development strategy as well as its weakness, and seeks to provide appropriate direction and balance to the socio-economic development of the country. The principal task of the Ninth Plan will be to usher in a new era of growth with social justice and participation in which not only the Governments at the Centre and the States, but the people at large, particularly the poor, can become effective instruments of a participatory planning process. In such a process, the participation of public and private sectors and all tiers of government will be vital for ensuring growth with justice and equity.

Objectives of the Ninth Plan

1.5 The Ninth Plan recognises the integral link between rapid economic growth and the quality of life of the mass of the people. It also recognises the need to combine high growth policies with the pursuit of our ultimate objective of improving policies which are pro-poor and are aimed at the correction of historical inequalities. Thus the focus of the Ninth Plan can be described as : "Growth with Social Justice and Equity".

1.6 The specific objectives of the Ninth Plan as approved by the National Development Council are as follows :

(i) Priority to agriculture and rural development with a view to generating adequate productive employment and eradication of poverty;

(ii) Accelerating the growth rate of the economy with stable prices;

(iii) Ensuring food and nutritional security for all, particularly the vulnerable sections of society;

(iv) Providing the basic minimum services of safe drinking water, primary health care facilities, universal primary education, shelter, and connectivity to all in a time bound manner;

(v) Containing the growth rate of population;

(vi) Ensuring environmental sustainability of the development process through social mobilisation and participation of people at all levels;

(vii) Empowerment of women and socially disadvantaged groups such as Scheduled Castes, Scheduled Tribes and Other Backward Classes and Minorities as agents of socio-economic change and development;

(viii) Promoting and developing people's participatory institutions like Panchayati Raj institutions, cooperatives and self-help groups;

(ix) Strengthening efforts to build self-reliance.

The development strategy of the Ninth Plan has been tailored to the requirements of these objectives.

The Development Strategy

1.7 India's development strategy, like that of most other developing countries, has evolved over successive Plan periods, reflecting the growing strength of our economy, structural transformations taking place in the domestic economy and also developments in the world economy. In the early stages of development planning, government was viewed as the principal actor in development exercising strict control over private investment, ensuring a dominant role for the public sector in all important industries. Trade policy tended to be inward oriented focusing on industrial development through import substitution which was encouraged through a tight control over imports and maintenance of high tariffs. The limitations of this strategy became evident by the end of the 1970s and early 1980s when it became clear that these policies reduced efficiency and competitiveness and growth was much lower than targeted. While government was over-active in industry, it was under-active in many areas, especially relating to social development and this was reflected in a very slow pace of improvement in critical social indicators.

1.8 Some efforts were made to reform the system in the second half of the 1980s to address the shortcomings in our development strategy. However it was not until 1991 that a wide ranging programme of economic reforms aimed at decontrolling and debureaucratising the economy was initiated. These reforms have been pursued by successive governments since 1991 and enjoy a broad base of support. They have also yielded good results thus far. There is no doubt that the Indian economy has responded well to the change in policy direction and the growth rate increased from 5.8% in the Seventh Plan (1985 to 1990) to 6.8% in the Eighth Plan. And yet there are many dimensions in which performance has lagged behind expectations. Faster growth has not reduced poverty as much as it should have, nor has it created the number of high quality jobs we need to satisfy the aspirations of our increasingly educated youths. Growth has not been as regionally balanced as it should have been. The deficiencies in social development indicators have also continued and our low level of social development is today a major constraint on reaching a growth rate of 8 per cent, which should be our medium term target. The Ninth Plan is being implemented at a time when we are about to enter the new millennium. The international environment is also full of uncertainties in the aftermath of the East Asian crisis. It is appropriate at this critical period to articulate a development strategy which reaffirms and builds upon what has worked well, initiates corrective steps where needed, and takes new initiatives to meet the new challenges which face the economy in the years ahead.

1.9 There should be no doubt that the process of reforms which has been underway for some years, and which has yielded many good results, must continue and be strengthened. The reforms involve a major re-orientation of the role of the State. Instead of being a pervasive controller of private sector activity, and also a direct producer in many areas through majority owned public sector enterprises, the State must play a different role in future. One of the strengths of our economy is that we have a strong and vibrant private sector, including large, middle sized and small enterprises. Our agriculture has always been based on individual farmers with a predominance of small and marginal farmers. Our development strategy must be oriented to enabling our broad based and varied private sector to reach its full potential for raising production, creating jobs and raising income levels in society. A vigorous private sector, operating under the discipline of competition and free markets, will encourage efficient use of scarce resources and ensure rapid growth at least cost. Our policies must therefore create an environment which encourages this outcome.

1.10 Encouragement of the private sector and reliance upon competition and market forces does not mean that the State has no role to play or even that its role in development may be reduced. What is involved is not so much a reduction in the role of the State as a re-orientation. The State must withdraw from the role of being a controller and licensor of private enterprise in areas where market competition and an efficient financial sector will ensure appropriate decisions on investment and technology. However, there are many areas where the State must actually increase its involvement. The most important of these is in the area of social development especially in rural areas. Despite progress in the other areas over the past decades, we are woefully lacking in providing basic services such as health care, education, safe drinking water etc. to the majority of our population especially in rural areas. Extension of these services to the mass of our population is an urgent priority, not only because it is a desirable social end in itself, but also because it is a precondition for achieving rates of growth of 7-8% per annum. Provision of these services to the mass of our people can only be achieved through a much larger role to be played by the State. The provision of economic infrastructure such as power, roads, ports, railways, telecommunications, municipal services etc. is another area where the State will need to play a continuing role. Some of these services can be provided by the private sector and it is essential to tap this potential as much as possible so that the deficiencies in these areas can be met as quickly as possible. However, even with the best possible effort to attract private investment in infrastructure the State will continue to have to provide a large part of the investment needed for economic infrastructure. Public investment in infrastructure must continue to have high priority especially in those areas of infrastructure where the private sector's continuation is likely to be limited. There are other areas where the State must continue to play a major role and these are examined in detail in the next section.

1.11 Agriculture provides the livelihood of the largest number of our people and robust growth in this sector is the best guarantee of achieving a broad based growth of income levels and employment especially in rural areas. Our development strategy must focus special attention on this sector which requires a unique combination of private effort and public support. Agriculture has not benefited as much as it should have from policies of economic liberalisation because agriculture continues to suffer from too many restrictions and impediments which prevent farmers from marketing their produce at attractive prices. The phased reduction in the high levels of protection given to industry, and the opening up of export market for agricultural products, will help to shift the terms of trade in favour of agriculture and this should help to raise rural incomes. But broad based agricultural development also requires substantial investments in economic infrastructure especially irrigation, rural roads and creation of organised markets. These are all areas where the State must play a lead role. Agricultural research is another area where the role of the State will continue to be important.

1.12 The process of liberalising Central government control over the industrial sector has advanced considerably. Industrial licensing has been eliminated for all but a handful of industries and the list of industries reserved for the public sector has also been sharply reduced. The remaining controls at the Central Government level need to be reviewed for further liberalisation. Indian industry must be unshackled from unnecessary bureaucratic and governmental interference. However the major effort in future has to be to extend liberalisation to the level of State Governments. Indian industry still suffers from a plethora of controls and regulations relating to matters in the purview of State Government which cumulatively impose a heavy burden of delay and even harassment of our entrepreneurs. A thorough revamp of these controls and the procedures involved at the State Government level would help to create a climate in which Indian industry can flourish.

1.13 The role of the public sector as a direct producer of goods and services needs to be reviewed in the context of experience gained and emerging realities. The Eighth Plan saw the start of a process of disinvestment of government equity from public sector enterprises and the resources so generated were used to supplement available budgetary resources to finance development expenditure. Initially, disinvestment was undertaken subject to government equity remaining at 51%. There is no particular reason why government should retain a majority equity stake in public sector enterprises except for those that are in the strategic areas where national security is involved. For all other enterprises the government has announced that as a general rule it will dilute its holdings to 26 per cent as early as possible. The manner in which this is to be done will be determined on the basis of recommendations of the Disinvestment Commission. The Commission has made recommendations regarding several public sector enterprises including recommendations to induct a strategic partner who would exercise full or joint management control, in some cases. These recommendations need to be implemented expeditiously. The resources realised through sale of government equity in PSUs could be used to finance much needed investments in the social sectors especially health and education. At a time when resources are scarce, there is merit in unlocking resources embedded in public sector assets created through earlier investments in these enterprises and using these resources to invest in the social sectors, where we are seriously deficient. Reduction in the government's holding in public sector equity will not have an adverse effect on the health of the public sector units. On the contrary, the removal of government interference should give these units the corporate freedom they need to function efficiently in a competitive market.

1.14 Foreign trade policies in the Ninth Plan must be tailored to the objective of accelerating growth in an environment in which the world is becoming increasingly integrated and globalised. The process of globalisation is a reality which cannot be denied and also should not be avoided. However, it needs to be managed so that we can derive the maximum advantage from world markets. To do this, it is necessary to continue the process of opening up of the economy to international competition, which was initiated in the Eighth Plan period, while making parallel efforts to strengthen the potential of Indian industry to compete effectively in world markets. Quantitative Restrictions(QR) on imports have already been dismantled for all except consumer goods, and these remaining restrictions will be removed in a phased manner by the year 2003. As a special measure, QRs have been abolished in advance for SAARC countries, in order to given an impetus to regional trade. Import tariffs have also been reduced significantly over time, but our import tariff rates continue to be much higher than in other developing countries. Continuing with high levels of protection is not desirable if we want our industry to be competitive in world markets and it is therefore necessary to continue the process of phased reduction in import tariffs to bring our tariff levels in line with levels prevailing in other developing countries. Indian industry has adjusted well to the gradual reduction in protection levels over the past several years and the associated shift to a more realistic market determined exchange rate. The process has certainly helped to modernise industry and reduce costs and should be continued. Priority in tariff structure reform should be given to reducing tariffs where they cause tariff anomalies i.e. where duties on inputs are higher than on finished goods. Steps should also be taken to strengthen the anti-dumping machinery to ensure that the domestic industry is not subjected to unfair competition.

1.15. Export performance will be critical in determining our ability to achieve high growth rates while also achieving the objective of self-reliance. Rapid economic growth requires larger volumes of investment and extensive industrial modernisation, both of which imply rapidly growing import needs. Maintenance of balance of payments stability in this situation depends upon our ability to achieve high rates of export growth. Without a strong export performance there is a danger of being pushed into unsustainable balance of payments deficits, which could lead to increased external indebtedness. Export growth was relatively strong through most of the Eighth Plan period but has slowed down in the early years of the Ninth Plan. This is a disturbing development which needs urgent attention. It is essential to examine the constraining factors which limit our export performance and take urgent steps to remove these constraints. Exchange rate policy is one important determinant of export performance and it is essential to ensure that the exchange rate remains supportive of the export effort. Equally important in the present situation are infrastructure constraints including transport, customs procedures, and banking facilities. Our facilities and procedures in these areas are inadequate and often lead to delays and harassment. They need to be thoroughly revamped to provide greater support to exporters.

1.16 Foreign investment provides external resources which help to finance the balance of payments deficit without adding to the country's external debt. In this respect, the ability to attract foreign investment promote the objective of self reliance by helping to avoid a build up of external debt which adds to our vulnerability. Apart from providing support for the Balance of Payments, foreign investment also provides critical access to technology and other types of know how, and also provides potential linkages to world markets. In a world where trade is increasingly dominated by transnational corporations, it is important to encourage foreign investment as part of the process of modernising our industry and developing linkages with the rest of the world. Many Indian companies are eagerly seeking foreign investment in joint ventures as part of their plan for technological upgradation and modernisation and these efforts should be encouraged. As the second largest developing economy in Asia, India can be a major destination for foreign investment and policies in the Ninth Plan should be designed to take advantage of this possibility. Foreign investment policy was re-oriented in the Eighth Plan period to encourage a larger flow of foreign investment into the economy, especially into the infrastructure sectors where a rapid expansion in capacity is urgently needed. Foreign direct investment increased from $ 0.1 billion in 1990-91 to $ 3.2 billion in 1997-98. This level can be raised threefold by the end of the Ninth Plan period.

1.17 An aspect of external economic policy which needs careful consideration is the pace of liberalisation of the capital account. Globalisation has meant an explosion of financial integration in world markets, with large volumes of capital moving freely across national boundaries. Free access to capital from world market has its advantages, but it also poses dangers to developing countries because of the potential volatility of these flows. This is amply demonstrated by the experience of East Asian countries, which suffered a massive outflow of capital based on a sudden change in international perception about underlying fundamentals in these countries. The outflow precipitated a currency crisis with a severely disruptive effect on these economies. It is important to recognise that East Asia's problems arose not because of open trade policies or openness to foreign direct investment, but because an open capital account allowed banks and corporations to borrow freely in world markets leading to a large accumulation of short term debt. Weaknesses in the banking sector led to poor inter-mediation of these flows to support unproductive investments, including investment in real estate. When these weaknesses became apparent, the short-term nature of the liabilities led to a reversal of capital flow which was not easily arrested. A lesson commonly drawn from the experience is that developing countries with weak banking system may be well advised to maintain restriction on short term capital flows to limit the potential danger of sudden and large outflows. The approach to capital account liberalisation followed in India has been cautious, and government policy has been particularly concerned to avoid a build up of short term external liabilities. This caution is vindicated by the East Asian experiences. External policies should continue the process of cautious liberalisation in the financial sector with particular caution on the build up of short- term debt.

1.18 Infrastructure especially electric power, telecommunications, railways, roads and ports has become a major constraint on growth partly because there was inadequate investment in this area in the Eighth Plan. Rapid growth in the Ninth Plan will generate a heavy demand for these services, and being non-tradable the additional demand has to be met by expanding domestic supply. This in turn requires a large increase in investment. Traditionally, infrastructure has been provided largely by the public sector but the investment needs of infrastructure development greatly exceed the resources likely to be available with the public sector. Mobilisation of private investment to supplement the public sector effort is therefore essential. However, it must not be assumed that private investment in infrastructure provides an easy solution to all problems justifying neglect of public investment in this area. Even with the maximum feasible success in attracting private investments, it will be necessary for the public sector to bear the brunt of the burden of expanding capacity in the Ninth Plan period. This is especially so in areas such as roads, railways and rural electrification, where the scope for private investment is limited, but it is also true for infrastructure in general that the public sector will remain the dominant source of expansion. It is therefore critical to ensure that the resources available with the public sector are adequate to the task. This calls for far reaching reform of the infrastructure sector. Reforms of the power sector in the States, including reform of power tariffs, is especially important to make the State Electricity Boards financially viable. This is necessary to expand public investment and also to create credibility among private investors selling power to State Electricity Boards (SEB). The financial position of the Railways also needs to be strengthened. In both cases, apart from achieving higher operational efficiencies, a large part of the answer lies in introducing higher user charges. In other areas such as roads it is more difficult to rely on user charges though a start can be made by introducing tolls on public highways being expanded or improved. Additional financing can however be provided by an earmarked cess on diesel.

1.19 Public investment in infrastructure will have to be supplemented by efforts to attract private investment in these areas wherever possible. All major infrastructure sectors have already been opened to private investment and a number of private sector projects are being implemented in power generation, telecommunication services, ports and even roads and airports. However, these efforts have been less successful than was initially expected. Several projects have run into unanticipated difficulties which have delayed financial closure or slowed down implementation. In retrospect, it can be said that the difficulties and complexities of inducting private investment into regulated infrastructure sectors were underestimated. In the case of the power sector, the financial weakness of the SEBs has made it difficult for the independent power producers to obtain financing as long as they are subject to the risk of non-payment for electricity sold to the SEBs. The difficulty in negotiating fuel supply contracts with suitable penalties for non-delivery is also a problem. In the case of telecommunications the problems that have arisen are very different. Private investors bid high licence fees but subsequently claimed that the projects had become unviable with such high fees. Questions have also arisen about whether the policy framework provides a level playing field between new entrants and the existing public sector supplies. There can be no general solutions to these problems. However it is clear that if we want private investment in infrastructure we must ensure that the policy framework in each sector makes it possible for private investors to invest in these sectors with reasonable expectation of an attractive return. The deficiencies in the existing policies in each sector, as revealed by the experience of the past few years, need to be reviewed and urgently corrected. It should be the objective to put in place a policy framework which draws from best practice internationally and is tailored to the specific requirements of our situation.

1.20 Reforms in the real economy need to be supported by an efficient financial sector capable of moblilising the savings of the community and allocating them to the most productive users. In this context it is important to emphasise the role of financial sector reforms in the years ahead. The Eighth Plan period saw the start of reforms in the banking sector consisting of financial liberalisation in the form of reduced direct Government control over interest rates and credit allocation mechanisms combined with efforts to strengthen the regulatory framework by improving prudential norms, capital adequacy standards and external supervision. While substantial progress has been made, the process of banking sector reforms needs to be accelerated, especially in the context of the recent experience of many East Asian countries where fragility in the banking sector was an important cause of the crises in the region. Efforts must be made to ensure that the Indian banking sector comes up to internationally acceptable standards of capital adequacy, prudential norms and risk management. A process of reform has also been underway in the capital markets, and considerable progress has been made in establishing a modern regulatory framework covering the major participants in the capital market. The technology of trading and settlements in the stock exchanges has been modernised. This process also needs to be continued in the Ninth Plan. A strong well functioning capital market is an important part of the financial system and is a noteworthy important source of funds for both the private and public sectors in the future.

1.21 Another major area of financial sector reform relates to insurance and pension funds. These institutions for contractual long term savings can play a major role in increasing aggregate savings of the economy. Insurance and pensions institutions are also natural sources for long term capital since they have long term liabilities which they need to match with long term assets. The insurance and pension sector is therefore particularly important for the financing of infrastructure, which needs long term funds. Proposals for the reform of insurance sector by ending the public sector monopoly in this area, and opening it up to private sector participants, need to be implemented urgently in order to create a financial sector which provides good quality service to the consumer and also meets the financing needs of industry.

1.22 The success of any development strategy depends critically upon the ability of the Government to maintain a stable macro-economic environment in which the fiscal deficit is kept at a reasonable level. Unfortunately, this is an area where the experience of the Eighth Plan has been disappointing. The combined fiscal deficit of the Central and State Governments has remained between 6 and 7 per cent over the past several years, which is very high by international standards. Continued deficits at these levels will either mean continued high rate of interest, or a constant threat of over monetisation and consequent inflation. Steps must be taken to restore the fiscal health of the government at all levels. The Government borrowing programme must be contained at a moderate level if we want to move to a regime of low real interest rates with an adequate availability of resources to finance private investments at reasonable interest rates.

1.23 It is necessary to define a long term fiscal policy, with a clear time path for reducing the fiscal deficit to a sustainable level. Within framework, particular emphasis must be placed on reducing the revenue deficit so that containment of the fiscal deficit is not at the expense of public investment. Control over the revenue deficit can only be achieved if there is a willingness to face difficult decisions. Efforts must be made to improve tax collections especially in the area of excise duties where the tax ratio has been declining steadily. It is also necessary to take steps to control non-Plan expenditure. This in turn requires a systematic review of subsidies. Over the years, a number of subsidies, both direct and hidden, have come into existence. Fixation of administered prices on extra-economic considerations is an important element of non-transparent subsidies. Such subsidies are open-ended and in some cases have accrued to those who are not envisaged to be the real beneficiaries. There is a need to move to a system of transparent subsidies directed towards specific target groups in a selective manner.

1.24 The Eighth Plan has witnessed significant improvement in technology levels in the country, particularly in the industrial sector. Much of this development has been based on import of technology which is certainly important and needs to be continued. However, it is also necessary to emphasise development of technological capabilities within the country. Steps need to be taken to enhance the technological capabilities of the nation and to this end, it is necessary to evolve a technology policy which gives adequate incentive to the development of domestic R&D. A substantial domestic R&D capacity must be an essential component of our long run development strategy. This aspect of development strategy is further emphasised by the emerging global regimes restricting the flow of a wide range of technologies on the ground of "dual use." This situation has to be met through a combination of international initiatives and renewed domestic effort. Government must evolve strategies which will help domestic R&D activities through an appropriate combination of tax and other incentives. It is also necessary to strengthen the legal framework protecting intellectual property to give appropriate incentives for research and development.

1.25 The evolution in information technology taking place around the world holds for the prospect of considerable economic gains for India both in domestic application of IT and in our economic interaction with the rest of the world. The spread of information technology in India is as yet inadequate, and urgent steps are needed to create a national network for information dissemination. This would not only help our industrial sectors, and especially the software industry but would also enhance the effectiveness of dissemination of technologies for strengthening rural economic activities, including agriculture, and social infrastructure and would also enable greater transparency in the operation of Government schemes and programmes. India has the potential to become a software super power in the next ten years and it must be the objective of policy to realise this ambition. The government has already taken a number of steps in this area and it must be ready to do more.

1.26 The Ninth Plan is based on the concept of cooperative federalism whereby much greater freedom would be given to states to determine not only their own priorities but also the modalities of public intervention and provision of goods and services. This concept also embodies a higher degree of dialogue and coordination between the states. The central government's principal role in this regard would be to raise the issues which appear to be of national interest and to provide a forum for arriving at a consensus. These issues are dealt with in greater depth in Chapter 6.

1.27 A disturbing development in recent years is the inability of the States to mobilise resources as targeted leading to a shortfall in the share of States in total Plan outlay. The share of the States in the Eighth Plan was only 36.4 per cent as compared to the projected share of 41.5 per cent. When the states' share declines, the sectors which suffer more severely are agriculture, basic minimum services, health, education, women and child development, welfare and also economic infrastructure such as electricity. In view of the emphasis that is being placed on the importance of these sectors, this trend needs to be halted and reversed. This is a relevant consideration in determining the support from the Central Government for State plans. However, the major correction has to come by reversing the deteriorating trend in States' resources for the Plan. This in turn focus attention on the growth of non-plan expenditure in the States and the very large increase in losses in sectors such as electricity, irrigation and road transport which seriously erodes States' resources.

1.28 The role and function of the Panchayati Raj Institutions (PRIs) has important implications for development strategy. Past experience has shown that functions and services which are localised in nature are most efficiently implemented by local political entities and other local bodies. It is therefore necessary to devolve not only greater resources and responsibilities to the PRIs, but also to grant greater powers to them for ráising their own resources. In this context, programmes in the social sector which are of national importance, and therefore have a high level of central government involvement, but which are essentially localised in their delivery, would need to be operated through a more direct relationship between the central government and the PRIs in order to increase their effectiveness. This mechanism is already operational in certain centrally sponsored schemes (CSS), and needs to be extended to others as well. The transfer of some CSS along with the funds, as already initiated, is a step in this direction.

1.29 The Eighth Plan had identified peoples' initiative and participation as a key element in the process of development, particularly in improving the effectiveness of development outlays which has been declining over the years. It had also recognised that the role of the Government should be to facilitate the process of peoples' involvement by creating right types of institutional infrastructure, particularly in rural areas. The progress on this front has not been entirely satisfactory principally due to the fact that the other tiers of the Government were not fully integrated into the development strategy. The process of social mobilisation and development of peoples' initiatives cannot be achieved without the active support and involvement of the political system at all levels. The Panchayati Raj bodies in rural areas and Nagar Palikas in urban areas will have to be directly involved in the development process. People's involvement via their elected representatives will be realised through genuine democratic decentralisation.

1.30 Other forms of peoples' participation also need to be strengthened. From the early days of planning, cooperatives have been perceived as the most important form of peoples' institution for promotion of equity, social justice and economic development. Every effort will be made to make the cooperatives work. They need to be liberated from tight bureaucratic control. Self-help Groups, Associations of Workers or Small Producers, etc. are other forms of institutions which will be encouraged. Government will seek active partnership with the voluntary sector in organising and promoting these institutions.

1.31 The Indian planning process has always laid emphasis on measures to ensure sustainability of the development process not only in economic terms, but also in terms of social and environmental factors. Much of the measures adopted in the Agenda 21 of the United Nations Conference on Environment and Development already find reflection in the Indian plans. The Ninth Plan will need to carry this tradition further and consolidate on the creation of conditions for sustainable development. Rapidly growing population, urbanisation, changing agricultural, industrial and water resource management, increasing use of pesticides and fossil fuels have all resulted in perceptible deterioration in the quality and sustainability of the environment. It is recognised that environment protection does not only involve a prevention of pollution and of natural resource degradation, but has to be integrated with the over-all development process and the well-being of people.

Areas of Special Importance for State Intervention

1.32 The Ninth Plan views the role of the state and private sector as complementary and both are essential. Private sector activity needs well functioning markets and hence the emphasis on economic liberalisation and decontrol. However, while market forces are extremely important, there are many circumstances in which markets may not exist or, even if they do, may not work efficiently and effectively. There are also conditions under which unbridled operation of market forces may give rise to outcomes which may be deleterious when seen in a broader national and social perspective. Government regulation and intervention in markets becomes justifiable in such situations though this should not become an open-ended rationale for excessive intervention. Government interventions have to be strategic and must emanate from a vision of the role and responsibility of state policy and public action where markets are likely to be imperfect. Three broad areas are especially relevant in this context. These are: (a) quality of life of the citizens; (b) generation of productive employment; and (c) regional balance.

(a) Quality of Life

1.33 Eradication of poverty and provision of basic minimum services are integral elements of any strategy to improve the quality of life. No developmental process can be sustainable unless it leads to visible and widespread improvement in these areas. There is by now enough evidence to show that rapid growth has strong poverty reducing effects and, given a public policy stance which is sensitive to the needs of the poor, a focus on accelerated growth will also help in realising the objective of alleviating poverty. The shift in emphasis towards private initiative and reliance on the entrepreneurial spirit of the people essentially seeks to create the conditions for rapid and sustained growth. Nevertheless there are aspects of growth which can be labour-displacing and impoverishing. These arise essentially out of unequal initial endowments of physical resources, human capital and information, which prevent segments of the society, particularly women and other socially and economically disadvantaged groups like the Scheduled Castes, Scheduled Tribes, Minorities, Other Backward Classes, disabled etc. from taking advantage of the opportunities that become available or from protecting their interests in an adequate manner. Much of these disadvantages have their roots in historical circumstances and are perpetuated through social and political factors. Market forces left to themselves may not correct these disparities, and indeed may accentuate them since there would very likely be a tendency to exploit the weak and the disadvantaged by economic alignments of the socially and politically advantaged. Public action will be necessary to reduce and eventually eliminate these schisms through a focus on removal of the initial handicaps and stringent protection of the rights of the disadvantaged.

1.34 It is important to emphasise that the process of elimination of historical disadvantages such as gender, caste and other types of social and economic inequalities should not be based on increasing dependency of these segments of the people on the government. Sustainability of the growth process demands that they should be viewed as active participants, and indeed as partners, in the process of development and not as passive beneficiaries of public largesse. The need therefore is to create the conditions by which the disadvantaged are not only empowered to take advantage of the opportunities created by the growth process but also to contribute actively in the process of creation of wealth and well-being. For this purpose, the individual capabilities of the people have to enhanced through education, information and access to appropriate technology. Amelioration of the immediate deprivation through anti-poverty programmes should be viewed only as a transitional arrangement, and every effort directed towards ensuring that these can be phased out at the earliest

1.35 Empowerment of the historically disadvantaged will require more than provision of the basic capabilities for integrating them into the growth process. Appropriate institutional structures will need to be created and encouraged in order to allow full play to their productive and entrepreneurial energies. The objective conditions of the Indian economy are such that the vast majority of the populace will continue to have to be engaged in self-employment or casual employment in the foreseeable future. Thus any effort at raising the growth rate of the economy through increases in productivity and entrepreneurial dynamism would need to look beyond the usual forms of production organisation. In order for such activities to be viable and remunerative in a market framework, alternative forms of organisation will have to be recognised and nurtured. Revitalisation of the cooperative sector and other forms of economic association of people is of great significance in this context. Cooperatives have played an important role in development and promotion of equity and social justice. Some have grown into substantial size, but there continue to be policy and procedural limits on their growth and diversification. There is a need to de-bureaucratise and de-politicise the operation of this sector and to enable it to access resources from other sources on its own strength.

1.36 In the past, food and nutritional security has been largely interpreted to mean adequate availability of basic food products in the country as a whole. The concept of food security now needs to be broadened to include peoples' access to basic nutritional requirements, both physically and economically. This problem is particularly acute in the vulnerable sections of society and in the deficit and inaccessible regions of the country. It is necessary to develop strategies by which such inadequacies can be overcome by integrating the food production and distribution systems with the employment and poverty alleviation programmes. In particular, the Public Distribution System (PDS) will need to be restructured in order to provide foodgrains at substantially lower prices to the poor in a focused manner and to ensure availability of such commodities in the remote and deficit areas of the country. A wide-spread, well-established PDS is essential for ensuring food security.

1.37 Economic growth and employment opportunities in themselves may not be sufficient to improve the living conditions of the poor. They need to be accompanied by measures which enhance the social and physical conditions of existence. Despite considerable efforts, provision of social infrastructure and services remain inadequate. These are areas which are in the nature of quasi-public goods and in which private initiatives and the market are unlikely to play a significant role. Primary education, primary health care, including the preventive and promotive, safe drinking water, nutrition and sanitation require heavy investment which has to be provided out of public funds. However, since the requirements of social infrastructure vary significantly across regions, greater decentralisation of decision-making than exists at present is desirable. Furthermore, recognising the localised nature of these essential services, it is desirable that the control over the operation and maintenance of the facilities should be in the hands of peoples' institutions and local associations, with adequate resources being made available either from the exchequer or through devolution of powers to raise such resources.

1.38 In recent years the problems of rapid urbanisation has become acute. There has been a progressive decline in the availability of essential services as well as in the quality of life in urban areas. The urban poor have been the worst affected segment in this process of decline. The health and environmental consequences of increasing population density, lack of safe drinking water and inadequate urban sanitation are likely to become further aggravated unless steps are initiated during the Ninth Plan to improve the situation through a well considered and articulated urbanisation policy with identified programme components including those for disease surveillance, epidemic control and urban solid and liquid waste management.

1.39 Social and demographic indicators cannot improve merely through increased investment, but in addition require a significant change in social attitudes and behavioural responses of the people. In order to achieve these objectives, there is no alternative to social mobilisation and community participation. In this process the role of women is critical. The process of empowerment of women at the political level has already begun, but it needs to be carried forward into the social and economic spheres as well. Special emphasis would have to be placed on ensuring that control of social infrastructure, particularly in health and education, in the public domain is vested in women and women's organisations.

1.40 A synergy between environment, health and development needs to be explicitly recognised. No development process which leads to an adequate quality of life can be sustained in a situation of deteriorating environmental and ecological conditions. Environmental degradation is usually the outcome of individual actions which do not take into account the externalities imposed on others both in space and time. The market mechanism left to itself does not provide any method of forcing the internalisation of these costs. Indeed, it may actually reinforce such behaviour. As a consequence, it is the responsibility of the government to ensure that the interests of both the current victims of environmental degradation and future generations are adequately protected, without disrupting the process of growth and development. Eventually, the responsibility for preservation of the environment rests on the people themselves. In order for these responsibilities to be properly discharged, however, the rights to a healthy environment have to be unambiguously assigned through legislative action; and people's participation in preservation of the environment fostered through social mobilisation and appropriate organisational structures.

1.41 Finally, all efforts to improve the quality of life can flounder under the pressure of population growth. This is another area where immediate individual interest may be in conflict with both the national interest and the longer-term interests of individuals. While there is evidence that rapid growth and development does generate positive effects towards population containment, the pace of such reduction may not be sufficient in view of the pressures that are being experienced on the nation's limited natural resource base. Concerted public action, both direct and towards awareness-building, is essential for creating the conditions by which the country can stabilise its population at a level that can be sustained in the long-term.

(b) Employment

1.42 Productive work is not merely a means to the ultimate end of economic well-being. It should be seen as an end in itself. It is a basic source of human dignity and self-respect. It is also an integral element in nurturing national identity and social cohesion. Although rapid economic growth is the surest and most sustainable source of increasing work opportunities, market forces alone cannot be relied upon to provide gainful work for all. This is particularly true in a labour-surplus economy like India. The congruence between the skill and spatial distribution of the labour force and the corresponding requirements of the economy may not be achieved through market-based mechanisms due to numerous distortions in the labour markets, information systems and infrastructural endowments that continue to persist in the country.

1.43 A primary objective of state policy should be to generate greater productive work opportunities in the growth process itself by concentrating on sectors, sub-sectors and technologies which are more labour intensive, in regions characterised by higher rates of unemployment and underemployment. The experience of the last decade has been that relatively rapid growth does generate adequate employment opportunities. However, there is no cause for complacency. The magnitude of labour force growth in the coming decade is the highest that it has ever been or is ever likely to be. The skill and geographical distribution of the emerging labour force reflect past trends in population growth and skill development, and cannot be changed significantly at this stage. Public intervention will be necessary to ensure not only that adequate work opportunities are created, but also that the labour force is able to access these opportunities.

1.44 The agricultural sector has historically played an extremely important role in providing employment in India, and is likely to continue to do so at least for the next decade or more. The skill profile of the emerging work-force is such that a large majority will have to continue to seek work opportunities in this sector. In order to create such opportunities, land and tenancy reforms are essential. The evidence strongly suggests that small farmer agriculture, based on secure rights on the land, is not only more productive per unit of land than either large farms or where the rights of the actual tiller are not well defined, but is also more labour absorbing. Active government intervention, both in implementation of existing laws and formulating new legislation for ensuring the tillers' rights, in these areas will have to be taken up in earnest in order to create conditions of high labour absorption with adequate productivity growth.

1.45 In a dynamic economic environment, restructuring or failure of firms and even demise of certain economic activities is natural and to be expected. Efforts at preventing such adjustments and failures in the interest of protecting employment has proven to be both inefficient and ineffective. The welfare effects of such measures in terms of the trade-off between the interests of the currently employed and those of either the unemployed or the new entrants to the labour force are also not unambiguous. While providing avenues for retraining, skill upgradation and reemployment, the focus of public policy needs to be shifted from protecting specific jobs to protecting the interests of the work-force. This has two dimensions. First, provision has to be made for the payment of the legitimate dues of and for mitigating the hardships faced by the displaced work-force. Such systems by and large exist for the organised sector, but the labour force in the unorganised sectors and the self-employed are presently uncovered. Providing such support is not easy to do without the creation of appropriate people's organisations with active government support. Second, all efforts have to be made to find alternative occupation for the unemployed. Although the minimum necessary condition for ensuring such reemployment is that the growth rate of creation of work opportunities must exceed the growth rate of the labour force, it is not sufficient. Existing workers embody a certain structure of skills which may not be appropriate for the new work opportunities that may be created. The market by itself may not be prepared to impart these skills to the displaced workers, since the preference will generally be for training the younger, new entrants in the labour force, whose potential life-time returns to the investment in human capital is likely to be significantly higher. It is necessary, therefore, to establish systems in the public domain for retraining or reskilling the displaced labour force in line with the requirements of the economy.

1.46 Even if the generation of work opportunities is adequate, the quality of employment in terms of the incomes received and the work environment may leave much to be desired, and may be likely to remain so without directed public action. It is therefore necessary to shift the focus of employment strategies towards creating conditions whereby employment opportunities lead to significantly better living and working conditions of the people and to uphold the dignity of labour. In particular, the incidence of scavenging and child labour which arise out of acute poverty and prevailing social disabilities need to be eradicated keeping in mind the requirement of maintaining family incomes. Public investment in modern sanitation systems, on one hand, and focused provision of appropriate education and skill, on the other, are necessary to tackle the first social evil. In so far as the second is concerned, precipitate action may not always achieve the objectives. A family-centric strategy and sensitivity to the needs of the orphan or run-away, coupled with rigorous implementation of the existing laws, will need to be evolved to effectively tackle this problem.

1.47 It is not enough to merely create the right kinds of employment opportunities, but also to provide the people with the human capital by which they can take advantage of these opportunities. Education and skill development are the essential features of such empowerment. Free and compulsory education for children, especially for the girl-child and other educationally backward groups, supported by an adequate mid-day meal programme in schools is the first step towards this end. Vocationalisation of the education system is essential, particularly since there is evidence that there are a number of skills which are in acute short supply and for which there is a serious shortage of training facilities. In addition, special programmes will have to be implemented to develop skills, enhance technological levels and provide marketing channels for people engaged in traditional occupations. The education and training systems in the country if not reformed will begin to display a certain degree of rigidity and get increasingly divorced from the needs of the economy and the social infrastructure. This trend needs to be reversed, and efforts will have to be made to introduce a system by which the emerging skill requirements of the economy are anticipated and the education and training systems reoriented accordingly. Although the private sector, which will be the main source of work opportunities in the future, will have an important role to play in this regard, the initiative will have to be taken by the government since the bulk of the educational system in India is in the public domain.

1.48 Recognising the high incidence of underemployment and increasing casualisation of labour, there is need to enhance employment opportunities for the poor, particularly for those who are in seasonal occupations. The recent trend in lower labour force participation rates among women is partly a reflection of the inadequacy of appropriate work opportunities. In view of the observed relationship between women's participation in the labour force and fertility, this trend has disquieting portents regarding the pace of reduction in the growth rate of population. There is need therefore for public intervention in creating work opportunities which are sensitive to the seasonal and locational needs of the underemployed, particularly women. Such opportunities should be demand-driven to the extent possible. In this context, the effort to implement a national Employment Assurance Scheme is of considerable significance.

(c) Regional Balance

1.49 Balanced regional development has always been an essential component of the Indian development strategy in order to ensure the unity and integrity of the nation. Since not all parts of the country are equally well endowed to take advantage of growth opportunities, and since historical inequalities have not been eliminated, planned intervention is required to ensure that large regional imbalances do not occur. With greater freedom and choice of location that is now available to industry, it is more than likely that some states would be able to attract more private investment than others. In such a situation it will be necessary to deliberately bias public investment in infrastructure in favour of the less well-off states. It will also have to be ensured that the states which benefit from this reorientation do not dilute their own efforts at generating investible resources or divert their resources to other uses.

1.50 Efforts at attracting private investments by state governments has already led to a certain degree of competition in granting of fiscal and other concessions. This tendency is likely to be accentuated in the future as private investment becomes increasingly more important. While a certain degree of competition in this regard may be desirable, in the long-run it would adversely affect the fiscal viability of some of the states and thereby jeopardise the ability of these states to provide the basic social and economic infrastructure. This would have serious implications regarding the future progress on regional balance and would tend to accentuate regional disparities in quality of life. It is necessary therefore for states to operate in a spirit of cooperative federalism and to arrive at a set of public policy and action in which state-level initiatives at attracting private investment in a competitive manner will be acceptable, and those in which a common position would be taken by all states in their collective interest.

1.51 There are also regions or pockets of poverty which are unable to benefit adequately from the over-all growth process. For the most part such pockets of poverty reflect the inadequate integration of the local economies in the wider growth process due to historical reasons. There is a strong probability that even in the future, market-based growth may elude these regions unless active intervention is made by the government. Sustainable anti-poverty programmes in such regions would need to involve not only direct employment and income enhancing policies to tide over the immediate deprivation, but also measures by which the asset endowment of the poor can increase and such areas can become better integrated with the rest of the economy for sustainable growth.

1.52 The focus regarding the issue of backwardness and regional balance has traditionally been on industrialisation. The evidence, however, suggests that reduction in regional disparities, particularly in average standards of living, may be better achieved through greater focus on agriculture and other rural activities. For this it is necessary to not only increase the productivity of agriculture in backward areas, but also to increase the degree of integration between the rural areas and the rest of the country through improved connectivity in terms of transport and communications, and provision of marketing support. In the absence of adequate public investment in such infrastructure, the prospects of a disparity-reducing agricultural growth will recede.

1.53 In some regions of the country, relatively high levels of income continue to be associated with low human development indicators and poor provision of social infrastructure, such as safe drinking water, primary health and primary education facilities. These are areas in which private initiatives are unlikely to play any major role, and it would be the primary responsibility of the government to ensure that appropriate interventions are made. There is therefore a need to identify the minimum norms of availability of such infrastructure and to accelerate public investment for achieving these norms in a balanced and timebound manner. The problem of shelter for the poor, both in urban and rural areas, is particularly acute and a programme of providing assistance for construction of houses will need to be implemented.

1.54 The issue of regional balance operates at both the inter-State and the intra-State level and there is therefore the need to address it in a framework that is more flexible than the political and administrative boundaries of each individual state. Growth and development are intimately related to the level of economic integration of the various parts of the country and the linkages that are formed between the backward and the more developed regions. In view of this, it is necessary to move away from the concept of competitive policy formulation to a framework of cooperative federalism, wherein neighbouring states adopt a common set of strategies for development of their backward areas in a coordinated manner and remove or reduce the barriers to inter-state commerce that have been built up over the years. Cooperative action can not only prevent loss of revenues to state and local governments that may arise from the reduction of existing fiscal barriers, but actually augment the flow of resources.

1.55 In view of the resource constraints being faced by the Government at all levels, the prioritisation of the various facets of quality of life would have to be carried out on a region-specific basis. In particular, it will be necessary to identify those areas of the country where the growth process will more or less take care of the problem of acute deprivation. The focus of anti-poverty programmes would have to be shifted to those other areas which are as yet inadequately benefited by the growth process. In such areas the pre-conditions for a market-based development strategy will have to be created expeditiously, even if it means a certain degree of positive bias.

The Role and Methodology of Planning

1.56 The Planning Commission believes that the principal task of planning in a federal system is to evolve a shared vision of and a shared commitment to the national objectives and the development strategy not only in the Government at all levels but also among all other economic agents. No development strategy can be successful unless each component of the economy works towards a common purpose with the full realisation of the role that has to be played within an overall structure of responsibilities. The principal function of the approach to the Ninth Plan is not only to articulate such a shared vision, but also to ensure shared commitments.

1.57 Based on such a shared vision, the principal task during the Ninth Plan is to build on the successes of the Eight Plans, while tackling the problems that have emerged, particularly in areas such as capital formation in agriculture, living standards of the poor, infrastructure, social sector, regional disparity and fiscal deficits. Despite the considerable progress that has been made by the Indian economy in both economic and social spheres, the development task is far from complete and resources continue to be limited. Moreover, as has been indicated, the Indian economy is still vulnerable and the operation of a more open economic system has to be tempered by judicious public interventions to ensure that these vulnerabilities are gradually overcome.

1.58 Recognising the federal nature of the Indian system, the planning process has to develop a common policy stance which would be adopted both by the Centre and the States. The role of planning would therefore involve considerable degree of policy coordination between the Centre and the States, between the States, and between the States and the sub-State level tiers of Government.

1.59 With the progressive deregulation of the economy, and the larger role of the private sector and market based decision making, planning methods based on input output balances for each industrial sector have become less relevant . However, sector level planning for the infrastructure sectors and broad planning for critical sectors such as agriculture remain highly relevant both to identify inter-sectoral constraints and as a guide to government policy action. The planning process also needs to take stock of the resources for development to the internal and external, and to indicate methods by which these resources can be augmented in a sustained manner. Since planning is done for the entire nation, the strategies for resource augmentation need to cover not only the government at all levels but also those which would be available to other sections of people.

1.60 The other principal task of planning, particularly in a market oriented economy, is to identify the areas of emerging vulnerabilities and to suggest measures to address them. Although the specific policies would need to be worked out by the concerned ministries or the States, the broad directions would have to be provided by the planning system. Unless such problem areas are placed within the wider macro-economic context, short-run fire-fighting measures can lead the economy in undesirable directions.

1.61 With the reduction in the instruments available to Government in controlling economic matters and the greater degree of uncertainities that are present in any market based system, the methodology of planning will have to change if it is to retain its relevance. The Eighth Five Year Plan had explicitly indicated a shift from directive to largely indicative plan. There is considerable variance in the interpretation of this term. The Ninth Plan is based on a more specific modality of planning which involves working out of a consistent and desirable development path, the identification of emerging trends and deriving policy measures to bring about a confluence between the two. The planning process today, therefore, focuses on planning for policy so that the signals that are sent to the economic system induce the various economic agents to behave in a manner which is consistent with the national objectives.

1.62 The most important characteristic of the methodology adopted in the formulation of the Ninth Plan is that it is not based on a deterministic relationship between the Plan and economic performance. It is explicitly recognised that there are uncertainities in the system and limitations in the ability of the planning system to accurately predict future trends. Furthermore, it is also recognised that the effects of Government policies and interventions are not entirely predictable. This is certainly true of economic variables, although it may not be so for the performance in social sectors such as health and education. The planning approach adopted for the Ninth Plan therefore concentrates on pointing out the likely outcomes and suggests the major directions for policy intervention. The details of the actual policies and the manner of implementation will need to be worked out from time to time between the concerned Ministries, States and the Planning Commission.

Development Perspective and Sustainability of Growth

1.63 Development and growth are long term processes, and a five year plan represents only the characterisation of the economy and social processes over a period in which a fair degree of reliance can be placed on estimates and projections. The viability and sustainability of the development strategy embodied in a five year plan needs to be seen in the longer perspective in order to ensure that continuity of directions and the balance between interests of the present and the future generations is maintained. The Indian Five Year Plans have traditionally been embedded in a 15 year perspective period. The Ninth Plan continues this tradition.

1.64 Since the principal objective of economic planning is to fulfill the social and human aspirations of the people, the basis for all planning efforts rests upon the projections of future demographic trends, the requirement for work opportunities and the need to erradicate poverty. The factors which determine the long term conditions of growth, along with the size and skill profile of the work force, are the availability of investible resources through domestic savings and prudent access to international investment funds, the basic resource endowment of the country, the available and latent entrepreneurial abilities of the people and the pace of technological development.

Population Growth & Demographic Profile

1.65 Population stabilisation is an essential prerequisite for sustainability of the development process. The National Family Planning Programme was launched in 1952 with the objective of "reducing birth rate to the extent necessary to stabilise the population at a level consistent with requirement of national economy". The technological advances and improved quality and coverage of health care resulted in a rapid fall of mortality rate from 27 in 1951 to 9.8 in 1991. In contrast, the reduction in birth rate has been less steep, declining from 40 in 1951 to 29.5 in 1991. As a result the annual exponential population growth has been over 2% in the last three decades. The report and recommendations of the NDC Committee on Population gave a new thrust and dynamism to the Family Welfare Programme during the Eighth Plan period. As a result of these recommendations, the centrally defined method-specific targets for Family Planning have been abolished and decentralised area-specific need assessment to meet all the felt needs for contraception, maternal and child health have been initiated. Indeed this was the basis on which one half of the funds under the social safety net scheme was provided to districts with crude birth rate (CBR) over 39/1000 (as per the 1981 Census) to improve existing facilities for safe delivery and child care in these districts. During the Eighth Plan period the fall in birth rate has been steeper than that in the death rate; consequently annual growth rate is around 1.9% during 1991-95. The projections of the major demographic indicators for the perspective period are presented in Table 1-1. It may be seen that the rate of decline in population growth is likely to be accelerated during the Ninth Plan period and will continue to do so during the perspective.

1.66 Although the above projections made by the Technical Group on Population Projections constituted by the Planning Commission in 1996 are based on well-accepted and time-tested methodology and should have a high degree of accuracy, they are nevertheless projections. Any such exercise is based on extrapolation of past trends and behaviour, and can never adequately capture possible departures from the trend. Reproductive behaviour is affected by an extremely complex set of economic and social variables. Although it is difficult to derive precise relationships between these variables and the rate of population growth, some of the linkages are well accepted in qualitative terms. In particular, factors such as female literacy, infant mortality rates, average age at marriage and labour force participation rate for women are believed to exert considerable influence on fertility. It is quite likely therefore that the special emphasis that is being placed on basic minimum services and on empowerment of women in the Ninth Plan may lead to sharper increase in these variables and thereby to even more impressive fall in the growth rate of population than indicated in the table.

Table 1-1 : Major Demographic Indicators

	1996	2001	2006	2011
1. Population (million)	934.22	1012.39	1094.13	1178.89
2. Urban Population (%)	27.23	28.77	30.35	31.99
3. Sex Ratio (males per 100 females)	107.9	107.2	106.6	106.0

	1996-2001	2001-06	2006-11
4. Growth rate of population(%p.a.)	1.62	1.57	1.50
5. Expectation of life at Birth (years)			
Male	62.36	63.87	65.65
Female	65.27	66.91	67.67

Note : 1. Population as on March 1.
2. Expectaion of life at birth is estimated from SRS based Abridged Life Tables. 1989-93. Registrar General, India.

SOURCE: Report of the Technical Group on Population Projections constituted by Planning Commission, published as: Population Projections for India & States 1996-2016. Registrar General, India (1996)

1.67 One of the features of Indian demographic behaviour which has been the cause for considerable concern has been the more or less steady decline in the sex ratio during the current century from 972 females per thousand males in 1901 to 927 in 1991. The factors responsible for this continued decline are as yet not clearly identified. However, it is well recognised that the adverse sex ratio is a reflection of gender disparity and appropriate steps to correct this trend will need to be taken during the Ninth Plan period. It is expected that the steps that are being proposed will lead to an improvement in the sex ratio to about 943 by the end of the perspective period. A major component in the reversal of the sex ratio trend would be a substantial reduction in maternal mortality. At present the longevity at birth of women is only marginally higher than that of men. However, over the next decade the difference in life expectancy between men and women is expected to progressively increase.

1.68 The average growth rate of population during the 15 year perspective period of 1 54 per cent is distributed extremely unevenly between the different states of the nation. The statewise estimates of the likely rates of growth of population are given in Table 1-2. As may be seen, there is a wide variation in the growth rates, varying between 0.89 per cent per annum in Orissa to 2.22 per cent per annum in Uttar Pradesh. As a consequence of these differential population growth rates, the share of different states in the total population of the country is likely to change quite substantially over the perspective period. In particular, the population share of northern states of Bihar, Madhya Pradesh and Uttar Pradesh are likely to increase substantially, whereas almost all other States would either have a constant or declining population proportion. A matter of greater concern relates to the goal of population stabilisation. In recent years, the earlier approach of using the Net Reproduction Rate of unity (NRR = 1) as the over-all indicator of the replacement level of fertility has been changed to a Total Fertility Rate (TFR) of 2.1. The projected level of the TFR for the country as a whole in 2012 is 2.52, which is significantly higher than the level required for attaining the replacement rate, and the desired rate may not be achieved until 2026. As can be seen, if the country has to attain the desired replacement rate within the perspective period, urgent measures at fertility reduction would need to be taken in Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh.

Table 1-2 : Rate of Growth and Share of Projected Population

States	Rate of Growth (1997-2012)	Share of population to total 1997	Share of population to total 2012	Year by which TFR=2.1 may be achieved
Andhra Pradesh	1.06	7.48	6.98	2002
Assam	1.39	2.65	2.58	2015
Bihar	1.78	9.71	10.07	2039
Gujarat	1.37	4.73	4.62	2014
Haryana	1.54	1.94	1.94	2025
Karnataka	1.24	5.13	4.91	2009
Kerala	0.90	3.21	2.92	1988
Madhya Pradesh	1.77	7.74	8.01	2060
Maharashtra	1.09	9.01	8.44	2008
Orissa	0.89	3.58	3.25	2010
Punjab	1.15	2.33	2.20	2019
Rajastan	1.82	5.20	5.42	2048
Tamil Nadu	0.82	6.17	5.55	1993
Uttar Pradesh	2.22	16.37	18.10	2100
West Bengal	1.29	7.77	7.50	2009
Rest of India	2.05	7.03	7.58	
All India	1.54	100.00	100.00	2026

SOURCE: Report of the Technical Group on Population Projections constituted by Planning Commission, published as: Population Projections for India & States 1996-2016, Registrar General, India (1996)

1.69 The important socio-economic variables which are not only related to population dynamics but also to the quality of life are given in Table 1-3. In recent years most of

Table 1-3:Important Social & Demographic Indicators- Major States

States	Birth Rate (1996)	Death Rate (1996)	Infant Mortality Rate (IMR) (1996)	Couple Protection Rate (CPR) (1995)	Total Fertilty Rate (TFR) (1994)	Life expectancy females (89-93)	Female Literacy Rate (1991)	Mean age at Marriage (females) (1994)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andhra Pr.	22.7	8.3	66	46.9	2.7	61.5	33.7	17.8
Bihar	32.1	10.2	72	21.1	4.6	57.2	23.1	18.6
Gujarat	25.5	7.6	62	57.4	3.1	61.1	48.5	20.4
Haryana	28.8	8.1	68	53.9	3.7	63.7	40.9	19.2
Karnataka	23.0	7.6	53	55.6	2.8	63.5	44.3	19.4
Kerala	17.8	6.2	13	46.7	1.7	74.7	86.9	22.3
Madhya Pr.	32.4	11.1	97	47.4	4.2	53.8	28.4	18.8
Maharashtra	23.2	7.4	48	51.0	2.9	65.4	50.5	19.1
Orissa	26.8	10.7	95	39.5	3.3	55.3	34.4	19.5
Punjab	23.5	7.5	52	76.9	2.9	67.6	49.7	20.3
Rajastan	32.3	9.1	86	32.6	4.5	58.5	20.8	18.4
Tamil Nadu	19.2	7.9	54	51.7	2.1	63.4	52.3	20.2
Uttar Pradesh	34.0	10.2	85	37.2	5.1	55.1	26.0	19.5
West Bengal	22 8	7.8	55	34.2	5.0	62.3	47.1	19.5
All India	27.4	8.9	72	45.4	3.5	59.7	39.4	19.4

Source: Col. 1,2,3,5,7 & 8 SRS Estimates
Col 4 Deptt of Family Welfare
Col 6 SRS Based Abridged Life tables, 1989-93, RGI, India

these indicators have improved quite significantly. The birth rate has reduced from 29.9 in 1990 to 27.4 in 1996. The death rate too has declined from 9.6 to 8.9 during the same period. In particular, the infant mortality rate has come down from 80 to 72. Although the couple protection rate has increased from 44.1 per cent in 1991 to 45.4 per cent in 1995, its pace of increase is relatively slow and reflects in part the inadequacies that have been experienced in meeting the demand for contraception. Despite this, the total fertility rate has shown a fairly sharp reduction from 4.3 in 1985 to 3.5 in 1994. One of the reasons for this could be the increase in the mean age of marriage of females from 18.3 in 1981 to 19.4 in 1994. However, these broad all-India numbers are not uniformly distributed between the States, which is one of the principal reasons for the significant differences that have been noted in the projections of population over the perspective period.

1.70 Though the decline in birth and death rates have occurred in all states, the rate of decline was slower in some states like U.P. and Bihar; even within the same state there are substantial differences between districts. The Family Welfare Programme, therefore needs to be re-oriented to remove or minimise the inter- and intra-State differences, with emphasis on improved access and quality of reproductive and child health services through PHC-based decentralised area-specific microplanning without recourse to specific centrally fixed targets. It is imperative that adequate data-base is available at the PHC level on a yearly basis, both for need assessment and also to provide an independent mechanism for impact assessment and midcourse correction. This can be achieved only through complete registration of all births and deaths. For this, it is necessary to strengthen the Civil Registration system through involvement of ICDS workers, Panchayati Raj institutions, as well as health personnel.

1.71 Simultaneously, the Ninth Plan will launch an intensive drive to promote health education, particularly in reproductive health, so that India builds a sound foundation for a successful preventive and promotive national health paradigm. Basic principles of hygiene, sanitation, nutrition, and prevention of illness and disease will be promoted through not only the educational institutions and the adult education programme but also through the ICDS programme, through counselling offered by the health workers at all levels, and the mass media.

1.72 While demographic transition reflects quantitative and qualitative changes in the population profile, the on-going changes in disease burden is producing a major health transition as reflected in the wide difference between the present and projected distribution of disease burden expressed as a percentage of disability adjusted life years (DALYs) by broad cause group. Communicable diseases, along with maternal and perinatal morbidity, presently constitute 56.4 per cent of DALYs, while non-communicable diseases constitute less than 30 per cent. Over the next 15 years, non-communicable diseases are likely to constitute nearly half of the distribution of total disease burden, thus posing a serious future threat to the health of the population. While a decline in communicable diseases as a result of public health measures would be a welcome development, disproportionate increase in non-communicable diseases such as high blood pressure, diseases affecting the heart, diabetes and cancer would be in large measure due to the rapidly changing life styles, both in terms of quantity and quality of food consumed and increasing level of physical inactivity. Preventive and promotive measures need to be urgently initiated to avoid the projected outcomes, in addition to incorporating within the health system, community education and early detection as well as management of such diseases.

1.73 Despite the steady reduction that is expected to occur in the rate of growth of population, the biggest challenge facing the Ninth Plan, and indeed the entire perspective period, arises out of the projected age structure of the population that is emerging from the past demographic trends. These projections are presented in Table 1-4. It will be seen that the growth rate of the population between the ages of 15-60 is likely to be considerably higher than the growth rate of population. Since this is the age group which is likely to be actively seeking employment, the need for expanding work opportunities will be considerably higher than before. On the positive side, the total dependency ratio is likely to decline quite significantly over this period. This occurs through a sharp reduction in the dependency ratio pertaining to the young, with that for the old remaining more or less constant. Therefore, if gainful employment can be provided to the entire work-force, the economic conditions of the households should improve significantly faster than earlier.

Table 1-4 : Projected Age Structure of the Population as on 1st March

(million)

Year	1997	2002	2007	2012
under 15	353.64	345.11	334.80	337.93
15-59	532.60	610.55	692.64	758.61
60+	63.64	71.94	84.01	98.50
Dependency ratios :				
(a) Young	0.66	0.57	0.48	0.45
(b) Old	0.12	0.12	0.12	0.13
(c) Total	0.78	0.69	0.60	0.58

Note: (1) dependency ratio for young is the ratio between under 15 population to 15-59 population
(2) dependency ratio for old is the ratio between 60+ population to 15-59 population

SOURCE: Report of the Technical Group on Population Projections constituted by Planning Commission, published as: Population Projections for India & States 1996-2016, Registrar General, India (1996)

1.74 The details of the labour force participation rates and its likely evolution over time are given in Chapter 4. However, the likely position of labour force growth relative to the growth rate in population is given in Table 1-5. It will be seen, that the growth rate of

Table 1-5 :Population and Labour Force Growth

	Population		Labour Force	
	millions	% growth	millions	% growth
1978	637.6	-	255.8	-
1983	718.2	2.16	286.6	2.07
1994	895.0	2.10	368.5	2.39
1997	951.2	1.85	397.2	2.27
2002	1028.9	1.57	449.6	2.48
2007	1112.9	1.57	507.9	2.44
2012	1196.4	1.45	562.9	2.06

Note: Population and Labour Force figures are based on Tables 4.5 and 4.9.

labour force is likely to be highest during the Ninth Plan period and only gradually decline thereafter. As a result, any planning over the perspective period will have to have employment generation as its central focus. If adequate work opportunities are not created, there would be growing incidence of unemployment in the country and an increase in the social tensions that arise therefrom.

Growth Target for Full Employment

1.75 The need for providing adequate work opportunities for the growing labour force and also to reduce the base level of unemployment significantly has been taken as the most pressing task for determining the minimum required growth performance of the economy. The planning model generates steady state growth paths between the terminal year of the perspective period and the base year in a manner which ensures both inter-sectoral consistency and consistency between the investment requirements and the availability of investible resources. Using constant sectoral incremental capital output ratios (ICORs) and constant sectoral employment elasticities, alternative growth paths can be evaluated in terms of their impact on the generation of work opportunities. The details of the ICORs and the employment elasticities are discussed in Chapters 2 & 4 respectively.

1.76 The base line scenario was developed on the basis of a steady state growth path yielding 6.5 per cent average growth per annum over the perspective period. This was consistent with the growth rate that has been observed on the average during the Eighth Plan period. It was found that the work opportunities generated along this growth path were such that the unemployment rate would actually increase from 1.5 per cent in the base year of the Ninth Plan to 2.5 per cent in the terminal year of the perspective period (2011-12). In other words, maintenance of the Eighth Plan growth performance is likely to be inadequate not only to reduce the level of unemployment but also to absorb the additions to the labour force. An alternative growth path targetting an average annual growth rate of 7.4 per cent during the perspective period has also been examined. At this rate of growth the unemployment rate reduces significantly to -3.5 per cent in the terminal year. In other words, not only are the new additions to the work force gainfully absorbed and the backlog of unemployment is removed, but also that the realisation of full employment is likely to occur significantly earlier than the 15 year time horizon. The macro economic parameters of these alternative scenarios are presented in Table 1-6.

Table 1-6 : Alternative Growth Perspectives

(per cent)

	Eighth Plan	15 year Perspective Plan	
		Scenario I	Scenario II
1. Growth rate of GDP	6.8	6.5	7.4
2. Investment rate	24.9	27.4	29.8
(a) Private	16.6	18.5	21.2
(b) Public	8.3	8.9	8.6
3. Saving rate	23.8	25.3	27.2
(a) Private	22.4	23.6	25.1
(b) Public	1.4	1.7	2.1
4. CAD to GDP ratio	1.1	2.1	2.6
5. ICOR (absolute)	3.7	4.2	4.0
6. Unemployment rate (Terminal year)	1.5	2.5	-3.5

Note. (1) Growth Rates of GDP is at Factor Cost
(2) Investment and Saving rates are expressed as ratios to GDP at market prices.
(3) Unemployment is on Usual Status basis.

1.77 It would be seen that the investment requirement of the two scenarios are not as different as could be expected from the difference in the growth rates. The principal reason for this is that in Scenario-I the ICOR increases sharply from the 3.7 level achieved during the Eighth Plan to 4.2. In Scenario-II, however, the value of ICOR remains at 4.0. This difference arises principally due to the fact that the share of investment in infrastructure, which are the sectors with the highest ICORs, in total investment is higher in Scenario-I than in Scenario-II. This is partly due to the relatively high growth rates that have been assumed for infrastructural sectors in view of the serious shortfalls that have been experienced in these sectors. This is especially true for Rail and Other transport and for Electricity. The reduction in ICOR in Scenario-II does not, however, occur principally by increase in the growth rate of agriculture, which is assumed to rise to 4.8 per cent per annum in Scenario-II as compared to 3.9 per cent in Scenario-I, which is in line with the higher demand arising out of the higher growth rate, but more due to an increase in the shares of manufacturing and services. The broad sectoral growth rates in the two scenarios are presented in Table 1-7.

Table 1-7 : Sectoral Growth Rates in Perspective Plans

(per cent per annum)

Sectors	Scenario I	Scenario II
Agriculture & Allied	3.9	4.8
Manufacturing	8.0	9.6
Infrastructure :		
Group 1	6.3	6.6
Group 2	9.6	10.4
Services	6.8	7.5
GDP at factor cost	6.5	7.4

NOTES : (1) Infrastructure Group 1 contains Construction, Rail and Other Transport.
(2) Infrastructure Group 2 contains Electricity, Gas & Water supply and Communications

1.78 The main difference between the two scenarios in terms of the policy implications lies in the substantial step up that is required in public savings in Scenario-II. The results indicate that unless public savings, particularly the savings of the Government, is enhanced substantially it would not be possible to attain the higher growth path. The alternative to this would be to increase the inflow of foreign savings through a wider CAD. While this may be a viable option, it would depend upon the ability of the country to attract sufficient foreign direct investment (FDI) to finance the foreign exchange requirements without having to resort to increasing external debt or other financial liabilities. In other words, the principal responsibility for generating adequate work opportunities to reduce unemployment in the country and to improve the quality of life rests with the Government, which would need to reduce its existing revenue deficit in the budget and eventually bring it to a surplus. As in all these exercises, the Government includes both the Centre and the States, but the division of responsibility between the two cannot be determined in such an aggregated model. This would depend upon a realistic assessment of the responsibilities of the different wings of Government and their ability to raise the necessary resources. Such an exercise can only be done for a shorter period and would need to be confined to the immediate future. The possibilities that exist during the Ninth Plan period are detailed in Chapters 2 & 3.

1.79 Although the perspective is developed under steady state growth assumptions, it is normally not feasible to change the required parameter values right from the initial years of the perspective period. It is therefore necessary to divide the perspective period into its constituent five year plan periods in order to assess the feasibility of attaining the required parameter values. A possible composition of the 7.4 per cent growth perspective plan is presented in Table 1-8.

Table 1-8 : Planwise Decomposition of Perspective Period

(per cent)

	IXth Plan	Xth Plan	XIth Plan
1. Growth rate of GDP	6.5	7.7	8.1
2. Investment rate	28.2	29.8	31.3
(a) Private	18.8	21.5	23.3
(b) Public	9.4	8.3	8.0
3. Saving rate	26.1	27.3	28.2
(a) Private	24.5	25.3	25.6
(b) Public	1.6	2.0	2.6
4. CAD to GDP ratio	2.1	2.6	3.1
5. ICOR (absolute)	4.3	3.9	3.9
6. Unemployment rate	1.8	neg	-3.5

Note : (1) Growth Rates of GDP is at Factor Cost
(4) Investment and Saving rates are expressed as ratios to GDP at market prices.
(5) Unemployment is on Usual Status basis.

1.80 As would be seen, the parametric values appear to be quite reasonable, and should be achievable with some effort on the part of the Government and the public sector. The Ninth Plan is the medium-term characterisation of this growth path. The details of the policies and approaches required to attain this growth trajectory are given in Chapter 2.

Growth Performance and Poverty

1.81 The most significant feature of the 7.4 per cent growth perspective is that over the course of the next 15 years private consumption is likely to grow at marginally above 7 per cent per annum in real terms. With a growth rate of population averaging 1.54 per cent per annum during this period, the per capita private consumption is likely to grow at an average annual rate of 5.5 per cent. In other words, per capita private consumption in India in the terminal year of the perspective period may be over 2.2 times the level that is likely to be achieved in the base year of the Ninth Plan. With such substantial increase in per capita private consumption, the incidence of poverty in the country can potentially reduce significantly.

1.82 The Planning Commission has been estimating the incidence of poverty at the national and state levels as an integral component of formulating appropriate growth strategies. For the Ninth Plan, the quantitative index of poverty has been developed on the basis of the recommendations of the Expert Group on Estimation of Proportion and Number of Poor, constituted by the Planning Commission in 1989. The Expert Group recommended computation of state-wise poverty estimates on the basis of state specific poverty lines and the National Sample Survey (NSS) consumption distribution without any adjustment for the discrepancy between the CSO and NSS estimates of private consumption. The estimates of state-wise poverty since 1973-74 have been revised on the basis of the Expert Group methodology. The latest estimates of incidence of poverty are available for the year 1993-94 on the basis of NSS consumer expenditure data of 50th Round (July, 1993 to June, 1994). The poverty ratios and the number of poor at national level for the different years are given in Table 1-9.

Table 1-9 : Percentage and Number of Poor

Year	Poverty Ratio			No. of poor (in million)		
	Rural	Urban	Combined	Rural	Urban	Combined
1973-74	56.4	49.0	54.9	261.3	60.0	321.3
1977-78	53.1	45.2	51.3	264.3	64.6	328.9
1983	45.7	40.8	44.5	252.0	70.9	322.9
1987-88	39.1	38.2	38.9	231.9	75.2	307.1
1993-94	37.3	32.4	36.0	244.0	76.3	320.3

Note : The estimates are based on the methodology recommended by the Expert Group on Estimation of Proportion and Number of Poor as adopted by the Planning Commission

1.83 The incidence of poverty expressed as percentage of people below the poverty line is observed to have declined from 56.4 per cent in 1973-74 to 37.3 in 1993-94 in rural areas and from 49.0 per cent in 1973-74 to 32.4 per cent in 1993-94 in urban areas. For the country as a whole, the percentage of people below the poverty line declined from 54.9 per cent in 1973-74 to 36 per cent in 1993-94. However, the number of poor in the country remained more or less stable at around 320 million due to the rise in population. This fact should not over-shadow the 300 million persons who joined the non-poor group during the twenty year period between 1973-74 and 1993-94, but underlines the need for containment of the growth rate of population.

1.84 The state-specific poverty lines in rural and urban areas for 1973-74 and 1993-94 are given in Annexure-1.1. The state-wise poverty ratios and number of poor in rural and urban areas as well as for the state as a whole for these two years by Expert Group method are given in Annexures-1.2 and 1.3. It may be seen that the decline in poverty ratio during the last 20 years has been uneven among the states. The pace of poverty reduction was relatively rapid in Kerala, Andhra Pradesh, Tamil Nadu, Gujarat, Punjab and West Bengal. The decline in poverty ratio, however, was not enough to reduce the number of poor in eight major states. These are : Assam, Bihar, Haryana, Himachal Pradesh, Madhya Pradesh, Maharashtra, Orissa and Uttar Pradesh.

1.85 Poverty is closely related with hunger. The percentage of persons without two square meals a day for some months of the year is often termed as the "hunger ratio". It is observed that about 19 per cent of the rural population and 7 per cent of the urban population remained hungry in 1983. As per the latest available information these have come down to about 5 per cent in rural areas and 2 per cent in urban in 1993-94. The percentage of chronically hungry people in total population in rural areas, which was 35 to 40 per cent in Bihar, Orissa and West Bengal in 1983, reduced to 6.6 per cent in case of Bihar and 14 to 16 per cent in other two states in 1993-94. Hunger ratios less than the poverty ratio indicate that all the poor people do not remain hungry. However, any incidence of chronic hunger is still a cause of concern.

1.86 In order to examine the likely effects of the relatively faster growth of private per capita consumption on the incidence of poverty during the next 15 years, it is necessary to project the behaviour of the poverty ratio on the basis of the trends that are likely to obtain in the macro-economic variables. There are a number of ways in which such projections can be made. One method would be to relate the past trends in poverty ratios with major macro-economic variables such as the growth rate of GDP, the share of agriculture, inflation rate, and policy variables such as public expenditure on anti-poverty programmes, using econometric methods. This approach, however, has the disadvantage that it is unable to capture certain important facets of the behaviour of poverty and inequality in the Indian economy. An alternative methodology is to explicitly recognise these specific features and to extrapolate the future trends on the basis of specific assumptions being made regarding the future movements of these variables which are directly involved in the estimation of poverty. The projections on poverty made for the perspective period are based on this latter approach.

1.87 The behaviour of various measures of poverty and inequality in India are given in Table 1-10. The normal method of measuring poverty in India is by the poverty or "headcount" ratio, which is simply the proportion of the number of people below the poverty line in the total population. This ratio, however, makes no distinction within the broad category of the poor depending upon their actual levels of consumption and deprivation. As a result, the poverty ratio fails to capture the depth and severity of poverty in an adequate manner. A measure for capturing the depth of poverty is the poverty gap (PG) index, which adjusts the poverty ratio with the difference between the per capita consumption of the poor and the poverty line expressed as a percentage of the poverty line. This is therefore a measure of the magnitude of the effort that would be required to shift the

Table 1-10 : Indices of Poverty and Inequality

Year	Poverty Ratio			Poverty Gap Index			Squared Poverty Gap			Lorenz Ratio	
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1973-74	56.4	49.0	54.9	16.56	13.64	15.95	6.81	5.26	6.48	0.27581	0.30125
1977-78	53.1	45.2	51.3	15.73	13.13	15.15	6.48	5.25	6.21	0.33861	0.34481
1983-84	45.7	40.8	44.5	12.32	10.61	11.96	4.78	4.07	4.61	0.29759	0.33027
1987-88	39.1	38.2	38.9	9.11	9.94	9.32	3.15	3.60	3.26	0.29826	0.35369
1993-94	37.3	32.4	36.0	8.45	7.88	8.30	2.78	2.82	2.79	0.28190	0.33940

Note (1) Poverty ratios as in Table 1-9.
(2) PGI and SPG are computed from the NSS consumption Expenditure Distribution of the respective years and the implicit national poverty lines as per the Expert Group.
(3) Lorenz ratios are estimated from the NSS consumption expenditure distribution of the respective years.

consumption of all persons below the poverty line to the level of the poverty line. A more comprehensive measure of the severity of poverty is the squared poverty gap (SPG). The SPG is composed of not only the poverty ratio and the poverty gap ratio, but it also captures the consumption distribution of the poor as measured by the coefficient of variation. This measure explicitly takes into account the higher intensity of efforts that are required to address the people who are progressively further below the poverty norm in order to bring them out of poverty.

1.88 It will be seen that the annual average rate of decline of the poverty ratio during the period from 1973-74 to 1993-94 has been 2.05 per cent in both rural and urban areas, and 2.09 per cent for the country as a whole. The poverty gap ratio during this period declined by 3.31 per cent per year in rural areas, 2.71 per cent per year in urban areas and 3.21 per cent per year for the country as a whole. The SPG declined even faster by 4.38 per cent, 3.07 per cent and 4.13 per cent per year in rural, urban and the country respectively. The fact that the more distribution-sensitive measures of poverty have declined progressively faster during the last 20 years is a cause for optimism. It implies that the depth and severity of poverty has reduced faster than the incidence, and that over time there has been a trend towards a greater degree of clustering of the poor around the poverty line leading to a situation where economic growth is likely to have a considerably larger impact on poverty reduction than before. This would of course require that the measures of relative inequality do not deteriorate sufficiently to overcome the growth effect.

1.89 The most commonly used measure of relative inequality is the Lorenz ratio. The behaviour of the Lorenz ratio of household consumption expenditure as given by the NSS surveys shows a very high degree of stability, as can be seen in Table 1-10. The near constancy of this measure of inequality for 20 years gives a certain degree of justification to believe that it may continue to remain more or less stable in the future as well. However, there is reason to believe that the measures of inequality based on the NSS consumption distribution may actually understate the true level of inequality in the country. A characteristic of consumption behaviour in India, specially in the recent past, has been that the discrepancy between private consumption expenditure as measured by the CSO and household consumption expenditure as obtained from the NSS has been growing. Although a part of this discrepancy may be attributed to consumption by non-household private entities, such as voluntary agencies and non-governmental organisations, the possibility cannot be ruled out that there is a growing incidence of under-reporting of consumption expenditures by the higher income categories.

1.90 The methodology for projecting the likely behaviour of the incidence of poverty in the country is based on these two specific features of consumption behaviour in the country namely : (a) stability of the Lorenz ratio for household consumption expenditure; and (b) the increasing discrepancy between the CSO and NSS measures of total non-governmental consumption. Since the plan model yields projections of total private consumption, which is equivalent to the CSO measure, the analogue of the NSS measure of consumption has to be derived by projecting the behaviour of the discrepancy term. This is done by relating the extent of discrepancy to the behaviour of commodity structure of output in the economy over the perspective period as obtained from the inter-sectorally balanced growth path given by the plan model.

1.91 The household component of consumption as per the latest estimate of NSS for 1993-94 is 59.7 per cent of total private consumption as given by the CSO and, more importantly, this component for various reasons has steadily reduced in the past 10 to 15 years. For the projections, the household component of the total private consumption has been worked out for three different commodity groups, viz., foodgrain, other food and non-food. The over-all discrepancy between the CSO and NSS estimates of consumption can be decomposed by these three commodity groups, and it is found that in 1993-94 the NSS consumption of food-grains was virtually identical with the CSO estimate, that for other food was 65 per cent of CSO, while that for non-food was only 27.7 per cent. The over-all figure of the NSS analogue of consumption for the perspective period is worked out as a weighted average of these three groups under the assumption that the discrepancy factors remain constant at the 1993-94 values, and with the commodity structure of CSO consumption in the base year as weights. It should be clear from the above estimates of the commodity group-wise discrepancy factors that a relatively higher growth rate of agriculture will lead to a lower increase in the over-all discrepancy term. In other words, this approach explicitly incorporates the observed positive relationship between agricultural growth and poverty reduction by recognising that the trend in increasing implicit inequality has more to do with non-agricultural sectors than with agriculture.

1.92 The over-all rates of economic growth of 6.5 per cent per year in the Ninth Plan (1997-2002), 7.7 per cent per year in the Tenth Plan (2002-2007) and 8.1 per cent per year in the Eleventh Plan (2007-2012), as per the selected trajectory, are accompanied by growth rates of per capita household consumption, which is the analogue of the NSS measure of consumption, of 4.3 per cent per year, 4.8 per cent per year and 5.3 per cent per year in the successive plan periods. These are derived from the assumed structure of growth, which yields annual rates of growth of foodgrain, other food and non-food as 3.2 per cent, 5.8 per cent and 7.5 per cent respectively in the Ninth Plan. In the Tenth and Eleventh Plans, the rates of growth of foodgrain and other food remain similar at 3 per cent per year and 6 per cent per year respectively. In case of non-food, the growth rate is assumed to be 8 per cent per year in the Tenth Plan and 8.5 per cent per year in the Eleventh Plan. This structure of consumption growth in conjunction with the group specific household shares for 1993-94 determines the over-all household share of total consumption in the three successive plan periods. The changing pattern of growth in the successive plan periods results in a gradual lowering of the household component. It was 59.7 per cent in 1993-94, and, as a result of the changes in structure of growth, it is projected to go down to 55.6 per cent in Ninth Plan, 53.5 per cent in the Tenth Plan and 50.1 per cent in the Eleventh Plan. As a result, the rates of growth of per capita household consumption are assumed to be significantly lower than the corresponding growth rates of per capita private consumption.

1.93 The household component of consumption in the base year of the Ninth Plan and the terminal years of each of the subsequent three plan periods is flowed through a vector of state-wise consumption proportions to allocate the total consumption among the states. This vector of consumption proportions is obtained from the growth in total consumption of each state between 1983-84 and 1993-94 relative to the growth in total national consumption. This procedure implies that the relative position of the states in terms of total consumption witnessed during the period 1983-84 to 1993-94 is assumed to remain unchanged throughout the plan as well as in the perspective period. The underlying assumption is that the rate of growth of consumption in the states during the period are derived from their past performance, and their relative positions do not change. The state-wise growth of per capita consumption in the three future plan periods as derived by this procedure are given in Table 1-11. It should be noted that although the growth in consumption of each state should logically be derived from an assumed growth of state domestic product (SDP), this procedure by-passes this connection and assumes constancy in the consumption shares. No implication can necessarily be drawn about the growth in SDPs from these constant shares, since the state-wise savings behaviour can be quite different from each other.

Table 1-11 : Projected Growth in Per Capita Household Consumption In the States

(per cent per year)

Sl. No.	State	Ninth Plan (1997-2002)	Tenth Plan (2002-2007)	Eleventh Plan (2007-2012)
1.	Andhra Pradesh	4.75	5.26	5.83
2.	Assam	4.62	4.81	5.47
3.	Bihar	4.04	4.58	4.99
4.	Gujarat	4.43	4.94	5.52
5.	Haryana	4.38	4.68	5.32
6.	Himachal Pradesh	3.41	4.36	6.00
7.	Jammu & Kashmir	3.53	4.51	6.20
8.	Karnataka	4.61	5.04	5.65
9.	Kerala	5.01	5.31	6.03
10.	Madhya Pradesh	4.06	4.57	5.04
11.	Maharashtra	4.79	5.17	5.80
12.	Orissa	4.99	5.41	6.00
13.	Punjab	4.79	5.05	5.74
14.	Rajasthan	4.08	4.47	4.97
15.	Tamil Nadu	5.05	5.47	6.08
16.	Uttar Pradesh	3.62	4.18	4.47
17.	West Bengal	4.55	5.00	5.59
18.	Other states/UTs	2.39	3.27	4.87
19.	All India	4.29	4.76	5.31

1.94 The state-wise consumption (household component) derived on the basis of the above growth rates are broken up into rural and urban components on the basis of the urban-rural per capita consumption differentials as given by the per capita urban-rural expenditure data of 1993-94, which are assumed to remain unchanged throughout the perspective period, and the population growth in the state. These per capita consumption of the states, which are worked out separately for rural and urban areas, are assumed to follow a two parameter log-normal distribution, which is a standard distribution function used in such analyses and has the distinct advantage that one of the two parameters is directly determined from the Lorenz ratio. As has already been mentioned, the stability of the Lorenz ratio for household consumption expenditure is a critical component of the projection exercise. The dispersion of each of the state-wise distribution functions is computed from the Lorenz ratio of the consumption distribution of each state, using the NSS data on consumer expenditure of 1993-94, and these too are assumed to remain unchanged throughout the three plan periods comprising the perspective.

1.95 From the state-wise distribution functions of consumption expenditure, the state-specific estimates of poverty for the Ninth Plan and for the perspective periods are worked out using state specific poverty lines computed as per the methodology of the Expert Group. These poverty lines have been computed on the basis of the state-wise price indices available for the base year of the Ninth Plan (1996-97) and are assumed to increase at the same rate as the over-all rate of inflation for the projection period. Therefore, this exercise assumes that there is no differential rates of inflation between the states over the perspective period. The poverty ratios are worked out separately for each state in rural and urban areas. The estimate of national level poverty ratio in rural and urban areas have been computed as the weighted average of state-wise poverty ratios as per the Expert Group methodology. In order to check the robustness of the estimates, the incidence of poverty in rural and urban areas at the national level have also been worked out from the national level consumption distribution of the NSS and a national poverty line. The estimates of poverty following this procedure have been worked out for the base and terminal year of the Ninth Plan (1996-97 and 2001-02) and at the end of the Tenth and Eleventh Five Year Plans. The poverty ratios at the national and state levels are given in Table 1-12. As can be seen, the increase in per capita consumption projected over the perspective period is able to reduce substantially the poverty ratio in all the states, including the poorest states.

Table 1-12 : Projection of Statewise Poverty Ratios in the Perspective Period

(per cent)

Sl.No.	State	1996-97	2001-02	2006-07	2011-12
1.	Andhra Pradesh	17.35	11.13	5.35	2.44
2.	Assam	26.46	10.65	3.82	2.07
3.	Bihar	44.09	27.46	14.08	6.52
4.	Gujarat	17.07	9.05	3.94	1.28
5.	Haryana	18.41	10.16	5.00	2.58
6.	Himachal Pradesh	22.38	14.02	7.34	3.14
7.	Karnataka	30.72	17.86	8.68	3.45
8.	Kerala	21.22	11.35	4.76	1.38
9.	Madhya Pradesh	33.38	21.97	12.75	6.81
10.	Maharashtra	32.74	20.66	11.41	5.43
11.	Orissa	40.21	22.93	10.76	4.63
12.	Punjab	8.02	2.98	0.85	0.15
13.	Rajasthan	20.31	10.85	4.70	1.52
14.	Tamil Nadu	30.73	18.11	8.96	3.59
15.	Uttar Pradesh	32.52	21.91	12.88	6.92
16.	West Bengal	25.08	13.54	6.26	2.86
All India		29.18	17.98	9.53	4.37
All India (weighted)		29.02	17.65	9.19	4.39

1.96 These estimates of state-wise poverty, however, are critically dependent on three important assumptions : (a) unchanged inequality in the distribution of consumption; (b) unchanged urban-rural per capita consumption differentials; and (c) unchanged poverty norms for all states and the nation. The likely validity of each of these assumptions needs to be examined. The structure of consumption growth in the various states when compared with the pace of poverty reduction reveals that reduction in poverty in all the states is not uniformly dependent on the rise in per capita consumption. Some of the poor states are projected to experience a rate of poverty reduction which is higher than that at the national level despite a lower rate of growth in per capita consumption as compared to the national average. Bihar, and to some extent Orissa, are examples. The projected poverty reductions in most of the poorer states are quite significant in both rural and urban areas. It appears that the states with relatively lower initial inequality in consumption distribution have been projected to experience a faster reduction in poverty than the states with a relatively higher inequality. This phenomenon arises out of the sensitivity of the analysis to the assumed constancy of the Lorenz ratios. It is recognised, however, that as the more backward states start developing, the relative inequality measure may in fact worsen and become progressively similar to those obtaining for the more industrialised states. As a consequence, the reduction in poverty in these states may not be as sharp as projected above. On the other hand, the proportionately higher growth rate in agriculture relative to the growth rate of GDP projected for the perspective period as compared to the historical proportions suggests that the urban-rural consumption differentials may indeed narrow, which would argue for a sharper reduction in poverty than projected. In this context it is interesting to note that an agriculturally developed state like Punjab has lower inequality than the more industrialised Maharashtra. This appears to suggest that the focus that is being placed on agriculture in the Ninth Plan is more likely to be poverty reducing than an industry-based growth strategy. In so far as the constant poverty lines are concerned, it is not possible to project the inflation rates for different states and therefore no statement can be made regarding the impact of differential rates of inflation. Finally, it needs to be mentioned that the observed clustering of the poor around the poverty line and its implication for a faster reduction in the poverty rate has not been taken into account in the above exercise. If this trend continues, the pace of poverty reduction may accelerate even more than projected in this exercise.

1.97 The projected poverty ratios in the rural and urban areas at the national level are presented in Table 1-13. The growth in per capita consumption between 1993-94 and 1996-97 reduces the incidence of poverty to 30.55 per cent in rural reas, 25.58 per cent in urban areas and 29.18 per cent for the country as a whole. The incidence of poverty in the terminal year of the Ninth Plan is estimated as 18.61 per cent in rural areas, 16.46 per cent in urban areas and 17.98 per cent for the country as a whole. By the end of the perpsective period the povery ratio is projected to be less than 5 per cent. The poverty reductions are the impact of consumption growth alone as the inequality in the distribution of per capita household consumption is assumed to remain unchanged during the perspective period. Indeed, since the discrepancy between household and private consumption is projected to increase, there is an implicit inference that the extent of relative inequality may rise to a certain extent. Under the assumptions made, the reduction in poverty is higher in rural areas as compared to urban in the Ninth Plan and also in the perspective period. This arises almost entirely due to the fact that relative inequalities are more pronounced in urban areas as compared to the rural.

Table 1-13 : Projection of National Poverty Ratios

(percent)

Region	1996-97	2001-02	2006-07	2011-12
Rural	30.55	18.61	9.64	4.31
Urban	25.58	16.46	9.28	4.49
Total	29.18	17.98	9.53	4.37

1.98 The projections of statewise and national ratios for the perspective period are based on the assumed stability of two key parameters: (a) the Lorenz ratio; and (b) the per capita urban-rural consumption differential. The rationale for the assumed constancy of these ratios lies in their past behaviour. However, public policy and development strategy can conceptually affect their future behaviour. In order to understand the magnitude of such effects, the sensitivity of the poverty measures to changes in the distributional parameters need to be seen. The impact of a reduction in inequality on poverty worked out through a simulation exercise shows that 5 per cent reduction in the Lorenz ratio of consumption distribution, *ceteris paribus*, reduces the incidence of poverty by an additional 2 percentage points in the terminal year of the Ninth Plan and reduction in the Lorenz ratio by 10 per cent reduces the incidence of poverty in the Ninth Plan by 4 percentage points. On the other hand, reduction in the urban-rural per capita consumption differential by 5 and 10 per cent reduce the poverty ratio by only 0.2 and 0.4 percentage points respectively. The principal reason for this limited effect is that while rural poverty declines, there is a partial off-set through increase in the urban poverty. For this reason, it may not be desirable to focus excessively on policies to reduce the urban-rural differential except on the basis of distribution of the incremental growth. The national poverty ratios arising from the sensitivity analysis are presented in Table 1-14.

Table 1-14: Projection of National Poverty Ratios: Sensitivity Analysis

(percent)

Scenario	1996-97	2001-02	2006-07	2011-12
1. Scenario I	27.17	16.00	8.01	3.51
2. Scenario II	28.99	17.84	9.45	4.35
3. Scenario III	26.98	15.86	7.93	3.48
4. Scenario IV	25.08	14.02	6.60	2.79
5. Scenario V	28.81	17.71	9.37	4.32
6. Scenario VI	24.69	13.76	6.48	2.75
Base Case	29.18	17.98	9.53	4.37

Notes:
1. Scenario I is based on a reduction of Lorenz ratio by 5%, i.e., from 0.2816 to 0.2675 in rural areas and from 0.34 to 0.323 in urban areas.
2. Scenario II is based on a reduction of per capita urban-rural consumption differential by 5%, i.e., from 62.78% to 59.64%.
3. Scenario III is based on the impact of both Scenario I and Scenario II.
4. Scenario IV is based on a reduction of Lorenz ratio by 10%, i.e., from 0.2816 to 0.2534 in rural areas and from 0.34 to 0.306 in urban areas..
5. Scenario V is based on a reduction of per capita urban-rural consumption differential by 10%, i.e., from 62.78%to 56.50%.
6 Scenario VI is based on the impact of both Scenario IV and Scenario V.

1.99 There are a number of ways by which the reduction in inequality in consumption distribution can be effected. The increased outlay on anti-poverty programmes, if directed towards states with higher poverty and high poverty regions within the states, can lead to an improvement in the inequality parameters and thereby to a faster reduction in poverty than projected. Another option lies in transferring consumption from top to the bottom deciles of the population. A 5 per cent rise in the share of consumption of bottom three deciles of the population at the expense of top 10 per cent means a reduction in the income of the top 10 per cent by 2 to 3 per cent of their consumption share. In a similar way, a 10 per cent rise in the share of consumption of bottom three deciles of the population means a reduction in the income of top 10 per cent of the population by 5 to 6 per cent of their consumption share. It needs to be realised, however, that although the percentage changes in the distributional parameters appear to be fairly small, the magnitudes involved are quite substantial and may involve considerable effort. For example, a 5 per cent and 10 per cent rise in the share of consumption of bottom 30 per cent of the population involve a transfer of 0.75 per cent and 1.5 per cent of the total consumption respectively. This translates into an annual transfer of total income of Rs. 4753 crore and Rs. 9505 crore at 1996-97 prices during the course of the Ninth Plan for the two cases. These transfers are in addition to the existing redistributive measures through anti-poverty and other programmes which are implicitly built into the Ninth Plan. The effect of these transfers would be to reduce the incidence of poverty from 18 per cent in the terminal year of the Ninth Plan in the base-line to 15.9 per cent and 13.8 per cent respectively. It needs to be understood that the income transfer from the top to bottom deciles may not be reflected entirely in reduction of the consumption of the former. A certain portion of the reduction in income would almost inevitably fall on their savings. Thus, such a transfer is likely to result in a reduction of the savings rate in the economy. The magnitude of this shortfall, in itself, may not be a serious problem, provided it is made up through increased efforts towards mobilising additional investible resources.

1.100 These projections of the possible reduction of poverty during the perspective period, though quite impressive, should not be a cause for complacency. In particular, there is no cause to bring into question the utility or size of the anti-poverty programmes at the present time. These programmes, it should be remembered, not only alleviate the immediate deprivation of the poor, but also contribute quite significantly to the creation of productive assets - private assets in the case of schemes like IRDP, and community assets through JRY and EAS. Therefore, the impact of these schemes are embedded in the above analysis both through their direct effect on the consumption of the poor and through the indirect effects arising from the income generated from the assets created. Reduction of these schemes is likely to alter the parametric basis of the analysis and there is no estimate of the magnitude of such changes. More importantly, time series analyses indicate that the existence of these schemes, along with the PDS, have prevented the distribution-sensitive measures of poverty, such as the PG and SPG indices, from worsening during natural calamities. Closure of these programmes would expose the population below or around the poverty line to vulnerabilities which continue to be present in the Indian economy. It should be recognised that starting new programmes during times of necessity is expensive in terms of both human and financial costs and also tends to be inefficient. There is, however, a strong case for better targetting and improving the effectiveness of these programmes.

Food Requirement and Agricultural Growth

1.101 Given the objectives of removal of the incidence of poverty and unemployment and of ensuring food and nutritional security, attaining a high growth rate in agriculture in the Ninth Plan and beyond is necessary. In order to achieve these objectives, the value of agricultural output is targetted to increase at annual rate of 4.5 percent in the Ninth Plan. The targetted annual growth rates in the value of agricultural output for the Tenth and Eleventh Plans are 5.3 percent and 5.1 percent respectively. The commodity-wise break-up of the target growth rates is given in Table 1-15. These targets have been determined keeping in mind the commodity-wise level of expected demand- both domestic and external -and the domestic supply possibilities.

Table 1-15 : Target Growth Rate in Value of Output of Agriculture During the Ninth Plan and over the Perspective Period

(in percentage)

Commodity	IX Plan	X Plan	XI Plan
1) Agricultultural Crop	3.82	4.54	4.27
a) Foodgrain	3.05	3.57	2.73
i) Rice	2.75	3.08	2.73
ii) Wheat	3.75	4.31	3.64
iii) Coarse Cereal	2.20	2.40	2.43
iv) Pulses	3.50	4.93	5.66
b) Oilseeds	5.25	8.85	5.16
c) Sugar Cane	4.00	6.16	6.07
d) Fruits & Vegetables	7.00	8.01	7.89
e) Other Agricultural Products of which	2.64	3.08	3.04
i) Tea	5.00	6.16	6.07
ii) Coffee	5.00	6.16	6.07
2) Livestock	6.59	7.68	7.36
a) Milk Group	7.04	8.32	7.89
b) Meat & Poultry Group	7.50	8.63	8.50
c) Other Livestock Products	2.00	1.85	1.82
3) Fishery	6.50	7.00	7.00
4) Total Agriculture	4.50	5.30	5.10

Note : The growth rates given in this table differ from the growth rates of the quantum of output on account of expected changes in relative prices .

1.102 The expected per-capita consumption levels of various commodities by the end of perspective period, which are presented in Table 1-16, have been worked out on the basis of expected population growth rate, growth rate in per-capita consumption expenditure and the elasticity of demand with respect to per-capita consumption expenditure. Foodgrain consumption is likely to increase from 194.70 million tonnes in 1996-97 to 298.38 million tonnes in 2011-12. In order to meet this demand, the production of foodgrain is projected to increase from 199.32 million tonnes in 1996-97 to 337.3 million tonnes in 2011-12. Within foodgrains, though India is comfortably placed as far as cereal production is concerned, the deficit in pulses is expected to continue. This is despite the fact that the production growth rate is projected to be stepped up from 3.5 percent in the Ninth Plan to 4.9 percent in the Tenth Plan and further to 5.7 percent in the Eleventh Plan. These target growth rates for pulses are much higher than the production growth rate of pulses achieved in the past. This, and more, will have to be achieved through bringing more area under pulses, enhancing of irrigation coverage and introduction of new HYVs for pulses.

Table 1-16 : Projected Production and Per Capita Consumption of Selected Agricultural Commodities

Commodity	Production 1996-97 (mil. ton)	Consumption 1996-97 (kg.)	Production 2011-12 (mil. ton)	Consumption 2011-12 (kg.)
1) Agricultural Crop				
a) Foodgrain	199.32	188.50	337.3	223.35
i) Rice	81.31	84.00	128.16	93.80
ii) Wheat	69.27	63.00	130.45	81.25
iii) Coarse Cereal	34.27	27.50	48.93	27.50
iv) Pulses	14.46	14.00	29.76	20.80
b) Oilseeds	24.96	7.00*	58.56	11.05*
c) Sugar Cane	277.25	27.00**	679.64	45.48**
2) Livestock				
a) Milk	68.6	70.25	227.5	152.15
3) Fishery	5.35	5.05	14.76	9.30

* Consumption of oilseeds is in terms of edible oil.
** Consumption of sugarcane is in terms of sugar and jaggery.

1.103 Within non-foodgrains, consumption demand for sugar and jaggery is expected to increase from 25.25 million tonnes in 1996-97 to 54.03 million tonnes in 2011-12. In order to meet this demand, sugarcane production has to be targetted to increase at an annual rate of 4 percent in the Ninth Plan and 6.2 and 6.1 percent in the Tenth and Eleventh Plans respectively. However, sustaining such high growth rates over the perspective period is likely to be quite difficult. The alternative is to increase the recovery rate of sugar from sugarcane. At present the recovery rate in India is about 10 per cent, which is much lower than the international standards. Concerted efforts have to be made to increase the recovery rate, which would reduce the sugarcane production requirement to meet domestic demand for sugar. Even a one percentage point increase in the recovery rate from the present 10 percent to 11 percent will reduce sugarcane production requirement from 679.64 million tonnes to 610 million tonnes in 2011-12, which would make it that much easier to meet the other agricultural output targets.

1.104 Given the very high demand elasticity with respect to per-capita consumption expenditure, the demand for livestock products and fishery is expected to grow at a very rapid rate. The consumption requirement of milk is likely to increase from 66 million tonnes in 1996-97 to 180.76 million tonnes in 2011-12. The consumption of fish is expected to increase from 4.74 million tonnes in 1996-97 to 11.05 million tonnes in 2011-12. Apart from this, there is a good export market for livestock and marine products. In order to cater to both domestic and external markets, the production of livestock and fishery sectors should be targetted for rapid growth. Milk production is targetted to increase from 68.6 million tonnes in 1996-97 to 227.5 million tonnes in 2011-12. The enhanced production of milk is likely to come entirely from enhanced yield levels. To achieve this, the network of veterinary hospitals and facilities for cross-breeding will need to be strenghthened and upgraded. Availabilty of quality fodder and feed will also have to receive special attention. Fish production is targetted to increase from 5.35 million tonnes in 1996-97 to 14.76 million tonnes in 2011-12. To meet this target, the focus will be on integrated development of marine and inland fishery, conservation and upgradation of aquatic resources and adequate availabilty of quality fish seeds and feeds.

1.105 High growth rate in agriculture in the long run can be sustained only by broadening the regional base of agriculture. This will be have to achieved through devoting greater amount of resources to rain-fed areas, ensuring more intensive and efficient utilisation of irrigation facilities and continuous flow of improved technology and farm practices.

1.106 Sustaining such a rate of agricultural growth would require much larger use of inputs particularly land, irrigation, fertilisers and pesticides, HYVs etc. However, the availabilty of land is expected to emerge as a major constraint on agricultural growth. Due to increasing demand of land for housing, rising level of urbanisastion and industrialisation, increasingly larger quantity of agricultural land is being shifted to non-agricultural uses. In the past such loss of agricultural land was being compensated by converting forest land into agricultural land. However, there is no scope for further conversion of the forest land. The only possibilty for fresh land is through reclamation of waste land and land affected by salinity, alkalinity and water-logging. It is expected that such reclaimed land will compensate for the loss of agricultural land for non-agricultural uses. The Net Sown Area is therefore expected to remain more or less constant at the level of 142 million hectares throughout the perspective period. Vigorous effort will need be made to reclaim degraded land. However, this alone will not be sufficient. Reclaimed land is likely to be inherently deficient in fertility compared to normal agricultural land. Focus will thus have to be on developing appropriate technology packages which will restore the fertility of reclaimed land.

1.107 Land degradation is one of major problems in India. Soil erosion is the most important cause of land degradation. It is estimated that nearly 45 percent of geographical area of India is affected by serious soil erosion through ravine and gully, waterlogging, shifting cultivation, etc. Major efforts will need to be made to reduce the incidence of soil erosion through water conservation measures, improvement of drainage facility, tree plantation, discouragement of shifting cultivation, etc. Neglect of such measures is likely to make the prospect of maintaining and increasing the forest cover of the country that much more difficult, as survival strategies of the poor will compel them to encroach on forest lands.

1.108 Given that the Net Sown Area cannot, and indeed should not, be increased further, the availability of land can be augmented only through increasing cropping intensity. Enhancing cropping intensity will not only require expansion of irrigation facilities, but also higher efficiency of the irrigation system. At present the ultimate irrigation potential is estimated to be 113 million hectares. With this irrigation potential and the current cropping intensity coefficient with respect to irrigation, the cropping intensity can go up to 149 as against the current level of 134.20. However, this will not be sufficient. Concerted efforts have to be made to increase the cropping intensity coefficient with respect to irrigation through water conservation measures and more efficient and judicious use of existing irrigation facilities. For working out irrigation requirement to achieve the target growth rate of production in agriculture, it has been assumed that the cropping intensity coefficient with respect to irrigation will increase by 6.4 percent in the Tenth Plan over the Ninth Plan and a further 6.3 percent in the Eleventh Plan over the Tenth Plan. Under these assumptions, the cropping intensity is projected to rise from 134.20 in 1996-97 to 154.33 in 2011-12. With appropriate investment, gross irrigated area can increase from 76.25 million hectares in 1996-97 to 105.50 million hectares in 2011-12.

1.109 Increase in yield is expected to be the primary contributor to the enhanced agricultural production. The growth rate of yield is expected to be 2.91, 3.54 and 3.37 percent per annum in the Ninth, Tenth and Eleventh Plans respectively. In the past, the yield growth rate has largely been based on increasingly more intensive use of inputs, particularly chemical fertilisers and pesticides. However, very high level of the use of these inputs can lead to land degradation and other ecological and environmental problems. Under the present yield coefficient with respect to chemical fertiliser use, maintaining the above mentioned rates of growth in yield, would result in an unsustainably high level of fertiliser-intensity by the end of perspective period. Concerted efforts will need to be made to increase the yield coefficient with respect to both fertiliser use and irrigation. This alone will not be sufficient, and increased attention will have to be paid on replacing chemical fertilisers with bio-fertilisers. Under the assumption of 10 per cent increase in the yield coefficients with respect to chemical fertiliser use and 6.4 per cent increase in the yield coefficient with respect to irrigation in the Tenth Plan over the Ninth Plan and further improvements of similar magnitudes in the Eleventh Plan over the Tenth Plan, the chemical fertiliser consumption requirement will be 45.48 million tonnes in 2011-12. The per-hectare chemical fertiliser consumption would then stand at 207.53 kgs. in 2011-12 as against the current level of 75.12 kgs. per hectare. Such a level of chemical fertilizer intensity would not be supportable for both environmental and productivity reasons. Replacement of chemical fertilizers with bio-fertilizers is therefore essential, and efforts towards development of the appropriate technologies and towards encouraging the production of bio-fertilizers will have to be taken up in right earnest immediately. The consolidated strategy for agricultural growth in terms of the various major input requirements is presented in Table 1-17.

Table 1-17 : Area Yield and Input Use in Agriculture

Item	1996-97	2011-12
1) Net Sown Area (million hec.)	142.00	142.00
2) Gross Sown Area (million hec.)	190.50	219.15
3) Cropping Intensity (in %)	134.20	154.33
4) Annual Growth in Agricultural Crop Production (in %)		
a) Ninth Plan	3.82	
b) Tenth Plan	4.54	
c) Eleventh Plan	4.27	
5) Annual Growth in Gross Sown Area (in %)		
a) Ninth Plan	0.91	
b) Tenth Plan	1.00	
c) Eleventh Plan	0.90	
6) Annual Growth Rate in Yield (in %)		
a) Ninth Plan	2.91	
b) Tenth Plan	3.54	
c) Eleventh Plan	3.37	
7) Fertiliser Consumption (mill ton.)	14.31	45.48
8) Fertiliser Intensity (kg/hec)	75.12	207.53
9) Gross Irrigated Area (mill hec)	76.25	105.50
10) Percentage of Gross Area Under Irrigation	40.00	

1.110 To further harness the growth and distributive potential of agriculture, development of agro-based industries will need to receive special attention. Agro-based industries are not only labour-intensive and contribute to increased value-addition, they expand the market for agricultural commodities both domestically and externally. This can have very positive effects on the terms of trade for agriculture and thereby on the incentive for more rapid agricultural growth. The agro-processing industry in India is still at a nascent stage. Growth of agro-processing industries should be actively encouraged through the provision of adequate credit, quality transport, communication, storage and marketing facilities.

Energy and Natural Resources

1.111 Achievement of an average 7.4 per cent growth rate in GDP over the next 15 years will generate a high growth in demand for natural resources, particularly energy. The demand for total primary commercial energy increased from 25.5 MTOE in 1953-54 to 212.9 MTOE in 1994-95, representing an increase of more than 8 times over the 40 year period. It is likely to increase to 770 MTOE by 2011-12 representing over 3 fold increase in 17 years. In per capita terms, the demand for primary commercial energy was 67 KGOE in 1953-54. It increased to 234 KGOE in 1994-95. By 2011-12 the per capita primary commercial energy consumption is expected to increase to 648 KGOE. Despite the not inconsiderable growth, this level of per capita primary commercial energy consumption in 2011-12 is low when compared to the international average per capita energy consumption levels of 1433 KGOE in 1994-95, and over 5000 KGOE in the developed countries. The demand for electricity, in particular, is likely to increase by about 3.5 times by 2011-12 as compared to 1996-97. As a result, more installed generating capacity will have to be added over the next 15 years than what has been done in the last 50 years. The demand for petroleum products is likely to treble by 2011-12 than what it was in 1996-97. Similarly, the demand for coal is likely to increase by nearly 2.6 times. These will require increase in exploration activity, development of mines/oil fields, setting up of thermal and hydro-electric power stations which are not only highly capital intensive but also are likely to put great pressure on the quality of environment. Such large demand will also require transport facilities viz. railways, roads and ports to be expanded sufficiently so that these infrastructural facilities do not act as a constraint for achieving the desired growth in the economy in general and the availability of energy in particular.

1.112 In the long run, some of the important questions that the planners will have to themselves address to are: (a) how long will depletable resources, such as oil, last; (b) what sort of export strategy will have to be adopted so that growing requirement of imported energy is met without adversely affecting the balance of payments position; (c) what are the environmental consequences associated with intensive mining and use of the relatively abundant mineral resources such as coal, iron-ore, etc. In short, the question of sustainability of natural resources and the environment as well as that of strategic self-reliance are important in the long run and will need to inform the development strategy. This question of sustainability has to first take account of the domestic availability of these resources and the options that are available to the country. The domestic availability and the life indices of some of the important mineral resources is given in Table 1-18. Even though the size of certain primary commercial energy reserves appear fairly large, their per capita availability is modest on account of the large population of the country. If no significant additions are made in future, the per capita availability would worsen.

Table 1-18 : Life Indices of some Important Minerals

Sl. No. Mineral/Ore/ Metal	Recoverable reserves as on 1.4.1990 (M.tonnes)	Depletion upto 2001-02 (m. tonnes)	Recoverable reserves as on 1.4. 2002	Projected production during 2001-02 (m.tonnes)	Balance life at 2001-02 level Production (Years)@
1.	2.	3.	4.	5.	6.
1. Crude Oil	727.00 (1.1.1996)	213.73	513.27	36.98	13.88
2. Natural Gas (B.Cu.M.)	640.00 (1.1.1996)	167.10	472.90	30.74	15.38
3. Coal					
(i)Coking	15961.00 (1.1.1997)	170.80	15790.20	50.20	314.50
(ii)Non-Coking	56772.00 (1.1.1997)	1455.35	55316.65	324.85	170.28
4.Bauxite	2525.00	77.02	2448.00	9.54	256.60
5.Copper Metal	4.56	1.41	3.14	0.44	7.11
6.Zinc Metal	10.00 (1.4.94)	1.23	8.77	0.16	54.46
7.Lead Metal	2.50 (1.4.94)	0.52	1.98	0.08	25.25
8.Iron Ore	12745.00	871.31	11873.69	107.00	110.97
9.Chromite Ore	88.00	17.33	70.67	2.12	33.33
10.Magnesite	233.00	5.32	227.68	0.52	Adequate Reserves
11.Limestone	76446.00	1239.92	75206.08	148.27	Adequate Reserves
12.Dolomite	4967.00	42.61	4924.39	4.56	Adequate Reserves

NOTE : @ - Subject to change on revision of recoverable reserves

1.113 As can be observed from the table, the hydrocarbon reserves of the country are unlikely to last beyond 2016 (oil reserves, in fact, will last only till 2014) at the projected production levels of 2001-02, and that of copper beyond 2009. The position regarding other minerals is comparatively better. However, mining is beset with environmental problems as it often leads to deforestation, diversion of land from agricultural to other purposes, etc. Greater use of energy would result in increased carbon emission and other pollutants. This coupled with denudation of forests (which act as sinks for emissions) is likely to worsen the environmental problems.

1.114 The demand for electricity (generation requirement) is likely to increase to 1473 Bkwh by the end of the Eleventh Plan, as against 394.5 Bkwh in the utilities in 1996-97 representing an average increase of 9.1% per annum. Much of the generation is likely to be thermal, through within thermal there is a possibility of greater share of hydro-carbon (oil & gas) based generation vis-a-vis coal based generation. Greater emphasis on hydro-electricity is important, particularly to meet the peak requirement. Hydro-electricity should also be preferred as it is a clean source of energy. However, much of the hydro-electric potential that remains to be tapped is located in the ecologically fragile Himalayan region and in more difficult locations. Tapping this source, therefore, is fraught not only with environmental hazards but is also much costlier as compared to thermal power. On the other hand, coal based thermal power plants lead to problems related to air pollution, ash disposal, etc. Dependence on oil based thermal power plants would result in less pollution, less pressure on railways and other infrastructure, but it would result in greater dependence on imports and the consequent reduction in self-reliance, and also increase balance of payments pressures. An important source of energy which has been neglected over the recent years is nuclear power. Although it is relatively expensive in terms of the capital costs, it is free from many of the problems discussed above. Consideration needs to be given to increasing the share of nuclear power as a viable alternative source of energy.

1.115 The rate of growth of nuclear power is currently limited by financial constraints while it is technologically poised for higher rates of growth. The availability of nuclear fuels in the country can sustain 350,000 MWe of power, and the industrial capability and R&D infrastructure can indeed support an accelerated programme. The nuclear power programme should grow to a minimum size of 20,000 MWe in the course of the next 25 years. The programme would be largely based on indigenous designs of Pressurised Heavy Water Reactors and Fast Breeder Reactors. Some Light Water Reactors may be inducted as a supplementary line to increase the nuclear power capacity at a faster pace, subject to such systems being available on political and commercial conditions acceptable to the country. A reasonable size Nuclear Power Programme based on fission systems will also enable the country to develop fusion based systems (using hydrogen as nuclear fuel) in due course of time. Such fusion based systems are expected to play a very important role in the long run in meeting the energy needs of mankind. Full benefits of this technology will not be available to the country unless its growth is adequately supported in the near term as a matter of policy. Nuclear power development is important to avoid excessive dependence on energy import, in the coming decades.

1.116 The major problem of the power sector is the optimum generation mix. In the short run, dependence on gas based and oil based plants seems to inevitable for meeting the power demand on account of the relatively shorter gestation periods of these sources. However, in the long run, the optimum mix has to be planned in such a manner that bulk of the base load requirements will have to be met from coal based thermal electricity, supplemented by nuclear electricity to the extent possible, while the peak requirement has to be met from hydro-electric stations and oil/gas based power. The use of oil for meeting base load requirements will have to be discouraged. The signing of PPAs in future should ensure that oil/gas fired stations are mainly configured for meeting peaking requirements.

These fuels should not be used for meeting the base load requirements. Indeed, there is a case for converting existing oil/gas based power plants and those which are in the process of being established to peak-load plants at some point in time in the future. The agreements with the independent power producers may have to contain clauses which would permit such reassignments.

1.117 Sufficient reserves of coal are available in the country. The demand for coal is likely to increase from 296 million tonnes in 1996-97 to 776 million tonnes in 2011-12. The domestic production is likely to increase to 672 million tonnes in 2011-12 as against 286 million tonnes in 1996-97. Thus, the gap between demand and domestic production of coal is likely to be 104 million tonnes in 2011-12. Much of the coal mining in India is done by open cast mining techniques. Although it raises the productivity and recovery of coal from the mines, it leads to severe environmental problems viz. land degradation (including that of agricultural and forests), displacement of people, air pollution, etc. As per some studies done in the Planning Commission, the land requirement for open cast mining was about 513 hectares per million tonnes of coal, as compared to 235 hectares per million tonnes of coal by underground mining. According to the Working Group of Ninth Plan, nearly 790 hectares of land will be required per million tonne of additional coal production. On the other hand, the recovery and productivity in underground mining is lower, which increases the unit cost of production of coal. In the long run, new ways of mining coal, viz. coal slurry or coal bed methane, etc. are some of the technologies that will have to be adopted to reduce the environmental hazards as well as to improve the productivity. Greater dependence on imports of coal would also require massive expansion of port facilities, rail transport network (unless the end-use industries are set up close to ports), apart from putting pressure on the balance of payments. The utilisation rate of coal in all the end-use industries will have to improve in order to reduce the demand of coal and problems associated with its production and use.

1.118 The recoverable reserves of crude oil in the country are likely to be of the order of 513 million tonnes by 2001-02if no further accretion to reserves takes place. The production of crude oil is expected to be 37 million tonnes. With hardly any accretion in the reserves taking place in the last few years (in fact, there is a net deceleration in the reserves), the reserves to production ratio is likely to decline. The accretion to crude oil reserves was negative in each of the first three years of the Eighth Plan while in case of natural gas, the recoverable reserves declined from 735 billion cubic metres from 1992-93 to 707 billion cubic metres in 1994-95. Given a constant production level of 37 million tonnes from 2001-02 and the anticipated recoverable reserves of 513 million tonnes, the crude oil reserves are likely to last only till 2015-16. These reserves could be completely exhausted in 2011-12, if it is assumed that 30% of the demand of petroleum products will be met from domestic crude oil production. The situation for natural gas is marginally better. In addition, there also exist potential of coal bed methane, oil shale and methane gas hydrates in the country. As per the initial estimates available, the potential is placed at 850 billion cubic metres of coal bed methane, 600 million tonnes of oil shale and 6156 trillion cubic metres of gas hydrates. If these estimates are confirmed by detailed exploration, there will be a big improvement with regard to availability of energy sources for the growth of our country. It is thus, abundantly clear that until and unless these new hydrocarbon sources are proved and developed, the demand for petroleum products in the years to come will have to be increasingly met from imports. This will put pressure on the balance of payments. Therefore, exports will have to increase substantially. Efforts will have to be simultaneously made to reduce the oil intensity of the economy. This is particularly true of the transport sector. The share of railways in the total freight movement in the last few years has declined sharply vis-a-vis the roads sector. It is important to reverse this trend. The energy efficiency of movement by rail is better than of roads and steps will have to be taken to encourage it. Since the early 1980s, growing number of scooters (2-wheelers) and cars have been plying on the roads, particularly in the urban areas. This has resulted in greater energy (in particular oil) intensity, traffic jams and environmental hazards viz. air pollution. If unchecked, this problem could take serious dimensions in the years to come. It is, therefore, essential that these modes of transport are replaced by public modes of tranport, viz. buses and whenever feasible by suburban trains; including mass rapid transport system (MRTS).

1.119 So far as non-conventional energy sources are concerned, the development of wind generators in recent years has been quite impressive. Suitable policy measures to encourage the use of wind, solar, biomass and co-generation should be evolved. Consideration may be given to making use of solar water heating systems mandatory in residential buildings above a certain size. There is need to consider enacting a legislation to enforce energy conservation standards.

1.120 It is important that conservation of natural resources receives adequate priority, especially from environmental angle. The danger of further deterioration in the quality of air and water is not unreal and so is the case with the quality of soil. Greater demand for land resources for food, fodder, fuel, water as well as for mining and other activities will put pressure on the availability and quality of land. Therefore, it is essential that these resources are used with utmost care so that growth is sustainable.

1.121 One of the main problems in taking a rational decision on natural resource use is the lack of an appropriate information system and a methodology for natural resource accounting. As a result, the depletion of the national asset base is simply not taken into account while evaluating alternative strategies. The Ninth Plan will lay great stress on evolving such natural resource accounting methodologies so that decisions can be taken on the basis of the full cost to the Nation.

1.122 The most important methodology for preventing undue depletion of natural resources is by ensuring their efficient use at all levels. This has two important dimensions. First, exhaustible or vulnerable natural resources should be priced appropriately in order to prevent over-exploitation. In India, since a large proportion of natural resources are subjected to administered prices, there has been a tendency to under-price resources quite significantly. This approach needs to be changed urgently. Second, technologies which conserve the use of natural resources need to be developed and promoted vigorously.

Technology

1.123 In order to strengthen the technological capabilities of the Indian industries, both for meeting the national needs and for providing global competitiveness, a number of new initiatives have been launched. A Technology Development Board has been established in 1996 with a mandate to facilitate development of new technologies and assimilation and adaptation of imported technologies by providing catalytic support to industries and R&D institutions to work in partnership. Matching grants to R&D institutions showing commercial earnings through technology services was also introduced in 1996. Such initiatives will need to be carried forward and broadened.

1.124 Issues of natural resource conservation and agricultural growth cannot be effectively tackled in the absence of an appropriate technological base. In addition, technology is essential for increasing the competitiveness of the Indian economy in international markets. Indigenous development of technology is therefore of the highest importance and deliberate planned steps need to be taken to increase technological self-sufficiency of the Nation.

1.125 Rapid technical progress is altering fundamentally the skills, knowledge, infrastructure and institutions needed for the efficient production and delivery of goods and services. So broad and far-reaching are current technological developments that many see the emergence of another industrial revolution driven by a new technological "paradigm". This paradigm involves, not only new technologies and skills in the traditional sense, but also different work methods, management techniques and organisational relations within firms. As new transport and communications technologies shrink international 'economic space', it also implies a significant reordering of comparative advantage, and trade and investment relations, between countries.

1.126 In India also, there is considerable technological activity in a wide spectrum of firms. What is most impressive is the number of small and medium sized enterprises that are investing in new technology based ventures, and often striking out in world market as exporters. However, the rest of the industrial sector still needs to invest on technology upgrading. Experience of many developing and industrialised countries suggests that a rapid acceleration of industrial technology development calls for a deliberate 'strategy', in the sense that it requires the government to coordinate and guide an essentially market-driven process. Free markets suffer from various kinds of 'market failures', they may not throw up the appropriate amounts of infrastructure, skill, information and institutional support, and mere exposure to market forces, while getting rid of inefficient policies, may not suffice to create the technological dynamism that continued industrial growth needs.

1.127 Indian technology policies are undergoing significant changes, and on the whole have improved greatly in recent years. They are not, however, ideal. A coherent technology strategy in India must address a number of interconnected elements in the incentive regime and the relevant factor markets and institutions. The following approach should guide future policies in technology:

Skills : Technology development calls for both general and specific forms of human capital, and emerging technologies are highly skill intensive in both technical and managerial terms. While India is endowed at present with large amounts of high-level human capital, investments in the creation of new skills (as measured by enrolment levels in technical subjects at all levels) are low. In addition, firm level investments in training are highly variable, and large parts of industry invest very little in training. The SME sector in particular suffers from very low levels of skill, while industrial training institutes are often unresponsive to their needs.

Technological effort : R&D in Indian industry has been rising, but the overall level is still low and over three-quarters of research effort originates in the public sector. This is in contrast to Taiwan and Korea, where most of R&D is undertaken by industrial enterprises. It is important for the Government to analyse current technological trends in industry in order to formulate appropriate policies to encourage R&D.

Technology access : Technology upgrading requires that Indian enterprises of all types have information on relevant technologies in international markets and also within the country. Many countries have well-developed systems of computerised on-line technology information and dissemination services, often backed up with consultancy and financial assistance for small and medium enterprises to enable them to know about, test, and implement new technologies. The availability of similar facilities are weak in India. Note needs to be taken of the emerging trends of restrictions on access to technology through stringent intellectual property restrictions and on "dual use" technologies by certain groups of industrially advanced countries. Special efforts have to be made both at national as well as at international levels, to ensure that such restrictions do not inhibit progress in high technology sectors.

Technology institutions : India has a large infrastructure of technology support institutions, some of which are undergoing reform to make them more relevant to industrial needs. A number of universities, especially the IITs, are interacting increasingly with industry on technological matters, while others are outside this circle. There is a need to strengthen 'Technology Foresight Programmes' to analyse the implications of emerging technologies, analyse domestic strengths and weaknesses and target future technologies for local development.

Other infrastructure : Technology development generally requires the setting up of clusters of industries that can share information and skills, as in 'science parks' or dedicated industrial estates. Some such facilities exist in India, but their efficacy and functioning need to be strengthened.

Annexure-1.1

Poverty Lines in Rural and Urban Areas

(Rs. monthly per capita)

S.No.	States	Rural		Urban	
		1973-74	1993-94	1973-74	1993-94
1.	Andhra Pradesh	41.71	163.02	53.96	278.14
2.	Assam	49.82	232.05	50.26	212.42
3.	Bihar	57.68	212.16	61.27	238.49
4.	Gujarat	47.10	202.11	62.17	297.22
5.	Haryana	49.95	233.79	52.42	258.23
6.	Himachal Pradesh	49.95	233.79	51.93	253.61
7.	Karnataka	47.24	186.63	58.22	302.89
8.	Kerala	51.68	243.84	62.78	280.54
9.	Madhya Pradesh	50.20	193.10	63.02	317.16
10.	Maharashtra	50.47	194.94	59.48	328.56
11.	Orissa	46.87	194.03	59.34	298.22
12.	Punjab	49.95	233.79	51.93	253.61
13.	Rajasthan	50.96	215.89	59.99	280.85
14.	Tamil Nadu	45.09	196.53	51.54	296.63
15.	Uttar Pradesh	48.92	213.01	57.37	258.65
16.	West Bengal	54.49	220.74	54.81	247.53
17.	All India	49.63	205.84	56.76	281.35

Note : (1) The state-wise poverty lines are based on the methodology of the Expert Group as adopted by the Planning Commission.

(2) The poverty lines at All India level are implicitly derived from All India poverty ratio and NSS consumption expenditure distribution of the year.

Annexure-1.2

Incidence of Poverty in 1973-74

S.No.	State	Rural No. of Poor (Lakhs)	Rural Poverty Ratio (%)	Urban No. of Poor (Lakhs)	Urban Poverty Ratio (%)	Total No. of Poor (Lakhs)	Total Poverty Ratio (%)
1.	Andhra Pradesh	178.21	48.41	47.48	50.61	225.69	48.86
2.	Assam	76.37	52.67	5.46	36.92	81.83	51.21
3.	Bihar	336.52	62.99	34.05	52.96	370.57	61.91
4.	Gujarat	94.61	46.35	43.81	52.57	136.42	48.15
5.	Haryana	30.08	34.23	8.24	40.18	38.32	35.36
6.	Himachal Pradesh	9.38	27.42	0.35	13.17	9.73	26.39
7.	Karnataka	128.40	55.14	42.27	52.53	170.67	54.47
8.	Kerala	111.36	59.19	24.16	62.74	135.52	59.79
9.	Madhya Pradesh	231.21	62.66	45.09	57.65	276.30	61.78
10.	Maharashtra	210.84	57.71	76.58	43.87	287.42	53.24
11.	Orissa	142.24	67.28	12.23	55.62	154.47	66.18
12.	Punjab	30.47	28.21	10.02	27.96	40.49	28.15
13.	Rajasthan	101.41	44.76	27.10	52.13	128.51	46.14
14.	Tamil Nadu	172.60	57.43	66.92	49.40	239.52	54.94
15.	Uttar Pradesh	449.99	56.53	85.74	60.09	535.73	57.07
16.	West Bengal	257.96	73.16	41.34	34.67	299.30	63.43
17.	All India	2612.90	56.44	600.46	49.01	3213.36	54.88

Annexure-1.3

Incidence of Poverty in 1993-94

State		Rural		Urban		Total	
		No. of Poor (Lakhs)	Poverty Ratio (%)	No of Poor Lakhs)	Poverty Ratio (%)	No of Poor (Lakhs)	Poverty Ratio (%)
1.	Andhra Pradesh	79.49	15.92	74.47	38.33	153.97	22.19
2.	Assam	94.33	45.01	2.03	7.73	96.36	40.86
3.	Bihar	450.86	58.21	42.49	34.50	493.35	54.96
4.	Gujarat	62.16	22.18	43.02	27.89	105.19	24.21
5.	Haryana	36.56	28.02	7.31	16.38	43.88	25.05
6.	Himachal Prade	15.40	30.34	0.46	9.18	15.86	28.44
7.	Karnataka	95.99	29.88	60.46	40.14	156.46	33.16
8.	Kerala	55.95	25.76	20.46	24.55	76.41	25.43
9.	Madhya Pradesh	216.19	40.64	82.33	48.38	298.52	42.52
10.	Maharashtra	193.33	37.93	111.90	35.15	305.22	36.56
11.	Orissa	140.90	49.72	19.70	41.64	160.60	48.56
12.	Punjab	17.76	11.95	7.35	11.35	25.11	11.77
13.	Rajasthan	94.68	26.46	33.82	30.49	128.50	27.41
14.	Tamil Nadu	121.70	32.48	80.40	39.77	202.10	35.03
15.	Uttar Pradesh	496.17	42.28	108.28	35.39	604.46	40.85
16.	West Bengal	209.90	40.80	44.66	22.41	254.56	35.66
17.	All India	2440.31	37.27	763.37	32.36	3203.68	35.97

CHAPTER 2

MACRO-ECONOMIC DIMENSIONS AND POLICY FRAMEWORK

Growth and Investment Targets

2.1 Accelerating the growth rate of the economy with stable prices is central to the attainment of a number of objectives discussed in the previous chapter. There is by now enough evidence to show that rapid growth has strong poverty reducing effects especially when it is complemented by a public policy stance which is sensitive to the needs of the poor. Accelerated growth will also help in realising the objectives of increasing employment and, through that, spread of income generation and poverty eradication. However, the linkage between growth, employment and poverty reduction depends crucially upon the sectoral pattern of growth and on the degree to which the disadvantaged segments of the population and the backward regions of the country are successfully integrated into the wider growth process.

2.2 The growth objective also subsumes a number of subsidiary objectives which have, at one time or another, been explicitly identified as objectives in earlier Five Year Plans. Industrialisation, productivity growth, infrastructural development, are examples of such subsidiary objectives. The logic of economic growth and the requirements of structural consistency demand that most of these subsidiary objectives are met in order to attain the primary objective of accelerating the over-all growth rate. It is therefore usually unnecessary to spell out each component of growth as a distinct objective unless it has direct bearing on the implementation of the over-all growth objective as possible alternative paths of development. It is in this context that agricultural growth has been specifically given the highest priority, as it determines a pattern of development that accelerates GDP growth with a rapid reduction in unemployment and poverty.

2.3 Economic growth is the outcome of numerous factors interacting with each other. For resource-constrained developing countries, capital accumulation or investment is the most important factor for increasing the productive capacity of the economy as well as for improving the productivity of the other factors of production. The Indian planning methodology has therefore traditionally focused on the relationship linking growth to the investment rate and the incremental capital-output ratio (ICOR), and the Indian Plans have been essentially investment plans, dealing with the allocation of investible resources among different sectors, maintaining inter-sectoral consistency towards attaining the targetted rates of growth. In a broad sense the results of such plans have not been unsatisfactory. As can be seen in Table 2-1, except for the Third and the Fourth Plans, the actual performance of the economy has usually been at or above the planned or targetted level. During these two Plans, the shortfalls were largely due to exogenous shocks that could not possibly be predicted. The Third Plan witnessed the drought years of 1965 and 1966, and the Indo-Pakistan War of 1965. The Fourth Plan experienced three consecutive years of drought (1971-1973) and the first oil-price shock of 1973.

Table 2-1 : Growth Performance in the Five Year Plans

(per cent per annum)

	Target	Actual
1. First Plan (1951-56)	2.1	3.61
2. Second Plan (1956-61)	4.5	4.27
3. Third Plan (1961-66)	5.6	2.84
4. Fourth Plan (1969-74)	5.7	3.30
5. Fifth Plan (1974-79)	4.4	4.80
6. Sixth Plan (1980-85)	5.2	5.66
7. Seventh Plan (1985-90)	5.0	6.01
8. Eighth Plan (1992-97)	5.6	6.78

Notes : (1) The growth targets for the first three Plans were set with respect to National Income. In the Fourth Plan it was Net Domestic Product. In all the Plans thereafter, Gross Domestic Product has been used

(2) The Eighth Plan actual is based on the Quick Estimate for 1996-97.

2.4 Even today this approach remains useful as a starting point for assessing the limits of the possible alternative paths of development and the steps required for accelerating the growth rate of the economy. However, with the economic reforms of the last few years, some of the traditional instruments of implementing the Plans are no longer available. In particular, for determining the over-all rate of investment or its sectoral distribution, market forces, relative prices and incentives now play much more important roles than direct allocation of resources by public authorities. With the steady reduction in the share of public investment, both planned and actual, in total investment, as shown in Table 2-2, the ability of the Government to determine the structure of the economy through its own investment behaviour has eroded significantly. With the greater importance of private investment and the movement towards a more market based system, planning has to move away from direct intervention strategies to planning for policies. These issues will be addressed in this chapter.

Table 2-2 : Share of Public Sector in Total Investment

(per cent)

	Planned	Realised
Fifth Plan (1974-79)	57.6	43.3
Sixth Plan (1980-85)	52.9	47.8
Seventh Plan (1985-90)	47.8	45.7
Eighth Plan (1992-97)	45.2	34.3

2.5 The incremental capital-output ratio (ICOR) is a summary expression for the existing technical conditions and structural configuration of the economy which captures the relationship between investment and additional output. The ICOR is usually expressed as a relationship between investment and output in the same Plan period. However, there are gestation lags which are present in any investment activity, and the

ICOR depends in fact on the pace of investment in the past creating additional output during the Plan period and also takes into account the investment which will create capacities for sustained growth in the future. In addition, different sectors of the economy have very different ICORs, and the aggregate ICOR for the whole economy is a weighted average of these sectoral ICORs. It depends crucially on the sectoral composition of investment and growth. The sectoral structure of growth, in turn, depends on a number of factors such as the pattern of demand, the nature of inter-sectoral linkages, and the possibilities of trade. Attempts are made to capture these complexities by using an input-output matrix based planning model. It needs to be kept in mind that the aggregate ICOR which has been used for discursive purposes in formulating this Plan is derived from a model which tries to capture the gamut of complexities which are inherent in any economy.

2.6 Since its inception, the planning methodology in India has been based on the assumption that the economy is savings constrained. In other words, it is assumed that the demand for investible resources always exceeds the supply, and hence the total level of investment is determined uniquely by the available level of savings. While this assumption was more true in the past than at present, with increased opportunities of borrowing from abroad and of foreign savings supplementing domestic savings, it is true that investment cannot exceed the total availability of savings for any length of time without incurring the risk of unsustainability. Indeed, the availability of total savings over a period determines the maximum sustainable level of investment, and hence of growth.

2.7 The total volume of investible resources or total savings available in the economy is determined both by the level of domestic savings and by the inflow of foreign savings financing a desirable level of current account deficit. Domestic savings originate from three principal sectors, namely: (a) the Government, including the public sector; (b) the private corporate sector; and (c) households. The inflow of real foreign savings is the current account deficit and can be financed either in the form of debt, both public and private, or foreign investment, both direct and portfolio.

2.8 The growth prospects for the future need to be based on an analysis of the recent growth experience, a careful assessment of the resources which could be mobilised and the imperatives of meeting certain minimum social needs and aspirations. Care also has to be taken to ensure that the growth process is sustainable both in terms of external indebtedness of the country and the fiscal viability of the Government not only in the current Plan period but in the future as well. Since the Plan has commenced from April 1, 1997 and cover the five-year period from 1997-98 to 2001-02, the base year for the exercises is 1996-97. All the calculations are presented at prices that are assumed to prevail in 1996-97.

2.9 The average growth rate that has been achieved in the Eighth Plan in terms of the GDP at market prices is 6.8 per cent. This has been supported by an average investment rate of 25 per cent of GDP, thereby yielding an ICOR of 3.7, which is significantly less than the figure of 4.1 that was assumed in the Eighth Plan calculations. There has been a significant step-up in the domestic savings rate during the Eighth Plan period to 24 per cent of GDP as compared not only to the long period of stagnation experienced during the 1980s, but also in relation to the savings target assumed for the Eighth Plan, which was placed at 21.6 per cent. This is a positive development and augurs well for the future. On the other hand, the reduction in the over-all ICOR should have been sharper in view of the perceptible improvement in the growth rate, particularly in agriculture, and hides certain adverse developments. The principal cause of concern relates to significant increases that have taken place in the ICORs of some of the infrastructural sectors.

2.10 A more serious problem, however, is that because of fiscal difficulties, total public investment has slipped quite sharply from the Eighth Plan targets. During Plan formulation it had been assumed that public investment would form about 45 per cent of total investments in the country. In actuality, however, it is unlikely to be greater than 34 per cent, dipping to below 30 per cent in the closing years of the Plan as shown in Table 2-3. On the other hand, total investment at 25 per cent of GDP has significantly exceeded the Eighth Plan target of 23 per cent. Taking this into account, the slippage in public investment as a percentage of GDP has been from the target of 10.4 per cent to 8.3 per cent. This slippage of 2 percentage points has fallen disproportionately on infrastructure, both economic and social. On the positive side, there appears to be some buoyancy in private investment which has increased from the target of 12.6 percent of GDP to 16.6 per cent.

Table 2-3 : Investment Shares in the Eighth Plan

	92-93	93-94	94-95	95-96	96-97	Plan
1. Total Investment (% of GDP)	22.4	22.7	25.6	27.1	27.3	25.0
2. Public Investment (% of Total Investment)	36.2	38.8	35.5	29.0	29.3	34.3
3. Public Investment (% of GDP)	8.1	8.8	9.1	7.9.	7.4	8.3

Note: These shares are at current prices

2.11 Keeping these factors in mind, the macro-economic performance of the economy, that is likely to occur during the Ninth Five Year Plan, had been projected on the basis of a model that had been developed specifically for this purpose. In calculating the parameters of the model for the Ninth Plan period, a number of specific assumptions had been made which need to be noted. First, it had been assumed that the trend towards improvement in total domestic savings, as well as in public savings, witnessed in the last couple of years would continue during the Ninth Plan. The improvement in Government savings would have to arise essentially from combined improvement in taxes net of subsidies, with public consumption expenditure more or less maintaining its share of GDP. This assumption explicitly takes into account the impact arising from the adoption of the Fifth Pay Commission recommendations both by the Centre and the States. As a consequence, although public consumption increases sharply during the first two years of the Plan, it reduces equally dramatically in the last three years. Total public investment, which includes investment by the Centre, the States and all public sector enterprises, had been determined with a view to achieving a fiscal deficit target of 4.0 per cent for the Centre during the Plan period. In view of the emphasis that is being placed on investment in infrastructure, the ICOR would tend to rise from 3.7 during the Eighth Plan to 4.3 during the Ninth Plan. This parameter was generated by the model in order to ensure that the growth rate of the economy would not suffer in the post-Plan period due to infrastructural bottlenecks which could arise from the shortfalls in pipe-line investment that occurred during the Eighth Plan period.

2.12 On the basis of the parameters described above, the likely growth rate of GDP during the Ninth Plan in the base-line scenario following the recent trends was projected to average about 6.2 per cent per annum, despite a step-up in both private and public savings, and a current account deficit of about 1.7 per cent of GDP. Public investment as a whole would be about 33 per cent of total investment in the economy, which would be considerably lower than 45.2 per cent that was assumed during the Eighth Plan and about the same as 34.3 per cent that is likely to be attained. The standard of living of the people, as determined by the growth in private consumption, would be likely to grow by 5.7 per cent per annum, which amounts to a growth in per capita consumption of 4.0 per cent assuming a growth rate of population of 1.7 per cent over the Plan period. This compares very favourably with the 2.9 per cent and 3.5 per cent annual growth in per capita consumption that were recorded during the Seventh and the Eighth Plan periods, and arises from the lower rate of population growth on the one hand and greater availability of public and foreign savings for financing the required investment, on the other. On the negative side, the pattern of growth and the likely employment elasticities are such that the employment potential created in the base-line scenario would barely absorb the additions to the labour force during the Plan period. However, because of the increase in infrastructure investment, the conditions are created for an acceleration in the growth rate and consequently a sharp reduction in the unemployment rate during the post-Plan period.

2.13 An alternative growth scenario envisaging an accelerated growth rate of 7 per cent during the Ninth Plan was also examined. A preliminary assessment of the macro-economic and sectoral implications and the necessary policy measures which would need to be taken by both the Centre and State governments for attaining such a growth rate were worked out and presented to the National Development Council (NDC). In January 1997, the NDC approved a GDP growth target of 7 per cent per annum for the Ninth Plan. Detailed exercises were carried out to ascertain the feasibility of this growth target and the manner in which it may be attained. It was found that the growth target is feasible, provided that there is a shift in the development emphasis and certain policy decisions are taken. The configuration of the macro-economic parameters which would make the target achievable are presented in Table 2-4. Subsequent events, however, have raised doubts regarding the attainment of the growth target mandated by the NDC for the Ninth Plan period. The first year, i.e., 1997-98 of the Ninth Five Year Plan (1997-2002) is already over. The performance of the economy has not been encouraging during this year.

Table 2-4 : Macro Parameters for the Ninth Plan (1997-2002)
[for a GDP growth rate of 7 % per annum]

	VIII Plan	IX Plan	Post Plan
1. Domestic Savings Rate (% of GDP at market price)	24.1	26.2	27.2
2. Current Account Deficit (% of GDP at market price)	0.9	2.1	2.4
3. Investment Rate (% of GDP at market price)	25.0	28.3	29.5
4. ICOR	3.9	4.0	3.9
5. GDP Growth Rate (% Per Annum)	6.5	7.0	7.5
6. Export Growth Rate (% Per Annum)	10.3	14.5	14.5
7. Import Growth Rate (% Per Annum)	14.1	12.2	13.2

According to the latest data available for the year 1997-98, the Gross Domestic Product at factor cost (GDPfc) has grown at a rate of about 5.25 per cent, with the agricultural sector showing a negative growth rate. Due to a variety of reasons, although the economy is expected to pick up momentum during the second year of the Plan, it is unlikely to entirely recover the ground lost in the first year. As a result, the growth trajectory is likely to be adversely affected for the entire Plan period since the absolute level of investible resources will stand revised downwards. In addition, the ICOR is also likely to increase significantly due to the temporary reduction in the level of capacity utilisation. Given these considerations, the growth target of the Ninth Five Year Plan has been revised downward to 6.5 per cent per annum on an average. Although this may appear to be a deviation from the NDC approval, it needs to be noted that the average growth rate of GDP projected for the last three years of the Plan is about 7 per cent. A higher target for this period may not be feasible. In order to attain the growth target for the perspective period, suitable adjustments have been incorporated into the post-Plan scenario. The revised macro parameters consistent with this revised target growth rate are presented in Table 2-4(a).

Table 2-4(a) : Macro Parameters for the Ninth Plan (1997-2002)

	VIII Plan	IX Plan	Post Plan
1. Domestic Savings Rate (% of GDP at market price)	23.8	26.1	27.2
2. Current Account Deficit (% of GDP at market price)	1.1	2.1	2.6
3. Investment Rate (% of GDP at market price)	24.9	28.2	29.8
4. ICOR	3.7	4.3	3.9
5. GDP Growth Rate (% Per Annum)	6.8	6.5	7.7
6. Export Growth Rate (% Per Annum)	11.9	11.8	14.5
7. Import Growth Rate (% Per Annum)	11.7	10.8	15.9

2.14 It can be seen that the strategy that has been selected for attaining an accelerated growth rate of 6.5 per cent hinges on a fairly sharp increase in the investment rate of about 3.3 percentage points above the Eighth Plan average, while keeping the aggregate ICOR at a level somewhat higher than in the Eighth Plan. These are deliberate choices which have been made from a range of possible alternatives on the basis of a number of considerations which are discussed later. The increase in investible resources will have to come mainly from domestic sources, 2.3 percentage points of the required 3.3, and the remainder of about 1.0 percentage points from external savings. Although the ICOR target appears to be a relaxation of the level attained in the Eighth Plan, it has to be seen in the context of the projected increase in the ICOR to 4.3 during the Ninth Plan period in the base-line scenario which, as has been mentioned, would be necessary to create sufficient pipe-line investment in infrastructure for sustaining growth in the post-Plan period. A decline of even this magnitude is by no means trivial. Both these parametric requirements for achieving the target growth rate, therefore, are quite formidable and cannot be assumed to be attained without deliberate planning and strategic policy initiatives.

2.15 The macro-economic aggregates arising from the Ninth Plan growth target are presented in Table 2-5. As can be seen, the size of national investment in this scenario rises substantially from Rs. 1399 thousand crore during the Eighth Plan to Rs. 2171 thousand crore at 1996-97 prices. Private consumption expenditure grows at the rate of 6.2 per cent per annum, which implies a per capita consumption growth of 4.5 per cent per annum. At this rate, the per capita consumption level in the country would double in 15 years. More importantly, this scenario sets the stage for even faster growth in the post-Plan period, which could be as high as 7.7 per cent, if not higher, by creating the appropriate level of pipe-line investment in the infrastructure sectors.

Table 2-5 : Macro-economic Aggregates for the Ninth Plan

(Rs. '000 crore at 1996-97 prices)

	8th Plan	1996-97	2001-02	9th Plan
1. GDP at Factor Cost	5012.3	1149.2	1576.0	6902.5
2. GDP at Market Prices	5573.6	1277.0	1759.1	7694.0
3. Gross Domestic Savings of which :	1337.9	334.0	477.4	2010.8
3a. Private	1255.6	309.7	434.0	1883.7
3b. Public	82.2	24.3	43.4	127.1
4. Total Consumption of which :	4242.1	956.8	1300.0	5761.2
4a. Private	3635.9	824.6	1112.7	4888.7
4b. Public	606.2	132.2	187.3	872.5
5. Gross Capital Formation of which :	1398.7	348.5	495.2	2170.6
5a. Private	938.4	251.9	329.0	1444.4
5b. Public	460.3	96.6	166.2	726.2
6. Public Borrowings	378.1	72.3	122.9	599.1
7. Current Account Deficit	60.8	14.4	17.9	159.8
8. Exports	470.3	117.4	205.1	800.9
9. Imports	505.0	132.2	221.0	936.1

NOTE : Public borrowings include the debt issued to the public both for financing public investment (Rs. 378.1 thousand crore during the Eighth Plan) and for sterilisation of foreign exchange inflows.

Domestic Resources for the Plan

2.16 One of the most significant features of the Eighth Plan period has been the sharp increase in domestic private savings that has occurred. The Eighth Plan had been based on a projected domestic private savings rate of 19.6 per cent of GDP, which was in itself a significant step-up over the Seventh Plan achievement of 18 per cent. In actuality, however, the private savings rate has averaged 22.4 per cent during the Eighth Plan period. This has reversed the earlier trend of a slow growth in private savings during the decade of the eighties as compared to the fairly rapid growth that was experienced in the preceding decades. Expectations about the future need to be based on an appraisal of the likelihood of the recent trends being continued in the future.

2.17 Domestic private savings can be divided into two main components : (a) savings by households; and (b) savings by private corporate sector. These are determined by very different factors and need to be appraised separately. As far as household savings are concerned, these are theoretically driven by the level of personal disposable income, its expected growth in the future, its distribution between different income classes and categories, and the interest rate. In the Indian context, however, the definition of household as used by the statistical authority includes all unincorporated enterprises as well. Therefore, two additional factors - namely the profitability of unregistered enterprises and their share in GDP - also have to be taken into account. An analysis of the savings behaviour of households indicates that the sharp increase from 16.1 per cent of GDP in the Seventh Plan to 18.6 per cent during the Eighth Plan has more or less brought the household savings rate back to the long-term trend of savings behaviour, which would have come to about 18.4 per cent in the terminal year of the Eighth Plan. In the last three years of the Plan, it has actually exceeded the trend value. This has been enabled principally by the sharp increase in the share of personal disposable income in GDP arising out of a reduction in the share of taxes. However, since the average savings rate is now quite close to the marginal propensity to save, and there is a strong possibility that the share of the unregistered sector in GDP may not increase by very much in the future, it may be prudent to assume that during the Ninth Plan the household savings rate will be only somewhat higher than the level that has been attained in the terminal year of the Eighth Plan, which is 19.2 per cent of GDP. Indeed, although the share of taxes in GDP is targeted to rise, and thereby reduce the share of personal disposable income, the household savings rate has been assumed at 19.8 per cent for the Ninth Plan, which leaves little cushion for slippages in the savings behaviour of other sectors.

2.18 Household savings are divided into two categories in the Indian National Accounts : (a) financial savings; and (b) savings in physical assets. This nomenclature has been the source of some degree of popular misconception. It is believed, for instance, the supply of savings available to the Government and the private corporate sector is given by the level of financial savings, which in turn is determined solely by the portfolio decision of households, while savings in physical assets are either made directly by the investors or are mediated by the informal credit market which the corporate sector does not access. This view is, however, only partly correct. Financial savings of the 'households' are computed 'net' of advances made by the banks to the unincorporated sector. The financial savings component of total household savings is shown in Table 2-6. Sharp increases in the share of financial savings were observed during the mid-1970s and early 1980s. The expansion of commercial banks across the country, particularly in rural areas, following the nationalisation of banks in 1969, and a range of instruments for encouraging small savings by the Government played an important role in mobilising financial savings. Thereafter, the share of financial savings appears to have stagnated despite the considerable development of the financial sector in the country.

Table 2-6 : Share of Financial Savings in Total Household Savings

Period	Share (per cent)
1966-72	25.1
1972-82	37.5
1982-89	50.3
1989-96	51.7

2.19 The gross savings of the private corporate sector primarily comprises of the depreciation reserve and the retained earnings of corporate entities. The savings rate of this sector, therefore, depends upon the share of this sector in GDP, its profit rate, and its capital intensity. This rate has registered a steady and sustained increase since the mid-1970s to average 3.8 per cent of GDP during the Eighth Plan and 4.1 per cent in the terminal year. There is every reason to believe that the share of the corporate sector will tend to rise somewhat faster during the Ninth Plan period, which will tend to lead to a higher increase in the savings rate. On the other hand, due to the increased competition consequent on liberalisation, both the profit rate and the average capital intensity of this sector may fall somewhat. On balance, therefore, the savings rate of this sector will increase, but perhaps not quite as rapidly as during the Eighth Plan. The figure assumed in this regard for the Ninth Plan is deliberately on the conservative side in order to provide some room for slippage.

2.20 The overall picture regarding the magnitude and pattern of domestic savings during the Ninth Plan is presented in Table 2-7. As can be seen, in order to meet the domestic savings rate target of 26.1 per cent, public sector savings have to rise to 1.6 per cent of GDP as compared to the 1.4 per cent which is obtained in the Eighth Plan. This increase in the public sector savings rate will have to come entirely from higher internal resource generation of the public sector enterprises, particularly the public infrastructural sectors, in order to offset a projected increase in the dissavings of the Government.

Table 2-7 : Composition of Domestic Savings

(% of GDP at market prices)

	VII Plan	VIII Plan	IX Plan	Post Plan
1. Public Sector	2.3	1.4	1.6	2.0
(of which)				
1.1 Government Sector	-1.6	-1.8	-2.2	-1.7
1.2 Public Enterprises	3.9	3.2	3.8	3.7
2. Private Corporate Sector	1.9	3.8	4.7	5.0
3. Household Sector	16.1	18.6	19.8	20.3
4. Gross Domestic Savings	20.3	23.8	26.1	27.3

2.21 The need to increase public savings has dimensions beyond merely meeting the target of domestic savings for attaining 6.5 per cent growth during the Ninth Plan. Sustainability of the fiscal balance demands that the fiscal deficit, and more particularly the revenue deficit, be reduced gradually. As will be discussed later, a target of 4.1 per cent of GDP in respect of the fiscal deficit of the Central Government in the terminal year and an average of 7.8 per cent for overall public sector borrowing requirement (PSBR) have been taken for the Ninth Plan, which automatically limits the level of public investment to 7.8 per cent of GDP plus the rate of public savings. In view of the developmental needs of the country, public investment cannot yet be determined residually, but has to be specifically targetted.

2.22 The total tax receipts of the Government, at the Centre and in the States, amounted to about 16.4 per cent of GDP during the Eighth Plan, but after taking into account the direct subsidies of about 2.6 per cent of GDP, the net tax receipts were of the order of 13.8 per cent. This is roughly divided between indirect taxes less subsidies of 10.1 per cent and direct taxes of 3.7 per cent. The direct consumption expenditure of Government during the same period works out to about 10.9 per cent of GDP. Therefore, in order to achieve a public investment level of even 8.3 per cent, as compared to the target of 9.9 per cent, the Government has had to borrow 6.9 per cent of GDP from the rest of the economy and from abroad. Although some progress has been made in reducing the overall fiscal deficit of the Government, public borrowings at the rate of 6.9 per cent of GDP during the Eighth Plan would appear to be too high for sustainability.

2.23 Any effort to increase the growth rate of the economy has to take into account two important facets of the role of public investment and public borrowings. On the one hand, efforts to increase the share of public expenditures in GDP through enhanced borrowings tend to reduce private investment by pre-empting investible funds and causing what is known as "crowding out". On the other hand, it has also been found that private investments tend to be positively correlated to public investment, especially in infrastructure. The reason for this is that in the absence of adequate infrastructural facilities and the increase in aggregate demand caused by public investment, the efficiency and capacity utilisation of private investment tend to suffer. In addition, lack of infrastructure raises costs and thereby tends to reduce both profitability and export competitiveness. The influence of these two factors has to be explicitly taken into account while framing public investment plans. By and large, there is a certain level of public investment share which is essential for adequate private investment demand to be generated and to be productive both through the "crowding in" effect of complementary investment in infrastructure and through providing the necessary component of aggregate demand. Public investment above this level may crowd out private investment unless the public sector generates sufficient additional savings of its own, but on the other hand lower public investment may be associated with insufficient private investment and hence lower growth.

2.24 The acceleration in growth that has occurred during the Eighth Plan has been based primarily on private investment exceeding the targets by considerable magnitudes and the public sector falling well short of its targets. The short-fall in public investment fell mainly on certain infrastructural sectors. The planned and actual sectoral public investment during the Eighth Plan are presented in Table 2-8. As may be seen, three sectors, namely Mining & Quarrying, Communications and Services experienced higher investments than planned, while the rest of the sectors experienced shortfalls of varying degrees. The higher investment in the Mining & Quarrying and Communications sectors is due almost entirely to the higher internal resource generation of the oil and telecommunications sectors respectively.

Table 2-8 : Planned and Actual Sectoral Public Investment during the Eighth Plan

(Rs. '000 crore in 1996-97 prices)

Sector	Planned	Actual	% of Planned
1. Agriculture	64.9	38.3	59
2. Mining & Quarrying	40.7	59.5	146
3. Manufacturing	58.2	33.2	57
4. Electricity etc:	141.6	122.4	86
5. Construction	4.4	3.9	89
6. Transport	69.6	53.0	76
7. Communication	37.3	43.5	117
8. Services	83.3	106.5	128
Total	500.0	460.3	92

2.25 In order to examine the implications of the shortfalls in public investment on the macroeconomic variables of the economy, a counterfactual simulation has been undertaken in which it is assumed that the public sector investment plan is met for all sectors while keeping public consumption at the absolute levels actually realised. Since the excess investment in the oil and telecommunications sectors arose out of higher internal resources, these have been maintained at the actuals, but the excess investment in services, which is largely dependent upon budgetary support, has been scaled down to the planned level. The results of this counter-factual simulation are shown in Table 2-9. It may be seen that if the planned public investment had materialised, the growth rate of the economy could have increased by 0.2 percentage points arising out of an increase in total investment of 0.5

percentage points of GDP, which is supported by an increase of 0.3 percentage points of GDP in public savings and 0.2 percentage points increase in the CAD. The increase in public savings arises primarily from an increase in the tax/GDP ratio of a similar magnitude. Despite this, public borrowings too would need to increase by 0.3 percentage points in order to finance the higher public investment. There is a slight decline in the share of private investment, which arises partly out of the higher growth rate and partly from a very slight degree of "crowding out".

Table 2-9 : Macro-economic Aggregates for the Eighth Plan

		Actual	Counterfactual
1.	GDP at Factor Cost (% growth)	6.8	7.0
2.	GDP at Market Prices (% growth)	6.6	
3.	Gross Domestic Savings (% of GDPmp) of which :	23.8	24.1
	3a. Private	22.4	22.4
	3b. Public	1.4	1.7
4.	Total Consumption (% of GDPmp) of which :	76.2	75.7
	4a. Private	65.3	65.5
	4b. Public	10.9	10.2
5.	Gross Capital Formation (% of GDPmp) of which :	24.9	25.4
	5a. Private	16.6	16.5
	5b. Public	8.3	8.9
6.	Public Borrowings (% of GDPmp)	6.9	7.2
7.	Current Account Deficit (% of GDPmp)	1.1	1.3

2.26 Although the counterfactual simulation indicates that the planned infrastructural investment could be met with only minor increases in public borrowings, the need to effect fiscal correction during the Eighth Plan has led to inadequate creation of infrastructural capacities. As a result, the sectoral capacities have been severely distorted since private investment as yet has had little role to play in creating capacities in infrastructural sectors. That infrastructural constraints have not retarded the growth impetus during the Eighth Plan is due primarily to the achievements of the Seventh Plan in infrastructure creation and to the significant improvements in the efficiency and productivity of a number of infrastructural sectors during the Eighth Plan period. This is, however, not a sustainable situation, and the distortion between capacities in the infrastructure and non-infrastructure sectors needs to be corrected expeditiously. In addition, the investment required to meet the needs of the social sectors also has to be explicitly taken into account in view of their importance in meeting the social objectives of the Plan.

2.27 Taking into account the above factors, the planning model indicates that there is a need to target public investment at about 9.4 per cent of GDP during the Ninth Plan on the basis of the physical targets that have to be attained. For this investment target to be achieved along with fiscal sustainability, public savings not only need to be raised to the 1.6 per cent level indicated above but also it is necessary to undertake disinvestment in public sector enterprises, while protecting the necessary levels of current outlay for the social sectors.

2.28 Public savings have two principal components : (a) the savings of the Government, both Centre and States; and (b) the savings of public enterprises. The Government savings have shown very discouraging performance during the 1980s and even in the 1990s as shown in Table 2-10. While the Government savings were positive during the Sixth Plan, they turned increasingly negative thereafter. Even during the Eighth Plan, although some efforts were made, they were nowhere near enough. As far as the savings of PSEs are concerned, they increased more or less steadily upto and including the Seventh Plan, but dipped somewhat as a percentage of GDP in the Eighth Plan. In view of the fact that investment in PSEs has declined in recent years in relative terms, their share in GDP is also likely to decline. In addition, the planned programme of divestment of PSEs will also put a downward pressure on the savings emanating from them. Therefore, too much should not be expected in terms of increased PSE savings despite the efforts being made to make them more efficient and profitable. The Ninth Plan target for PSE savings has been placed at 3.8 per cent of GDP, which is only somewhat higher than the Eighth Plan achievement. The strategy for attaining this target is discussed later.

Table 2-10 : Government Savings Behaviour in Five Years Plans

(percentage of GDPmp)

	VIth (1980-85)	VIIth (1985-90)	VIIIth (1992-97)	IXth (1997-2002)
1. Receipts :	16.28	18.74	17.74	18.75
1.1 Income from Entrepreneurship and Property	0.61	1.10	1.17	1.10
1.2 Tax Revenue	15.40	17.21	15.97	16.97
1.2.1 Direct Taxes	2.64	2.55	3.12	3.92
1.2.2 Indirect Taxes	12.76	14.67	12.84	13.03
1.3 Misc. Receipts	0.27	0.42	0.61	0.70
2. Expenditure :	16.44	21.32	21.05	22.09
2.1 Subsidies	2.60	3.57	2.80	2.75
2.2 Interest on Debt	1.56	2.87	4.52	4.65
2.3 Current Transfers	2.24	2.98	3.06	3.30
2.3.1 Domestic	2.23	2.97	2.99	3.25
2.3.2 Rest of the World	0.01	0.01	0.07	0.05
2.4 Consumption Expenditure	10.04	11.89	10.67	11.39
3. Depreciation	1.73	1.95	1.51	1.15
4. Gross Savings	1.57	-0.63	-1.80	-2.19

NOTE : Government is defined as Centre and State governments and Departmental Enterprises including Railways and Posts.

2.29 Targetting higher levels of PSE savings as a substitute for government savings is not a solution to the governments' fiscal problems. Although there is some flexibility between the two as far as investments are concerned through budgetary support to PSEs on the one hand and dividend payments by the PSEs on the other, the prospects are fairly limited. Moreover, there are large components of the governments' investment programme, particularly those in the social sectors, which cannot be performed by the PSEs. These would have to be funded by government savings and borrowings. Therefore, by the end of the Ninth Plan period, the Government as a whole, including both the Centre and the States, would have to reach a position of near revenue neutrality as compared to the large revenue deficits that exist at present. This is no easy task, particularly in view of the Ninth Plan focus on Basic Minimum Services, which have large revenue components in expenditure.

2.30 The detailed strategy to increase both public savings and investment is discussed in the following Chapter. However, there are some aspects of the strategy which have macroeconomic implications, and therefore need to be mentioned at this stage. The broad approach to be followed is that while the rate of growth of revenues must be increased, the rate of growth of revenue expenditure too must be slowed down. The Government will need to mobilise financial resources by utilising all sources which have remained untapped so far. At the same time, the structure and manner of deployment of public expenditure should be altered significantly in order to ensure the maximum positive impact on poverty alleviation and the social sectors. These changes will leave their impact on the distribution of income between the public and private sectors, and hence need to be taken into account.

2.31 It is to be noted that the ratio of total revenues of the Centre and the States to GDP had reached 23.8 per cent in 1989-90, but declined thereafter and came down to 22.6 per cent in 1990-91 and stayed at that level in 1993-94. However, there is a major difference between the behaviour of revenues between the Centre and the States. The gross revenues of the Centre declined steadily from 14.4 per cent in 1989-90 to 12.2 per cent in 1993-94, whereas in the case of the States, they increased steadily from 9.4 per cent in 1989-90 to 10.4 per cent in 1993-94. The ratio of total tax revenues of the government sector to GDP had reached 16.9 per cent in 1989-90 but declined thereafter and reached 15.3 per cent in 1993-94, but revised to have reached around 16 per cent of GDP in 1995-96. In view of this, it would be reasonable to aim at raising the tax ratio by about 1.5 to 2.0 percentage points of GDP so that it reaches the level of 17.5 per cent in the post-Plan period. This would only mean slightly exceeding the ratio that had already been reached in 1989-90.

2.32 In 1995-96, the gross tax revenues of the Centre amounted to 10.24 per cent of GDP. The corresponding figure is 10.70 per cent as per the 1996-97 Budget. With appropriate policy measures and administrative efforts, it should be possible to raise this ratio to 11.50 per cent. In 1995-96, the own tax revenues of the States amounted to 5.72 per cent of GDP of which sales taxes alone brought 3.25 percentage points. Given the potential of the sales tax and the scope for rationalisation and better enforcement of the other State taxes too, it should be possible to raise the ratio of State tax revenues to around 6.5 per cent of GDP.

2.33 With the increased role that is being proposed for the Panchayati Raj Institutions (PRI) in the Ninth Plan, the issue of resources for these bodies assumes paramount importance. Along with the devolution that may be made by the State Finance Commissions, some additional taxation powers may also need to be devolved. In addition, PRIs should be given powers to raise revenues from common properties, such as land and sub-soil water. Although no fixed quantitative targets have been set, and the resources of PRIs are included in the States' resources, there is considerable potential in this area which, if properly tapped, can both improve the quality of local public services quite substantially and reduce the pressure on State budgets.

2.34 The sectoral pattern of investments and the necessary resource flows arising out of the Ninth Plan target are presented in Table 2-11. The most significant feature of the pattern of investment is that the share of the private corporate sector is projected to rise to 9.1 per cent of GDP as compared to 4.33 per cent that had been planned for the Eighth Plan and the 8 per cent actually achieved. This increase arises essentially from two factors. First, the internal accruals of this sector rises sharply from 2 per cent to 4.5 per cent of GDP in line with the trend that has been noted in recent years. Second, most of the external capital inflows of 1.5 per cent of GDP as compared to only 0.7 per cent achieved for the Eighth Plan are assumed to come into this sector, as is discussed later. This ensures consistency between the savings and the growth projections for this sector. As far as the household sector is concerned, its investment as a percentage of GDP is also projected to rise from 8.6 per cent in the Eighth Plan to 9.7 per cent. However, the sharp increase in the investment share of the private corporate sector as compared to the household sector will imply that the share of the former in GDP arising in the private sector will increase during the Ninth Plan period. The share of the public sector will decrease significantly, and because of an increase in its savings rate, its pre-emption of the financial savings of the households will reduce from 81 per cent in the Eighth Plan to 71 per cent. The actual percentage shares that are likely to occur during the Eighth Plan are also shown in the Table for ease of comparison.

Table 2-11 : Intersectoral Flow of Resources in Ninth Plan

(Rs. thousand crore)

	Public Sector	Private Corporate	House-hold	Total
Gross Investment	726 (9.4) [8.3]	699 (9.1) [8.0]	746 (9.7) [8.6]	2171 (28.2) [24.9]
Financed by:				
1. Own Savings	127 (1.6) [1.4]	362 (4.7) [3.9]	1522 (19.8) [18.5]	2011 (26.1) [23.8]
2. Borrowings				
2.1 From Households	550 (7.2) [6.5]	226 (2.9) [3.4]	-776 (-10.1) [-9.9]	0
2.2 From External Sources	49 (0.6) [0.4]	111 (1.5) [0.7]	0	160 (2.1) [1.1]

NOTE : 1. Figures in bracket () are % of GDP at market prices
2. The figures in the square [] brackets are the actual percentages estimated for the Eighth Plan.

Sustainable Current Account Deficit and External Resources

2.35 The rapid build-up of external debt during the 1980s, culminating in the crisis of 1991, has created some apprehension regarding the maximum sustainable level of external inflows that can be absorbed by the economy. Since one major element of the development strategy for the Ninth Plan is to augment domestic resource generation through enhanced inflows of external savings in order to accelerate the rate of growth, this issue needs to be elaborated in some detail. There is no single objective criterion for determining the level of current account deficit that can be run by a country on a sustained basis. It is determined by the perception of the viability of the economy in servicing its external obligations by the international financial system, which in turn may be dependent upon a number of summary measures of external liability of the nation.

2.36 One of the standard yardsticks for evaluating the sustainability of a nation's debt position is the external debt (ED) to GDP ratio (ED/GDP). This had reached an unsustainably high figure of about 41 per cent in 1991. Since then it has declined more or less steadily, and stands at about 26 per cent at present. While this is reassuring, in the sense that if present trends continue, the ratio could be reduced to about 18 per cent by the end of the Ninth Plan, it should be treated with caution. The reason for caution arises from the fact that the reduction in the external debt to GDP ratio has been achieved to a large extent by substituting foreign investment flows for external debt flows. Thus the ED/GDP ratio is today an incomplete measure of the total outstanding external liabilities of the nation. Since foreign investment also needs to be serviced and in theory is also repayable, it constitutes just as much a claim on the current income of the nation as debt repayment. Therefore, the proper measure of external indebtedness should include all foreign liabilities, which would include both external debt and all foreign investment inflows. If such a measure is used, the external liabilities to GDP ratio is substantially higher, and stands at about 32 per cent. On this count, therefore, the country continues to be quite heavily 'indebted', which is reflected in the fairly low ratings that are being presently given to India by the international credit rating agencies.

2.37 There is a point of view which holds that the current account deficit need not per se be a matter of policy concern, and attention should be restricted only to the public component of external debt. The argument is that the private sector can be expected to fully take into account the inter-temporal viability of its liabilities, both internal and external, and hence the private component of the current account deficit would necessarily be self-correcting. This is, however, not a tenable position, particularly at the present juncture. International experience shows that debt crises can occur even when the bulk of the external liabilities are privately held. The reason for this, apart from normal failure and default risk inherent in any commercial activity, is that the individual private sector firm normally evaluates its inter-temporal budget constraint in terms of the domestic currency and not on the basis of the currency in which the liabilities are denominated. Thus the possibility exists that private viability can coexist with a running down of the nation's foreign exchange reserves. Therefore, the aggregate level of current account deficit is and will continue to be a matter of policy concern until such time as the foreign exchange reserves of the country are large enough to meet such contingencies.

2.38 The standard methodology (e.g. Joshi and Little) to determine the sustainable level of current account deficit (CAD) for India defines the critical indicator as the external debt to exports (ED/E) ratio on the ground that this indicator is more relevant to a large and relatively less open economy like India than the external debt to GDP ratio. The analysis indicates that the increase in external debt as a proportion of exports can be broken down into two components. The first is the primary, or the non-interest component of current account deficit. The second is the interest payment on external debt; but since the denominator of the ED/E ratio is the value of real exports, the increase in the debt ratio depends upon the difference between the real interest rate on external debt and the growth rate of real exports. If the latter component is positive, i.e. the rate of growth of exports is less than the rate of interest on external debt, then there is no level of primary current account deficit that is sustainable since the ED/E ratio follows an explosive path. On the other hand, if this component is negative, then it is theoretically possible to run a primary CAD provided that in the long run the ED/E ratio converges to a sustainable figure. The sustainable value of the ratio is of course a matter of judgement; but as has been pointed out, since there are indications that the international capital markets regard India's external debt as being on the margin of the danger zone, it may be sensible not to allow this ratio to rise above the current level.

2.39 From the point of view of macro-management of an economy with a low initial level of foreign exchange reserves, the standard exercise needs to be modified in one important respect. The requirement of external capital inflows is given not only by the current account deficit (CAD), which represents the inflow of foreign savings, as assumed by Joshi and Little, but it also needs to cover the desired increase in the foreign exchange reserves, which provides the precautionary cushion against sudden disruptions. If this latter component is not taken into account in determining the sustainable level of CAD, then either the terminal value of the ED/E ratio will be higher than the sustainable or the foreign exchange reserves will be lower than dictated by prudence. Therefore, the Joshi and Little formulation needs to be modified by inclusion of a term which captures the requirement of maintaining the desired level of foreign exchange reserves. If the desired level of foreign exchange reserves (FER) is defined, as is normally done, in terms of months of imports, its future trajectory can be specified as being a function of the expected growth rate of imports.

2.40 The formulations for the sustainable current account deficit arising from the above two approaches have been worked out for the Ninth Plan period. As has already been mentioned, although the External Debt/Exports ratio in 1996-97 is likely to be 2.7, if the broader definition of total external liabilities is used, the applicable ratio works out to 3.2. These figures, however, include debt at concessional terms. In evaluating the future it cannot be assumed that the share of concessional debt will continue to remain at the past levels. Correcting for this, the ratio of discounted external liabilities to exports works out to 2.2, which is the relevant figure for the exercise. In so far as the real rate of interest on external borrowings is concerned, it would not be prudent to assume a rate lower than 5 per cent, which takes into account not only the long-term behaviour of international interest rates, but also premium which may have to be paid on account of the higher risk perception of the country and the possible future depreciation in the real exchange rate. Import growth is assumed to take place at the 10.8 per cent per annum for the Ninth Plan. On this basis, the sustainable values of CAD for the Ninth Plan period at different rates of growth of real exports by the two methods are presented in Table 2-12. As can be seen, the modified methodology yields a consistently lower value of the sustainable CAD/GDP ratio than the standard by about 0.3 percentage points. The two estimates are, however, not unrelated. The proper interpretation would be to treat the modified estimates as the sustainable level of the CAD/GDP ratio, and the standard estimates as the sustainable level of external inflows/GDP ratio. The difference between the two yields the level of inflows necessary to increase the foreign exchange reserves at the desired rate.

2.41 The calculations of sustainable CAD given in Table 2-12 implicitly assume that all future external inflows will be in the form of commercial debt, and ignore the possibilities of concessional debt, on the one hand, and foreign investments, on the other. In so far as concessional debt is concerned, the trend behaviour suggests that it will steadily decline as a proportion of total external inflows into the country. This view is supported by the overall trend in the international availability of concessional funds. However, to the extent that concessional debt does become available to the country, thereby reducing the average interest rate on foreign borrowings from the assumed figure, the CAD limits specified above can be pierced. This, however, would have to be done in a flexible manner keeping in view the commitments that are received by the country in this regard.

Table 2-12 : Sustainable Current Account Deficits

Export Growth	Sustainable CAD(% of GDP) Standard	Modified
8.0%	1.70%	1.40%
10.0%	2.00%	1.70%
12.0%	2.35%	2.05%
14.0%	2.75%	2.45%

NOTES : (1) The standard formula for sustainable non-interest CAD is :

$z = d.(gx - r^*)$;

where z = non-interest CAD/Export ratio;

d = External Debt/Export ratio;

gx = growth rate of real exports;

r^* = real interest rate on external borrowings.

(2) The corresponding modified formula is :

$z = [d.(gx - r^*) - m.gm]/[1 + m.gm]$;

where m = FER/Import ratio;

gm = growth rate of real imports.

(3) The sustainable total CAD (ie. including interest payments) to GDP ratio (c) as reported in the table is given by the relation :

$c = e.(z + d.r^*)$;

where e = Export/GDP ratio

2.42 On the positive side, the economic reforms have created the enabling conditions for inflows of foreign investment, both direct (FDI) and portfolio (FPI), which were practically nonexistent earlier. The basic advantage of foreign investment lies in that its risk sharing characteristics are superior to that of debt. In other words, unlike debt, these inflows generally need to be serviced only to the extent that they yield positive returns. The only form of external investment which does not have this characteristic is external portfolio investment in domestic debt instruments, which are substantially no different from external debt except to the extent that, on the one hand, they command the domestic rate of interest as against the international interest rate but, on the other hand, the exchange rate risk is borne by the foreign investor rather than by the domestic borrower. While caution needs to be exercised with regard to this particular form of foreign investment, the greater inflow of foreign investment, particularly FDI, may permit a somewhat higher level of sustainable CAD, subject to certain conditions.

2.43 Prior to the economic reforms, when foreign investment was virtually non-existent and the import elasticity was constrained by various import controls, the sustainable CAD was about 1.4 per cent of GDP and the required inflow of external capital was 1.6 per cent of GDP. The difference was for keeping the foreign exchange reserves at a desirable level. The external debt trap situation that occurred was mainly on account of the CAD being consistently around 2 per cent of GDP over an extended period during the 1980s which was financed primarily by higher recourse to external commercial debt. With the liberalisation of external trade and investment that has occurred since 1991, foreign investment inflows have begun to grow steadily and the import elasticity has also gone up quite sharply from about 1.5, which is the historical average, to 1.7. These two factors operate in opposite directions in so far as the sustainable level of CAD is concerned, the former to increase it and the latter to reduce it. Although the computations regarding the sustainable CAD capture the latter effect, the former has not been incorporated. The reason for this lies in the fact that foreign investments are supply-driven in the sense that although the country can create the conditions for making such investment attractive, the decision as to whether and how much to invest is made by the foreign investor. It is preferable to base the resource estimates for Plan investment upon the assumption that if necessary the entire amount of external capital inflows required for meeting the Plan targets can be made in the form of debt without jeopardising balance of payments sustainability. To the extent it is possible to attract non-debt creating flows of equity investment from abroad, it would give larger elbow room to the financing of the Plan.

2.44 Although, by and large, non-debt creating external capital inflows permit a somewhat higher sustainable CAD than under pure debt finance, two factors need to be taken into account. First, such inflows tend to require a higher rate of return than the interest rate on debt over the longer run. Therefore it would not be prudent to raise the CAD target too much unless there is sufficient confidence in being able to maintain high growth rates of exports over an extended period. This would be so even if these foreign capital flows are productively deployed, unless they raise net exports directly or by releasing resources indirectly from the competing sectors. Second, a distinction has to be drawn between FDI and FPI in terms of their effects on the economy. In general, FDI is to be preferred over FPI flows, partly because its returns are closely linked to the performance of the real economy and partly because it tends to be less volatile than FPI. Besides, the most important disadvantage is that FPI flows tend to be pro-cyclical, in the sense that it comes in when the balance of payments (BOP) position is seen to be strong and goes out when the BOP position is expected to weaken. Thus, it accentuates the direction of movement of the BOP, which can cause problems in macroeconomic management. In the case of countries like India, where the foreign exchange markets are very thin compared to the international financial market, a free FPI regime carries a danger of speculative movements which can lead to serious disruption in the economy.

2.45 On balance, while FPI flows can play a major role and should be welcome, our basic objective should be to promote larger volumes of FDI inflows. In certain years in the recent past, inflows of FPI have been relatively high and this has created difficulties in exchange rate and monetary management. In fact, the need to sterilise the large FPI inflows has led to a situation where public holding of government debt has had to increase beyond desirable levels and has restricted money finance of the fiscal deficit to very low levels. This situation has arisen due to the fact that there are still considerable controls and other barriers on the inflow of FDI and external debt, which are respectively the most desirable forms of external capital, but virtually none on FPI. The policy directions in the future should be to focus on creating a more liberal enabling framework for FDI with FPI flows being left to be determined in the market.

2.46 Keeping in view the above discussion, it is felt that the limits on sustainable CAD given in Table 2-12 may be adhered to as a matter of prudence until such time as there is greater confidence in the ability of the economy to attract higher FDI inflows. It may further be seen that the estimates are extremely sensitive to the assumed growth rate of exports. In planning for the Ninth Plan, although the targetted growth rate of exports has been taken to be 11.8 per cent per annum, it is felt that some relaxation may be permitted while specifying the sustainable current account deficit in order to provide necessary resources for growth. Such a relaxation is contingent on higher FDI inflows and on the fact that the current level of foreign exchange reserves is fairly comfortable, at least for the near future. Over the longer run, however, it is imperative that the growth rate of exports be raised to over 14% per annum. Therefore, the Ninth Plan has been based on a current account deficit of 2.2 per cent of GDP, which corresponds to an export growth rate of about 13 per cent per annum in real terms. The detailed figures for the Ninth Plan are presented in Table 2-13, where the sustainable figures are on the basis of 11.8 per cent growth rate of exports.

Table 2-13 : External Capital Requirements and Inflows

	Sustainable		Planned	
	% of GDP	$ bill.	% of GDP	$ bill
Current Account Deficit	2.0	41	2.1	43
Increase in Foreign Exchange Reserves	0.3	6	0.2	4
Total External Inflow	2.3	47	2.3	47
Of which :				
(1) FDI	1.2	24	1.2	24
(2) Debt + FPI	1.1	23	1.1	23

2.47 It should first be noted that the external financial inflows (Debt + FPI) given in Table 2-13 are specified in net terms, i.e. after taking into account the outflow of principal payments. Thus, the gross inflows would have to be significantly higher. Secondly, it may be noted from Table 2-11, that the public sector investment requirement will absorb about 0.6 per cent of GDP in the form of external resources, over and above the amount needed for maintaining the foreign exchange reserves. This will be almost entirely in external debt, with a minor component of external grants. Thus the resources available to the private sector will stand reduced by this amount. Third, export performance would need to be tracked with great care in order to determine whether or not the limits specified above can be allowed to be breached. If the growth rate of exports exceeds the target of 11.8 per cent, pari passu adjustment in the limits can be made.

Structure of Growth and the ICOR

2.48 The growth performance of the economy, even when it is savings constrained, depends not only on the quantum of investible resources available, but also on its pattern of deployment and the resulting sectoral structure of the growth path. As has already been mentioned, the ICOR, which is a summary measure of the productivity of investment in the economy, is determined by a number of factors not the least of which is the pattern of growth. Although, by and large, the sectoral structure of growth is determined by the pattern of demand, both direct and indirect, for different goods and services, it can be influenced through policy measures. The decision as to whether or not such policy-induced changes in the pattern of investment need to be undertaken depends primarily on an appraisal of the different objectives of the Plan and of the possibility of emerging distortions which may adversely affect the long-term sustainability of the growth process.

2.49 The first sector which needs to be distinguished for special consideration is agriculture. The objectives of the Ninth Plan have singled out agriculture as an area of priority in view of its potential to generate substantially greater employment per unit of investment than most other sectors of the economy. It has also been shown that agricultural growth tends to reduce poverty much faster than growth in other sectors, partly through its employment effect and partly through ensuring that prices of basic food products remain relatively stable. Agricultural growth is also central to another objective of the

Ninth Plan namely ensuring food and nutritional security for all, particularly the vulnerable sections of society. In addition, all available evidence suggests that reduction in regional disparities, particularly in average standards of living, may be better achieved through greater focus on agriculture and other rural activities than through the development of other sectors. The issue of backwardness and regional balance has always been a central concern of state policy. Traditionally, it was felt that the attainment of this objective was best served by a focus on industrialisation and dispersion of industries, which was sought to be implemented by various methods such as locational specificity in the grant of industrial licences and tax concessions. This view is undergoing a change and, with industrial deregulation, it is being increasingly realised that the choice of industrial location is difficult to influence and is best left to the discretion of the investors. A thrust on agricultural development, however, would necessarily imply accelerated growth of the relatively backward regions.

2.50 The second major area of concern relates to the availability of adequate infrastructural facilities not only for supporting the target growth rate of 6.5 per cent, but also for providing sufficient pipe-line investments for sustaining growth in the post-Plan period. The Eighth Plan has witnessed a serious distortion in the pattern of investment, with considerably higher increase in the capacities of non-infrastructural sectors than warranted by the investment made in infrastructure. The resulting shortage of infrastructure gets reflected both in increasing costs and in lower levels of capacity utilisation of the user sectors. Unless this distortion is corrected expeditiously, not only will it be difficult to sustain the desired rate growth but it may also affect future private investment behaviour. Although investment in basic infrastructure sectors that are in the pipe-line are barely adequate for sustaining a growth rate of around 6 per cent during the Ninth Plan at current levels of efficiency and capacity utilisation, there does exist some possibility of increasing the availability through shorter gestation projects and sharper increases in efficiency and capacity utilisation of the existing assets than have taken place in the past. In the Ninth Plan, therefore, it is assumed that the public sector, particularly in the infrastructure sectors, will improve its efficiency and financial performance to a substantial extent. This will not only generate the necessary resources for public investment, but it will also enhance the attractiveness of infrastructural investment by the private sector. In addition, the pace of investment in these sectors will have to be stepped up in order to provide the pipeline investment for supporting future growth.

2.51 Keeping the above considerations in mind, the sectoral pattern of growth envisaged for the Ninth Plan and the associated ICORs are presented in Table 2-14. These figures have been generated from the Plan model by imposing exogenously determined growth targets for agriculture and certain infrastructure sectors and taking into account all the relevant leads and lags. It will be seen that although the sectoral ICORs assumed for the Ninth Plan are either equal to or less than the corresponding ICORs prevailing during the Eighth Plan, the aggregate ICOR of 4.3 is significantly higher than the Eighth Plan average of 3.7. This arises from the fact that considerable investment in meeting the past shortfalls have to be made in three major infrastructure sectors, namely mining & quarrying, electricity, gas & water, and rail transport, all of which have fairly high ICORs. In addition, both the targetted growth rates and the future ICORs embody a number of assumptions and policy measures which need to be taken note of.

Table 2-14 : Structure of Growth

	Sector	Eighth Plan Growth Rate(%)	Eighth Plan ICOR	Ninth Plan Growth Rate(%)	Ninth Plan ICOR	Share of GDP(%) 1996-97	Share of GDP(%) 2001-02
1.	Agriculture & Allied Sectors	4.0	2.3	3.9	2.2	27.0	23.9
2.	Mining & Quarrying	3.5	6.3	7.2	5.9	1.8	1.8
3.	Manufacturing	9.2	4.7	8.2	4.4	19.4	20.9
4.	Electricity, Gas & Water	7.4	16.3	9.3	16.3	2.9	3.3
5.	Construction	5.2	3.3	4.9	2.7	6.0	5.5
6.	Trade	10.0	0.8	6.7	0.8	13.5	13.8
7.	Rail Transport	2.2	14.0	3.9	12.9	1.1	1.0
8.	Other Transport	6.8	7.5	7.4	6.5	5.1	5.3
9.	Communications	14.9	7.3	9.5	7.1	1.4	1.6
10.	Financial Services	12.1	0.8	9.9	0.7	6.6	7.7
11.	Public Administration	4.5	8.1	6.6	5.6	5.3	5.3
12.	Other Services	5.6	6.0	6.6	5.8	9.9	9.9
	Total	6.8	3.7	6.5	4.3	100.0	100.0

2.52 The drop in sectoral ICORs occur from two primary influences. First, it is assumed that the process of economic reforms would continue, which would lead to phased elimination of outdated technologies and therefore to higher energy and material efficiency in the industrial sectors. Second, the efficiency and productivity of five infrastructural sectors, namely irrigation, mining & quarrying, power, gas & water, railways and communications, are assumed to go up significantly. In addition, it is assumed that the prices, tariffs and user charges of these sectors are rationalised and raised appropriately wherever and whenever required by economic considerations. These measures have two positive effects. First, the increase in efficiency and capacity utilisation provides the supply from these sectors necessary to maintain the 6.5 per cent growth rate during the Ninth Plan. Secondly, the increase in the average price realisation, through rationalisation of tariffs, leads to increases in both the savings originating from these sectors, which have been reflected in the estimates of public resources, and in the measured value-additions relative to the cost of capital, which is the instrumentality for reducing the ICORs.

2.53 The resource constraints being faced by the Government at all levels and the public sector enterprises require that the existing assets be used more productively and efficiently and generate higher savings for future investment. The primary cause of low capacity utilisation of existing public assets is that the maintenance needs have not been met to the extent required for keeping these assets in good condition. This has largely been the outcome of the financial stringency that has been faced by the public authorities, which has led to a situation where, on the one hand, fresh capacities are being added to social and economic infrastructure, while, on the other, the existing capacities are getting rapidly eroded. As a result, the net operational accretion to capacities is far below the gross investment, which would tend to raise the capital-output ratio significantly.

2.54 The Ninth Plan will lay great emphasis on improving the productivity of existing assets. The first step in this process is to improve the financial viability of public authorities through sensible pricing strategies and reduction of non-transparent subsidies. The Planning Commission will closely monitor the maintenance programmes of major public assets in order to ensure that they are kept in good operational condition. In most cases, revamping and modernising of existing assets require considerably less investment than fresh investment in green-field sites for the same effective output. The Ninth Plan will give priority to such investment as compared to proposals for creating green-field capacities.

2.55 In so far as agriculture is concerned, the share of public investment in total investment has been dropping steadily for the last 15 years or so. Since private investment tends to concentrate on less capital intensive projects and have shorter gestation lags, the ICOR in agriculture has been gradually going down. During the Ninth Plan, the shortfall in public investment in irrigation, which has occurred during the Eighth Plan is sought to be made up, which would lead to a higher ICOR by itself. However, the present rate of utilisation of the existing irrigation potential is only about 68 per cent. This will have to be stepped up significantly in order to meet the agricultural growth target. The small decline in the Ninth Plan ICOR for agriculture reflects the net result of these two influences.

2.56 In electricity, although it has been assumed that the average tariff collections will need to be raised during the Ninth Plan period and the efficiency of operations both with respect to the plant load factor (PLF) and raw material usage will also improve, which collectively should have had the effect of reducing the ICOR, the need to invest significant amounts in the transmission network offsets some of the gains from the higher value-addition. In addition, since much of the investment that would have to take place during the Ninth Plan period will contribute to output only during the Tenth Plan and perhaps beyond, it would tend to raise the ICOR for this sector. The situation is similar with the gas and water sectors as well.

2.57 One of the fastest growing sectors during the Eighth Plan period has been trade, which has grown at a rate of 10 per cent per annum. This is quite unusual since the long-term relationship between the trade sector and the sectors producing tradable goods, i.e. agriculture, mining and manufacturing, has been of more or less equal growth. The sharp growth in trade during the Eighth Plan is only marginally related to the growth in exports and imports. The bulk of it has accrued from expansion in domestic trade. One explanation for this phenomenon can be that with the economic reforms the trading margins have gone up significantly. During the Ninth Plan, it is assumed that the historical relationship between trade and its supplying sectors will be re-established.

2.58 The remaining sectors, more or less, continue the pattern of growth that has been experienced in the past and are as reflected in the input-output structure of the economy. The financial sector is expected to continue to grow at a high rate which reflects the greater role of financial intermediation that would be required during the Ninth Plan period in order to achieve the higher levels of investment that has been targetted. The sectoral break-up of the GDP emanating from the above growth rates are given in Table-2.15.

Table 2-15 : Sectoral Structure of GDP at Factor Cost

(Rs. '000 crore at 1996-97 prices)

	8th Plan	1996-97	2001-02	9th Plan
1. Agriculture & Allied Activities	1442.5	310.1	376.1	1692.8
2. Mining & Quarrying	95.5	20.5	29.1	126.3
3. Manufacturing	922.3	222.6	329.6	1393.5
4. Electricity, Gas & Water	144.9	32.9	51.2	212.1
5. Construction	304.3	68.7	87.1	392.3
6. Trade	642.6	156.5	216.3	951.6
7. Rail Transport	61.2	13.2	16.0	74.8
8. Other Transport	256.1	58.8	84.1	363.8
9. Communications	58.7	15.7	24.7	101.7
10. Financial Services	301.5	75.9	121.7	507.0
11. Public Administration	274.9	60.6	83.6	380.6
12. Other Services	507.9	113.7	156.5	705.8
Total	5012.3	1149.2	1576.0	6902.5

Fiscal Balance, Inflation and the Monetary Stance

2.59 The Eighth Plan had witnessed a secular decline not only in the share of the public sector in total investment, but also as a percentage of GDP. This was principally the outcome of the efforts to bring about fiscal correction in a situation where the fiscal balance had been worsening steadily. Associated with this was the inability of most State governments to raise sufficient debt capital to finance their desired investment targets. The net result has been serious shortfalls in the creation of necessary economic and social infrastructure, the effects of which are starting to be felt. The Ninth Plan is predicated on a reversal of this trend, such that the share of public investment in total investment rises from the below 30 per cent level to which it had fallen in the terminal years of the Eighth Plan to about 33.4 per cent. Since the fiscal consolidation that had taken place during the Eighth Plan, by which the domestic debt to GDP ratio had been reduced from 59.7 per cent in 1991 to 56.5 per cent in 1997, was based mainly on severe compression of Plan expenditures in general and investment in particular, there may be an apprehension that a reversal of the trend may jeopardise the process of fiscal consolidation. This is a serious enough issue to merit careful consideration.

2.60 The long-term macroeconomic consequences of public debt accumulation depend on its rate of growth relative to growth in GDP, the ability of the private sector to generate sufficient savings for financing not only its own investment plans but also for absorbing the growing public debt, and the monetary consequences of increasing public debt, particularly on the inflation rate and rates of interest. The standard theoretical condition for stability of the debt/GDP ratio is that the real interest rate on public debt must be lower than the rate of growth of real GDP. While this condition ensures that the debt/GDP ratio will eventually converge to a stable long-run value, there is no assurance that this stable value of the ratio is consistent with the development needs of the country. Along the stable trajectory, the interest burden of the Government may actually rise quite significantly and put pressure on the development expenditure necessary to achieve and maintain a desirable structure of the economy. In fact, over the long-run, the growth rate of GDP itself may suffer and make the initial relations invalid. The recent experience clearly points to the dangers of relying entirely on such a definition of fiscal sustainability. During the past decade, despite the fact that the real interest rate on public debt, which on an average has been negative, has been significantly lower than the average growth rate of GDP of 5.7 per cent per annum, the combined interest burden of the Centre and States has steadily increased from 18.4 per cent of total government revenues during the second half of the 1980s to 27.4 per cent in 1996-97. In the case of the Central Government, the problem has become particularly acute in that 60 per cent of the total tax revenues was absorbed by interest payments in 1996-97.

2.61 In order to understand the implications of the burgeoning public debt and interest burden it is useful to examine the different measures of the deficit of the government. These are presented in Table 2-16. The difference between the fiscal deficit and the revenue deficit represents government investment as a percentage of GDP, while the difference between the fiscal deficit and the primary deficit reflects the interest burden of the government as a percentage of GDP. As may be seen, during the 1990s, the percentage

Table 2-16 : Measures of Deficit of the Government

(percentage of GDP)

	90-91	91-92	92-93	93-94	94-95	95-96	96-97
1. Combined Centre and States :							
(a) Fiscal Deficit	8.4	6.6	6.9	7.7	6.7	6.3	6.2
(b) Revenue Deficit	4.5	3.6	3.4	4.5	3.9	3.5	3.5
(c) Primary Deficit	4.9	3.1	2.6	3.7	2.2	1.9	1.7
2. Net Centre :							
(a) Fiscal Deficit	5.7	4.0	4.3	5.7	4.2	3.9	3.4
	(8.3)	(5.9)	(5.7)	(7.4)	(6.1)	(5.5)	(5.0)
(b) Revenue Deficit	3.5	2.6	2.6	4.0	3.3	2.7	2.2
(c) Primary Deficit	3.4	1.5	1.7	3.0	1.3	1.0	0.5
3. States :							
(a) Fiscal Deficit	2.7	2.6	2.2	2.0	2.5	2.4	2.8
(b) Revenue Deficit	1.0	0.9	0.7	0.5	0.6	0.7	1.2
(c) Primary Deficit	1.5	1.6	0.9	0.6	1.0	0.9	1.3

NOTES : (1) Source of the above data is RBI Annual Report 1996-97.
(2) Combined fiscal deficit is different from the RBI definition in that it is net not only of the lending of the Central government to the States but also of the other lendings. Combined revenue deficit is net of inter-Governmental transactions in the revenue account. Combined primary deficit is the combined fiscal deficit minus net lending and net interest payments.
(3) The Net Central Government fiscal and revenue deficits exclude net lending of the Centre and the Net Central government primary deficit is the net fiscal deficit minus net interest payments. For ease of comprehension, the gross fiscal deficit of the Centre as recorded in the budget, i.e. inclusive of net lending of the Centre, is shown in brackets ().

of government investment to GDP has declined both at the Centre (from 2.2 to 1.2 per cent) and in the States (from 1.7 to 1.6 per cent), but the interest burden has continued to increase sharply from an aggregate of 3.5 per cent of GDP in 1990-91 to 4.5 per cent in 1996-97. It will further be seen that although the Centre has managed to lower its revenue deficit significantly, it has not been so in the case of the States, which have witnessed an increase, particularly since 1993-94. The principal reason for the inability of the States to reduce their revenue deficit is that the responsibility for operation and maintenance for most social services and infrastructure rests on the States, which restricts their ability to reduce revenue expenditures sharply. However, there is a need to emphasise the importance of reducing the revenue deficit of the combined Central and State Governments, and eventually bring it to a surplus, even if it impinges adversely on some services in the short run, since a revenue deficit requires that the returns on government investment must be significantly higher than the cost of financing for fiscal sustainability. The first step towards this would be to contain the interest burden.

2.62 The main cause of the steady increase in the interest burden has been different in the Eighth Plan as compared to the earlier period. Prior to the economic reforms of 1991, a more or less stable nominal interest rate on public debt was combined with a rapidly increasing fiscal deficit, and hence the stock of public debt, to raise the interest burden. Since there were limitations on the direct borrowings behaviour of the States, the fiscal deficit of the States did not increase in any appreciable manner, staying at about 3 per cent of GDP, and the bulk of the increase in the interest burden fell on the Centre, which witnessed practically the entire increase in the fiscal deficit. During this period, the interest rate on public debt was specified by the Government, and its acceptance was ensured by the high and increasing statutory liquidity ratio (SLR) requirements imposed on the banking sector. During the Eighth Plan, however, consequent to the policy decision to shift from a government-determined interest rate on public debt to a system of market-determined rates as part of the financial sector reforms, the interest rates on public debt increased sharply. In addition, there was a steady reduction in SLR requirements from a high of 38.5 per cent of bank deposits in 1991-92 to 25 per cent at present, which reduced the government's access to bank finance, particularly for the States. The Centre adjusted partially to these developments by instituting a steady reduction in its gross fiscal deficit from 8.3 per cent of GDP in 1990-91 to 5 per cent in 1996-97. This fiscal adjustment, however, was not enough to entirely offset the increase in interest rates, and the interest burden continued to move upwards. The situation was much worse for the States, which were unable to effect any sizeable fiscal correction due to their reliance on the debt component of the Central assistance to State Plans for meeting the needs of developmental investment. The interest rate on such intra-government debt was also increased in line with the overall increase in interest rates. The reduction in the States' gross fiscal deficit from 3.5 per cent of GDP in 1990-91 to 2.9 per cent in 1995-96 and 3.3 per cent in 1996-97 was primarily achieved by curtailing Plan outlays, particularly support to the State PSUs, and is reflected in the lower market borrowings. Despite this, the interest burden of the States has ballooned during the Eighth Plan and at present seriously jeopardises the prospects of the States' ability to meet their investment obligations in the Ninth Plan.

2.63 One of the immediate concerns of the Ninth Plan would be to ensure fiscal sustainability of both the Centre and the States. For that, the interest burden as a percentage of current revenues of the Government has to be reduced and, as a policy objective, immediate measures should be taken to ensure that at least the interest burden to tax revenue ratios do not become any worse, and preferably improve, during the Ninth Plan period and beyond. Before entering into the issue of fiscal sustainability, however, the allocation of responsibilities for meeting the targets of public sector Plan outlays and investment, as given in Table 2-9, and the resource flows needed to achieve these ends have to be explicitly specified. These figures are presented in Table 2-17. The first point to note is that during the Ninth Plan, the Centre bears only a minor burden of 14.6 per cent of the total public

Table 2-17 : Structure of Outlays and Resources of the Public Sector in the Ninth Plan

	Rs. crore	% of GDP
Centre :		
Central Plan Outlay	374,000	4.86
of which :		
(a) Support to State Plans	170,018	2.21
(b) Support to CPSEs	38,000	0.49
(c) Support to Ministries		
(i) Investment	106,482	1.38
(ii) Current Outlay	59,500	0.77
Financed by :		
(a) Borrowings	384,700	5.00
(b) Other resources	(-)10,700	-0.14
States :		
State Plan Outlay	275,500	3.58
of which :		
(a) Investment	202,000	2.63
(b) Current Outlay	73,500	0.96
Financed by :		
(a) Central Support	170,018	2.21
(b) Borrowings	127,082	1.65
(c) Other resources	(-) 21,600	-0.28
PSEs :		
Outlay/Investment	417,718	5.43
Financed by :		
(a) Central support	38,000	0.49
(b) Savings (IR)	292,400	3.80
(c) Borrowings (EBR)	87,318	1.13

NOTES: (1) All Union Territories (UTs) are clubbed with the States.
(2) A part of the investment outlay of the States will be towards budgetary support to State PSEs for investment purposes. Since this quantum is not yet known, it is being carried in the State budgets.
(3) The `borrowings' of PSEs include all market-related funds including new equity issues, if any.
(4) `Other resources' of the Centre and the States include balance on current revenues(BCR),miscellaneous capital receipts (MCR) and external grants, less non-Plan capital expenditures.

investment necessary for meeting the Ninth Plan targets, and the major responsibility is that of the States (27.9 per cent) and the public sector enterprises (PSEs) (57.5 per cent). This pattern arises out of the need to strengthen the infrastructural base of the country, which largely falls in the domain of State governments and PSEs. Second, it may be noted that while the borrowings of the Centre are projected at Rs.384,700 crore for the five-year period, they are expected to increase sharply from about Rs.60,200 crore in 1996-97 to about Rs.76,900 crore each year on the average during the Ninth Plan period. However, the borrowings of the States will also need to increase substantially from Rs.16,800 crore in 1996-97 to about Rs.25,300 crore per year on the average during the Ninth Plan. These figures include the borrowings from small savings instruments, market borrowings and external debt. Thus, although the government as a whole will need to raise about 6.65 per cent of GDP as borrowings during the Ninth Plan as compared to 6.1 per cent in 1996-97, the share of States in the total borrowings will have to rise from 21.8 per cent in 1996-97 to 24.8 per cent during the Ninth Plan. The PSEs will also have to raise substantial funds from the market, amounting to Rs.17,500 crore per year on an average in order to meet their investment targets.

2.64 The increased borrowing needs of the States and the PSEs during the Ninth Plan, as compared to the historical trends, have to be accompanied and supported by a considerable improvement in the fiscal and financial discipline of these agencies. In particular, the States will have to record substantial improvement in their revenue deficits and the PSEs will need to increase their collective savings or internal resources from 3.4 per cent of GDP in 1996-97 to 3.8 per cent. Unless the measures to attain these targets are implemented, the borrowing targets are both unlikely to be attained and, more importantly, can potentially make the financial situation of these agencies considerably more precarious in the long run. Even with such efforts, resource mobilisation of this magnitude by the States and the PSEs will not be easy to achieve due to the creditworthiness of most States and PSEs as perceived by the financial market place. On the other hand, the Ninth Plan targets are unlikely to be achieved unless this transition to larger market-based borrowings is effected smoothly and rapidly. Therefore, strenuous efforts will have to be made to enhance the ability of the States and the PSEs to access market borrowings at reasonable terms on the strength of their performance. This will require a deliberate build-up of investor confidence through careful cultivation of an investor-friendly image and through greater openness and transparency of operations. These measures are, however, likely to take time and, in the interim period, consideration also needs to be given to the Centre, which enjoys a much superior credit standing and investor confidence, playing the role of an intermediary in channelising such funds to the States, over and above the implicit transfers included in the Central support to State Plans. This role, however, does carry the danger of 'moral hazard' problems arising, whereby the impetus towards fiscal discipline among certain States may get diluted. It should, therefore, be made amply clear that the debt servicing obligations of such intermediated loans may have to be the first charge on the devolution of tax revenues and the modalities of effecting such a linkage would need to be worked out.

2.65 The standard formulation for assessing fiscal sustainability (e.g. Joshi and Little; Stern) aims at deriving the level of fiscal deficit as a percentage of GDP which would stabilise the government debt/GDP ratio at its current level. The change in the debt/GDP ratio can be broken down into two components : (a) the primary deficit, which indicates the new borrowings required to finance the real expenditure of the government; and (b) the interest payment on the existing debt stock. Since the denominator of the debt ratio is GDP, the increase in the debt ratio on the latter count depends on the difference between the real interest rate and the growth rate of GDP. This formulation is similar to the analysis carried out for sustainability of the CAD earlier. This standard analysis, however, also needs to be slightly modified in the present context. It is usually assumed that the government faces a stable real interest rate on its borrowings, so that no distinction needs to be drawn between the gross and the net borrowings of the government. In India, however, there is a significant difference between the average interest rate paid on existing government debt, which was about 9.5 per cent in 1996-97, and the average interest rate on new debt, which was as high as 12.5 per cent. As a result, it is more relevant to assess the interest burden on gross borrowings rather than on the change in the debt stock or the net borrowings. Second, the standard approach argues for the inclusion of all public borrowings, including the borrowings of the non-financial public enterprises, in evaluating the public debt to GDP ratio. While this would certainly have been true earlier, when a very large component of borrowings by the PSEs was mediated by the government, it is no longer a compelling argument. In the last few years, the government support for borrowings by the PSEs has reduced substantially, except for some State PSEs, and there is now a greater willingness to set off the assets of the PSEs against their liabilities rather than reflect them as a claim on the government budget. Therefore, it is preferable at this stage to focus attention on the sustainability of the government's budget *per se*.

2.66 It is also possible to argue from the point of view of medium-term management of the economy that the absolute level of the government debt to GDP ratio may not be as much a cause of concern in itself, as the high and increasing pre-emption of the government's current revenues, particularly tax revenues, by interest payments. In order to achieve the objective of a stable or declining share of interest payments in total tax revenues, it becomes necessary to derive the maximum fiscal deficit that can be incurred so that the rate of build-up of public debt is limited to achieving a gradual reduction in the percentage of interest payments to total tax revenues. It can be shown that the sustainable level of fiscal deficit so derived is related positively to the growth rate of nominal GDP and the buoyancy of tax revenues, and negatively to the average interest rate on new debt. The current debt/GDP ratio and the average interest rate on existing debt are the important parameters. The behaviour of taxes and the buoyancies assumed for the Ninth Plan period are shown in Table 2-18. It is important to note that it is being assumed that during the Ninth Plan the devolution formula for tax sharing will be changed from the existing arrangement, under which roughly 27 per cent of Central tax revenues were devolved to the States, to the proposal for pooling all Central tax revenues of which the States will receive 29 per cent. This has the effect of decreasing the buoyancy of the net taxes of the Centre and increasing that of the States.

Table 2-18 : Tax Receipts of the Government

(Tax receipts as percentage of GDP)

	Direct	Indirect	Gross	Devolution	Net
1996-97 :					
Centre	3.11	7.41	10.52	- 2.71	7.81
States	0.18	5.66	5.84	+ 2.71	8.55
Combined	3.29	13.07	16.36		16.50
2001-02 :					
Centre	4.02	7.47	11.49	- 3.33	8.16
States	0.18	5.80	5.98	+ 3.33	9.31
Combined	4.20	13.27	17.47		17.47
Implicit Buoyancies :					
Centre	1.59	1.02	1.17		1.09
States	1.00	1.05	1.04		1.17
Combined	1.55	1.03	1.14		1.14

2.67 Such limits on the sustainable fiscal deficit need to be computed not only for the government as a whole, but for each component, namely the Centre and the States, taken separately in order to ensure that the division of responsibility for meeting the Plan objectives can be carried out by all wings of the Government without running into serious resource problems. In doing so, it must be noted that the Central Government is the major creditor so far as the States are concerned, accounting for 62.5 per cent of the total outstanding debt of the States in 1996-97. Since the Centre does not provide these loans at concessionary terms, they need to be deducted from the gross outstanding debt of the Centre to arrive at its net debt position. Furthermore, the Central assistance to State Plans, on the average, includes a debt component of slightly above 50 per cent, and this pattern is assumed to continue during the Ninth Plan for the purposes of analysing fiscal sustainability.

2.68 The analysis of the fiscal sustainability of the combined government, the Centre and of the States taken collectively for the Ninth Plan period as per the division of responsibilities and resources outlined in Table 2-17 by both the modified standard and the alternative interest burden formulae, are presented in Table 2-19. In deriving the values

Table 2-19 : Fiscal Sustainability of the Ninth Plan

(Gross Fiscal Deficit (GFD) as Percentage of GDP)

Sustainable Fiscal Deficit	Combined	Net Centre	States
1. Scenario 1			
Standard	4.98	3.30 (4.36)	1.68
Interest burden	6.61	4.42 (5.48)	2.19
2. Scenario 2			
Standard	5.57	3.71 (4.76)	1.86
Interest burden	7.61	5.10 (6.16)	2.51
3. Fiscal deficit/GDP ratio in 1996-97	6.13	3.35 (5.03)	2.78
4. Fiscal deficit/GDP ratio in the Ninth Plan	6.76	3.92 (4.98)	2.84

NOTES : (1) The standard analysis defines fiscal sustainability as the level of fiscal deficit at which the Debt/GDP ratio remains constant. The relevant formula is :

$$f = b.[g + i - rn - a.(rn - re)] + int$$

where : f = fiscal deficit/GDP ratio
b = total govt. debt/GDP ratio
g = growth rate of GDP
i = inflation rate
a = rate of repayment of existing debt
re = interest rate on existing debt
rn = interest rate on new debt
int = interest payment on public debt/GDP ratio

The interest burden definition is the level of fiscal deficit at which the interest/total tax receipt remains constant. The formula in this case is :

$$f = b.[E.re.(g + i) - a.(rn - ra)]/rn$$

where : E = buoyancy of nominal tax revenues

(2) Scenario 1 assumes GDP growth rate at the Ninth Plan target of 6.5 per cent and nominal interest rate at the 1996-97 level of 10.5 per cent. Scenario 2 assumes GDP growth rate of 6.5 per cent and nominal interest rate of 9.5 per cent.

(3) The GFD of the Centre is defined as net of the loans and advances to the States. In order to derive the GFD as given in the budget (i.e. inclusive of loans and advances to States), for the Ninth Plan period, 1.06 per cent should be added to the figures given above. These are shown in brackets.

of the variables and parameters for the Ninth Plan period certain assumptions have been made, which need to be noted. First, although the inflation rate during the Ninth Plan has been assumed to be in the range of 5 to 7 per cent per annum, for the purposes of this exercise it has been assumed that the lower of the range, i.e. 5 per cent, would be targetted. Second, the nominal interest rates on new debt have been assumed to respond to the lower inflation rate so that they remain in the range of 4.5 to 5.5 per cent in real terms. Third, the annual rate of repayment of existing debt has been assumed to be 5 per cent, which is somewhat higher than experienced in the recent past. The most significant point that needs to be noted in Table 2-19 is that the condition required for stabilising the interest/tax ratio under the buoyancy rates assumed for the Ninth Plan is significantly less demanding than the condition for stabilising the debt/GDP ratio in all the scenarios. In other words, if the nominal interest rates on public debt are responsive to the lower rates of inflation and the appropriate steps taken to raise the tax/GDP ratios by both the Centre and the States, the government debt/GDP ratios can be permitted to rise without necessarily running the risk of increasing the pre-emption of tax revenues by interest payments. Indeed, as may be seen, the Central Government has already achieved the necessary level of fiscal correction by 1996-97. The States, however, still have some way to go.

2.69 However, the behaviour of taxes estimated for the Ninth Plan period embody certain corrective measures which cannot be assumed to continue in the long run and the tax/GDP ratio will eventually stabilise, albeit at a higher level than at present. Therefore, it may not be entirely appropriate to use the definition of fiscal sustainability based on the interest/tax ratio for setting the long run sustainable target for the fiscal deficit, although it continues to be useful for indicating the extent to which the fiscal correction efforts can be allowed to be relaxed not only to take care of unforeseen circumstances, but also in the use of fiscal variables as a policy instrument for aggregate demand management. For the Centre, as may be seen, there is some cushion available for this purpose. For the government as a whole, however, stabilisation of the Debt/GDP ratio is perhaps a more prudent target to aim for in the longer run. It may be seen from Table 2.19, that even if the resource and expenditure patterns outlined in the Plan are adopted and adhered to strictly, the combined fiscal deficit of 6.76 per cent of GDP is likely to be significantly above the sustainable level of 4.98 per cent at a real interest rate on public debt of 5.5 per cent, which will imply a steady increase in the Debt/GDP ratio of the government but a very slight increase in the interest burden ratio. If the nominal interest rate on new government debt can be reduced to 10 per cent or less, implying a real interest rate of 5 per cent, the interest burden ratio of combined government will also exhibit a declining trend.

2.70 In addition, the Central Government has instruments available to it which have not been taken into account at all in making the above calculations. These instruments lie in the domain of monetary policies and need to be discussed with some care. In making the above calculations, it has been assumed that the inflation rate will be restricted to 5 per cent per annum during the Ninth Plan. This target is in itself questionable in the specific economic environment that is being sought to be created in the Ninth Plan period. As has been mentioned earlier, the Ninth Plan is predicated on two major planks : (a) an accelerated growth in agricultural GDP, which in itself is contingent upon a steady improvement in terms of trade for agriculture; and (b) removal of, or a reduction in, a number of implicit and non-transparent subsidies through rationalisation of administered prices and higher collection of user charges. Both these processes are inherently inflationary since they do have cost-push effects, and any effort to contain the inflation rate excessively will have negative effects on real growth. This is, of course, a transient phenomenon and will apply only until the desired relative price structure has been attained.

2.71 Therefore, it may not be feasible to contain the inflation rate at the 5 per cent level, and it may rise to even 7 per cent per annum, at least for the first few years of the Ninth Plan. The sustainable level of fiscal deficits at a 7 per cent rate of inflation are presented in Table 2-20. As may be seen, the sustainable fiscal deficit limits by both methodologies and in all scenarios increase significantly at the higher inflation rate, with the increase being greater for the standard Debt/GDP measure than for the interest burden. This occurs principally due to the assumption that although there would be higher nominal interest rates consequent upon higher inflation expectations, the real interest rates could drop to within the 3.5 to 4.5 per cent range as a result of the reduced demand for government borrowings as a proportion of the available resources.

Table 2-20 : Fiscal Sustainability at 7% Inflation Rate
(Gross Fiscal Deficit (GFD) as percentage of GDP)

Sustainable Fiscal Deficit	Combined	Net Centre	States
1. Scenario 1			
Standard	5.56	3.70 (4.76)	1.86
Interest burden	6.85	4.57 (5.63)	2.28
2. Scenario 2			
Standard	6.17	4.11 (5.16)	2.06
Interest burden	7.79	5.21 (6.27)	2.58
3. Fiscal deficit/GDP ratio in 1996-97	6.13	3.35 (5.03)	2.78
4. Fiscal deficit/GDP ratio in the Ninth Plan	6.76	3.92 (4.98)	2.84

NOTE : (1) Scenario 1 assumes GDP growth rate at the Ninth Plan target of 6.5 per cent and nominal interest rate at the 1996-97 level of 11.5 per cent. Scenario 2 assumes GDP growth rate of 6.5 per cent and nominal interest rate of 10.5 per cent.

2.72 On the other hand, the acceptance of a higher rate of inflation, for the structural reasons mentioned earlier, would imply that the target annual rate of growth of base money can be increased from about 14 per cent to above 16 per cent, assuming an elasticity of demand for base money of 1.3 with respect to real GDP. This translates to an increase in the potential seignorage available to the Central Government of 0.3 per cent of GDP from 2.2 to 2.5 per cent of GDP each year. In the recent past, excessive inflows of external funds relative to the CAD have caused the foreign exchange reserves to grow much faster than desired as discussed earlier. As a result, almost 1.5 per cent of GDP have been transferred abroad in the form of seignorage through an excessive growth of foreign exchange reserves in each of the past four years, which could have been more productively used to increase the inflow of real resources through higher imports or to reduce the growth of government debt through a higher level of monetisation of the fiscal deficit. This behaviour needs to be changed during the Ninth Plan period. As has been indicated earlier, the required growth in foreign exchange reserves amounts to about 0.4 per cent of GDP per year on the average during the Ninth Plan. It is, therefore, possible for the Central Government to appropriate 1.3 and 1.6 per cent of GDP as seignorage in the two sets of inflation scenarios respectively through recourse to higher monetised deficit of the Government and yet leave sufficient cushion to absorb some unforeseen excess capital inflows. Although this measure does not reduce the debt build-up as recorded in the government budget since government securities will have to be issued to the RBI, it does reduce growth in government debt held by the public and also the net interest burden through higher dividend payments by the RBI. For this order of seignorage to be achieved, however, a certain degree of control needs to be exercised on the inflow of external capital resources. As has been discussed earlier, limitations would need to be continued on external commercial borrowings and perhaps imposed on foreign portfolio investment while significantly improving the conditions for attracting foreign direct investment.

2.73 Secondly, the overall level of real interest rates in the economy will need to be brought down from the excessively high levels that exist at present to the target range of 3.5 to 5.5 per cent, without jeopardising the viability of the financial sector. This change can only be done in a graduated manner, since the lending rates will tend to follow the deposit rates with some lag. In the interim period, if the real lending rates become too high, it will affect investments adversely. The decline in nominal interest rates helps the government's fiscal sustainability quite considerably as can be seen from a comparison of scenarios 1 and 2 in both Tables 2-19 and 2-20. In view of this relationship, the Government needs to make a concerted effort at reducing the nominal interest rates. The containment of the combined fiscal deficit during the Ninth Plan will certainly help by reducing the pressure on credit demand, but more may need to be done, particularly as far as the deposit rates are concerned. In order to make a beginning, there is a strong case for reducing the interest rates on the various small saving schemes operated by the government. This alone should have a salutary effect on the overall structure of the deposit rates. There is little danger that such a step will reduce aggregate savings, since the empirical evidence suggests that there is at worst a negligible relationship between interest rates and aggregate savings. There may be some portfolio shifts in the short run, but these are unlikely to be large.

2.74 The aggregate effects of a carefully calibrated monetary stance on the fiscal sustainability of the government are, therefore, quite substantial. A viable monetary posture for the Ninth Plan would be to accept an average inflation rate in the region of 7 per cent per annum, which would justify a growth rate of money supply (base money) of 16 per cent per annum and a seignorage of 1.6 per cent of GDP. With appropriate measures, it should be possible to reduce the average interest rate on public debt to 11.5 per cent, if not lower going by current trends, yielding a real interest rate of 4.5 per cent, which is not unrealistically low by both historical and international standards.

2.75 However, as can be seen from Tables 2-19 and 2-20, the fiscal consequence of the Ninth Plan is divided asymmetrically between the Centre and the States. In the case of the Centre, the net fiscal deficit of 3.04 per cent arising from a gross fiscal deficit target of 4.1 per cent in the terminal year of the Plan will be substantially lower than that required for sustainability, implying a rapid reduction in both the Debt/GDP ratio and the interest burden; whereas for the States it will be above, which implies a growing problem of debt accumulation and increasing interest burden. Such a state of affairs is undesirable since it will not only jeopardise the fiscal viability of the States, but will also reduce their ability to raise debt from the market. As a consequence, public investment by the States will fall short of the Plan targets and will have serious adverse effects on those sectors which fall predominantly under the State jurisdiction such as agriculture, health, education and a number of infrastructural areas. In order to prevent such an eventuality, it is necessary for the States to vigorously pursue additional resource mobilisation (ARM) measures over and above those taken into account in computing the buoyancy rates. In the detailed discussions held with the Chief Ministers of all the States regarding the State Plans, it has been indicated that the States are collectively committed to implementing a number of ARM measures which would reduce the State fiscal deficit by above Rs. 13,000 crore additionally for the Ninth Plan period as a whole. Credit for these efforts has not been taken in the calculations of fiscal sustainability. If these commitments materialise, the fiscal deficit of the States, and therefore the combined fiscal deficit of the government, will be reduced by a further 0.17 per cent of GDP during the Ninth Plan.

2.76 A realistic assessment of the possibilities of improvement in the fiscal position of the States indicates that it may not be feasible to effect sharper fiscal corrections than have been indicated without seriously affecting the attainment of the Plan objectives. On the other hand, reduction in the Debt/GDP ratio of the States may not strictly be necessary in view of the relatively low level of this ratio (19.4 per cent) in the base year. However, the interest payment/tax revenue ratio at almost 27 per cent in 1996-97 is high enough to be a cause of concern, and it may not be desirable for this to increase further. It is, therefore, imperative that not only should the States achieve the resource mobilisation targets that have been committed by them, but also for the Centre to ease the pressure on the States by transferring a share of the improvement in its fiscal deficit, of at least 0.45 per cent of the GDP, to the States in order to make the State finances viable.

2.77 The proposed transfer of fiscal improvements is not as radical as it appears. In any case, the actual debt servicing receipts by the Centre tend to fall short of the dues due to the inability of a number of States to meet their commitments. In addition, the various Finance Commission awards have, from time to time, made appropriate adjustments for relieving the debt service burden of the States. Thus, this proposal seeks to legitimise an existing reality. There are, however, two distinct advantages of this proposal. First, it immediately affects the fiscal position of the States, which would improve their credit ratings and make it easier for them to access market borrowings. Second, it directly links the benefit to public investment by the States, rather than encourage increased consumption, which could otherwise be the case.

2.78 The combined effects of the fiscal and monetary measures outlined above are presented in Table 2-21. As can be seen, by the end of the Ninth Plan, the fiscal position of the Government and each of its components is likely to be considerably better than in the base year. In so far as the Central Government is concerned, the potentially sustainable net fiscal deficit can be as high as 3.70 per cent of GDP, even without recourse to any seignorage or inflation tax, which translates to a gross fiscal deficit figure of about 4.76 per cent. This target should not be difficult to attain during the course of the Ninth Plan period. At this level of fiscal deficit, both the Debt/GDP and the interest/tax ratios of the Centre will decline steadily. The position of the States, however, is not so comfortable. Considerable fiscal discipline will need to be exercised in order to achieve the specified targets even with the transfer from the Centre. During this period, although the interest/tax ratio will decline, the Debt/GDP ratio will continue to increase slowly. However, the increase in the Debt/GDP ratio will be sustainable, provided the process of fiscal consolidation is carried on beyond the Ninth Plan period. Once these targets are achieved, it should be possible to take more stringent measures for bringing the inflation rate down even further without jeopardising the process of fiscal consolidation.

Table 2.21 : Fiscal Sustainability with Adjustments

(percentages)

	Combined	Centre	States
1. Sustainable FD/GDP ratio as per Table 2.20, scenario 1	5.98	3.70	2.28
2. Transfer of fiscal benefits	0	-0.45	+0.45
3. ARM measures by States	+0.17	0	+0.17
4. Potential seignorage to Centre	+1.60	+1.60	0
5. Sustainable FD after adjustments	7.75	4.85	2.90
6. Ninth Plan fiscal deficit	6.76	3.92	2.84

NOTES : (1) The sustainable fiscal deficit to GDP ratio for the Centre is based on the standard Debt/GDP criterion, while that for the States is based on the interest payment/total tax criterion.

2.79 The transfer of the fiscal improvement from the Centre to the States during the Ninth Plan can be done in a number of ways. At present, a little above 50 per cent of the Central support to State Plans is in the form of loans. In order to effect the proposed transfer of the improvement in the Centre's fiscal deficit from the Centre to the States, this debt component may be reduced to about 30 per cent, which would reduce the addition to the debt owed by the States to the Centre by Rs. 32,000 crore over the Ninth Plan period. As one possible modality to achieve this reduction in the debt component, it is suggested that the loan component of normal Central assistance to non-special category States be reduced from 70 per cent level at present, to an average figure of 40 per cent. However, in doing so, attention is drawn to the fact that all States are not at the same level as far as their fiscal situation is concerned. Some States in particular have not displayed the same degree of fiscal discipline as others and, as a result, are in a considerably worse position. It is, therefore, suggested that as an alternative modality, the loan component may be reduced to 50 per cent for all non-special category States, and the balance of about Rs. 8,000 crore be reserved for providing additional relief to a few select poorly performing States. These benefits, however, have to be made conditional on the State implementing credible fiscal reform measures and attaining the stipulated resource mobilisation targets which have been agreed upon and which are contained in the State Plan documents.

2.80 It will be seen therefore that the share of interest payments in the total tax revenues of the government can be realistically brought down by limiting the fiscal deficit as suggested in the present exercise, which will also permit retirement of some of the existing public debt of the Centre. Given the size of the debt, such retirement would achieve only a relatively small reduction in the debt burden of about 6 percentage points over the Ninth Plan period. However, through the sale of seized contraband gold and of some government lands and through disinvestment of PSU shares, substantial funds can be raised and used for additional retirement of debt. The State Governments, in particular, can sell off many of their enterprises in the non-core sectors and use the proceeds for the debt retirement, which would certainly ease their fiscal position and improve their ability to raise further resources for investment in economic and social infrastructure.

2.81 Finally, it needs to be mentioned that the above exercises have fully factored in the estimated effects of the implementation of the Fifth Pay Commission recommendations by both the Centre and the States, amounting to additional burdens of Rs.51,000 crores and Rs.110,000 crores respectively for the Ninth Plan period. Therefore, although the fiscal pressures will be intense during the first two years of the Plan, the above targets can still be achieved if the growth rate is not allowed to slip from the target. Otherwise, the achievement of fiscal sustainability will become considerably more difficult. Therefore, care needs to be taken that the fiscal stringency of the first two years does not fall on the public investment programme. The above results have been obtained by allowing the fiscal deficits to widen in the first two years in order to accommodate the higher burden of salaries and wages. If revenue expenditures can be curbed, it will certainly help in achieving the fiscal targets sooner, but it is not strictly necessary.

Issues in Aggregate Demand Management

2.82 All the Five Year Plans since inception have been based on the implicit, and often explicit, assumption of a binding savings constraint in the Indian economy. In other words, it has been assumed that aggregate investment demand in the country would consistently exceed the availability of investible resources. There is no simple and intuitively appealing method of empirically assessing the degree to which the different constraints are binding on the economy. Nevertheless, cognisance must be taken of the possibility that there may be situations when constraints other than savings are more relevant for determining the growth performance of the economy. The alternatives to the savings or investible resource constraint are : (a) the fiscal constraint, or the availability of sufficient resources with the government to meet the development objectives in a fiscally sustainable manner; (b) the foreign exchange constraint, or the availability of adequate foreign exchange for ensuring balance of payments sustainability; (c) the agricultural constraint, which arises from the insufficiency of 'wage goods' on the one hand, and the lack of a widely dispersed distribution of purchasing power, on the other; and (d) the infrastructural constraint, which arises from the lack of adequate infrastructure for sustaining high levels of capacity utilisation in the rest of the economy. These are generally referred to as 'structural' constraints, in the sense that they originate from rigidities in specific sectors. This is in contrast to the overall indication of the demand-supply position given by the savings constraint. This distinction between the structural constraints and the savings constraint has a crucial bearing on the conduct of policy.

2.83 In a structurally constrained economy, the very fact that the savings-constrained growth rate is greater than the attainable implies that the investment necessary to attain the maximum structurally constrained growth rate must be less than the ex-ante savings. This possibility may become a particularly serious problem when the public sector may no longer be the dominant investor, since public sector investment is by and large a policy decision, while private investment is very sensitive to behavioural parameters like capacity utilisation, or costs and prices being expected to be influenced by other structural constraints. Earlier, even private investments were not particularly sensitive to such variables since the industrial licensing regime offered sufficient quasi-monopoly powers to off set their adverse effects, at least for some time. At present, with the shift towards greater market-orientation of the economy, where private sector investments are expected to be large and account for more than 65 per cent of total investment and the extent of competition to be significantly higher, private investors are unlikely to tolerate increasing capacity underutilisation that may result from such constraints, and will tend to adjust their planned investments accordingly. Thus, a generalised aggregate demand problem can arise whereby the actual demand-constrained growth rate will fall short not only of the level justified by the available investible resources or ex-ante savings, but also of the structurally constrained one. In such a situation, public investment becomes crucial which can, by policy, be guided to reduce the structural bottlenecks, and avoid problems arising out of transient movements in current aggregate demand.

2.84 Although the identification of what exactly is the binding constraint to growth is difficult to demonstrate with quantitative precision, it is possible to show that with the current availability of resources, the Indian economy could have a higher rate of investment, and therefore a higher rate of growth, had the policies succeeded in removing the specific bottlenecks or structural constraints. In other words, savings or investible resources have not always been the binding constraint. Indeed, the persistent difference between the total external capital inflows and the current account deficit (CAD) is a fairly sensitive measure of the extent of excess resource availability which could have been used to raise the rate of investment and the rate of growth. Since the initiation of economic reforms in 1991 and the liberalisation of foreign investments, such a situation has obtained persistently during the Eighth Plan period. The extent of absorption of external capital flows in the real economy during the Eighth Plan period is presented in Table 2-22. It can be seen that during the Eighth Plan the economy was unable to productively utilise the entire amount of investible resources that became available. Indeed, even the foreign investment flows were not fully absorbed in the form of physical resources. Instead of financing larger import surpluses or inflow of physical resources, these capital flows led to a substantial increase in foreign exchange reserves. While there

Table 2-22 : Absorption of External Resources

(per cent of GDP)

	CAD	Capital Inflows	Foreign Investment	FE Reserves (months of imports)
1992-93	1.57	1.79	0.12	4.8
1993-94	0.33	3.76	1.64	10.2
1994-95	0.84	3.01	1.58	8.4
1995-96	1.63	1.42	1.42	6.0
1996-97	1.13	2.97	1.51	6.9
Eighth Plan Average	1.1	2.58	1.32	7.3

was certainly a need to restrain excessive increases in domestic demand in order to re-build the country's foreign exchange reserves which had become excessively depleted in 1991-92, this need was more or less over by the end of 1993-94, by which time the foreign exchange reserves stood at over US $ 19 billion. The situation would have appeared even worse but for the fact that the Government had placed binding ceilings on external commercial borrowings (ECBs) and had periodically implemented measures to regulate the inflow of foreign portfolio investment (FPI).

2.85 The incomplete utilisation of the available investible resources during the Eighth Plan needs to be seen in the context of the considerable liberalisation of private investment that has taken place during this period. The almost complete abolition of industrial licensing, relaxation of FERA and MRTP restrictions, opening up of the sectors which had earlier been reserved for the public sector, all had contributed to an unprecedented increase in private investment opportunities. On the face of it, the private sector did respond positively to these policy measures, in that the average growth rate of private investment during the Eighth Plan was 14.4 per cent per annum, more than double that of any period in the past. These figures are, however, conditioned by the low level of investment in the base year (1991-92), when private investment had actually dropped by 22.0 per cent. Correcting for this base year problem, the rate of growth of private investment comes down to 7.2 per cent, which is still significantly higher than the trend rate of 6.5 per cent witnessed during the 1980s. However, the contrast of this with public investment is striking. Whereas the pace of private investment depends on many market uncertainties and slow build-up of confidence, tardy growth of public investment would be indicative of the failure of planning, inability to transfer investible resources to the public sector and use them to remove the binding bottlenecks. The growth rates of investment during the Eighth Plan and proposed for the Ninth Plan are given in Table 2-23. It will be seen that the Ninth Plan investment programme envisages a slower rate of growth of private investment than was experienced during the Eighth Plan despite a higher growth rate of total investment and a much higher growth of public investment. This feature of the Ninth Plan needs explanation.

Table 2-23 : Growth Rates of Investment

(percent per annum)

	Trend Rate (1980-90)	Eighth Plan Actual	Eighth Plan Corrected	Ninth Plan
Total Investment	6.4	10.3	5.9.	7.3
Public Investment	6.3	2.5	2.5	11.5
Private Investment	6.5	14.4	7.2	5.5

2.86 First, all indications point to the likelihood that the Indian economy would have access to a larger volume of resources and should be able to absorb a much higher rate of investment during the Ninth Plan period. The recent slow-down in the economy appears to indicate that an aggregate demand problem arising from one or more of the structural constraints is leading to excess capacity and accumulation of stocks, and the economy is likely to behave in a cyclical manner unless the Government intervenes and these constraints are removed. In view of the recent behaviour in external capital flows, the foreign exchange constraint does not appear to pose a problem for the immediate future. On the contrary, unless it is regulated to a certain extent as discussed earlier, there may be excessive inflows which may create problems of its own, particularly as far as the Government's fiscal position and exchange rate management are concerned. Both of these impinge on the attainment of the targetted growth rate of exports which needs to be maintained so that foreign exchange problems do not re-emerge when the servicing payments on the current foreign investments start to accelerate. Agriculture too does not appear to be a primary constraint given its performance in recent years. In fact, if the Ninth Plan targets for agriculture are attained, it should instead provide an additional impetus to investment and growth during the Ninth Plan period. This will, however, require adequate public investment, which underlines the need to adhere to the planned public investment programme, particularly by the States.

2.87 The main areas of concern, therefore, are the fiscal and the infrastructural constraints, which are closely linked in the present circumstances where the bulk of investment in infrastructure will continue to be in the public domain. The model results indicate that public investment has fallen to a level such that private investment demand cannot rise sufficiently to compensate. As a result, there is an inadequacy of aggregate demand arising out of insufficient public investment, and an increase in public investment will not "crowd out" private investment at least in the near future, and may indeed lead to a certain degree of "crowding in". Moreover, infrastructural inadequacies are starting to be felt in a serious manner, and unless these are overcome expeditiously, private investments will continue to be sluggish. Although vigorous efforts should continue to be made to encourage private investment in infrastructure, the present state of preparedness is such that not too much can be expected in physical terms within the Ninth Plan period. The bulk of the responsibility, therefore, will have to continue to rest with the public sector which has sufficient existing assets to build upon through expansion, upgradation and modernisation. Therefore, the Ninth Plan should be seen as a phase of consolidation whereby the conditions are created for a more vibrant and sustained growth of the private sector in the future.

2.88 Second, private investments during the Eighth Plan were fuelled by an unprecedentedly high rate of growth of credit to the private sector, which accelerated from the long-run average of about 6.5 per cent per annum in real terms to above 8.5 per cent. This was partly the outcome of the reduction in pre-emption of credit by the public sector and partly from the financial sector reforms whereby the reserve requirements of the banking sector were reduced substantially, on the one hand, and the role of the non-bank financial sector increased significantly, on the other. This latter effect is unlikely to obtain to quite the same extent in the Ninth Plan since much of the correction has already been accomplished and credit expansion is likely to settle down to a more stable growth path dictated by the overall monetary policy stance.

2.89 Keeping the above factors in mind, the likely behaviour of private investment has been estimated and projected for the Ninth Plan period. Although the effect of the infrastructural constraints have not been captured meaningfully, the role of growth expectations and credit availability in determining private investment demand are significant. The projections show that if real credit to the private sector is allowed to grow at the trend rate of 6.5 per cent per annum and if public investments are as per the Plan, the total investment rate in the economy is likely to rise by about one percentage point over the Ninth Plan target. While this will enable the economy to step up the average growth rate of GDP from 6.5 to 6.8 per cent per annum, the current account deficit will rise to 2.6 per cent of GDP, which would be higher than the sustainable limits described earlier unless there is a substantial growth in foreign direct investment to finance it. Considering the very low share of India in the total flow of FDI in the world, it may be quite possible for India to attract that order of foreign direct investment. Indeed, an effect of increased FDI may be to raise the average productivity of capital and lower the ICOR.

2.90 On the other hand, if the CAD tends to rise beyond the sustainable limits without commensurate increase in FDI, corrective measures may have to be taken. It should be recalled, however, that the sustainable level of CAD has been computed on the basis of the entire external inflows being in the form of debt. Therefore, a CAD of this order can be maintained with greater recourse to external debt, provided that these are mainly in the form of medium to long-term ECBs and not in short term debt. This implies that the Ninth

Plan targets can be achieved even with insufficient FDI through flexible use of the ECB limits, and there is no compelling reason to reduce public investment for balance of payments reasons unless both the CAD threatens to pierce the limit and FDI does not materialise in adequate measure. In such a situation, in order to maintain the projected macro-parameters of the Ninth Plan and retain the growth target of 6.5 per cent, public investment could have to be less by 1.1 percentage points of GDP from the planned in order to accommodate the additional private investment. A comparative picture of the macro-economic parameters of these three scenarios is presented in Table 2-24.

Table 2-24 : Macro Parameters in Alternate Scenarios

	Plan	Scen-I	Scen-II
1. Domestic Savings Rate (% of GDP at market price)	26.1	26.5	26.1
2. Current Account Deficit (% of GDP at market price)	2.1	2.6	2.1
3. Investment Rate (% of GDP at market price)	28.2	29.1	28.2
3a. Public	9.4	9.6	8.3
3b. Private	18.8	19.5	19.9
4. ICOR	4.3	4.3	4.3
5. GDP Growth Rate (% Per Annum)	6.5	6.8	6.5
6. Export Growth Rate (% Per Annum)	11.8	11.8	11.8
7. Import Growth Rate (% Per Annum)	10.6	11.7	10.8

NOTES : (1) Scenario-I assumes that private investment is allowed to grow at its unconstrained level and public investment is pegged to the absolute values of the Ninth Plan.

(2) Scenario-II assumes that private investment is allowed to grow at its unconstrained level and public investment is adjusted to maintain the resource balance of the Ninth Plan.

2.91 Although Scenario-II appears attractive from the point of view of its implication for the government's fiscal deficit as compared to the Plan, it involves certain serious risks which have to be noted. First, there is no assurance that the projected private investment will actually materialise since the negative effects of the existing infrastructural shortages have not been adequately captured in the private investment demand function. If it does not, since public investment is fixed ex-ante by the Plan, the total investment will fall by a multiplier process and the growth rate will suffer quite seriously. Such a reduction in the total aggregate demand tends to fall more heavily on the agricultural sector, which is likely to experience a deterioration in its terms of trade. As a consequence, agricultural growth will inevitably suffer both from the supply side, as investment by both the public and private sectors will fall relative to the planned, and also from the demand side, with a downward pressure on relative prices. Any reduction in the growth rate of agriculture will not only make it more difficult to attain the other objectives of the Ninth Plan, but it will also have serious long-run implications for sustainability of the growth path and the objective of food security.

2.92 Another reason why the projected private investment may not materialise in its entirety lies in certain weaknesses that are becoming increasingly perceptible in the Indian financial sector. As the Indian private sector moves towards investment in the more capital-intensive and longer gestation projects in the infrastructure and heavy industry sectors, its needs for long-term funds, both equity and debt, will increase rapidly. The financial sector is presently not structured to cater to these demands in an adequate manner. The long-term private debt market is practically non-existent in India, and has to be created almost ab-initio. The equity market too is extremely weak, both in its ability to mobilise sufficient resources and to generate adequate investor confidence in new issues. The investment boom observed during the Eighth Plan rode on the expansion plans of the existing large corporate bodies. There is, however, a limit to the absorptive capacity of such corporations, and a sustained growth in private investment cannot come about without new and relatively unknown companies coming into the equity market. Even short- and medium-term debt is becoming problematic for the smaller and financially weaker companies as the banks are turning more sensitive to their level of risk exposure. These issues will have to be addressed during the Ninth Plan, and are discussed later, but until they are resolved satisfactorily, a certain degree of doubt exists about the potential private investment demand growth during the Ninth Plan.

2.93 Second, even if private investment demand is assumed to grow at the rate required by Scenario-II, at least a part of the reduction in public investment will inevitably fall on economic infrastructure, as has been the experience in the past. If the increase in private investment in infrastructure does not compensate for this decline in public infrastructural investment, the relative availability of infrastructure will become even worse than it is at present, and will seriously jeopardise future growth prospects. Under the circumstances, it is therefore preferable to target the higher level of public investment, particularly since the fiscal position of the government can be quite sustainable as has been indicated earlier.

2.94 On the other hand, the Plan carries the danger that if private investment is left unconstrained, then there may be excessive pressure on the credit front. This needs to be seen in the context of a fairly tight growth rate of money supply that is desirable in order to contain inflationary pressures and a need to reduce the nominal interest rates, particularly on public debt. Excessive credit demand originating from a targetted public sector borrowing requirement and a higher than expected private investment demand can be met upto a point by an increase in the credit to base money ratio or the broad money multiplier without increase in the interest rate. However, it would have implications regarding the inflationary pressures on the economy since the growth rate of broad money would be above the target range. Beyond that level, however, interest rates too are bound to increase, which would not only jeopardise the fiscal sustainability target but also increase the inflationary tendencies through a cost-push effect in addition to the demand-pull effect of the growth of broad money. In order to obviate this possibility, deliberate measures to contain private investment may have to be instituted. The modality to achieve this would be to restrict the growth rate of credit to the private sector to slightly above the level required to achieve the desired level of private investment. According to the estimated private investment demand function, this would mean that real credit growth to the private sector will have to be no more than 5.5 per cent per annum, as compared to the trend rate of 6.5 per cent. With inflation in the range of 5 to 7 per cent, this translates to a growth in nominal credit in the range of 10.5 to 12.5 per cent.

2.95 A possible alternative to deliberate credit control for achieving the objective of limiting private investment would be to engage in an aggressive programme of disinvestment of selected PSEs and encouraging formation of joint ventures and other forms of public-private partnership. Disinvestment or divestment of existing PSEs absorbs credit without creating new investment demand provided that the proceeds are appropriated to the consolidated funds of the government. Joint ventures, on the other hand, do create new productive assets, and thereby adds to investment demand, but these can be adjusted within the overall limits specified in the Plan for investment by the public sector enterprises and thereby reducing the public sector borrowing requirements (PSBR). A distinction, however, has to be drawn between raising disinvestment or joint venture equity funds from the domestic market and in foreign markets. The former is a drawal on the overall investible resources of the economy and therefore reduces the resources available for private investment pari-passu. The latter represents an addition to total investible resources and therefore does not serve the purpose of controlling private investment, although it does add to the productive capacity of the economy. Further, there is a question regarding the ability of the public sector, particularly the States and the PSEs, to raise the necessary investible resources from the market in order to undertake their planned investment programme. Failure on this count will expose the economy to the same risks that have been mentioned in connection with insufficient private investment demand. With the statutory liquidity ratio (SLR) having become non-credible as an instrument for raising public debt resources, alternative methods will have to be sought. The first step, of course, is to enhance the creditworthiness of these agencies and perhaps increase the extent of Central Government intermediation, as have been mentioned earlier. Public-private partnerships can also contribute to this process. But these may be insufficient, particularly for State government borrowings. There may be a case for State governments to issue specific-purpose debt instruments which are linked to particular projects rather than general claims on the State exchequer. If such initiatives can be made sufficiently attractive, it would obviate the need to deliberately curtail the rate of growth of overall credit availability.

2.96 If, however, public investment comes under pressure due to a shortfall in the attainment of the public savings target, the response would have to be different. Much would depend upon the source of the shortfall. If it occurs due to the inability of the government to either raise its tax revenues or curtail its growth of revenue expenditures as planned, the overall availability of domestic savings may not be affected substantially since the disposable income of the private sector will rise and thereby increase private savings at least to some extent. In such a situation, a combination of a higher than planned investment by the Centre, which does have a certain degree of fiscal cushion, and a more liberal credit regime for private investment may serve the purpose, particularly if these investments can be guided into the infrastructure sectors. If, however, the shortfall occurs mainly on account of a reduction in the savings of the public sector enterprises, it may lead to a decrease in the domestic savings rate. Efforts to compensate by increasing private investment may not be appropriate in such a situation since it can lead to over-heating of the economy and an unsustainable balance of payments position. Private investment can be allowed to increase only to the extent they are financed by foreign savings, particularly FDI.

2.97 The combination of these various alternatives which can be effectively implemented would have to be determined from time to time depending upon the emerging situation and the constraints faced by the different agencies involved. However, it needs to be emphasised that unconstrained increase in private credit will expose the economy to needless risks and due care will have to be exercised in managing the behaviour of aggregate demand in the economy. A process of continuous monitoring of the various critical parameters of the Ninth Plan will have to be instituted and a mechanism to incorporate such information in the process of Annual Plan formulation in a flexible manner will need to be effected.

Sectoral Output and Investment Pattern

2.98 The planned sectoral structure of output of the economy during the Ninth Plan as given in Tables 2-14 and 2-15 has been determined in a traditional planning framework in which the principal objective is to ensure sectoral consistency between demand, both direct and indirect, and supply. The main factors, which are taken into account in making these estimates, are final demand, intermediate or inter-sectoral transactional demand, export possibilities, import intensities and the overall availability of investible resources. The achievement of these sectoral output targets is, however, contingent upon the necessary investments being made, not only in total, but also sectorally. The main challenge facing the planning and economic administration system of the country is to devise strategies by which the investment programme envisaged in the Plan is realised. Even in the past, when there was considerable degree of governmental control over the pattern of investment through a high share of public investment on the one hand and industrial licensing on the other, the sectoral pattern of investment tended to be somewhat different from the planned. With the substantial reduction in the share of public investment envisaged for the Ninth Plan and the almost complete deregulation of private investment, the uncertainties involved in determining the likely pattern of investment have increased manifold.

2.99 A central tenet of all planning methodologies is that allowance must first be made for those variables over which the Government has least control, and those which are most controllable should be used in a flexible manner for filling the gap between the desired and the likely. In this approach, the likely sectoral flow of private investment is the least controllable in a market economy, followed by the investment pattern of the States. The Central Sector bears the residual responsibility for meeting the Plan objectives which cannot be realised through private sector initiatives and the State Plans. It would be logical, therefore, to first assess the probable deployment of private investment and the investment plan of the States, and to allocate the Central Plan resources for bridging the shortfalls. This procedure, however, has limitations in its application at the present juncture.

2.100 First, although the projection of aggregate private investment demand can be made with a certain degree of confidence, the same cannot be said of the sectoral pattern. Since projections are necessarily based on certain observed regularities in behaviour, it is difficult to make projections for sectors which have experienced significant structural changes in the recent past. The considerable deregulation in private investment that has taken place since the inception of the economic reforms, particularly those pertaining to sectors which were earlier reserved for public investment, has thrown up a number of such sectors. Moreover, there are certain other sectors, in which the investment behaviour does not display any systematic and stable behavioural pattern even though these sectors may not have undergone any systemic change. As a consequence, using a model of aggregate and sectoral private investment demand in which growth expectations and credit availability are the main explanatory variables, it has been found that only about 77 per cent of the total targetted private investment during the Ninth Plan can be sectorally allocated on the basis of past behaviour. Even these are subject to the normal uncertainties associated with any projection exercise. The sectoral distribution of the remaining 23 per cent has to be entirely conjectural and would need to be decided upon on the basis of the areas in which such investments are required and are feasible. It is hoped that, with greater experience, such projections of private investment behaviour would become more comprehensive and accurate in the future Plans.

2.101 Second, even the sectoral allocation of public investment is not entirely deterministic. In particular, the public investment pattern is determined to a large extent by estimates of the internal resource generation of the various public enterprises, both departmental and non-departmental, and the extent to which these resources are redeployable. These estimates are themselves contingent not only upon the performance of the enterprises, but also upon certain policy decisions being taken by the Government at the appropriate time. Both of these factors are subject to uncertainties arising partly out of market conditions and partly out of political compulsions. The Eighth Plan experience has shown that certain sectors, such as petroleum and telecommunication, have raised greater resources than targetted, while others, such as power, transport and irrigation, have performed well below expectations. As a consequence, the investment pattern was distorted in favour of the former and against the latter. On the whole, however, since these estimates are made on the basis of extensive consultations with the States and the concerned Central Ministries and the necessary commitments have been made, there is a certain degree of assurance that the planned sectoral investments will be forthcoming.

2.102 On the other hand, there are sectors in which either the Government is the sole investor or the process of creating the conditions for private investment participation is yet to be completed. In such cases, public investment has to be determined on the basis of exogenously determined targets for capacity creation which arise out of the non-growth related objectives of the Plan, on the one hand, and the need to maintain sectoral balance, on the other. Since these sectors are sub-sets of the broad sectoral classification of the economy, there is a minimum level of public sector investment which has to be specified at a sectoral level independently of the behaviour of private investment. The sectoral investment profile of the Ninth Plan is therefore based on a combination of estimates of likely private investment, targetted public investment and a subjective assessment of the likelihood of the residual investment gaps being filled by either private or public sector. These estimates are given in Table 2-25.

Table 2-25 : Sectoral Investment Needs and Sources in the Ninth Plan

(Rs. '000 crores)

Sector	Investment Required	Projected Private	Public Centre	Public States	Additional Required
1. Agriculture	245.7	118.0	23.8	59.5	44.3
2. Forestry & Logging	4.1		1.9	2.0	0.2
3. Fishing	22.6	11.4	0.7	7.4	3.1
4. Mining & Quarrying	84.5		48.1	2.4	33.9
5. Manufacturing :					
a) Registered	438.4	379.2	67.8	10.2	- 18.8
b) Unregistered	173.3	162.2	0.1	1.6	9.4
6. Electricity, etc:	336.7	47.5	73.4	72.0	143.8
7. Construction	39.9	24.4	13.5	8.1	- 6.1
8. Trade	47.2		1.6	10.1	35.5
9. Hotels etc:	21.1		0.4	0.5	20.2
10.Rail Transport	35.0		45.4		- 10.4
11.Other Transport	129.0	114.0	38.2	39.5	- 62.7
12.Communications	69.2		57.9		11.3
13.Banking & Insurance	104.4		2.3		102.1
14.Real Estate, etc:	249.0	242.1		5.5	1.4
15.Public Admin, etc:	121.8		16.3	88.2	17.3
16.Other Services	48.7	20.2	5.3	22.4	0.8
TOTAL	2170.6	1119.0	396.8	329.4	325.4

NOTE : Public investment by Centre and States includes the investment by the respective PSEs.

2.103 As may be seen, given the limitations on the resources available to the public sector, it is not possible to arrive at an exact balance between the sectoral investment requirements as emanating from the model and the deployment of the resources available with the public and the private sectors, despite the over-all resource balance that has been assumed. For most sectors, the discrepancies are not large, particularly in view of the fact that for a number of sectors, such as trade, hotels & restaurants, communications and banking & insurance, it was not possible to estimate private investment demand functions from the existing data base. On the basis of the recent experiences, it is more than likely that these sectors will at the very least receive the required levels of investment from the private sector. In particular, the sectors which have been recently opened up for private investment, like mining & quarrying and communications, have fairly modest private investment requirements, which should be realised with relative ease, and may indeed be exceeded, if the policy and procedural frictions are reduced expeditiously. In so far as the financial sector, namely banking & insurance, is concerned, it does not fall under the purview of the public sector plan despite the bulk of the sector being in the public sector at present. The performance of this sector taken as a whole in recent years indicates that the required investment may not materialise in its entirety unless there is some step up in the level of private investment. While the conditions have been created for private investment in the banking and related financial segments and the performance of the public sector banks has also by and large improved, the insurance sector continues to depend upon the internal accruals of the existing public sector companies. It is unlikely that the desired rate of growth of this segment can be achieved without significant private participation either through equity or greater leveraging by the public sector.

2.104 There are, however, a few areas of significant mis-match which need to be noted. First, it is very likely that Other Transportation, which includes civil aviation and all surface transport except the railways, will attract much larger quantum of private investment than strictly necessary. There is need to restrict such investment and reorient the investment pattern in favour of the sectors which are likely to experience shortfalls. Similarly, registered manufacturing may also experience higher than necessary investments taking place under the present circumstances. In addition, the effects of FDI may not have been fully captured in the estimations which would aggravate the problem even further. As far as Other Transport is concerned, reduction in public investment by way of adjustment is not desirable since it contains public investment in ports, airports, waterways and public transportation, which are all essential for meeting the existing infrastructural deficiencies, particularly for exports. On the other hand, fishing and unregistered manufacturing are two sectors in which private sector presence is large and which may experience shortfalls in investment. In the case of fishing and unregistered manufacturing, the principal problem appears to be the availability of adequate credit for investment purposes. All efforts will therefore have to be made in reorienting the credit system in favour of these sectors and away from registered manufacturing and other transport.

2.105 In the sectors dominated by public investment, there is some excess investment than is strictly required by sectoral consistency planned for in Railways. It needs to be recognised that there has been a steady deterioration in the modal mix in transportation in favour of road transport, which needs to be corrected both in the interest of cost and energy conservation. Since the input-output based macro-economic balances reflect in part past behaviour, even if inoptimal, some adjustment is certainly called for. Indeed, an even higher level of investment than planned for would be desirable in this sector, and efforts should be made in attracting private participation, which is practically non-existent at present, by attracting resources away from sectors which are projected to have higher than necessary private investment. Similarly, the investment requirement for Public Administration, etc. tends to be somewhat understated by the conventional planning methodology since the planning model does not adequately capture the non-economic benefits of public health and education expenditure, which are included in this sector. In order to reflect the priorities of the Ninth Plan, some adjustment has had to be made in these sectors, particularly in the State Plans, but even these are insufficient.

2.106 The above adjustments to the optimal investment programme arising from the planning model are relatively minor in nature, and do not violate sectoral consistency requirements in any substantive manner. The major area of concern, however, is the public utilities sector comprising of Electricity, Gas and Water. It may be seen that after accounting for private investment based on past behaviour and the public sector allocations, about 40 per cent of the total investment requirement remains to be filled by additional resource deployment. While it is true that the estimates of private investment do not take into account the impact of the recent liberalisation in the electricity and gas sectors and some incipient private sector forays in water supply, it is unlikely that on current trends these would entirely bridge the gap. In fact, it appears that an additional amount of investment in the region of about Rs.100 thousand crores would have to be mobilised for this sector during the Ninth Plan period over and above the private commitments that are presently perceptible. Reallocation of the public investment pattern is in itself not a viable solution since the magnitude involved is over 13 per cent of the estimated investible resources available to the public sector, and it would therefore involve a sharp reduction in sectors which are of equal national importance, primarily in agriculture and in social and other economic infrastructure. Although there is some possibility in substituting public investment in manufacturing with private investment, the re-appropriation of these resources may not be easy since the bulk is in the form of internal accruals of PSEs, especially in the form of depreciation reserves.

2.107 The implications of this wide gap between the requirement and availability of investment in the utilities sector, particularly in power, need to be fully appreciated. First, as has been the experience in the past, the cut-back in investment in the power sector is likely to fall disproportionately on transmission and distribution, which are the areas in which there is already a substantial back-log of investment requirement and where the conditions of entry by the private sector are yet to be created. As a consequence, even if adequate generating capacities are realised through new investment and improved efficiency, imbalances in peak/base loads and in spatial distribution are likely to become exacerbated. In such a situation, it would become necessary to introduce rational rationing mechanisms in order to minimise disruptions. Second, the short-fall in investment in this sector will imply an excess availability of private investible resources in the economy, which would either be invested in non-productive assets or in other sectors of the economy. In the first case, the growth rate of the economy is likely to be adversely affected and the extent of speculative behaviour to increase. In the latter case, the demand-supply balance for the utilities will further deteriorate and thereby put greater pressure on the government for management of shortages. Third, the pipe-line investments necessary to accelerate or even maintain the growth rate in the post-Plan period would not be available in adequate measure, resulting in even more serious problems in the longer-term future.

2.108 The basic cause of this problem therefore is not the availability of investible resources in the economy, but the inadequate generation of internal resources by the public utilities and their consequent inability to tap the capital market for additional investible resources either in the form of equity or debt. Despite the assumptions made in the Plan regarding improved efficiency and better collection of user charges, the financial viability of the public utilities would have to be improved even further if these resources are to become available. Immediate action on power sector reforms, and similar reforms in the other utilities, will need to be taken to prevent the present shortages from widening and to create adequate pipeline investments for maintaining the growth impetus in the post Plan period. In other words, the public sector plan may have to be further increased beyond the more or less realistic resource assessments made in the Plan on the basis of increased internal resources and market borrowings by the utilities, which are dominantly in the State sector. However, these measures may not be sufficient within the time-frame available, and the government would have to seek ways of augmenting the resources available for this sector within the over-all resource position outlined in the Plan.

2.109 In this context, disinvestment or divestment of government holdings of both equity and debt in the existing PSEs has a special role to play. As has been noted, there are a number of sectors in which private investment is able and willing to not only supplement public investment, but substitute for it as well. Mining, manufacturing, telecommunications, hotels and financial sectors are prime examples of such sectors where the public sector has large investments and is likely to make even more during the Ninth Plan. It has also been mentioned that much of the future public investment in these sectors are not reappropriable as such since they are in the form of depreciation reserves. Disinvestment, however, enables the government to realise the capitalised value of such future flows in the form of a draft on private resources and to redirect them into the utilities sectors where they are required. Therefore, an aggressive programme of disinvestment of equity and sale of securitised government debt in some of the existing PSEs will need to be pursued if the investment needs of the utilities sectors are to be realised during the Ninth Plan. It should be noted that this argument for disinvestment is not being proposed on budgetary considerations, which has been examined earlier without any recourse to disinvestment proceeds, but as a method of altering the asset holdings of the government away from the non-critical sectors to those which are essential for the development of the country and in which the public sector will always have to play a dominant role. However, it needs to be borne in mind that such a step will have budgetary implications in that the non-tax revenues of the government can be negatively affected in the medium-run. It is therefore imperative that the financial performance of the public utilities be improved sufficiently in order to obviate such a possibility.

2.110 Although the analysis of sectoral growth and investment thus far has been in the context of ensuring macro-economic balance and sectoral consistency, and sectoral details have not been provided, there are four sectors which are critical in achieving success of the proposed growth strategy and in the realisation of the Plan objectives. These are Agriculture, Infrastructure, the External Sector and the Financial Sector. The strategic approach towards these sectors are discussed in some detail in the following sections within the context of the over-all development strategy being proposed in the Plan.

Strategy for Agricultural Development

2.111 In the Ninth Plan, the objective of reducing the incidence of poverty and removal of unemployment is sought to be attained primarily through accelerated agricultural growth. While to meet consumption demand, growth in output is important, for income growth and poverty reduction it is the growth in value-added which is of crucial importance. The relationship between value of output and gross value added depends on the behaviour of the share of purchased inputs in total input and terms of trade between agricultural and non-agricultural sectors. The share of purchased inputs is expected to increase which would result in lower annual growth rate of Gross Value Added compared to the growth rate of Value of Output. For Gross Value Added to increase at the same rate as Gross Value of Output in agriculture, terms of trade must improve in favour of agriculture. In the Ninth Plan a target of 4.5 percent annual growth rate in Gross Value of Agricultural Output, excluding forestry, has been fixed.

2.112 While fixing the target for the Plan both demand (domestic as well as external) and domestic supply possibilities have to be taken into account. The domestic demand requirement for agricultural products has been worked out on the basis of the elasticity of demand for various commodity groups with respect to per capita consumption expenditure, targetted per capita consumption growth rate and expected population growth rate during the Ninth Plan. The domestic demand has been worked out on the assumption of a) GDP growth rate of 6.5 per cent; b) elasticity of private consumption with respect to GDP of 0.8825 resulting in 5.7 per cent growth rate in private consumption; and c) population growth rate of 1.7 per cent. The per capita consumption expenditure elasticities of various commodities have been worked out utilising the results of the 50th Round of NSSO Survey on Household Consumer Expenditure (1993-94). The required growth rate in the value of output of different commodity groups is given in Table 2-26. The commodity groups for which domestic consumption growth rates have been worked out on the basis of NSSO consumption expenditure data accounted for 83.01 per cent of total value of output of agriculture and allied activities in 1993-94 (1980-81 prices). Using the share of these commodity groups as weight, the value of output of these commodity groups should grow at 3.84 per cent per annum just to meet domestic consumption requirement. Assuming that the growth rate of other agricultural products and other livestock products will remain the same as was achieved in the eighties and early nineties, the value of output of agriculture and allied activities should grow annually at the rate of 3.52 per cent in order to meet domestic demand requirements. India has also traditionally been exporting commodities like tea, coffee etc. Apart from that, the world market offers significant opportunities to Indian agriculture. Given the export possibilities, Indian agriculture should grow annually at the rate of 4.5 per cent.

Table 2-26 : Targeted Annual Growth Rate in the Value of Agricultural Output in the Ninth Plan

(in per cent per annum)

Item	Compound Growth Rate 1980-94	Required Growth Rate in IX Plan to Meet Domestic Demand	Annual Growth Rate in IX Plan
1) Agricultural Crops	2.77	-	3.82
a) Foodgrain	2.67	2.73	3.05
i) Rice	3.41	2.19	2.75
ii) Wheat	3.44	2.91	3.75
iii) Coarse Cereals	0.67	2.05	2.20
iv) Pulses	1.16	6.31	3.50
b) Oilseeds	5.81	2.28	5.25
c) Sugarcane	2.79	3.78	4.00
d) Fruits & Vegetables	4.15	6.00	7.00
e) Other Agricultural Products, of which :	1.40	-	2.64
i) Cotton	3.57	-	4.00
ii) Tea	2.65	2.24	5.00
iii) Coffee	4.51	-	5.00
iv) Spices	3.92	0.15	4.25
v) Rubber	8.50	-	9.00
2) Livestock	4.57	-	6.59
a) Milk Group	4.89	6.22	7.04
b) Meat & Poultry Group	5.66	5.90	7.50
c) Other Livestock Products	1.50	-	2.00
3) Fishery	6.31	4.19	6.50
4) Total	3.21	-	4.50

Note : (1) Agriculture includes agricultural crops, livestock and fishery. Forestry is not included.
(2) The growth rates required for meeting domestic consumption are generated on the assumption that the terminal year exportable surpluses will be zero.

2.113 However, while fixing the target for the Plan, apart from demand, domestic supply possibilities have also to be taken into account. In many commodities e.g. foodgrains, oilseed, sugarcane etc. the growth rate in production deteriorated in the early nineties compared to the eighties. However, there are certain commodities, e.g. fruits and vegetables, meat products etc., in which the production growth rate improved. In order to achieve 4.5 per cent rate of growth in the Ninth Plan the strategy should be to achieve the growth rates of the eighties in the commodities in which the growth rate deteriorated and to further improve the growth rates of the commodities which became more dynamic in the early nineties. Keeping in mind the domestic production possibilities, the domestic demand requirement and export possibilities, the commodity-wise break-up of the agricultural growth rates have been worked out, as given in Table 2-26. The associated production, consumption and surplus levels are given in Table 2-27.

Table 2-27 : Targeted Production, Domestic Consumption and Exportable Surplus of Agricultural Commodities in the Ninth Plan

(million tonnes)

Item	Base Production 1996-97#	Target Production 2001-02	Projected Consumption 2001-02	Projected Surplus 2001-02
1) Agricultural Crops				
a) Foodgrain	199.32	234.00	227.16	6.84
i) Rice	81.31	99.00	94.29	4.71
ii) Wheat	69.27	83.00	78.37	4.63
iii) Coarse Cereals	34.28	35.50	35.00	0.50
iv) Pulses	14.36	16.50	19.50	-3.00
b) Oilseeds	24.96	30.00	25.75	4.25
c) Sugarcane	277.25	336.00	332.50	3.50
d) Fruits & Vegetables	141.00	179.00	170.99	8.01
e) Other Agricultural Products of Which				
i) Cotton*	14.25	15.70	15.50	0.20
ii) Tea@	785.00	1000.00	877.00	123.00
iii) Coffee@	220.00	300.00	80.00	220.00
iv) Spices	2.73	3.36	2.75	0.61
v) Rubber	0.54	0.83	0.79	0.04
2) Livestock				
a) Milk Group	68.60	96.49	92.75	3.74
3) Fishery	5.35	7.04	6.56	0.48

Notes : 1) Projected consumption of for foodgrains includes seed, feed and wastage.
2) * million bales.
3) @ million kg.
4) +/- implies export/import.
5) # - Assumed base.

2.114 The target of 3.9 per cent rate of growth in Gross Value Added in agriculture in the Ninth Plan is much higher than the targetted growth rate of 3.1 per cent in the Eighth Plan. Correspondingly, achievement of this growth rate will require a much higher level of investment. The investment in the Eighth Plan for agriculture and allied activities, excluding forestry and logging, is likely to be Rs. 153586 crore at 1996-97 prices. During the Ninth Plan, the investment requirement is projected to be at Rs. 268,300 crore at 1996-97 prices, which is nearly 75 per cent higher than in the Eighth Plan.

2.115 Private investment accounts for a major share of investment in agriculture. Public investment in agriculture is one of the most important determinants of private investment. However, a significant shortfall in public sector investment in agriculture has been observed in the Eighth Plan. To achieve 4.5 per cent growth in the Ninth Plan such shortfall cannot be allowed. This would also necessitate a change in the composition of investment from long-gestation to short-gestation projects. Thus, the optimal use of the existing resources (particularly irrigation potential created) would require primary focus. Regional composition of growth would be of prime importance. Apart from public investment, credit is one of the most important determinants of private investment. The availability of credit at reasonable interest rate would be crucial.

2.116 A positive agricultural price policy, which included subsidies on inputs and a minimum support price for output, has been an integral part of our agricultural development strategy. The minimum support price was expected to provide an incentive to the farmers to adopt high-risk new technology and to cover possible hazards of high input costs. It was also expected to be an effective instrument of changing the cropping pattern in desired direction. However, in recent years, the fixation of minimum support price has become quite controversial. The controversy essentially revolves around whether the minimum support price of a crop should be fixed in accordance with import-parity price or the actual cost of production. A high minimum support price does provide an incentive to farmers. But at the same time, it may adversely affect agricultural export which is going to play a crucial role in the Ninth Plan. A viable minimum support price policy has to be evolved during the Ninth Plan which will provide adequate incentive to the farmers and at the same time keep Indian agricultural commodities competitive in the world market.

2.117 The issue of input subsidies has become very controversial. Rising input subsidies is said to be crowding out public investment in agriculture. While a rising input subsidy is not sustainable, it should also be kept in mind that any drastic reduction in input subsidy is likely to have adverse short-term impact on agricultural production. Apart from that, the achievement of 4.5 per cent growth rate in agriculture crucially depends on maintaining favourable terms of trade for agriculture. Any drastic increase in the cost of purchased inputs may adversely affect terms of trade. Not only that, the impact of withdrawal of subsidy will vary across categories of farmers and across regions. It is a well known fact that the cropping intensity and input use in small operational holdings are higher compared to large operational holdings. Thus, a cut in input subsidy is likely to affect small and marginal farmers more adversely than the large farmers. Similarly, the distribution of small and marginal farmers vary across States. The share of small and marginal farmers is very high in the eastern region. Therefore, the withdrawal of subsidy may affect the eastern region more than the other regions. Increased input cost may also reduce gross value addition in agriculture. Because of the above mentioned reasons, a clear-cut input subsidy policy should be evolved for the Ninth Plan. Here again, the small farmer nature of the high potential areas in the eastern region needs to be kept in mind. Rapid productivity increases can be achieved only when sufficient inputs are applied and these would have to be provided in an affordable manner. In this regard, it must be mentioned that the eastern region is likely to contribute more than 50 per cent of the total incremental foodgrain production in the Ninth Plan. Consideration may be given to linking the subsidised supply of agricultural inputs to JRY/EAS type of scheme.

2.118 Availability of land has emerged as one of the most important constraints on agricultural growth. The potential of further expansion of net sown area (NSA) is practically nil, and given the environmental commitments articulated in the Approach Paper, it may even decline. The supply of land can be augmented only through increased cropping intensity. Depending on the likely availability of area, the contribution of yield to enhanced agricultural output is likely to vary and with this, the input requirement is also likely to vary. The projected area, yield and associated input requirements commensurate with 4.5 per cent growth in value of agricultural output are given in Table 2-28.

Table 2-28 : Area Yield and Input Use in Agriculture for the Ninth Plan

Item	1996-97	2001-02
1) Net Sown Area (million hectares)	142.00	142.00
2) Gross Sown Area (million hectares)	190.50	203.00
3) Area Under Foodgrains (million hectares)	124.51	126.00
4) Area Under Non-Foodgrains (million hectares)	65.99	77.00
5) Cropping-Intensity (%)	134.20	143.00
6) Annual Growth in Value of Output of Crops* (%) :		
a) All Crops	2.77	3.82
b) Foodgrains	2.67	3.05
c) Non-Foodgrains	2.88	4.44
7) Annual Growth in Area* (%) :		
a) Gross Sown Area	0.54	1.28
b) Area Under Foodgrains	-0.23	0.24
c) Area Under Non-Foodgrains	2.37	3.13
8) Yield Level (1996-97 prices) (Rs./hectare)	15326	17688
9) Annual Growth in Yield* (%) :		
a) Total Agricultural Crops	2.24	2.91
b) Foodgrains	2.98	2.60
c) Non-Foodgrains	0.37	2.72
10) Fertiliser Consumption (million tonnes)	14.31	20.00
11) Fertiliser Intensity (kg./hectare)	75.12	98.52
12) Gross Irrigated Area$ (million hectares)	76.25	91.50
13) Percentage of Gross Area Under Irrigation (%)	40.00	45.07

* Base year growth rate relates to growth rate between 1980-94. Terminal year growth rate relates to target annual growth rate in the Ninth Plan.

$ Gross Irrigated Area as per Land-Use Statistics.

2.119 The projections are based on the following assumptions for the base year (1996-97):-

i) Net sown area (NSA) is taken to be 142 million hectares which is assumed to remain at the same level during the Ninth Plan.

ii) Cropping intensity (CI) is assumed to be 134.2 per cent.

iii) Value of yield is taken to be Rs.15326 per hectare at 1996-97 prices.

iv) Gross cropped area (GSA) is assumed to be 190.50 million hectares.

v) Fertiliser consumption is taken to be 14.31 million tonnes.

2.120 The GSA is expected to increase at the annual rate of 1.28 per cent as against the trend growth of 0.54 per cent (Table 2-28). The GSA is projected to reach 203.0 million hectares and cropping intensity to 143.0 per cent by the end of terminal year (Table 2-28). Such an increase in cropping intensity will require an increase in the area under irrigation. The gross irrigated area (GIA) is projected to be 91.50 million hectares in 2001-02 as compared to 76.25 million hectares in 1996-97. This implies that 15.25 million hectares of additional area has to be brought under irrigation. In this regard, it must be mentioned that the additional irrigation potential created during the Eighth Plan is expected to be of the order of 10-11 million hectares. The value of yield is projected to increase from Rs. 15326 in 1996-97 to Rs.17688 (at 1996-97 prices) in 2001-02. The fertiliser consumption is projected to rise from 14.31 million tonnes in 1996-97 to 20 million tonnes in 2001-02. The fertiliser consumption is expected to increase from 75.12 kg per hectare in 1996-97 to 98.52 kg per hectare in 2001-02.

2.121 Cropping intensity crucially depends on the availability as well as the quality of irrigation facilities. This will not only require further augmentation of irrigation facility but also optimal use of existing facilities. In recent years, a large gap has been observed between the irrigation potential created and actual utilisation. Apart from this, irrigation intensity (ratio of Gross Irrigated Area to Net Irrigated Area) is very low in India. As per land-use statistics, irrigation intensity in 1993-94 was only 1.33. In 1993-94, the net irrigated area stood at 51.45 million hectares. However, only 16.92 million hectares were being irrigated more than once.

2.122 At present, the area under forest is much below the desired level. In 1993-94, as per land-use statistics, the total area under forestry was 68.42 million hectares which constituted 20.81 per cent of the total reported area. The Approach Paper has set a target of bringing one-third of geographical area under forest cover by the end of the perspective period (2011-12). This will require the area under forest to go up from 68.42 million hectares in 1993-94 to 109.58 million hectares, requiring additional 41.16 million hectares of afforestation. Apart from that, because of increasing housing demand, urbanisation and industrialisation, the area under non-agricultural use is likely to increase. In 1993-94, 22.03 million hectares were under non-agricultural uses. Between 1980-81 and 1993-94, the area under non-agricultural uses increased at the annual rate of 0.88 per cent. Assuming the same trend to continue, the area under nonagricultural use is likely to be 25.79 hectares by the end of the perspective period. Thus, forestry and non-agricultural use would require additional 44.92 million hectares over the perspective period. At present, nearly 72.31 million hectares of land are lying uncultivated or fallow, of which 14.84 million hectares are under pasture and tree crops. Thus, nearly 57.47 million hectares of land are available, sufficient to meet the additional requirement of area for forestry and non-agricultural use at the macro-level provided forestry and non-agricultural use are undertaken on such land. However, at the micro level nonagricultural use is spreading in presently cultivated area. This is likely to reduce the cultivated area, unless cultivation is spread to uncultivated and fallow land. However, the yield level in such areas is likely to be significantly lower.

2.123 As discussed above, yield growth is likely to be the primary contributor to enhance production in the Ninth Plan. Apart from irrigation facilities, adequate availability of fertiliser, HYVs and pesticides is of crucial importance. In this regard, it must be mentioned that in the Eighth Plan there has been only a small increase in fertiliser consumption. Fertiliser consumption, which was 12.73 million tonnes in 1991-92, increased to 14.31 million tonnes in 1996-97. Moreover, in recent years, the imbalance in nutrient use has aggravated. The N:P:K ratio, which was 6:2.4:1 in 1990-91, worsened to 9.9:2.9:1 in 1996-97. The recommended ratio is 4:2:1. Such a lop-sided use of nutrients is likely to adversely affect long-term productivity of land. Not only that, coverage of HYV has to be increased substantially across regions and crops. The challenge is to introduce HYVs in the crops in which HYV is presently not available and to replace the old generation of HYVs with new the generation HYVs in the crops in which HYVs are already there. New HYVs should also be made more region-specific. In recent years, the pace of introduction of new HYVs has slackened, which needs to be reversed. This will require a significant increase in expenditure on agricultural research and extension services.

2.124 India is marked by a significant regional disparity. The strategy of agricultural development has to be tailored to the requirements of different regions. Agricultural development of the eastern region, consisting of eastern Uttar Pradesh, eastern Madhya Pradesh, Bihar, Orissa, West Bengal and Assam would require special emphasis, partly because of the presence of large untapped potential, partly because this region accounts for a major proportion of the poor people in India and partly because this region is expected to contribute more than 50 percent of the total incremental foodgrain production in the Ninth Plan. Agriculture in the eastern region is characterised by certain unique features :

i) Agriculture economy of the eastern region is dominated by small and marginal farmers. In all the States more than half of the area is operated by small and marginal farmers as compared to the all-India average of one-third.

ii) Though the reported area under tenancy is comparatively low, the quality of tenancy, except in West Bengal where significant land reforms have been undertaken, is low. In all the States except Assam, the incidence of sharecropping is very high.

iii) The region has abundant surface and ground water. However, a significant part of the region is flood prone. All the states suffer from major drainage problems.

iv) The region is also characterised by low agricultural productivity and input use.

v) The entire region is characterised by weak agricultural institutions - e.g. marketing, credit, input delivery, etc. This is particularly true for credit. Of the total short-term agricultural loans disbursed by PACs in 1992-93, the collective share of Assam, Bihar, Orissa and West Bengal was less than 5 per cent. The same is true for the credit provided by RRBs. These States accounted for just 10.5 per cent of the total credit disbursed by RRBs in 1994-95.

2.125 In the eastern region, which is dominated by small and marginal farmers, input subsidy is likely to play a major role in stimulating greater input use, and hence, higher production and productivity. Given the high incidence of share-cropping, land reforms assume great importance. In this regard, West Bengal can be a role model where land reforms had led to a significant improvement in production and productivity. Given that a large part of the region is flood-prone, significant investment has to be made on improving the drainage system. Apart from that, given the deficient agricultural infrastructure, particularly rural credit system, a significant improvement in infrastructural facilities needs to be made.

2.126 For rural economy as a whole, apart from agricultural development, growth of rural non-farm employment is equally important. The share of rural non-farm employment is very low in the eastern region. The development of rural non-farm employment not only reduces seasonal unemployment but also the incidence of underemployment. There is a symbiotic relationship between agricultural and rural non-farm sectors through backward and forward linkages. While agricultural growth itself is likely to stimulate rural non-farm employment, the other important factors encouraging rural non-farm employment are rural infrastructure and government expenditure, particularly, on employment generation programmes. There is a need to step up such expenditures in the eastern region.

2.127 Apart from the eastern region, the peninsular India, including Rajasthan, requires special focus. The major constraint for agricultural development of this region is water scarcity and soil degradation. Because of water scarcity, this region is also characterised by low cropping intensity and predominance of low value cereals and millets. The agricultural development of this region would involve augmentation of water resources and spreading of water conservation practices. In this regard, restoration of tanks by deepening and embanking and increasing the number of dug-cum-bore wells will play an important role. Development of HYVs for coarse cereals should receive priority. There is also a need to diversify within agriculture itself. In this, animal husbandry can play an important role. Provision of fodder, strengthening of milk sheds and milk grid will play a crucial role.

2.128 Animal husbandry, dairy and fishery are expected to be major contributors to the achievement of 4.5 per cent rate of growth in the value of agricultural output in the Ninth Plan. For animal husbandry and dairying, the focus should be on disease control, improvement in genetic resources, extension services and strengthening of marketing and credit infrastructure. Adequate availability of quality fodder and feed will be crucial. For fishery, the focus should be on integrated development of marine and inland fishery, conservation and upgradation of aquatic resources and adequate availability of quality fish seeds and feed.

2.129 Such a high rate of growth in agricultural commodities would also require a massive expansion and upgradation of agricultural marketing infrastructure, e.g. storage capacity, efficient transportation and distribution system, market intelligence, etc. Over the years, the development of marketing infrastructure has not kept pace with the growth in agricultural production, both in quantitative and qualitative terms. The composition of agricultural production and consumption has changed, creating new demands on the marketing infrastructure. Bulk of the transport of agricultural products particularly intra-State, is through road transport. Although the density of roads in India is relatively high, the quality of roads is low. Nearly half the roads are unsurfaced. The proportion of unsurfaced roads in rural area is much higher. Also, the existing surfaced roads are not properly maintained, leading to delays and escalation of transportation cost. At present, the storage capacity with various government agencies is estimated to be 44.82 million tonnes which is considered adequate at the macro level. However, at the micro level, particularly in hilly and remote areas, shortage of storage capacity exists which needs to be removed. The existing cold storage capacity is 8.65 million tonnes, of which nearly 89 per cent is utilised for storage of potato. Fruits and vegetables, meat and meat products and milk and dairy products account for 5.6 per cent, 0.92 per cent and 0.65 per cent respectively of the cold storage capacity. However, given the emphasis on these products in the Ninth Plan, the cold storage capacity needs to be significantly increased. Currently, there are 6836 wholesale and regulated markets in India. Their number, as well as expertise, need to be increased. All these would require a very large investment in the concerned nonagricultural sectors. Without commensurate increase in such investment, it would be impossible to achieve 4.5 per cent rate of growth. The infrastructural requirement and investment for agricultural development will crucially depend on the regional composition of agricultural production.

2.130 As the achievement of 4.5 per cent rate of growth would involve a large jump in agricultural exports, the marketing infrastructure for exports, particularly the cold storage chain, the railways, port and communication facilities, facilities for packaging, grading and certification of agricultural commodities and development of future markets would require special attention. In the absence of an adequate supporting infrastructure, India may not be able to export the targetted quantity even if the world demand and domestic production allow it to do so. As India has normally been a net importer of agricultural products, no specialised infrastructure for exports of agricultural commodities now exists. However, during the Ninth Plan, India is expected to emerge as a net exporter of agricultural products. Thus, creation of specialised infrastructure would require focussed attention. First, the port facilities are quite inadequate. At present, only the Kandla port can handle bulk exports of rice and wheat and the normal berthing time is around 30 days. Exports of fruits and vegetables require other specialised facilities like temperature controlled warehouses, mega x-ray machines at both the sea and air ports. Also, the air freight capacity needs significant augmentation. Apart from these, the facilities for grading, sorting and packaging are essential for exports. However, such facilities are practically non-existent. Significant investment has to be made on these facilities.

Infrastructure and Basic Industries

2.131 The Ninth Plan aims at achieving 6.5 per cent annual rate of growth in the economy with the targetted growth rate for agriculture sector at 3.9 per cent per annum and that for industrial sector including construction at 7.6 per cent per annum. In order to realise this growth rate in GDP and to accelerate it in the perspective period matching infrastructure will need to be created to meet the requirement of different sectors of the economy. The demand for power, petroleum products, roads, ports, urban transport, telecommunication services, etc. is likely to increase rapidly and so will the investment requirements for creating these facilities. It is, therefore, crucial that an efficient, effective, user-responsive and environment - friendly infrastructure is created. In the light of the liberalised policy regime, as well as on account of the inability of the public sector undertakings to raise sufficient resources, the provision of infrastructure cannot be just in the domain of the public sector as has been the case hitherto. Contribution from private sector will become equally crucial. New ways and means of financing these projects will have to be explored, greater competition will have to be encouraged and the performance of the constituent sectors should be benchmarked against the rest of the world.

2.132 As has been pointed out, there has been considerable slippage in the growth of capacity in the infrastructure sectors during the Eighth Plan period. In view of this, even in the baseline scenario of 6.2 per cent growth, there is a need to improve the efficiency and capacity utilisation of the existing infrastructural assets. In the accelerated growth scenario for the Ninth Plan, such steps would need to be taken with even greater vigour. The first priority for augmenting the availability of infrastructural facilities will lie in accelerated completion of the ongoing projects so that they start yielding returns as early as possible. This in itself, however, will not be enough and efforts would have to be made to initiate new infrastructure investments. In view of the resource constraint, the Government will be able to provide only a part of the total requirements. This is even more pressing in view of the fact that a large number of infrastructure projects will be of a long gestation type, particularly in the road and irrigation sectors, which would have to be mainly in the public domain. Substantial private involvement in infrastructure will have to be encouraged, not only in order to provide the requisite capacity during the Ninth Plan but also to create the pipeline investment that would be necessary for maintaining and accelerating the growth rate of the economy in the post-Plan period.

2.133 In order to achieve the desired levels of investment, both public and private, in the infrastructure sectors, it is of great importance that the issues of appropriate pricing and cost recovery are tackled at the earliest. Appropriate pricing policy, on the one hand, will enhance the resource availability with the public authorities so that not only is the necessary finance available for undertaking adequate maintenance and upgradation of existing facilities, but also for providing investible resources for making fresh investment. On the other hand, the revision of prices is a necessary instrument for making the infrastructural projects viable and attractive for the private sector. At the same time, steps would have to be taken to reduce transmission losses, including theft of power, which by themselves are important reasons for raising the average cost of energy. Reduction of such avoidable losses will be critical for reducing the burden on the consumers and ensuring viability of investments.

2.134 There will, however, be other infrastructure sectors where the gestation periods would be long and immediate pay back cannot be expected. In such sectors, either the Government would have to undertake the bulk of the investment or would have to evolve appropriate methods of public-private partnership so as to make such projects attractive for private sector investment. Infrastructure projects are characterised by large investment requirements, inspite of the technological possibility of unbundling the services, as well as long gestation period. So far, the Governments (both Central and State) have owned, operated and financed nearly all the infrastructure as it was assumed that production characteristics and public interests were such that Government provision (and therefore monopoly) would yield better results. In practice, however, it was associated with mixed performance. As compared to the 1950s, the infrastructure sector has expanded rapidly. Be it power, petroleum, telephones, sanitation, roads, etc., these sectors serve a much larger proportion of the population now than 50 years back. However, the sector is also plagued by a number of problems viz. the cost of providing these facilities has been very high, focus has been mainly on creating new facilities and not on maintenance and getting the best out of the existing facilities, waste and inefficiency are rampant, etc. In the Ninth Plan, in view of the requirement of resources for infrastructure sector, greater attention has to be paid to get the best out of the facilities already created rather than creating new ones. The strategy obviously cannot be the same for all the sub-sectors; and for each of these, a different approach has to be followed.

2.135 Energy : Energy is one of the most important inputs required for sustaining the process of economic and social development. The final commercial energy consumption in the economy increased from 20.35 Million Tonnes of Oil Equivalent (MTOE) in

1953-54 to 142.73 MTOE in 1994-95, registering an annual average growth rate of 4.9 per cent. The primary commercial energy requirements of the economy have correspondingly gone up from 25.5 MTOE to 212.9 MTOE during the same period.

2.136 The demand for commercial energy for final consumption in the Ninth Plan and the perspective period upto the end of the Eleventh Plan in 2011-12 will depend upon the targetted growth in the economy based on both aggregate and sectoral, and the concomitant demand from the different consuming sectors. The commercial energy demand estimated on the basis of end-use analysis and co-relation of the past consumption with GDP growth, is given in Table 2-29 below based on the assumption of a sustained 6.5 per cent growth rate of GDP during the Ninth Plan ,7.7 per cent in the Tenth Plan and 8 per cent thereafter.

Table 2-29 : Projected Demand for Final Consumption of Commercial Energy

	1994-5	2001-2	2006-7	2011-2
Electricity (Bkwh)	289.4	496.1	756.2	1150.2
		(8.1)	(8.8)	(8.7)
Petroleum Pdts. (MMT)*	63.8	104.8	153.0	226.3
		(7.3)	(7.9)	(8.1)
Coal (MMT)*	79.6	114.0	140.0	179.5
		(5.1)	(4.4)	(5.1)
Natural Gas (MCM)*	12110	15730	18291	20853
		(3.8)	(3.1)	(2.7)

NOTE : (1) * Excluding demand for power generation.
(2) Figures in bracket are the CAGR over the period.

2.137 The installed generation capacity requirement in power Utilities in 2011-12, the terminal year of the Eleventh Plan, is estimated to be nearly 318,000 MW at the present level of capacity utilisation in the Utilities. This is 3.7 times the installed capacity of 85,019 MW as at the end of the Eighth Plan in 1996-97, thereby necessitating a further addition of nearly 233,000 MW in the Utilities in the next fifteen years. In the case of Ninth Plan, the total installed generating capacity requirement by the end of the year 2001-02 works out to 130,763 MW on the same basis, requiring a further addition of 45,744 MW during the Plan period. However, it may be possible only to add 40,245 MW during the Ninth Plan in view of the present status in respect of the ongoing projects as well as of those which can be taken up during the Plan period. The composition of the likely addition by modes is assessed as 9820 MW of hydel, 880 MW of nuclear, 4643 of gas thermal, 16097 MW of coal thermal and 8805 MW of oil thermal capacity. Out of the total additional capacity envisaged in the Ninth Plan, 43.7 per cent is likely to come from private sector.

2.138 The modal mix of power generation in future and the requirement of primary energy for the same will depend on the level of development of these modes in the coming years, the increase in the efficiency of power generation, transmission and distribution and end-use. The requirement of energy imports will depend on the extent to which the primary energy needs of the economy are met through indigenous production. As far as indigenous production of primary energy is concerned, the production profile for the year 2001-02 is on the basis of what is considered feasible within the time span under consideration. In the case of 2006-07 and 2011-12, the production of various forms of primary energy, particularly coal and primary electricity, is assumed on the basis of the growth achieved in the respective sectors during the period 1979-94. Coal production increased at an average annual growth rate of 6.13 per cent and the average annual addition to hydro capacity was around 695 MW during this period. Based on the balance of recoverable reserves of hydrocarbons, the production of crude oil and natural gas in future is projected to increase at a slow rate. In view of this, the production of crude oil, which is targetted at 36.978 million tonnes in the year 2001-02, is assumed to increase to 40 million tonnes in 2006-07 and further to 45 million tonnes in 2011-12. The production of natural gas is projected to increase by one billion cubic metres every year over the level of production in the year 2001-02. These assumptions are summarised in Table 2-30. Such a scenario can be termed as 'Business As Usual' Scenario (BAU).

Table 2-30 : Assumptions for Primary Commercial Energy Production in BAU Scenario

	1994-5	2001-2	2006-7	2011-2
Hydro Capacity (MW)	20837	31456	34918	38380
Nuclear Capacity (MW)	2225	3105	4105	5105
Wind Generation (GWH)	182	1150	1900	2700
Solar Generation (GWH)	-	30	60	120
Crude Oil (MMT)	32.2	37.0	40.0	45.0
Natural Gas (MCM)*	17339	29165	33915	38665
Coal (MMT)	253.7	370.6	498.9	671.8
Lignite (MMT)	19.1	46.1	61.0	75.0

* Natural gas production is net of flaring which is assessed at 5 per cent of gross production.

2.139 The dependence on energy imports has been increasing in the past to meet the primary energy needs of the economy. Nearly one-fourth of the total primary commercial energy needs are estimated to have been met through imports in the terminal year of the Eighth Plan. In the wake of the limited primary energy resource endowments of oil and natural gas and the increasing demand for petroleum products in the final energy consumption, the dependence on energy imports is likely to increase in the coming years. The dependence on imports may increase to 27.7 per cent by the end of the Ninth Plan and may go up steeply to over 47 per cent by the end of the Eleventh Plan if no concerted action is initiated to increase indigenous primary commercial energy production and higher efficiency of energy production and use.

2.140 The requirement of coal and oil (including natural gas) for power generation will depend on the quantum of power generated from these fuels. The requirement of coal for power generation in 2001-02 is assessed at nearly 300 million tonnes which may go upto around 880 million tonnes with accelerated growth, in the year 2011-12 if there is no acceleration in development of hydro power capacity. Similarly, the requirement of liquid fuels for power generation is estimated to be 13.3 million tonnes in 2001-02 and may go up to 17.9 million tonnes in 2011-12 if no further addition is allowed in capacity based on liquid fuels. However, if the share of hydro capacity increases to 35 per cent in 2011-12 and the liquid fuels based capacity is allowed to increase at the same rate as in the Ninth Plan, the requirement of coal for power generation may come down to 594 million tonnes. However, the requirement of liquid fuels (including LNG and fuel for flame support) for power generation may go up to 39 million tonnes in 2011-12.

2.141 A number of scenarios can be developed in order to assess the demand for imports of primary energy to meet the projected energy demand in the Ninth Plan and the perspective period. Scenario I is the business as usual scenario. Scenario II assumes an accelerated hydro power development in the next 15 years, thereby increasing the share of hydro capacity in total installed generation capacity to 30 per cent and 35 per cent in the year 2006-07 and 2011-12 respectively as compared to nearly 25 per cent in 2001-02. Also, the addition to liquid fuel based capacity increases at the same rate of 8805 MW per Plan during the Tenth and the Eleventh Plans. Scenario III assumes a savings of 10 per cent in electricity and oil consumption to be achieved in the Tenth and the Eleventh Plans as compared to a saving potential of about 7 per cent in the Ninth Plan. A gradual lowering of T&D losses and auxiliary losses is also assumed in the perspective period. The net import requirement of coal and liquid fuels in the three scenarios considered is summarised in Table 2-31.

Table 2-31 : Net Import Requirement of Commercial Energy

	2001-02	2006-07	2011-12
Coal (MMT)			
Scenario I	40.5	161.7	388.5
Scenario II	29.8	45.2	101.9
Scenario III	(-)3.5	(-)17.1	11.4
Oil & Oil Products(MTOE)			
Scenario I	75.2	137.2	212.4
Scenario II	75.2	145.6	228.8
Scenario III	68.3	127.5	205.0

Note: Negative net imports implies surplus availability from domestic sources. However, some coal imports may be required for specific uses.

2.142 Power : The demand for electricity for final consumption in the Ninth Plan will increase to 496.1 Bkwh in 2001-02 from 324.5 Bkwh in 1996-97. The gross generation in utilities is likely to increase to 606.7 Bkwh in 2001-02 as compared to 394.5 Bkwh in 1996-97. The energy shortage in 1996-97 was 11.5 per cent. The peak shortage was 18 per cent. Table 2-32 gives the demand for electricity as well as the generation requirement for electricity at the end of the Ninth, the Tenth and the Eleventh Plans.

Table 2-32: Demand and Generation Requirement of Electricity

(Billion Kwh)

	<-------2001-02-------->				2006-7	2011-12
	I	II	III	IV		
Power (U+NU)						
Demand	608	616	655	664	1016	1552
Generation	606	614	653	662	1013	1549
Imports	2	2	2	2	3	3

NOTE : Scenario I = With Conservation Measures in Demand & Supply
Scenario II = With Conservation Measures in Demand
Scenario III = With Conservation Measures in Supply
Scenario IV = At present level of losses

2.143 The generating capacity to meet this requirement will have to increase to 130763 MW by the end of the Ninth Plan from the capacity of 85019 MW in 1996-97. It is, however, expected that the feasible capacity addition during the Ninth Plan is likely to be 40245 MW. This capacity addition will be short of the projected requirement. With this level of capacity addition, the shortage of energy is likely to be 1.4 per cent and the peak shortage will be 11.6 per cent. This will also call for an investment level of about Rs. 300 thousand Crore, including the investment required to upgrade the transmission & distribution system and to provide adequate pipe-line investment for the post-Plan period. Raising resources of this magnitude is not going to be an easy task particularly by the States, given the pricing structure of the different State Electricity Boards. Enhancing the contribution from capacities already created, demand management, rationalisation of prices, encouragement to private sector for greater participation, etc. are some of the steps needed urgently to improve the situation in the power sector. The major components of the strategy in the power sector would be :

i) Greater attention has to be paid to early completion of the ongoing projects than on new projects. There are long delays in the commissioning of the hydro-electric stations as well as in nuclear power plants. This also results in substantial cost overruns. Early completion of ongoing projects will reduce the cost overruns and yield the much needed benefits. The share of hydel in total generating capacity of the country has declined from 34 per cent at the end of the Sixth Plan to 25 per cent at the end of the Eighth Plan. In order to have an optimal hydro-thermal mix in the total system, advance action has to be initiated on some of the hydro projects for benefits during the Tenth Plan.

ii) It is essential to maximise benefits from the existing plants by (a) improving their operational efficiency and capacity utilisation and (b) improving/augmenting the T & D network and reducing the T & D losses to the maximum extent possible. The Plant Load Factor (PLF) has improved significantly over the last few years. As compared to the PLF of 55 per cent in 1991-92, the PLF was 64 per cent by 1996-97 i.e. the end of the Eighth Plan. The Common Minimum National Action Plan for Power Sector prepared by the Ministry of Power envisages further improvement in the PLF since large scope of improvement still exists in some of the states so that the overall PLF in the State sector improves to 65 per cent by the end of the Ninth Plan as compared to 60 per cent at the end of the Eighth Plan. The PLF at the national level is envisaged to improve from 64 percent to 70 percent during the Ninth Plan. The improvement in PLF can be achieved by adopting measures like renovation and modernisation of old power plants in a time bound manner that could result in upgradation and life extension of these plants, regular and timely maintenance, etc. The transmission and distribution losses are higher than the desirable levels. With every reduction of 1 per cent in T&D losses, it is possible to save 800 MW of new capacity addition. One of the reasons for higher T&D losses is the inadequate investment on T&D. Greater share of investment in power sector has to be spent on transmission and distribution system. System improvement is equally essential for improving the quality and reliability of electricity supplies in the rural areas where low voltage and brown outs are more common than in the urban areas.

(iii) Rationalisation of electricity tariff is perhaps the most crucial step that has to be taken for improving the availability of electricity. According to the latest estimates, as given in Table 2-33, the average cost of supply for all the Electricity Boards taken together was about Rs.2.08 in 1996-97. As against this, the average revenue collection is Rs.1.58. While the agriculture and domestic sectors, on an average, paid 22 paise and Rs.1.04, the average tariff for industrial and commercial sectors was Rs.2.63 and Rs.2.60 respectively. The agriculture and domestic sectors are presently subsidised to the tune of nearly Rs. 20,000 crore. While cross subsidy from industrial and commercial sectors does improve the financial health of the State Electricity Boards (SEBs), it is not sufficient to offset the losses incurred on account of sales to agriculture and domestic sectors. There is a limit to which the burden of subsidised sales of electricity to the agriculture and domestic sectors can be passed on to industrial and commercial sectors. It can affect adversely the competitiveness of the industries, especially the energy intensive products. In addition, the SEBs are not able to raise enough resources for proper development of the power sector as well as the expansion of installed generating capacity. The negotiations with private producers will also suffer a great deal if the rationalisation of tariff does not take place. Since Rationalisation of tariff is a pre-requisite for carrying out the reforms in the power sector, an Electricity Regulatory Commission Ordinance 1998 was promulgated on 25.4.1998 for establishment of Central Electricity Regulatory Commission (CERC) and State Electricity Regulatory Commissions (SERCs) for rationalisation of tariffs and related matters thereto.

(iv) In view of the inability of the State sector to provide sufficient power mainly due to the inability to raise sufficient resources, private sector participation was envisaged in 1991 as a part of the process of reforms in this sector. Steps are being taken to make the private investment more attractive . Recently detailed principles for negotiating Power Purchase Agreements (PPAs) for Indian Private Power Project have been issued to the State Electricity Boards (SEBs). After reviewing the policy on Foreign Direct Investment, automatic approvals for foreign equity upto 74 per cent would be accorded in the areas such as i)Electricity generation and transmission , ii) Non-conventional energy generation and distribution and iii) Construction and maintenance of power plants etc. Private participation would lead to a shift away from discretionary government interventions to greater acceptance of market forces, from controls and administered prices to transparent fiscal incentives and disincentives, greater private investment instead of public investment with a major objective of greater competition and efficiency. Ownership transfer in itself, and by itself need not result in higher

Table 2-33 : Average Cost, Average Tariff and Agricultural Tariff of Different SEBs (1996-97)

(paise/kwh)

	Average Cost	Average Tariff	Agriculture Tariff
1. Andhra Pradesh	169.7	128.0	14.9
2. Assam	373.8	211.8	160.5
3. Bihar	302.2	173.4	16.2
4. Delhi (DVB)	335.8	234.0	-
5. Gujarat	205.3	141.0	19.0
6. Haryana	219.6	162.0	50.0
7. Himachal Pradesh	134.8	132.0	50.0
8. Jammu & Kashmir	230.4	36.0	10.2
9. Karnataka	195.9	140.8	1.7
10. Kerala	146.7	103.2	23.7
11. Madhya Pradesh	205.6	147.4	4.3
12. Maharashtra	198.7	189.6	24.4
13. Meghalaya	180.1	108.4	50.0
14. Orissa	254.9	190.1	55.0
15. Punjab	186.1	137.9	32.6
16. Rajasthan	227.6	175.8	38.0
17. Tamil Nadu	192.3	171.0	0.0
18. Uttar Pradesh	198.9	147.0	51.3
19. West Bengal	210.1	168.8	23.7
Average	207.7	157.8	22.2

gains. The private sector could possibly exploit monopoly power more than the public sector. It is the competition that will help in maximising the benefits to the consumers. Greater participation by the private sector in the years to come will have to be encouraged in order to ensure greater competition. For this, it is important that the financial health of the SEBs improves. It is equally important that credit on liberal terms is given by the financial institutions, fiscal and other incentives are provided in a transparent manner rather than relying on pricing and administrative controls. In order to ensure that the desired objectives of maximising the consumer benefits as well as proper development and expansion of the power sector are met, it is essential to set up independent regulatory bodies both at the Centre and the State levels.

(v) Demand management and energy conservation measures by different end-users will also reduce the need for additional capacity creation. Wide gap is observed in the off-peak and peak demand in Eastern, Western and Northern Regional grids . In order to avoid backing down of base load power stations , inter regional links need to be strengthened for optimal utilisation of the capacity . efforts have to be made to facilitate shifting from regional grid based operations to an integrated national grid. Rectification of pump sets will reduce the demand for electricity in the agriculture sector. Similarly, process changes/technology upgradation, other house-keeping measures will help in specific electricity consumption in some of the major energy intensive industries like cement, steel etc. In the domestic sector too, it is possible to contain the electricity demand by introducing energy efficient lighting viz.. compact fluorescent lamps (CFLs) and other devices.

(vi) Suitable policy for development of all forms of renewable energy sources including that of hydel needs to be evolved by providing higher financial support .

(vii) Concerted efforts have to be made by the concerned agencies to take appropriate steps in the areas of their responsibility so that the full programme of generating capacity addition would materialise during the Ninth Plan. It also needs to evolve a mechanism through which the languishing unfinished State projects could be transferred to Centre / private sector for its early completion .

(viii) For improving the reliability and quality of power supplies to the consumers in different parts of the country and for increasing access to electricity in the rural areas, greater emphasis both by public and private undertakings would have to be laid in generation, transmission and distribution of power. Also, special emphasis would have to be placed on accelerated electrification of unelectrified villages, exploiting as far as possible, the decentralised non-conventional energy sources.

(ix) In order to supplement the power available from utilities, maximisation of captive and co-generation in various industries is necessary for which adequate fiscal incentives need to be provided to respective industries.

2.144 Coal : The demand for coal at the end of the Ninth Plan is likely to increase to about 412 million tonnes as compared to 296 million tonnes in 1996-97. Production from domestic sources in 2001-02 is likely to be only 370 million tonnes. Table 2-34 gives the demand, likely production and the imports for coal for the Ninth, Tenth and the Eleventh Plans.

Table 2-34 : Demand, Production and Imports of Coal

(Million Tonnes)

	2001-2	2006-7	2011-12
Demand	412.12	544.6*	775.3*
Production	370.60	498.9	671.8
Gap	41.52	45.7	103.5

* Corresponding to low hydro-generation and high liquid fuel based generation of power. The demand may be higher if there is decline in the liquid fuel (including LNG) based power generation.

2.145 There is a large unmet gap which has to be met through increasing the domestic production further. Otherwise it will necessitate larger imports and consequent foreign exchange outgo. The investment requirement for meeting the Ninth Plan requirements alone for raising the domestic production would be over Rs.20,000 crore. Therefore, it is essential to get the best returns from this investment. This will call for :

(i) improving the low productivity in the coal mines particularly that of underground mines. The output per mine shift (OMS) is low by international standard and the improvements have been confined mostly to open cast mines. It is important that both the man as well as machine productivity in the coal mines is improved.

(ii) There is often a considerable delay in opening a new mine. The long gestation lag is on account of various factors viz. environment clearance, labour problems, problems relating to land acquisition and rehabilitation of oustees. In order to improve the productivity in coal mines as well as to avoid time and cost overruns, it is important that these bottlenecks are cleared with a minimum time lag.

(iii) Internal resource generation in the coal sector needs further improvement in order to raise the production. During the Eighth Plan, some rationalisation of coal prices was undertaken. As a result of decontrol of prices of all coals and superior grade non-coking coal, the internal resource generation in the coal sector improved leading to lower reliance on the budgetary support. It is important that prices of all the grades of coal are deregulated. The relative prices for different grades of coal will have to take into account the fact that the setting up of the washeries becomes an economical proposition. The setting of prices of coal has to take into account the relative availability, substitutability and the calorific values of other fuels also.

(iv) The coal resources in the country are unevenly distributed and have high ash content. They have to be carried over long distances and this results in burden on the transport infrastructure. Beneficiation and washing of coal at the pitheads will reduce the burden of transporting large quantities of low grade coal to the end-users. The price of beneficiated coal has to be accordingly adjusted.

(v) In order to avoid mismatch between the demand for coal and its supply, it is essential that the critical rail links are established on a priority basis. The coal pit head based power plants with suitable arrangements for evacuation of power to the consuming states would help in avoiding transport bottlenecks. Similarly, in view of the large requirement for coal imports, the port facilities have to be expanded.

(vi) Private sector participation in coal mines has been allowed in recent years to fill the gap between coal demand and production. It makes, therefore, imperative to bring in necessary legislative changes to the existing legal framework to facilitate private sector participation in coal production and distribution. Action has already been initiated to achieve this objective. Efforts would need to be made to further streamline the administrative procedures to expedite the necessary clearances and required legislative changes. The role of private sector at present is limited to the extent of allocating captive mines for power generation, steel plants and for cement making. Private participation should be encouraged in coal mining in the years to come. Regulatory mechanism will have to be created to ensure proper and systematic development and exploitation of coal mines, and appropriate pricing of different grades of coal (including fixing of royalty) so that the consumers benefit and greater competition is encouraged. A proper evaluation of recoverable reserves is also important for the purpose of fixing of royalty, the basis of which should not be the quantity of coal actually mined but the recoverable reserves.

(vii) Privatisation of the existing coal mines also needs to be considered. A start can be made with the privatisation of mines which are presently fully linked to a limited number of users. The concept can then be extended to other mines which are more merchant in nature.

(viii) A regulatory body needs to be established urgently which would perform an appellate function to resolve any price or quality disputes between the producers and the consumers and between the producers and the Government.

(ix) Tax incentives that are being extended to sectors like power, telecommunication, ports etc. should also be given for the development of coal mines.

(x) Demand management and conservation of coal by the end-users have to receive priority. This is particularly true for the power sector which uses over 2/3rd of the coal..

(xi) Environmental degradation including land subsidence in certain coal fields will have to be given due attention.

(xii) The mineable reserves of coal are expected to be around 20 billion tonnes out of the total estimated resources of around 204 billion tonnes . The amount of mineable reserves for project formulation, however, is even lower. Efforts, therefore, are needed to bring the estimated coal reserves into mineable reserve category through acceleration of both regional/promotional and detailed exploration.

(xiii) In order to attract private investment, financial incentives and concessions as applicable to infrastructure sectors like Power and Telecommunications would need to be extended to this Sector. This would facilitate increased market borrowings and easy access to capital markets . The project cost would also come down as a result of lower import duties on plant and machinery which forms the major part of project costs.

(xiv) As lignite deposits are generally located away from coal fields , the formulation and implementation of more lignite projects, and lignite based power plants , therefore, will be essential to avoid unnecessary coal transportation costs and stress on railway infrastructure.

2.146 Petroleum Sector : In the recent years, the share of petroleum products and natural gas in the total final energy consumption has increased significantly. This share was about 35 per cent in 1980s. It increased to about 54 per cent in 1996-97. Natural gas is a clean and environment friendly fuel and as a result, its use in the years to come could increase. Table 2-35 gives the refinery throughput, indigenous crude oil production and imports of crude oil at the end of Ninth, the Tenth and the Eleventh Plans.

Table 2-35 : Demand, Production and Imports of Crude Oil

(Million Tonnes)

	2001-2	2006-7	2011-12
Crude Throughput	108.2*	150*	200*
Crude Oil Production	37.0	40	45
Gap	71.2	110	155

* Subject to creation of refinery capacity.

2.147 The country is heavily dependent on imports of crude oil and petroleum products and this dependence will increase in the years to come. As a result, there will be substantial foreign exchange outgo. Raising of domestic oil production, setting up of refineries, laying pipeline for transportation of gas as well as oil products will raise the requirement for investible resources in the Ninth Plan. The priority areas in the oil sector are as follows:

(i) The indigenous crude oil production will have to be augmented by acceleration of exploration efforts in deep off-shore, unexplored/less explored off-shore as well as on-shore areas, improving reservoir management and enhanced oil recovery (EOR). A New Exploration Licensing Policy (NELP) with certain fiscal and financial incentives has been announced recently to boost investment in exploration. This could help in accretion of the hydrocarbon reserves. The average recovery factor in India is low by international standards. An improvement in the recovery factor would give additional amount of oil without corresponding accretion of reserves. Simultaneously, exploration and development projects would require to be taken up in other countries as well as to increase equity oil abroad .

(ii) A large amount of gas was being flared till the late 1980s. However, in recent years flaring has declined. Gas utilisation would improve further with the commissioning of gas compression and evacuation facilities as well as augmentation of existing pipeline network.

(iii) In order to meet the increasing demand for oil products, additional infrastructure viz. port handling facilities for crude oil and petroleum products, pipelines, tankers, rail wagons etc. will have to be established and this will involve large financial requirements. Joint ventures among public sector undertakings as well as between the public and private sector undertakings could go a long way to finance these activities.

(iv) In the wake of the ongoing liberalisation programme, the petroleum industry (both upstream and the downstream) has been thrown open to private sector participation (both Indian and foreign). The response, particularly in the downstream sector, has been encouraging.

(v) The prices of oil products continue to be largely administered. In view of the greater need for raising the resources for expansion of oil sector as well as large-scale private sector participation, it is important that the present administered pricing regime (APR) is dismantled at the earliest. The initial steps in this direction have already been taken and these need to be carried through to the logical conclusion. Since the country is a net importer of crude oil as well as petroleum products, border prices should be the guiding principle in fixing the prices of crude oil as well as petroleum products in the economy.

(vi) In view of the severe foreign exchange constraints that the country had been facing the conservation of petroleum products has received high priority since early 1970s. It is important that these efforts continue in the Ninth Plan. This will also help in ensuring greater energy security. The transport sector being the largest user of petroleum products needs special attention.

(vii) The existing infrastructure facilities for handling petroleum products are inadequate. In order to handle the additional imported and indigenous crude oil, petroleum products and natural gas, including Liquified Natural Gas (LNG), the infrastructure requirements for ports, tankers, rail loading, pipe line and product tankages , would need to be enhanced substantially.

(viii) Most of the oil importing countries pursue a national policy to maintain a strategic reserve as an insurance against contingent situations like war, natural calamities and also for hedging against violent price fluctuations in the international market. This is particularly true in the case of oil importing countries. Similar strategies would need to be taken up expeditiously as the gap between domestic production and demand is widening sharply. The present strategic tankage is for 12 days storage of crude oil and petroleum products import. The capacity needs to be increased by at least 15 days of import requirements during the Ninth Plan.

2.148 Non Conventional Sources of Energy: In India, majority of rural population still depend upon the locally available non-commercial sources of energy such as animal dung, crop waste and fuel wood. As the country is endowed with a large potential of non-conventional and renewable sources, there is scope to meet the energy needs of the rural areas through these sources of energy. The potential and the achievements from various sources is indicated in Table 2-36

Table2-36: Potential and Achievements of Renewable Energy Sources

Source/System	Approximate Potential	Achievement (October 1997)
Biogas Plants(Nos.)	12 million	2.57 million
Improved Chulhas(Nos.)	120 million	26 million
Biomass	17000 MW	105 MW
Solar Photovoltaic	20 MW/sqm	28 MW/sqm
Solar Thermal System	35 MW/sqm	4.36 lakh sqm
Wind Power	20000 MW	925 MW
Small Hydro Power	10000 MW	151 MW
Power from Municipal Wastes	1700 MW	3.75 MW

In order to ensure the efficient use of these energy sources in an environmental friendly manner, it is important to promote the programme of non-conventional energy sources on an increased scale. This can be achieved through:

i) creating necessary institutional mechanism for R & D, demand development through market mechanism, mandatory use of established technologies, amendments of Electricity Act for absorption of non-conventional power into the grid, creation of infrastructure for repair and maintenance, etc.

ii) taking necessary action to remove administrative bottlenecks, if any, and reverse the slowdown in critical areas of promoting non-conventional energy sources, and

iii) giving thrust on co-generation programme in industries to meet their power needs and enable them to sell the surplus power to utilities.

2.149 Transport Sector : The major modes of transport viz. rail, road, waterways and airways have witnessed a rapid growth in the last 50 years and contributed to the development process in the country. The railways have a vast network and carry large volume of passenger and freight traffic. The aggregate road length in the country is nearly 3.3 million kms. However, a large proportion of villages are still without all-weather road connections. Most of the roads comprise of one lane. In a number of urban areas, there is heavy congestion on roads and lack of adequate mass transport system and the consequent explosion of the personalised modes of transport (mainly two wheelers) has resulted in low speed, high energy consumption, traffic jams as well as high levels of air and noise pollution and alarming rate of accidents. The traffic on the ports has also increased over the years. However, much of the equipment at the ports is over-aged and technologically obsolete. Another lop-sided development of the modern transport network is that it caters mainly to the needs of urban areas, and not to those of the rural areas to the desired extent. In the Ninth Plan, the transport sector has to gear itself to resolving some of these problems. Complementarity of transport services in the presence of all round excess demand in every segment presents an opportunity for coordinated planning of all the segments. The aim should be to have balanced excess demand in all sectors. The major issue in transport policy, therefore, is to achieve an optimal inter-modal mix in such a way that the resource cost of movement of passenger and goods is the least. The strategy for the major transport sectors would be as follows:

2.150 Railways The railways are most suitable for long distance traffic. The share of railways in the total movement of passengers and goods has declined over the years due to the inability of the railways to expand their capacity. Priority is given for movement of bulk traffic. One of the reasons for the movement of goods to shift towards roads even over long distances, is the skewed tariff policy followed by the railways in which the movement of passengers is cross subsidised by goods movement. In the Ninth Plan, this trend will have to be contained and reversed. This will call for rationalisation of tariff, electrification of dense routes, containerisation of goods movement etc. It is likely that in the Ninth Plan, greater movement of goods (including foodgrains) will be from eastern to southern regions. The movement from northern to southern region will grow at a slower pace. As a result, greater attention will have to be paid to the eastern and southern regions for laying new lines, multiple tracks, etc. The following measures are contemplated for achieving the goal of greater share in passenger and freight movement :

(i) Capacity expansion in the railways is generally costly and involves long gestation period. However, this is not the case with rolling stock. Unfortunately, the total number of wagons available with the railways has actually declined during the Eighth Plan with the result that the capacity to move goods has been eroded significantly in absolute terms. Adequate funds will have to be provided for this purpose, apart from improving the utilisation of existing assets. The current wagon utilisation rates will have to be improved further and the turnaround time of the wagons will have to be reduced. The quality of control equipments viz. signalling, etc. needs to be improved in order to increase the average speed of trains and to reduce the average time between trains. These measures will enable the railways to provide reliable service at competitive rates.

(ii) The tariff policy of cross subsidising passenger movement by freight movement has resulted in several distortions leading to diversification of traffic to roads. This has resulted in an increase in energy consumption and consequent environmental damage. Therefore, there is a need for rationalising the tariff in such a manner that passenger fares are aligned with cost and the need for cross subsidisation is reduced. Alternatively, the ratio between freight and passenger trains will have to be altered significantly in favour of the former, so that the average burden of cross-subsidisation reduces and thereby the railways are enabled to offer more competitive rates on freight traffic.

(iii) The railways being the owners of vast tracts of land, can supplement their financial resource by certain non-tariff revenue measures like utilisation of land space for commercial purposes. In addition, the wide network of the railway's communication system can be leveraged to provide long distance (trunk) capacity for telecommunication purposes at much lower costs than would be entailed in laying new cables.

(iv) Priority has to be given to the completion of the ongoing projects, particularly the critical links on the high density corridors. This is especially important in view of the extremely distorted pattern of track utilisation that exists at present, which is affecting the financial position of the railway system.

(v) The productivity in the railways over the years has improved. However, there is scope for further improvement. In particular, the recent tendency to improve wagon utilisation through reduction in the average lead distance needs to be reversed since the comparative advantage of the railways lies in long distance traffic. Wagon utilisation rate can be improved by better network management and improving the average running speed of the trains. The speed of freight trains is very low and the turn-around time is very high, which reduces the competitiveness of the railways vis-a-vis the road sector. Dedicated lines for goods movements can be an option worth considering, besides a reappraisal of the priorities accorded to freight and passenger movement in different corridors.

(vi) Although the Ninth Plan assessment of investment requirements has not envisaged any significant private sector participation in railways, efforts need to be initiated to encourage such participation in the future. The earlier efforts, such as the "own your wagon" scheme or leasing arrangements for track, have not performed particularly well. Consideration should be given to allowing private sector to operate trains in the low density corridors to begin with on payment of rental and service charges to the railways. This would not only improve the viability of the railways, but would also increase the utility of the presently underutilised segments of the railway network.

(vii) It is important that there is an active coordination and cooperation between rail and road and between rail and port/shipping networks. This will ensure better and speedier movement of goods. The railways could consider the possibility of setting up either a joint venture subsidiary or some other mechanism of tie-ups with private road operators for better services including door-to-door movement of goods.

2.151 Roads : While the vehicle population in the country has grown at the rate of 10 per cent in the last 45 years, the road length has extended by about 4 per cent only. A number of villages are yet to be connected by all-weather roads. Another major problem is the slow movement of traffic on Indian roads. This is not only on account of poor conditions of the roads, but also due to numerous check-posts for the collection of octroi. In the Ninth Plan, the focus regarding roads should be on the following to ensure speedier movement of goods.

(i) Construction of missing links, construction of 4 lanes and 2 lanes where single lane stretch exists, construction of bridges and flyovers. There is a need to focus on the completion of ongoing projects. Multi-laning of high density corridors should receive adequate attention.

(ii) Providing all-weather roads wherever they do not exist and promoting energy conservationand environment protection.

(iii) It is obvious that the provision of such a large network would need participation not only of the government agencies but also the private sector. For mobilising resources, dedicated levies and user charges will have to be imposed. Tolls can be charged on high density traffic corridors and the major bridges. The revenue thus earned should be spent on the development and maintenance of roads and provision of highway amenities. For encouraging private sector participation, various tax concessions have been offered. These need to be carried further. Consideration also needs to be given to the use of land development as a method of improving the viability of private investment in the road sector. For this, legislative changes may be necessary, particularly at the State-level.

(iv) The procedures for acquisition of land for construction of roads, environmental clearance, etc. should be simplified. In particular, issues relating to right of way can prove to be major hindrances to private participation in the road sector. Legislative changes would be needed in this regard before any significant progress can be expected in terms of private sector participation.

(v) Octroi and entry tax are important sources of revenue for many State and local governments. However, they lead to reduced speed of vehicles, higher energy consumption, etc. Abolition of such fiscal barriers to smooth operation of the transport system and substituting them by alternative means of revenue collection and sharing would help in increasing the efficiency and speed of movement on the roads.

(vi) Most of the State Road Transport Undertakings are making losses on their operations. This is on account of the unremunerative tariff charged by most of the State Transport Undertakings. In terms of physical performance, viz. energy consumption, there has been some improvement in recent years, but is not sufficient to make up for the losses incurred on account of lower tariff. Therefore, tariffs need to be revised in line with the cost based on minimum productivity norms. Private bus operators are also being encouraged in a number of States, with mixed results. A more rational tariff structure coupled with stricter monitoring of route and timing violations may overcome some of the negative features that have been experienced.

2.152 Ports : As there will be a greater dependence of the Indian economy on international trade (larger volume of exports and imports), it will call for the expansion and better utilisation of the existing port facilities in the country. The productivity of ports in India is extremely low. Both the idle berth time as well as the turn-around time of ships is quite high by international standards. Equipment utilisation has been low on account of various operational constraints such as equipment break-down, over-aging of equipment, power failure etc. The Ninth Plan will have to mainly address itself to improving the productivity at the ports.

(i) Some of the areas that need attention are size of the ships, automation, containerisation, etc. Mechanised loading and unloading facilities would need to be developed at certain ports, keeping in view the likely large increase in volume of imports of certain commodities like coal, oil, etc.

(ii) Night navigation facilities would need attention at all the major ports to improve the turn-around of vessels. The maintenance of port infrastructure would also need to be improved.

(iii) The productivity of labour and equipment will have to be increased for achieving the desired results. One of the reasons for low productivity could be the absence of dedicated jetties. Introduction of dedicated jetties could improve the productivity. This will also call for introduction of mechanised aids and cargo handling techniques.

(iv) Private sector participation will have to be encouraged. This will enhance the competition in this sector and thereby help in improving the efficiency, productivity and quality of service. For greater private participation, joint ventures of Indian and foreign companies, between public and private enterprises and among private parties will have to be considered.

(v) The setting up of an independent Tariff Regulatory Authority of India will help in fixing the various port charges and also the charges to be collected by private providers of port facilities.

2.153 Telecommunication : The telecommunication sector has witnessed a substantial growth rate in the last decade or so. The spread of telecommunication facilities on per capita basis has nevertheless been slow as compared to even the other developing countries Most of the rural areas still do not have any means of telecommunication. This sector is characterised by near monopoly of the provision of services by the public sector. Even manufacturing of telecomm equipment was mainly in the hands of public sector till 1991. Since then, the manufacturing of telecom equipment has been deregulated. During the Eighth Plan, resource mobilisation in this sector has been fairly encouraging vis-a-vis the target set at the beginning of the Eighth Plan. During this period, the sector has also witnessed rapid diversification of value-added services viz. radio paging, cellular mobile phone, etc. registering a healthy growth. With the opening of the sector, the prices of some of the telecom equipments as well as provision of the services have declined. As a result, the telecom sector is likely to be one of the fastest growing sector in the economy.

2.154 The Ninth Plan would aim at providing telephone on demand, achieving universal coverage, ensuring the world standard services, the emergence of the country as a major manufacturing base of telecom equipments and their exports, etc Rural connectivity would also be an important goal in the Ninth Plan. The strategy to achieve this objective would be as follows:

(i) The telecommunication activity, being commercial in nature, requires commercial principles to be applied in its operation. The service provision by the public sector will have to be financed mostly from internal and extra budgetary resources with little reliance on the budgetary support.

(ii) The private sector is expected to supplement the efforts made by the Government to enhance the telecommunication facilities. The success of different organisations engaged in providing telecom services will depend on the quality of service and the efficiency of operation including billing, fault repairing etc. Computerisation of various sub--activities has to be an integral part for improving the quality of service provided.

(iii) Telecom is an area where the technology changes occur very fast. Joint ventures with international companies could help in bringing in the best technology.

(iv) To ensure greater competition and efficiency of services, it is necessary that the Department of Telecommunication should function only as a policy making body and not a service provider. The regulatory function has already been entrusted to the Telecommunication Regulatory Authority of India (TRAI). The TRAI is an autonomous institution and it should be made self-financing one The monopoly of Department of Telecommunication in all the sub-activities, viz. distance services, internet connections, basic services etc., should be dismantled and competition has to be encouraged.

(v) Provision of telecom services will require substantial funds and it will not be possible for the Government alone to finance such requirements. New sources of long-term funds and other instruments viz. licence fee, etc. will have to be tapped.

2.155 Steel : The production of crude steel (including from secondary producers) increased from 22.16 million tonnes in 1991-92 to 27.38 million tonnes in 1995-96. The demand for steel in 2001-02 is likely to be 31.06 million tonnes. The production target has been fixed at 38.01 million tonnes. Table 2-37 gives the demand, production and the exports, imports for finished steel during the Ninth Plan and the perspective period. It may be seen that despite a sizeable increase in both production and exportable surplus of steel in India, there will be an increasing trend in imports. This arises essentially on account of the demand for special grades of steel which is expected to rise with increasing sophistication in the manufacturing sector and which would not be possible to meet in an economic manner from domestic sources.

Table 2-37 : Demand, Production, Exports & Imports of Steel

(Million Tonnes)

	2001-2	2006-7	2011-12
Demand	31.0	45.6	66.4
Production	38.0	54.0	80.0
Imports	0.5	1.5	3.0
Exports	7.5	9.9	10.6

2.156 The Ninth Plan aims at producing steel not only for the domestic market but also for exports on the basis of the inherent strengths of the Indian steel industry. For this, the best quality of steel has to be provided at competitive prices. India has certain advantages viz. the indigenous availability of cheap and good quality iron-ore, lower labour cost, etc. On the other hand, the labour productivity is low, the quality of indigenous coal is poor and the energy usage (which is the major component of steel-making), though it is declining, is quite high by international standards. As a result, the energy cost accounts for nearly 33 per cent of the cost of producing steel in India as compared to 20 per cent in the developed countries. The competitive advantage in iron-ore and labour cost is wiped out because of the old age of the plants, obsolete technology, lower degree of automation, poor quality of coal, higher energy cost, etc. In the Ninth Plan and beyond the following areas should receive priority so that better quality steel is available at competitive prices.

(i) Import of larger quantities of coking coal (having ash content of 8 per cent). Similarly, better quality of other inputs required should also be ensured.

(ii) Implementation of automation in the process routes, full capacity utilisation, improved maintenance practices, extensive mechanisation in all possible areas and pollution control measures will help in better plant availability, utilisation and in improving labour productivity.

(iii) Conventional primary rolling practices have to be replaced by continuous casting technology.

(iv) Introduction of quality monitoring, inspection and control measures at all stages of production and operation.

(v) The energy intensity of steel-making will have to be reduced substantially. Apart from the measures listed above, this will also call for recovery of the waste heat energy.

(vi) With the considerable increase in the level of competition in the steel industry through decontrol and the emergence of new steel producers in the private sector, the need to maintain substantial public sector presence in this industry has been obviated to a substantial extent. Therefore, consideration needs to be given to privatising specific public sector plants, particularly those which are in need of substantial investment for capacity expansion and efficiency improvement. A beginning can be made with the Indian Iron & Steel Company (IISCO).

(vii) The Indian steel industry has historically not undertaken sufficient R&D to improve its efficiency and productivity through its own efforts and has relied essentially on repeated imports of technology. In recent years, however, a change is discernible and considerably greater efforts are being made to develop indigenous technologies for attaining international benchmarks. In view of the sustained growth that is projected over the perspective period, it is hoped that this trend in technology development will accelerate and the country will be able to export not only steel, but also steel technology.

2.157 Cement : The cement industry is vital for the development of infrastructure sector. The present installed capacity of cement is over 100 million tonnes while the production in 1996-97 is 76 million tonnes. The liberalisation policies, which in the case of cement industry started in 1982, helped in the strong growth of the cement sector. The capacity was 27 million tonnes in 1980-81, yielding an average annual growth rate of capacity of above 8.5 per cent. In the Ninth Plan, the production of cement is projected to increase to 110 million tonnes. Table 2-38 gives the demand, production, exports and imports of cement at the end of the Ninth Plan.

Table 2-38 : Demand, Production, Exports & Imports of Cement

(Million Tonnes)

	2001-02
Demand	109.0
Production	113.0
Imports	-
Exports	4.0

2.158 The cement industry is characterised by high energy cost, requirement of infrastructure facilities like coal, power, railways, ports for movement, alternative processes of producing cement etc. In recent years, most of the cement plants have shifted away from wet process to dry process. The energy consumption per tonne of cement has been declining, though it still remains substantially higher than the international levels. Shortage of power, railway wagons and good quality coal are the major problem areas that have to be overcome in the Ninth Plan. The strategy for the Ninth Plan would include the following measures :

(i) Improving the capacity utilisation in the cement industry. The cement industry in the past has achieved higher capacity utilisation than has been the trend in the recent years. One of the reasons is the shortage of power. This also results in higher operating cost. Provision of sufficient and reliable capacity utilisation will have to be ensured.

(ii) Ensuring availability of good quality of coal and other raw materials viz. limestone etc. Efforts will have to be made to increase the energy efficiency of producing cement.

(iii) Cement, being a low-value, high-volume commodity, will need to be transported long distances as well as to the ports for exports. Sufficient wagons and enhanced port handling facilities will have to be ensured in order to make these activities viable on an ongoing basis.

2.159 Fertiliser : The fertiliser industry is also highly capital and energy intensive. Because of their use in the farm sector, the prices of fertilisers are kept low. The Eighth Plan had advocated removal of subsidy in a phased manner and creation of free market conditions for fertilisers. The phosphatic and potash fertilisers were decontrolled while the prices of nitrogen fertiliser are still controlled. As a result, the prices of phosphatic and potash fertilisers have increased rapidly resulting in distortions in the use of fertilisers. The over dosing of comparatively cheaper nitrogen fertilisers has serious implications for long-term fertility of soil. Table 2-39 gives the demand, production, imports and exports of nitrogenous fertiliser on the basis of the recent experience.

Table 2-39 : Demand, Production, Exports & Imports of Nitrogenous Fertiliser

(Million Tonnes)

	2001-02		2006-07
	Scenarios		
	I	II	
Demand	13.4	17.9	16.4
Production	14.0	14.0	
Imports	-	3.9	
Exports	0.6	-	

Note: 1. Scenario I for 2001-02 assumes that the subsidy on nitrogenous fertilisers is removed in a phased manner, and is consistent with the strategy outlined for agriculture. Scenario II is the counter-factual which assumes continuance of the subsidy.

2. The projection for 2006-07 is consistent with scenario I.

2.160 The pricing policy for fertilisers should aim at maintaining the nutrient contents of soil, reducing the subsidy provided and encouraging fresh investment in the sector. The choice of feedstocks for producing fertilisers is also an important issue. The cost of producing fertiliser by naphtha route is higher than producing fertiliser with natural gas as the feedstock. However, due to the uncertainty about the availability of gas, the dismantling of the APM regime in the petroleum sector would mean that naphtha would not be available to fertiliser sector at concessional rates. The question of domestic production of fertiliser versus imports will have to be looked into in view of the decontrol of fertiliser prices. The economics of setting up fertiliser plants based on LNG will also have to be considered. Import of fertilisers will require proper infrastructure (port and railway facilities) for movement of fertilisers. While setting up these facilities, note has to be taken of the fact that the demand is seasonal. A comprehensive scheme for buffer stocks will have to be implemented in view of the large and rising demand and to facilitate better utilisation of railways and port infrastructure.

The External Sector and International Dimensions

2.161 A viable external sector is an important component of a successful development strategy. It is indeed the cornerstone of all efforts at achieving self-reliance, which is one of the objectives of the Ninth Plan. Historically, India's economic relations with the rest of the world has been characterised by a certain degree of insulation from the international economy. This has, however, not prevented the periodic emergence of balance of payments crises, the latest of which was in 1991-92. The liberalisation of the external sector, following the crisis of 1991-92 indicated a substantial shift in the approach to India's external economic relations, the lessons from which need to be carefully considered in planning for the future.

2.162 The experience on the balance of payments front during the Eighth Plan brings out four very important lessons. First, the balance of payments outcome is closely influenced by macroeconomic, fiscal and monetary policies. Prudent macro-policies, of which control of the fiscal deficit, particularly the revenue deficit, is a central element, are not only essential for internal balance but also for external balance. Second, excessively high tariffs on imports often impart an anti-export bias to policies through cost escalation of imported inputs essential for exports and through pre-emption of domestic resources for the relatively high cost production of importables in the domestic economy by increasing their profitability relative to exportables. Third, the apprehension that Indian industry will be adversely affected by external competition, when import licensing is relaxed, has largely been proved to be unfounded. Overall industrial growth recovered quickly from the crisis-hit low of 1991-92. In 1994-95 and 1995-96 both industrial output and imports grew unusually rapidly, dispelling apprehensions about Indian industry's ability to take advantage of external opportunities. Interestingly, during recent years, small scale industry has grown even faster than overall industry. Fourth, the experience during the Eighth Plan demonstrates that Indian industry, particularly the small scale sector, can effectively utilise export opportunities and generate high quality employment opportunities through the export of labour intensive items.

2.163 The approach to the external sector during the Ninth Plan builds on the experience gained during the Eighth Plan and on certain emerging realities which need to be faced squarely. The actual balance of payments outcome will no doubt depend on developments in the world economy - for example, the state of international commodity prices including that of oil, world growth and the state of the international capital market, which have important bearing on India's exports, imports, invisible earnings (especially remittances), foreign investment flows and non-resident deposit flows. These are exogenous factors which are beyond the control of the country. However, the development strategy, the policy environment and internal macroeconomic balance will also be crucial determinants of the balance of payments outcome.

2.164 The maintenance of an appropriate policy-mix through the Ninth Plan is essential for consolidating and building on the strength of the external sector achieved during the Eighth Plan. Such an appropriate mix requires a close and concerted coordination of fiscal policy, monetary policy, exchange rate policy, export-import (EXIM) policy, industrial policy, foreign investment policy, external borrowing policy and external assistance policy. Furthermore, a restructuring of the policies with reference to the oil sector would be required.

2.165 Large fiscal deficits entail high government borrowing held by the Reserve Bank of India (RBI), leads to an acceleration of growth in money supply, and this, in turn, fuels inflation. Otherwise, they tend to raise the rate of interest, increasing the domestic cost of production. As a result of either effect, Indian exports become less competitive. Therefore, it is important for successful balance of payments management that the consolidated general Government fiscal deficit is steadily brought down to the levels recommended in the Plan.

2.166 The monetary policy stance of the RBI has to strike a fine balance between providing for legitimate credit needs of Government and productive sector versus controlling inflation and maintaining orderly conditions in the foreign exchange market. If money credit conditions are too loose, domestic demand will strengthen inflationary expectations and varying spreads between domestic and international interest rates will cause the Rupee to depreciate in a disorderly fashion along with excessive loss of foreign currency reserves. The more success that is achieved in reducing the fiscal deficit and pressures on the credit market from excessive demand from the public sector, the greater will be the scope for extending credit to productive sectors of the economy without endangering external payments balance.

2.167 The Ninth Plan assumes that the rapid growth of GDP would be associated with an expanding export market which supports high growth of economic activities in which the country has a comparative advantage, particularly those which are labour intensive in nature. The emphasis on exports goes beyond the need for generating foreign exchange earnings for meeting unavoidable imports, and determines to a large extent the entire production structure of the economy. There are three main considerations which need to be taken into account in this regard.

2.168 First, explicit account has to be taken of the fact that India, as a signatory to the World Trade Organisation (WTO), is committed to becoming a more open economy within a stipulated time-frame. In particular, the deadline for complete removal of all quantitative restrictions, which comes into effect during the Tenth Plan period, requires that the pre-conditions for successfully managing an open trade regime be created within the Ninth Plan period itself. Indeed, as per the existing time-table for the phasing out of quantitative restrictions on imports, a significant number of commodities will have to be taken out of the restricted list within the Ninth Plan itself. The phasing out of quantitative restrictions on imports and replacing license protection by tariff protection, appropriately calibrated to ensure orderly adjustment for domestic producers, has to be combined with providing incentives to domestic and foreign investors to expand their operations in infrastructure, intermediate and capital goods industries efficiently and taking full advantage of international trading opportunities. The possibility of a significantly higher rate of growth of imports during the Ninth Plan period and beyond both because of the commitment to import liberalisation and because of a higher rate of investment, which would still remain highly import intensive for quite some time to come, is accentuated by the fact that the country's dependence on imported energy will rise rapidly in the coming years. All these will put a strain on the balance of payments unless adequate exports are forthcoming. Thus, exports can no longer be viewed merely as an exogenous variable determined outside the planning system and would have to be planned for in a careful and realistic manner during the Ninth Plan.

2.169 Second, since domestic consumption patterns change only slowly over time, there is a high probability of transient mismatch between the domestic production structure and the domestic demand pattern, especially during periods of rapid capacity creation. In order to prevent the emergence of periodic sectoral capacity underutilisation or excess supply, which has adverse feedback effects on investment demand, exports must have the flexibility to expand rapidly for absorbing the slack. The recent slowdown in the economy demonstrates the importance of sustained export growth for maintaining the tempo of overall growth and investment. Since the Ninth Plan envisages a considerable acceleration in the investment rate, even compared to the recent past, it is not enough to ensure adequate levels of aggregate demand at the macro-level, which has been built into the Plan, but also to create the conditions for adequate demand and supply balance at the meso-level by targetting high growth rate of exports.

2.170 Third - and perhaps the most important - the greater inflow of external investment resources that has been planned for accelerating the growth rate of the economy necessitates collateral planning for the future stream of payments such as interest, dividends and capital gains. Indeed, inflows of foreign capital themselves would depend upon a credible expectation of sustained export expansion to ensure the capacity to service these flows. Although for some time external capital flows may not only meet investment requirements but also maintain the foreign exchange reserves at a desirable level, in the longer run at least the latter requirement should be met from current revenues. This implies that efforts should be made to achieve a situation where a current account deficit (CAD) coexists with a trade surplus within a reasonable period of time.

2.171 For the Ninth Plan, in a significant departure from the past practice, the target for the growth rate of exports has not been derived residually from the estimated growth rate of imports and a target level of CAD. It has been worked out on the basis of the planned structure of growth and the levels of exportable surplus that would have to be made available at a sectoral level in order to attain the targetted growth rate of the economy with sustainable level of external capital inflows. The likely growth rate of imports has, therefore, been endogenously determined, not at the commodity level as was the case earlier, but in the aggregate. This approach reflects at once both the greater uncertainty in predicting the commodity composition of imports consequent upon the present and future import liberalisation and the belief that there is a greater short-run policy influence and control over imports than over exports despite the shift to a more liberal trading regime.

2.172 It needs to be borne in mind that the ex-post value of the current account deficit is determined primarily by the difference between the aggregate investment level and the gross domestic savings in the economy. This variable is amenable to control through fiscal policies, which affect both savings and investment, and through monetary policies, particularly credit policy, which influence investment demand. For an open economy, without much controls on imports and foreign exchange, the level of imports is thus determined mainly by the level of demand, while tariffs, by influencing the relative prices, only determine the composition of imports. Given the exogenously determined level of exports, therefore, the aggregate flow of imports can potentially be regulated in a fairly sensitive manner by normal macro-economic policy instruments. For such policy instruments to be used credibly, however, it is necessary not only to ensure that the fiscal stance described earlier by both the Centre and the States is adhered to rigorously, but also for the Centre in particular to achieve a fiscal position which would allow it to operate flexibly in either direction. It is difficult to achieve a credible degree of fiscal flexibility without the Central Government budget running a revenue surplus. This is one of the reasons why the Ninth Plan lays greater emphasis on the fiscal correction by the Centre as compared to the States. In addition, until the process of fiscal consolidation is complete, exchange rate and import duty policies would need to be used in a deliberate manner in order to ensure that both the level and structure of imports are commensurate with the needs of sustainable growth and development.

2.173 In the more liberal import regime that is being visualised, however, the extent of vigilance over trade matters has to be improved significantly both in degree and quality so that the interests of domestic industry are adequately protected within the limits and procedures set by the WTO. Equally, it is important not to allow any dilution of the rights and privileges to which India is entitled under Article XVIII of GATT in respect of the management of the border regime. Furthermore, the institutional arrangements for anti-dumping measures need to be strengthened quite considerably. With greater openness, the import of differentiated products is likely to increase faster than that of relatively homogeneous commodities. The degree of sophistication required to identify and prove dumping in such differentiated products is qualitatively greater than what exists in the present system. There has to be both an early warning system operating through the Customs authorities, and also an efficient market information system which can rapidly generate the requisite data from the originating countries, both of which being closely integrated with the designated anti-dumping authority to ensure speed and transparency. This would require not only a close coordination between the Ministries of Commerce and External Affairs and the Customs, but perhaps even some redefinition of the functions and responsibilities of the different components of the system. Since such changes tend to take time and involve a certain amount of learning-by-doing, the process for creating the necessary institutional structure needs to begin immediately.

2.174 The model results indicate that the rate of growth of imports can be permitted to be 10.8 per cent per annum on an average during the Ninth Plan as compared to 11.7 per cent observed during the Eighth Plan. The Eighth Plan figure, however, is conditioned by the negative growth of imports experienced in 1991-92. Correcting for this aberration, the average annual growth rate of imports was 10.4 per cent yielding an implicit elasticity of imports to GDP of 1.5 during the Eighth Plan, which is assumed to rise to about 1.7 during the Ninth Plan. The increase in elasticity essentially reflects partly the additional import of energy over and above the trend rate observed in recent years, and partly the import of goods which have heretofore not been reflected in the import basket and which may do so consequent upon liberalisation. In the terminal year of the Ninth Plan, the total value of imports is expected to be of the order of Rs. 220,990 crore or US $ 60.7 billion at constant prices. Of this, the standard basket of imports would be about Rs.211,585 crore (US $ 58.1 billion) and the nonstandard about Rs.9405 crore (US $ 2.6 billion). Although the composition of the import basket will be determined by a number of factors. particularly the relative prices of imports, the fact, that a large part of Indian imports are of an essential nature limits the extent to which their requirements will be price sensitive. The detailed commodity-wise structure of imports expected during the Ninth Plan period under the assumption of constant relative prices, is given in Table 2-40.

Table 2-40 : Import Projections for Ninth Plan

(Rs. Million)

SECTOR	1996-97 DGCI&S	1996-97 RBI	2001-02
WHEAT	3900	4279	4787
OTHER CEREALS	5	5	8
PULSES	7069	7755	9384
JUTE	780	856	960
RUBBER	950	1042	1715
OTHER CROPS	6937	7610	7125
ANIMAL HUSBANDARY	5649	6198	5440
FORESTRY & LOGGING	7119	7809	6009
FISHING	2	2	4
COAL & LIGNITE	30817	33808	45226
CRUDE PETROLEUM & N.GAS	158802	174214	333908
OTHER METALLIC MINERALS	57038	62573	72084
NON METALLIC & MINOR MINERALS	110678	121419	126663
SUGAR	31	34	38
EDIBLE OIL	28268	31011	25874
OTH. FOOD & BEVERAGE IND.	858	941	1131
COTTON TEXTILES	2838	3114	3481
WOLLEN TEXTILES	2827	3101	3469
SILK TEXTILES	1313	1440	1613
ART.SILK AND SYNTHETIC FIBRES	3818	4188	5629
OTHER TEXTILES	2267	2487	3344
WOOD & WOOD PRODUCTS	9122	10007	10439
PAPER & PAPER PRODUCTS	27994	30711	50791
LEATHER & LEATHER PROD.	4517	4955	5542
RUBBER PRODUCTS	5060	5551	6541
PLASTIC PRODUCTS	3719	4080	3922
PETROLEUM PRODUCTS	190284	208752	154400
FERTILIZERS	27977	30695	26854
PESTICIDES	1546	1696	1899
SYNTH. FIBRE & RESIN	27653	30337	31504
PAINTS, DRUGS, COSMETICS	16038	17594	21644
OTHER CHEMICAL	99223	108854	145617
CEMENT	20	22	0
OTHER NON-METALLIC MINERAL PROD.	4201	4609	5155
IRON & STEEL	50377	55266	35261
NON-FERROUS METALS	37900	41578	56349
TRACTORS & OTH. AGRI. MACHINES	2517	2762	2509
OTHER NON-ELECTRICAL MACHINE	170271	215525	306074
ELECTRICAL MACHINE	30483	47806	73644
COMMUNICATIONS EQUIPMENT	51649	71026	64511
RAIL EQUIPMENT	6613	7255	6589
MOTOR VEHICLES	14089	44186	59886
MOTORCYCLE, SCOOTER & BICYCLES	701	769	861
OTHER TRANSPORT EQUIPMENT	24344	199081	302604
OTHER MANUFACTURING	83676	120523	179371
TOTAL	1321940	1737530	2209860

2.175 In so far as exports are concerned, the growth rate of aggregate exports has been targetted to be 11.8 per cent per annum over the Ninth Plan period. This growth rate can be decomposed into two primary factors : (a) the rate of growth of the tradable goods and services sectors; and (b) the propensity to export of these sectors. In view of the fact that Indian exports are primarily in the form of real goods (merchandise) and, with the exception of software and a minor component of consultancy services, is likely to continue to be so in the near future, an adequate approximation of the tradables sector would consist of agriculture, mining and quarrying, and manufacturing. A characteristic feature of the Indian economy has been the steady decline in the share of these sectors in GDP from 68 per cent in the First Five Year Plan to below 50 per cent in the terminal year of the Eighth Plan, as shown in Table 2-41. In other words, the (merchandise) tradables sector in India has grown at a slower pace than the economy as a whole.

Table 2-41 : Share of (Merchandise) Tradables in GDP

(per cent)

Plan Period	Share of Tradables
1. First	68.0
2. Second	66.8
3. Third	63.8
4. Fourth	61.0
5. Fifth	59.5
6. Sixth	57.3
7. Seventh	54.6
8. Eighth	51.5
1996-97	49.9

NOTE : The tradable goods sector is defined as the sum of the GDP originating in Agriculture, Mining & Quarrying, and Manufacturing.

2.176 If this trend is allowed to continue, the prospect of being able to attain the targetted growth rate of exports will become extremely difficult. It can be shown that the marginal propensity to export, or the share of exports in the incremental output of the tradable goods sectors, necessary to attain a targetted growth rate of exports (gx) is related to the average propensity to export (a), or the share of exports in the base year value of output of the tradables sector; the change in the share of tradable goods in GDP (t); and the growth of GDP (gy). In 1996-97, the value of 'a' is estimated to be 5.6 per cent and that of 't' to be 49.9 per cent. The marginal propensity to export necessary for achieving a growth rate of exports of 11.8 per cent with a GDP growth rate of 6.5 per cent at different terminal year shares of the tradables sector is shown in Table 2-42. It may be seen that if the share of tradables is allowed to drop to 46 per cent of GDP, which would be the case if the trend behaviour were to obtain, 13.6 per cent of the incremental value of production in the tradables sectors would have to be exported in order to attain the targetted growth rate of exports. This is feasible, but the marginal propensity to export would have to be nearly two and a half times the average, which may be difficult to attain in a short span of time. The Ninth Plan is, therefore, predicated on the share of tradable remaining more or less at the level attained during the terminal year of the Eighth Plan (50 per cent), which would still require a marginal propensity to export of 10.5 per cent – which is somewhat under double the average propensity to export. Even this would require considerable efforts and cannot be assumed to be achievable without active policy intervention. Although targetting an increase in the share of tradables would make the conditions less demanding, there are two arguments against it at the present juncture. First, the Ninth Plan has to take into account the need to make up the backlogs in the infrastructure sectors, which are all nontradables, without which sustained growth of either the economy or of exports will not be feasible. Second, the focus on the social sectors will also require adequate investment in order to meet the objectives of the Plan. Once the immediate urgency of meeting the backlog in the economic and social infrastructure is over, perhaps by the Tenth Plan, efforts at actually raising the share of tradable goods and services in GDP would need to be taken up in order to improve the export base of the economy.

Table 2-42 : Parameters for Attaining 11.8 per cent Growth Rate of Exports

Share of Tradables in GDP	Marginal Propensity to Export
54%	8.2%
52%	9.1%
50%	10.2%
48%	11.6%
46%	13.6%

NOTE : The relevant relationship is :

m = a.gx/[gy + dt/t]

where : m = marginal propensity to export

dt = change in the share of tradables in GDP.

2.177 The first, and possibly the most important, pre-condition for creating a more open economy, therefore, is to create an expanding production base of tradable goods and services which can not only withstand external competition, but can provide the surplus necessary to provide sufficient export earnings for meeting the import needs of the country. The second pre-condition is to create the conditions under which the export market becomes increasingly more attractive so that there is both a shift from selling in the domestic market to exports and that capacities are developed to specifically target such export opportunities. Both these conditions are inextricably interlinked, and involve the reduction and eventual elimination of the anti-export bias that has characterised the Indian economic system in the past and continues to exist to some degree even at present. There are two dimensions to this. First, the incentive structure has to be re-oriented towards investment in tradable goods and services and away from non-tradables. Second, the relative profitability of exports vis-a-vis domestic sales has to be improved. The principal instrument for achieving both these conditions is the exchange rate, which needs to be discussed in some detail.

2.178 With the steady reduction of controls in trade matters, the exchange rate has emerged as a major instrument of policy. It needs to be used firmly but judiciously to achieve steady and sustainable growth of trade, investment and competitiveness. With the introduction of almost full convertibility on the current account and also partial convertibility on the capital account, the exchange rate has already been made more sensitive to the demand for and supply of foreign exchange in the economy. This, however, may have to be tempered occasionally by strategic intervention by the Government in order to ensure that the imperatives of macro-economic policy are met. Since exports have a central role to play in the attainment of the Ninth Plan targets and in the present and future development strategy, it is suggested that the exchange rate should be viewed primarily as an instrument to affect the behaviour of exports at least until such time as the production base of the economy is sufficiently integrated with the international market and exports are robust enough to withstand periodic fluctuations in the exchange rate and in international prices.

2.179 The exchange rate not only affects the degree of price competitiveness of domestic tradables in comparison to international markets, but also determines the relative profitability of tradables *vis-a-vis* non-tradables in the domestic economy. In the present context, both the factors are of importance, and the conduct of exchange rate policy would have to take into account the somewhat different considerations that underlie the two objectives. The standard measure of domestic prices relative to the international is the real effective exchange rate, which adjusts the nominal exchange rate by the differential rates of inflation in India and abroad. During the Eighth Plan, the export-weighted real effective exchange rate (REER) of the rupee has shown considerable amplitude combining sharp depreciations with long periods of gradual appreciation, with the effect that at the end of the Eighth Plan (March 1997) the REER was 9.9 per cent above its level in March 1993, which implies that the relative price competitiveness of Indian exports on account of the exchange rate has been eroded to this extent. Matters are even worse if the effect of the exchange rate on relative attractiveness of tradables *vis-a-vis* non-tradables in the domestic economy is considered. The appropriate measure of this is not the REER, but the nominal exchange rate adjusted only by the domestic inflation rate. This measure has appreciated quite substantially over the same period by 20.6 per cent, as shown in Table 2-43. This behaviour of the exchange rate is not conducive to a steady move towards greater export-

Table 2-43 : Indices of the Exchange Rate

(Base 1993 = 100)

As on end of March :	NEER Level	NEER % Change	REER Level	REER % Change	WPI/NEER Level	WPI/NEER % Change
1993	100.0	-	100.0	-	100.0	-
1994	99.7	- 0.3	106.9	6.9	109.6	9.6
1995	91.9	- 7.8	106.2	- 0.6	111.2	1.5
1996	88.0	- 4.3	104.1	- 1.9	111.8	0.5
1997	88.8	0.9	109.9	5.6	120.6	7.9

SOURCE : Reserve Bank of India, Annual Report 1996-97

NOTES : (1) NEER = Nominal effective exchange rate
= w(i).e(i).e
where : w(i) = x(i)/x
x(i) = exports made in the ith currency
x = total exports
e(i) = index of the exchange rate of the ith currency against US$ expressed as the number of units of ith currency per US$ 1
e = index of exchange rate of the rupee expressed as the number of units of US$ to Re. 1

(2) REER = Real Effective exchange rate
= NEER.[w(i).P/P(i)]
where : P = Price index for India
P(i) = Price index of ith country

(3) WPI = Wholesale price index (domestic)

orientation of the economy. During the Ninth Plan, the exchange rate will need to be deliberately depreciated in terms of the average level of prices in the country, which would, given the targetted rate of inflation for the Ninth Plan period, imply a nominal depreciation in the range of 5 to 7 per cent per annum under normal circumstances. Such an exchange rate strategy would, to some extent, correct for the bias against tradables by leaving the relative prices of traded and non-traded goods more or less unchanged and thereby facilitate the efforts at containing the secular reduction in the share of tradables in GDP. This should also automatically lead to a depreciation of the REER in the 2 to 3 per cent per annum range, assuming that the international rate of inflation does not accelerate from its historical trend rate of 3 to 4 per cent per annum, and thereby improve the price competitiveness of Indian goods and services in the external market.

2.180 There is a point of view which holds that the exchange rate is not only an uncertain instrument of export promotion but it also has the negative effects of generating cost-push inflation and retarding external capital inflows, and that greater reliance should be placed on increases in efficiency and improvements in quality, productivity and technology for attaining greater international competitiveness. While it is no doubt true that in the longer run there is no substitute for efficiency, quality, productivity and technology, these take time to develop and may not be directly affected by public policy during the short to medium run. These attributes are expected to develop steadily over time in the Indian economy as a normal consequence of increased competition and greater integration with the international economy, and the government can play only a facilitative role. The immediate imperative is to encourage a greater degree of outward-orientation through policy initiatives, for which the exchange rate is the principal instrument.

2.181 Note, however, has to be taken of the alleged negative dimensions of exchange rate depreciation. The first argument against a policy of steady depreciation is that it is inherently inflationary and, when exports are either import-dependant or face low price elasticity of demand, may not stimulate exports in any substantial manner. Thus, the trade-off involved in exchange rate depreciation is between the negative effects of an acceleration in domestic inflation and a net export expansion effect. It is true that any effort at altering the relative price structure tends to be inflationary as the various sectors of the economy attempt to protect their relative position. This does not, however, constitute a compelling argument for not making the effort at altering the price relatives when it is desirable as a part of a development strategy. On the other hand, it does underline the need to adopt a stringent anti-inflationary policy stance as a complementary measure, which is in any case an integral component of the Ninth Plan strategy. Furthermore, in the Indian context, there is ample empirical evidence that exchange rate depreciation does have strong export expanding effect. This arises primarily out of the fact that the Indian export basket still has a very low share of differentiated or branded products, which are the category of goods that are less price-sensitive, and the bulk of exports rely principally on price competitiveness. This characteristic of the Indian export basket is likely to continue to obtain in the immediate future, and emphasises the need to follow an active exchange rate policy.

2.182 It is sometimes argued that a stable nominal exchange rate is conducive to attracting greater external capital flows, and an expectation of currency depreciation may deter such inflows by lowering the expected returns denominated in foreign currency terms. But, it should be noted that if the exchange rate gets misaligned due to inflation and macro-economic imbalances there will be expectation of depreciation, and a prolonged non-adjustment of the exchange rate will only strengthen such expectations resulting in reduced capital flows and eventual capital flight. What is called for are appropriate policies to maintain macro-economic balances and not any artificial pegging of the exchange rate. Furthermore, the real benefits of foreign investment can be realised only when these investment come in, on the basis of the intrinsic strengths of and the real factors present in the economy rather than on the basis of the implicit "capital gains" arising out of an expected appreciation of the currency. The advantage of a depreciating currency is that the foreign investment that does come in under such an expectation will not only be less speculative, but also more export-oriented in its own interest as against the greater inward-orientation of investment that relies on nominal exchange rate stability. The possibility of an outflow of existing portfolio investment arising out of an expected depreciation adds to the urgency of clearly signalling the future strategic approach to exchange rate management before the stock of such external portfolio liabilities becomes too large to risk any substantial net outflow.

2.183 There is, however, an issue as to whether the exchange rate should be depreciated gradually or devalued sharply to attain some medium run target value. If the primary emphasis of exchange rate policy is on its effect on external capital flows, then a devaluation is generally to be preferred, since it immediately improves the incentive to export and reduces the probability of generating expectations of further depreciation among foreign investors. However, such a step does not generally create the condition for a sustained shift towards greater export-orientation, particularly as far as new investments are concerned. It may also require much sharper anti-inflationary measures, which may be contractionary in the short run since the fiscal parameters are unlikely to improve sufficiently within the short period. A more gradualist exchange rate stance, on the other hand, not only improves the relative profitability of exports, albeit less than a devaluation, but also affects the pattern of investment in favour of tradables in general, and exportables in particular. It would, however, require strict management in terms of the collateral macro-economic policies, particularly to prevent generation of inflationary expectations that may accompany a process of gradual depreciation. In view of the objectives of the Ninth Plan, it appears preferable to opt for the latter strategy and address the issue of foreign investment through policies aimed at reducing and eventually eliminating the impediments which exist at present.

2.184 In recent years, the ability of the Government to determine the behaviour of the exchange rate has eroded quite significantly. Relatively large movements of financial capital and the need for monetary restraint have constrained the extent to which the exchange rate could be used as a policy instrument. In order to re-establish the primacy of the exchange rate as an instrument of macro-economic policy in an open economy, the Government has to create the conditions whereby it can intervene in the foreign exchange markets in a meaningful way. For this, binding ceilings not only on ECBs, as at present, but also some control on net FPI flows, through taxes and other disincentives, appear inescapable, at least until such time as the Indian foreign exchange market achieves sufficient depth and the foreign exchange reserves of the country are sufficiently large to withstand speculative pressures. Such restrictions on the inflow of FDI are, however, unnecessary since they are normally associated with real capital inflows, both physical and in the form of technology and services.

2.185 Exchange rate management, however, is only one of the instruments to effect a greater degree of export-orientation in the economy. Tariff reforms are an important component of the efforts at increasing competition and efficiency in the economy, and making Indian exports more competitive both abroad and also relative to import substitutes in the domestic market. The Ninth Plan will attempt to achieve international levels of tariffs, while carefully phasing out the changes, keeping in view the larger interests of the economy and the progress made on other fronts. This transition can be made without too much disruption in view of the additional protection to domestic industry that is sought to be provided through the process of exchange rate depreciation during the Ninth Plan period.

2.186 The other major contributor to altering the incentive structure in favour of exports and export-orientation is the exemption from, or reimbursement of, all taxes on exports. Although schemes for such exemption or reimbursement have been in existence for quite some time, they have been both incomplete and cumbersome. In particular, these schemes have more or less been limited to Central taxes and there has been no meaningful effort to reimburse State and local taxes, which cumulatively amount to a fairly heavy burden. One of the reasons for lack of movement in this area is that the State Governments by and large do not perceive any direct benefits from participating in the export promotion effort. Moreover, the difficulties in effecting such reimbursement in the existing system of State and local taxes can be formidable. The Central Government will need to take a lead in this matter not only to create a sense of involvement and interest among States in exports, but also to evolve the modalities of achieving an administratively tractable reimbursement mechanism. This may involve a certain amount of restructuring and rationalisation of State and local tax systems, and will have to be considered in the broader framework of tax reforms.

2.187 In addition to the above specific measures, the policies in general must be supportive of sustained high export growth. This includes streamlining of customs and banking facilities and procedures for exporters, removal of the remaining quantitative restrictions on exports (including most agricultural products), implementation of special schemes for exporters to allow them duty-free access to imported inputs, preferential access to exporters for external commercial borrowing approvals, and special efforts to release infrastructure bottlenecks which are hampering the export effort. Other policies necessary to strengthen the export effort include :

(i) Enhancement of investment limit of the SSI sector against committed export obligation to encourage production base for exports.

(ii) Special efforts and policy measures to reduce transactions costs of foreign trade.

(iii) Implementation of Electronic Data Interchange (EDI) in a time-bound manner covering export facilitation sectors like banking, transport, insurance, trade information etc.

(iv) Effective involvement of States in export effort including removal of inter-State barriers/levies for free movement of export goods.

(v) Strategic support to the exporting community to upgrade marketing and information skills, standardisation of quality and common facilities for research, development and training through budgetary resources.

(vi) Developing new instruments specifically for export finance and insurance schemes for various tradable commodities.

(vii) Enhancement and upgradation of export-related infrastructure, such as ports, shipping, airports, etc. and ensuring that the costs associated with these activities are brought at par with international rates.

(viii) Enhancement and upgradation of overall infrastructural facilities, particularly in respect of power, transport and communication facilities.

2.188 It is expected that with a concerted effort on all the fronts described above for export promotion and creation of conditions for greater export-orientation of the economy, the rate of growth of exports during the Ninth Plan period will attain the targetted level of 11.8 per cent per annum to yield a terminal year (2001-02) value of total exports of Rs. 205,070 crore or US$ 56.3 billion in real terms. The detailed commodity-level break-up of this figure, on the basis of the projections made, is given in Table 2-44.

Table 2-44 : Export Projections for Ninth Plan

(Rs. Million)

SECTOR	1996-97 DGCI&S	1996-97 RBI	2001-02
PADDY	31458	32489	19670
WHEAT	6790	7012	17503
OTHER CEREALS	487	503	840
PULSES	1279	1321	0
JUTE	158	165	275
COTTON	16042	16568	25495
TEA & COFFEE	24059	24847	44104
OTHER CROPS	17288	17855	23789
ANIMAL HUSBANDARY	8124	8390	14456
FORESTRY & LOGGING	649	670	1119
FISHING	40221	41539	75350
COAL & LIGNITE	766	791	1320
CRUDE PETROLEUM & N.GAS	1061	1096	1608
IRON ORE	17139	17700	29470
OTHER METALLIC MINERALS	3641	3760	4396
NON METALLIC & MINOR MINERALS	7484	7729	11537
SUGAR	6290	6496	8937
EDIBLE OIL	9226	9528	10826
OTH. FOOD & BEVERAGE IND.	83552	86288	115869
COTTON TEXTILES	110365	113980	212194
WOLLEN TEXTILES	3553	3669	7254
SILK TEXTILES	4296	4436	4403
ART.SILK AND SYNTHETIC FIBRES	25250	26076	59467
JUTE, HEMP., MESTA TEXTILES	4582	4732	6364
READYMADE GARMENTS	132748	137095	249770
OTHER TEXTILES	40056	41367	78756
WOOD & WOOD PRODUCTS	1333	1377	1549
PAPER & PAPER PRODUCTS	5333	5508	9034
LEATHER & LEATHER PROD.	55089	56893	79512
RUBBER PRODUCTS	12086	12482	16708
PLASTIC PRODUCTS	18833	19450	34825
PETROLEUM PRODUCTS	17079	17638	22022
FERTILISERS	0	0	5840
PESTICIDES	1198	1237	2064
SYNTH. FIBRE & RESIN	2946	3042	5076
PAINTS, DRUGS, COSMETICS	53641	55398	99364
OTHER CHEMICAL	48349	49933	88437
CEMENT	0	0	8000
OTHER NON-METALLIC MINERAL PROD.	169360	174901	293782
IRON & STEEL	27556	28459	42882
NON-FERROUS METALS	22613	23354	25051
TRACTORS & OTH. AGRI. MACHINES	192	198	187
OTH. NON-ELECTRICAL MACHINE	39588	40885	71627
ELECTRICAL MACHINE	479	495	601
COMMUNICATIONS EQUIPMENT	30403	31399	99024
RAIL EQUIPMENT	328	339	405
MOTOR VEHICLES	24504	25306	35952
MOTORCYCLE, SCOOTER & BICYCLES	7875	8133	8178
OTH. TRANSPORT EQUIPMENT	339	351	585
OTH. MANUFACTURING	37822	39061	75263
TOTAL	1173510	1211940	2050740

2.189 These export projections are based primarily on the supply-side possibilities under the assumption that for the most part Indian exports are unlikely to be constrained by lack of international demand provided that the price and quality factors are adequately taken care of. However, cognisance has to be taken of the possibility of various potential barriers to exports emerging in the future. In recent years, a number of non-tariff barriers to Indian exports have emerged with varying degrees of effect. In certain cases, such as on issues involving child labour and environment, there is little that can be done at the level of economic policies and institutions, and reliance will have to be placed on diplomatic initiatives for explaining the wider ramifications of the problem while taking appropriate steps at home to prevent any abuse. In other cases, however, such as quality or hygiene-based and anti-dumping restrictions, there is need to evolve mechanisms through which such measures can be anticipated and the appropriate steps taken to enable Indian industry to adapt or respond to them. Such indirect restrictions are likely to become more pronounced as the existing controls on trade in agricultural products and the Multi-Fibre Arrangement (MFA) are phased out under the WTO. The principal instrument for addressing such problems would again be a pro-active and responsive system of economic intelligence monitoring and dissemination which needs to be created expeditiously.

2.190 With the intellectual property rights issues getting linked to trade matters under the WTO, there is a need to take appropriate initiatives at the national as well as international levels to prevent this from emerging as an area of concern. The domestic IPR mechanism also needs to be strengthened in order to ensure that common intellectual property and local traditional knowledge are granted adequate protection, on the one hand, and to withstand unilateral restrictions being placed on transfer of technology on the ground of 'dual use', on the other. There is also a need to recognise that the grant of product patents in accordance with the WTO provisions in effect confers quasi monopoly powers. The standard and widely accepted device to ensure that such monopoly powers are not used to the detriment of the consumers is to establish independent regulatory mechanisms. It is, therefore, necessary to identify areas where such problems may occur and to establish regulatory authorities as and when required.

2.191 Furthermore, a strategy will need to be evolved for meeting the challenges of inter-regional blocs. It needs to be remembered that under the WTO, preferential tariff areas or customs unions are expected to have a common set of tariffs such that the tariff rate on any product must be equal to or less than the lowest rate prevailing in any member country prior to the formation of the bloc. In view of this, all the trade-offs will have to be fully evaluated before joining the existing trade blocs until such time as the Indian tariff rates are brought close to those of the potential partner countries.

2.192 While the Ninth Plan does seek to reduce the level of protection substantially in the country and thereby create the conditions conducive to joining the existing trade blocs, it will be desirable to place special emphasis on the development of regional initiatives in trade and investment under the broad aegis of SAARC. Efforts at realising the objectives of SAPTA, and eventually SAFTA, are critical for building upon the potential synergies that are available in the South Asian region. Studies have shown that the possible gains from considerable liberalisation of trade within the SAARC region are substantial with very little risk. These gains go beyond trade and investment. Regional cooperation can yield even greater potential dividends in a number of non-traded products such as power, transport and water resources, which need to be explored with greater vigour.

2.193 External capital flows have always played, and are expected to continue to play, an important supplemental role in overall resource availability for investment in the country. Considerable attention has been paid to this issue in the context of a number of aspects of Plan formulation. It has been repeatedly emphasised that foreign direct investment has a special role to play in the development strategy that is envisaged for the Ninth Plan in comparison to the other forms of external capital. Although foreign direct investment flows into India have been increasing steadily, attracting higher levels of direct foreign investment in high priority infrastructural sectors such as power, telecommunication, roads, ports, etc. the removal of all policy barriers is necessary for improving the facilities in these sectors and achieving an acceleration in the GDP growth during the Ninth Plan. An inadequate policy and regulatory framework continues to inhibit direct foreign investment in infrastructure and this problem will have to be redressed. This aspect of FDI is by now well accepted in India. However, there is a need to go beyond this. In a situation where the extent of import competition is expected to rise through gradual reduction in tariff and non-tariff barriers, there is no logical or compelling reason to deny access to foreign investors in industries where imports are freely allowed. The growth and employment effects of such investments are certainly more beneficial than the mere availability of the products that occur through the import route.

2.194 It is sometimes argued, however, that in recent years a significant proportion of FDI has been utilised in the acquisition of Indian companies and not in the creation of new productive assets and as a result FDI has involved only a change of ownership of existing assets rather than an increase in the productive capacity of the economy. Further, it is claimed that this trend may be accentuated in the future, with greater incidence of hostile take-overs of Indian companies, if FDI inflow is further liberalised. Arising from this, a case is made for protection of Indian companies from take-overs through restrictions on the investment behaviour of foreign corporations. It is difficult to assess the validity of this argument without a full assessment of the deployment of the new investible resources that become available to domestic entrepreneurs through this process. However, there is no doubt that the real benefits of FDI occur either when new capacities are created in the economy or when the existing capacities are made more efficient and competitive, particularly for addressing export markets. Consideration, therefore, needs to be given to evolving methods of ensuring that FDI flows add substantively to the productive capacity of the nation and to suitably amend the Monopolies & Restrictive Trade Practices (MRTP) Act for preventing abridgement of competition through take-overs and mergers.

2.195 The balance of payments position of the economy and its mode of financing projected for the Ninth Plan period is given in Table 2-45. As may be seen, the inflow from net invisibles, including factor payments, is projected to decline, which primarily reflects the effect of higher servicing needs on account of external capital flows. As a result, the current account deficit is expected to grow faster than the deficit on the trade account. On the other hand, it should also be noted that the financing of the CAD envisages a higher level of FDI flow and lower levels of FPI and external debt.

Table 2-45 : Balance of Payments and Its Financing in the Ninth Five Year Plan

(Rs.'000 crores in 1996-97 prices)

	1996-97	2001-02	Ninth Plan
Exports	117.3	205.1	800.9 (10.4)
Imports	132.2	221.0	936.1 (12.2)
Trade Balance	-14.9	- 15.9	- 135.2 (-1.8)
Net Invisibles	0.5	- 2.0	- 24.6 (-0.3)
Current A/C Balance	-14.4	- 17.9	- 159.8 (-2.1)
Financed by :			
Net External Assistance	0.5	1.0	7.7 (0.1)
Net External Debt	15.5	5.9	53.9 (0.7)
FDI	8.7	10.7	92.3 (1.2)
Net FPI	9.3	4.8	23.1 (0.3)
Total Capital Inflow	34.0	22.4	177.0 (2.3)
Change in Reserves	20.8	4.5	17.2 (0.2)

NOTES : (1) Repayment of IMF loan has been adjusted against external assistance in 1996-97.
(2) Net external debt includes NRI deposits and short-term credit.
(3) Figures in brackets are percentages to GDP.

2.196 The Ninth Plan will ensure that the process of attaining the prerequisites for capital account convertibility is begun. The Committee on Capital Account Convertibility (CCAC) set up by the Reserve Bank of India (RBI) has outlined the minimum conditions under which capital account convertibility can be reasonably considered. These include first a set of macro-economic targets, which are: (a) the fiscal position is brought under control so that the gross fiscal deficit of the Central Government is below 3.5 per cent of GDP and a significant reduction in the borrowing needs of States and PSEs is achieved; (b) inflation is brought under control to the range of 3 to 5 per cent; (c) external debt service ratio is reduced to 20 per cent of current external receipts; (d) the level of minimum foreign exchange reserves is determined so as to satisfy four distinct parameters, and not merely on the existing norm of three months of imports. It is felt that in addition to the recommendations of the CCAC, two less quantifiable conditions would also need to be met. These are : (a) the availability and costs/ prices of nontraded goods and services which are critical inputs into production and distribution, and which therefore determine competitiveness of the tradable goods sectors, are not significantly out of line with those prevailing internationally; and (b) Indian exports are sufficiently robust so as to withstand periodic fluctuations in the exchange rate and in international prices.

2.197 The Ninth Plan is based on the attainment of a 4.1 per cent gross fiscal deficit to GDP target for the Centre by the terminal year. However, it appears unlikely that the borrowing needs of the States and PSEs can be curtailed sufficiently during this period without jeopardising the attainment of the Plan objectives. Secondly, the Ninth Plan is targetting an inflation rate in the 5 to 7 per cent range in order to provide sufficient elbow room to effect the necessary corrections in the relative prices of agricultural products and infrastructural facilities, on the one hand, and to ease the process of fiscal consolidation, on the other. It may not be either feasible or even desirable to compress inflation further to the levels recommended by the CCAC at this stage. Third, while the external debt service ratio is likely to attain the level stipulated by the CCAC by the end of the Ninth Plan, meeting the desired foreign exchange reserve position may not be easy. It may be noted from the analysis of BOP sustainability described earlier that increases in the rate of growth of reserves reduces the sustainable level of CAD as a percentage of GDP. This will have adverse implications on the growth performance of the economy, unless the additional reserve accretion is based on higher **FDI** flows. Finally, the process of benchmarking the infrastructural sectors to international standards of cost and quality is only just beginning. Moreover, correction of the anti-export bias in policies leading to a requisite degree of export-orientation also has some distance to go before the desired robustness of exports can be attained. Therefore, although the Ninth Plan will begin the process of moving towards capital account convertibility, it is unlikely that all the pre-requisites will be met by the end of the Plan period.

2.198 In addition to the macro-economic pre-requisites, the CCAC has also recommended certain minimum conditions pertaining to the financial sector. These include : (a) an uniform regulatory framework for all financial institutions; (b) the nonperforming assets of the banking sector to be brought below 5 per cent of total credit outstanding; (c) cash reserve ratio (CRR) of banks to be reduced to 3 per cent of net demand and time liabilities (NDTL); and (d) tighter prudential norms to be established than required by international practice. While these conditions may be desirable in themselves, they have to be seen in the context of the role and functioning of the financial sector in the development strategy and will be taken up in the following section.

Issues in Financial Intermediation

2.199 The Ninth Plan, is based on the assumption that all available savings or investible resources in an economy are utilised in creating productive capacity through investment. This may not necessarily always be the case. The extent of transformation of desired savings into investment is largely determined by the process of financial intermediation and the ability of the financial sector to not only mobilise resources but also to channelise them in a manner desired by the investors. This function becomes increasingly more important and demanding as an economy grows in complexity. In addition, the efficiency of the financial intermediation process can also affect the desired level of savings in the economy by altering the expected returns to savings.

2.200 The financial sector in India has developed quite substantially in both size and sophistication during the past three decades. The nationalisation of the commercial banks in 1969 led to a rapid growth and spread of banking services all over the country. The sharp increase in financial savings by households, during the 1970s can be largely traced to the spread of banking in the economy. A further fillip was given by the emergence of the non-bank financial companies (NBFCs) in hire purchase and leasing finance and the boom in the stock markets in the early 1990s arising out of the liberalisation of the financial sector. Despite these favourable developments, it is becoming increasingly apparent that the financial sector in India needs to develop further and faster if the growth rate of the economy of 6.5 per cent per annum and more is to be attained during the Ninth Plan and sustained thereafter.

2.201 Recognition of the critical nature of the financial sector prompted the Government to set up a Committee on the Financial System (Narasimham Committee) in 1991 to examine all aspects relating to the structure, organisation, functions and procedures of the financial system. The deliberations of the Committee were guided by the demands that would be placed on the financial system by the economic reforms taking place in the real sectors of the economy and by the need to introduce greater competition through autonomy and private sector participation in the financial sector. Despite the fact that the bulk of the banks were and are likely to remain in the public sector, and therefore with virtually zero risk of failure, the health and financial credibility of the banking sector was an issue of paramount importance to the Committee.

2.202 Most of the measures suggested by the Narasimham Committee have been accepted by the Government and implemented to a substantial extent. The recommendations regarding reduction in the statutory liquidity ratio (SLR) and the cash reserve ratio (CRR) have more or less been effected with the SLR having been reduced to the recommended level of 25 per cent and the CRR to 10 per cent. In so far as the prudential norms are concerned, banks have moved towards greater transparency through adoption of recommended income recognition and asset classification norms. The balance-sheets of banks have also been made more transparent and provide greater disclosures to reflect the new accounting procedures. Most banks have also achieved a capital adequacy ratio (CAR) of 8 per cent in relation to their risk-weighted assets in conformity with the standards set by the Bank for International Settlements (BIS). To a large part this has been achieved by considerable injection of recapitalisation funds by the Government, particularly to the weaker public sector banks. The stronger nationalised banks have been permitted to access the capital market for raising equity funds in order to maintain the desired level of CAR at higher levels of operation. This has also initiated the process of private participation in the public sector banks. In addition, entry of private banks is being permitted with stringent entry conditions and strict adherence to prudential norms. At present ten new private banks have become operational. In line with the recommendations, a Board for Financial Supervision (BFS), assisted by a Department of Supervision in the RBI, which is authorised to exercise the powers of on-site inspection and off-site supervision of banks, financial institutions and non-bank financial companies has been functional for the banking sector since November 1994, which has also started supervising the operation of other financial institutions. However, the duality of control over banks by both the RBI and the Ministry of Finance continues to obtain.

2.203 Despite these significant steps at financial sector reform, certain areas of concern remain. The main area of concern relates to the ability of the financial sector in its present structure to make available investible resources to the potential investors in the forms and tenors that will required by them in the coming years. In a very stylized sense, the requirement of investment funds for productive investment can be divided into three broad categories - equity, long-term debt, and medium- and short-term debt. The proportion in which different forms of funds are required depends on the nature of the activity and the sector in which the investment is proposed to be made and on the perceptions regarding the future developments in the financial sector. Although there is some flexibility in these proportions, by and large not too much variation in either the debt:equity ratio or the term structure of debt appropriate for the particular industry is either possible or desirable from the point of view of both the lenders and the borrower. Thus the desired sectoral and institutional investment pattern in the country gives rise to a particular structure in which investible funds would need to be made available. If the financial sector is unable to provide the funds in the three broad categories in more or less the same proportion as required by the demand, the possibility is that there could simultaneously exist excess demand and excess supply in different segments of the financial market. In such a situation, the segment facing the highest level of excess demand would prove to be the binding constraint to investment activity and effectively determine the actual level of investment in the economy. It is therefore entirely possible that the level of aggregate investment could fall short of the aggregate supply of investible resources not because of a lack of investment demand, but because of a mismatch between the structures of the demand for and the supply of investment funds arising from an inadequately developed financial sector.

2.204 In an efficient and integrated financial market, much of these problems is resolved through movement of funds between various types of financial institutions and instruments, and also by portfolio reallocation by the savers, in response to differential movements in the returns to the alternative financial instruments. Frequently, new instruments are also developed to meet specific investment needs. Even in such relatively efficient markets, aberrations can arise due to the fact that the rates of return in financial markets, unlike prices in goods markets, have to be qualified by risk factors, and are therefore susceptible to problems arising out of asymmetric information and speculative behaviour. Issues of "adverse selection" and "moral hazard", characteristic of imperfect information and incomplete markets, are present even in the most developed and sophisticated financial systems. The Indian financial sector, however, has yet to attain this degree of integration and maturity, and can be characterised as a fragmented market. By and large, there is very little movement of funds between the various segments of the Indian financial sector in response to the discrepancies in the demand and supply positions. To make matters worse, most segments of the Indian financial sector are specialised in providing only a limited component of the investment portfolio and are either restricted from or technically incapable of addressing the demand for other components. As a result, both the quantum and pattern of investment in the economy are determined primarily by the portfolio decisions of the savers, and it would be entirely fortuitous if the savings portfolio more or less matches the desired structure of investment.

2.205 Earlier, the potential mis-match between the patterns of demand for investible funds and the supply was not of much consequence since there was a situation of pervasive excess demand in all segments of the market, arising primarily out of the high level of preemption of financial savings by the government and a substantial proportion of directed lending. With the considerable expansion and liberalisation of the financial markets in recent years, both through higher rates of savings and external capital flows and through reduction in the preemptive and directive role of the government, the problems arising out of the non-integration of the financial sector are likely to become increasingly more acute. Unless efforts are made to identify the emerging structure of investment demand, particularly from the private sector, and to reorient the functioning of the financial sector accordingly, not only may there be a problem in attracting investment in those areas which are of national importance, but also the possibility exists of inadequate utilisation of investible resources leading to a slower rate of growth than would be potentially justified by exante savings. In addition, an excess supply of funds in one segment of the financial sector carries the danger that such funds may be used for speculative purposes in foreign exchange, real estate or commodities, which create their own problems in economic management.

2.206 As has been repeatedly emphasised, private participation in economic infrastructure sectors and basic industries will need to be increased significantly in the coming years. These activities tend to be characterised by heavy investments, long gestation lags and long pay-back periods, which require the commitment of long term funds, both as equity and long term debt. In the past, since these sectors were predominantly catered to by public investment, the need to develop appropriate financing mechanisms was not felt. As a result, the Indian financial sector is heavily biased towards short and medium term debt, whether it be the commercial banking sector or the development finance institutions (DFIs). Unless the availability of equity and long term debt to the private sector is increased substantially in the coming years, the likelihood of adequate private investment in these sectors appears to be remote.

2.207 The most fundamental basis for all investment activity is equity, and its likely availability needs to be considered with some care. Although India has a fairly well developed secondary market in shares, the primary issues market has historically been fairly small and sluggish, except for a short period of intense activity during the early and mid 1990's. One of the reasons for the slow growth in the primary market has been the tendency for the major corporates to rely more on internal accruals for providing equity funds than to dilute share holdings through public issues. There is no reason to believe that this pattern will change in the near future. Even foreign companies in India tend to hold their shares quite closely and therefore do not contribute in any meaningful manner to the development of the equity market. Rapid growth in the infrastructural sectors will therefore require that relatively new firms enter the market by raising sizeable equity from the public, unless the existing corporate sector becomes considerably more aggressive in its expansion plans. In the alternative, excessive reliance may have to be placed on attracting foreign equity inflows to bridge this shortage.

2.208 Unfortunately, the recent experiences in the share market, particularly in primary issues, has led to a withdrawal of the small investors from participation in these markets. While the negative developments like the stock market scam may have only short run effects, there are basic deficiencies which may have a longer run effect unless corrected. With the deregulation of the share market through the closure of the Controller of Capital Issues (CCI) and the establishment of the Securities and Exchanges Board of India (SEBI), and greater freedom being given to promoters for determining the premium on equity issues, there has been a tendency for pricing shares on an excessively optimistic basis. This was permitted by a booming secondary market and a basic lack of information, knowledge and analytical skills among the small investors. Theoretically, share premia should be determined on the basis of the expected future stream of returns and the likely capital gains that arise from secondary trading. These are dependent not merely on the performance of the company and the overall level of activity and liquidity in the secondary market respectively, but primarily by the extent to which the specific share is traded, whereby the underlying fundamentals get reflected in the market price of the share. In the absence of adequate secondary trading, the quoted share price is of little significance since it is determined by marginal transactions, often only by insiders, and genuine investors may find it virtually impossible to buy or sell the share in the market at rational prices. The use of a general share price index is therefore not a proper basis for determining the likely premium that a specific new issue should command. This is particularly true when the most readily available share price indices are composed of the most heavily traded shares and are not necessarily reflective of the state of the segment to which the new issue belongs. Uncritical acceptance of such a basis for pricing of new issues by relatively ill-informed investors can lead to the phenomenon of pervasive over-pricing. The result of having excessively high share premia on the basis of the movement of general share price indices has been a considerable loss of confidence among the small investors, who have lost fairly substantially in the recent past on account of insufficient secondary market transactions in most scrips and the consequent lack of liquidity in the over-priced shares. Frequently such shares have also traded well below their issue prices, which has not been reflected in the indices, and thereby permitted the aberration to continue for extended periods.

2.209 There is no case for reintroducing the office of the Controller of Capital Issues. However, institutional improvements in the market are needed to ensure that excessive over-pricing of primary issues does not occur on a regular basis. The SEBI has clearly and correctly indicated that it would not perform the function of determining the issue price of shares and that this should be determined by more market based arrangements. The principal tasks to be performed by SEBI are to ensure investor protection through transparency in the capital markets and full disclosure by the promoters and to prevent market manipulation. While transparency and disclosure are undoubtedly essential, they only provide the information base which, combined with strong analytical skills, enable a proper determination of the issue price. The appropriate institutions for this purpose would be the merchant bankers and the issue managers, who are not only responsible for advising the clients but also for ensuring that the issue is picked up by the market or that the underwriting functions are carried out smoothly. Unfortunately the track record on this account is not particularly good. In order to bring greater discipline into the primary issues market it is suggested that the conditions for recognition of lead merchant bankers and their supervision be made more stringent. This role would have to be carried out by SEBI and appropriate institutional arrangements would have to made for expeditious and rigorous implementation of enhanced penal provisions. The other source of discipline in issue pricing could be the major financial institutions which would act as the intermediary for the small investors. In the Indian case, however, neither the banking system nor the development financial institutions are involved in any significant manner in the primary issues market. A number of mutual funds were set up in the earlier 1990's in order to play this intermediary role. These too could not effectively perform the disciplining function and most of them withdrew from the primary market and started focussing excessively on the secondary market and in debt instruments. With the decline in the stock market, most of the mutual funds have suffered serious erosion in their net asset values (NAVs). The involvement of mutual funds in the primary issues market, however, is essential for the healthy growth of industry and revival of investor confidence. Earlier efforts at encouraging mutual funds were centered around tax concessions. While these are useful, they are not a substitute for demonstrated expertise in investment appraisal and asset management; and tax incentives should be granted, if at all, only primarily to encourage greater focus on primary markets.

2.210 In order to revive confidence in the equity market a number of steps need to be taken. First, the tendency to list new issues on the major stock markets needs to be checked. Shares should be quoted on the major stock exchanges only after they have established adequate track records in terms of trading behaviour. The existing classification system of grading shares adopted by most major bourses may not be adequate for this purpose, unless distinct indices are developed and publicised for each category, and every new issue is placed in a specific category by the concerned exchange and ratified by SEBI. Another methodology would be to have a distinct exchange for new issues with well-defined graduation criteria for listing in the major exchanges. The Over the Counter Exchange of India (OTCEI) was established essentially for this purpose, but has remained more or less non-functional due to the lack of adequate market-making efforts. This institution needs to be revived and energised, and all new issues should be listed first with the OTCEI and should be allowed to graduate to the major exchanges only on the establishment of a minimum track record. This would have the advantage of bringing a certain amount of discipline in the matter of setting issue prices. In order to energise the primary market and the operation of the OTCEI it is suggested that market-making efforts be broadened by encouraging further participation of the major financial institutions, including banks. Furthermore, in order to increase the level of liquidity, foreign portfolio investments should be permitted freely in these two segments over and above the limits placed on their activity in other markets and instruments. In addition, the restrictions on forward trading activities such as "badla" and other derivatives should be less stringent in the OTCEI than in the major exchanges. Another method to bring rationality into issue pricing would be to introduce "Issue Houses", which would have to take responsibility for providing equity funds even before the shares are sold to the public.

2.211 In so far as long term debt is concerned, at present the Government monopolises practically all sources of long term funds, such as insurance, pension and provident funds. Earlier there was a certain logic to this in the sense that since the Government was practically the only investor in capital intensive long gestation projects, its needs for such funds was of overriding importance. With the desired shift in investment responsibilities, it has become necessary for the Government to vacate some of this space for the private sector. In addition, there is need to create conditions whereby savers are attracted towards investing in long term debt instruments, which are practically non-existent today.

2.212 The insurance sector has been an important source of low cost long term funds all over the world. This is permitted by the fact that most insurance companies operate in only two major areas - risk cover and annuities - which do not require payment of interest or repayment of the principal respectively. In the Indian context, however, the insurance companies, particularly in life insurance, also tend to act as investment funds in the sense that they not only provide risk cover but are also committed to repayment of the principal with interest, although with long maturities. One of the reasons that this has happened is that the average premium charged by the insurance companies in India tend to be relatively high due to obsolete and rigid actuarial practices and inefficient operations. There is a pressing need to reorient the insurance sector in India in a manner that it fulfills its principal mandate of providing risk cover. It is unlikely that this sector would attain the requisite degree of efficiency and professionalism unless it is exposed to a certain degree of competition. A comprehensive package consisting of restructuring of the existing institutions and introduction of domestic private sector participation will need to be implemented. A blue-print for such a restructuring already exists, and the necessary legislation to bring about some of these changes has been introduced in Parliament.

2.213 The other principal source of long term funds internationally has been the various forms of contractual savings such as pension and provident funds. In India, although the quantum of resources available in such funds is quite considerable, they have not played their legitimate role in providing finances for growth and development in an adequate manner. The attitude towards such funds in India has been excessively focussed on safety and security rather than on returns. As things stand today, the responsibility of the management of such funds is either that of the Government or of the employer. This, coupled with the regulatory framework, has led to a situation where such funds have been deployed only in Government securities or in "trustee bonds", which are generally also public debt instruments. As a result, the returns to the employees, who are the legitimate owners of these funds, is determined primarily by the interest on Government debt. In a situation where efforts are sought to be made in lowering the interest on public debt, such restrictions would reduce the returns to these funds. However, efforts at widening the portfolio of these funds are unlikely to be successful unless the pattern of management and responsibility is changed significantly. In the present situation, where either the Government or the employers, in the form of trustees, are responsible for the deployment of these funds, risk averse behaviour is only to expected, and merely enabling a more diversified portfolio may not be of much significance. It is suggested therefore that in the case of organised labour, which are the groups presently covered under such schemes, the responsibility for management of provident and pension funds should be vested in associations of employees and workers, such as the recognised trade unions or any other institutional arrangement that may be deemed appropriate. Since a direct nexus would thereby be drawn between the management of these funds and the beneficiaries, the likelihood of taking greater risks for higher returns would be increased. Typically such arrangements also involve professional asset management companies which provide the expertise for obtaining the best returns for their clients. Such arrangements also need to be encouraged. The Government's efforts in this direction should be redirected to providing the prudential guidelines and supervisory functions, on one hand, and to widen the coverage of contractual savings by bringing unorganised labour also within the ambit of such schemes, on the other.

2.214 As far as the creation of a debt market is concerned, particularly for long term debt, much more concerted efforts need to be made. At present, in the absence of such a market, practically all debt instruments are held to maturity, and this illiquidity reduces the attractiveness of debt instruments, particularly those of longer maturity. The National Stock Exchange (NSE) was originally set up as a market for debt, but has over time become essentially a market in equity and has thereby not fulfilled its principal charter. The main reasons for this appear to be the fact that public debt instruments, which set the benchmark or the reference rate, are issued in denominations which are much too large for the average investor, and that there has been an inadequacy of market-making activities. The present structure of stamp duties too have had a dampening effect on generating sufficient debt market activity. The efforts at creating a debt market need to be revived with full vigour. As a starting point, the National Stock Exchange should be encouraged to increase its involvement in debt instruments, for which the Government would have to issue public securities of appropriately low denominations. This would no doubt increase both the cost and the uncertainty faced by the Government in terms of its debt raising efforts, but it would be a small price to pay in order to generate a healthy debt market in the country in which not only financial institutions but also other companies and even individuals can participate. More importantly, once the interest rate on public debt instruments becomes the reference rate, it would considerably enhance the effectiveness of monetary policies in the country, and the dependence on the CRR as an instrument of monetary control can be reduced.

2.215 Until the secondary debt market becomes sufficiently active so as to be able to absorb debt instruments of various maturities, there is a case for the Central government to move its debt portfolio towards the shorter end of the maturity spectrum which would increase the liquidity in the debt market. This would be consistent with the recommendation for the Centre to vacate more space in SLR placements in favour of States and PSEs. A major source of illiquidity in the debt market is the cost of funds to the primary dealers which are too high to make investment in government securities remunerative. This problem would need to be tackled if treasury bills are to be used as the main instrument for creating and energising the secondary debt market. Since there is an integral relationship between the emergence of the treasury bill rate as a credible instrument of monetary policy and the reduction in the CRR, it is suggested that the banks should be permitted to utilise a part of the CRR funds for investment in the secondary T-bill market once the institutional arrangements have been established instead of depositing these with the RBI. Over time these funds can be gradually released for more diversified investment, thereby achieving the target CRR level in a phased manner. The Government can also utilise the debt of PSEs held by it both to activate the debt market and to provide investible funds for public investment. In order to do so, the Government would have to securitise its loans to PSEs, which could then be floated in the market. The advantage of such instruments is that they not only would be relatively risk-free, since they are implicitly guaranteed by the Government, but would also carry interest rates which would be sufficiently high so as to make trading feasible for the market-makers.

2.216 The second area of concern relates to the relatively high rates of interest that prevail in the country. Interest rates are no doubt related to the rate of inflation in a trend sense, but this relationship is primarily with respect to the rates received by the savers. With a decrease in inflationary expectations in the economy, the nominal deposit rates should be amenable to reduction without materially affecting the expected real returns to savers. There are two dimensions to this. First, the actual rate of inflation would need to be brought down to its target level and maintained at that level for a sufficient period of time for inflationary expectations to be adjusted downwards. Second, the Government would have to clearly signal its anti-inflationary stance in a credible manner. The conduct of monetary policy is one method of doing so, but it may not be generally discernible to the average saver. On the other hand, the rates of interest offered by the Government on its borrowings also offer an indication of the Government's inflation expectations, and should be consistent with the target inflation rate. A starting point could be the interest rates offered on the various small-saver schemes operated by the Government. Since these schemes are in direct competition with the deposit raising activities of banks and other financial institutions, a general reduction in deposit rates cannot be achieved without a lowering of the interest rates applicable to these schemes. The interest rates paid by the borrowers, however, though based on the deposit rates, are also determined by the level of efficiency of the financial system. The spread between the deposit and lending rates in India are much too high by international standards and reflect both the constraints faced by and the relatively low level of efficiency in the financial intermediation system. Long-run competitiveness of the economy cannot be ensured unless these spreads are brought down to at or near international levels. Although in recent years there has been considerable liberalisaion of the banking sector along with a tightening of prudential norms and practices, which have led to an improvement in the health of the banking sector, there are some areas of concern which need to be examined.

2.217 The Narasimham Committee had recommended deregulation of the administered interest rate structure on attainment of a reasonable degree of macro-economic balance through a reduction in the fiscal deficit in order to control increases in the nominal interest rates. However, there has been considerable deregulation of interest rates such that almost all lending rates and deposit rates over one year maturity are now determined by individual banks on the basis of their asset-liability mix. Deposit rates for one year maturity have been linked to the "bank rate", which is the rate charged by the RBI on its general refinance facility. The Narasimham Committee had envisaged the bank rate to be an anchor to be used by RBI to signal changes in the direction of the level of interest rates. However, the bank rate in its present form can acquire significance only in a situation of tight liquidity during which recourse to refinancing would be taken by banks. Even in such cases, the over-all limit on general refinance appears to be too low for the bank rate to act as a meaningful reference rate. Consideration needs to be given to making the bank rate an effective instrument of control of interest rates during periods of liquidity stringency by enhancing the refinance limit substantially. This would have implications regarding the pace of reduction in the CRR and the conduct of open market operations by the RBI since there would be an additional source of bank liquidity which would need to be taken into account while determining the desirable rate of growth of credit.

2.218 One aspect of the banking industry which has received a great deal of attention lately has been the high level of nonperforming assets (NPAs). It is undoubtedly true that high NPAs raise the cost of bank operations and thereby the spread, and efforts need to be made to bring these down. However, a balance has to be drawn between the reduction in NPAs, on one hand, and ensuring adequate supply of credit to the economy, on the other. Excessive pressure on banks to reduce NPAs is likely to lead to a high degree of selectivity in the credit disbursal process. As a result, it may well be possible that the total level of credit issued by the banking system may fall short of the levels dictated by the growth in deposits. While this would no doubt reduce the level of NPAs, it would also have the effect of raising the average cost of credit actually disbursed. As a result the spreads would be affected by two contradictory influences and, in the short run, it is likely that the latter effect would dominate so that either the spreads would actually rise or the health of the banking sector would be adversely affected. An increase in spreads through an increase in the lending rates would be self-defeating for the banking sector in view of the fact that the prime borrowers also have access to international sources of funds and are likely to switch if domestic interest rates are raised in any significant manner, thereby raising the average level of risk exposure in the lending portfolios of banks. The likelihood therefore is that there would be downward pressure on the deposit rates which would, on one hand, tend to divert savings from the commercial banking sector to other more risky instruments and institutions and, on the other hand, may actually reduce the desired savings of individuals who do not have access to alternative forms of financial savings.

2.219 The approach to addressing this problem would need to be on two tracks. First, the rate of reduction of NPAs will have to be fairly gradual keeping in mind the normal lending risks associated with the Indian economy and the speed at which debt recovery and settlement processes operate in the country. Second, the factors other than NPAs which affect the level of spread required for the viability of banks would need to be considered in the context of national priorities and policy objectives. In so far as the first is concerned, the risk profile of investors tend to change only slowly over time and this has to be consciously taken into account before mandating minimum NPA levels for the banks. The main action to be taken in this regard is on strengthening and professionalising the internal control and review procedures of banks and other financial institutions with a view to ensuring autonomy with accountability. The efforts made towards establishing Debt Recovery Tribunals have achieved some effect in speeding up debt recovery proceedings. However, the process of judicial review and implementation of debt recovery decisions need to be given further impetus, and the role of the States is critical in this regard.

2.220 There are a number of considerations which enter into determining the effects of policy on banking spreads. First, the level of the cash reserve ratio (CRR) that is to be maintained by the Indian banks are considerably higher than the international levels which are specified for prudential reasons. Although in recent years there has been significant reduction in the CRR from 15 per cent to 10 per cent and also the interest paid on CRR deposits with the RBI has been raised from 3.5 to 4.5 per cent, there is a view that the CRR should be reduced even further, preferably to 3 per cent. While such a target for the CRR is eventually desirable for the health of the banking sector and a reduction in the spreads, it needs to be seen in the context of the immediate policy imperatives. A decrease in the CRR enables the banking system to generate a higher level of credit from the same deposit base, which implies an increase in the money multiplier. Thus, in view of a given inflation target a decrease in the CRR would require a corresponding decrease in the rate of growth of base money, which would reduce significantly the extent of seignorage available to the Government. In view the relatively high level of fiscal deficits that are likely to obtain during the Ninth Plan period, it does not appear desirable to reduce the potential seignorage excessively. Sharper decreases in the CRR can be brought about once the fiscal deficit of the Government has been brought to about 3.5 per cent of GDP and the revenue account comes into surplus. Secondly, with the greater importance of monetary policy in macro economic management, the CRR will continue to be an important instrument until such time as the interest rate on treasury bills and the bank rate become credible instruments of monetary control. This is unlikely to happen until an active market in treasury bills is created and the treasury bill rate becomes a commonly accepted reference rate for the structure of interest rates in the country.

2.221 The second point of policy intervention by the Government in the operation of the banking system has been the statutory liquidity ratio (SLR) through which banks are compelled to hold Government and public sector securities. The negative effects of the SLR have been mitigated to a considerable extent in recent years both by a reduction in the SLR from 38.5 per cent of the total net demand and time liabilities (NDTL) of banks to 25 per cent, and by having market determined rates of interest on public debt instead of rates prescribed by Government. However, in the absence of an active debt market in Government securities, the SLR is characterised both by a certain degree of illiquidity with the banks and an interest rate on public debt which is not determined in a truly competitive market. These factors will become increasingly more important during periods of relatively tight liquidity. On the whole, however, the SLR is desirable both as a prudential measure and in view of the need to generate debt resources for the Government. The latter rationale will be obviated once a proper debt market comes into existence and the creditworthiness of the public sector, particularly States and PSEs, improves adequately. In order to reorient the SLR system to the needs of the Ninth Plan, it is desirable that the SLR concept also be extended to non-bank financial institutions so that the holdings of public debt are diversified. This would also contribute towards achieving a more uniform regulatory framework for the financial system as a whole. In addition, it would be desirable for the Centre to gradually vacate the space for long term debt and make these available to the States and public sector enterprises which have the most pressing needs for long term funds.

2.222 The third area which needs examination is the directed lending for priority sectors. There is a point of view which holds that priority sector lendings have been made to the detriment of the health of the banking sector in India, and that it should be abolished at the soonest possible. Even the Narasimham Committee had recommended that priority sector lending should be reduced to 10 per cent of total bank credit instead of the present 40 per cent, which should be restricted to a very limited category of borrowers, and the entire directed credit system should be reviewed after three years with a view to phasing it out altogether. However, the role that priority sector lending has played in making credit available to sectors which are of national importance in terms of their effects on employment and poverty alleviation, such as agriculture and small scale industries, and which have strong externalities cannot be gainsaid. The Indian economy is still not in a position in which the sectors which have access to organised sector credit will be able to take care of these objectives. Moreover, priority sector lending needs to be seen in the context of the implicit credit rationing system that needs to be followed in a relatively capital scarce economy. Since pure price rationing in the sense of using the interest rate as a single allocation device is neither feasible nor desirable in the presence of incomplete information and adverse selection possibilities, and since a comprehensive portfolio balancing approach is administratively difficult in a widely dispersed banking network, there is a high probability that smaller borrowers would be systematically discriminated against in terms of credit allocation. This would be contrary to the interests of both the nation and even the banking sector itself. Priority sector lending therefore would have to continue, but with certain changes in order to diffuse the risk which is carried presently only by the banking system. First, priority sector lending also should be extended to the non-bank financial institutions in such a manner that the total volume of credit remains more or less the same and thereby reduces the burden on the banks. Second, the institutional mechanism for making available credit to the priority sectors needs to be revised. Since most new and foreign banks and practically all non-bank financial institutions do not have the capacity to either appraise or effectively supervise lendings in the priority sectors, specialised institutions may have to be developed not only on a sectoral basis but perhaps also on a regional basis. In this context institutions such as NABARD, SIDBI, local area banks (LABs), regional rural banks (RRBs) and cooperative financial institutions need to be strengthened and professionalised, and the linkages between themselves and with the commercial banking sector established on a firmer and more formal footing. It should be ensured that with greater autonomy and private participation in public sector banks, the institutional structure of branch networks, which are critical for effective implementation of priority sector lending, is not diluted. In the case of banks without such wide-spread infrastructure and non-bank financial institutions, the funds may have to be routed through the specialised institutions. In such cases care would have to be taken that the rate of interest paid by the specialised institutions is no higher than the risk weighted interest received by the public sector banks on their direct loans to the priority sectors. Finally, the recent tendency for inclusion of various activities under priority sector needs to be curbed since it tends to diffuse the focus from those sectors which have high externalities and which need to be supported in a distinct and focussed manner. Therefore, not all infrastructure should be categorised as priority sector, but only those which have high social returns and long pay-back periods.

2.223 An important area of priority sector lending involves credit to the social sectors and activities which may not be "bankable" in the usual sense of the term, but which have very high social returns. Micro-credit is well established as an area of focus not only in India but in a number of other countries as well and a number of experiments have been successfully tried. It has been found that the loan servicing experience with microcredit can be as good or even better than credit to formal sectors if it is implemented through appropriate mechanisms such as group-lending. These efforts should be pursued much more vigorously.

2.224 In addition to the above policy influences on the performance of the banking sector, the vulnerability of financial institutions, particularly banks, has increased on account of the much larger range of activities that they need to undertake and for which they may not be adequately prepared. Especially in the nationalised banking sector, each bank is presently undertaking the full range of banking and other services for which they may not be fully competent. Some of the areas where such short comings are becoming increasingly apparent are project appraisal skills, particularly for non-industrial activities, treasury and portfolio management skills, merchant banking skills and skills in operating in the foreign exchange and derivatives markets. There is need to upgrade the level of such skills in all segments of the financial sector, and most particularly in the nationalised banks. While formal training in these areas is necessary, it is not sufficient. In order to develop most of these skills there has to be a considerable amount of learning by doing experience, which can be acquired only gradually. In the private financial sector some of these problems have been addressed by hiring professionals with the requisite skills and qualifications. In the nationalised sector however, there are policy and other barriers to taking recourse to such solutions. This would put the nationalised banks at a disadvantage and, given the dominance of this sector in the Indian economy, harm the interest of their customers.

2.225 The dangers arising from an undifferentiated nationalised banking sector have been recognised by the Narasimham Committee, which has suggested that there should be multi-tier banking system in which a very limited number of banks should be international in character offering the full range of services, a somewhat larger set of national banks, local banks confined to specific regions, and rural banks for agricultural financing. It is not clear, however, the manner in which this structure would contribute to the strength and viability of the banking sector. With the growing role of fee-based activities in bank profitability, a structure which restricts specific segments to only traditional banking functions may in the longer run lead to greater incidence of non-viability as the spreads come under pressure from the stronger banks. While it is certainly true that skill requirements are considerably more demanding in feebased activities, which would restrict the number of banks that can operate effectively in them, it may not be prudent to restrict the operational domain of the rest. One possible solution is to merge some of the banks in order to get a more viable set of larger and stronger entities. This would have to be done carefully with a thorough assessment of the complementarities and synergies that can be obtained. Mere consolidation of banks on financial considerations would not serve the purpose. Another possible solution would be to recognise the complementarity that exists between the branch network and deposit-taking function of commercial banks and the skill availability with the development finance institutions (DFIs). It is suggested therefore that the lower tiers of the banking sector be organised around the four major DFIs either on a geographical basis or, on the basis of areas of operation. This would not only strengthen the capabilities of the banks, but would also contribute to the greater integration of the financial sector, which has been recognised as a fundamental weakness of the Indian system.

2.226 One characteristic feature of the organised financial sector in India which is a cause of considerable concern is the lack of free flow of information within the financial system regarding the creditworthiness of borrowers and solvency of institutions. The high level of existing NPAs can in some measure be traced to this lacuna. Unless information sharing and early warning systems are instituted, the dangers to the financial system will get multiplied as the level of complexity of financial transactions in the economy increases. The institutionalisation of such an information system should be of the highest priority and may require legislative action to make it credible.

2.227 Finally, the liberalisation of the Indian economy particularly with respect to foreign investment and external flow of funds is exposing the Indian financial sector to issues that have not been of great significance earlier. In particular, the Indian markets have extremely slow operational and reaction speeds in comparison the international market. Unless the speed of transaction in the Indian system is increased significantly it would expose the Indian financial institutions to vulnerabilities arising out of arbitrage and speculative behaviour. The introduction of modern banking and money management systems has to be of the highest priority before further liberalisation of international financial flows can be contemplated. There is as yet both inadequate appreciation of this need and considerable resistance to introduction of automation. This mind set will need to be changed if the Indian financial sector is to fully perform the functions that are required from it. The move towards capital account convertibility has to be predicated on the Indian financial system attaining international levels of expertise and speeds of operation if the dangers from speculative and arbitraging activities are to be mitigated.

CHAPTER 3

PUBLIC SECTOR PLAN : RESOURCES AND ALLOCATIONS

Introduction

3.1 The Eighth Five Year Plan was formulated with an approved public sector outlay of Rs. 434,100 crore. The anticipated Eighth Plan expenditure is of the order of Rs. 391,000 crore. The lower plan expenditure was the result of the shortfall of about 10 per cent in the resource mobilisation undertaken during the plan period. The projected public sector plan outlay for the Ninth Plan, consistent with the accelerated GDP growth of 6.5 percent per annum envisaged, is placed at Rs.859200 crore at 1996-97 prices. This represents a step up of about 48 per cent and 33 per cent in real terms over the anticipated Eighth Plan expenditure and the approved Eighth Plan Outlay respectively.

3.2 This Chapter includes a review of performance in respect of resource mobilisation during the Eighth Plan in order to assess the prospects of resource mobilisation as per the scheme of financing envisaged for the Ninth Plan. The projected scheme of financing is discussed separately for the Centre (including U.Ts without Legislature) and States (including U.Ts with Legislature) followed by a discussion of measures considered necessary to achieve the estimated resources for financing the Ninth Plan.

Eighth Plan Performance

3.3 The projected financing pattern of the Eighth Plan Outlay of Rs.434,100 crore at 1991-92 prices consisted of budgetary support (43.4 per cent), Internal and Extra Budgetary Resources (IEBR) of the Central Public Sector Enterprises (CPSEs: 33.2 per cent), and own resources of States (23.4 per cent). This pattern of financing envisaged positive Balance from Current Revenues (BCR) for both the Centre and the States as well as positive contribution by State Level Public Sector Enterprises (SLPSEs). Keeping in view the expected positive BCR and the need to adhere to a non-inflationary scheme of plan financing, the share of borrowings as well as deficit financing in the aggregate resources of the Centre was kept at low levels. However, actual performance of both the Centre and the States revealed significant deviations from projected financing pattern. The areas of shortfalls and deviations are discussed below:

BCR of the Centre and the States

3.4 The Eighth Plan Chapter on Financial Resources did not refer to fiscal deficit specifically. However, the need for reducing the reliance on both borrowings and deficit financing was emphasised. Thus the estimates of financial resources for the Eighth Plan included positive BCR both at the Centre and the States. However, contrary to projections, the BCR of both the Centre and the States turned out to be negative during each of the five years of the Eighth Plan. Thus, the combined BCR of Centre and States turned out to be (-) Rs.39563 crore as against the positive BCR of Rs.35005 crore projected for the Eighth Plan. Annexure I to this Chapter provides the details.

3.5 The deterioration in the BCR of the Centre was mainly due to (i) decline in indirect tax revenue, and (ii) increased interest burden. The import duty rates were reduced considerably in order to enable Indian industry to reduce cost of production and face international competition. Thus, the customs revenue registered considerable decline from 3.4 per cent of GDP in 1992-93 to 2.7 per cent in 1993-94. The collection rate, i.e the ratio of realised import revenue to the value of imports, is estimated to have declined from 44 per cent in 1992-93 to 37 per cent in 1993-94 and further down to around 30 per cent by 1996-97. However, import growth coupled with depreciation of the rupee reversed this declining trend in revenue from customs which improved from the level of 2.7 per cent in 1993-94 to 3.5 per cent of GDP in 1996-97, which was only slightly higher than that prevailing in 1992-93. As regards Union excise revenue,the Eighth Plan period witnessed further switch from specific duties to advalorem duties aimed at ensuring buoyancy as measured by the ratio of change in tax revenue to change in GDP at current prices. The scheme of MODVAT was extended with a view to reducing industrial costs and prices by relieving tax on inputs. There was also reduction of rates in the items of mass consumption, white goods, automobiles and synthetic fibres. Exemptions from excise revenue to small scale sector continued. Such exemptions provide loopholes. The net effect of these measures was, a significant drop in excise revenue from 4.4 per cent of GDP in 1992-93 to 3.7 per cent in 1996-97. The main reason for this decline was the growing proportion of MODVAT credit which nearly doubled from about 22 per cent of gross excise revenue in the beginning of the Eighth Plan period to about 42 per cent by the end of the Plan period. Further increase in the ratio of MODVAT credit to gross excise revenue is not expected to be significant as the proportion of revenue from MODVAT to total Union Excise revenue has reached 85 per cent by the end of the Eighth Plan period. Indeed, the proportion of MODVAT credit can be brought down by plugging the loopholes.

3.6 As regards direct taxes, the focus of reforms was on rate reduction and simplification to facilitate better compliance. The reform measures resulted in some improvement. The ratio of direct tax revenue to GDP rose from 2.6 per cent in 1992-93 to 3.1 per cent in 1996-97. However, this improvement in direct tax revenue was not sufficient to compensate for the decline in indirect tax revenue mentioned above.

3.7 Many items of Non Plan Revenue Expenditure (NPRE) showed declining trend in terms of their proportion to the total NPRE, during the Eighth Plan period. The percentage of subsidies to NPRE came down from 18.2 per cent to 13.2 per cent. However, the proportion of interest payments increased from 39.6 per cent to 46.2 per cent, mainly due to the rise in Government borrowing at market related interest rates.

3.8 Balance from current revenues of the States had also declined sharply from Rs. 12985 crore to (-) Rs. 2009 crore in the Eighth Plan. This was mainly on account of substantial shortfall in States' Own Tax revenues. The realisation in revenue collection was around 85 per cent of the projected level. In absolute terms, the revenue collection was less by Rs. 30,000 crore compared to the estimates of Eighth Plan. Further, the interest burden also increased from Rs. 10944 crore in 1991-92 to Rs. 26298 crore in 1996-97 (BE) i.e. at an annual compound rate of growth of 19.16 per cent, even though the amount of loans received by the States was only of the order of 89 per cent of the projected level in the Eighth Plan. Rapid growth of interest liability was due to higher interest rates. The interest rate on loans against the small savings varied between 14.5 per cent and 15 per cent during the Eighth Plan period as against 12 per cent to 13 per cent in the Seventh Plan period. Similarly, interest rates on plan and non-plan loans rose to 12 and 13 per cent as against 8 to 9 per cent in the Seventh Plan period. Interest on SLR based market borrowings rose by 2 percentage points in the Eighth Plan period over the Seventh Plan period. This increased burden on account of higher rates of interest exacerbated the deterioration of BCR.

The Eighth Plan – Review of Plan Expenditure and Resource Mobilisation

- The plan expenditure incurred during the Eighth Plan is estimated to be 90 per cent of the total public sector outlay of Rs.4,34,100 crore projected for the five years – 1992-97 at 1991-92 prices.
- Contrary to projections, the Balance from Current Revenues (BCR) of both the Centre and the States turned out to be negative during each of the five years of the Eighth Plan.
- Reduction in import duty rates as well as in excise duty rates for items of mass consumption, white goods, automobiles and fibres coupled with loopholes in the exemptions provided to small scale sector resulted in lower revenue realisation.
- Excise revenue dropped from 4.4. per cent of GDP in 1992-93 to 3.7 per cent in 1996-97.
- Improvement in direct tax revenue from 2.6 per cent to 3.1 per cent of GDP during the Plan period consequent on direct tax reform, however, only partly compensated the decline in indirect tax revenue.
- Non-plan revenue expenditure including subsidies showed declining trend.
- Market related interest rates on Government borrowings, increased interest liability.
- There was substantial shortfall in States' Own Tax Revenue also.
- The interest burden of the States increased at an annual compound rate of growth of 19.16 per cent.
- The resource mobilisation by the Central Public Sector Enterprises (CPSEs) was about 90 per cent of the Plan projections in real terms.
- Failure to undertake price revisions commensurate with the increase in input costs resulted in poor financial performance of the Undertakings.
- Adverse money/capital market conditions affected borrowings of the Enterprises.
- The financial performance of the State Level Public Sector Enterprises (SLPSEs), especially the State Electricity Boards (SEBs) has been more discouraging. Only three of the SEBs could earn positive rate of return on investment against the statutory obligation for a three per cent rate of return.
- The Centre's dependence on borrowings for financing the Plan increased by 40 per cent over the projections. However, in the case of States, borrowings fell short by 12 per cent.
- The flow of external grant registered only a modest increase whereas there was steep errosion in the net external borrowings mainly on account of increase in the proportion of repayments out of gross borrowings.
- The deficit financing increased by about 65 per cent vis-à-vis the projection of Rs.20,000 crore for the Plan period.

Resources of Public Sector Enterprises

3.9 Internal and Extra Budgetary Resources (IEBR) of CPSEs were projected at Rs. 1,44,140 crore at 1991-92 prices (Annexure 1). The Actuals for 1992-96 and the Revised Estimates for 1996-97 in respect of generation/mobilisation of IEBR by CPSEs work out to Rs.1,30,324 crore, which is less by Rs.13,816 crore or about 9.6 per cent vis-à-vis the projected estimates. The actual mobilisation of resources by the CPSEs during the first four years of the Eighth Plan has been less compared to the corresponding revised estimates. On this analogy, the actual mobilisation in the fifth year viz., 1996-97 may also be taken to be less than the revised estimates. Keeping this in view, the shortfall in IEBR during the five year period may be placed around 10 per cent of the projected amount.

3.10 The CPSEs could not mobilise funds from the market through bonds to the expected level. The adverse money/ capital market conditions and some inherent weaknesses of PSUs were responsible for this shortfall. The failure to undertake necessary price revision to meet the rising input costs resulted in poor financial performance of most of the undertakings. Hence, they could not compete successfully with the private corporate sector for funds in the market. Even the CPSEs which were allowed access to tax-free bonds found it difficult to raise funds from this measure as per target in some of the years because of high market rates of interest. Besides, the allocation of tax-free bonds was restricted even for the CPSEs which were otherwise capable of raising funds through bonds. This was in line with the Government decision to phase out the instrument of tax free bonds. During 1992-93 the amount raised through bonds constituted only around 18 per cent of the target. Though this proportion rose to about 81 per cent in 1993-94, it declined to 41 per cent and 27 per cent in 1994-95 and 1995-96 respectively. The corresponding proportion is estimated to have risen only marginally over the previous year to reach 33 per cent in 1996-97.

3.11 In the case of States, the projected internal resources of State Level Public Sector Enterprises (SLPEs) amounted to Rs. 4000 crore. However, actual generation of resources by SLPEs turned out to be negative, i.e. (-)Rs. 2723 crore which implied a deterioration of Rs. 6723 crore compared to the projection. This was the result of their poor financial performance, especially of State Electricity Boards (SEBs). The rate of return on investment in State Power Sector continued to be negative throughout the Eighth Plan as against the statutory obligation to achieve a rate of return of 3 per cent. Though there is scope for efficiency gain, the root cause of poor financial performance lies in low tariff which needs to be revised upwards to enable the SEBs to reduce commercial losses.

Borrowings

3.12 The deterioration in BCR necessitated greater dependence on borrowings for plan financing. As per the Eighth Plan projections, Centre's borrowings, including Miscellaneous Capital Receipts (MCR), was expected to be Rs. 23551 crore per year whereas the amount borrowed during the Eighth Plan averaged Rs. 33030 crore per annum, which meant an increase of about 40 per cent in the dependence on borrowings vis-a-vis projections. In the case of States, the borrowings including MCR, fell short of projections by around 12 per cent. Taking both Centre and States together, borrowings for financing the Eighth Plan exceeded the projection by about 19 per cent.

Net Inflow of Resources from Abroad

3.13 Net inflow of budgetary resources from abroad in the form of external loans and grants amounted to Rs. 19,234 crore as against a projected amount of Rs. 28,700 crore. The proportion of repayments which constituted about 45 per cent of the gross external borrowings in the initial year, increased to about 73 per cent by the terminal year of the Eighth Plan. In nominal terms, the repayments increased from Rs. 4306 crore to Rs. 6969 crore whereas the net external borrowings declined from Rs. 5319 crore to

Rs. 2589 crore during the Plan period. Rupee depreciation during this period also contributed to the steep decline. The flow of grants registered only a modest increase from Rs. 919 crore to Rs. 1199 crore during this period. Hence the erosion experienced in net external borrowings could not be made good by the small increase in the external grants.

Deficit Financing

3.14 As in the case of borrowings, reliance on deficit financing also exceeded the projections due to the resource gap arising mainly from negative BCR. Besides, minimum budgetary support had to be provided through non plan loans to certain public enterprises to meet cash losses and working expenses. As a result, the recourse to deficit financing in the Eighth Plan was to the extent of Rs. 33,037 crore as against a projection of Rs. 20,000 crore. This meant an increase of about 65 per cent vis-a- vis the projection.

Resource Assessment for the Ninth Plan - The Profile

3.15 The overall resources for Plan consist of (i) Budgetary Resources of the Centre, including Central Assistance for States and U.Ts., (ii) Internal and Extra Budgetary Resources (IEBR) of the Central Public Sector Enterprises (CPSEs), and (iii) Own Resources of States and U.Ts with Legislature. The size of projected budgetary resources for the Plan depends on the excess of the aggregate projected sum of receipts comprising (a) Balance from Current Revenues, (b) borrowings & other liabilities, (c) other capital receipts (including recovery of loans & advances and disinvestment), and (d) external grants, over nonplan capital expenditure. The IEBR of CPSEs consists of internal and extra budgetary resources. The retained profits and depreciation provision constitute internal resources (IR). The extra budgetary resources include borrowing both at home and abroad, and other resource items like intercorporate transfers, public deposits, external aid received directly from the donors, equity capital raised from the market etc. A part of the aggregate resources of the Centre flows as Central Assistance to the States and the U.Ts. As regards States' own resources, the magnitude depends on BCR, contribution of State Level Public Enterprises, especially SEBs and SRTCs, and borrowings. The Central Assistance mentioned above supplements the States' own resources.

Resources of the Centre

3.16 Resources of the Centre consist of both budgetary resources including external assistance routed through the budget and the Internal & Extra Budgetary Resources (IEBR) of Central Public Sector Enterprises (CPSEs). The quantum of budgetary resources of the Centre which is available for providing overall budgetary support to the plan is divided into two parts viz. budgetary support for Central Plan (including U.Ts without Legislature) and Central Assistance for States' Plans (including U.Ts with Legislature). A part of the budgetary resources allocated as budgetary support for the Central Plan is used for providing necessary support to CPSEs. Such budget support to the enterprises has declined significantly from around 50 per cent in mid eighties to below 15 per cent during the Eighth Plan. This necessitated greater dependence of CPSEs on IEBR for financing their plan outlay. As per revised estimates, the proportion of IEBR in the plan outlay of CPSEs ranged from 85 to 90 per cent during the Eighth Plan period. CPSEs in sectors like Petroleum and Telecom depend entirely on IEBR for financing their plan outlay. The provision of budgetary support is limited to (a) CPSEs in the infrastructure sector and (b) loss making CPSEs most of which belong to industry groups like pharmaceuticals, fertilisers, textiles and heavy engineering.

3.17 In the month of April, 1998 the Prime Minister indicated Special Action Plans (SAPs) with the objective of (a) doubling the food production in ten years; (b) expansion and improvement of social infrastructure; (c) expansion and improvement of physical infrastructure and financial services; (d) unveiling a National Water Policy and (e) making India a global information technology power. The Planning Commission was requested to evolve appropriate action plans for achieving the said goals in consultation with the Administrative Ministries concerned and the Finance Ministry. Accordingly, the Commission formulated Special Action Plans in these areas. These were dovetailed with the normal sectoral plans. The additional financial resources specifically required in respect of the SAPs during the Ninth Plan period were estimated to be of the order of Rs.21,950 crore. The aggregate budgetary support of the Centre to the Plan including the provisions to SAPs is placed at Rs. 374,000 crore.

3.18 Table 3.1 presents the relevant details on the availability of Budgetary Resources for financing the Ninth Plan.

Table - 3.1 : Budgetary Resources for the Ninth Plan (1997-2002)

(Rs.in crore at 1996-97 prices)

Resource Item	Amount
1. BCR	(-)2778
2. Loan recovery	43327
3. Borrowings and other liabilities	391592
4. External Grants	10062
5. Disinvestment	23895
6. Aggregate Budgetary Resources of Centre (1 to 5)	466098
7. Non-Plan Capital Expenditure	92098
8. Centre's Aggregate Budgetary Resources for Plan (6 - 7)	374000

3.19 The magnitude of Centre's aggregate budgetary resources for Plan amounting to Rs. 374,000 crore, as indicated above, is in conformity with the terminal year fiscal deficit of 4.1 per cent of GDP. The projection of BCR shown in table 3.1 given above, is based on tax revenue projections which range from 10.15 per cent of GDP in 1997-98 to 11.5 per cent in 2001-02. The non-tax revenue projected for the Ninth Plan remains at 2.8 per cent of GDP during the plan period. As regards non-plan revenue expenditure (NPRE), the projections take account of the interest liability based on the composition of short-term, medium and long-term loans as well as the monetisation of part of the fiscal deficit. On the average, the rate of interest on borrowings and other liabilities included in the fiscal deficit is estimated at 9.5 per cent. The decline in fiscal deficit from 6.1 per cent of GDP in 1997-98 to 4.1 per cent in 2001-02, has also been considered in projecting the interest liability. The NPRE projected for the Ninth Plan, therefore, shows a decline from 11.05 per cent of GDP in 1997-98 to 9.59 per cent in 2001-02. As regards the capital receipts, loan recoveries were projected to register a negligible growth of about 0.5 per cent at current prices during each year of the Ninth Plan. As regards borrowings and other liabilities, the projections correspond to the targeted level of fiscal deficit in terms of percentage to GDP Following the Government decision to avoid automatic monetisation of budget deficit through the issue of ad-hoc treasury bills, explicit deficit financing has been kept at zero level.

3.20 The Central Government had taken certain measures to meet the impact of the Fifth Pay Commission's recommendations in 1997-98. The annual average burden on this account is expected to be less onerous in the later years of the Plan. The liability in this regard during the remainder of the Plan period has been accordingly included in the projections of NPRE.

3.21 The aggregate budgetary support of Rs. 374,000 crore for the Ninth Plan is largely predicated upon a strict fiscal discipline calling for containment of non-plan revenue expenditure and raising the tax-GDP ratio to 11.5 per cent by the end of the Plan. While the former is implicit in the fiscal deficit profile indicated in paragraph 3.19, the latter is mainly a function of tax buoyancy, which consists of the increase in tax revenue arising from both built-in flexibility of and discretionary changes in the tax system. There is considerable scope for raising tax revenue through strict enforcement and expansion of the coverage of Tax Deducted at Source (TDS), as was evident during the post reform period when revenue from corporate income tax as well as personal income tax increased from one per cent of GDP each in 1990-91 to 1.5 per cent and 1.4 per cent of GDP respectively in 1995-96. It is important to recall that the tax-GDP ratio was as high as 11.3 per cent in 1989-90. It declined to 10.8 per cent in 1990-91. Between 1990-91 and 1994-95 it further declined by one percentage point to 9.8 per cent. This decline in the tax-GDP ratio in the first four years of the economic reforms stand in sharp contrast to the increase of 2 to 4 percentage points experienced by some of the developing countries in the wake of their economic reforms. In 1996-97 there has been some improvement, the ratio reaching 10.5 per cent. Considering that Centre's tax- GDP ratio had reached 11.3 per cent in 1989-90 and taking into account the expected impact of discretionary measures referred to above on tax buoyancy, the average tax-GDP ratio projected at 10.67 per cent for the Ninth Plan period is well below the level achieved in 1989-90.

3.22 There is considerable potential for mobilising additional resources from direct and indirect taxes through widening of the base, reducing exemptions to the bare minimum and improving the tax administration including stricter enforcement. Measures necessary to exploit the potential are detailed in paras 3.45 to 3.48. In view of this, the projections of tax- GDP ratio mentioned above should be taken as minimal levels that must be achieved rather than as limits of maximal effort.

IEBR of CPSEs

3.23 The significant reduction in budgetary support to CPSEs from around 50 per cent of their plan outlay in 1985-86 to about 10 per cent in 1996-97 has made it necessary for them to generate/ mobilise more IEBR for financing their plan outlay. Nearly 90 per cent of the plan outlay of CPSEs is financed through the IEBR generated/ mobilised by them. The IEBR projected for the Ninth Plan amounts to Rs.285379 crore at 1996-97 prices; an increase of about 23.6 per cent in real terms over the Eighth Plan estimates. This has been estimated on the basis of projected savings of CPSEs and their anticipated borrowings. The projection of IEBR is consistent with the overall public sector outlay of Rs. 859,200 crore envisaged for the Ninth Plan.

Financial Resources for the Ninth Plan – A Profile

- The Ninth Plan (1997-2002) envisages GDP growth rate of 6.5 per cent per annum. The Public Sector Plan Outlay is placed at Rs.8,59,200 crore at 1996-97 prices, representing a step up of 48 per cent and 33 per cent in real terms over the anticipated Plan expenditure and the approved Plan outlay respectively of the Eighth Plan. The share of the Centre's Plan and that of the States, including U.Ts, would be 57 per cent and 43 per cent respectively.
- The Centre's Plan Outlay of Rs.4,89,361 crore is to be financed to the extent of 41.7 per cent and 58.3 per cent by way of Gross Budget Support (GBS) and Internal and Extra Budgetary Resoaurces (IEBR) of the CPSEs respectively.
- The Balance from Current Revenues (BCR) is anticipated to be negative as against positive BCR projected for the Eighth Plan.
- The tax revenues are estimated to range from 10.15 per cent to 11.5 per cent of GDP giving an average Tax-GDP ratio of 10.67 per cent during the Plan period.
- Non-tax Revenue will continue to remain at 2.8 per cent of GDP.
- The Non-Plan Revenue Expenditure (NPRE) is projected to decline from 10.05 per cent of GDP in 1997-98 to 9.5 per cent in 2001-02.
- Borrowings are likely to contribute 60 per cent of the financial resources for the Centre's Plan.
- The CPSEs are expected to finance 90 per cent of their Plan Outlay through IEBR.
- The fiscal deficit is expected to decline from 6.1 per cent to 4.1 per cent of GDP during the Plan period.
- Borrowing by States will constitute 48 per cent of their Ninth Plan Outlay.
- The Internal Resources of the State Level Enterprises are also expected to be higher at 4 per cent of the Plan Outlay as against 2 per cent projected for the Eighth Plan.
- The States' BCR (including Additional Resource Mobilisation – ARM commitment) will improve to become positive during the Ninth Plan.

3.24 The financial sector reforms have enabled the corporate sector including CPSEs to raise resources from the market both at home and abroad. However, the public sector enterprises have to compete with their private sector counterparts for raising resources. This necessitates more autonomy for CPSEs to enable them to improve their financial performance. CPSEs are required to maximise generation of IR during the Ninth Plan period. Efficiency gains through higher productivity alone cannot achieve this. It is necessary to facilitate periodic price revision to meet the rising input costs. With improvement in operational efficiency and adoption of suitable pricing policies, it is expected that the CPSEs would be able to raise the projected level of IEBR during the Ninth Plan.

Financing Pattern of Central Plan Outlay

3.25 The financing pattern of the Central Plan Outlay inclusive of IEBR of CPSEs is given in Table 3.2.

Table 3.2 Financing Pattern of Central Plan Outlay (including U.Ts without Legislature)

Resource	Amount (Rs.in crore at 1996-97 prices)	percentage share in aggregate resources
1. BCR	(-)2778	(-)0.4
2. IEBR of CPSEs	285379	43.28
3. Borrowings and other liabilities	391592	59.39
4. Misc. Capital Receipts(net)	(-) 24876	(-)3.8
5. External Grants	10062	1.5
6. Deficit Financing	0	0.0
7. Aggregate Resources(1 to 6)	659379	100.0
8. Assistance for State Plans	(-)167158	(-)25.35
9. Resources for Central Plan *	492221	74.65

*includes UTs without Legislature

Notes: 1. Borrowings and other liabilities include External Borrowing of Rs.49956 crore.
2. Misc.Capital Receipts(net) consist of the difference between non-debt Capital Receipts and Non-Plan Capital Expenditure.
3. Resources for Central Plan include an amount of Rs.2860 crore as Central Assistance for UTs without Legislature.

3.26 It will be seen that the financing pattern for the Ninth Plan is markedly different from the earlier pattern in as much as deficit financing has been kept at zero level and balance from current revenues has turned negative. This has necessitated considerably higher percentage of borrowings and other liabilities.

3.27 The Gross Budgetary Support to the Central Plan for the first two years of the Ninth Plan (1997-98 – Revised Estimates and Budget Estimates for 1998-99) accounted for only about 15.7 per cent and 18.5 per cent respectively of the total such support for Ninth Plan. Consequently, the budgetary support for the remaining three years will have to be considerably enhanced so as to achieve the projected Central Plan Outlay for the Ninth Plan. This calls for stepping up of the resource mobilisation efforts on the lines indicated in paras 3.45 to 3.48. As regards IEBR also, the Revised Estimates for 1997-98 and Budget Estimates for 1998-99 work out to about 15.8 per cent and 19.5 per cent respectively of the total for the Plan period. Therefore, in order to finance the projected plan outlays, the CPSEs will be required to raise higher levels of IEBR in the remaining years. Annexure II shows budgetary support, IEBR and plan outlay of Central Ministries/ Departments for the Ninth Plan.

The financing pattern of the Centre and States and the gross budgetary support to the Plan are based on the recommendations of the Tenth Finance Commission. In the computation of States Own Resources and the BCR of the Centre, it has been assumed that 29 per cent of Centre's gross tax revenue will be devolved to the States after passing the requisite Constitution Amendment Bill. However, the Tenth Finance Commission award will be valid only until 1999-2000. The resource position may be significantly altered depending upon the recommendations of the Eleventh Finance Commission.

Resources of States

3.28 The resources of the States for their Plans consist of States' Own Resources (SOR) and Central Assistance (CA). The SOR includes balance from current revenues (BCR) of the States, internal resources of their enterprises, mainly of the State Electricity Boards and State Road Transport Corporations, devolution of grants through Tenth Finance Commission for capital works, borrowings by State Governments and their enterprises and miscellaneous capital receipts (MCR). The Central assistance includes domestic budgetary assistance as well as assistance for externally aided projects.

3.29 As mentioned earlier (paras 3.4 to 3.8), resource mobilisation during the Eighth Plan fell short of projection. Table 3.3 shows that the total resource mobilisation for financing the Eighth Plan of States constituted only about 81 per cent of the projected amount.

Table 3. 3 : PROJECTED VIS-A-VIS REALISED FINANCING PATTERN OF EIGHTH PLAN OUTLAY OF STATES

(Rs. crore at 1991-92 prices)

	Projection	Realisation
I. States Own Resources	101485	70335
(i) Balance from current revenues including additional resource mobilisation	12985	(-)2009
(ii) Contribution of Public enterprises	4000	(-) 2723
(iii) Borrowings	84500	75067
II. Central Assistance for States Plan including Area Programmes of Rs. 4500 crore	78500	75750
III. Total Resources for the States Plan (I+II)	179985	146085*

***Based on actuals for 1992-95 and anticipated for 1995-97.**

3.30 The main shortfall was in respect of BCR and contribution of the public enterprises. As against the total amount estimated at about Rs. 17000 crore from these two sources, the realisation would be around (-) Rs. 4730 crore leading to a deterioration of about Rs. 21700 crore. There was also substantial shortfall in the assistance for Externally Aided Projects of the order of Rs. 5400 crore. The entire SOR of States at the aggregate level accrued from borrowed funds, some part of which was utilised to meet non-plan revenue expenditure and negative contribution of their enterprises. The amount borrowed by the States for financing their Eighth Plan did not exceed the projection. However, these borrowings were at higher rates of interest. Further these were largely utilised to finance social sector outlays where there are no direct and immediate financial returns. Even where such funds are invested in productive sectors like power, irrigation and transport, the financial returns are extremely poor. All this has resulted in compounding the debt servicing problem of the States, the effect of which will be more evident in the coming years. Were the projected levels of borrowings to be reached, the plan outlay would have been higher. However, this would have exacerbated the debt burden.

3.31 The shortfall in resource mobilisation indicated above reinforces the conclusion that States will have to take concrete steps to improve their balances from current revenues and generation of internal resources of their enterprises. Improvement in BCR also presupposes compression of non-plan revenue expenditure.

Resource Assessment for the Ninth Plan

3.32 The estimates of financial resources for the Ninth Plan were firmed up during the discussion between Deputy Chairman and the Chief Minister. The final position that emerged is presented in Table 3.4.

Table 3.4 : Resources for States' Plan (1997-2002)

(Rs.crore at 1996-97 prices)

Item	Ninth Plan Amount	Ninth Plan per cent Share	Eighth Plan Projection	Eighth Plan Realisation
1. BCR (including ARM commitment)	1372	0.39	7.22	(-) 1.36
2. Internal Resources of State Enterprises (including ARM commitment)	14890	4.25	2.22	(-) 1.86
3. Borrowings	169439	48.39	46.95	51.37
4. Total SOR (1 to 3)	185701	53.04	56.39	48.15
5. Central Assistance	164437	46.96	43.61	51.85
6. Total Resources (4 + 5)	350138	100.00	100.00	100.00

Note: 1. Chief Ministers committed for ARM of the order of Rs. 40611 crore; 2/3 of ARM has been taken under BCR and 1/3 under PSEs.

2. BCR also includes Rs. 405 crore of Opening Balance and Rs. 9418 crore of Grants from Finance Commission.

3.33 The BCR estimate of the Eighth Plan projections was too optimistic accounting for 7.22 per cent of total resources. In reality, however, the BCR turned out to be significantly lower reducing its share to (-) 1.36 per cent. Keeping this in view and the likely additional liability on account of pay revisions, the Ninth Plan projection of BCR including the budgetary ARM has been kept at a modest level accounting for 0.39 per cent of the total resources. The Eighth Plan projection estimated the share of contributions by State enterprises at 2.22 per cent of the total. In fact, it turned out to be (-) 1.86 per cent. For the Ninth Plan, the share of contribution of State Enterprises including ARM is estimated at 4.25 per cent of the total. This implies a thorough re-organisation and revamping of the structure and functioning of the SEBs and SRTCs. In the projection for Eighth Plan the share of borrowing was a little less than 47 per cent. While the actual amount of borrowing fell short of projections its share in the total resources as realised was much higher at, 51.37 per cent. This was mainly because the performance in respect of BCR and contributions of PSEs was far lower than the projections. The share of borrowing in the total resources in the Ninth Plan is kept slightly below the level experienced in the VIII Plan. The share of Central Assistance in the States' Eighth Plan projection was about 44 per cent. The share of Central Assistance for States in the Ninth Plan is kept slightly higher than the projected level in the Eighth Plan.

3.34 As has been observed earlier, the scheme of financing of Ninth Plan of the States visualises substantial efforts for mobilisation of additional resources through budgetary measures as well as through measures to be taken by State enterprises. The States have to take a number of steps to improve their tax GDP ratio. These include tax reforms, focussing on rationalisation of tax structure, specially the Sales Tax. The introduction of prohibition in some States had a softening impact on raising resources. This needs to be made up through compensatory measures in the other elements of tax structure and improvement in tax administration. Equally important is the need for empowering the States to tax services sector, to impose consignment tax and also to revise royalty rates for major minerals as per the recommendations of the Sarkaria Commission.

3.35 The SEBs are statutorily required to realise 3 per cent return on net fixed assets. In the Eighth Plan the average realisation of all SEBs was of the order of (-) 9.5 per cent. Out of 19 Boards, 15 had negative returns and 4 had positive returns of which only 2 had rate of return of above 3 per cent. The main reason for their extremely poor performance has been their inability to rationalise tariff structure to recover at least the cost of supply. The operational inefficiency and transmission and distribution losses are the other reasons. It is expected that concerted efforts will be made to restructure the SEBs, revise the tariff and improve their operational efficiency during the Ninth Plan period.

3.36 The functioning of the SRTCs need to be substantially improved. The fare structure should be revised periodically to yield reasonable returns. These Corporations have a number of social obligations to meet. It will be necessary to ensure that the Corporations continue to have remunerative routes so that they can cross subsidise the social obligations.

3.37 At the time of discussions with State Chief Ministers to finalise the resources for the State Plans, it had been estimated that the additional liability for pay revisions would be of the order of Rs.60,000 crore. However, the latest estimates indicated by the States place this burden at around Rs.11,0000 crore. The extra burden is unlikely to be met entirely by ARM. It is likely that the BCR of the States will not improve to the extend desirable and continuing reliance will have to be placed on market borrowings. It is, therefore, assumed that the share of market borrowings in the scheme of financing of the States' plans will continue at the level experienced during the VIIIth Plan.

3.38 Sufficient attention has not been paid to realisation of non-tax revenues by the States. The areas from where the non- tax revenues can be augmented are irrigation charges, royalties on minor minerals and revision of user charges on services rendered by the Government. There is an urgent need for more frequent revisions of water rates and effective water rate administration atleast to meet the full O&M expenditure of the irrigation department.

3.39 The Central Assistance to the States' Plan is projected at Rs. 164437 crore comprising of Rs. 124437 crore of domestic budgetary support and Rs. 40000 crore of assistance for externally aided projects (EAPs). The Central Assistance to the States in 1997-98 amounted to Rs. 24192 crore at 1996-97 prices. This works out to only about 15 per cent of the Ninth Plan. It follows that the Central Assistance has to be substantially stepped up in the remaining years of the Ninth Plan.

3.40 Some of the measures to improve the State finances like alternative scheme of devolution recommended by the Tenth Finance Commission, revision of royalty rates, introduction of consignment tax, delegation of powers to the States to tax service sector, setting up of Tariff Regulatory Commissions for power sector etc. require the support from the Centre. The measures to be taken by the Centre to supplement the resources of the States are mentioned in detail in the section on measures to be adopted by the Centre to improve the resources of the States.

Union Territories

3.41 The outlay for Union Territories during Eighth Five Year Plan was projected at Rs.6250 crore. The anticipated expenditure amounts to Rs.6530 crore indicating a performance level of 104.5 per cent.

3.42 The resources of the UTs without legislature are equal to the Central Assistance. In the case of other two UTs with legislatures, there is the additional element of their own resources. Table 3.5 shows the resource position of UTs for the Ninth Plan.

Table 3.5 :Resources of Union Territories

(Rs. crore)

UTs.	SOR	Central Assistance	Total
A. U.Ts with Legislature:			
i) Delhi	13548.28	1993.00	15541.28
ii) Pondicherry	572.07	727.93	1300.00
B. U.Ts without Legislature	-	2860.00	2860.00
	14120.35	5580.93	19701.28

Overall Financing Pattern

3.43 The aggregate public sector resources for the Ninth Plan work out to Rs.859200 crore. This comprises of Centre's resources of Rs.659379 crore including Central Assistance to States and UTs (vide item No.8 of Table 3.2), States' own resources of Rs.185701 crore (vide item No.4 of Table 3.4) and U.Ts own resources of Rs.14120 crore (vide Table 3.5).

3.44 The Table 3.6 presents the scheme of financing the plan outlays of Centre, the States and the U.Ts.

Table 3.6 : Overall Financing Pattern of the Public Sector Outlay during the Ninth Plan

(Rs.in crore at 1996-97 prices)

Resource	Centre (including U.Ts without Legislature)	States and U.Ts with Legislature	Total
1. BCR	(-)2778	1372	(-)1406
2. Resources of PSEs	285379	55030*	340409
3. Borrowings (incl.net MCR & Other liabilities)	316760	143419	460179
4. Net Inflow from abroad**	60018	0	60018
5. Aggregate Resources (1 to 4)	659379	199821	859200
6. Assistance for Plans of States and U.Ts with Legislature	(-)167158	167158	0
7. Resources for Public Sector Plan(5+6)	492221	366979	859200

* For States and U.Ts: Resources of PSEs are inclusive of 3/4th of total LIC/ GIC loans, and the full amount of loan from REC, IDBI and "Others" under negotiated loans; Bonds and Debentures are also included under this item. Accordingly, item 3 i.e Borrowings of States/ U.Ts is exclusive of the items which are already included in item 2 i.e Resources of PSEs.

** Consists of External Loans amounting to Rs.49956 crore and External Grants of Rs.10062 crore.

Measures to ensure projected resources for Central Plan

3.45 Successful implementation of Central Plan pre-supposes resource mobilisation commensurate with projections. The aggregate resources required for financing the Ninth Plan of the Centre and for providing Central Assistance to States and UTs amounts to Rs.659379 crore at 1996-97 prices. Of this, Rs.285379 crore will be raised by CPSEs leaving the balance of Rs.374000 crore to be financed by way of budgetary resources.

3.46 In order to raise budgetary resources to the extent of Rs.374000 crore, a number of measures are required to be undertaken. The fiscal deficit has to be contained within the limit indicated at para 3.19 above. The growth of non-plan revenue expenditure (NPRE) during the Ninth Plan also needs to be restricted to the rate mentioned in para 3.19. The receipts from disinvestment may have to be substantially improved in the remaining three years of the Plan so that the total of such receipts would rise to at least Rs.23895 crore during the Plan period. In addition, the following measures are necessary to bring about substantial improvement in the tax-GDP ratio as envisaged in paragraphs 3.21 and 3.22.

(a) Efforts aimed at simplification of tax laws and streamlining of tax collection procedures need to be continued and strengthened. In the case of direct taxes, compliance with tax laws is enforced through the assessment of tax returns filed by tax payers every year. On examination of the existing assessment system, it was found that scrutiny assessment tended to enlarge the litigation list. Scrutiny assessments should be made less irksome and more efficient. Equally important is the need to establish tax courts as the final arbiter of tax matters. Tax administration should be improved through computerisation, better records management, establishment of a tax research and guidance cell, etc.

(b) The tax-GDP ratio registered perceptible increase in a period of five years in response to tax reforms which were carried out under fiscal pressure in some developing countries. This achievement was facilitated by reducing the scope of exemptions and deductions (even as tax rates were generally scaled back) and improvement in tax administration. Though tax reforms in India in the early 1990s were also carried out under fiscal pressure, tax-GDP ratio registered a diminution. While several initiatives have already been taken for modernisation of tax administration which have started yielding positive revenue results, much still remains to be done. The improvement in the direct tax-GDP ratio witnessed in the post-reform period has been largely due to broadening the scope of tax deduction at source. Presumptive taxation of corporate and business incomes is equally important. Introduction of a minimum asset-based levy on corporate enterprises assumes importance in this context. It is also necessary to introduce presumptive schemes to bring into the tax net the hard-to-tax sectors such as small business, agriculture and services. What is important is to develop occupation-specific presumptive norms which can facilitate identification of potential tax payers. Such norms can be used as a bench-mark in the selection of cases for scrutiny as well as in the process of scrutiny for all enterprises irrespective of income level. These norms should be backed by detailed book-keeping requirements, which can be simplified for lower income groups.

(c) Tax deduction at source (TDS) has become a major tool for the collection of income-tax. The contribution of TDS has declined in 1990s, despite the fact that its coverage has widened. The share of TDS in gross collection of income-tax increased from about 23 per cent in 1980-81 to about 37 per cent in 1989-90, but declined subsequently to about 31 per cent in 1994-95. One of the major loopholes which contributes to the decline in revenue from TDS relates to the branch-wise threshold of Rs. 10,000 for the purpose of deducting income tax at source from interest on time deposits with banks. Further, the provision for TDS does not apply to non-banking financial companies. Other deficiencies from which the TDS scheme suffers arise from lack of proper monitoring and scrutiny. Often this receives low priority. Sample exercises done in selected States/ Metropolitan cities have indicated immense potential for raising additional revenue under TDS through proper checking of annual returns. Computerisation of TDS functions coupled with upgradation of manpower skills can go a long way in improving the revenue raising capacity of TDS.

(d) One important reason for the decline in revenue from indirect taxes expressed as a ratio of GDP lies in the fact that the revenue loss due to reforms could not be made good by adequate reductions in the exemption regimes. The introduction of MODVAT with effect from March 1, 1986 and further extension in coverage under MODVAT during the subsequent years encompassing raw materials, capital goods, petroleum products, tobacco, specified textiles and equipments, etc. have raised the proportion of revenue from MODVAT in the total Union Excise revenue to 85 per cent. The additional resource mobilisation measures relate to removal of exemptions/ concessions, extension of MODVAT to service sector and efficient tax administration. Exemptions under MODVAT system have scope for misuse of provisions by tax payers. Exemptions relate to two broad groups: general and specific. General exemptions relate to SSI units, goods produced for captive consumption within factory, capital goods meant for use in production of exportable items, etc. whereas specific exemptions relate to 81 identified items ranging from coffee, tea and spices to pens, pencils and combs. The need to extend MODVAT to the service sector is reinforced by the faster growth of this sector vis-a-vis other sectors and increase in the proportion of services in the consumption basket of richer families. Countries adopting VAT generally levy sumptuary excise on some commodities to discourage consumption or for reasons related to health and/ or environment. Such an excise on cigarettes, motor cars, petroleum products and alcoholic drinks can yield substantial ARM. As for tax administration, most important measures relate to simplification of forms and procedures, effective cross verification of invoices, and a selective yet incisive audit programme. With the help of latest computer-aided techniques it should be possible to identify and focus on a small percentage of dealers who have a big probability of being defaulters. As regards the other important indirect tax, viz. customs, despite reduction in tariff rates, a number of exemptions still prevail which result in revenue loss. Though all exemptions cannot be deleted (as a good number of general exemptions relate to bilateral/ multilateral agreements, defence, etc.), a review should be made and wherever possible exemptions eliminated. Besides exemptions, the other important factor resulting in loss of customs revenue relates to undervaluation of imports. The establishment of a Centralised Valuation Organisation under the Bombay Custom House which handles nearly 50 per cent of India's total imports, can reduce the incidence of undervaluation of imports through effective monitoring & by tracking trends in world prices.

Ensuring the Projected Resources for the Plan

- Continue and strengthen simplification of tax laws and streamlining of tax collection procedures.
- Scrutiny assessment to be less irksome and more efficient.
- Establishment of tax courts as the final arbitor of tax measures.
- Computerisation, better records management and establishment of tax research and guidance cells.
- Continuation of minimum asset based levy on Corporate enterprises and evolving occupation specific presumptive norms for small business, agriculture and services.
- Computerisation of Tax Deduction at Source (TDS) coupled with upgradation of manpower skills.
- Sumptuary excise on commodities such as cigarettes, motor cars, petroleum products and alcoholic drinks.
- Review of exemptions under customs and establishment of a Centralised Valuation Organisation under the Bombay Customs House to reduce incidence of under-valuation of imports.
- Subsidies to be made transparent and closely targeted.
- More productive utilisation of existiang assets of the public sector enterprises.
- Price revision by CPSEs commensurate with the increase in input costs.

3.47 Equally important are measures aimed at controlling non-plan expenditure. Subsidies have become an important and growing component of Public Expenditure. There are a number of hidden subsidies whose magnitude and quantum are rarely measured or monitored. It is therefore of utmost importance that subsidies be transparent and closely targeted.

3.48 Since the plan outlay of Public Enterprises accounts for about two-thirds of the total Central Plan outlay, it is necessary to improve their financial viability through appropriate pricing strategies and reduction of non-transparent subsidies. In order to overcome the resource constraints being faced by these enterprises, it is necessary to ensure more productive utilisation of existing assets. Improvement in financial performance can go a long way in enabling public enterprises to borrow from the market for financing plan investment and thereby reduce their dependence on budgetary resources which are required for social sectors which depend exclusively on budgetary support for financing their plan outlay.

Measures to be taken by the Centre to improve the Resources of the States

3.49 In order to help the States to raise required level of resources, the Centre has to play supportive role in certain areas as detailed below:

3.50 A higher Statutory devolution of funds from the Centre to the States through Finance Commissions is an issue which needs support of the Central Government. The Tenth Finance Commission recommended an alternative scheme wherein 29per cent of the gross revenues from all Central taxes, pooled together, may be given to the States. This has been supported by the Central Government also. Necessary legislative measures need to be taken expeditiously.

3.51 Even though the alternative scheme of TFC may improve devolution to the States in so far as tax revenues are concerned, the basic question that is to be addressed is whether there is an increase in total gross as well net devolution to the States. The net flow of grants and loans to States has declined over a period of time as a percentage of GDP. The net revenue flow has become negative in the case of a number of States; and net capital flow has also substantially slowed down. These issues have to be looked at in a larger perspective, taking into account the growing needs of the States in the developmental activities like education, health care, etc. and non-developmental obligations like maintenance of law and order, and fast growing debt servicing. It is necessary to adopt a holistic approach and work out a positive solution.

3.52 A number of tax proposals are being sent by the States and UTs to the Central Government from time to time for approval. The Central Ministries should clear these proposals expeditiously. There is a tendency to view these proposals largely in terms of the sectoral interests on technical grounds. The paramount importance of facilitating resource mobilisation by the States & UTs should be given due weightage in the scrutiny of these proposals.

3.53 The revision of royalty rates of major minerals is another measure which will go a long way to improve the resources of the States. The Mines and Minerals (Regulation and Development) Act 1957 was enacted, empowering the Central Government to fix the rates of the royalty on major minerals including coal. Two general issues raised by the mineral producing States, in this connection, are (i) frequency in the revision of royalty rates and (ii) fixing the rates on advalorem basis. The Act envisaged that the royalty may be revised only once in a period of 4 years. The revision in 1991 took place after a gap of 10 years though the subsequent revision in 1994 had a gap of a little more than 3 years. The Sarkaria Commission recommended that review of royalty rates on minerals, petroleum and natural gas should be made every two years and well in time as and when they fall due. It is necessary to have frequent revisions in the royalty rates including coal in order to augment the revenue resources of the States. Similarly there is a case for shifting specific duties on coal to advalorem duties to avoid erosion of the resources of the States in real terms. This may lead to some administrative problems in fixing ex-factory price, which need to be tackled appropriately in order to avoid revenue leakage. Considering the fact that Mineral rich States like Bihar, Orissa, Madhya Pradesh, A.P. and West Bengal are resource-scarce States and relatively backward, these two measures need to be taken up as early as possible.

3.54 Revenue growth from the Sales tax in many States has become slow due to competitive reduction in tax rates by the States and also due to large number of incentives and concessions provided by States to attract industries. The Sales tax is the most important tax measure with the States and it provides about 60per cent of the tax revenues. It is necessary that this tax should be strengthened. A committee of State Finance Ministers on Sales tax Reform had recommended that (a) the base should be broadened by reducing the number of exemptions to a few, (b) by having only 3 rates apart from zero, (c) by putting an end to the policy of competition among the States in offering sales tax concessions and (d) by graduallly moving over to a system of value added tax in each State. Though the adoption of the value added tax may take considerable time, it is possible to implement other recommendations. This needs to be encouraged and facilitated through a suitable initiative from the Central Government.

Supportive Role by Centre to improve the Resources of the States

- Adoption of a holistic approach in respect of net flow of grants and loans to States keeping in view the States' growing needs for provision of Education and Health care and maintenance of Law and order.
- Expeditious scrutiny of tax proposals received from the States and UTs.
- Frequent revisions in the royalty rates on major minerals including coal on the lines recommended by Sarkaria Commission.
- Ad valorem duties in place of specific duties on coal.
- Initiative from the Central Government for the adoption of a system of value added tax in each State.
- Implementation of consignment tax and continuation of Central Sales Tax without dilution.
- Empowering the States through appropriate legislation to levy tax on services.

3.55 The administration of the Central Sales Tax has become weak due to evasion of tax through transfer of goods on consignments. In order to check evasion and to get additional revenues from levy of tax on consignments. Constitution was amended to enable the Parliament to enact necessary legislation for levying of consignment tax in 1982-83. Subsequently the issue was discussed a number of times but the necessary legislation could not be carried out for one or the other reason. The Sarkaria Commission has noted that it is a matter of serious concern that after a lapse of about five years no legislation has been brought in for giving effect to the intent of the consignment tax and the Union Government should bring in legislation in this regard without further loss of time. On the other hand there is a view which is opposed to the introduction of a consignment tax and favours eventual elimination of Central Sales Tax on the ground that such taxes may impede introduction of a comprehensive VAT and discourage evolution of an integrated national market. However, the point to be noted is that considerable effort was made to amend the Constitution to enable the Government to introduce consignment tax to check evasion of C.S.T. through disguise of consignments. The revenue loss to the States by withdrawing C.S.T. and not implementing the consignment tax may be as high as Rs. 50,000 crore in the Ninth Plan period. It is therefore necessary that consignment tax is implemented and C.S.T. is continued without dilution.

3.56 The Service sector has been lightly taxed. This sector has registered impressive growth during the recent years and is expected to grow even more during the Ninth Plan period but its contribution to the budgetary resources is not commensurate with its share in GDP which is over 40 per cent. The MODVAT presently under operation under excise of the Centre should be extended to the service sector as well. The Sarkaria Commission had suggested taxation of advertisement broadcast by radio or television by suitable legislation. State Governments have argued that tax on services should normally form a part of the consumption tax, which is within the purview of the State Governments. The States have, therefore, argued that the Centre should delegate to the States the powers to levy, collect and retain yield of such taxes. In order to provide these powers to the States, it may be necessary to enact appropriate legislation as the power to tax services is not with the States at present.

3.57 The commercial losses of the State Electricity boards in absolute terms have shot up to Rs.10,941 crore in 1996-97 (RE) as against a little over Rs.4,000 crore in 1991-92. The hidden subsidy for the agriculture and domestic uses has increased from

Rs.7,248 crore in 1991-92 to Rs.19,277 crore in 1996-97 RE and is projected to go up to Rs. 1580 crore in 1997-98. In the agricultural sector many states are providing energy either free or at negligible rates. The restoration of financial health of the SEBs and improvement in their operational efficiency are most crucial issues in the power sector. According to the Electricity (Supply) Act 1948, the SEBs are required to earn a minimum rate of return of 3 per cent on their net fixed assets in service after meeting the financial charges and depreciation. Most of the SEBs do not conform to this standard and the overall rate of return on their fixed assets is negative estimated at (-) 16 per cent in 1997 -98. While inefficiencies in the operation in respect of T&D losses and plant load factor and billing and related matters are some of the reasons for their losses, the more important reason for commercial losses is irrational fixing of rates of tariff for electric power specially in relation to the agricultural sector and in some cases, to the domestic consumers. In this context it is considered desirable to establish Central Electricity Regulatory Commission which will set the bulk tariffs for all Central generating and transmission utilities and State Electricity Commissions in the States to fix tariff rates. It is also necessary to ensure that the PPAs signed by SEBs with enterprises in the rush to attract investment from IPPs do not have built-in conditions and clauses which will compromise or adversely affect the financial health of SEBs in the medium and long run

Active Role by the States and their Enterprises to improve Resource Mobilisation

- Gradual reduction of hidden subsidy provided for agriculture.
- Establishment of State Electricity Regulatory Authorities to fix tariff rates.
- Safeguarding the financial health of SEBs in the medium and long term even as investment from IPPs is attracted.
- Improvement in operational efficiency of SEBs including reduction of T&D losses and higher plant load factor.
- Simultaneous revision of bus fares to offset increase in input prices of State Road Transport Corporations/Undertakings.
- Sharing of non-viable routes also by the private operators.
- Assessment of resources of the local bodies by the State Governments and initiating the process of dove-tailing plans of local bodies and State Governments

3.58 The State Road Transport Corporations/Undertakings are second largest enterprises of the States. These enterprises as a whole earn negative returns to their fixed capital mainly because these enterprises were required to run on non-viable basis. There should be an automatic mechanism to revise fares to offset increase in input prices. Social obligation should be duly compensated. While inducting private sector operators, the SRTC should not be put to a disadvantageous position by limiting their operations to non-viable routes while releasing all or most profitable routes to private operators. Also equity support should be extended in deserving cases

Local Bodies and Decentralised Planning

3.59 The Constitution Seventy-Third **Amendment** Act, 1992 on the Panchayats and the Constitution Seventy-Fourth Amendment Act, 1992 on Municipalities have introduced a three-tier system of Government. These Acts have added Eleventh Schedule identifying subjects within the jurisdiction of Panchayats and twelfth schedule identifying subjects of Municipalities. Both Acts have provision for constitution of Finance Commissions by the States to review financial position of Local Bodies and to make recommendations on the distribution of tax proceeds between the State and the Local Bodies and on assignment of taxes etc. to the latter. Following these Acts, State Finance Commissions have been set up by the States. The State Governments are further required to endow the Local Bodies with power and authority necessary to enable them to function as institutions of self Government with the responsibility of preparing plans for economic development and social justice and implementing them. The task of financing plans of Local Bodies will have to be integrated with the implementation of the States' Finance Commission Reports. These reports are expected to give the details of schemes of revenue raising for meeting current expenditure and grants-in-aid for meeting requirements to aid the process of restructuring these Bodies, which at present are financially unviable in most of the cases. These require exercises to be followed up by detailing sources of finance for capital expenditure. While estimating the resources for the Ninth Five Year Plan, resources from the Local Bodies have not been separately quantified for want of adequate information. However, a process has to be initiated in regard to dove-tailing plans of Local Bodies and State Governments and assessing resources of these Bodies by the State Governments.

Public Sector Resources – Allocations

3.60 The distribution of public sector outlay between the Centre and the States is determined by the respective resource generation capabilities, on the one hand, and the distribtuion of the developmental responsibilities, on the other. In so far as the resourcesare concerned, the summary position for the Ninth Plan is given in Table 3.7.

3.61 It may be seen that the outlay of the Central Ministries account for almost 57 per cent of the total public sector plan outlay. This high percentage is due primarily to the IEBR of the Central sector which accounts for 58.31 per cent of the outlay of the Central Ministries. These IEBR are not reappropriable both between the Centre and the States and between the different Ministries. The re-appropriable parts of the Centre's resources are distributed in the proportion of 54.5 per cent for Central Ministries, including Centrally Sponsored Schemes, and 44.0 per cent as Central support to State Plans and 0.7 per cent for UTs with legislature and 0.8 per cent for UTs without legislature respectively.

Table 3.7 : Resources Dimensions and Allocations for the Ninth Plan (1997-2002)

(Rs. in Crore at 1996-97 prices)

Sl. No.	Resources Components	Central Ministries	States & UTs with Legislature	UTs without Legislature	Total (3+4+5)
1	2	3	4	5	6
I.	Domestic Budget Support (DBS)	183964	127158	2860	313982
II.	External Aid routed through Budget(EAP)	20018	40000	-	60018
III.	Gross Budgetary Support (I+II)	203982	167158	2860	374000
IV.	Internal & Extra Budgetary Resources(IEBR) of CPSEs	285379	-	-	285379
V.	States' Own Resources	--	199821*	-	199821
	GRAND TOTAL (III+IV+V)	489361	366979	2860	859200

* **Includes States' Own Budgetary Resources and IEBR of States' Public Enterprises.**

3.62 The allocation of the available public sector resources by the major heads of development is summarised in Annexure 3.2. In making these allocations, high priority has been given to three broad areas : (a) agriculture and rural development ; (b) energy and (c) social services, which are central to the objectives of the Ninth Plan. It needs to be realised, however, that there are limitations on the extent to which the allocations by heads of development can be changed from one plan to another. A five year plan is part of continuum in which programmes and projects of relatively long duration are begun and need to be sustained over subsequent plan periods. Abrupt reduction in the flow of resources can lead to potentially large wastage of investment already made. On the other hand, with growth and development, the priorities of public action do need to change, and these are reflected in the objectives of the Five Year Plans. Reorientation of the structure of the public sector outlays to reflect the priorities and objectives of a plan perforce have to be incremental in nature. Thus, although dramatic changes cannot be made from one plan to another, changes that are made in a given plan would continue to accelerate in the future so long as objectives and priorities are maintained.

3.63 An important conceptual and ethical basis of the Ninth Plan is the concept of cooperative federalism, whereby considerable freedom is to be granted to the States in determining their plan outlays in order to suit their specific needs and aspirations. As a consequence, the allocation of outlays by the States have been arrived at through the process of consultation between the individual States and the Planning Commission. These allocations, therefore, primarily reflect the desires of the States while reflecting, for the most part, the national objectives. These are presented in Annexure 3.3.

3.64 The Central sector bears the residual responsibility for meeting the plan objectives to the extent that these could not be realised through the State plans or through private sector initiatives. There are, however, limitations to the ability of the Centre for bridging the perceived gaps primarily due to the resource constraints that have been experienced and the need to make adequate provisions for support to the State plans. The Department-wise allocations of outlays in the Central sector and their financing through budgetary support and internal and extra budgetary resources are indicated in Annexure 3.4 A and 3.4 B for Departments implementing SAPs and the others respectively.

3.65 Even so, the allocation of Central sector outlays reflect the constraints placed on the planning process by the need to maintain continuity with the past and resource stringency in fully reflecting the objectives of the plan. The principal lacuna in the allocations that have been made lie in not providing the requisite budget support for the priority social service sectors. To fully meet the funds requirements for providing safe drinking water, universalisation of primary education and primary health care and to ensure nutrition security for children it would be necessary to provide additional outlay, over and above the amounts allocated by the Centre and States to these sectors. Since the resources position of the States is already strained in view of the additional resource burden for salary revision predicated by the implementation of the Fifth Pay Commission recommendations by the Centre, many of the States are unlikely to be able to raise even part of these requirements. Therefore, the burden of additional resource mobilisation falls largely on the Centre.

3.66 The Steering Group on Financial Resources had projected an amount of Rs.25,000 crore by way of disinvestment as resources for the Ninth Plan. While working out the balance from current revenues of the Centre, the fiscal deficit/GDP ratio was kept at 4.1 per cent average for the Ninth Plan by the Steering Group. The fiscal deficit of the Centre can be raised to 5 per cent average for the Ninth Plan period without disturbing the sustainability of fiscal balance.

3.67 Taking into account the additional resource mobilisation through disinvestment of equity of Central PSUs and enhancement of fiscal deficit within the limit of sustainability, it has been feasible to provide additional allocation for priority sector social services through the SAPs.

Annexure 3.1

Projected vis-à-vis Realised Financing Pattern of Eighth Plan Outlay of Centre (including UTs) and States

(Rs. In crore at 1991-92 prices)

	Item	Projected			Realised		
		Centre (incl. UTs)	States	Total	Centre (incl. UTs)	States	Total
1.	BCR	22020	12985	35005	-37554	-2009	-39563
2.	Resource of PSEs	144140	4000	148140	130324	-2723	131449
3.	Borrowings incl. MCR	117755	84500	202255	165148	75067	240215
4.	Net flow from abroad	28700	0	28700	19234	0	19234
5.	Deficit Financing	20000	0	20000	33037	0	33037
6.	Aggregate Resources	332615	101485	434100	314037	70335	384372
7.	Assistance for States Plan	-78500	78500	0	-75750	75750	0
8.	Resources for Public Sector Plan	254115	179985	434100	234439	146085	380524

Note: The figures of realisation are provisional as actuals are not available for all the five years of the Eighth Plan.

Annexure 3.2

Public Sector Outlay by Major Heads of Development in the Ninth Plan (1997-2002)

(Figures in Rs. Crore at 1996-97 prices)

Head of Development	Centre	Percent	States/ Uts	Percent	Total	Percentage of Total: Ninth Plan	Percentage of Total: Eighth Plan
1	2	3	4	5	6	7	8
Agriculture and Allied Activities	14876	3.0	27586	7.5	42462	4.9	12.7
Irrigation and Flood Control	2291	0.5	53129	14.4	55420	6.5	
Rural Development	42278	8.6	32408	8.8	74686	8.7	7.9
Special Programs	0	0.0	3649	1.0	3649	0.4	1.5 *
Energy	153807	31.4	68568	18.5	222375	25.9	26.6
Industry and Minerals	51664	10.6	13484	3.6	65148	7.6	10.8
Transport	81791	16.7	37582	10.2	119373	13.9	12.9
Communications ***	47249	9.7	31	0.0	47280	5.5	5.8
Science & Tech & Environment	15449	3.2	3009	0.8	18458	2.1	2.1
Gen. Economic Services	6279	1.3	8301	2.2	14580	1.7	1.5
General Services **	1393	0.3	11103	3.0	12496	1.5	
Social Services	72284	14.8	110989	30.0	183273	21.3	18.2
Total :	489361	100.0	369839	100.0	859200	100.0	100.0

* includes the Central Assistance for Special Area Programmes which is being allocated to the States as part of the Central Assistance for State Plans in the Ninth Plan and, as such, is not reflected as part of Special Programmes;

** The figure for States is exceptionally high in the Ninth Plan due to the inclusion of the amount earmarked for decentralised planning by a few States for which no sectoral break-up is given;

*** Also includes Information Technology

Annexure 3.3

NINTH PLAN - 1997-2002 - OUTLAYS PROPOSED BY - STATES/UTs

(MAJOR HEADS OF DEVELOPMENT)

Sl. No.	Major Heads of Development	Andhra Pradesh *	Arunachal Pradesh *	Assam *	Bihar *	Goa	Gujarat	Haryana *	Himachal Pradesh *	J & K *
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1.	AGRI. & ALLIED ACTIVITIES	505.39	341.70	1094.86	746.00	69.87	2009.70	562.32	842.80	1102.95
		(2.01)	(9.57)	(12.19)	(4.47)	(4.66)	(7.18)	(6.04)	(14.79)	(11.61)
2.	RURAL DEVELOPMENT	1922.49	108.04	807.71	4160.00	21.95	1160.50	312.82	252.98	287.85
		(7.64)	(3.03)	(8.99)	(24.94)	(1.46)	(4.14)	(3.36)	(4.44)	(3.03)
3.	SPECIAL AREA PROGRAMMES	946.22	20.00	40.12	272.00	9.51	0.00	85.65	0.00	561.45
		(3.76)	(0.56)	(0.45)	(1.63)	(0.63)		(0.92)		(5.91)
4.	IRRI. & FLOOD CONTROL	6006.80	279.95	710.42	2700.00	278.09	8381.55	1673.01	258.85	425.60
		(23.88)	(7.84)	(7.91)	(16.19)	(18.54)	(29.93)	(17.97)	(4.54)	(4.48)
5.	ENERGY	5752.37	467.13	852.72	2300.00	130.20	4041.00	2652.42	1039.30	2271.45
		(22.87)	(13.09)	(9.49)	(13.79)	(8.68)	(14.43)	(28.49)	(18.23)	(23.91)
6.	INDUSTRY & MINERALS	962.13	46.10	380.04	400.00	34.55	1205.00	144.31	150.00	375.25
		(3.83)	(1.29)	(4.23)	(2.40)	(2.30)	(4.30)	(1.55)	(2.63)	(3.95)
7.	TRANSPORT	2416.47	929.51	1006.99	1500.00	207.40	726.00	1110.68	614.70	787.55
		(9.61)	(26.04)	(11.21)	(8.99)	(13.83)	(2.59)	(11.93)	(10.78)	(8.29)
8.	COMMUNICATIONS	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00
							(0.09)			
9.	SC.,TECH. & ENVIRONMENT	17.43	1.55	18.00	150.00	4.62	57.25	12.10	7.09	32.30
		(0.07)	(0.04)	(0.20)	(0.90)	(0.31)	(0.20)	(0.13)	(0.12)	(0.34)
10.	GENERAL ECONOMIC SERVICES	64.46	116.50	256.37	392.00	25.38	726.25	68.89	322.83	256.50
		(0.26)	(3.26)	(2.85)	(2.35)	(1.69)	(2.59)	(0.74)	(5.66)	(2.70)
11.	SOCIAL SERVICES	6460.07	1177.61	3644.03	3660.00	692.47	9648.85	2644.97	2106.44	3120.75
		(25.69)	(32.99)	(40.56)	(21.94)	(46.16)	(34.46)	(28.41)	(36.96)	(32.85)
12.	GENERAL SERVICES	96.17	81.80	172.67	400.00	25.95	18.90	42.83	105.01	278.35
		(0.38)	(2.29)	(1.92)	(2.40)	(1.73)	(0.07)	(0.46)	(1.84)	(2.93)
	GRAND TOTAL	25150.00	3569.89	8983.93	16680.00	1500.00	28000.00	** 9310.00	5700.00	9500.00 **
		(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	100.00)	(100.00)

Note : Figures in bracket are inter-se percentages.

* : Proposed Outlay

** : Proposed Outlay proportionately reduced to the Originally Agreed Outlay.

NINTH PLAN - 1997-2002 - OUTLAYS PROPOSED BY - STATES/UTs
(MAJOR HEADS OF DEVELOPMENT)

Sl. No.	Major Heads of Development	Karnataka *	Kerala	Madhya Pradesh *	Mahara-shtra *	Manipur *	Meghalaya *	Mizoram *	Nagaland *	Orissa *
1.	2.	12.	13.	14.	15.	16.	17.	18.	19.	20.
1.	AGRI. & ALLIED ACTIVITIES	1464.00	1039.50	1129.50	1827.64	183.17	332.58	146.48	260.00	562.88
		(6.26)	(6.46)	(5.63)	(4.98)	(7.55)	(13.30)	(9.05)	(12.96)	(3.75)
2.	RURAL DEVELOPMENT	1173.97	392.90	2005.59	3170.88	61.20	138.54	236.95	288.80	945.52
		(5.02)	(2.44)	(9.99)	(8.64)	(2.52)	(5.54)	(14.64)	(14.39)	(6.30)
3.	SPECIAL AREA PROGRAMMES	555.00	47.00	0.00	190.84	0.00	18.50	0.16	27.00	0.00
		(2.37)	(0.29)		(0.52)		(0.74)	(0.01)	(1.35)	
4.	IRRI. & FLOOD CONTROL	6170.00	1028.00	2722.02	10929.25	320.60	90.77	17.32	57.00	3388.58
		(26.37)	(6.39)	(13.56)	(29.78)	(13.21)	(3.63)	(1.07)	(2.84)	(22.59)
5.	ENERGY	3745.00	2671.00	3479.46	5596.75	335.34	299.07	242.94	119.65	4627.64
		(16.00)	(16.59)	(17.33)	(15.25)	(13.82)	(11.96)	(15.01)	(5.96)	(30.85)
6.	INDUSTRY & MINERALS	1026.00	1125.86	1112.97	902.85	126.51	94.52	75.42	121.00	123.49
		(4.38)	(6.99)	(5.54)	(2.46)	(5.21)	(3.78)	(4.66)	(6.03)	(0.82)
7.	TRANSPORT	1740.00	569.00	562.92	3402.09	399.68	538.13	265.27	305.40	1278.73
		(7.44)	(3.53)	(2.80)	(9.27)	(16.47)	(21.52)	(16.39)	(15.22)	(8.52)
8.	COMMUNICATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.	SC.,TECH. & ENVIRONMENT	40.00	75.00	210.20	14.68	9.00	6.75	3.08	5.00	75.76
		(0.17)	(0.47)	(1.05)	(0.04)	(0.37)	(0.27)	(0.19)	(0.25)	(0.51)
10.	GENERAL ECONOMIC SERVICES	105.00	185.00	317.53	1001.91	133.67	67.02	80.93	204.00	551.30
		(0.45)	(1.15)	(1.58)	(2.73)	(5.51)	(2.68)	(5.00)	(10.17)	(3.68)
11.	SOCIAL SERVICES	7206.03	2863.74	8506.69	8734.60	569.89	847.22	522.13	514.79	3364.63
		(30.79)	(17.79)	(42.37)	(23.80)	(23.49)	(33.88)	(32.26)	(25.66)	(22.43)
12.	GENERAL SERVICES	175.00	6103.00	28.12	928.50	287.33	67.52	27.83	103.79	81.27
		(0.75)	(37.91)	(0.14)	(2.53)	(11.84)	(2.70)	(1.72)	(5.17)	(0.54)
					**		**	**		
	GRAND TOTAL	23400.00	16100.00	20075.00	36700.00	2426.39	2500.62	1618.51	2006.43	15000.00
		(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Note : Figures in bracket are inter-se percentages.

* : Proposed Outlay

** : Proposed Outlay proportionately reduced to the Originally Agreed Outlay.

Annexure 3.3 contd.

NINTH PLAN - 1997-2002 - OUTLAYS PROPOSED BY - STATES/UTs
(MAJOR HEADS OF DEVELOPMENT)

Sl. No.	Major Heads of Development	Punjab *	Rajasthan *	Sikkim *	Tamil Nadu	Tripura *	Uttar Pradesh	West Bengal *	Total States	A & N Islands
1.	2.	21.	22.	23.	24.	25.	26.	27.	28.	29.
1.	AGRI. & ALLIED ACTIVITIES	621.00	1496.00	198.25	2802.23	195.68	3070.38	711.49	23,316.37	137.89
		(5.40)	(6.80)	(12.39)	(11.21)	(7.59)	(6.63)	(4.21)	(6.58)	(8.98)
2.	RURAL DEVELOPMENT	805.00	1881.00	54.50	2301.25	357.45	4742.80	1106.95	28,697.65	59.00
		(7.00)	(8.55)	(3.41)	(9.21)	(13.87)	(10.23)	(6.55)	(8.10)	(3.84)
3.	SPECIAL AREA PROGRAMMES	13.80	112.20	0.00	0.00	140.19	575.00	216.32	3,830.96	0.00
		(0.12)	(0.51)			(5.44)	(1.24)	(1.28)	(1.08)	
4.	IRRI. & FLOOD CONTROL	1285.70	2466.20	41.00	1447.65	194.01	3290.12	1404.39	55,566.89	10.00
		(11.18)	(11.21)	(2.56)	(5.79)	(7.53)	(7.10)	(8.31)	(15.69)	(0.65)
5.	ENERGY	2956.65	5194.20	267.00	6019.95	174.54	7544.15	5636.15	68,416.08	150.00
		(25.71)	(23.61)	(16.69)	(24.08)	(6.77)	(16.28)	(33.35)	(19.32)	(9.77)
6.	INDUSTRY & MINERALS	281.75	1711.60	70.00	1402.91	79.34	526.65	1326.65	13,804.90	38.00
		(2.45)	(7.78)	(4.38)	(5.61)	(3.08)	(1.14)	(7.85)	(3.90)	(2.48)
7.	TRANSPORT	603.75	2140.60	160.00	2705.78	367.37	10006.72	1064.70	35,409.44	550.36
		(5.25)	(9.73)	(10.00)	(10.82)	(14.25)	(21.59)	(6.30)	(10.00)	(35.85)
8.	COMMUNICATIONS	0.00	0.00	0.00	0.00	0.95	0.00	0.00	25.95	5.00
						(0.04)			(0.01)	(0.33)
9.	SC.,TECH. & ENVIRONMENT	43.70	30.80	11.00	70.10	3.22	2074.60	59.15	3,032.38	5.00
		(0.38)	(0.14)	(0.69)	(0.28)	(0.12)	(4.48)	(0.35)	(0.86)	(0.33)
10.	GENERAL ECONOMIC SERVICES	893.55	292.60	73.75	70.13	12.18	2103.58	206.18	8,527.51	40.00
		(7.77)	(1.33)	(4.61)	(0.28)	(0.47)	(4.54)	(1.22)	(2.41)	(2.61)
11.	SOCIAL SERVICES	3788.10	5984.00	479.50	7958.07	1028.39	12277.97	4797.91	102,599.05	481.27
		(32.94)	(27.20)	(29.97)	(31.83)	(39.90)	(26.50)	(28.39)	(28.97)	(31.35)
12.	GENERAL SERVICES	207.00	690.80	245.00	221.93	24.07	128.03	370.11	10,910.98	58.48
		(1.80)	(3.14)	(15.31)	(0.89)	(0.93)	(0.28)	(2.19)	(3.08)	(3.81)
		**	**					**		
	GRAND TOTAL	11500.00	22000.00	1600.00	25000.00	2577.39	46340.00	16900.00	354,138.16	1535.00
		(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Note : Figures in bracket are inter-se percentages.

* : Proposed Outlay

** : Proposed Outlay proportionately reduced to the Originally Agreed Outlay.

Annexure 3.3 Concld.

NINTH PLAN - 1997-2002 - OUTLAYS PROPOSED BY - STATES/UTs
(MAJOR HEADS OF DEVELOPMENT)

(Rs. crore)

Sl. No.	Major Heads of Development	Chandigarh *	D & N Haveli *	Daman & Diu *	Delhi *	Lakshadweep	Pondicherry *	Total UTs	Total States/UTs
1.	2.	30.	31.	32.	33.	34.	35.	36.	37.
1.	AGRI. & ALLIED ACTIVITIES	7.28	32.76	9.66	206.00	43.99	143.19	580.77	23,897.14
		(1.06)	(15.98)	(5.85)	(1.33)	(16.29)	(11.01)	(2.95)	(6.39)
2.	RURAL DEVELOPMENT	11.88	4.27	1.21	359.00	5.48	38.20	479.04	29,176.69
		(1.73)	(2.08)	(0.73)	(2.31)	(2.03)	(2.94)	(2.43)	(7.80)
3.	SPECIAL AREA PROGRAMMES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,830.96
									(1.02)
4.	IRRI. & FLOOD CONTROL	1.20	16.19	5.83	130.00	17.36	39.00	219.58	55,786.47
		(0.18)	(7.90)	(3.53)	(0.84)	(6.43)	(3.00)	(1.11)	(14.92)
5.	ENERGY	86.46	46.68	29.03	3000.00	37.01	232.00	3,581.18	71,997.26
		(12.62)	(22.77)	(17.59)	(19.30)	(13.71)	(17.85)	(18.18)	(19.26)
6.	INDUSTRY & MINERALS	3.09	5.74	3.53	110.00	9.16	185.00	354.52	14,159.42
		(0.45)	(2.80)	(2.14)	(0.71)	(3.39)	(14.23)	(1.80)	(3.79)
7.	TRANSPORT	19.39	25.24	27.24	3271.60	85.49	72.60	4,051.92	39,461.36
		(2.83)	(12.31)	(16.51)	(21.05)	(31.66)	(5.58)	(20.57)	(10.56)
8.	COMMUNICATIONS	0.00	0.00	0.00	0.00	0.93	0.00	5.93	31.88
						(0.34)		(0.03)	(0.01)
9.	SC.,TECH. & ENVIRONMENT	1.06	0.30	0.82	112.00	6.44	1.60	127.22	3,159.60
		(0.15)	(0.15)	(0.50)	(0.72)	(2.39)	(0.12)	(0.65)	(0.85)
10.	GENERAL ECONOMIC SERVICES	9.59	5.83	17.85	78.38	5.26	31.30	188.21	8,715.72
		(1.40)	(2.84)	(10.82)	(0.50)	(1.95)	(2.41)	(0.96)	(2.33)
11.	SOCIAL SERVICES	541.23	63.15	57.81	7645.00	55.25	521.50	9,365.21	111,964.26
		(79.01)	(30.80)	(35.04)	(49.19)	(20.46)	(40.12)	(47.54)	(29.95)
12.	GENERAL SERVICES	3.82	4.84	12.02	629.30	3.63	35.61	747.70	11,658.68
		(0.56)	(2.36)	(7.28)	(4.05)	(1.34)	(2.74)	(3.80)	(3.12)
	GRAND TOTAL	685.00	205.00	165.00	15541.28	270.00	1300.00	19701.28	373839.44 #
		(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Note: Figures in bracket are inter-se percentages.

* : Proposed Outlay

\# : Figures based on projections by State Governments. The overall size of public Sector Plan is placed at 859,200 crore and includes only Rs. 369,839 crore for States/UTs

Annexure 3.4A

Projected Financing of Special Action Plans and Other Programmes of Selected Ministries/Departments in the Ninth Plan

(Rs. Crore at 1996-97 prices)

Sl. No.	Ministry/ Department	Budget Support		Total Budget Support Col (2+3)	IEBR	Total Outlay Col(4+5)
		SAP	Other programmes			
	1	2	3	4	5	6
1.	Agriculture and Cooperation	1400.00	7753.82	9153.82	0.00	9153.82
2.	Agriculture Research and Education	1210.00	2166.95	3376.95	0.00	3376.95
3.	Animal Husbandry and Dairy	1426.75	918.89	2345.64	0.00	2345.64
4.	Coal	1222.01	1237.58	2459.59	16982.00	19441.59
5.	Health @	200.00	5184.54	5384.54	0.00	5384.54
6.	Family Welfare	4700.00	10420.20	15120.20	0.00	15120.20
7.	Education	2537.65	17843.99	20381.64	0.00	20381.64
8.	Youth Affairs and Sports	318.42	507.67	826.09	0.00	826.09
9.	Culture	205.70	714.71	920.41	0.00	920.41
10.	Non-Conventional Energy	200.00	1922.14	2122.14	1678.00	3800.14
11.	Power	1000.00	13943.05	14943.05	30648.00	45591.05
12.	Rural Dev.	2790.00	9647.97	12437.97	0.00	12437.97
13.	RE&PA	900.00	28495.90	29395.90	0.00	29395.90
14.	Surface Transport	1935.96	10133.86	12069.82	13195.00	25264.82
15.	Urban Affairs & Employment	1150.00	3781.22	4931.22	6559.00	11490.22
16.	Women & Child Development	450.00	7360.42	7810.42	0.00	7810.42
17.	Water Resources	0.00	2291.25	2291.25	0.00	2291.25
18.	Information Technology*	300.00	0.00	300.00	0.00	300.00
A.	Sub-total SAP Ministries/Depts	21946.49	124324.16	146270.65	69062.00	215332.65

*** Under a separate Development Head**
@ Inclusive of ISM &H.

Note :- The above figures exclude a sum of Rs. 9626.74 crore towards three Centrally Sponsored Schemes under the Ministries of Agriculture & Cooperation, Education, and Rural Employment & Poverty Alleviation, which have been approved for transfer to States. This figure is reflected in the State Plan Outlays. Until these schemes are actually transferred, appropriate adjustments will be made in the Annual Plans.

Projected Budget Support, IEBR and Outlay for the Other Central Ministries/Departments in the Ninth Plan (1997-2002)

(Rs. Crore at 1996-97 prices)

Sl. No.	Ministry/Department	Budget Support	IEBR	Total Outlay Col. (2+3)
	(1)	(2)	(3)	(4)
1.	Chemicals & Petrochemicals	171.00	6589.00	6760.00
2.	Fertilizers	1043.38	9970.00	11013.38
3.	Civil Aviation	495.37	10617.00	11112.37
4.	Tourism	485.75	308.00	793.75
5.	Consumer Affairs	28.37	0.00	28.37
6.	Food & Civil Supplies	216.27	150.00	366.27
7.	Sugar & Edible Oils	39.48	0.00	39.48
8.	Commerce	1455.95	178.00	1633.95
9.	Supply	22.19	0.00	22.19
10.	Posts	507.25	0.00	507.25
11.	Telecommunication	44.04	46398.00	46442.04
12.	Environment & Forests	3013.84	0.00	3013.84
13.	Economic Affairs	2544.08	0.00	2544.08
14.	Expenditure	11.11	0.00	11.11
15.	Revenue	4.21	0.00	4.21
16.	Food Processing	235.04	0.00	235.04
17.	Home Affairs	443.92	0.00	443.92
18.	ID & IPP	1923.75	0.00	1923.75
19.	Heavy Industry	551.00	1476.00	2027.00
20.	SS & Agro Rural Industries	3786.85	517.00	4303.85
21.	Information & Broadcasting	680.05	2163.00	2843.05
22.	Labour	899.12	0.00	899.12
23.	Law & Justice	306.31	0.00	306.31
24.	Mines	844.96	6909.00	7753.96
25.	Personnel etc.	64.36	0.00	64.36
26.	Petroleum & Natural Gas	0.00	78401.00	78401.00
27.	Planning	577.12	0.00	577.12
28.	Statistics	155.37	0.00	155.37
29.	Wasteland Development	443.93	0.00	443.93
30.	Science & Technology	1497.35	0.00	1497.35
31.	Science & Industrial Research	1327.48	0.00	1327.48
32.	Bio-Technology	675.00	0.00	675.00
33	Steel	85.50	16147.00	16232.50
34.	Textiles	1414.51	0.00	1414.51
35.	Social Justice & Empowerment	6608.13	0.00	6608.13
36.	Atomic Energy	5700.00	2517.00	8217.00
37.	Electronics	542.37	355.00	897.37
38.	Ocean Development	510.62	0.00	510.62
39.	Space	6511.72	0.00	6511.72
40.	Railways	11791.33	33622.00	45413.33
41.	RGI	53.27	0.00	53.27
B	Sub total Non-SAP	57711.35	216317.00	274028.35

CHAPTER 4

EMPLOYMENT PERSPECTIVE

Labour Force Growth and Employment Requirements

4.1 One of the most daunting challenges facing the Ninth Plan is to provide employment not only for the additions to the labour force during the Plan period, but also to reduce the back-log of unemployment accumulated from the past. This imperative needs to be seen in the context of both an acceleration in the growth rate of the labour force and a secular downward pressure on the employment intensity of the growth processes. Despite an expected reduction in the growth rate of population to 1.58 per cent per annum by the end of the Ninth Plan, the labour force growth reaches a peak level of 2.51 per cent per annum during the Ninth Plan period; the highest it has ever been and is ever likely to attain. Population is projected to increase by 78 million during the Ninth Plan period (1997-02) to a level of 1029 million by the end of the Plan. However, the age structure of the population changes in response to fertility behaviour experienced in the past, and projected for the future, so that the proportion of the population in the most active working age-group of 15 to 59 years goes up significantly during the Plan period. This is a reflection of the high rates of population growth observed during the late 1970s and early 1980s. Moderation in growth of population, which has been brought about by a decline in birth rate in recent years, starts getting reflected in decline in labour force growth only in the post Ninth Plan period.

4.2 The growth rate of the labour force is determined partly by the age structure of the population and the age and sex specific labour force participation rates that can be expected to obtain. The age profile of the population for the Ninth Plan period is presented in Table 4.1. As can be seen, the Ninth Plan period is likely to witness a sharp decline in the share of the population in the age group of 0 to 14 years, and a corresponding increase in the age group of 15 to 59 years, with the 60+ age group more or less retaining its share.

Table 4.1 : Age structure of population: 1997-2002

(Per cent)

Age-group	1997	2002
0 -14	37.23	33.59
15 - 59	56.07	59.41
60+	6.70	7.00

4.3 The labour force participation (LFPR) by age and sex are given in Tables 4.2 & 4.3. As may be seen, participation in labour force varies across age-groups, rising sharply after 20 years age in case of males and 34 years in case of females. Furthermore, for any particular age-group, it tends to vary over time, the direction of change depending upon the benefit perceived by the individual from devoting time to an economically productive activity in contrast to pursuit of education or leisure. A crucial factor in the choice between joining and remaining in the labour force or otherwise is the availability of social security, either through the family or through other institutional structures. The most recent year for which labour force participation rates (LFPR) are available by age-groups is 1993-94. Variations in LFPRs during the past 16 year period are not uniform across age-groups; there is a substantial decline in LFPR in age group 15- 29, practically no change in 30 - 44 years, and a slight increase in the higher age groups.

Table 4.2 : Trends in Labour Force Participation Rates

(Per Thousand of Population)

Age Group	Period	Male Rural	Male Urban	Female Rural	Female Urban
15-29	1977-78	879	746	515	257
	1987-88	824	710	478	211
	1993-94	804	684	455	204
30-44	1977-78	990	990	619	324
	1987-88	988	987	603	301
	1993-94	990	986	600	300
45-59	1977-78	963	940	538	291
	1987-88	964	933	538	275
	1993-94	968	937	543	283
60+	1977-78	667	517	221	130
	1987-88	670	482	220	123
	1993-94	699	443	241	114
All (15+)	1977-78	904	831	517	269
	1987-88	879	810	496	239
	1993-94	877	811	491	238

Note: Constituent shares in labour force in 1993-94 are Rural Male 0.499, Rural Female 0.270, Urban Male 0.182 and Urban Female 0.049.

Table 4.3: Participation in Labour Force by Age Group and by Sex: 1997 – 2012

(per thousand of populaltion)

Age	Males 1997	Males 2002	Males 2007	Males 2012	Females 1997	Females 2002	Females 2007	Females 2012
15-19	517	482	447	412	302	282	261	241
20-24	871				408			
25-29	975				454			
30-34	988				505			
35-39	990				526			
40-44	986		(a)		538		(a)	
45-49	981				524			
50-54	961				476			
55-59	914				411			
60 +	637				205			

Note: (a) No change in labour force participation in age groups above 20 years.

4.4 A continuation of the trend decline in labour force participation is projected in the age group 15 - 19 years over the perspective period. The decline may be even sharper if the thrust on education and literacy that is proposed for the Ninth Plan is realised to a substantial extent. As far as the base year (1996-97) projection of the LFPRs for the other age groups are concerned, these have been derived on the basis of the information pertaining to the 1987-88 and 1993-94 NSS data and the 1991 Census. It turns out that there is practically no difference between these figures and the 1993-94 NSS data. Assuming no significant change in participation rates occurring in other age groups in relation to the base year, the LFPRs by age and sex are given in Table 4.3. However, it is recognised that with improved health and longevity, the LFPRs in the older age groups, particularly 50+ years, may be higher than assumed. On the other hand, with improvements in the average economic conditions, the imperative to remain employed for survival reasons is mitigated. Thus there are contradictory forces operating in this regard, and it is implicitly being assumed that the net effect is not significant.

4.5 On the basis of the age and sex structure of the population and the LFPRs, the labour force is projected to increase by 52.4 million during the Ninth Plan period on the usual status concept, as shown in Table 4.4. As may be seen, the absolute number of persons in the 35-60 age group of labour force increases sharply during the Ninth Plan because of the change in age

Table 4.4 : Labour Force Projections by Age Groups

Age Group	1997	2002	Growth
	(Million)		(% p.a.)
15-19	40.31	45.03	2.24
20-24	55.45	62.91	2.55
25-29	56.89	61.47	1.56
30-34	52.64	58.88	2.26
35-39	46.60	52.80	2.53
40-44	39.56	46.04	3.08
45-49	32.90	38.13	2.99
50-54	25.86	30.27	3.20
55-59	18.86	22.45	3.55
60 +	28.15	31.64	2.37
15 +	397.22	449.62	2.51

structure, which leads to 3 percent or higher growth occurring in labour force age groups 40 to 59, despite an expected reduction in the LFPR of this age-group. If the motivation to attain higher education levels or the expected level of economic well-being and social security do not materialise, the LFPR's of lower age groups may turn out to be higher and put even further pressure on the labour market.

4.6 The labour force growth corresponding to the projected increase in population, change in its age structure and change in labour force participation for the perspective period is given in Table 4.5. It will be seen that the requirement of work opportunities increases by 52 million in Ninth Plan, followed by an increase of 58 million in the quinquennial 2002-07, and a mild

Table 4.5: Population and Labour Force: 1997 – 2012

(million- Ist April)

	1997	2002	2007	2012
Population	951.18	1028.93	1112.86	1196.41
Labour Force	397.22	449.62	507.94	562.91

reduction to 55 million in quinquennial 2007-12. Thus, although the rate of growth of the labour force is highest during the Ninth Plan period, the increase in the absolute number of persons in the labour force will peak during the post Plan quinquennium of 2002-07. Efforts will therefore have to be initiated for creating the conditions for absorption of the larger number of workers in the post-Plan period during the Ninth Plan period itself.

Employment Opportunities during the Ninth Plan and Beyond

4.7 In measuring employment / unemployment in a country like India, certain specific features of the workforce need to be taken into account. The structure of workforce with dominance of self-employment and primary sector, where work-sharing is common, also tends to depress unemployment rates in general and chronic, long-period unemployment rates in particular. Inadequacy of the measure of unemployment in terms of open unemployment has, therefore, been well recognised in the measurement and analysis of unemployment in India. The National Sample Survey Organisation (NSSO), which provides estimates of the rates of unemployment on the basis of its quinquennial surveys, therefore, uses three different concepts. A person is considered unemployed on Usual Status (US) basis, if he/she was not working, but was either seeking or was available for work for the major part of the reference year. On the basis of a week as the reference period, a person is considered unemployed by Current Weekly Status (CWS), if he/she had not worked even for one hour during the week, but was seeking or was available for work. The third concept of unemployment is the Current Daily Status (CDS), which is in terms of total person days of unemployment, and is the aggregate of all the unemployment days of all persons in the labour force during the reference week. The US unemployment rates is generally regarded as the measure of chronic open unemployment during the reference year; the CWS unemployment rates also measure chronic unemployment, but with the reduced reference period of a week. The CDS is considered to be a comprehensive measure of unemployment, including both chronic and invisible unemployment.

4.8 Of the three concepts used to study disposition of time in order to arrive at estimates of labour force and employment - usual status, current weekly status and current daily status - the usual status concept covering the principal and subsidiary workers is the closest to the concept used in the Census to enumerate workers. By including even those who are not principal workers but work in a subsidiary capacity, e.g., students, pensioners, etc., the usual status conc " t comprehensively covers all those engaged in or seeking economic activities. In a situation where social security in the form of a reasonable and assured support as allowance for unemployment is not guaranteed, those who take to work in a subsidiary capacity do so generally out of economic compulsion. Hence both the Principal and the Subsidiary workers need to be considered in estimating both the labour force and employment. Moreover the usual status concept, with one year as the reference period over which disposition of time to activities is seen in classifying an individual as being in or out of labour force, and those in labour force as being employed or seeking work, yields more stable estimates of employment in contrast to the other two concepts which have shorter reference periods of a week or an average day of the week respectively. Taking the usual status concept as the reference, it is possible to study the nature and characteristics of those employed, using the information available from the data compiled on current weekly and current daily status concepts bases. Projections of labour force and employment have therefore been made on the usual status concept, and qualified, where necessary, on the basis of the other two concepts.

4.9 Given the existing base of information, two independent and unrelated sets of data have to be used for estimating the relationship between employment and output : (i) estimates of employment and unemployment prepared on the basis of allocation of time by an individual to different activities; and (ii) estimates of output made using national income concepts. Data for the former is collected through quinquennial National Sample Surveys, and for the latter through the system of National Accounts. Although there are some conceptual differences between the two sources of data, they can be used so long as the differences remain consistent over time. The relationship between the two variables, i.e. output and employment, at the sectoral level has varied over time, but has been observed to have remained within a reasonable range if the effect of economic shocks, such as droughts, are accounted for. Thus it is possible to econometrically estimate with some margin of error, the elasticity of employment on a sectoral basis which can then be utilised for projecting employment both at the sectoral and at the aggregate level for the Ninth Plan period. These elasticity estimates are provided in Table 4.6, but it needs to be recognised that these estimates can change depending upon the economic structure and composition of growth at the sub-sectoral level.

Table 4.6 : Elasticity of Employment to GDP

Sector	Employment Elasticity					
	1972-73 to 1977-78	1977-78 to 1983	1983 to 1987-88	1987-88 to 1993-94	1983 to 1993-94	1997 to 2002
	Actuals					Projected
1.Agriculture*	0.75	0.45	0.45	0.53	0.50	0.50
2.Mining & Quarrying	0.94	0.80	1.00	0.39	0.67	0.60
3.Manufacturing	1.00	0.67	0.29	0.42	0.33	0.25
4.Electricity	1.00	0.73	0.73	0.33	0.50	0.50
5.Construction	0.33	1.00	1.00	0.00	1.00	0.60
6.Wholesale & Retail Trade	1.00	0.73	0.63	0.59	0.60	0.55
7.Transport Storage & Communication	0.74	1.00	0.25	0.68	0.47	0.55
8.Financing, Real Estate, Insurance & Business Services	0.00	1.00	0.11	1.00	0.90	0.53
9.Community, Social and Personal Services	0.73	0.83	0.27	0.92	0.59	0.50
All Sectors	0.59	0.53	0.38	0.43	0.40	0.38

*** On the basis of 3 year moving average of GDP at 1980-81 prices.**

4.10 As has been noted, the growth of labour force accelerates in the Ninth Plan period in comparison to the preceding decade, which requires a commensurate increase in the pace of creation of additional work opportunities in this period. This factor needs to inform every aspect of formulation of the Ninth Plan.

4.11 It has been explained in Chapter 2 that the growth target for Ninth Five Year Plan needs to be 6.5% per annum on an average. The sectoral structure of growth corresponding to the target of 6.5% growth in GDP, as given in Chapter 2, along with the estimated sectoral elasticities, yield an increase in work opportunities during the Ninth Plan period as shown in Table 4.7. The projections of labour force and work opportunities created

Table 4.7 : Projections of Work opportunities 1997-2002

Sector	GDP Growth (% p.a.) (1997-02)	Work opportunities (Million) 1997	2002
1. Agriculture	3.9	238.32	262.48
2. Mining & Quarrying	7.2	2.87	3.54
3. Manufacturing	8.2	43.56	48.22
4. Electricity	9.3	1.54	1.93
5. Construction	4.9	14.74	17.03
6. Wholesale & Retail Trade	6.7	34.78	41.67
7. Transport, Storage & Communication.	7.3	11.96	14.57
8. Financing, Real Estate, Insurance and Business Services	8.5	4.55	5.68
9. Community, Social and Personal Services	7.1	38.98	46.41
All Sector	6.5	391.30	441.52

during the Ninth Plan lead to a reduction in the average rate of unemployment during the Ninth Plan period as compared to the Eighth Plan (table 4.8).

Table 4.8: Labour Force and Employment in Eighth and Ninth Plan Periods
(Million)

	8^{th} Plan(1992-97)	9^{th} Plan (1997-02)
Labour Force	374.2	423.4
Employment	367.2	416.4
Unemployment	7.0	7.0
(rate) (Percent)	(1.87)	(1.66)

Note-1 to Table 4.9 applies.

4.12 Every effort would need to be made in attaining full employment in the post-Plan period. Since labour force growth is expected to be at its peak in the Ninth Plan period, attainment of near full employment by the year 2007 may not be an unreasonable target provided that the conditions are created for further acceleration in the growth rate and the intensity of labour absorption is not substantially reduced both sectorally and in terms of the sectoral structure of growth. It is estimated that full employment by 2007 is contingent upon acceleration in growth of employment in post Ninth Plan period to 2.8 per cent compared to a realised growth of 2.36 per cent (1978-94) and projected at 2.44 per cent in the Ninth Plan.

This would require GDP to grow at 7.7 per cent per annum during the post-Plan period - which is well within the realm of feasibility, as shown in Chapter 2.

Table 4.9 : Population, Labour Force and Employment

(Million)

	1978(a)	1983(b)	1994(a)	8^{th} Plan (1992-97) (f)	9^{th} Plan (1997-02) (f)	10^{th} Plan (2002-07) (f)
Population(c)	637.6	718.2	895.0	951.2	1028.9	1112.9
		(2.19)	(2.12)	(1.89)	(1.58)	(1.58)
Labour Force	255.8	286.6	368.5	374.2	423.4	478.8
		(2.09)	(2.42)			
Employment	249.1	281.2	361.5	367.2	416.4	474.7 (d)
		(2.23)	(2.42)			
Unemployment	6.7	5.4	7.0	7.0	7.0	4.1 (e)
Unemployment Rate (%)	2.63	1.89	1.89	1.87	1.66	0.86(e)

Notes : 1. Estimates of labour force and employment are on usual status concept and pertain to 15 years and above.
2. Figures in brackets are compound growth rates in the preceding period.

(a) As on Ist January
(b) As on Ist July
(c) Population at the terminal year of the plan
(d) Required to attain near full employment.
(e) Unemployment reduces to negligible level by the year 2007
(f) Labour force, employment and unemployment are stated as annual averages during the Plan period.

Quality of Employment

4.13 In addition to the total number of employment opportunities created, it is equally important to examine both the consistency of the work opportunities with the skill attributes of the labour force and the quality of employment in terms of providing an adequate level of income for the workers. The distribution of workers by the level of education is given in Table 4.10. As may be seen, nearly 70 per cent of the workforce is either illiterate or educated below the primary level. Even in industries other than agriculture, where skill development for improvement in productivity definitely requires a reasonable level of educational standard, 52 per cent of workforce was below the primary level of education; 26 per cent being illiterate. A pattern of development which requires skill and education levels not immediately available in the economy would lead to a mismatch between the demand and supply of labour services such that an increasisng level of unemployment in one segment of the labour market would be associated with shortages in other segments. Given the pattern of skills that are likely to be available during the Ninth Plan period, it is important to focus on the growth of sectors which have high absorption intensities of a relatively uneducated labour force. The focus on agriculture, trade and transport and construction reflect this imperative.

Table 4.10 : Distribution of workers by the level of education: 1993-94 (a)

	level of general education				Share in work force
	illiterate	literate upto primary	middle and above	total	
agriculture	**608**	**228**	**164**	**1000**	**566**
rural male	493	284	223	1000	324
rural female	812	132	56	1000	200
rural persons	615	226	159	1000	524
urban male	396	304	300	1000	25
urban female	707	191	102	1000	17
urban persons	522	258	220	1000	42
other than agriculture	**258**	**260**	**482**	**1000**	**434**
rural male	280	310	410	1000	121
rural female	617	205	178	1000	31
rural persons	349	288	362	1000	152
urban male	163	254	583	1000	231
urban female	418	199	383	1000	51
urban persons	209	244	547	1000	282
all industries	**456**	**242**	**302**	**1000**	**1000**
rural male	435	291	274	1000	445
rural female	786	142	72	1000	231
rural persons	555	240	205	1000	676
urban male	186	259	555	1000	256
urban female	490	197	313	1000	68
urban persons	250	246	504	1000	324

Note: (a) usual status principal and subsidiary workers
Source : Computed from NSS 50th Round Data on Employment and Unemployment.

4.14 Improvement in the quality of employment can be achieved only in a situation of rapidly growing productivity to which the labour can lay a just claim. However, it is not enough to merely create the right kinds of employment opportunities, but also to provide the people with the human capital by which they can take advantage of these opportunities. Education and skill development are the essential features of such empowerment. Free and compulsory education of children supported by an adequate mid-day meal programme in schools is the first step towards this end. In addition, special programmes will have to be implemented to develop skills, enhance technological levels and provide marketing channels for people engaged in traditional occupations.

4.15 Even in a near full employment situation, wages received depend on productivity of the worker; an important determinant of which is the level of attainment of skills for production. To the extent the skills are related to a basic level of education, the situation in 1993-94 does not show very encouraging prospects. Considerable efforts have been made to increase literacy and school enrolment since 1993-94 and will continue at an accelerated pace, but with 76 per cent of workforce being 25 years and above age (61 per cent of workforce being 30+), the benefits from increased level of educational attainment of an average worker will show up only towards the end of the perspective period 1997-2012. In the medium term, a strategy of maximising the earnings of the existing workforce will necessarily have to rely on increasing the earnings of agricultural labour which accounts for 57 per cent of the workforce, and the operations require more of the field level skills rather than educational. Any increase in agricultural and allied sectors productivity will directly benefit the incomes of labour engaged therein. But in the medium term the prospects of increasing the quality of employment for an average worker, through improvements in productivity, are indeed circumscribed by what is feasible in agriculture sector, and the improved earnings of the younger, better educated and trained workers, realised through their contribution to growth of output in other sectors.

4.16 The strategy during the Ninth Plan will have to focus attention on bringing about awareness among the unorganised workers, particularly in agriculture, about the intention underlying the legislations, encouraging organisation of workers to take advantage of the legislative intentions to the fullest measure.and providing effective redressal mechanisms to enforce their rights. In addition to minimum wage legislations which exist in all States, the Government has drawn up a Bill on Safeguarding the Rights of Agricultural Workers and another for construction labour. Unanimity among the States needs to be evolved on these legislative intentions. One of the most important weaknesses of the Indian employment and social sector programmes has been its inability to inform the target beneficiaries about the schemes that are available and to which they have a rightful claim. The Ninth Plan therefore stresses the creation and deployment of an effective information dissemination system, and the necessary redressal mechanism for making the demands effective. Indeed, information is the basis of any empowerment process. The informatics revolution has changed the character of economic transactions the world over in a fundamental manner. The Ninth Plan emphasises the creation of a basic informatics infrastructure with universal access, along with the development of the other, more traditional, forms of infrastructure,in a manner such that the poor and underprivileged have the information necessary to make them effective participants in the process of development and to exercise their rights and prerogatives.

4.17 Another area of concern regarding the quality of employment relates to security of work opportunities that are being created. A gradual increase in proportion of casual labourers is observed over the recent two decades; from 23 per cent in 1972-73 to almost 32 per cent in 1993-94. This increase was mainly at the cost of the self- employed, whose proportion fell from 61 per cent in 1977-78 to about 55 per cent in 1993-94. The proportion of regular employed varied between 13 - 16 per cent during the period 1972-1994(about 16-20 per cent among male workers and 5 - 7 per cent among female workers). There has been a decrease in proportion of regular employees among urban male workers from 51 per cent in early seventies to 44 per cent in eighties and to 42 per cent in early nineties. Among rural male workers also, the proportion has decreased from 12 to 8 per cent. But among female workers, the share of regular workers has remained stable at 3 - 4 per cent in rural areas and 25 -28 per cent in urban areas.

4.18 The reported rise in share of casual workers is not necessarily disadvantageous if wage rates received by them ensure an adequate level of living. The NSS data on wage earnings of casual labourers have indicated a rise in real wages in rural areas between 1977-78 and 1987-88. Between 1987-88 and 1993-94, the average wage earnings of rural casual labourers have risen from Rs. 10.77 per day worked in 1987-88 to Rs. 20.21 or by 88 per cent. The increase was 86 per cent from Rs.12.29 to Rs.22.82 among males and about 100 per cent from Rs 7.59 to Rs. 15.15 among females. The consumer price index for agricultural labourers had increased about 77 per cent during this period. Thus, the tendency towards a rise in real wages of casual labourers has continued between 1987-88 and 1993-94. As the process continues, the small and marginal land holdings would cease to restrict the mobility of workers in search of better work opportunities and could improve the effective land man ratios.

4.19 The direction of change in wages of casual labour shows improvement in benefit from employment, but even at the 1993-94 level of prices the absolute wage levels at Rs. 15 per day in rural areas and Rs. 22 in urban areas cannot afford a reasonable level of well being, let alone the reasonable level of social security to an average worker. The situation of near full employment by 2007 that is being projected, under the assumptions stated, does not necessarily imply a kind of employment that ensures an appropriate level of living to those who are employed. As discussed later, incidence of poverty exceeds unemployment in India. In the existing state of economic and statistical information, it is not possible to directly project the effect of an increase in income from growth on payment of compensation to labour, which is the real indicator of quality of employment. However, the data available from the National Sample Surveys does provide some indicators of the kind of employment that is available to those identified as employed by the existing measures of employment. Although the time disposition of persons employed under the US basis is not available for the reference period, and therefore cannot ,be used for the purpose of examining the quality of employment, such information is available for the alternative measure of chronic unemployment, i.e., the CWS. Although this may not be entirely compatible with the US basis, it gives an indication of the nature of the problem. For example, about 5 per cent of persons who are identified as employed by the current weekly status concept, get work for three days or less in a week; in the case of the rural female identified as employed on the same concept but getting work for less than half a week, being much higher at around 10 per cent as may be seen in Table 4.11.

Table 4.11 : Persons Employed according to Current Weekly Status Concept distributed by number of days worked in a week

(per thousand of employed)

Days worked in a week	Rural Male	Rural Female	Urban Male	Urban Female	All Areas Male	All Areas Female	All Areas Persons
0.5 - 1.0	5	11	3	14	5	12	7
1.5 - 3.0	28	87	14	59	26	84	44
3.5 - 5.0	67	246	37	183	62	239	118
5.5 - 6.0	27	36	35	38	29	36	31
6.5 - 7.0	873	620	911	706	878	629	800
All	1000	1000	1000	1000	1000	1000	1000

Under-employment

4.20 Under-employment among those assessed as employed' arises due to two kinds of factors. Firstly, the labour time of a person classified as employed' over the reference period' may not be utilised fully. Thus, for instance, a long reference period over which the status of a person is assessed to classify him as employed' or unemployed' may include many short spells of unemployment. If the aggregate time of such spells of unemployment is a minor part of the total reference period, the person is assessed as employed because he/she worked for major part of the reference period but, clearly, the work that was available to her/him could not utilise the labour time of the person fully. This kind of under-employment among the employed persons is visible'. The other factor causing underemployment is related to income from work. Though the labour time of an employed person may be utilised at work, uniformly, over the reference period, and hence the person is seen as employed, but the compensation received from the time at work may not yield adequate income.' Such under-employment is referred to as invisible under-employment'.

4.21 Problem of visible under-employment' has to be understood with reference to a more precise analysis of use of labour time than what is done in classifying a person as employed' or unemployed.' Invisible under-employment has to be examined in the context of income from work'. However, under-employment due to any reason whatsoever is ultimately responsible for inadequacy of income of an employed person.

4.22 Under-employment indicates the possibility of fuller utilisation of the available resources. The social significance of the problem, which gives urgency to finding speedy solutions for it, must, however be traced to the need for raising the income of the under employed. The under employed have some kind of opportunity for work which, however, do not yield adequate income.

4.23 Quantification of incidence of under-employment is difficult. To measure under-employment, "adequate income" below which a person can be considered as under employed has to be specified. This is the problem of defining a reference level' to demarcate the underemployed. Given the sharp variation in income across occupations, it is difficult to specify one "adequate income" for the entire workforce. The other poblem is of measurement' even if a reference level income could be prescribed. For example, a "minimum wage" is fixed by each State for its workers on a normative basis. The level of minimum wage also differs across industries; agriculture etc. in the States. Even if a set of minimum wages' could be accepted as criteria for identifying the under-employed, these can be used only for those employed on wages, and not for the entire workforce. Fifty-five per cent of the workers are in the self-employed category (in 1993-94 as per 50th round of NSS). The concept of minimum wage' is not applicable here. Self-employed have mixed income, which includes wage income. But data on income of the self-employed is not available from the National Sample surveys on employment and unemployment; only the information on wages of those employed as regular or casual workers is collected. Thus the possibility of using a specified level of income as "adequate income" to distinguish the under-employed among the entire workforce also does not exist. However, certain alternative approaches are possible.

Invisible Under-employment

4.24 Some employed persons, particularly, the self-employed, may appear to work throughout the year. But in terms of productivity or income, the work they are pursuing may not be sufficient for them. They may, therefore, want additional and/or alternative work in order to supplement their income. Such under employment is termed as invisible under employment and therefore, not directly measureable. The National Sample Surveys seek to determine indicators of invisible under-employment through a set of probing questions addressed to the employed persons on their availability for additional/alternate work. Reasons for seeking additional work are also elicited. Of the usually employed persons, 6.1 per cent seek additional work. Of these 68.7 per cent do so to supplement their income; 50.6 per cent only to supplement income and the rest 18.1 per cent to supplement income and also because they do not have enough work. (Table 4.12) By this measure, 4.2 per cent of the usually employed are looking for additional work to supplement their income. But all the employed persons, who look for additional work in order to supplement income cannot be considered as under-employed, because this is a subjective assessment by the individuals, and some of them may already be having a reasonable level of income. On the other hand some of those not able to look for additional work may be earning well below a minimum acceptable level of income.

Thus the incidence among the usually employed of looking for additional work to supplement income can only be a rough indicator of invisible under employment.

Table 4.12: Usually working persons who sought or were available for additional work, and their distribution by reason for seeking or being available for additional work: 1993-94a

area and sex	number of workers seeking or available for additional work	distribution by reason for seeking or being available for additional work			
		to supplement income	not enough work	not enough work and to supplement income	others
	(per 1000 usually working persons) 1	(number per thousand of those seeking or being available for additional work)			
rural male	69	522	188	174	116
rural female	60	475	186	203	136
rural persons	66	510	188	182	121
urban male	44	477	159	182	182
urban female	51	529	157	157	157
urban persons	45	487	159	177	177
All	61	506	182	181	130

Notes: a. Source NSS Report No. 409 on the results of 50th Round of National Sample Survey on Employment and Unemployment.

1. Persons aged 15 years and above classified according to their usual principal status.

Visible Under-employment

4.25 Given the difficulties in using adequate income' to discern under-employment (even if it were possible to specify the level(s) of such income), an alternative approach to quantify under employment is the study of time disposition of workers to determine whether an employed' person is fully employed'. Data available from NSSO Surveys on employment has been used for this purpose. Usual Status' measure of employment classifies a person as employed or unemployed by studying time disposition of the person over a reference period of one year, and classifies the person as such if the person was employed for a major part of the year. However, in case of seasonal work, such a measure of employment reveals unutilisation of time i.e. does not show up as unemployment. Thus, some of the persons categorised as usually employed, do not have work throughout the year due to seasonality in work or otherwise and their labour time is not fully utilised - they are, therefore, under employed. In a country like ours agricultural activities and agriculture based industries account for more than two-third of employment. Workers employed in these activities, particularly the self- employed, though employed during the major part of the year may not find enough work during the lean season. Some of them may find alternate work and others either remain unemployed or even withdraw from the labour force. As noted earlier, it is possible to study pattern of time disposition of a usually' employed person more intensively by reducing the duration of reference period from one year. A set of persons assigned the activity status employed' on usual status basis' are reclassified to discern their activity stutus on weekly status basis'. This leads to an estimate of visible under employment. Such of the usual status employed, who turn out to be out of work in a study of time disposition on weekly status basis, are referred here as under-employed'. The reason for being out of work over the shorter reference period can either be withdrawal from labour force' or if continuing in labour force it could be non availability of work'. Incidence of visible under-employment' is the proportion of the usual status employed' who are out of work' when seen as to their activity status on weekly status basis'.

4.26 Distribution of usually employed persons by the current weekly status is shown in Table 4.13 for three previous quinquennial surveys on employment and unemployment.

Table 4.13: Per thousand distribution of usually employed (principal and subsidiary status) by their broad current weekly status in rural and urban areas: 1983, 1987-88 and 1993-94

all- india : rural

current weekly status	male			female		
	1993-94	1987-88	1983	1993-94	1987-88	1983
employed	957	931	929	807	675	657
out of work, due to being	43	69	71	193	325	343
unemployed	15	23	23	14	8	24
not in labour force	28	46	48	179	317	319
all	1000	1000	1000	1000	1000	1000

all - India : urban

current weekly status	male			female		
	1993-94	1987-88	1983	1993-94	1987-88	1983
employed	977	967	958	884	768	767
out of work, due to being:	23	33	43	116	232	233
unemployed	11	17	17	9	17	15
not in labour force	12	16	26	107	215	218
all	1000	1000	1000	1000	1000	1000

4.27 It is seen that the proportion of usually employed who were found to be not employed during the week preceding the date of survey, say the under employment rate, declined gradually during the period 1983 to 1993-94 and with a faster rate between the period 1987 - 88 and 1993 - 94 in general, and for females in particular. Secondly, this problem of under employment is seen to be more serious among usually employed females than among employed males, and more in rural than in urban areas. During 1993 - 94, the under employment among usually employed females was 19 per cent in rural India and 12 per cent in urban India. The corresponding percentages for usually employed males were 4 and 2 only. Most of the usually employed females who were currently not working, had withdrawn from labour force and did not report themselves as currently unemployed.

Table 4.14: Usually employed persons classified by their current weekly status : 1993-94, 1987-88, 1983

Persons all India

activity according to current weekly status	per thousand of the usually employed		
	1993-94	1987-88	1983
employed	914	854	844
out of work, due to being:	86	146	156
unemployed	14	17	22
not in labour force	72	128	133
all the usually employed	1000	1000	1000

4.28 The incidence of underemployment has reduced during the past decade; with a sharper decline during the recent years. In 1993-94, 8.6 per cent of the usually employed persons were out of work when seen on a weekly status basis as compared to 15.6 in 1983 and 14.6 in 1987-88. (Table 4.14)

4.29 The combined incidence of unemployment and underemployment among the labour force is shown in Table 4.15. Though open unemployment was only 2 per cent in 1993-94, the incidence of under-employment and unemployment taken together was 10 per cent in that year.

Table 4.15: Combined incidence of unemployment and under-employment: 1993-94

Activity status	Proportion of labour force	Remarks
1. Labour force	100.00	Working or seeking work on usual status basis
2. Employed	89.55	Usual status employed staying in work force when classified by their weekly status
3. Unemployed	2.02	Incidence of open unemployment on usual status basis
4. Under-employed	8.43	Usual status employed going out of work when classified by their weekly staus
5. Unemployed and under-employed (3+4)	10.45	Open unemployment on usual status and the incidence of loss of work by the usually employed when classifed by their weekly status

4.30 A strategy that seeks to enhance incomes of those employed, by offering them opportunities for using their time for economically productive work, more intensively, has to provide work at places where they find stable employment. In case of females, this has to be done by creating opportunities for home based work or in locations closer to residence. Otherwise, a large number of them will have to continue to move to jobs where they arise; primarily from rural agriculture to urban construction or informal sector services, accentuating the problem of migrant workers and of a growing urban informal sector. Efforts through the planning process at moving jobs to people are definitely more cumbersome and demanding than the ones which implicitly rely on moving people to jobs, but the latter alternative poses a wide range of infrastructural and social problems at locations where the jobs are, or are expected to arise. The planning issue in such a situation is a choice between promoting economic activities that have a prospect of using productively the unutilized time of those having less stable employment, closer to the location of their main and traditional occupation as against making adequate economic and social infrastructure available at the places to which the low paid and the underemployed migrate. Institutional arrangements that promote home based work, particularly in the rural areas, offer the prospect of increasing income of the employed and also of reducing the pressures at downward revision of wages in the high growth areas.

4.31 An important component of the efforts at creating appropriate work opportunities for those in casual or seasonal employment during the Ninth Plan is the Employment Assurance Scheme (EAS), which is designed to provide 100 days of work at minimum wages on demand. Since the incidence of underemployment is fairly wide-spread all over the country, the EAS necessarily has to be universal in character. This would also enable it to address the problems of transient unemployment which occurs in the course of migration. Another important dimension of the EAS is that being demand-based in character, it has the potential to significantly increase the bargaining position of unorganised labour. Thus, the EAS can act as a minimum support price for labour and thereby effectively supplement the minimum wage legislations that seek to achieve this end. The real challenge in this regard is to be able to administratively ensure that the EAS operates in the manner it is designed to and not become ineffective through an inadequate level of preparedness. Eventually, the self-selection process which is implicit in the EAS will allow it to become the basis of a credible social security programme for the poor and the unorganised work force in the country.

The Regional Dimension

4.32 The national perspective on work opportunities presented above has been prepared on the macro-economic considerations of output and income, saving and investment, trade and balance of payments as developed in Chapter 2, and on demographic and labour force trends at the national level. It therefore seeks to balance aggregate labour force against work opportunities in a macro-economic framework. However, there are substantial demographic, economic and social variations across the States, and also within the large States, such that the National level perspective may give rise to implications for employment planning that could be at variance with the regional realities and differ substantially between the States. Though with the existing state of regional economic information base, it is not possible to repeat the National level analysis at the level of States, the available region level detail can be utilised to discern certain serious concerns, which may be suppressed in the macro exercises, and that should be addressed by the planning process.

4.33 A regional perspective on employment has been attempted under the assumption of a uniform step up of economic growth across all States, which indicates variations in development of employment situation in the Ninth Plan period.The balance between labour force and work opportunities in Ninth Plan is expected to improve in the States of Andhra Pradesh, Assam, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Orissa, and West Bengal resulting in a decrease in unemployment in these States. (Table 4.17). On the other hand, the States of Bihar, Kerala, Punjab, Rajasthan, Tamil Nadu, and Uttar Pradesh face the prospect of an increase in unemployment as labour force increases by more than the increase in work opportunities. Moreover, on top of the increased backlog of unemployment in the Ninth Plan, the expansion of labour force in the post-Ninth Plan period in the States of Bihar, Rajasthan and Uttar Pradesh is at an even higher pace than in the Ninth Plan. This makes the need for accelerating work opportunities in these States in the perspective period more acute.

4.34 Given the fact that agriculture contributes three-fourths of the jobs increase in these States, any attempt at improving the lot of workers in this sector has to be based on a reorientation of agricultural growth. The magnitude of workers in agriculture in these states is large; 69 to 74 per cent of workforce (Table 4.19). To absorb a substantial part of the agricultural workers in the secondary sector, in an alternative strategy of economic diversification, manufacturing and related services sectors in these States will require an order of step up in growth, that may not be feasible in a 10 to 15 year perspective. This sets the agenda for federal economic policies that influence the inter-state behaviour of agricultural growth. And, if the requisite reorientation of regional agricultural growth profile is not realised, the alternative is that the federal Planning Process would have to cope with, and indeed even facilitate, migration of workers from these regions, which in any case is already there but will accentuate in the medium term perspective. The reason being that if the problem of unemployment and underemployment is not tackled at places where the labour force originates, it transforms itself, at least partly, into the problems of migrant workers in the destination States. This is as much a problem of the destination States, as it is of the States where labour force originates, calling for mutually compatible policies between the two types of States with an important coordinating role for the Centre.

Regional Variations in Labour Force and Employment

4. 35 The balance between labour force and employment opportunities will vary across the regions. Over the perspective period 1997-2012, labour force will be rising at an increasing or at a decreasing pace depending upon: (i) the time at which changes in fertility have occured in the respective States; and (ii) the need and willingness of people to participate in or withdraw from labour force. It is therefore possible to estimate the regional dispersion in the growth of the labour force on the basis of the available demographic data and State-specific LFPRs. As far as work opportunities are concerned, the problem is somewhat more difficult. While a regional employment growth profile consistent with the targeted aggregate and sectoral GDP growth in the Ninth Plan cannot be projected using the available data or the Plan model, it is possible to have some indication of trends in regional employment situation under certain specific assumptions. If the disparities in aggregate economic growth rates of each state relative to the growth rate of GDP is assumed to be the same as experienced during the period 1983- 1994, and further if quality of employment in terms of labour productivity continues to be the same, yielding stable relationships between the growth in state domestic products and creation of work opportunities, it is possible to estimate the pace of creation of work opportunities on a state-wise basis for the Ninth Plan period. Under these assumptions, the growth rates of the labour force and of work opportunities on a state-wise basis have been estimated and are presented in Table 4.16.

Table 4.16 : Employment Growth 1997-02 under assumption of unchanged trend in inter-state disparities in economic growth, and Growth in Labour Force 1997-02 and 2002-07 - Major States.

State	Employment Growth under the stated assumptions1	Labour Force Growth*	
	1997-2002	1997-2002	2002-2007
	(Per cent per annum)		
All India	2.44	2.51	2.47
Andhra Pradesh	3.11	2.39	2.34
Assam	3.73	2.73	2.79
Bihar	1.29	2.58	2.85
Gujarat	2.53	2.37	2.18
Haryana	3.49	2.99	2.84
Karnataka	2.81	2.47	2.26
Kerala	1.26	2.30	1.90
Madhya Pradesh	2.61	2.39	2.48
Maharashtra	2.54	2.26	2.20
Orissa	2.35	2.10	2.13
Punjab	0.73	2.27	2.08
Rajasthan	2.71	2.84	2.91
Tamil Nadu	2.00	1.98	1.70
Uttar Pradesh	2.07	2.57	2.68
West Bengal	2.75	2.52	2.45

Note :* Employment and labour force estimates on usual status basis.

4.36 The absolute change in the difference between the labour force and work opportunities in the different states is presented in Table 4.17. Of the 15 major states, 9 states are likely to experience a reduction in unemployment, while 6 states may witness an increase. In the event that some of the states which record a decline in unemployment may have an existing unemployment base of less than the decrease indicated, it would indicate that an excess

Table 4.17 : Change in unemployment in Ninth Plan in States classified by the trends in labour force and employment

characteristics of labour force and employment	State	Employment growth	Labour force growth	unemployment	
		1997-02		9^{th} Plan avg.	Change during the Plan
		(per cent per annum)		('000 persons)	
increasing unemployment and high labour force growth	Bihar	1.29	2.58	2414	2373
	Rajasthan	2.71	2.84	281	186
	Uttar Pradesh	2.07	2.57	1976	1740
increasing unemployment but low growth of labour force	Kerala	1.26	2.30	2389	912
	Punjab	0.73	2.27	1065	783
	Tamil Nadu	2.00	1.98	976	59
decreasing unemployment but high growth of labour force	Assam	3.73	2.73	-23	-441
	Haryana	3.49	2.99	189	-160
	West Bengal	2.75	2.52	467	-282
decreasing unemployment and low growth of labour force	Andhra Pradesh	3.11	2.39	-1093	-1487
	Gujrat	2.53	2.37	-474	-221
	Karnataka	2.81	2.47	-616	-476
	Madhya Pradesh	2.61	2.39	-109	-400
	Orissa	2.35	2.10	-23	-191
	Maharashtra	2.54	2.26	-5	-568

demand for workers may exist, which could be met either through migration from other states or through increases in the remuneration to workers. It is unlikely, however, that the pattern of migration would be such as to entirely fill the supply shortages since migration depends not only upon the level of information available to the unemployed regarding employment opportunities, but also on the skill profile required by the receiving states. Such information is not readily available today, and every effort would need to be made to evolve a national clearing house for such information. Of the 6 states where unemployment in likely to increase, Punjab, Kerala and Tamil Nadu are special in the sense that the minimum wage in these states is much higher than most other States. The workers in these States expect better earning levels. A large proportion of the unemployed here can find better employment in other States given better skills and training. Better information availability may facilitate their movement. In the other three states; Bihar,Rajasthan and Uttar Pradesh; however, these conditions are unlikely to be fulfilled, and without active government intervention the recorded level of unemployment will rise. At the extreme, it is quite possible that chronic unemployment in the country could rise by almost 6 million during the Ninth Plan period, not because of a shortage of work opportunities to such an extent in the country, but due to a mis-match in the spatial pattern of job creation and labour force growth, on the one hand, and rigidities in labour mobility, on the other.

4.37 This shows that the the expected level of unemployment at all India will not be valid, if there is not a complete mobility of labour from one state to another. For that purpose, not only all barriers to free movement of labour need to be removed, but the movement be facilitated by providing incentives to establishments to receive workers from everywhere. If this is not done then, the alternative is to target at a sharper step up in growth of output in the three States.

4.38 If post Ninth Plan period (2002-07) employment growth, statewise, continues to be the same as in Ninth Plan and the labour force grows according to the projected statewise demographic profile then in some states there will be no backlog of unemployment, while in some there will be a level of unemployment which is higher than what is expected at the end of the Ninth Plan. This is presented in Table 4.18. The States which face prospect of a increase in unemployment in post Ninth Plan period (2002-07) are Bihar, Rajasthan, Uttar Pradesh, Kerala and Punjab. Of these, Bihar, Rajasthan and U.P. are the States where the labour force and employment growth differential widens more than in the Ninth Plan. On the other hand, most of the States where unemployment is likely to decrease during the Ninth Plan, under the stated assumptions, are also the States where growth of labour force will be decelerating in the post Ninth Plan period. There is, therefore, a strong prospect of increasing migration from the States listed in quadrant (I) of Table 4.18 to those in quadrant (IV). Any possibility of

Table 4.18 : Changes in Unemployment and in Labour Force in post Ninth Plan Quinquennium (2002-07)

		Labour Force Growth in post Ninth Plan Period (2002-07) compared to Ninth Plan (1997-2002)	
		Accelerating	Decelerating
Unemployment rate in post Ninth Plan period (2002-07) *	Increasing	Bihar, Rajasthan, Uttar Pradesh (I)	Kerala, Punjab (II)
	Decreasing	Assam, Madhya Pradesh, Orissa (III)	Andhra Pradesh, Gujarat, Haryana, Karnataka, Maharashtra, Tamil Nadu, West Bengal (IV)

Note: * Direction of change in unemployment in States is indicated under the assumption that the growth of employment in 2002-07 is the same as in Ninth Plan.

realising higher than the Ninth Plan period targeted growth of economy at 6.5 per cent per annum, either within the Ninth Plan or raising it later in the perspective period needs to be explored, with a much sharper regional focus, if existing conditions of employment in Bihar,Rajasthan and Uttar Pradesh are to improve. To the extent, it is not possible to reduce disparities in growth, it will be prudent that the planning process, with the consensus of the States concerned, provides either for facilitating migration of labour or a reorientation of the employment and anti-poverty schemes.

Table 4.19 : Contribution of Agriculture to increase in Employment 1981-1991(a)

State	Agricultural Workers in State (1)	Contribution of Agriculture to Jobs Increase	
	1981	1981 - 1991	
	(Per cent to workers in State)	(Per cent)	Index (All India = 1.00)
All India	66.52	58.70	1.00
Andhra Pradesh	69.53	64.55	1.10
Bihar	79.07	87.19	1.49
Gujarat	60.12	43.51	0.74
Haryana	60.78	51.50	0.88
Karnataka	65.03	55.82	0.95
Kerala	41.30	22.29	0.38
Madhya Pradesh	76.20	71.99	1.23
Maharashtra	61.75	52.23	0.89
Orissa	74.70	64.58	1.10
Punjab	58.03	47.74	0.81
Rajasthan	68.91	70.53	1.20
Tamil Nadu	60.95	50.18	0.85
Uttar Pradesh	74.50	63.27	1.08
West Bengal	54.99	46.79	0.80

Note : (1)Cultivators and Agricultural Labourers enumerated as main workers.

4.39 If, inspite of all efforts to improve the quality of the growth process both at the national and the regional level, it is found that the problem of unemployment remains untractable in the identified states, there is compelling logic to reorienting the government-sponsored employment programmes in favour of these states. As has already been noted, the problem of underemployment and disguised unemployment is present in greater or lesser degree in practically all the states of the country, and the growth process is unlikely to fully correct this phenomenon in any state during the Ninth Plan period. The appropriate instrument for addressing this specific issue is the EAS, which is designed specifically for the purpose. The more intractable problem of overt unemployment, however, will require additional interventions. It is suggested, therefore, that the other major programme of casual wage employment operated by the government, namely the Jawahar Rozgar Yojana (JRY), should be given greater regional focus and the available resources should be concentrated in the areas where such unemployment is likely to be endemic in the coming years. The financial implications of such an added focus are presented in Table 4.20.

Table 4.20 : Investment required under Special Employment Programes in States having prospect of a rise in unemployment in Ninth Plan,and a rise in labour force growth in post-Ninth Plan period.

State	Unem ploy ment in 1997	Addition to unemployed 1997-2002 (1)	Mandays of jobs to be created (2)		Investment required during Ninth Plan (3)	
			level of open unemployment in 2002			
			at pre Ninth Plan level	negligible	at pre Ninth Plan level	negli-gible
	000 persons		million mandays		Rs. Crore	
Bihar	1227	2373	2136	3240	12062	18296
Rajasthan	188	186	167	337	945	1901
Uttar Pradesh	1106	1740	1566	2561	8843	14462
Total	2521	4299	3869	6138	21849	34659

NOTES : (1) Under the assumptions stated.
(2) Assuming that 180 mandays of employment in a year is Critical minimum.
(3) Based on the current norm on cost of generating one manday on employment under Jawahar Rojgar Yojana, i.e. Rs. 56.47 at 1996- 97 prices.

Educated Unemployed

4.40 Characteristics of the unemployed persons help in determining the nature of employment opportunities that need to be created to utilise the labour force that is seeking work. In regard to educational characteristics of the unemployed persons there has been a substantial change since the years of early eighties . Both the enumeration approach of the Census in identifying the unemployed persons, and the sampling approach of the National Sample Surveys on Employment and Unemployment reveal a substantial increase of literates among the unemployed persons (Table 4.21).

Table 4.21: Education profile of the unemployed in India

year	illiterate	primary	middle	secondary and above	literate	all unemployed
			level of education			
census of population (all age groups)1,3,4						
1981	29.62	14.57	16.84	38.97	70.38	100.00
1991	19.56	12.17	20.89	47.38	80.44	100.00
sample surveys on employment and unemployment(15 years and bove)1,2						
1983	6.10	19.32	27.58	47.00	93.90	100.00
1993-94	5.24	11.01	20.20	63.55	94.76	100.00

Notes : 1 The concepts used for identifying the unemployed in the population census are not exactly the same as those used in National sample surveys on employment and unemployment.
2 Sample survey estimates are according to usual activity taking into consideration the subsidiary economic status of persons categorised as "not working."
3 Education level secondary and above' includes also those literates assigned education status as education level not classifiable' in 1981 and 1991 Census.
4 Information on 1991 Census is based on advanced tabulation of 100 % data for States with population below 10 million and 10 % sample data for States with population 10 million and above.

4.41 Among the unemployed persons 30 per cent were illiterate according to 1981 Census, but their proportion came down to 20 per cent in 1991 Census. Though there are substantial variations across States, if the States of Bihar, Madhya Pradesh, Punjab and Uttar Pradesh are excluded then more than 75 per cent of those unemployed in 1991 were literate. (Table 4.22)

4.42 National Sample Surveys show that, over the period 1983 to 1993-94, the proportion of those educated to a level of secondary school or higher among the unemployed persons increased from 47 per cent to 64 per cent. While a high proportion of the literates among the unemployed shows an unutilisation of scarce resources put in for educating the people, it also indicates a mismatch between the kind of job opportunities that are needed and those that are available in the job market. Clearly, the increase of literates among the unemployed and further among the literate unemployed, of those with higher level of educational attainment points to the need for skilled jobs rather than the simple low productive manual labour that an illiterate has to resort to for a living. In contrast the unemployed with education at secondary or higher level have a potential for higher output and hence income, if work opportunities are available. In the States of Bihar, Gujarat, Punjab, Rajasthan and Uttar Pradesh the proportion of illiterates, or those with education only upto the primary level is 40 to 60 per cent compared to the all India average of 31 per cent (Table 4.22). With the regular wage employment shrinking, the educated unemployed have to find job opportunities as self-employed and such opportunities are mostly in the informal sector or outside the organised sector. This points to the need for pursuing strategies that help the informal sector to expand, particularly, in the high income growth locations, where the income levels in the unorganised sector can be expected to be fairly reasonable, and where bulk of the first generation migrants look for and find work. If the rising proportion of the literates among the unemployed is not checked by an

Table 4.22 : Education profile (Percentage Distribution) of the Unemployed in India According to 1991 Census.

States	Illiterate	Primary	Middle	Secondary & above	Literate	Total
All India	19.56	12.17	20.89	47.38	80.44	100.00
Andhra Pradesh	18.23	9.83	8.63	63.31	81.77	100.00
Assam	25.81	11.81	16.52	45.86	74.19	100.00
Bihar	35.24	6.51	10.85	47.40	64.76	100.00
Gujarat	23.16	20.27	12.03	44.54	76.84	100.00
Haryana	17.54	14.90	12.70	54.85	82.46	100.00
Karnataka	15.22	9.59	15.17	60.03	84.78	100.00
Kerala	2.39	13.17	32.93	51.50	97.61	100.00
Madhya Pradesh	26.01	11.26	11.27	51.47	73.99	100.00
Maharashtra	17.22	13.20	22.47	47.11	82.78	100.00
Orissa	20.77	6.71	22.72	49.80	79.23	100.00
Punjab	36.75	15.31	5.85	42.09	63.25	100.00
Rajasthan	47.79	11.23	9.08	31.90	52.21	100.00
Tamil Nadu	11.61	13.75	15.18	59.45	88.39	100.00
Uttar Pradesh	53.44	6.14	3.31	37.12	46.56	100.00
West Bengal	20.79	13.23	21.62	44.36	79.21	100.00

Source: Census 1991.

Note:1. The All-India Figure excludes Jammu & Kashmir where 1991 Census not conducted due to disturbed conditions.

2. Unemployed refers to Non-workers seeking/available for work.

3. Figure for literate unemployed includes those with education from primary to Post Graduation and technical education & also where educational levels not classifiable.

4. Information based on advanced tabulation of 100% data for States with population below 10 million and 10% sample Data for States having population 10 million and above.

appropriate strategy of development, then it may even result in a reduction in the demand for education. Such a development will lead to a possible increase in the illiterates or low educated persons in the labour force, and in turn a return to a higher proportion of labour force that is suitable only for unskilled and low productivity jobs. It is in this context that the strategies for sharper increase in the economic growth of low income - high illiteracy States assume a crucial importance.

Employment and Poverty

4.43 The existing measures of employment, as per the data on employment available from the NSSO, do not directly convey the quality of employment in terms of the living standards of the workers. However, the data on changes in poverty, when read with that on unemployment and level of worker productivity in agriculture, shows some causal linkages between poverty reduction, on one hand, and employment intensity of growth and productivity of workers in agriculture, on the other. The following analysis suggests that any strategy for improving the quality of employment on a sustained basis will therefore have to have effective measures for raising agricultural productivity without compromising on the employment intensity of agriculture as an integral element, at least until such time as the rate of absorption of the labour force by the non-agricultural sectors is high enough to provide sufficient employment opportunities. Special employment programmes in themselves can only be a palliative or a short-run response to an immediate crisis of employment and poverty, but a lasting solution to the problem of poverty rests in raising the per worker productivity in agriculture.

4.44 Employment increased at close to 2 per cent per annum during the decade 1983 to 1993-94. In this period, incidence of poverty, expressed at proportion of poor in population, reduced by 8.51 percentage point. The absolute number of poor during the same period declined by 0.78 per cent. The relative position of changes in employment and poverty varies sharply across States (Table 4.23). States of West Bengal, Bihar, Karnataka, Kerala, Andhra Pradesh, Assam, Orissa, Rajasthan and Gujarat had an employment generating growth during 1983-94. Of these, the States of West Bengal, Kerala, Andhra Pradesh, Orissa and Gujarat were able to reduce the number of poor in this period, and Karnataka and Rajasthan were able to reduce the incidence of poverty. Most of these states which have achieved reduction in poverty in one sense or the other have also had a high level of productivity of male agricultural workers. On the other hand, States which exhibited a weak response of employment to growth could still reduce the incidence of poverty if they had high levels of agricultural worker productivity. Punjab and Tamil Nadu are cases in point. Though employment generating growth, and level of productivity of agricultural workers, are able to account for a small variation in the change in number of poor across States, the two definitely contribute to a decrease in the number of poor.

Table 4.23 : Change in number of poor and employment elasticity of State domestic product during 1983 to 1993-94 and level of productivity of male agricultural workers.

State	Employment elasticity to SDP (1983-94)	Productivity of male agricultural worker (1992-95)	Change in poverty (1983-94)	
			Number of poor (Per cent change)	Proportion of poor (percentage points)
West Bengal	0.69	0.87	-20.12	-19.19
Bihar	0.55	0.33	6.77	-7.26
Karnataka	0.48	1.23	4.44	-5.08
Kerala	0.47	1.88	-28.43	-14.99
Andhra Pradesh	0.45	1.04	-6.45	-6.72
Uttar Pradesh	0.44	0.87	8.57	-6.22
Assam	0.43	0.90	24.03	0.39
Orissa	0.41	0.70	-11.42	-16.73
Rajasthan	0.41	1.01	1.32	-7.05
Gujarat	0.39	1.21	-10.79	-8.58
All India	0.37	1.00	-0.78	-8.51
Maharashtra	0.31	1.09	4.93	-6.58
Madhya Pradesh	0.31	0.96	7.4	-7.26
Punjab	0.30	3.01	-12.33	-4.41
Tamil Nadu	0.26	1.22	-22.29	-16.63
Haryana	0.17	2.44	48.24	3.68

Note: Employment on Usual Principal Status basis.

4.45 During the Ninth Plan period, the average productivity per worker in agriculture is targeted to increase by about 11.2 per cent over the five year period. Such a magnitude of increase in productivity was attained in over 12 years during the past two decades. If the fruits of this growth are shared between land and capital, on one hand, and labour, on the other, in roughly the same proportions as in the past, it is likely that the incidence of rural poverty will decrease by a significantly larger magnitude during the Ninth Plan period than it had during the period 1983-84 to 1993-94. In other words, a reduction in the rural poverty rate of at least 7.15 percentage points is not at all unlikely between the base and the terminal years of the Ninth Plan with the given magnitudes of agricultural growth and the rate of labour absorption in agriculture. The magnitude could potentially be even larger in view of the significantly lower growth rate of population and can be further accelerated if the distribution of the additional value-added in agriculture is effectively altered in favour of labour through a meaningful and well-structured EAS programme.

4.46 The experience of 1983-94 on changes in employment and poverty, reinforces the perception that a strategy for reduction in poverty in low income States based on employment generation, has to be accompanied by measures which contribute to sharp improvement in productivity of agricultural workers in these States. If the acceleration in growth of output from around 3 per cent per annum realised so far to 4 per cent per annum targeted in the Plan has to show its effect on the lot of majority of workers in poor States, then the regional contribution to such acceleration in growth of agricultural output has to be realised by a distribution of agricultural output across States, which is quite different from what exists at present, and shifted in favour of States where bulk of agricultural work force is located. (Table 4.19). Step up in Agriculture growth following the existing regional distribution of output may be quite feasible but will require large-scale migration of workers from low agriculture productivity States. Alternatively, the targeted acceleration in agricultural growth may take place without a tangible impact on the incidence of poverty. Therefore, the regional distribution of agricultural growth is a crucial element in the efforts to reduce poverty significantly in the country during the Ninth Plan and the prospective period.

Sectoral Employment Prospects And Policies

4.47 Sectoral programmes discussed in the respective Chapters have a direct bearing on employment. Some of the Sectors have more direct employment generating potential and require special policies from the employment angle in the Ninth Plan

Agriculture and Allied Sectors

4.48 Agriculture has been playing crucial role in past years in economic development of the country and will continue to do so in near future too primarily because of its predominant share in total employment. It contributes 29.4% of GDP and employs 64% of the workforce. However, agriculture cannot be expected to employ a large number of workforce indefinitely and also hold its share in overall GDP. It is common knowledge that beyond a certain level of development employment content of crop-output growth tends to decline as is observed in the low and declining employment elasticities in some of the agriculturally better developed States. It is, however, seen that development of agriculture in a large number of States in India is still at a stage where output growth leads to a substantial increase in employment. In large parts of the country, agricultural growth would continue to significantly contribute to employment growth. It is necessary to increase public investment in agriculture especially for strengthening irrigation and other rural infrastructure in backward areas so that sustained agricultural growth and , therefore, acceleration of employment growth is facilitated. The rural employment programmes need to be more firmly oriented towards rural infrastructure development programme. Such efforts designed especially to reducing dependence of agriculture on rainfall alongwith development and utilisation of dry-land technologies would also ensure a reasonable growth of agriculture.

4.49 Horticulture is an employment intensive sector. Given the emphasis on these products in the Ninth Plan, the cold storage capacity needs to be significantly increased. Infact, substantial agricultural growth would require a massive expansion and upgradation of agricultural marketing infrastructure.

4.50 The plantation sector provides direct and indirect employment for about 42 million people, besides generating downstream economic activities. The main emphasis will be on increasing productivity, accelerating replanting activities, rapid expansion in non-traditional areas, improvement in packaging and quality assurance.

4.51 Animal Husbandary and Dairying will receive greater attention for development during the Ninth Plan as this sector plays an important role in generating employment opportunities and supplementing incomes of small marginal farmers and landless labourers, especially in the rainfed and drought-prone areas. For animal husbandary and dairying, the focus would be on disease control, improvement in genetic resources, extension services and strengthening of marketing and credit infrastructure. Adequate availability of quality fodder and feed will be crucial.

4.52 For fishery, the focus should be on integrated development of marine and land fishery, conservation and upgradation of aquatic resources and adequate availability of quality seeds and feed.

4.53 Agricultural exports will receive special attention as this area offers greater potential for increasing farm incomes, tackling unemployment and earning foreign exchanges. As the achievement of 3.9 per cent rate of growth would involve a large jump in agricultural exports, the marketing infrastructure for exports, particularly the cold storage chain, the railways , port and communication facilities, facilities for packaging, grading and certification of agricultural commodities and development of future markets would require special attention. During the perspective period, India is expected to emerge as a net exporter of agricultural products. Thus, creation of specialised infrastructure would require focussed attention

Rural Non-Farm Employment

4.54 Agriculture and other land- based activities, in the long run, even with a high and diversified rate of growth will not be able to ensure employment to all the rural workers adequate levels of incomes. Technological advancement and institutional changes in agriculture sector will lead to further shrinking of employment potential in the growth and also conversion of a substantial number of those underemployed in agriculture into openly unemployed seeking work elsewhere. Given the fact that some of them will be able to get employment in urban areas; still it is necessary that the rural economy gets diversified into non-farm activities to provide productive employment to the growing rural labour force. This will also help in arresting migration from rural areas to urban areas. Rural non-farm sector which has accounted for a steadily rising share of the rural workforce (from about 15 per cent in 1978 to 22 per cent in 1987-88 and 23 per cent in 1993-94) has registered a rate of employment growth of around 5 per cent between 1987-88 and 1993-94. There is certainly a discernible shift in the growth structure of productive employment opportunity in the non-farm sector in the rural areas. This phenomenon cannot be treated as over-crowding in agriculture. Practically all non-farm activities have shown a steady increase in employment. Manufacturing and services respectively accounted for 31 and 27 per cent of rural non-agricultural employment; trade accounted for 20 per cent and construction 12 per cent in

1993-94. Manufacturing has shown about 1 per cent growth in employment during 1988-94. But Services, Transport and trades have shown an annual growth in employment of about 4, 3 and 3 per cent per annum respectively during this period. Such diversification and expansion of the rural economy particularly non-farm sector is possible through promotional policies and effort particularly in respect of infrastructure, improved access to credit, technological upgradation and training in entrepreneurial development and marketing support.

4.55 With suitable promotional policies, including those relating to location and infrastructural development in rural towns, considerable expansion of activities with a high employment potential for rural workers is feasible. Such policies should include measures for orientation of credit and lending practices of banks to suit small business and manufacturing enterprises, strengthening of producers cooperatives and assistance in marketing and technology.

Industrial Sector

4.56 Consumer goods industries account for two-thirds of manufacturing employment and a little over a one-third of GDP from Manufacturing. It includes a major part of the Small Scale sector. A large domestic demand for a variety of consumer products offer tremendous scope for expansion of output and employment in this sector.

4.57 The number of Industrial Entrepreneurs Memoranda(IEM) and Letters of Intent (LOI) filed from 1991 to December, 1996, totalled 31,157 with overall investment intention of Rs.6,34,760 crore and estimated employment of 5.7 million. There has been substantial growth in the assistance disbursed by the all-India financial institutions during this period. Foreign firms and Multi - National Corporations (MNCs) were showing keen interest in investing in India . The total number of foreign collaborations during 1991-1996 amounted to 10,041 of which 5,434 proposals involved foreign direct investment (FDI) amounting to Rs.78,030 crore.

4.58 The textile industry is one of the largest and the most important sectors in the economy in terms of output, employment generation and foreign exchange earnings. It is presently contributing 20 per cent to the national industrial production and 33 per cent to the total national export earnings. It has also made a significant contribution to employment generation by providing over 20 million jobs. The modernization of textile sector would be a major thrust area in the Ninth Plan. For this purpose, it is proposed to create a Textile Modernisation Fund.

4.59 The VSI sector has a considerable potential for generating employment. The village & small industries (VSI) sector has been growing at the rate of about two to three percentage points higher than the large and medium industries sector. Today , it contributes more than 40 per cent of value-added in the manufacturing sector and 80 per cent of total employment in the industries sector. Its contribution to exports is significant and accounts for more than 40 per cent(both direct and indirect). During the Ninth Plan because of immense potential of creating new jobs at low cost the VSI sector has been accorded high priority by providing incentive and support to facilitate their growth and employment. The Khadi & Village Industries (KVI) sector is not only providing employment to people in rural and semi-urban areas at low investment per job, but also utilise local skill and resources and provides part-time as well as fulltime work to rural artisans, women and minorities. The spread of village industries would also ensure increase in income levels and quality of life of rural workers, artisans and craftsmen. Therefore, the thrust area will be promotion of village industries under KVIC during the Ninth Plan.

4.60 The Handloom sector provided employment to 124 lakh persons during 1996-97 which is next to agriculture in terms of employment intensity despite facing problems like obsolete technology and traditional production techniques, high price of inputs, inadequate market intelligence etc. Through appropriate policy measures by the end of the Ninth Plan, the employment in handlooms is expected to reach about 173 lakh persons.

4.61 In the case of sericulture which is an important labour intensive and agro-based cottage industry providing employment to about 62 lakh persons has a large rural employment generation potential, in addition to enhancing credit availability on easy terms, special attention will be paid to improvement of quality of raw silk by introducing better silkworm breeding practices.

4.62 Today the Food Processing Industry contributes about 18% of the total output of the industrial sector (GDP) and provides employment to about 1.5 million persons. However, about 70% of the units in this sector are in the informal sector, in a primitive state of technology. This sector has enormous scope for growth. The country being the largest grower of fruits and second largest producer of vegetables, having a large livestock population and a long coastline for exploiting fisheries resources, the food processing industry promises to be an area where the potential for development is enormous.

Other Sectors

4.63 Among the major sectors of economic activity, construction recorded the highest growth in employment of over 13.36 per cent per annum during the period 1983 to 1987-88. However, it has declined sharply between 1987-88 to 1993-94. The growth rate of employment in construction in last 10 years (i.e.1983 to 1993-94) has been 5.33 per cent per annum. Housing, rural roads, school , Health sector buildings are all part of Construction Sector. With liberalisation of infrastructure building, it was expected that larger private investment would be forthcoming in construction sector. However, the climate for private and household investment does not still seem favourable. The employment effect of construction growth is very high not only because of its high employment elasticity, but also because of the high employment multiplier effect it has among the major sectors of the economy.

4.64 Trade, Transport and Services sector have done relatively better during the last ten years. Growth rates of employment in trade has been 3.55% per annum during 1987-88 to 1993-94 as against 3.64% per annum during 1983 to 1987-88. Similarly, in Transport sector, employment growth between 1983 to 1993-94 have been about 3.59% per annum. The most remarkable growth has been experienced by Services sector where the growth rate of employment has been 5.39% per annum during 1987 -88 to 1993-94 compared to 1.84% per annum between 1983 to 1987-88. In view of the above, it is expected that the services sector has got substantial potential of employment growth in the coming years.

Skills, Training and Employment

4.65 A part of the unemployment problem emanates from the mismatch between the skill requirements of employment opportunities and the skill base of the unemployed. The mismatch is likely to become more acute in the process of rapid structural changes in the economy. It is, therefore, necessary to orient the educational and training system towards improving its capability to supply the requisite skills in the medium and long terms, so as to enable it to quickly respond to labour market changes in the short run. Besides, the system should also be in a position to impart suitable training to the large mass of workers engaged as self-employed and wage earners in the unorganised sector for upgradation of their skills , as an effective means for raising their productivity and income levels.

4.66 The existing training institutions like the Industrial Training Institutes (ITI s) have, no doubt , been meeting a significant part of the requirements of the skilled manpower of the organised industry. It , however, seems necessary that the processes of restructuring and reorientation of their courses are made more expeditious with a view to quickly responding to the labour market. A greater involvement of industry in planning and running the training system would also be necessary for this purpose. For skill upgradation of the workers in the unorganised sector, flexibility in the duration , timing and location of training courses would need to be introduced . To the extent a sizeable proportion of employment would have to be self-employment in tiny and small units in various sectors, the training system should also gear up not only for providing ' hard ' skills suitable trades, but also the ' soft ' skills of entrepreneurship , management and marketing , as part of training courses.

4.67 It is widely recognised that the rapid expansion of education, particularly of higher education , has also contributed to the mismatch in the labour market. While shortages of middle level technical and supervisory skills are often experienced , graduates and post-graduates in arts, commerce and science constitute a large proportion of the educated unemployed. High private rates of returns on higher education, to a large extent resulting from low private cost, is an important reason for the rush for higher education despite high incidence of educated unemployment. At the same time, efforts to divert the school leavers to vocational stream have so far been too little in relation to the size of the problem. While these efforts need to be strengthened, appropriate mechanisms also need to be evolved in the training and employment system to ensure that those graduating out of the vocational and middle level technical training courses, have the route to higher ladders open to them. through upgradation of their qualifications and skills by undergoing training in higher level courses during their employment career.

CHAPTER 5

IMPLEMENTATION, DELIVERY MECHANISM AND INSTITUTIONAL DEVELOPMENT

Introduction

5.1 During the last 50 eventful years, India has acquired rich experience and learnt useful lessons in the field of economic development and social change.

5.2 When the First Five Year Plan was launched, the planners were aware that they were super-imposing economic development programmes on a semi-feudal society, which was characterised by age-old social inequalities, long persisting economic disparities and a general attitude of the common masses to expect everything from the Government. Besides, the Indian economy was saddled with outmoded legal institutions, incompatible administrative system and procedures and generally unenterprising behavioural attitude of even those who were functioning as economic agents. The nation decided to launch upon the development plans with the hope that some of these institutional barriers which were operating in the Indian economy and hindering economic development and social change might get themselves transformed and become positive motivating factors. They were also aware of the strength of the deep-rooted institutional deficiencies and proceeded with the assumption that these institutional barriers could be rectified as the development process proceeded along and the deficiencies could be minimised as and when found necessary and feasible in the course of implementing the development plans.

5.3 The past fortyfive years of development experience reveals that while some minor institutional hurdles have been gradually weakened by the forces of development initiated through successive Five Year Plans, the nation has not fully succeeded in building up institutions to answer the needs of the time. Many institutional hurdles and semi-feudal socio-economic institutions, which existed at the time of Independence, have remained. Notwithstanding these hurdles, deficiencies and failures, the Indian economy has entered into a higher growth path as compared to not only the pre-Independence period but also the early Five Year Plan periods. Covering a span of thirty years from 1951 to 1981, the Indian economy grew at the rate of 3.5%, which of course, was more than the growth of its population and much more impressive compared to the decadent economic situation in the pre-Independence decades. During the eighties, the Indian economy entered into the higher growth path of nearly 6% per annum and the growth performance has become even better during the recent years. This is not a small achievement considering the vastness of the country and disparate regions. But what is of concern is that these achievements have not been uniform across regions, sectors and groups of people. There lies the inherent weaknesses of the strategies and programmes of Indian Five Year Plans.

5.4 This Chapter takes stock of the implementation of the Five Year Plans with a view to identifying the weak spots in the formulation and implementation of the Plan programmes and projects and will attempt to find solutions to the weaknesses in the delivery system. Implementation of the Plan involves designing of the strategies, programmes and schemes, designing of the projects, monitoring of their implementation and ex-post evaluation of the results or benefits flowing from the projects.

Implementation & Delivery Systems - A Review

5.5 For the realisation of the intended Plan objectives, the quality of design and effectiveness of implementation of the Plan programmes are as important as the availability of resources. Past experience has shown that many development projects and programmes, having laudable objectives, have failed to deliver the result/ because of the inadequacies in design and implementation. Time and cost overruns have been widespread and substantial in public sector infrastructure and investment projects. It is common knowledge that the benefits intended to be delivered to the people through development programmes in the social sectors have not fully reached the beneficiaries because of the weakness in administrative planning and delivery mechanism. An area of priority of the Ninth Plan is to improve project planning and implementation to ensure that avoidable time and cost overruns are reduced, if not eliminated and the intended benefits actually reach the people.

5.6 While designing and executing projects/ programmes, assumptions are made about some technical and non-technical parameters because of imperfect knowledge about the local situation, inadequate data base and time and resource constraints. In designing large irrigation projects, for example, assumptions are made about water availability, land acquisition, irrigation intensity, cropping pattern, land productivity and co-operation of the water users- all of which have a bearing on the viability of projects. More often, such assumptions turn out to be unrealistic or too optimistic and, as a result, the progress of implementation of such projects suffers. This has been corroborated by ex-post evaluations of such projects. While it is possible to bring about an improvement in project design and implementation through extensive groundwork and giving adequate attention to the minute details of every aspect, it is not always feasible because of time and resource constraints and certain unforeseen factors.

5.7 A more practical approach to programme/project formulation and implementation is to put the lessons learnt from experience to practice. Ex- post and concurrent evaluation of projects have brought out how the inadequacies in design and implementation affected the completion of a project. In the past, these lessons were not fully systematised and adequately used by the policy makers, planners and project managers. To ensure effective utilisation of available resources, the Ninth Plan strategy for programme implementation and delivery system will be built upon the lessons learnt from experience in the execution of innumerable projects and programmes in the past. To this end, a review of the past experience has been made to identify the factors that generally contributed to delay in completion and sub-optimal project outcomes. As the nature and problems of implementation of public sector infrastructure and investment projects differ from those of poverty alleviation and social sector programmes, the lessons learnt from experience and the steps to be taken for efficiency improvement are discussed under separate headings.

Public Sector Development Projects

5.8 A recent review of 187 Central sector projects, each costing more than Rs.100 crore, by the Department of Programme Implementation (DPI) showed that, as on February, 1997 as many as 118 projects were running behind schedule and the time overrun varied from one month to 200 months. A study of a few major projects indicated that the cost overrun, for reasons other than inflation and changes in the duty/ exchange rate regimes, ranged from 40% to 75% of the original estimates. Past experience reveals that the factors responsible for time and cost overruns 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, mis-match of equipments, etc.
- Inadequate and untimely release of funds.
- Unforeseeable factors such as adverse geo-mining conditions and natural calamities.

5.9 Reviews of some projects with substantial time and cost overruns were undertaken to identify activity-wise delays, type of cost overruns and the reasons thereof. In a coal washery project with a time overrun of 10 years, the activity-wise time overruns and the reasons thereof were: 4½ years in land acquisition owing to litigation and law and order problem; 1½ years in land filling work (not envisaged at the planning stage) due to poor planning; and 4 years due to non-fulfillment of contractual obligations. About 94% of the cost overrun of the project is explained by these delays.

5.10 An ongoing power project, which was to be completed in 6½ years, has already taken more than 11 years to complete about 90% of the project activities. The expenditure incurred so far is about 210% of the original estimates. Inordinate delay in land acquisition, inability of a public sector unit to supply vital equipments and designs as per contract, slow progress of work by private contractors, changes in scope midway through execution, serious funds crunch on account of non-payment of dues by electricity boards, inadequacies in the tender documents etc. are found to be the major reasons for time and cost overruns.

5.11 Time and cost overruns due to changes in design and scope midway through execution are quite frequent in large public sector projects. In the case of large surface irrigation projects, in particular, this problem is so acute that several projects had alarming time and cost overruns. To cite an example, an irrigation project in a State, which was initially designed in 1953 for flood protection and irrigation benefits to 5.7 lakh hectares, underwent drastic changes in design and scope, midway through execution, to include: (a) hydel power generation, (b) an additional branch canal with a command area of 1.6 lakh hectares, (c) another main canal system taking off from the barrage with an aggregate command area of 3.25 lakh hectares, (d) extension of the embankments (flood protection) and (e) cost of watercourses as the project cost. Because of these changes, the project got delayed by more than 20 years and the cost escalation, as per the latest available estimate was 347.25 percent. It is also not clear if the benefit-cost ratio of the entire project will still be favourable, as the planned power generation and irrigation capacities have not been realised.

5.12 It is quite common in large projects, particularly in mining and large scale surface irrigation schemes that the project authorities have not been able to get possession of land in time for the construction of various components of the project. Generally, two factors are associated with the problem of land acquisition. First, more often than not, there is a significant difference between the land prices assumed at the time of project planning and the market rates, as a result of which the process of land acquisition leads to time and cost overruns. The second problem relates to the absence of an institutional mechanism for speedy disposal of disputes arising in the context of land acquisition. When such disputes acquire a high profile, as in the case of Tehri and Narmada dams, the projects get delayed indefinitely with adverse consequences on costs and benefits.

5.13 The findings of diagnostic evaluation studies/ reviews lend support to the general observations about the factors causing time and cost overruns. However, what is important to note is that factors like problems relating to land acquisition/rehabilitation, obtaining clearances, non-fulfillment of contractual obligations by both public sector units and private contractors, inadequate and untimely release of funds and inadequacies in tender documents contribute more often to the greater part of the time and cost overruns of public sector projects. These problems arise due to inadequacies in planning procedures and implementation.

5.14 Project planning has to be more scientific and approval procedures more realistic to ensure that avoidable time and cost overruns are much less frequent. The approval procedure should be linked with early completion of incomplete projects and sustainability of project output. Because of the unrealistic approval procedure, many of the projects are delayed. At the other extreme, less stringent approval procedures encourage a tendency to get too many projects cleared without the requisite financial resources in sight. There is, thus, a need for striking a balance between these extremes. It is important to ensure that rigour in appraisal and planning does not itself become a cause of delay because of repetitive and multi-level examination of technical and economic data. Strict time-tables need to be laid down for completion of the approval processes and preliminary work. Similarly, strict financial procedures should be formulated for eliminating projects, which do not have financial backing.

5.15 The implementation of projects will considerably improve if the planning and approval procedures become more scientific and rigorous. However, for effective project management, there is a need to keep track of the progress in implementation and take necessary corrective actions, as the progress may be affected by unforeseen factors. Thus, monitoring and evaluation system must be strengthened and the implementing agencies must be made accountable for non-adherence to the plan of work. There is evidence that effective monitoring of implementation and mid-course corrections by the project management have often led to timely completion of projects without any cost overrun. An IFFCO fertilizer project was completed well within the approved cost estimate and time schedule, even though there had been delays in certain activities ranging from one to seven months during implementation. This was possible because the project management used to review the progress every week and take corrective actions to re-adhere to the original schedule of works. The corrective actions, inter alia, included actions against defaulting contractors, provision of standby generators, import of steel structures and cement to augment domestic supply and the like.

5.16 Apart from rigour in planning and project management, certain procedural and institutional reforms would be required to reduce avoidable delays and thus cost overruns. Time -bound clearances at different stages and effective inter-agency coordination would cut down time and cost overruns considerably. It is also not uncommon to find that where public sector units are the main providers of engineering design, equipment and material, non-fulfilment of contractual obligations by these agencies has been a major source of delays in project completion. Appropriate rules and procedures must be framed to avoid such delays and alternative strategies to deal with such situations by the project management must be evolved. The project management must be made fully responsible for the inadequacies in tender documents which often lead to delays, avoidable litigations and cost escalations. Stringent penal clauses to deal with non-compliance must form a part of the tender documents and suitable laws must be in place for early resolution of legal disputes.

5.17 Sustainability of the assets created has received much less attention in the planning process. This is the primary reason for the deteriorating conditions of assets and low capacity utilisation. The project design should include the parameters which bring out clearly as to how the project output in the form of goods and services will be sustained during operation, how various assets will be maintained and quality ensured. This question is also linked with the issue of 'pricing' of project output. This too must be squarely addressed, and within some defined parameters the project authorities should have freedom to price their output to recover legitimate costs and generate a reasonable surplus for further investments.

Strategy for the Ninth Plan

5.18 For bringing about improvement in project design and implementation, the following steps are required to be taken during the Ninth Plan.

(i) There is a need for better prioritisation of Plan projects. Ongoing projects, in preference to new projects, should have the first charge on the Department's budgetary allocations so as to optimise on early completion of incomplete projects. The Ministry of Finance and the Planning Commission have already initiated suitable actions in this regard. Some of the measures being proposed include shelving of projects which have not made substantial progress in terms of physical and financial targets during the Eighth Plan, and according priority to projects which are at an advanced stage of completion.

(ii) Improving the quality of projects "at entry" is essential for reducing time and cost overrun of projects. This calls for scientific approach to project planning. Inadequate design and financial planning have resulted in a substantial time and cost overruns in the past. A number of steps are required to be taken to improve project planning. First, the organisations responsible for project design must be made sensitive to the factors that generally contribute to time and cost overruns through dissemination of the findings of ex-post evaluation of projects, so that adequate attention is paid at the planning stage itself to prevent their recurrence. Second, there is a need for capacity building of these organisations through training and interactions with technical institutes. There is evidence that in some projects, technological options have not been realistically evaluated. Third, interagency coordination must begin with the project preparation itself, so as to minimise the procedural delays later.

(iii) The detailed procedures for submission, examination and approval of projects need to be reviewed and clearly defined limits should be set in terms of project cost and processing time for approval by various agencies. A decision has already been taken in this regard. However, it is necessary to review the capacity of the agencies in terms of both staff and technical competence so as to ensure that clearance is given only after detailed scrutiny of the proposals. Wherever required, capacity building of these agencies must be undertaken and accountability fixed.

(iv) There is a need for an appropriate manpower management policy for effective project implementation. Short tenure of key project staff, inadequate provision of technical and administrative personnel for projects and lack of training of project staff affect project implementation. Selection of key project staff must precede project implementation and their continuity ensured during project implementation. It has often been noticed that because of the requirement of approval of higher authorities and formalities of recruitment the required project staff is not available on time. Training of project staff at all stages of the project cycle is also needed.

(v) Adoption of a simplified procedure for acquisition of land is required to avoid time and cost overrun of projects. If the resettlement cost assessment is realistic, much of the delays associated with land acquisition can be eliminated. In China, in the case of one bridge project, the resettlement cost was as high as 46 percent of the total project cost, and the project was successfully implemented. This aspect is, to a large extent, related to the methodological issues of project planning. Appropriate guidelines for cost-benefit analysis of the project must be formulated for realistic assessment of the financial and economic rates of return and the issues relating to subsidy and pricing of project output/service must be brought upfront. The Planning Commission should review the existing guidelines and effect necessary changes.

(vi) One aspect that merits consideration is whether the project entities can be delinked from the budget, so as to ensure that budgetary considerations do not affect the adequate and timely flow of resources to the projects. This is particularly relevant in the context of the reduced role of the Government in the public sector investment and infrastructure projects. This would require some binding arrangements with the financial institutions for loan-financing of projects. This switch-over will eventually give rise to a new dimension for repayment. This, in turn, will induce the policy makers to focus attention on policy reforms and cost recovery, and consequently, make the project entities more cost-conscious. It may also help in moving towards privatisation of some project entities.

(vii) The issues of cost recovery, loan repayment and cost consciousness are also relevant in the context of sustainability of project output, which has been affected for lack of maintenance of capital equipment and infrastructure. The issue of sustainability should be addressed clearly at the planning stage itself and within a broad policy framework authority needs to be delegated to the agencies responsible for project operation and maintenance for setting economic prices and fees. The agencies responsible for project appraisal must ensure that the issue of sustainability of output has been adequately addressed in the project proposals.

(viii) The trends of macro-economic variables and the policy evolution, including socio-political changes have to be considered in preparing projects, estimating costs and working out financial and economic returns. Changes in interest rates, exchange rates, fiscal deficit and inflation rate influence the project outcome in different ways. Explicit consideration of these aspects is required in working out the project viability.

(ix) Monitoring and evaluation are important components of investment management. Currently, adequate follow-up action is usually not taken on monitored information, partly because of the inability of the project management to take prompt action and partly due to non-adherence to the accountability criteria. With the delegation of authority to the project management to resolve all implementation related problems within the authority of the Ministry/Department and strict adherence to accountability, the monitoring system is likely to be effective. All large projects must be post-evaluated and the cost of such studies should form a part of the project cost. The findings of such studies need to be discussed in seminars and given publicity to generate awareness among project managers, planners and policy makers about the problems in design and implementation and to draw lessons.

(x) Deficiency in contract management has been a major cause for time and cost overrun. Lack of transparency in contract document, lack of professionalism of the project management and inadequate delegation of authority cause most of the disputes and delays. The weaknesses in the legal systems also stand in the way of speedy disposal of disputes. Apart from building the capacity and skill of the project management, there is a need for suitable amendments to laws so as to prevent frequent adjournment and to ensure speedy disposal of cases.

Development Programmes

5.19 During the past fifty years, there has been an overall progress in all areas of social concern. Yet, the achievements are mixed, with stark contrasts and disparities. The chronic food deficit economy of the fifties and the sixties has been transformed into a self-sufficient one and an elaborate food security system is in place to enable the country to face even droughts without any imports or foreign help. Yet, more than 300 million people live below the poverty line and millions of children remain undernourished. As per the Sixth All India Education Survey, about 94 percent of our population have access to a primary school within one kilometre of walking distance and nearly 85 percent to a middle school within a distance of three kilometres; yet, nearly half of our population and 61 percent of our females above seven years remain illiterate. In the health sector, many communicable diseases have been eliminated or controlled, there have been a marked reduction in birth rate, death rate and infant mortality rate, and life expectancy at birth has risen by about twenty years during the last four decades. However, these achievements are uneven, with marked disparities across States and population groups. Examples of such contrasts and disparities pervade all the development activities and this has happened in spite of the existence of a large number of programmes targetted in favour of the poor and socially disadvantaged. Why is it that these programmes have failed to make much impact on the wellbeing of a large section of the people, even though the welfare goals have been so well laid down in the Constitution and various policy pronouncements?

5.20 The performance of many of these development programmes has been evaluated and reviewed primarily with reference to their immediate objectives, and to identify the factors that have contributed to their success or failure. As will be evident from the review of past experience in the execution of development programmes, presented later in the chapter, the factors affecting the performance of various sectoral programmes are more or less similar in nature. They mostly relate to inadequate resource allocation, faulty design, weaknesses in implementation and institutional bottlenecks. Yet, development programmes have been and continue to be formulated and implemented without dwelling over the basic issues as to why the same weaknesses in design and implementation persist and why corrective mid-course actions for better programme performance are not taken on the findings of concurrent and ex-post evaluation. Obviously, the root causes of unsatisfactory programme performance are systemic rather than symptomatic.

5.21 It is of utmost importance to understand the role such systemic factors could play in influencing the design, implementation, resource allocation and outcome of the development programmes. The single most important reason as to why the programmes aimed at improving access to basic services and development opportunities have not commanded the priority and resources these deserve, is that social goals have not been central to our development strategy. The success or failure of the development process has never been equated with the success/failure of programmes in the areas of poverty alleviation, education, health or safe drinking water supply. Social policies seem to have been formulated within a pre-established macro-economic framework which does not explicitly consider the redistributive and welfare issues. It must be recognised that if the policy-making in the social sectors remains an appendix to economic decisions concerning resource allocation, pricing, fiscal stabilisation, balance of payments etc., it is unlikely that the design and implementation of development programmes would be purged of their deficiencies. Some of the reforms that are required in the planning process to address the systemic deficiencies are discussed in the next two sections dealing with the precondition for success and the strategy for programme implementation.

5.22 At the operational level, the factors affecting the performance of development programmes are of two types, viz; (a) those relating to diversion, non-utilisation and improper use of funds allocated to these programmes and (b) those relating to design and implementation of programmes. A review of some Centrally sponsored welfare schemes revealed that diversion of funds from priority areas had been substantial. The Reports of the Comptroller and Auditor General of India (CAG) have also hinted at substantial diversion of funds under rural development and welfare programmes. Apart from diversion of funds, available resources have often not been allocated to the priority areas in a sector. Allocation to education has been biased in favour of higher education rather than primary education and that to the health sector in favour of urban health care systems. Until recently, the public distribution system too was highly urban based.

5.23 While diversion and improper use of resources have adversely affected the performance of programmes and led to sub-optimal outcomes, the more fundamental problems of the development process relate to the inadequacies in the planning and implementation of programmes. Evaluation studies conducted by the Planning Commission also suggest that the poor performance of development programmes/projects is primarily due to deficiencies in planning and implementation. Adequate attention is seldom paid to the assessment of beneficiary needs, the fixation of criteria for selection of target groups, the choice of implementation methods and delivery system, the adequacy of physical and financial inputs, choice of indicators to be monitored and the sustainability of programme benefits. Rigid guidelines for the implementation of programmes, high operational costs, improper targetting leading to leakage of benefits to areas/people not targetted, extending the coverage of a programme to a larger (than desired) area/population to avoid the risk of exclusion, inadequacy of the delivery systems of most programmes etc. are all reflections of inadequate planning of programmes before implementation.

5.24 The Planning Commission alone has, till date, conducted nearly 170 evaluation studies. The State Evaluation Organisations have completed another 2200 evaluation studies. Governments, both at the Central and the State levels, can save considerable time and resources, if the findings of these evaluation studies are put to practice in order to select socially acceptable and operationally practical implementation methods. This will avoid inappropriate assumptions about the needs, or forms of cooperation, of the target population and help select appropriate implementing agencies.

5.25 The lessons learnt from the experience of executing thousands of development schemes during the last forty years can be briefly summarised as follows:

(i) There is inadequate analysis of available information during programme formulation. This happens primarily, because there is no established mechanism through which the programme agencies can have ready access to the relevant information regarding the target groups / areas or the findings of evaluation studies. As a result, avoidable errors at the planning stage creep in. For example, in a programme designed for the empowerment of rural women, the basic and well- known fact that most rural women in India are illiterate was not explicitly considered while formulating the operational rules and designing the delivery system. In one rural employment generation programme, there was no correspondence between the seasonal variations in labour supply and the release of money for undertaking employment generating schemes. The installation of piped water supply schemes in areas with erratic electricity supply without the provision of adequate electricity is another example. In a district in one State, 50 percent of the community tube wells installed remained inoperative for varying periods upto two years in the absence of energisation. Some rudimentary analysis of available information at the micro level and logical framework analysis would have helped avoid such errors that lead to wastage of resources and sub-optimal programme impact.

(ii) There is another lacuna which persists at the stage of formulating schemes/projects. While estimating the cost of schemes/ projects, it has become a common practice to apply standard per unit cost. The unit cost varies from region to region because of variations in topography and because of unique nature of some regions like north eastern regions. Consequently, project costs tend to be underestimated and time is wasted later in prolonged correspondence to get additional funds sanctioned by the Central Ministries. This has become a perennial problem in the case of Centrally sponsored programmes.

(iii) Formulation of a multiplicity of programmes in an area of social concern without any specific thrusts can lead to several problems. Available resources are spread too thinly across a large number of projects leading to sub - optimal project outcome. For the out-of-school girl children, for example, a number of programmes are currently in operation. In the formal system itself, special incentives for girls are provided in most States and some of these schemes, as in Tamil Nadu and Maharashtra, have improved the retention rate of girl children. The Girl Centres under Non Formal Education (NFE), the scheme for adolescent girls in Integrated Child Development Scheme (ICDS), the National Open Schools, the Ashram Schools in tribal areas and some special component plans are also trying to reach the same target group. Many such Centres in the non-formal sector do not attract adequate response. As a result, many grassroots level education centres turn out to be non-viable and ineffective resulting in wastage of precious resources.

(iv) The general approach in implementation is 'top-down' and 'target-oriented'. Some physical and financial targets are sought to be achieved in most programmes. However, evaluation studies by the Planning Commission reveal that the fulfilment of these targets does not necessarily ensure that the programme objectives are being met. In many anti- poverty programmes, though the targetted number of families/beneficiaries /districts/villages have been covered and the allotted money spent, such programmes have failed in making the desired impact on the wellbeing of the beneficiaries. The implementing agencies are often more concerned with the mere fulfilment of targets assigned to them than with the actual flow of benefits to the target groups.

The 'top-down' approach in planning and implementation has led to formulation of schemes without assessment of the needs of the people. It was observed that in almost all the TSP states, the major part of the Tribal Sub-Plan funds was spent on the creation of infrastructure like irrigation structures and buildings for schools and health centres, most of which are not being used by the tribals for lack of complementary inputs. Had such programmes been planned more holistically in coordination with other complementary programmes taking into account the beneficiary needs and the profiles of the people and area, their impact would have been greater. In a district of one state, it was noted that financial allocations under different employment generating schemes are being pooled to create structures for soil conservation measures, school buildings and many other capital intensive works in which the involvement of the local people is minimum. In many programmes, the targets and financial allocations are often unrealistic. In a study of the functioning of community health centres in one State, it was noted that the number of patients seeking treatment under a national programme is many times more than the target set and it was reported that the resources allocated are grossly inadequate even to carry out the most inexpensive clinical tests. However, because of the "target oriented" and "top down" approach to implementation, targets are shown to have been met on paper, whereas in practice, neither the actual incidence of the disease gets reported, nor do the patients receive quality treatment.

(v) For some programmes separate implementing agencies are created, whereas these are actually implemented by the existing line departments, who work independently for different components of a programme. This results in lack of focus on target groups, wastage of resources and lack of coordination among the line departments. The creation of such agencies without the necessary institutional changes makes them redundant and affects the implementation and operation of programmes. An evaluation study conducted by Programme Evaluation Organisation (PEO) revealed that there is a separate administration for planning and implementation of tribal development projects, whereas in practice various schemes are being implemented through the existing line departments. Except in Andhra Pradesh and Maharashtra, the project officer and staff of ITDPs have very little role to play in the design, implementation, monitoring and co-ordination, for which ITDPs were created.

(vi) Monitoring and Evaluation (M&E) of programmes are undertaken to introduce the necessary correctives steps in programme formulation and implementation. In spite of the existence of an elaborate M&E system in the country, the findings of M&E are not put to use for a variety of reasons. First, the physical and financial indicators regularly monitored often do not reflect the actual performance of programmes . In an area development programme, for example, it was found that, while at the aggregate level the targets with regard to areas under forestry, irrigation and soil conservation were met, the primary objective of the scheme, viz.; integrated watershed development was not achieved, as these activities were not integrated at the watershed level. Second, whatever information is generated through the M&E system, this is not analysed with a problem-solving perspective to aid the implementing agencies to re-assess the original schedule of work. Third, there is no mechanism through which the planners and implementing agencies can have ready access to information in a format that is useful to them. Publicity and systematisation of available information in a user-friendly format is needed to ensure their use in decision- making.

(vii) Lack of accountability of the implementing agencies either to the Government or to the people has been the single major cause for diversion of funds in development programmes. It is well known that implementing agencies and administrators can get away easily with time and cost overruns or non-fulfilment of targets by attributing these to factors beyond their control. In many cases, they may indeed be justified, as most programmes leave too many loose ends at the planning stage. Nevertheless, several cases of improper use of funds meant for anti-poverty programmes have come to light. In one of the employment generating schemes, it was found that the muster rolls were not maintained at the grassroots level. A voluntary organisation unearthed several cases of large scale misappropriation of funds in rural development programmes in four districts of one State. This happened primarily because of lack of people's participation in the implementation of programmes, lack of transparency in the operation of schemes and inadequacy of monitoring mechanism. Suitable institutional reforms, involvement of the people and grassroots level non-government agencies in the formulation and implementation are needed to overcome this problem.

(viii) The operational cost of some programmes tends to be abnormally high, partly because of redundant and ineffective administration and partly due to other inadequacies in planning and implementation. In a programme for rural women, it was observed that the unit delivery cost was nearly four times the benefit received by a beneficiary. This happened because of inadequacies in planning and implementation. The delivery cost also increases because of vertical implementation of a number of programmes in an area. For example, in one State it was noted that the number of village level functionaries involved in the administration of rural development programmes was as many as 22.

(ix) Several social sector programmes are formulated without addressing the question of sustainability of benefits. The primary objective of such programmes should be to build the capability of the vulnerable groups to become self-reliant. In reality, most programmes run with ever expanding Government budgets and thus pre-empt resources which could find better alternative uses. It is possible to recover the full or a part of the operation and maintenance costs of many programmes, if service delivery is improved and if people are involved in the formulation, implementation and operation of schemes. The PEO evaluation study of the Accelerated Rural Water Supply Programme (ARWSP) in 1996 revealed that the facilities created under the programme have become defunct over time for lack of maintenance. As a result, the number of no- source villages has been rising, even though more and more villages are being brought under the programme. But, in one village in a district of Maharashtra, the maintenance of a piped water supply scheme was being looked after by the villagers successfully. Decisions on water consumption norms, sanitation rules and water charges are taken collectively in the Gram Sabha, the violations of which attract penalty. They employed an operator with their own money and had reserve funds for exigencies. The PEO field teams came across other instances of successful management and operation of schemes by the people themselves.

(x) The most distressing part of financing of the development projects and programmes under the Five Year Plan regime has been the failure to énsure timely and adequate flow of funds to the implementing agencies. This requires proper management of flow of funds. It may be mentioned in this context that in the budgetary process which has been provided for in the Constitution and practised in India, there is very little of management of funds flow. All the rules and regulations which have been formulated are only intended to control the public expenditure. This is only a part of the management system. However, when the Five Year Plans were launched, the Central and the State Governments faced a practical problem of integrating the Plans into the annual budgetary process. This was because planning is a long term exercise, whereas government budgeting is a short term annual exercise. Even so, the Central and the State Governments split the Five Year Plans into Annual Plans and integrated the Annual Plans into the regular budgets, which also came to obtain legitimacy as they were approved by the Central and State legislatures. By so doing, they solved only one problem, namely, getting the required approval of the legislature for incurring expenditure under Plan account. But it did not ensure regular flow of funds from the Central Government or the State Governments to all the implementing departments. Both the Central Government, and the State Governments faced ways and means problems. In the case of Central Government this was overcome by resorting to ad hoc borrowing from the Reserve Bank of India (RBI) against the security of adhoc treasury bills, which came to be known as deficit financing. But no such corresponding financial facility was available for the State Governments. Whenever they faced financial problems, they used to take recourse to unauthorised overdrafts from the RBI. Therefore, whatever revenues they received on cash flow basis was allotted to the priority sectors as identified by the political leaders in power. All the development projects and programmes did not receive regular instalments due for spending. More often, the funds start flowing only in the middle of the calendar year in small amounts and the flow picks up by the end of December. Even so, not even the second instalment due for planned project is received by the departments. Invariably most of the allocated money reaches the departments either in February or March. This untimely flooding of funds creates a piquant situation and leads to unduly hasty expenditure. To begin with, the project implementation work is affected by bits and bits for want of funds and after reaching the last month of the financial year, the implementing departments are not in a position to absorb the entire amount. Consequently, some funds lapse. Repetition of such mismatched flow of funds adversely affects the implementation of Plan projects and programmes.

Even to this day, no satisfactory solution has been devised to get over this problem. This has become a major stumbling block in the successful implementation of the Plan programmes and projects.

Pre-conditions for Success

5.26 The general weaknesses in the programme formulation and implementation notwithstanding, there have been several cases of success. Such success stories have generally come about where different models of participation by people's institutions are being adopted. There is evidence that voluntary organisations, co-operatives, government agencies and even the corporate sector have successfully designed and implemented rural development programmes and have contributed towards improving access to public services through people's participation. One can identify a number of other factors like meticulous planning, social leadership, external technological and managerial inputs, holistic approach, availability of resources, dedication of government officials and continuous monitoring of progress in implementation which have contributed to success. But, without exception, people's participation has been a critical factor. The people have participated at various stages of planning and implementation of programmes through the Gram Sabha and formation of socially functional groups like self-help groups (SHGs) and producer/ beneficiary co-operatives.

5.27 However, people's participation cannot come about automatically, as the vast majority of the rural people are poor and illiterate and not capable of organising themselves as agents of socio-economic change because of their lack of knowledge and inadequate access to information, and physical and financial resources. In fact, in most of the successful interventions, the constraints and inertia of the rural people have been removed through the involvement of facilitators/animators coming from all walks of life. Among them were political leaders, social activists, philanthropists, corporate managers and government officials who successfully catalysed the development process through people's participation.

5.28 In the past, some political leaders were instrumental in mobilising the milk producers of Kaira district of Gujarat to form the village and district level co-operatives which eventually gave birth to the Anand Milk Union Ltd., a successful venture in the co-operative sector. Some individual social activists who initiated the rural development through social mobilisation in pilot projects, went on to form voluntary organisations, like: Bharatiya Agro-Industries Foundation, Gram Gaurav Pratisthan, Hind Swaraj Trust and Kishore Bharati, and replicated their models of development successfully. In the corporate sector, rural development schemes through people's participation have been successfully implemented by Tata Steel in Chhotanagpur (Bihar), by Mafatlal Group in Parbhani (Maharashtra), by Lupin Laboratories in Bharatpur (Rajasthan) and by Hindustan Lever in Etah (Uttar Pradesh). These are only a few of a number of such successful interventions facilitated by individuals and organisations.

5.29 There have been successes in development programmes initiated by government agencies too. The impact of programmes like Development of Women and Children in Rural Areas (DWCRA) in Andhra Pradesh, Kerala, Nagaland and Tripura and of the Employment Guarantee Scheme (EGS) in Maharashtra has been encouraging. There are also examples of how villagers, through their collective efforts, have mobilised resources and taken advantage of government programmes to improve their access to basic needs. In a village in the Nizamabad district of Andhra Pradesh, the villagers formed a Village Development Committee and generated funds through donations, first to build a community hall and then a stable and pucca safe drinking water supply system and an upper primary school over a period of time. In the process, they linked their resources with the funds available in the various programmes initiated by the Government. Pooling of resources, both physical and financial, has enabled them to have a piped water supply system with five bore wells and pumps and an upper primary school with 8 rooms and 6 teachers of whom 3 were community sponsored. The same villagers contributed Rs. 90,000 to get an electric sub-station sanctioned to the village.

5.30 One interesting lesson that could be learnt from most of these successful interventions is that the development of the disadvantaged groups is not possible with focus on a single activity. Most of the agencies and activists, who catalysed the development process, initially focussed on a single activity but, soon realised that deprivation of the poor is multi-dimensional and that a multi-pronged strategy is needed both for social mobilisation of people and for sustainabiliy of the development process. It was noted that without addressing the problem of illiteracy, il! health, poverty and the forward and backward linkages of their primary activities simultaneously, the people could not be motivated to participate in the development process. They soon had to change their approach from "project" focus to "holistic". This lesson underscores the need for convergence and inter-programme synergy in implementation of our development programmes.

5.31 These success stories are, however, localised and have not been replicated on a wider scale, partly because of inadequate physical, financial and human resources of the organisations involved, and partly due to the weakness of the existing social institutions in promoting and sustaining the processes and methods adopted in the successful interventions. In a country where the number of absolute poor exceeds 300 million and many more do not have adequate access to basic minimum needs, such isolated experiments cannot make any perceptible impact on social and economic development. Yet, these micro level experiments represent the seeds of change which, if multiplied on a wider scale, can contribute significantly towards realisation of the development goals like poverty alleviation, health for all and universalisation of elementary education. The challenge, therefore, is to multiply the seeds of change sown in the success stories. Multiplication on a wider scale would obviously require institutionalisation of the processes and methods adopted in these interventions.

People's Participation

5.32 The core element that emerges from the success stories is 'people's participation'. The people are expected to undertake initiatives of their own when they become conscientised and critically aware of their life situations and begin to perceive the options for changing that reality. This is the basic premise on which the facilitators worked. They first studied the local situation to assess the socio-economic profile of the people and their needs, the local resource base and its potential, existing social relations, the need for technological, financial and managerial inputs etc. and chalked out a strategy of sensitising the people for self development. They assisted the people to reflect upon, analyse and understand their socio-economic environment, the factors that constrain development and access to public services. In the process of animation, alternative possibilities of dealing with the constraints are explored and their feasibility examined, using the local knowledge (internal inputs) as well as knowledge from outside (external inputs). Once sensitised, the facilitators provided the people with the necessary support mechanism like technical skill, credit, extension and other services by linking the local groups with the providers. More often than not, such development actions of the people started on a small scale, but the initial successes gave them the necessary confidence to embark upon larger and more sophisticated actions.

5.33 The essential ingredients of people's participation for self development, as revealed in the success stories, are: assessment of local resources and local level planning, sensitising people and building local organisations for collective actions and an umbrella support mechanism to facilitate people's development actions. If these processes and mechanisms are to be multiplied on a wider scale, these will have to be institutionalised. The multiplication process requires a major political commitment by the State to provide the necessary political space and a policy framework for a sensitive support mechanism. This will call for, among other things, simplification of ground rules that would facilitate participation of grassroots level organisations in the development process, bringing about flexibility and dynamism among the providers of public services, and orienting the judicial system for speedy disposal of disputes and to be sensitive to the needs of the poor and disadvantaged.

5.34 It is common knowledge that delivery of services and upkeep of equipment suffer due to inadequate financial authority of the grassroots level functionaries and also due to the rigidities in the operational rules and audit systems. This often leads to helplessness and inaction on the part of the functionaries. In the case of voluntary organisations, for example, procedures require the filling up of a multiplicity of forms, adherence to complex accounting/ audit systems, and multi-level and repetitive examination of files. All these cause delay in the release of funds and affect their functioning. That such sub-optimal functioning of the delivery system has a very high 'opportunity cost' must be appreciated and reforms of outmoded rules and procedures must be undertaken in the context of decentralised planning and implementation. The Conference of the Chief Ministers held on 27 May, 1997 deliberated on the broad areas that need to be reformed for an effective and responsive government. What is now required is to identify specific institutional changes that need to be brought about and a plan of action for their implementation.

Panchayat Raj Institutions

5.35 The 73rd and 74th Constitutional amendments have opened up new opportunities for decentralised management and people's participation in the development process. While, in principle, the Panchayati Raj Institutions (PRIs) can be the effective bodies for local level planning and implementation, they may not be so in practice because of a number of constraints. First, all Panchayat members do not necessarily seek to achieve social goals and hence may not be sensitive to the needs of the people. Diversion and misuse of resources have been reported even where the PRIs are involved in the implementation of programmes. It has also been found that the Gram Pradhans who are mostly elected from the main village (71 to 92% in different districts of a State) ignore the development of hamlets. Second, most of the members do not have the necessary background in planning and implementation of development programmes. Third, unless there is a functional link between the various tiers of the Panchayats in terms of administrative and financial control, the required coordination in planning and implementation may not come through. Fourth, the Panchayats need flexibilities in operational rules, authority and financial resources if they are to participate actively in planning and implementation of development programmes.

5.36 To ensure that the PRIs act in the most effective manner, the involvement of people and facilitators in planning, prioritisation and implementation of programmes and in monitoring of their activities is essential. To circumvent the problem of disparity in the allocation of available financial resources between the main village and the hamlets, there is, perhaps, a need for developing appropriate principles of allocation of resources at the micro level. The second constraint can be removed through training and retraining of the members of PRIs. While some States have already created institutions for the training of Panchayat members, others too need to follow. Experienced public administrators, managers of co-operatives and social activists/leaders should be involved in designing training courses and managing training centres. The States should evolve appropriate mechanisms to ensure harmonious working of different tiers of the PRIs. Perhaps, legislative actions would be required.

5.37 The objectives sought to be realised through the 73rd and 74th amendments of the Constitution would remain unfulfilled without devolution of adequate financial resources to the PRIs. Their financial needs can be effectively met in two ways, viz; (a) through quantification of the awards of the State Finance Commission for the PRIs in line with the awards of the Central Finance Commission for the States, and (b) by empowering the PRIs to raise resources locally. Though, in some cases the Panchayats have received resources for specific purposes, the process of devolution of resources needs to be institutionalised to realise the full potential of the PRIs in decentralised planning and implementation. The issue of devolution of resources and authority to the PRIs is complex and calls for systemic changes through legislative actions. The State of Kerala has made the pioneering move to formally devolve 40 per cent of development funds in favour of PRIs. But there too, despite a high degree of literacy and political awareness, the process was not entirely free from its share of problems and difficulties. There is, therefore, a need for a more informed debate and mobilisation of the people around the relevant issues so as to fully operationalise the various provisions of the 73rd/74th Constitutional amendments.

5.38 For effective functioning of the grassroots level institutions of some north eastern States, the Central Tribal Belt and other scheduled areas, another issue that needs to be squarely addressed is the conflict between the PRIs and the local bodies like tribal panchyats and hill councils. Sometimes, the power and jurisdiction of these bodies are a matter of dispute and this affects the development of such areas. Perhaps, it would be necessary to give recognition to informal bodies like tribal panchayats, and to delineate the functions and responsibilities of various agencies where more than one development agency is involved.

5.39 With these reforms, the PRIs can be an effective instrument for large-scale development interventions at the grassroots level. Since the development actions have to come from the people and since they do not have the necessary financial, technical, managerial inputs and market information, it is essential that access to such inputs be facilitated. To be effective, the local organisations must acquire legitimacy of their standing, particularly in the eyes of the officials and support institutions. An important element in the acquisition of legitimacy is the extent to which the agency officials meet their genuine demands. The PRIs can play an important role in this regard. They can facilitate such linkages between the people and the organisations which provide these inputs. The existing support mechanisms like credit institutions and extension services are not sensitive enough to the needs of the people. Training of the staff of these organisations needs to be organised to bring about the necessary behavioural changes. Some rules and procedures need drastic simplification so as to facilitate people's initiative and action.

5.40 Sustenance of this process and its eventual take-over by the people would also need further institutional reforms to ensure: information exchange, conflict resolutions, joint action, strategic planning and public awareness/education In a large number of areas, legal and legislative actions would be required to facilitate free flow of development related information, resolution of conflicts arising out of denial of information, contractor disputes and other non-compliances, the use of local resources/raw materials by locals, removal of excessive bureaucratic control over co-operatives, growth of grassroots level organisations for strategic planning etc. The primary objective of such reforms should be to frame simple rules, laws, incentives and disincentives to guide individuals and groups to act for self-development on the one hand and to reduce the transaction costs of such actions on the other.

Strategy for Ninth Plan

5.41 The following steps are required to be taken during the Ninth Plan for improving the performance of poverty alleviation and social sector programmes.

(i) Inadequate resource allocation, relative to actual need, results in unsatisfactory outcome. The argument of efficiency of resource use should not be taken as a justification for reduction in social expenditure, the imperative of reduction in fiscal deficit notwithstanding. The declining trends in social sector expenditure, particularly at the State level needs to be reversed. There is need for a realistic assessment of the investment and the time required to meet the goals of universal access to basic public services, such as primary education, primary health care, child nutrition and safe drinking water The Planning Commission has already taken up the exercise of assessing the gaps in basic minimum services (BMS) in different States and the allocation of resources for such services has been stepped up. However, the approach still remains "incremental" in nature without a time- frame. The findings of a High Level Commission relating to the assessment of gaps in basic services and resource requirement for the North Eastern Region tend to suggest that allocation of resources needs to be substantially stepped up for the realisation of the goal of universal access to BMS. However, the issue of allocation of resources to programmes in social sectors is linked with the broader issue of the choice of the development strategy. The need for adequate resource allocation to these programmes will be appreciated if the social policy- making is internalised in the planning process through an explicit recognition of the social objectives in the Plan formulation and evaluation. When the redistributive and welfare issues are placed alongside the economic growth objectives, there will be more clarity on the complementarity and trade - off between objectives, and this will certainly generate more informed debate, influence the choice of development strategies and consequently, resource allocation to social priority needs.

Equally important is regularity in the flow of allocated funds to priority sector projects. This will have to be streamlined in order to achieve the intended targets. The Central Ministries may have to resort to release of CSS funds directly to the grassroots level Departmental CEOs to ensure adequate flow of funds to schemes like BMS, though it may amount to a departure from the basic philosophy of encouraging a greater degree of initiative and autonomy to the State Governments in development planning and implementation. However, some degree of such trade-off becomes inevitable in order to minimise the diversion of funds meant for the priority sector projects, on the one hand, and to energise the PRIs, on the other.

(ii) The quality of spending public money is as important as availability of resources. Two issues assume importance in this context. The first relates to poor conception, planning and implementation of development programmes and the second to the inability of the system of governance to resist populist pressures for hand-outs/subsidies to vested interest groups or to indulge in token gestures for political gain. While, for improvement in planning and implementation, the lessons learnt from successful interventions must be put to practice, there is a need for building adequate administrative capacity in public bureaucracies and also for changing the ways in which they have traditionally functioned. This can be done through capacity-building programmes to induce behavioural changes and to enhance appropriate skills needed in a more decentralised and participative development process. The issue of responsible management of public finances is more complex and a solution has to be found in the frame-work of co-operative federalism. The use of incentives/disincentives in the resource allocation principle of the Centre is likely to go against those very States which need more resources for development. While the State Governments need to be persuaded by the Finance Commission, Planning Commission and National Development Council to mobilise adequate resources, earmarking of funds for priority areas and improvement in public administration are also necessary.

(iii) Accountability of the Ministries and administrators is the first principle of democratic governance and the freedom of access to reliable information is the pre-requisite to operationalising accountability. Two steps are urgently required to ensure transparency and accountability. The first is to reform the data collection system to ensure generation of reliable and disaggregated data base by strengthening the agencies responsible for data collection. In particular, the grassroots level agencies which provide primary data need to be strengthened to ensure quality and reliability of the data. At present, even the land use statistics are not uptodate. One State Government has recently planned to bring 3 million hectares of under-utilised land under cultivation. But, an independent research revealed that the actual underutilised land is much less than 3 million hectares. The Lekhpals have not updated the land statistics for about ten years. It is expensive to have an elaborate official system at the grassroots level for generation of the required data base that would reflect the ground reality. Grassroots level non-official agencies and community organisations including educational institutions (high schools) may be geared to complement the official monitoring effort. The second is the analysis and dissemination of the reliable data, so generated, to the policy makers, planners and managers for improving the quality of planning and decision - making on the one hand, and to the media and general public for initiating an informed debate and ensuring transparency in public administration on the other. Since the majority of the rural population are illiterate and not well informed about the development interventions of the Government, it may be necessary to organise widespread multi-media publicity campaigns in the rural areas of the type attempted by the Department of Field Publicity, Ministry of Information and Broadcasting in 471 villages of Andhra Pradesh in 1995. Enactment of the Right to Information Act and making the findings of evaluation studies accessible to the public and media are also required to bring about accountability and transparency in development administration. However, more innovative ways of dissemination of development-related information at the grassroots level need to be designed. One effective mode could be to develop reading materials in simple local languages giving information on the development programmes, local government functionaries, the rules and procedures for accessing benefits of government programmes, activities and performance of PRIs etc. for the neo-literates of non-formal education systems and for inclusion in the school curricula at middle/secondary levels. The use of these reading materials is likely to attract the neo-literates to join the post literacy campaigns and make the middle/secondary level students aware of their immediate environment.

Accountability could also be brought about through involvement of local groups/ panchayats in the implementation of programmes. Thus, if the local people are involved in planning, implementation and management of programmes and if the government functionaries are made accountable to the local bodies like the Panchayats or Village Committees, the delivery systems of development programmes are likely to improve. One way of making this operational is to release the salaries of staff of schools and health centres through the PRIs and to deliver benefits under beneficiary-oriented programmes through the local bodies like co-operatives and self-help groups.

(iv) Decentralisation of development planning and administration has the virtue of permitting development strategies and programmes to be customised to the needs of diverse groups of people. Centrally planned strategies tend to be uniform and monolithic and fail to take into account the differences in the characteristics of various population groups. Our socio-economic diversity, ecological variety and cultural heterogeneity point to the inescapability of decentralised decision making. Decentralisation of development planning and people's participation strengthen the sense of community ownership, the absence of which frequently leads to the failure of many well - conceived programmes. The 73rd and 74th Constitutional amendments have opened up the opportunity of local self-governance. The Gram Sabhas will have to play a leading role in identification of local needs, mobilisation of local resources including human resources, identification of target group beneficiaries and monitoring of implementation of local projects. They should also take up the responsibility of maintaining the community assets like hand pumps etc. In this context, the novel and fruitful experiment of the Kerala Government to organise development planning at the grassroots level through massive campaign of 'plan literacy' and mass mobilisation at the Gram Sabha Level needs special mention. Extensive training of personnel at the grass-root level formed a crucial component of the Kerala experiment. Effective decentralisation will, however, critically depend on operationalising the provisions of the Constitution in letter and spirit, not only through holding Panchayat election, but also through devolution of financial powers and capacity building. This is the onerous responsibility of the State Governments. Most of the States have conducted these elections, though only a few of them have initiated new and creative ways of involving the local communities in planning from below by creating District Planning Committees and through capacity building of the elected members. As early as in June 1982, the Planning Commission addressed the States urging them to take steps towards four important aspects of a decentralised district level planning set-up. These were:

(a) effective functional decentralisation,

(b) effective financial decentralisation,

(c) establishment of appropriate planning mechanism at district level and

(d) formulation of appropriate budgeting and reappropriation procedures.

However, no significant progress has been made in this direction so far. Operationalisation of the Planning Commission's guidelines for effective decentralisation of the planning process calls for systemic changes. One important change required is to link the Finance Commission's awards to States with the State-level Finance Commissions' awards to districts. Since this requires political will and legislative actions, the need for generating informed debate and socio-political mobilisation for effective programme implementation gets reinforced. In a limited way, the Planning Commission has made an attempt to address the problem of devolution of financial powers by recommending direct release of the funds for the Centrally Sponsored Programmes to the PRIs, and by asking the States to indicate the PRI component in their annual plans. However, more fundamental changes are required and the Centre and the States must jointly address the relevant issues.

(v) Democratic decentralisation in planning and implementation with people's participation will, to a large extent, help overcome the problems posed by the vertical operation of multiplicity of development programmes and inefficiency in resource use. Pooling of resources allocated by the Centre and States to programmes in education, health, social welfare and poverty alleviation at the local level will facilitate convergence and inter-programme synergy. Though democratic decentralisation provides the necessary framework for better use of resources, there is no one-to-one correspondence between them. It needs to be supplemented by social mobilisation of the people and meaningful partnership of the Government, voluntary organisations, self-help groups and other actors in civil society. Communication and trust need to be promoted between the grassroots level functionaries and the communities for better community -Government partnership.

During the Ninth Plan an enabling environment for this partnership is proposed to be created through capacity building in public administration and institutional reforms to bring in transparency and effectiveness in the implementation and operation of development programmes. The important areas that warrant reforms relate to: simplification of rules and procedures that would encourage local initiatives; recognition of groups and cooperatives and their formal involvement in the delivery of services under government programmes; devolution of financial powers to the PRIs and amendment of laws so as to enable the local bodies to have control over resources meant for local use, like the village commons' water resources, fodder, minor forest produce, quarries, etc; data collection systems at district or State level, dissemination of and access to reliable information/ data. Expert bodies consisting of efficient administrators, academicians, social activists and representatives of grassroots level development organisations should be constituted to go into the issues deliberated upon at the Chief Ministers' Conference on 27th May, 1997, and to identify the specific rules / procedures / laws that need reform to facilitate people's initiative and action. The role of the government implementing agencies in this new environment must change from direct involvement in the implementation/ delivery of services to that of a provider of support services to improve access to the external inputs and knowledge which the grassroots organisations need for the development of the people. The government agencies should also undertake monitoring and evaluation of various programmes, and dissemination of the best practices. It may, however, be mentioned that institutional reforms in areas where legislative actions and constitutional amendments are required, need sustained effort by a large section of the people. This has been the experience in the past. In one State, the sustained struggle by the people under two organisations has made the Government grant access to development related information to all concerned.

(vi) Monitoring of programmes must be made purposeful. Professional help should be sought to identify the indicators to be monitored so as to ensure that the monitored data actually reflect the performance of the programmes and become useful to the managers in taking the necessary corrective actions. In keeping with the decentralisation of the planning process, there is need for building the evaluation capacity at the State level. The existing evaluation organisations suffer from many weaknesses. Adequate resources will need to be allocated for strengthening the capacity of these organisations both at the Centre and the States. There is also a need for strengthening the evaluation training institutes in the country to impart training not only to the evaluation professionals at various levels but also to the planners and programme administrators to enable them to appreciate the utility of evaluation studies in the programme management cycle and hence, adequate resource allocation for monitoring and evaluation.

(vii) Apart from bringing about an improvement in planning and implementation, the Ninth Plan strategy would place emphasis on measures like shelving or reorienting such schemes whose delivery costs are abnormally high, reducing the number of schemes and building in sustainability of outputs/services as a necessary component of programme formulations. Alternative delivery mechanisms need to be evaluated and the least cost and most cost-effective alternatives should be adopted.

Monitoring & Evaluation- Methodological & Organisational Issues

5.42 The need for an effective monitoring and evaluation (M&E) system was felt as early as in the First Plan itself. The First Plan document stated that "with increased investment on development, more attention to systematic assessment and evaluation of the results from public expenditure was necessary. With every important programme, provision should always be made for the assessment of results. In spite of considerable development in economic and social sciences, our knowledge of human motivation and social processes is but limited. We cannot always say for certain that a given set of causes will produce a particular, clearly definable, set of results and none other;". The Second Plan document emphasised the need for a strong M&E system, building up a strong development administration, training of personnel, informing and educating the public and organising a sound system of planning based as much on the participation of the people at each level as on the best technical, economic and statistical information available. As a review of the past Plan performance revealed gaps in achievement in various areas of development, the need for a strong M&E system only got reinforced in subsequent Plan documents.

5.43 Over time an elaborate monitoring and evaluation mechanism has been built for efficient development administration and a large number of institutions for training in public administration at the Centre and State level have been created. While the M&E system has proved its utility in development administration, it is not as effective as it should be. The scope and nature of development programmes have been undergoing changes and the interaction between a programme and its environment is becoming increasingly complex. The government now operates under increasing financial and competitive pressures. The M&E system has not shown the necessary dynamism to cope with these changes and complexities. The Working Group on Monitoring and Information System of the Seventh Five Year Plan identified the following problems:

- ineffectiveness in identifying/reducing likely delays and problems;
- large data gaps, delays in data generation and transmission, inadequate data
- analysis, feedback not reaching proper users;
- inadequate information on interlinked projects;
- information difficult to retrieve in the absence of data bank;
- information not reflecting the true picture;
- more emphasis on reporting than on action; and
- inadequate use of monitored information in decision making.

5.44 These problems arise primarily out of methodological weaknesses in the existing monitoring system. First, the existing system of monitoring has been routinised and gives an impression that it is a well-oiled system. But, in reality this has resulted in the growth of complacency and weakening of guard against deterioration of quality, reliability and timeliness of the information monitored. Second, the system places undue emphasis on monitoring but not on what could be done to re-adhere to the plan of work and targets as originally fixed. Third, time and cost overruns are often explained away by 'reasons beyond control' of the project management and this explanation is usually accepted. Non-adherence to the accountability criteria has weakened the effectiveness of the monitoring agencies too. Fourth, the existing system places greater emphasis on financial progress reporting than on physical progress.

5.45 The Government has already taken measures to make the implementation and delivery system more effective. Specific mechanisms with regards to monitoring and effective implementation of Central Sector projects/programmes, Centrally Sponsored Schemes and State Plan schemes have already been worked out. In the case of Central Sector Projects, the following steps have been initiated:

(i) Empowered Committees have been set up to monitor any question of delay in award of contracts and issues related to contract management including speedy resolution of disputes by those Departments/ Ministries which are executing/implementing the Government owned projects. The projects implemented by the Port Trust are treated as Government owned projects. In other Ministries/Departments, the system of Quarterly Performance Review Meeting exists; where it does not, it should be introduced. EC/QPR meetings are chaired by the concerned Secretary and it includes representatives from other Ministries, such as Ministry of Finance, Planning Commission , Department of Programme Implementation, Ministry of Environment and Forest. The Financial Advisers of the concerned Ministries/ Departments are invariably represented on the Committee. Participation in the proceedings for the EC is at the level of a Secretary to the Government of India as far as possible and in no case participation at the meeting is below the level of a Joint Secretary to the Government of India.

(ii) The EC/QPR meetings are to monitor and review the progress of all projects being implemented departmentally by the Administrative Ministry or by the PSUs. However , the EC/QPR give special attention to monitor projects costing Rs. 100 crores or more and keep a continuing watch over their implementation in view of their size and varied nature of problems faced by them.

(iii) In the event of any problem not being resolved in local EC/QPR, the chairman of the Committee is free to refer the matter to the Cabinet Secretary for a final decision.

(iv) For projects costing Rs. 50 crores and above, a Nodal Officer responsible for implementation is appointed for the projects duration. He is expected to have at least five years of services to ensure his involvement in the project up to its completion stage so that he is fully responsible and accountable for the implementation of the projects. The tenure of the nodal officer is for the duration of the projects or for 5 years whichever is earlier. In only rare and exceptional circumstances if his transfer becomes inevitable, this is effected only with the approval of the concerned Secretary. The nodal officer so appointed is delegated adequate financial and administrative powers and made fully responsible for time and cost over-runs while implementing the project and his future promotion/career is linked with the performance in implementing the project.

(v) Projects which are unable to make progress and where expenditure incurred is 20% or less even after 60% of the gestation period is over, may be shelved or dropped or transferred to the private sector;

5.46 A system of annual updation of projects cost has also been introduced. Financial Adviser of the concerned Ministry/ Department is responsible for yearly updation of project cost (cost above Rs. 50 crores) and communicating the results of such updation to the Planning Commission before the Annual Plan exercise. They would also indicate if the updated cost is different from the phasing of expenditure based on completion cost. This is to enable the Planning Commission to take into account the project-wise fund requirements in recommending Plan allocations to the Ministry of Finance. In order to ensure a uniform methodology for updation, Planning Commission has prepared indicative guidelines in consultation with the Department of Expenditure and Department of Programme Implementation on yearly updation of cost and circulated the same to the Financial Advisers of all Ministries/Departments.

5.47 The above decisions, by and large, are applicable mainly to Central Sector projects. In order to ensure that projects are implemented within the given time frame and minimum cost over-run, apart from above measures, the following additional measures have been suggested:

a) For projects costing Rs. 50 crores and above, projects authorities would prepare resource based PERT chart, which will facilitate not only monitoring of these projects and assessment of financial requirement, but also help in allocating resources optimally at the time of finalisation of Annual Plans.

b) The concerned Secretaries would send the Quarterly Status Reports of the projects under implementation to Planning Commission, highlighting the constraints identified by the EC/QPR meeting. The concerned Division in Planning Commission, based on the information contained in the status paper received from the concerned Ministry and that available in the Division, would prepare a background note for the Quarterly Sectoral Meeting to be taken by the Member Secretary. Concerned Secretaries would be invited to this meeting.

5.48 With regard to the Central Sector development programmes/schemes, the following decisions have been taken:

a) Planning Commission in consultation with the concerned Central Ministries would fix yearly physical targets corresponding to plan allocations.

b) Concerned Secretaries would take QPR meetings to review the progress of all Central Sector Schemes and programmes being implemented by the Department/Ministry and submit the report to Planning Commission. QPR meeting to be chaired by Secretary to the concerned Department/Ministry will include representatives from other Ministries/Departments such as Planning Commission, Ministry of Finance and other concerned Ministries /Departments.

c) In the event of any problem not being resolved in the local QPR, the Chairman of the Committee is free to refer the matter to Cabinet Secretary for a final decision.

d) For programmes/schemes costing Rs. 50 crores and above, a Nodal Officer responsible for implementation is appointed for the project duration or for 5 years whichever is earlier. He is expected to have atleast 5 years of services to ensure his involvement in the projects upto its completion stage or five year plan period so that his is fully responsible for implementation of the project. In only rare and exceptional circumstances if his transfer becomes inevitable, this is effected only with the approval of concerned Secretary .

e) Based on the report received from the Central Ministry and information available in the concerned Division, concerned Adviser in the Planning Commission would prepare a review paper identifying the constraints and remedial action required for consideration at the meeting to be taken by Member Secretary, Planning Commission. Secretaries of the concerned Ministries and, if required, Chief Secretaries of concerned States would participate in the meeting.

5.49 Monitoring of Centrally Sponsored Scheme in the social sector is done through the monitoring committees/cells set up under the scheme. The monitoring mechanism consists generally of an apex body/committee at the national level headed by the Minister or the Secretary of the Administrative Ministry/Department with representatives from other Ministries and bodies which are associated with the scheme. A similar type of mechanism has been established at the State level under the Chairmanship of Ministries/Secretaries of the Department concerned involving representatives of the Department /Institutions /bodies. At the district level, a coordinating-cum-monitoring mechanism has been established under the chairmanship of the District Collector with representatives from other Departments/Panchayat Raj Institutions and prominent user organisations and knowledgeable persons in the area.

5.50 In case of Externally Aided Projects, tripartite bodies/societies are formed to monitor the scheme at the project/district level involving representatives from official, professional and private organisations. At the national and state levels, advisory-cum-monitoring committee are set up for overall supervisions. The monitoring is done on a periodic basis (annual, mid-term appraisal and project ending) and the monitoring reports sent to the apex organisation as also to the donor agencies overseas.

5.51 In some schemes for instance, Basic Minimum Services (BMS), the monitoring is done jointly by the Central and State Governments concurrently. Ministry of Rural Development reviews/monitors the Integrated Rural Development Programme (IRDP) under the concurrent evaluation surveys, the latest being that of 1992-93. The Programme is also constantly reviewed at block/district/State/Central/ level through Coordination Committees.

5.52 While the monitoring mechanism envisaged for individual Centrally Sponsored Schemes at the time of approval of the scheme would continue, additionally the following measures have been proposed.

a) Planning Commission, in consultation with State Governments and concerned Central Ministries, would fix yearly physical targets corresponding to plan allocation and the concerned Central Ministry would take quarterly review meetings and submit the report to Planning Commission.

b) Based on the report referred to above and information available in the Subject Division, concerned Adviser in the Planning Commission would prepare a review paper identifying the constraints and remedial action required for consideration at the Quarterly Sectoral meeting to be taken by Member Secretary, Planning Commission. Secretaries of concerned Central Ministries and Chief Secretaries of concerned State would participate in the meetings.

5.53 Review of State Plan Scheme/Projects would be undertaken as a participatory exercise with the State Governments. For important programmes like BMS, Planning Commission in consultation with the State Governments and concerned Central Ministries would fix the yearly physical targets corresponding to Plan allocations. The concerned Central Ministries would take quarterly review meetings with concerned State Governments, preferably at the State capitals. Concerned Plan Adviser in the Planning Commission would be invited to these meetings and submit the report to Planning Commission.

5.54 Based on the review done by the Central Ministries and constraints identified, a background note would be prepared by the concerned State Plan Adviser for consideration at the meeting to be taken by Member Secretary, Planning Commission. Secretaries of concerned Ministries and Chief Secretaries of concerned States would participate in these meetings.

5.55 With a view to bringing transparency in Government functioning & introducing social audit, details of state-wise & year wise outlay & physical targets would be made available on Internet for information to all. Actual expenditure & achievements in physical terms would also be fed into the internet against the aforesaid targets. To start with physical & financial targets and actual achievements in respect of important programmes in the Social Sector being implemented by the State covering areas like health, primary education, safe drinking water, sanitation, housing, nutrition etc. would be fed into the Internet. Later the coverage would be expanded to include more sectors.

5.56 In addition, a Plan Speed Group has been constituted to speed up implementation of some sectoral projects/ programmes in the backward States so that the development gaps between the progressive and backward States are minimized within a reasonable time frame. The Group will consist of the following:

1. Adviser, Planning Commission in charge of the Sector.
2. Secretaries to the Government of India in the sectoral Ministries/Departments.
3. Secretaries of the backward States dealing with the sector.
4. Representatives from Ministry of Finance and other Central organizations in that sector.

5.57 The Plan Speed Group would look into the reasons for the slow progress of schemes in that particular sector in the backward states and take the following steps:-

a) analyse reasons for slow progress

b) suggest measures for giving a push to the schemes which are not moving at desired speed

c) remove obstacles to progress

d) identify the factors contributing to rapid progress in other States and transfer that experience to the backward States.

e) suggest changes in personnel, systemic practices, administrative procedures, etc. which will catalyze development.

5.58 If monitoring is to serve its purpose the constraints have got to be removed. Instead of routine and comprehensive monitoring, it may be useful if emphasis is placed on a few indicators of physical and financial progress that can help diagnose the problems in implementation. Whatever data are generated must be analysed with a problem solving perspective in mind. To ensure timely feedback of the monitored information, computerised information network is required and for retrieval of information a data bank must be built. Finally, an efficient monitoring system would be indispensable under decentralised planning. The transfer of Centrally Sponsored Schemes to States and the involvement of PRIs in the implementation of poverty alleviation, development, and the seven - point basic minimum services programmes would certainly require a strong monitoring system at the state district and taluk levels. Adequate resources would be earmarked for strengthening the M&E System during the Ninth Plan.

5.59 As noted earlier in the chapter, evaluation studies are a rich source for learning lessons from experience. If these lessons are put to practice, the design and implementation of development projects and programmes will considerably improve. The Programme Evaluation Organisation (Estd. in 1952) and the State Evaluation Organisations (SEOs) were established with this objective in mind. However, over time, these organisations have become some what ineffective grown weak. As in the case of monitoring agencies, the root cause of the gradual weakening of the evaluation orgnisations is primarily the non-adherence to the accountability criteria by planners and programme managers. As a result, the findings of evaluation studies do not get the necessary attention, and follow-up actions are often not taken. This general apathy has affected the health of these organisations adversely. Their professional staff strength has been declining, the professional competence of existing staff is not equal to the task they are required to perform and there is lack of infrastructural facilities. Because of these inadequacies, the evaluation organisations are unable to deliver quality and timely output to the users. There is no arrangement for training of their staff, as a result of which there is lack of awareness about the latest development relating to the methodological issues of evaluation. Inadequate infrastructure has further contributed to their ineffectiveness. The Evaluation Advisory Boards in many States are non-functional. Even where these exist, the members are drawn only from government agencies. These should be broad-based to include academics and social activists to ensure quality and reliability of the evaluation reports. In the context of decentralised planning, there is a greater need for a strong evaluation system. The District Planning Committees too will need feedback from evaluation. The evaluation organisations at the State level will need major expansions and adequate infrastructure to contribute towards planning and implementation of programmes at local levels. To avoid duplication of efforts and wastage of resources, the activities of the evaluation organisations at various levels need to be coordinated.

5.60 There is also an inadequate appreciation of the role of training in conducting evaluation studies. No mechanism exists at present to impart training in evaluation methods. There have been innovations in evaluation methods to provide quick and timely feedback to the users but these methods have hardly been used by the evaluation organisations in the country. Even the basic training on standard evaluation methods, sample design, techniques of data analysis etc. is not imparted to the staff. The existing training institutions like Indian Institute of Public Administration(IIPA), Institute of Applied Manpower Research (IAMR) and National Institute of Rural Development (NIRD) are at present not adequately equipped to respond to the training needs under decentralised planning. These need to be strengthened to meet the needs of planners, implementors, evaluation professionals and District Planning Committees.

5.61 It must be appreciated that ex-post and concurrent evaluation of programmes/schemes/projects is required for mid-course corrective actions and learning lessons. Evaluation studies should, therefore, be carried out by organisations which are independent and which possess the required skills and infrastructure. There is a general tendency to get the evaluation studies carried out by organisations which do not have adequate capacity to undertake diagnostic evaluation of government programmes.

5.62 For ensuring optimum use of the monitored information and findings of evaluation studies for efficiency improvement in implementation and design of projects/programmes, there is a need for reconsidering the linkage of evaluation organisations with the users of their findings. At present, these are attached to the Planning Commission and Departments. While planners need their services for improving design of projects/programmes, greater weightage needs to be given to follow-up actions on the findings of evaluation studies. To ensure those follow-up actions on the findings of evaluation studies are taken by the planners and implementing ministries/departments, the demand for evaluation studies must originate not only from the policy-making bodies but also from the public. This requires giving access to the findings of evaluation to the general public through press releases of main findings. The Planning Commission has started doing this. Another effective way of ensuring follow-up actions on the findings of evaluation studies is to involve the stakeholders of development programmes in the design and implementation of evaluation studies. The method of participatory evaluation has been experimented with and found very effective in some countries. The Programme Evaluation Organisation has been involving the implementing agencies and the beneficiaries themselves in the implementation of evaluation studies. This will further enhance the utility of such studies and hence ensure follow-up actions on the evaluation results.

CHAPTER 6

COOPERATIVE FEDERALISM AND DECENTRALISATION

COOPERATIVE FEDERALISM

Introduction

6.1 In a vast country like ours, the spirit of co-operative federalism should guide the relations between the Centre and the States on the one hand, among different States and between the States and the Panchayati Raj Institutions (PRIs) and the Urban Local Bodies (ULBs) on the other. The essence of co-operative federalism is that the Centre and the State Governments should be guided by the broader national concerns of using the available resources for the benefit of the people. Co-operative federalism encourages the Government at different levels to take advantage of a large national market, diverse and rich natural resources and the potential of human capabilities in all parts of the country and from all sections of the society for building a prosperous nation. Co-operative federalism makes it possible to raise all the available resources by the Government at different levels in a co-ordinated way and channel them for use for the common good of the people. This requires a harmonious relationship and co-operative spirit between the Centre and the States and among the States themselves. While a healthy competition among the States for evolving efficient and socially desirable policies and programmes is welcome, any competition which nullifies each other's advantages in development and erodes the resource base of the States should be avoided. Co-operative federalism is intended to ensure a minimum bundle of basic services and a nationally acceptable level of living for all the people of the country.

Centre-State Relations

6.2 The relations between the Centre and the States in political, economic, financial and administrative spheres have been periodically reviewed. The Administrative Reforms Commission and the Sarkaria Commission were appointed to review the whole gamut of relations between the Centre and the States and to recommend measures, including changes in the Constitutional provisions, to harmonise the relationship between the Centre and the States. While the Government has accepted and implemented several recommendations of the Administrative Reforms Commission, the recommendations of the Sarkaria Commission are under consideration in the Inter-State Council (ISC) which is trying to reach a consensus on various issues. Out of the 247 recommendations of the Sarkaria Commission, the Inter-State Council has taken a decision on 91 recommendations. These recommendations pertain to All India Services, Administrative Relations, Deployment of Union Armed Forces, Agriculture, Forest, Food, Civil Supplies, Mines & Minerals, Trade, Commerce, Mass Media etc. The re-activisation of ISC has opened a new chapter in the Centre-State relations and provided a useful forum for building a common national approach on various issues.

Formulation and Implementation of Plans

6.3 In the sphere of planning, the balance of decision making process tilted more towards the Centre during the early years of planning. This was probably inevitable as there was lack of adequate experience in the formulation and the implementation of Plan programmes at the State level. No doubt, planning from the grass-roots level has been emphasised from the very beginning, but its implementation has been sporadic and tardy. Even so, the

Planning Commission encouraged District Planning Committees (DPCs) and taluk level planning process from the Fourth Plan. Subsequently, a significant step was taken through the enactment of the 73rd and the 74th Amendments to the Constitution in 1993, which conferred a Constitutional status not only on the PRIs and the ULBs but also on the DPCs. It is now fully realised that the spirit of co-operative federalism should get reflected in the strong encouragement given to participative planning processes. In other words, the Central Government, the State Governments, the PRIs, the ULBs, and the non-Governmental organisations, the voluntary action groups and most of all, the people at the grass-roots have to be involved in the process of formulation and implementation of the Plans. It is realised that the process of democratic decentralisation can have true meaning only when sufficient autonomy and freedom is available to the States as well as to the PRIs and the ULBs in the formulation and the implementation of the Plans. At the same time, autonomy pre-supposes maturity in decision making and responsibility in the use of national resources. Decentralisation of the process of formulation and implementation should, therefore, ensure accountability.

6.4 Various steps have been taken in the past to improve the interaction with the States in the process of formulating and implementing the Five Year Plans. The National Development Council (NDC), which approves and reviews the Five Year Plans is chaired by the Prime Minister and includes Union Ministers and the Chief Ministers of all the States. In addition to this, periodic conferences of State Chief Ministers on major specific policy issues are held not only to elicit their opinion but also to take them into confidence in regard to the thinking of the Central Government. Over and above these, conferences of State Ministers of various development departments are also held to monitor the progress of Plan schemes and to find solutions to the problems faced by the State Governments in the course of implementing the Plan strategies, programmes and schemes. These conferences and meetings help resolve the day-to-day problems faced by the implementing agencies and the delivery system. At the administrative level, the secretariat of the Planning Commission interacts regularly with the administrative departments of the State Governments on all matters relating to the formulation and the implementation of the Five Year Plans. Thus, the regular and periodic interactions with the State Governments have helped in sorting out various policy issues and chalking out mutually agreed policies and programmes for achieving the goals of the Five Year Plans. There have also been frequent conferences and meetings of State Chief Ministers and Ministers at the zonal level to sort out the administrative problems relating to mobilisation of resources, implementation of Plan programmes and even maintaining law and order. In a vast country like ours, such periodical conferences and meetings of the State Chief Ministers and Ministers will go a long way in resolving certain unique problems relevant to the particular zones.

6.5 Similarly, at the State level, the State Governments should develop machanisms and forums for interacting with the elected representatives of the PRIs and the ULBs to resolve the issues relating to the formulation and the implementation of district and grass-root level development programmes. In some States like Karnataka, a State Development Council has been constituted, which is presided over by the Chief Minister and attended by the Presidents of Zilla Panchayats and Municipal Presidents. This is a replica of the NDC, which is worth emulation in other States also. There is also a need for a horizontal consultation process between the PRIs and the ULBs to learn from each other's experiences and to resolve day-to-day problems, if any. During the Ninth Five Year Plan such initiatives will be further encouraged and supported

Share of States in Public Sector Plan Outlay

6.6 An important area of concern in the sphere of planning is the decreasing share of the States in the overall public sector Plan outlay. The share of the States in the actual public sector expenditure is going down continuously from the Fifth Plan onwards, so much so that while the share of the States was about 50% in the Fifth Plan it came down to almost 37% in the Eighth Plan. Further, the share of the States in terms of total public sector expenditure has been lower than the originally envisaged outlay in successive Five Year Plans since the Sixth Plan. In the Eighth Plan, while the share of the States in the total public sector outlay was envisaged to be 41.46%, in actual realisation it is likely to be of the order of 37 percent. The main reason for the declining share of the States has been the shortfall in the mobilisation of resources by the State Governments. Besides others, the non achievement of the States' envisaged outlays has adverse implications for sectors like Agriculture, Education, Health and other Social and Basic Minimum Services.

6.7 The States' own resources (SOR) for their Eighth Plan were projected at Rs.1,01,485 crore. As against this, the expected realisation would be only Rs.70,335 crore, i.e., 69.3 percent of the projected SOR. The major shortfall was in respect of the Balance from Current Revenue (BCR) and internal contributions of public enterprises of the States. The BCR was projected at Rs.12,985 crore, while the expected realisation is (-) Rs.2,009 crore only, showing a shortfall of Rs.14,994 crore. An important reason for such a severe shortfall was the failure of many State Governments to raise the budgetary resources through additional revenue raising measures, increase in the non-Plan revenue expenditure on the target group oriented programmes, effect of the adoption of Central Pay scales and Central Dearness Allowances by many State Governments. The financially unviable operations of the State Electricity Boards, the State Road Transport Corporations and other State enterprises in most of the States had an adverse impact on the BCR of the State Governments, as these resulted in higher subsidies and grants to these enterprises, in addition to substantial loss of revenue in terms of interest and dividends, while States were forced to pay interest on their loans. The unwillingness of most of the States to revise the irrigation rates at least to meet the O&M expenditure was another reason for the shortfall in the States own resources. The most worrisome aspect was the increasing number of States providing free electricity to the farmers at a time when the country is facing a severe power shortage.

6.8 The internal resources of the State public sector enterprises was projected at Rs.4,000 crore for the Eighth Plan but the realisation is expected to be around (-) Rs.2,723 crore showing a deterioration in resources to the extent of Rs.6,723 crore. The shortfall in this was mainly due to the financially unviable operations of the State Electricity Boards and State Road Transport Corporations. Had the States implemented the agreed decision to levy a minimum of 50 paise tariff per unit of energy supplied to the agricultural sector and contained the T&D losses, thefts and arrears to a reasonable level, the SEBs would have been able to generate resources as committed in the Plan. The losses of the State Transport Corporations have been attributed mainly to social responsibilities undertaken by them to ply buses on uneconomic routes and providing concessions to a large number of weaker sections and students.

6.9 The Planning Commission has been emphasising that the States should plug the drain of resources in the operation of State level public enterprises, especially in the case of State Electricity Boards and State Road Transport Corporations. These include restructuring the State Electricity Boards, modernisation and other efficiency improvement as well as tariff revisions to make these Boards financially viable. The State Electricity Regulatory

Commissions should also be set up without delay. The State Road Transport Corporations also should be made viable through proper fare revisions and improvements in the efficiency norms. They should be given support for strengthening their equity base. Further, the Planning Commission has emphasised the need for improving the Balance from Current Revenue (BCR) of the States through specific budgetary measures and containing the growth of non-Plan revenue expenditure. All these measures will improve the share of SOR which will enable the States to increase the size of their public sector Plan outlay. On its part the Government of India should help by providing a suitable macro economic framework. Efforts are also needed to build up a consensus on various issues like recovery of user charges, etc. to facilitate decisions at the State level.

Transfer of Centrally Sponsored Schemes

6.10 Another issue which has been cropping up from time to time in the relations between the Centre and the States pertains to the Centrally Sponsored Schemes (CSS). The CSS are being implemented right from the beginning of the First Plan. When they were conceived, they were welcomed as they were intended to serve certain specific national goals. One classic example of CSS, which has made a far reaching impact, has been the introduction of HYV seed. This ushered in the Green Revolution in the country. But the number of CSS has grown over the years and they have made deep inroads even into the spheres falling within the domain of the States. There have been efforts from time to time for transferring the CSS to the States along with the corresponding funds, but not to much avail. A review undertaken by the Planning Commission showed that in 1995-96 there were 182 CSS under implementation with the Central funding of the order of Rs.16,000 crore. This level of Central funding is even more than the normal Plan assistance given to the States for the State Plans. In principle, the CSS should be confined to schemes of an inter-State character, matters impinging on national security, selected national priorities where Central supervision is essential for effective implementation and multi-State externally financed projects where the Central coordination is necessary for operational reasons. Except for such schemes, all other schemes should be transferred to the States along with the corresponding funds. A detailed exercise has been done by the Planning Commission to identify the schemes which could be transferred to the States in the light of the above approach.

6.11 A final decision in the matter would be taken after ascertaining the views of the State Governments/Central Ministries with the approval of the NDC.

Inter-se Allocation of Plan Assistance

6.12 Since 1969, the Central assistance for the State Plans has been distributed to the States as per the Gadgil Formula. Some marginal changes have been made in this formula from time to time, but the emphasis has always been on channelising larger Central assistance to the backward States. The formula was last amended in 1991-92. As per the existing formula, after setting apart the funds required for Externally Aided Projects (EAPs) and reasonable amounts for Special Area Programmes, 30% of the balance is earmarked for ten Special Category States. The balance amount is distributed among Non-Special Category States on the basis of following criteria and weightage :

Criteria		Weightage
Population (1971)	-	60%
Per Capita Income	-	25%
Performance Criteria	-	7.5%
Special Problems	-	7.5%

6.13 During the Plan discussions, various Chief Ministers have asked for a revision of this formula for allocation of Central assistance to the State Plans so as to change both the criteria and the relative weights. While the backward States have argued for higher weightage to be given to backwardness, (equity), the better-off States have argued that they should be rewarded for maintaining financial discipline and achieving better productivity, (efficiency). No formula can satisfy the demands of all the States. The formula for the allocation of Central assistance has to be such that it helps in a balanced regional development on the one hand and encourages financial discipline and better economic performance on the other. The solution to this contentious problem has to be found by a consensus. The views of the State Governments have been sought regarding the revision of the formula. The NDC will have to take a final view on this matter.

Nature of Central Assistance

6.14 Besides the issue of inter-se distribution of Central assistance among the States, the nature of Central assistance, that is, the grant-loan component, has also been raised from time to time. The States argue that when 30% of the grant component was introduced in 1969, the revenue component of the States' Plans was around 30 percent. Subsequently, it has gone on increasing, reaching upto 45 percent. They maintain that this justifies the increase in the grant component of Central assistance for State Plans under Gadgil Formula. Further, the States argue that among other reasons, the 70% loan component in the Central assistance for the States Plans has been a major reason for their increasing debt burden. They argue that their debt burden has been increasing so much so that in some cases there is net reverse flow of funds. They have, therefore, been asking for an increase in the proportion of the grant component in the Central assistance. The Special Category States have demanded Central assistance to be given as 100 per cent grant. The Sarkaria Commission had examined this issue and recommended different patterns of loan-grant assistance, depending upon the paying capacity of the States. The Finance Commissions in the past had also looked into the debt position of the States and recommended a scheme for general debt relief for all States, linked to fiscal performance and specific relief for States with high fiscal stress, the Special Category States and the States with debt problems warranting special attention. It has to be recognised that any change in the grant-loan component of the Central assistance has implications for the resource position of the Central Government. The NDC may have to decide on the issue of grant-loan proportion in the Central assistance while considering the question of inter-se distribution of the Central assistance among the States.

Basic Minimum Services (BMS) Approach

6.15 A special focus on meeting the minimum needs of the people has been given since the Fifth Five Year Plan. However, the minimum needs programme, which was formulated and implemented for this purpose, did not make much headway, partly because of allocation of inadequate funds. Because of the persisting gaps in BMS prevailing particularly in rural areas, it was decided to give a big push to this programme from 1996-97. Accordingly, the Central Government has made an allocation of a special Central assistance for seven Basic Minimum Services (BMS). Instead of being routed through the Central Ministries / Departments, this special assistance has been given to the States as additional Central assistance towards their Plan. With a view to ensuring that the special Central assistance for BMS is indeed an additionality, it has been emphasised to the States that this assistance should not be made a substitute for the normal provisions which were being made by the States for the BMS. By mutual consensus, it has also been agreed that the States should provide at least 15% of the special Central assistance for BMS as their share over and above their normal provisions for these schemes. While the States have been allowed flexibility in deciding their priorities among various components of Basic Minimum Services, the consensus at the Chief Ministers' Conference was to give the highest priority to the three services viz., Primary Health, Primary Education and Drinking Water for universal coverage. Only when the prescribed norms for these services have been achieved, the States could choose from other BMS for their attention. However, some States have deviated from the decisions of the Chief Ministers Conference and allocated huge funds for services other than the three which were to be given the highest priority. Another problem that has been encountered is that some States have failed to make adequate provisions for the BMS as per the agreed formula. Considering the difficulties of the Special Category States in mobilising resources, they have been exempted from providing 15 per cent contribution. To ensure additionality of Additional Central Assistance (ACA) over normal provisions of the States, the release of ACA will have to be linked to suitable provisions being made to BMS as per the decisions already taken. From the Annual Plan 1997-98 onwards the allocation of Central assistance for BMS has been made on the basis of identified gaps in providing these BMS. This process will continue during the Ninth Plan period and larger amounts would be made available to the States for meeting the requirements of BMS so that the basic minimum needs of the people are met by a target date. The approach adopted in respect of BMS has also been followed for the development of urban slums. The same model can be replicated in respect of other programmes, as may be found feasible, in future. Since there are backward regions within the States, it is expected that while making allocations, the States would also keep in view the requirements of the backward areas within the State so that the basic minimum needs of the people in these areas are also catered to.

Procedure of Plan Formulation

6.16 The States should have full autonomy and freedom to draw up their Plans in accordance with the national priorities. There are, however, still some areas where the approval of Central agencies are required for the State projects, specially in the areas of power and irrigation projects as well as environmental clearances. Often, these clearances take long time leading to unnecessary delays and consequent time and cost overruns of the projects. The endeavour should be to delegate powers to the extent possible to the State Governments and also to ensure time-bound clearances in cases where the projects would need to be cleared at the Central level. The Planning Commission has already examined the position pertaining to the approval required for irrigation and power projects. As regards the power projects, investment approval was earlier necessary for all projects costing Rs.100 crore or more. After reviewing the position, a decision has been taken that power generation projects upto 100 MW (except where inter-State issues are involved) would not require clearances from the Planning Commission. Transmission schemes of only 220 KV and above are required to be referred to the

Planning Commission. All renovation and modernisation schemes need not be referred to the Planning Commission. Similarly, guidelines have been issued that medium irrigation projects need not come for the approval of the Planning Commission (unless where inter-State angle is involved).

6.17 Efforts have been initiated to involve the State Governments more closely in the formulation of Five Year Plans. The occasion of the Annual Plan discussion for 1996-97 was utilised to ascertain the views of the State Governments relating to the objectives, approaches, priorities and strategies for the Ninth Plan. These views were taken into consideration while preparing the Approach Paper to the Ninth Plan which was subsequently endorsed by the NDC. The State Governments are also represented on various Steering Committees and Working Groups which are set up by the Planning Commission for various sectors to review the progress made in the previous Plans and to decide the prospects and strategies for different sectors. The reports of these Steering Committees and Working Groups are a valuable input to the Planning Commission in the formulation of Five Year Plans.

6.18 Considerable thought has been given to the issue as to how the State Governments can have greater autonomy in formulating their Plans within the national objectives and priorities as reflected in the Five Year Plan Document. The procedure for State Plan formulation was amended from the Annual Plan 1993-94. As per the procedure prior to 1993-94, the sectoral Working Groups set up in the Planning Commission and having representation from the State Governments used to project the requirements of different sectors which invariably totalled up to a much larger Plan size than was feasible keeping in view the availability of resources. The Plan size used to be fixed at the meetings between the Deputy Chairman, Planning Commission and the State Chief Ministers, after the sectoral Working Groups had projected their demands. Since the Plan size was not able to accommodate the projected requirements of different sectors, there used to be arbitrary cuts while fixing the final sectoral allocations. Since 1993-94, the procedure has been altered and the meeting between the Deputy Chairman, Planning Commission and the State Chief Ministers is organised to finalise the Plan size before working out the sectoral allocations within the Plan size so determined. Many a time, the States show over-optimism regarding raising their own resources with a view to getting a higher Plan size fixed, as compared to the previous year even though the achievement in the previous year may be much less than the originally fixed Plan size. Fixation of unrealistic Plan size which does not materialise, has affected the credibility of the whole planning exercise. The Planning Commission would, therefore, in future indicate the level of Central assistance under the various heads to the State Governments and the States would decide their Plan size taking into account the Central assistance and their own resources and would seek legislative approval for both the Plan outlay as well as the additional measures for resource mobilisation. This system will encourage better accountability and commitment of the State Governments to achieve the Plan size as decided by them.

6.19 The interaction of the Planning Commission with the State Governments is at various levels in the process of formulation of Plans. An exercise is done by the financial resources Working Group to assess the likely availability of resources. Another exercise is done regarding the flow of assistance under externally aided projects. These interactions have proved very useful because while assessing the resources available under various heads, it is possible to assess the contribution of various items including the State public sector undertakings. The achievement in respect of tax and non tax revenues, vis-a-vis the potential, recovery of user charges, growth of non-Plan expenditure are also gone through in detail. These have not only provided crucial insight to the Planning Commission into various aspects of the functioning of the States' economy, but the interactions are useful for the States also because various deficiencies in the functioning of State PSU's or other sectors of the economy come to light. The position of different States in respect of various items facilitate comparisons and can encourage action in various areas.

6.20 The interactions with the State Chief Ministers at the level of Deputy Chairman have also proved to be mutually beneficial. The focus of these meetings has been changed from fixing the Plan size to discussing various sectoral issues, the performance of the States' economy, intra-State economic disparities, environmental status and remedial steps which may be necessary to improve the shortcomings. Any problems which the State may have with the Central Government are also projected at these meetings. Model practices adopted in various States in different schemes/projects are also shared at these meetings so as to learn useful lessons.

6.21 Another level of interaction with the State Governments is through the mechanism of the Working Groups, which are set up in the Planning Commission to decide the sectoral allocations within the overall Plan size fixed at the level of Deputy Chairman and Chief Ministers. These Working Groups have, in the past, not only been utilised to finalise the sectoral allocations, but have also provided an important forum of mutual exchange of views regarding the performance in the previous years, the strategies for development in future and any problem areas. Useful data is also exchanged at these Working Group meetings pertaining to various aspects. These Working Group discussions would, therefore, continue, albeit the number of suchWorking Groups may be reduced to a minimum.

6.22 It is essential for the Planning Commission to know the detailed sectoral Plans of the States at least in respect of the sectors crucial for the national economy like power, irrigation, communication, other infrastructural sectors, etc. so that the growth and strategies at the national level can be worked out. While working out the detailed Five Year Sectoral Plans, the policy perspective for private sector participation and the investment expected have to be considered. Once the Five Year Plan outlays have been finalised, the annual phasing of sectoral /sub sectoral allocations can be decided by the State Governments keeping in view the approved Five Year Plan outlays, national priorities and their own needs. A detailed examination of these sectoral allocations at the Planning Commission level is not necessary. The Annual Plan documents prepared by the States would be examined in the Planning Commission to ensure their broad adherence to the Five Year Plans.

Earmarking of Outlays

6.23 An area which has often been mentioned as affecting the autonomy of States in allocating resources among different sectors within the overall Plan size pertains to earmarking of outlays for particular sectors/schemes/projects. Upto 1969, the Central assistance used to be given for individual schemes/projects. On the recommendation of the NDC it was, however, decided that the Central assistance may be given in block form. However, to ensure compliance with the national priorities the system of earmarking of outlays for crucial sectors/schemes was initiated. Presently, the earmarking is restricted to 50% of the Plan outlay for Non-Special Category States while for Special Category States it can be higher. Under the existing guidelines the earmarking is being followed for the following :

i) Selected ongoing projects for power and irrigation;

ii) Externally aided projects;

iii) Schemes in one or two sectors which are of importance to the State's economy And fall priority areas of Five Year Plans;

iv) Basic Minimum Services.

6.24 The areas and the actual projects to be earmarked are settled with the State Government officials during the Working Group discussions. The earmarking has helped in ensuring minimum provisions for important schemes/projects in accordance with the national priorities. The system would continue even though a flexible approach would be adopted and earmarking would be restricted to the minimum extent necessary.

Review and Monitoring

6.25 Under the present system of review and monitoring, a brief general review of the performance of the States, specially in financial terms, is made at the meetings at the level of Deputy Chairman and the Chief Ministers. A more detailed exercise is done through the mechanism of Working Groups set up under the auspices of Planning Commission. The Working Groups set up for major sectors meet to discuss the performance of the previous year and the proposals of the following year including the need for earmarking for particular schemes / sectors on one day for each State. However, this exercise is done once a year and there is no mechanism for getting regular feedback from the States regarding the implementation of the various Plan schemes.

6.26 In order to be effective, the review and monitoring of the State Plans has to be a participative exercise with the State Governments. Further, these detailed exercises for review and monitoring may not be held only at Delhi, but in various State capitals to the extent feasible. Action in this direction has already been initiated and meetings at the level of Deputy Chairman in the State capitals have already been started. More such meetings would be organised in the State capitals.

Equity-Promoting, Holistic and Coordinating Role of Central Planning

6.27 While the question of greater autonomy to the States in the process of development planning is considered, the holistic, equity-promoting and coordinating role of central planning cannot be over-looked. The role of central planning has to be seen not as a constraint to the State's autonomy but as a necessary complement to decentralised, flexible and cooperative mode of development planning. The equity- promoting role demands that greater efforts are made to remove the gaps in the provision of BMS, the level of development of rural agricultural hinterland and infrastructure so that no region or sub-region and no group or groups of people remain deprived of the fruits of development and every region and all people at least reach a minimum standard of living. The equity-promoting role of central planning assumes added importance in the wake of the emerging policy environment in the country as well as globally. With the opening up of the economy and removal of controls, the market forces have been unleashed, which may have a tendency to exacerbate the disparities among groups of people and regions which can be further widened because of the operation of large global players. As the economy gets integrated more and more with the global economy, the Centre may be required to play a stronger equity-promoting role and to secure sufficient space for all the federal units to work out their own strategies of development without being overtaken by global regimes or forces. The Centre would also be required to ensure suitable macro economic policy framework for the growth of economy for meeting the aspirations of the people. A judicious balance on the part of the Centre between decentralisation and autonomy on the one hand and intervention to protect the interests of the weak and to provide space for autonomous decision making on the other is required to sustain the faith of the States in the philosophy of co-operative federalism.

Mobilisation and Sharing of Resources

6.28 The sphere of financial relations between the Centre and the States has been the most difficult one and despite continuous efforts, unanimity has not been reached on various issues involved. The issues, which have a bearing on resource availability, need careful analysis and discussion. The Sarkaria Commission had paid enough attention to the issue of financial relations between the Centre and the States and had made a large number of recommendations in this regard. These are being considered by the Inter-State Council and its Standing Committee.

6.29 Essentially, the problem of resource availability, which affects both the Centre and the States, can be overcome only if there are greater efforts to tap the resource potential both at the level of Central Government as well as at the State Governments. Unless the resource availability of the Central Government improves, it may not be possible to channelise a larger quantum of Central assistance or to increase the grant component to the States. The Government of India has recently agreed to a share of 29% to the States in the total gross revenues from all the Central taxes with effect from April, 1996. This will increase the flow of funds in absolute terms on non-Plan account. With this increased share of the States in the total devolution, the States would be in a position to benefit from the revenue buoyancy from all the taxes levied by the Centre. While the share of 29% of the net yield from all Central taxes has not satisfied all the States, the decision itself marks a watershed in the approach to the sharing of tax revenues of the Centre, because the sharing which was so far limited to two taxes, viz., Excise and Income Tax, will now include all Central taxes. In other words, the divisible pool of Central taxes has been broadened by implementing the Alternative Scheme of Devolution recommended by the Tenth Finance Commission.

6.30 Notwithstanding such a widening of the divisible pool of Central taxes, the financial needs of the States will increase during the Ninth Plan because of the large gaps which remain in the field of BMS and infrastructure. Therefore, the States need to raise more of their own resources to meet such increased outlay. In order to improve the resources of the States and to enable them to raise the required level of resources for Plan purposes, the Centre has to play some supportive role in certain specific areas. These areas relate to statutory devolution of funds from the Centre to the States through Finance Commission, discretionary grants and loans through Planning Commission, revision of royalty rates once in two years and application of these rates on ad valorem basis, helping the States to move towards a uniform tax structure and Modvat with the possibility of imposing Consignment Tax in the interim period. The Central Government has already constituted the Central Electricity Regulatory Commission under the Electricity Regulatory Commission Act, 1998. Some of the States have also set up their own State Electricity Regulatory Commissions which, inter alia, provide for unbundling and corporatisation of State Electricity Boards, fixation of electricity tariff and introducing competition. Many other States are in the process of setting up their own Electricity Regulatory Commissions in due course. All these steps are expected to improve the financial health of the State Electricity Boards which would result in increased size of State Sector Plan Outlay.

Inter-State Relations

6.31 Harmonious and cooperative relations between different States are as important as that between the Centre and the States for the healthy functioning of our federation. Various problems have been cropping up in inter-State relations from time to time. On the one hand, there are problems like increasing competition among the States and on the other, there are disputes over sharing of river water etc.

6.32 With the dismantling of controls and greater freedom for the location of industries, the competition among the States for attracting industries and other economic activities by offering incentives has intensified. While a healthy competition among the States for providing better and efficient services is to be welcomed, the practice of granting tax rebates and subsidies need to be seen in the right perspective of whether they lead to national welfare. Instances are not lacking where the States have joined a sort of a race in granting sales tax and other rebates for attracting new industrial units. This has affected the resource position of the concerned States without commensurate benefits, because in so far as the same concessions are allowed by a number of States, these concessions do not remain the main guiding factor for the location of an industry and other important considerations like efficiency of services and infrastructure facilities may become more important.

6.33 Similarly, often there is a tendency on the part of the States to allow tariff concessions to various sections. Power tariff is a case in point and many States have been supplying power to various sectors at a price much lower than the cost of generation. A national consensus had evolved at the Chief Minister's Conference for fixing the minimum tariff for agriculture and to move over to a regime of fixing tariffs for recovering the costs. Some States have, however, gone against this consensus and allowed free electricity to agriculture sector. This has not only put the financial condition of the State Electricity Boards in a precarious position but also created problems for the neighbouring States where vociferous demands have been made for similar concessions. Populist measures have a tendency to spread because once they are granted by one State, pressure builds up in the neighbouring States for allowing the same concessions. Similar is the position regarding the administrative charges for other services like irrigation and water. Despite various Commissions recommending minimum rates for such services, so that at least O & M costs are recovered, many States have not implemented these recommendations, depriving them of an important source of revenue and putting their financial position under great strain. It is essential to have a national consensus regarding such issues like harmonisation of tax structure, minimum tariff for certain services, cap on the level of subsidies and facilitation of inter-State trade flows. It is necessary that all the States should fall in line for implementing mutually beneficial policies.

6.34 Another important problem that keeps cropping up time and again is in respect of share in natural resources like river waters which has given rise to severe tensions and prevented optimal utilisation of such resources. There is a need for evolving a national policy on this issue and for putting in place a suitable mechanism for resolving such disputes.

DECENTRALISATION AND PANCHAYATI RAJ

6.35 India has a long history of village panchayats. The framers of the Constitution were aware of this Indian heritage in village panchayat system. Accordingly, they provided for Village Panchayats under the Directive Principles of the Constitution. Thus, Article 40 of the Constitution requires that "the State shall take steps to organise village panchayats and endow them with such power and authority as may be necessary to enable them to function as units of self-government".

6.36 Many State governments attempted to translate this Directive Principle into practice by enacting necessary legislation and creating Panchayati Raj Institutions (PRIs) but with limited success; such efforts were confined to selected States. Against this background the need for providing a firm Constitutional status for PRIs became necessary. And after a great deal of efforts the 73rd and 74th Amendments to the Constitution have been passed which provide Constitutional status to the PRIs and Urban Local Bodies (ULBs). As per the 73rd Amendment, the PRIs are the local level institutions comprising of elected representatives entrusted with the responsibility of identifying, formulating, implementing and monitoring the local level developmental and welfare programmes. The Constitutional provisions expect the State governments to enact necessary legislation not only to create PRIs but also to endow them with such financial powers and functional responsibilities as they may deem appropriate. They are also required to appoint a State Finance Commission (SFC) to recommend adequate devolution from the State Governments to PRIs and ULBs. The State governments are also expected to create District Planning Committees (DPCs) in each district to formulate local level development plans for both rural and urban areas.

6.37 The First Plan recognised the need for a disaggregated planning exercise through a process of democratic decentralisation incorporating the idea of a village plan and of District Development Councils. The Second Plan made some headway with the emergence of Community Development and the National Extension Programme. However, micro-level planning did not go beyond identification of activities, as neither village nor district plans were prepared. The Balwant Rai Mehta Committee (1957) recommended the block as the unit of planning with the Panchayat Samitis as the executive body for planning. It also suggested the setting up of Village Panchayats, Taluk Development Boards and Zilla Parishads. The government accepted these recommendations and the State government enacted appropriate legislations to usher in a new era of PRIs. However, the PRIs worked well only in a few States like Gujarat, Maharashtra, Karnataka and West Bengal.

6.38 The Third Plan reemphasized decentralised planning in many sectors, but the absence of a planning machinery resulted in poor planning. During the Fourth Plan the emphasis shifted towards district planning. The Planning Commission also took interest in helping the States in initiating decentralised planning. Accordingly a scheme of strengthening regional/district planning units was initiated by the Planning Commission. The concept of an integrated area approach was adopted and several States did prepare district plans. But once again the success was limited to three or four States. Two other initiatives were taken -- the 'Lead Bank' scheme was introduced for preparation of 'district credit plans' and agencies for specific programmes like Command Area Development, Small Farmer Development and the development of Marginal Farmers and Agricultural labourers were set up. However in the Fourth and Fifth Plans little progress was made towards decentralising the planning process. In 1977 the Ashok Mehta Committee was set up to examine the functioning of PRIs and to suggest measures for making decentralised planning effective. The Sixth, Seventh and Eighth Plans reemphasised district planning within a multi-level planning framework. However, proper administrative arrangements were not made to facilitate this process; there was also a lack of technical expertise and an absence of financial devolution, both of which acted as impediments in the process of democratic decentralisation.

6.39 As we enter the Ninth Plan, democratic decentralisation has been given a boost with the enactment of the 73rd and 74th Constitutional Amendment Acts. Consequent to this, most of the State Governments/UTs have enacted enabling legislations, providing for elected bodies at the village, inter-mediate (Taluka) and district levels with adequate representation from the weaker sections and of women. (In case of some UTs only a two tier structure has been recommended) Most of the States have constituted State Election Commissions and State Finance Commissions (SFCs) as stipulated. Almost all the States have constituted panchayati raj bodies as per the new provisions with the exception of Bihar, where elections have not been held so far, and Goa, where the Zilla Parishad level panchayats have to be constituted. Elections are also due in the UT of Pondicherry.

6.40 Today, PRIs are Constitutional entities. The State Governments have to endow these panchayats with powers and authority necessary to enable them to function as institutions of local self-government with the responsibility of preparing plans for socio-economic development and for implementing them. The Eleventh Schedule has identified 29 subjects which have to be brought under the purview of the panchayats. However, in order that the PRIs are able to undertake the responsibility entrusted to them they require both financial and functional autonomy. It is necessary not only to ensure flow of funds to them from the Consolidated Funds of the States and from the Central Government via the Centrally-Sponsored Schemes (CSS), but also to give them independent revenue raising powers of their own. The SFCs were set up with this objective of making specific recommendations for making the panchayats financially viable.In many States, the SFCs have submitted their reports and in some of the States their recommendations have been accepted. However, in some States the recommendations of the SFCs have either not been received at all or they are still under the consideration of the State Governments. It is hoped that all SFCs submit their recommendations expeditiously and the State Governments will initiate appropriate action to devolve adequate funds to the PRIs by the end of the current year

6.41 While resource mobilisation by PRIs is generally limited, it is imperative to provide PRIs with revenue-raising powers of their own in order to reduce their excessive dependence on the State and Central Governments. There are taxes which can be collected by local bodies. By way of illustration, in case of West Bengal the SFC has recommended that a substantial part of the plan expenditure be given to the districts in the form of untied funds; for this a formula has been developed by the SFC to work out the entitlement' of each local body. In addition, grants for specific schemes entrusted to the panchayats will be given to them by the State Government. Funds from Centrally Sponsored Schemes will also be in the form of a grant but those would not be a part of the untied pool. Sixteen per cent of the net proceeds of all taxes collected by the State in a year will be transferred to local bodies. Certain taxes like entertainment tax will be handed over to them. Irrigation rates would be collected by Zilla Parishads and resources generated in regulated markets will be brought within the purview of District Planning Committees (DPCs). Further, the three tiers of panchayats have been empowered to raise taxes, levies and tolls on a variety of activities. Incentive schemes have been suggested to encourage benefits to increase their incomes. These are some of the ways in which the resource position of panchayats would be strengthened. In Kerala too untied funds have been provided to each gram panchayat/ block panchayat and municipalities for the first time. Here too certain taxes have been assigned to village transferred the accrual of income from minor minerals, fisheries etc. to the panchayats. Untied grants to panchayats by sharing of tax and non-tax revenues and the flow of programme funds to the panchayats has been mandated. Various forms of cesses on land revenues, agriculture and other fees have also been earmarked for PRIs.

6.42 In other words, it is imperative that the PRIs raise their own resources. But until such time that they are financially dependent on funds from the State government, these should be in the form of untied funds. The State budgets should specify the amount earmarked for district sector plan under panchayati raj as also the distribution of this among the three tiers. It is suggested that 30 - 40% of a State's plan be devolved on local bodies.

6.43 In the case of urban local bodies too they would be permitted to levy their own taxes and cesses at the local level which could include professional tax, property tax, entertainment tax and motor vehicle tax etc. In addition, there is considerable scope for them to levy user charges and licence fees. Wherever feasible elected bodies should be allowed to borrow for productive infrastructure projects subject to credit worthiness. Urban local bodies may be allowed to raise loan funds through bonds for financially viable economic activities like water supply, sewerage system etc.

6.44 Based on the recommendations of the Tenth Finance Commission these elected local bodies both rural and urban would receive Rs.5381 crore as grant-in-aid to supplement their resources over a four year period from 1996-97. When the Eleventh Finance Commission considers this issue the State Governments may ask for more resources provided that their elected bodies are by then functioning well and are able to plan and implement various development works entrusted to them.

6.45 In so far as Centrally-Sponsored Schemes are concerned, it is proposed that in the case of selected schemes funds flow directly to PRIs. In case of such schemes, if they are transferred to States, funds would be earmarked for elected local bodies. Furthermore, States would be required to earmark resources out of the total plan of the States for decentralised planning.

6.46 Along with financial autonomy, functional autonomy of the PRIs must also be clearly delineated. Even in respect of the 29 subjects identified in the Eleventh Schedule it is necessary for the State governments to clearly identify what would be done by the three tiers of panchayats at their level. Detailed instructions and guidelines would have to be issued by the concerned departments to their field officers in this regard as it has been done in Karnataka. Furthermore, departmental functionaries required to implement the programmes at the panchayat level must be placed under their overall supervision and control. In some States like Gujarat, Maharashtra, Karnataka, Kerala, Tripura and West Bengal detailed instructions have already been issued and in several cases departmental functionaries have been placed with the panchayats. It must be reiterated here that under no circumstances is it necessary to create new administrative structures and hire staff for undertaking the planning and implementation of these works. Only redeployment of the existing staff in various departments is required. More recently in Madhya Pradesh 18 Departments have been transferred to the PRIs at various levels.

6.47 As has already been stated one of the major tasks of the PRIs is the preparation of plans for fostering economic development and social justice. The district development plans would have to be prepared through the institution of the DPCs which are mandated. However, in many States the DPCs have not been set up so far. This should receive top priority and DPCs should be in position to formulate local level plans before the end of the current year. It is expected that Gram Sabha would list out priorities and assist in the selection of beneficiaries for various programmes and schemes. In this way, the aspirations of the people would be articulated. Thereafter, village level plans will have to be prepared which would be incorporated in the intermediate plans and finally merged into a district plan. Moreover, broad principles have to be laid down for assigning the functions of each of the three tiers; this should be based on the rule that what can be done at the lower level should be done at that level and not at the higher level. Some States have already identified the works/schemes of sectoral/departments to be undertaken at the different levels. For instance, in the case of Andhra Pradesh maintenance of community assets, poverty alleviation programmes, sanitation, markets, internal roads have been devolved at the gram panchayat level. The intermediate level would be responsible for block component of Primary Education, Women and Child Welfare and Jawahar Rozgar Yojana. At the Zilla Parishad level drinking water, rural roads, secondary education and the district component of JRY would be implemented. The DPCs should not only consolidate plans from below but should take decisions on the development of the district within the given resource potential and identified needs and constraints.

6.48 A core planning team comprising of experts from various disciplines needs to be formed for every district which could help in the preparation of plans keeping in view the physical and natural resource endowments of the area and the funds available, as also the priorities of the people. In addition, experts could be hired on a consultancy basis if expertise is required in a specific area. In Kerala, a Voluntary Technical Core (VTC) has been created consisting of about 10,000 technical experienced people to vet and re-work projects prepared by the panchayats. These include retired persons with technical expertise, bank personnel and officials of government departments. One VTC would be created for each block with the BDO as its Secretary. The District Planning Officers would scrutinise the document submitted to them by the panchayats as prepared with the help of VTCs and would see if it can be accommodated within the overall sectoral allocation. While the plan funds flowing to the districts would be untied, they would thereafter be project linked in order to ensure that the works in the plan are executed properly. In addition, several well-known institutions of Kerala like Centre for Developing Studies and Kerala Sastra Sahitya Parishad (KSSP) have provided support to the programme, particularly in the sphere of literacy and land mapping. Similarly in other States voluntary groups and institutions need to be identified for providing services, training and support for effective implementation of programmes at the local level.

6.49 However, in order to make decentralised development a success, a time bound training programme would have to be initiated as majority of the new entrants into the panchayati raj system may not be familiar with the various programmes of the government, the available technologies and requisite information. In addition, training of trainers would be given priority through identified national level institutions like the NIRD, LBSNAA and IIPA and other State level institutions. To the extent possible NGOs would also be drawn into the training programme.

6.50 In the process of transferring of power to the local level democratic institutions there are bound to be conflicts of various kinds; most importantly between the democratic institutions and the bureaucracy. Hence, it is necessary to institutionalise the link between the two in order to facilitate harmonious functioning by formulating appropriate rules of business. There are alternative models where such a link has been attempted. In the case of Karnataka, the Collector is outside the system of elected local governments but the Chief Executive Officer of the Zilla Parishad is a bureaucrat. In West Bengal, the Collector is the Member Secretary of the DPC with the chairman of the Zilla Parishad as the chairman of the DPC. In Gujarat, both the Collector and the President of the District Panchayat are co-vice chairmen of the District Panchayat Board. In Madhya Pradesh one fifth of the Sarpanchas have been made members of the intermediate panchayat by rotation each year and all the Adhayakshas of the inter-mediate panchayats are representative in Zilla Parishads. Each State would have to evolve its own administrative arrangements to make democratic decentralisation functional on the ground. There would also be conflict between different political formations at the State and local level as also within a local area. These would have to be ironed out within the democratic political process itself. Moreover, a greater involvement of people in the running of institutions and services through PRIs would also have a positive impact on the quality of life of the local population.

6.51 Interest of the weaker sections of the society have been safeguarded under the PRIs. The 73rd Constitutional Amendment Act provides for mandatory reservation for Scheduled Castes/ Scheduled Tribes in every panchayat in the same proportion as the population in the panchayat area. In addition to this one-third of the seats would have to be reserved for women. What is more, one-third of the total number of offices of Chairpersons in the panchayats at each level shall be reserved for women.

6.52 It is hoped that the elected representatives of panchayats would articulate the felt needs of the community more accurately and will be able to mobilise local resources both physical and financial in a better way. They should be able to educate women about their own rights and other issues concerning them. As chairpersons, they can act as catalysts in the implementation of various development programmes. However, in many States where women are reluctant to participate in the affairs of the panchayats, it is necessary to ensure that they atleast attend Gram Sabha and panchayat meetings.

6.53 So far, we have been concerned with the process of democratic decentralisation involving the people through their elected representatives. However, it is recognised that in the final analysis the people themselves must be involved in the process of development. Therefore there is an urgent need to empower the village community through the Gram Sabhas. For this more powers have to be vested in the Gram Sabhas who should be have the authority to sanction and disburse benefits in open meetings, to decide on the location of various community assets and to have control over common property resources. At present the Gram Sabha has powers in so far as it can scrutinise the annual accounts, expenditure, audit notes etc., of the gram panchayat. But this is not enough to persuade people to attend Gram Sabha meetings. Steps have to be taken to ensure that the minimum number of Gram Sabha meetings take place in all villages in a year and that these are well attended. Village development plans must be placed before the Gram Sabha. Selection of beneficiaries and choice as well as location of works may be done as far as feasible according to the wishes of the villagers. This would also bring about greater transparency in the functioning of the Gram Sabhas and a system of social audit would evolve. Display of information regarding schemes and the budgets may be placed on the bill boards outside the gram panchayat offices and right to information may be facilitated by provision of photocopies of certain documents on nominal payment and availability of records for inspection. In fact, the initiative taken in Kerala towards making a Gram Sabha more dynamic and transparent system of democratic decentralisation where the power goes to the people and not the people's representatives' is the ideal perspective but as it a new process time will tell if it can be successfully pursued.

6.54 The Panchayati Raj system has now been extended to Scheduled Areas. The Provisions of the Panchayats (Extension to Scheduled Areas) Act, 1996, provides that State legislations should be in conformity with traditional practice and systems. The Gram Sabha in every village should safeguard these customs and traditions. It would identify beneficiaries and approve programmes for socio-economic development. The panchayats should be endowed with ownership of minor forest produce and should be consulted for grant of prospecting licences or mining lease of minor minerals and also in the case of acquisition of land. The State Governments will have to take appropriate action in this regard.