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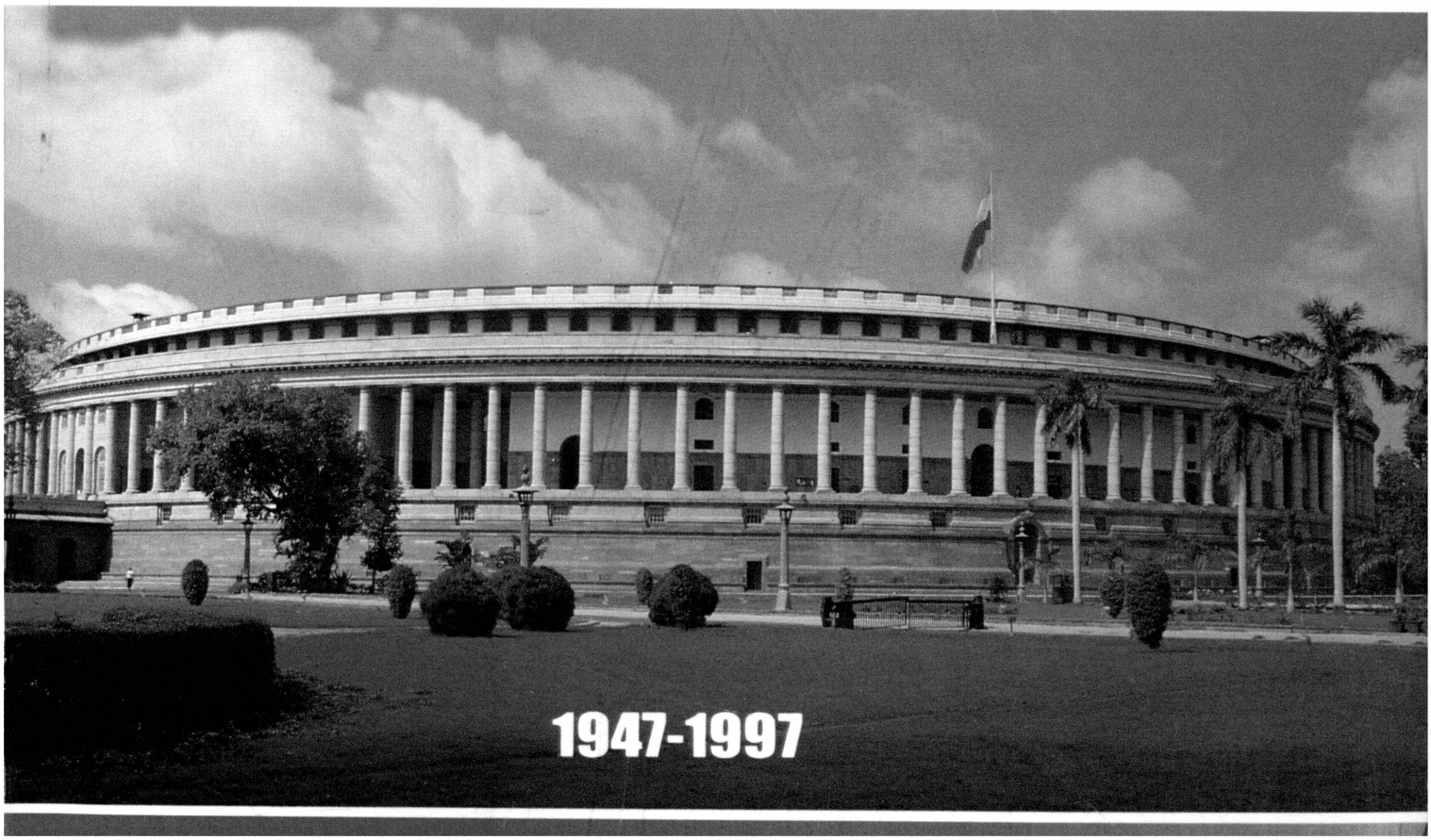
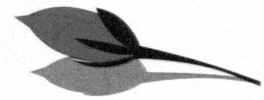
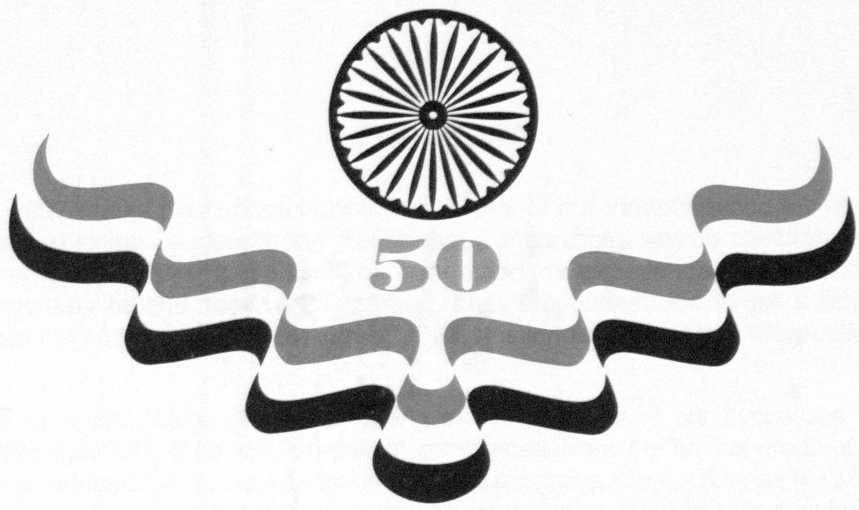
Fifty Years of Indian Parliamentary Democracy



"...the ambition of the greatest man of our generation has been
to wipe every tear from every eye.
That may be beyond us, but as long as there
are tears and suffering,
so long our task will not be over..."

Jawaharlal Nehru





Fifty Years Of

INDIAN PARLIAMENTARY DEMOCRACY

LOK SABHA SECRETARIAT
NEW DELHI
AUGUST 1997

LARRDIS, 1997

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FOREWORD

The year 1997 marks the Golden Jubilee not merely of our Independence but of our democracy. When I suggested to the Leaders in the House that a meaningful way to celebrate the Jubilee Year would be to introspect, in the House itself, on our democratic experience, free of all the pressures of normal parliamentary routine, they readily agreed. They empowered me to call a Special Session of the House from the 26th to the 29th of August, 1997. It is in this context that this publication has been brought out.

This work is in the nature of a stock taking of five decades of our successes and failures; of achievements and deficits. It covers, somewhat comprehensively, the crucial areas of the nation's life and times since Independence, but it is by no means exhaustive. Democracy as we have run it during these years has been sought to be scrutinised with reference to five basic parameters — practice of politics, management of the Economy, development of Infrastructure, Science and Technology and, most importantly, Human Development. To give depth to this scrutiny, it has been carried out in the perspectives of experiences in different States in the country and of international experiences.

An attempt has been made to present the subjects apolitically, transparently and candidly. Nor is the work prescriptive in the sense of suggesting solutions. Prescriptions are to come from the House itself.

The document is unpretentious and is meant only as a reference paper for the Members of the House to use autonomously in the light of their grassroots experience and concerns. It would have served its purpose, if the Members would find it of help in suggesting an Agenda for the next millennium in the threshold of which we are placed in this year 1997 and would make it truly memorable.

I compliment Shri S. Gopalan, Secretary-General, Lok Sabha and all the Officers of the Lok Sabha Secretariat who have worked together with rare dedication in bringing out this publication, which I consider should be thought provoking.

I shall also record a special note of appreciation of the contribution made to this work, particularly the part relating to Human Development, by Dr. (Smt.) Sarala Gopalan, retired Secretary to Government of India, Ministry of Human Resource Development, Department of Women and Child Development.

New Delhi;
14 August, 1997

PURNO AGITOK SANGMA,
Speaker,
Lok Sabha.

PREFACE

Lok Sabha, as the House of the People, immediately reflects the will of the people who are sovereign in our polity. The Government is collectively responsible and accountable to the House. Individual Members of the House render account of themselves to the people through the electoral process. To secure the accountability of the Government, the House scrutinises its policies, programmes and actions. This process has gone on since Independence through ten Lok Sabhas and until now in the eleventh. What has been the outcome of the collective performance of successive Governments and Houses over the years? Here is a presentation of facts as they are from which the Members of the House could make their own assessment.

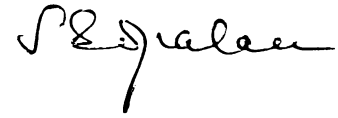
The world concedes that we are the largest successful democracy today. In achieving this adulation, we have been guided by our Constitution, a unique political document bequeathed to us by some of the greatest minds of our times, our first generation leaders. Visionaries as they were, they had anticipated problems of the future which is our present. Some of these problems — political, social and economic exclusion of significant sections of the people which are perceived or real, discrimination, caste and community divides and societal violence and terrorism, not to speak of the fear of the State itself — have serious implications for the survival of democracy. The various manifestations of these problems have been attempted to be presented in this publication, and in quantified terms at that wherever feasible.

I pulled courage to attempt this document only because of the unreserved encouragement and strong support given to me by the Hon'ble Speaker Shri P.A. Sangma.

This document would not also have been feasible but for the vast reservoir of information that the Library and Reference, Research, Documentation and Information Service (LARRDIS) is, and from which I could draw upon. I express my sincere and deep gratitude to all the LARRDIS officials, especially S/Shri John Joseph, K. Vijay Krishnan, N.K.R. Kalingan and Dr. B.C. Joshi; to the Officers of Editorial and Translation Service under the leadership of its ever supportive Shri S.K. Kaushik and Shri P.C. Bhatt; and to the Head of the Printing and Publications Service Shri Radhey Shyam and Assistant Directors S/Shri K.L. Dhingra and S.K. Verma, apart from Shri S. Venkateshan, Assistant Private Secretary to Hon'ble Speaker, and Shri P.P. Sastry, Stenographer, but for whose professional competence and service beyond the call of duty, I would not have been able to beat the deadline of 14th August in bringing out this work.

Let me also make a special mention of the Printer Shri Sudhir Kumar Jain of Jainco Art India, in rising up to the Hon'ble Speaker's expectations on aesthetics in the production of this publication.

I shall own full responsibility too for inadequacies, if any, in the work.



New Delhi;
14 August, 1997

S. GOPALAN,
Secretary-General,
Lok Sabha.

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1

POLITICAL LIFE
(Practice of Democracy)

Achievement of Independence from foreign rule by the country through a non-violent struggle was a great marvel in the history of humanity. The Independence movement was a movement as well for socio-economic emancipation of millions of our people. Our great leaders of the day bequeathed to us an outstanding Constitution which enshrines in itself our national ethos and features of great democracies of the world. There have already been seventy-eight Amendments to the Constitution and the five more are under consideration. Through these amendments, we have deepened the Preamble, find tuned the Fundamental Rights, complied with the Directive Principles, established a Welfare State and attempted to bring about a socio-economic revolution. Separation of powers is being practised elegantly. Primacy of the people is articulated in the legislative bodies, respecting independence of the Judiciary and granting freedom and flexibility to the Executive to carry on its task of governance without interference in day-to-day administration. Having integrated the country, we have re-organised the State and practised co-operative federalism. Our electoral mechanisms and prescriptions have helped us hold free and fair elections and facilitate smooth transfer of power to successive Governments. The multi-party system has contributed to the growth of the opposition without which there cannot be true democracy. It has also spawned governance through coalition in different parts of the country at different times. The Parliament is attempting to ensure ever increasing levels of accountability of the Government, through an elaborate Committee System. It already has to its credit creation of a regime of laws to provide equity and social justice to the people.

Problems are many too. Frequent elections, hung legislative bodies and coalitions do impact on political stability. Mechanisms for smooth running of coalitions are yet to be perfected. Admixture of caste, community and religious factors with politics compounds political life. There are suggestions for replacement of the Parliamentary System by the Presidential Form. Erosion of values in the practice of politics has set the Parliamentarians proactively call for ethics mechanisms. The manner of operation of constitutional provisions relating to President's Rule in the States is often alleged to be detracting from democratic principles and political morality. Political power sharing with Panchayati Raj institutions is yet to become a universal reality, despite Constitutional Amendments. There are apprehensions that the style of functioning of the Parliament, often in acrimonious environment, is indicative of its decline as an institution. Non-conventional court verdicts give rise to complaints of judicial activism. And, Governmental sluggishness is seen as erosion of its accountability to the Parliament. Extensive violence and terrorism of domestic and cross-border varieties and regional movements, perhaps symptomatic of underlying political and economic exclusion, deserve to be seriously addressed. Above all else, there are calls for electoral reforms to cleanse the very process of establishing popular Governments.

Independent India today is fifty years young. For a nation whose history dates back to five millennia, five decades perhaps is too short a period to attempt a realistic assessment of the functioning of its polity. This is all the more so because of the complexity and magnitude of its sheer diversities—geographical, historical, political, economic, social, linguistic and many more—in all their manifestations. Yet, as we celebrate fifty years of freedom, it is only appropriate that an appraisal of our polity, its operational dynamics and some of the problem areas is made.

OUR CONSTITUTION—A DYNAMIC DOCUMENT OF NATIONAL SELF-ACTUALIZATION

India achieved Independence from foreign rule after a non-violent struggle, hitherto unparalleled in the annals of world history. Our national movement was aimed not merely at throwing away the yoke of colonialism. Inherent in the liberation

struggle was the conviction that political independence has necessarily to be complemented by strenuous efforts towards the socio-economic emancipation of the millions of our countrymen. India's myriad problems encompassing all aspects of our national life made the challenges before the national leadership all the more monumental. It was our good fortune that when we emerged independent, we had the benefit of a galaxy of outstanding leaders who were fully conscious of the enormity of the tasks before them and who were equally definitive about the path we should chart out for ourselves. Their comprehensive farsightedness and visionary statesmanship which found expression in the supreme law of the land and which they bequeathed to us as a beacon light, illumine for us our direction and also our course.

The women and men who were entrusted with the momentous task of drafting the Constitution of free India were leaders in their own rights, having an all-embracing understanding of the many ills afflicting the nation. They came to the Constituent Assembly from all parts of the country, making it a miniature India and raising on its floor the desires and the dreams of the people at large. Though different in every conceivable way—be it their dress habits or food habits, the language they spoke or the political convictions they held, they were all united in their purpose—the larger cause of free India. They knew full well that they would be judged by history, more importantly by the generations yet unborn. They were equally convinced that they could not afford to belie the expectations of their countrymen and the trust that had been reposed in them. Above all, they were alive to the considered view of the Father of the Nation, Mahatma Gandhi, that *Swaraj* could not be a free gift of the British Parliament but must spring from the wishes of the people of India as expressed through their freely chosen representatives.

The Constituent Assembly of India met for 166 days spread over a period of 2 years, 11 months and 18 days. By the time the Constitution was adopted on 26 November 1949, the distinguished members of the Assembly had discussed threadbare each and every one of its provisions in the light of experiences elsewhere, while of course keeping in view our requirements and realities. As it emerged, the Constitution incorporated some of the salient features of the British, Irish, French, South African and American Constitutions even while it displayed a distinctive Indian approach based on its ethos and values.

The Underlying Attributes, flowing from Jawaharlal Nehru's "Objectives Resolution"

With hindsight, one can only marvel at the sagacity of the stalwarts who gathered in the Constitution Hall to draft the parchment. As our experience of the last fifty years demonstrates, our Constitution has been a dynamic document of national self actualization. In every sense of the term, the Constitution reflects the soul of the nation and symbolizes the unity of our people and our sovereign will. The underlying philosophy of the Constitution was set out by Pandit Jawaharlal Nehru who moved the Objectives Resolution which, to him, was 'a declaration, a firm resolve, a pledge, an undertaking and for all of us a dedication'. Inevitably, the Objectives Resolution, adopted on 22 January, 1947, was to guide the Constituent Assembly in the days ahead.

Box 1.1 : What the Objectives' Resolution spelt out?

- India is an Independent, Sovereign, Republic;
- India shall be a Union of erstwhile British Indian territories, Indian States, and other parts outside British Indian and States as are willing to be part of the Union;
- Territories forming the Union shall be autonomous units and exercise all powers and functions of Government and administration, except those assigned to or vested in the Union;
- All powers and authority of sovereign independent India and its constituents will flow from the People;
- All people of India shall be guaranteed and secured social, economic and political justice; equality of status and opportunities before the law; and fundamental freedoms—of talk, expression, belief, faith, worship, vocation, association and action—subject to law and public morality;
- The minorities, backward and tribal areas, depressed and other backward classes, shall be provided adequate safeguards;
- The territorial integrity of the Republic and its sovereign rights on land, sea and air shall be maintained according to justice and law of civilised nations;
- The land would make full and willing contribution to the promotion of world peace and welfare of mankind.

Constitution, an Instrument of Change

One of outstanding characteristics of our Constitution is its relative flexibility in terms of its adaptability to the changing national needs. This has been particularly helpful in the formative years since we had to usher in several amendments to suit emerging situations.

Explaining why it was necessary to introduce an element of flexibility in the Constitution, Pandit Nehru observed in the Constituent Assembly :—

> ...while we want this Constitution to be as solid and as permanent a structure as we can make it, nevertheless there is no permanence in Constitutions. There should be a certain flexibility. If you make anything rigid and permanent, you stop a nation's growth, the growth of a living vital organic people. Therefore, it has to be flexible.....Today, especially, when the world is in turmoil and we are passing through a very swift period of transition, what we may do today may not be wholly applicable tomorrow. Therefore, while we make a Constitution which is sound and as basic as we can, it should also be flexible and for a period we should be in a position to change it with relative facility.

As such, the Constitution has been found to be partly flexible and partly rigid. This is evident from the amending procedure prescribed by the Constitution itself which provides for amendment by simple majority, special majority and in exceptional cases special majority with ratification by at least one half of the State Legislatures.

Constitution—A Vehicle of Social Transformation

The adaptability of the Constitution to the ever changing native realities has effectively made it a vehicle of social change, the process being substantially facilitated by our Parliament. Till date, as many as 78 amendments have been adopted, many of them going a long way in realizing peoples' hopes and aspirations. The Constitution and the Parliament can be said to derive sustenance from the people. It is said that a Constitution is basically a people's covenant, their charter of freedom and the blueprint for their future. As it is, our Constitution is envisaged to be an instrument for economic growth and social change. The achievement of social and economic democracy, as much as political democracy, has been one of the cardinal concerns of our Constitution. The Fundamental Rights and the Directive Principles of State Policy are key elements of this overriding concern. Dr. B.R. Ambedkar, in his concluding Address, stated in the Constituent Assembly :—

> Political democracy cannot last unless there lies at the base of it social democracy. What does social democracy mean ? It means a way of life which recognizes liberty, equality and fraternity as principles of life. These principles of liberty, equality and fraternity are not to be treated as separate items in a trinity. They form a union of trinity in the sense that to divorce one from the other is to defeat the very purpose of democracy. Liberty cannot be divorced from equality, equality cannot be divorced from liberty. Nor can liberty and equality be divorced from fraternity. Without equality, liberty would produce the same supremacy of the few over the many. Equality without liberty would kill individual initiative. Without fraternity, liberty and equality could not become a natural course of things.

All through the last five decades, our Constitution has truly been a great facilitator of social change.

The Preamble and the 42nd Amendment

The spirit of the entire Constitution is reflected in the Preamble itself which declared the resolve of the people to constitute India into a Sovereign, Socialist, Secular, Democratic Republic. The Preamble also pronounces our resolve to secure for the people Justice—social, economic and political; Liberty of thought, expression, belief, faith and worship; Equality of status and opportunity; and to promote among them all, Fraternity, assuring the dignity of the individual and the unity and integrity of the nation. The Preamble, as has been widely acclaimed, reflects the broad framework of ideas which are deeply ingrained in our ancient heritage and are part of the Indian ethos for which the Constitution stands and the fundamentals on which it has been founded. Though not enforceable in a Court of Law, it is considered the guiding light of the Constitution whenever there is any ambiguity about any of its provisions.

The Preamble remained unchanged till 1976 when, after the 42nd Amendment, the words 'Socialist' and 'Secular' were added as also 'unity and integrity of the Nation'. Several difficulties had arisen in achieving the objective of socio-economic revolution so as to end poverty, ignorance, disease and inequality of opportunity. It was felt that the

democratic institutions provided in the Constitution had been subjected to considerable stresses and strains and vested interests had been trying to promote their selfish ends to the great detriment of the public good. It was, therefore, considered necessary to amend the Constitution, among other things, to spell out expressly the high ideals of socialism, secularism and integrity of the nation. It was also the view that the Preamble, being the key to the whole Constitution, should reflect more accurately the underlying philosophy of the Constitution. For a time, there was a view that the Preamble was not part of the Constitution. However, after the Kesavananda Bharati case, there has been wide acceptance that the Preamble is indeed an integral part of the Constitution.

Fundamental Rights and their Fine-tuning

The Constitution expressly provides for right to equality, right to freedom, right against exploitation, right to freedom of religion, cultural and educational rights and right to constitutional remedies. As per the Constitution, the State shall not discriminate against any citizen on grounds only of religion, race, caste, sex or place of birth. It also enumerates that there shall be equality of opportunity for all in matters relating to employment or appointment to any Office under the State. Above all, the Constitution clearly states that the State shall not make any law which takes away or abridges the rights conferred and that any law made in contravention of the clause, shall, to the extent of contravention, be void.

As is seen, the Constitution not only enumerates various Fundamental Rights, but it also guarantees these by making the right to constitutional remedies itself a Fundamental Right. As several constitutional experts have rightly pointed out, it is the remedy that makes a right real; if there is no remedy, there is no right at all. However, absolute concepts of liberty and equality are perhaps difficult to achieve in absolute terms in a modern welfare society. As such, even while enumerating the fundamental rights the Constitution may be said to enjoin upon the State that there are certain restrictions which the Government of the day is expected to follow in the governance of the country, in the sense that the State may encroach on the domain of these rights but for the common good or public interest. The Supreme Court and the High Courts are empowered to determine if a fundamental right has been infringed and to grant most effective remedies whenever rights are violated.

Right to property which was earlier a fundamental right underwent major changes on several occasions. Eventually, *vide* the 44th Amendment, this was omitted altogether from Part III of the Constitution on Fundamental Rights. Presently, right to property has been given the status of a legal right as distinguished from a fundamental right.

Directive Principles of State Policy and Practice of Welfare State Model

The Directive Principles of State Policy are essentially in the nature of certain directions to the State while making laws. The Constitution provides that the Directive Principles are not enforceable by any Court but the principles therein laid down are nevertheless fundamental in the governance of the country and it shall be the duty of the State to apply these principles in the making of laws. Essentially, the Directive Principles enshrine the ideal of social and economic democracy and are humanitarian in social precepts which aim at the realization of the goal of a welfare state.

Over the years, the State has endeavoured to put into practice several Directive Principles. For example, considerable progress has been achieved with regard to directive in article 39 (6) which calls upon the State to direct its policy towards securing that the ownership and control of the natural resources of the community are so distributed as best to subserve the common good. The State, through various legislations, has succeeded in bringing the tillers and ploughers of land—rather than intermediaries like *zamindars* and *jagirdars*—into direct relationship with it and in preventing the concentration of land by fixing appropriate ceilings. On another front, several major industries were nationalized and public sector enterprises set up with the express purpose of abolishing private monopolies. This was needed in the early years to prevent concentration of economic power. Later on, having regard to the performance of the Public Sector, need for wealth generation and productive use of resources and resource requirements for priority sectors and the changing international economic scenario, laws have had to be enacted readjusting the relative roles of the Public and Private Sectors. Several legislations have been enacted with a view to providing just and humane conditions of work, maternity relief, living wages, participation of workers in management of industries, public health, promotion of educational and economic interests of Scheduled Castes (SCs), Scheduled Tribes (STs) and other weaker sections, to protecting and improving the environment and safeguarding forests and wild life, etc.

Addition of Fundamental Duties

Originally, our Constitution did not delineate any Fundamental Duties for the citizens at large. However, a New Part IV A, *vide* 42nd Amendment, enumerates a set of Fundamental Duties which the people owe to the society and the nation as a whole. It was felt that the people, conscious of their rights as they were, should also be equally conscious of their duties. The emphasis had been only on the rights of the individual for far too long. Therefore, it was felt necessary to enumerate the Fundamental Duties too.

Separation of Powers, a matter of Balance of Powers

Interpreted in its very rigid form, the doctrine of separation of powers among the organs of State—the Executive, the Legislature and the Judiciary—does not permit of any overlapping either of functions or of persons who occupy the various offices of State. The Indian Constitution, while providing for separation of powers, has been far from rigid in the sense that the Executive power is vested in the President while provisions are made for a Parliament and the Judiciary without expressly vesting the legislative and judicial power in any person or body. Constitutional experts are of the view that our Constitution has not recognized the separation of powers in its absolute doctrinaire form but the functions of the different parts or branches of State have been described in detail. As a result, what is envisaged is a harmonious relationship among the three, not encroaching on the functions that essentially belong to another.

Independent Judiciary, Watchdog of the Rule of Law

The Constitution which provides for a Judiciary which is independent of the influence of the Executive also envisages an element of judicial review. This is based on the assumption that the Constitution is the paramount law of the land and all organs which owe their origin to the Constitution and derive their powers from its provisions, must function within the Constitution and not do anything inconsistent with the constitutional provisions. Over the years, it has been held that judicial independence and judicial review are basic features of the Constitution and cannot be taken away by any constitutional amendment.

Parliament—Judiciary Interface

There have been occasions when frictions have occurred between the Legislature and the Judiciary. These mainly related to the powers of the Courts to review the laws passed by the Parliament and the Legislatures, parliamentary privileges, administration of the Secretariats of State Legislatures and starting mid-1980s, the operation and interpretation of the anti-defection law. In very recent times, the issue of judicial activism has been a concern for all. Many parliamentarians and legislators have voiced a view that the Judiciary has at times been found transgressing its jurisdiction and entering into the Executive and Legislative domain. Those who support judicial activism counter this by asserting that this was the result of a failure on the part of the Executive and the Legislature to check the decay of our national institutions.

Behind the Legislature—Judiciary interface and controversies of judicial activism, the concept of "basic structure" of the Constitution has come to be established clearly. For long, it was held that no part of the Constitution was unamendable and that Parliament, by passing an Amendment Act as per provisions of article 368, could amend any provision of the Constitution, including the Fundamental Rights and article 368 itself. However, in the Golak Nath case, the Supreme Court, reversed its own earlier decisions upholding the power of Parliament to amend all parts of the Constitution. The Apex Court held that the amendment of the Constitution is a legislative process and a Constitution Amendment under article 368 is by itself 'law' within the meaning of article 13 of the Constitution. As such, the Supreme Court held that a Constitution amendment which 'takes away or abridges' a Fundamental Right would be void. In the light of this, Parliament thought it necessary to pass the Constitution (Twenty-fourth Amendment) Act, in 1971, providing expressly for Parliament's power to amend any part of the Constitution, including the provisions relating to the Fundamental Rights.

In the Kesavananda Bharati case, the Supreme Court reviewed the decision in the Golak Nath's case and went into the validity of the 24th, 25th, 26th and 29th Constitution Amendments. By majority view, the Apex Court held that while Parliament does have the power to amend any provision of the Constitution, this power cannot be so exercised as to alter or destroy the basic structure or framework of the Constitution. Thus, the amending power of Parliament is not absolute but limited in its scope. The theory of basic structure of the Constitution was reaffirmed by the Supreme Court in Indira Gandhi V. Raj Narain. Subsequently, in Minerva Mills Ltd. V. Union of India, the Supreme Court, while upholding the concept of the basic structure, held :—

> Since the Constitution had conferred a limited amending power on the Parliament, the Parliament cannot under the exercise of that

limited power enlarge that very power into an absolute power. Indeed, a limited amending power is one of the basic features of our Constitution and, therefore, the limitations on that power cannot be destroyed. In other words, Parliament cannot under article 368, expand its amending power so as to acquire for itself the right to repeal or abrogate the Constitution or to destroy its basic and essential features. The donee of a limited power cannot by the exercise of that power convert the limited power into an unlimited one.

The concept of 'basic structure' has been further developed by the Supreme Court in subsequent cases. More and more essential features relating to the basic structure have been added in Vaman Rao V. Union of India, Bhim Singhji V. Union of India, S.P. Gupta V. President of India, S.P. Sampath Kumar V. Union of India, P. Sambamurthy V. State of A.P. and Kihoto Holohan V. Zachillhu and others.

INDIA—A UNION OF STATES, AN ENDEAVOUR IN COOPERATIVE FEDERALISM

Article 1 of the Constitution itself clearly and unambiguously states that India is a Union of States. Indeed, ours is a unique system of federation with a manifest unitary character. The spheres and activities of the Union and the States are clearly demarcated. The exhaustive Union List and State List placed in the Seventh Schedule to the Constitution distinctly outline the respective jurisdictions and authority of the Union and the States. The provision of the Concurrent List is another salutary feature in the scheme of things. With the 73rd and 74th Constitutional Amendments, powers have been devolved on the Panchayats and Nagar Palikas too. This transmission of power at the lower levels—"power to the people"—it was felt, would make the system not only more democratic but also administratively more efficient, in tune with the larger concept of good governance.

National Integration

The first gigantic task before free India was the integration of over 500 Princely States distributed across the length and breadth of the Indian landmass. Under the able leadership of Sardar Vallabhbhai Patel, this challenge was overcome to the satisfaction of all concerned and to the relief of the nation as a whole. In the years to come, it was our common endeavour to preserve and protect our national integrity as ordained in the Constitution and for which the Constitution laid out clear-cut guidelines.

States' Reorganization

The geographical integration of the Indian Union is often said to have been achieved with remarkable ease, especially if one were to consider its vastness and variety. While this may appear somewhat true, the fact is that it was certainly not an easy enterprise. However, more challenges lay ahead of the nascent Republic. Political and emotional integration into an Indian Union was equally critical as much as geographical integration. Creating a new India encompassing in its bosom diversities of language, religion and region was indeed a Herculean task. In 1956, a perceptive exercise saw the reorganization of the States on linguistic basis. Hindi was given the status of the national language and official language with English being retained as another link language. Within the respective States, the regional language was given primacy. The reorganization of States on a linguistic basis has accommodated the wishes of the linguistic minorities even though, today too, criticisms are levelled at this measure. While every effort was to be made to promote Hindi in its status as the official language, the Constitution also enumerated several languages in its Eighth Schedule. Initially, the languages in the Eighth Schedule were Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Malayalam, Marathi, Oriya, Punjabi, Sanskrit, Tamil, Telugu and Urdu. To these were added Sindhi in 1967 and Konkani, Manipuri and Nepali in 1992 *vide* the Constitution 21st and 71st Amendments, respectively. As is evident, the effort has been, as far as possible, to accommodate the legitimate aspirations of the people.

Creation of New States

Taking a step further in acceding to the legitimate popular aspirations, several new States were carved out within the Union, much after the reorganization of 1956. Some of the States thus created in the wake of legitimate popular demands include Gujarat, Nagaland, Haryana, Himachal Pradesh, Manipur, Meghalaya, Tripura, Mizoram, Arunachal Pradesh and Goa.

Union-State Relations

Even though, as stated earlier, the Constitution envisages a harmonious relationship between the Union and the States, at times these relations have been marked by 'ups' and 'downs' for socio-political and economic reasons as also because of differing perceptions on the interpretation of constitutional provisions. One of the overriding concerns of the Constitution and the Founding Fathers was to keep the forces of disintegration in check and thus

safeguard the unity and integrity of the country. Accordingly, we find weaved into the system ways and means to deal with centrifugal and fissiparous tendencies, threats to the country's unity, integrity and sovereignty, and emergencies affecting national security and financial solvency.

It is often pointed out by experts that unlike other federations, the federal system prevalent in India is not the result of any agreement by the units. On the eve of Independence, most of the Princely States acceded to the Dominion of India. Subsequently, the Constitution brought all of them under the same federal system on an equal footing. Unlike in the United States, our Constitution does not provide for dual citizenship thereby making it amply clear that there is only one class of citizenship in the country.

Yet another feature of our federal set-up is that the Union Parliament has the power to reorganize the States or to alter their boundaries by a simple majority in the ordinary process of legislation. In fact, this power of the Parliament was demonstrated when several new States were created as mentioned above. The public services are also designed to promote unity and national integration as is evident from the provision for the All India Services. A single Judiciary with the Supreme Court at the apex administers both the Union and State laws as are applicable to the cases coming up for adjudication. The machinery for election, accounts and audit is also similarly integrated.

What has been envisaged in the Constitution is cooperative federalism whereby there is harmonious interaction and relationship between the Union and the States and among the States for the common good. Perceptions, however, have varied over the actual working of the system. While it is a fact that the Union has been by and large receptive to popular aspirations as is evidenced from the creation of new States, there is a criticism that in practice what is discernible is a heavily centralized federalism. There have been persistent demands from several quarters for more autonomy to the States, especially financial autonomy or financial devolution. The proponents of such a demand are of the view that the unitary base of the Constitution has been accentuated so much that there is very little left of federalism in the country. Those opposed to this view hold that a strong bias in favour of the Union is essential if we are to preserve and protect the unity and integrity of the country.

Controversies in Union-State relations have by and large revolved round the operation of distribution of powers between the units. While the Constitution delineated respective jurisdictions, several States, particularly in recent times, have been increasingly of the view that there is too much of centralization and as such there is need for greater devolution and decentralization. Over-concentration of power in the Union means that for every small thing, one has to rush to the Centre. Those who stand by this argument also feel that many a time, the Centre is not fully conversant with local problems and local needs. If timely remedial action is not taken, this can lead to disturbances which could be used by vested interests to foment trouble.

The perceived concentration of financial powers with the Centre has also been a major area of disagreement between the Union and the States. The Finance Commission which looks into Union-State financial relations has also often come under criticism for its alleged bias towards the Centre and lack of a proper perspective of local or regional issues. The centralized Planning exercise which we follow has also been under attack from many States for its purported lack of familiarity with local developmental and planning needs and meagre financial allocation for Annual Plans. The distribution of revenues between the Union and the States has also come under severe criticism. All these factors, coupled with a perceived lop-sided development of the States, have cast a long shadow over Union-State relations as they have emerged over the years.

Interestingly, the changing political landscape of the country has had its bearing on this crucial area. Till 1967, by and large, things moved without much trouble basically because the Congress Party was in power at the Union and in most of the States. If at all problems cropped up, these were treated as 'intra-party' affairs. However, the situation changed dramatically in 1967 with the Congress losing out in several States which also saw the emergence of regional political parties. Ever since, the Centre-State relations entered a somewhat difficult phase. Increasingly, regional political identities began asserting and also started successfully mobilizing popular opinion in favour of greater decentralization of power and autonomy—financial and otherwise. This process received further momentum in the 1980s and 1990s with the changing political scenario. Continued political instability at the Centre only aggravated the situation. On the political and constitutional side, the use and alleged misuse or abuse of article 356 of the Constitution came in for scathing attack as also the role of several Governors in political crises situations or even in fomenting such crises.

There are several mechanisms like the Inter-State Council, the National Integration Council, the National Development Council and the Chief Ministers' Conferences to look into all these matters. There are several inter-States dispute settlement mechanisms too to address problems among the States. However, perceptions have differed in all these fora on key areas, particularly on article 356, decentralization of power, and extending more financial autonomy to the States. In fact, several States have pointed out that this is all the more essential now that the liberalization process has struck firm roots.

On its part, the Centre has been alive to the exigency though the States feel that it is not doing enough to harmonize the situation. The Administrative Reforms Commission of 1966 and the Rajamannar Commission of 1971 did look into some of the issues involved. A comprehensive review of the Union-State relations was undertaken by the Sarkaria Commission. The Commission, whose Report was published in 1988, made several recommendations for enabling a harmonious working of the federal polity by minimizing the tension areas. The fast changing political scenario in the country has made the implementation of the Sarkaria Commission's recommendations in their totality some what difficult. Within political parties and among State and Union leadership, there are differing views on some of the recommendations of the Sarkaria Commission. The National Integration Council has already been set up as per the Commission's recommendations. The Commission has expressed its disinclination towards any drastic or radical changes of the constitutional machinery in the country. It, however, stressed the need for constant consultation and sustained cooperation between the Centre and the States. The Commission also focussed attention on 'cooperative federalism' and recommended making it a permanent feature of our federal structure. If we are to achieve distributive justice throughout the country, if we have to forge ahead as one nation, if we are to uphold our Constitution which envisages harmonious relations between the Union and the States and among the States, then cooperative federalism should be our watchword, especially when we are faced with many threats to our unity and integrity, from forces within and without.

ELECTORALISM—FORMULA FOR PRESERVATION OF DEMOCRACY

Elections are in essence the barometer of democracy and political parties and contestants the lifeline of elections. It is through the conduct of elections that the principles of consent and representation are articulated and realized. As is said, elections periodically accord legitimacy to the political system. They also provide opportunities to the people to offer their judgment on the performance of their representatives and the Government in power and also to generate new socio-economic and political attitudes which can determine the future course of the nation at large. In such a scenario, it is imperative that the electors exercise their right to vote in a free, fair and transparent manner. In short, holding of such elections periodically as provided for in the statute book is a *sine qua non* of democracy.

Electoral Mechanism

To us in free India, electoralism has been a national commitment. The Constitution, under article 324, provides for an independent electoral machinery called the Election Commission. The superintendence, direction and control of the preparation of the electoral rolls for, and the conduct of, all elections to Parliament and to the State Legislatures and of elections to the Offices of the President and the Vice-President are vested in the Election Commission. The Election Commission consists of the Chief Election Commissioner and such other number of Election Commissioners as the President may fix from time to time. In order to ensure that the Election Commission remains above any external influence, the appointment, the terms and conditions of service and the procedure for removal from office, etc. of the Chief Election Commissioner and the Election Commisssioners are provided for in the Constitution itself. The President, in exercise of his powers under article 324 (2) of the Constitution, fixed the number of Election Commissioners other than the Chief Election Commissioner at two with effect from 1.10.1993. Now, we have a three-member Commission accordingly.

Under article 327, Parliament is empowered to make provisions from time to time with respect to all matters relating to, or in connection with, elections to the Parliament and State Legislatures, including the preparation of electoral rolls, the delimitation of constituencies and all other matters necessary for securing the due constitution of the Houses. Accordingly, Parliament enacted the Representation of the People Acts in 1950 and 1951 which have been amended periodically to accommodate emerging realities. The 1950 Act incorporates extensive provisions, especially relating to the disqualification of electors, etc., while the 1951

Act deals with the overall conduct of elections, including provisions and procedure for disqualification of elected representatives on certain specified grounds. The 1951 Act is supplemented by the Conduct of Election Rules, 1961.

Electoral Reforms

The successful conduct of eleven General Elections to the Lok Sabha and that of many more such elections to the State Legislatures and other representative bodies has proven beyond doubt the inherent democratic ethos of the Indian electorate. Imperfections might have been there, but the fact remains that a substantial population running into several hundred millions are being given opportunities periodically to exercise their judgment as to who should govern them. This electoral saga has been possible because of the constitutional provisions ensuring free and fair elections as also because of reforms initiated by successive Election Commissions and Governments. One of the outstanding features of our electoral history has been that the verdict of the people was always accepted and political transitions were a peaceful exercise without acrimony.

The enormity of the Indian electoral mechanism is simply mind-boggling. Over the years, the electoral system has undergone much transformation coping with emerging situations. The proliferation of political parties, the increasing frequency of elections at all levels, the rising election expenditures, the changing style of election campaigns and the ever shifting electoral combinations have drastically altered the face of Indian elections. As a result, more than even before, electoral reforms have attracted the attention of all concerned. Some of the key issues in this area include the size of the constituency *vis-a-vis* the electorate; minimizing the number of contestants; State funding of elections and fixing a realistic amount that candidates could spend in elections; the use of money and muscle power in elections; checking the menace of criminalization of electoral politics; barring exploitation of caste, religious and regional sentiments in elections; a model code of conduct for political parties, especially the party in power, and contestants; inner party democracy and adherence to, and implementation of, party constitutions; and equal access to the Government media, preferably for all contestants.

With the passage of the 73rd and 74th Amendments, we have provided for further strengthening of the democratic process at the grassroots level. The ideal training ground for a free, fair and transparent electoral exercise is the Panchayati Raj Institutions. Naturally, electoral reforms must percolate down to the lowest rungs of our political hierarchy. Every political party can play a meaningful role in educating its grassroot workers of the sanctity of the electoral process. Such a positive approach, coupled with an open commitment by all political parties to strictly adhere to the rules laid down by the Election Commission, can go a long way in making our electoral process a still more welcome and appreciated exercise which stands out in stark contrast to the several farcical elections held elsewhere in the world. What is important is that electoral reforms are an on-going process. The active participation of the political parties, the electoral machinery, the elected representatives and the electorate in general is required in ample measure if we have to keep renewing our national commitment to the concept of electoralism.

POLITICAL PLURALISM

One of the distinctive features of the Indian political system has been the multiplicity of political parties and groups. In the early years of free India, we witnessed the predominance of a single party—the Indian National Congress—which ruled at the Centre and in almost all the States. Opposition to the Congress Party with stalwarts like Pandit Nehru, Sardar Patel, Maulana Azad, Lal Bahadur Shastri, Pandit Pant and many others in its fold was limited. Yet, it is to the credit of the vibrant democracy that India is, that the situation did not deteriorate to that of a one-party system as has happened in several parts of the world. The Congress Party paid due attention to the Opposition viewpoints which were effectively raised on the floor of the Parliament and State Legislatures and other political fora. On their part, the Opposition Parties were ever vigilant to keep the flame of democracy alive and keep the ruling party on its toes.

Party System

The multi-party system of the early years with a predominant single party soon gave way to genuine political plurality in the wake of the changing political climate and equations. This was only natural considering the many diversities of the Indian diaspora. The awakening of regional aspirations on regional, linguistic and cultural lines led to the emergence of new political groupings. On another front, several political diversities started coming to the fore on ethnic, caste and religious lines. Perceived injustices, uneven socio-economic development and fragmentation of mainline political parties added to the disenchantment with the

existing political spectrum. The logical corollary was the emergence of new political identities which thrived on a new found regional identity and consciousness.

Regional Parties

In 1957, the State of Kerala created history when it elected to power the Communist Party, the first time such an event occurred in India or for that matter anywhere in the world. The dismissal of the Communist Government in Kerala in 1959 under article 356 of the Constitution, the first time an elected Government with a majority in the State Legislature was dismissed by the Centre, lent a new dimension to the political and electoral system and also to the concept of cooperative federalism as envisioned in the Constitution.

The 1960s saw the rise of regionalism with a virulence never seen before. In the then Madras State, presently Tamil Nadu, language riots broke out extensively. Regional power centres started emerging in several other areas too. Within the Congress Party itself, regional leaders started asserting more. The ruling party came under increasingly severe internal stress in the mid-1960s.

The 1967 General Elections have turned out to be a high watermark in our political system. For the first time in independent India's history, the Congress Party lost elections in as many as eight States and in the Centre itself, it was voted in with a greatly reduced majority. The days of one-party dominance in the otherwise politically pluralistic system were over. Ever since, regional aspirations started asserting more and more. The success of the Dravida Munnetra Kazahagam (DMK) in Tamil Nadu proved to be the turning point which several other regional parties were looking for.

In 1969, when the Congress Party formally split, the number of members who dissociated themselves from Smt. Indira Gandhi was substantial enough to warrant recognition as the Opposition Party and its leader was recognized as the Leader of the Opposition in the Lok Sabha, the first time since Independence when such recognition was accorded.

Changing Political Realities

Yet another milestone in our political evolution was the declaration of Emergency in 1975. The 1977 General Elections saw a new political dispensation in New Delhi and in many States with the Congress Party losing out in its traditional strongholds. The Opposition also came to assume a new role. The Leaders of the Opposition in the Lok Sabha and the Rajya Sabha are now accorded statutory recognition and salary and status equivalent to that of a Union Cabinet Minister and certain other facilities and amenities under the Salary and Allowances of Leaders of Opposition in Parliament Act, 1977. The Janata Party experiment of 1977 at the Centre did not also last long but the era of coalitions had finally arrived. The failure of the Janata experiment itself and the basic aspiration of the people for an effective Central authority saw the return of Smt. Indira Gandhi. And, subsequently the landslide victory of Shri Rajiv Gandhi was to a certain extent in response to the crisis situation resulting from the assassination of Smt. Indira Gandhi and the perceived threats to national unity and integrity.

The late 1980s and the 1990s have been witness to the emergence of new political realities in the country. As a result, the role of the Opposition has also changed dramatically during this period. The times when the Congress Party was in power at the Centre and in almost all the States with hardly any Opposition to them were over. Now, all the major political parties are in power in some States or the other with regional parties holding sway in several States. In many States, some national party or other is functioning as the Opposition. At the Union, parties or coalition of parties are forming Governments with the major political parties sitting in Opposition alternatively, depending on their association with the ruling coalition. The practice of extending support from outside without joining the Government *per se* has also a bearing on the role of the Opposition in the present context. All in all, the content and character of the Opposition has undergone drastic transformation in recent years. This casts on the Opposition a major responsibility in ensuring smooth functioning of our legislative institutions and not to oppose just for the sake of opposition but to engage in creative and meaningful opposition in the larger interests of our parliamentary democracy.

In 1989, the Congress Party though elected numerically the largest single party in the Lok Sabha, did not stake its claim to form the Government and instead chose to sit in the Opposition. The Janata Dal experiment did not last long with the Bharatiya Janata Party (BJP), which was supporting the Government from outside, withdrew its support. The Chandra Shekhar Government also had to quit after a short stint in power when the Congress Party (which was also supporting the Government from outside) amended its decision not to further extend support to the Government.

After this came the experiment of minority Government with the Congress Party assuming Office under the leadership of Shri P.V. Narasimha

Rao. Though it began as a minority Government with a majority support, by the time its tenure was over, the Government had mustered enough majority of its own. The 1996 elections saw the BJP emerging as the single largest party. The BJP, when asked by the President to form the Government, accepted the offer and assumed Office but had to give up in two weeks' time, obviously for want of support from other political parties in the Parliament to give it an operating majority. The Congress which is the second largest party in the House did not stake its claim but offered support from outside to the United Front under the leadership of Shri Deve Gowda. In a year's time, the Deve Gowda Government—a coalition of many parties, including some supporting from outside—lost a Confidence Motion in the Lok Sabha after the Congress Party voted against the motion demanding a change in leadership. Subsequently, Shri I.K. Gujral took over as the new Prime Minister, as head of the United Front, with the Congress offering support from outside and with the BJP as the main Opposition party.

What is striking in the series of developments of the past few years is a realignment of political forces. Simultaneously, these developments have thrown up a host of other factors too—the possibility of hung Parliaments, the constitutional predicament the President finds himself in the emerging situations, especially when political groups which contested as rivals on separate manifestoes come together to form either coalitions or alliances to stake claim to form Government, the perspectives of regional parties who join the coalitions at the Centre, political instability and its impact on national development and the nation's unity and integrity, not to speak of the issues of political ethics and morality. A section of political opinion, concerned at recent developments, has even suggested the need for a National Government at the Centre.

In recent times particularly, there has been widespread concern over the direction our political system is taking. Citizens across the country have been alarmed at the increasingly large number of reports appearing regularly on the alleged criminalization of politics and lack of probity among the political leadership. More and more people are approaching the Courts with Public Interest Litigations (PILs) relating to reported instances of high handedness by those in positions of power. With the Courts being liberal in the admission of these PILs and even actively following them up there is indeed a crisis of credibility and confidence. Those adversely affected by the crisis do have grievances about what is being seen as judicial activism. Political leaders themselves feel distressed at the turn of events and have effectively voiced the need to cleanse the system of the undesirable elements. The Rajya Sabha has already established an Ethics Committee. The Lok Sabha has set in motion a detailed exercise for the purpose. Cleansing politics necessarily entails cleansing the electoral process too. Comprehensive electoral reforms are advocated as one option. Transparency in all sections of Government is also advocated by many as a way of clearing many suspicions. Right to information is being demanded.

PARLIAMENTARISM—GROWING DIMENSIONS

In less than fifty years of its existence, India has justifiably earned encomiums from far and wide as the world's largest working parliamentary democracy. Our faith in the efficacy of representative institutions has not been of recent origin. The existence of deliberative representative bodies and democratic institutions in our country can be traced back to the Vedic period when we spoke of 'Panch Parmeshwar', many centuries before Rousseau wrote of *vox populi vox Dei*. In modern times, our parliamentary republicanism grew with our fight against the colonial rulers. As discussed at the outset, the democratic ideals of our people were also at the core of our national liberation movement. Thus, when freedom dawned on the Indian horizon, it was only logical that our Founding Fathers opted for a parliamentary democratic polity for our people.

Legislative Bodies—Coping with New Realities

In its opening words, "We, the people", the Constitution proclaims that our political system derives its legitimacy and sustenance from the people at large. The sovereign will of the people finds expression and becomes exercisable through the institution of Parliament which is the supreme deliberative organ of the country. In the States, the Legislative Assemblies offer the platform for elected representatives to air the grievances of their constituents and seek redressal thereof. This being so, Parliament has rightly been accorded the pride of place and primacy in our democratic polity. The two Houses of Parliament, together, play the most pivotal role in ensuring that our political system operates as per the ideals enshrined in our Constitution.

It is an accepted fact that we have patterned our democratic polity on the Westminster system. But it will be myopic to stress that the Indian

political system is a replica of the British democracy. No two systems can work alike nor can any alien system be replicated by another society. The ethos and values as also native realities and requirements vary from country to country and as such institution can develop only in relation to these factors. Thus, while we have adopted the broad framework of the Westminster system, over the decades we have adapted it to suit our demands and needs.

In the specific case of parliamentary institutions too, this holds true. We have to a certain extent based our parliamentary practices and procedures on those of the British House of Commons. But, in the years that intervened, we began developing our own practices and procedures in the light of our experiences. To begin with, we discarded the ceremonial and the regalia associated with the British precedents as we felt that our institutions must reflect the Indian realities. Subsequently, we have made substantial departures from the British parliamentary practices with a view to attending to our requirements.

Our Practices and Procedures

A substantial chunk of our procedural law can be traced to the power given by the Constitution to the Parliament and the State Legislatures to make their own rules of procedure as also the well established parliamentary customs and conventions evolved over time. It has to be borne in mind that parliamentary institutions are dynamic and ever evolving. As is often said, though the basic principles may remain the same, parliamentary practices and procedures are bound to undergo changes or else they would be found wanting in emerging situations.

Our Parliament, in its endeavours to fulfil its constitutionally assigned roles, has brought forth several procedural initiatives and innovations. Some of the major such initiatives and innovations include the Calling Attention Notices, Adjournment Motions, Half-an-Hour Discussions, 'Zero Hour', Business Advisory Committee, Committee on Petitions, Committee on Government Assurances, etc. In addition to the Financial Committees, we have in the recent past set up a full fledged Departmentally related Standing Committee System to ensure greater Executive accountability to the Parliament.

There have been 25 No Confidence Motions since 1963. In the first and second Lok Sabhas, there were no No Confidence Motions. There were No Confidence Motions in all the other Lok Sabhas excepting for the Ninth one. Altogether, there have been 25 such motions. All of them were negatived. The distribution of these motions was as follows:

Against Jawaharlal Nehru	1
Against Lal Bahadur Shastri	3
Against Indira Gandhi	15
Against Morarji Desai	2
Against Rajiv Gandhi	1
Against P.V. Narasimha Rao	3
Total	25

There have been nine Motions of Vote of Confidence:—

Sought by Charan Singh	1
Sought by V.P. Singh	2
Sought by Chandra Shekhar	1
Sought by P.V. Narasimha Rao	1
Sought by Atal Bihari Vajpayee	1
Sought by H.D. Deve Gowda	2
Sought by I.K. Gujral	1
Total	9

Five of these motions were adopted, two negatived and two became infructuous.

These thirty four motions for vote of No Confidence/Vote of Confidence implied that as many times, the collective responsibility of the Council of Ministers and the vigilance of the Opposition came to be demonstrated in the House.

Recognizing full well the role of the people in a parliamentary polity, our Parliament took a major decision to bring the institution of Parliament nearer to the people by starting televising of major parliamentary proceedings. Dissemination of information by Parliament of its activities has greatly benefited the general public by enabling them to know more about their representatives and the institution itself. As for members of Parliament, the Secretariats of the two Houses extend all possible assistance to them to fulfil their functions and roles as effective representatives of the people.

Changing Profile

Over the years, the face of the Parliament has undergone dramatic transformation. This has been so particularly in the case of the Lok Sabha, the elected House, which in effect connotes the changing profile of the Indian electorate too. To begin with, one finds that the number of political parties represented in the Lok Sabha has been on the rise, especially in recent years. This corresponds with the proliferation of political parties, fragmentation of mainline political parties, emergence of regional

political entities, etc. Thus, the Eleventh Lok Sabha has representatives from as many as 28 political parties compared to 4 or 5 main political parties in the First Lok Sabha.

The educational background of the members of the Lok Sabha has also changed considerably over time. About 23.2 per cent members of the First Lok Sabha were under-matriculates whereas in the present Lok Sabha, their percentage has dropped to just 2.90. The Eleventh Lok Sabha has about 77.36 members who are graduates. It has also surpassed all previous records in having the highest number of Post Graduates and doctoral degree holders. The general trend in this regard shows that although the Constitution does not prescribe any minimum educational qualifications for membership of the House, the electors have favoured to return those who have had basic education and who could relate to their problems and thereby effectively articulate their grievances in the supreme legislative organ of the land.

The occupational background of members has also been changing with the Lok Sabhas over the decades. Earlier, members with a legal background used to outnumber those belonging to other professions. Thus, in the First Lok Sabha, lawyer members were maximum in number. In the present Lok Sabha, they have been relegated to the third position, behind political and social workers and agriculturists. This indeed is ample proof of a changing approach and attitude of the electorate in choosing their representatives. Their preference perhaps is indicative of the fact that they could send to Parliament representatives who are grassroot workers, fully conversant with their problems, and who could place them before the national Government for early and expeditious redressal.

On another front, if all the professions are seen independently, the Eleventh Lok Sabha stands out in its marked heterogenous character.

As regards the age of members, those belonging to the age group of 41-45 continue to dominate in the present Lok Sabha too. In the category of the youngest members (25-30 years), the Eleventh Lok Sabha has more such members compared to those in the previous House.

Significantly, at no point of time has the representation of women in the Lok Sabha touched even 10 per cent. In the Eleventh Lok Sabha, their representation is 7.2 per cent of the total membership of the House. With women having entered all walks of life in large numbers and with their participation in political life having been on the rise, it is indeed a paradox that their representation in the highest decision-making body is still comparatively very low. The 73rd and 74th Amendments which provided for 33 per cent reservation for women in the elected Panchayats and Nagar Palikas have been a major step forward in grassroot mobilization of women in decision-making institutions. About a million women have come to occupy decision-making positions in Panchayati Raj Bodies. It is a matter of satisfaction that the present Parliament is seized of the issue and is looking seriously into measures that would lead to greater participation of women in politics and enhanced partnership between men and women in political life.

All in all, the face of the Parliament has been changing with the changing socio-economic profile of the electorate as a whole—after all, Parliament, particularly the Lok Sabha, is a microcosm of the nation itself.

Parliament—A Purveyor of Equity

As discussed earlier, our Constitution has been a vehicle of social change. Convinced as they were that social and economic democracy should go hand in hand with political democracy, the Founding Fathers ensured that the Constitution gave enough guidelines and directions as to how to go about the task of social engineering, which was indeed a gargantuan task in a society as diverse and stratified as ours. The Preamble, the Fundamental Rights and the Directive Principles of State Policy all clearly show the intent and purpose of the Constitution-makers. In their scheme of things, it was left to Parliament to provide the momentum and the mechanism for effecting social change.

The India that emerged out of the colonial rule had to confront many challenges. While the threats to the political order was effectively handled by the national leadership, those posed by social and economic inequalities and inequities proved to be more menacing to the welfare of our nation. The concept of welfare society envisaged a predominant role for the Government in ameliorating the lot of the deprived and weaker sections. It was not merely a question of socio-economic emancipation but more fundamentally, empowering the disadvantaged who formed a substantial chunk of the population.

Realizing full well its critical role, the Parliament went about its task with utmost concern and a rare zeal. Already, the Constitution provided for reservation of seats in the Lok Sabha and the State Legislative Assemblies for the Scheduled Castes and the Scheduled Tribes. Over the years, various Commissions and Committees were set up by Parliament to look into the lot of the SCs, STs, Minorities, Backward Classes (BCs) and Other Backward Classes (OBCs) and suggest ways and means as to how best they could be emancipated socially, economically and politically. Some of these Commissions and Committees are permanent bodies with monitoring mechanisms also to ensure that all welfare measures are implemented in letter and spirit.

Yet another principle embodied in the concept of a welfare State is the rooting out of poverty, production of wealth and an equitable distribution thereof amongst all who contribute towards its production. With this in view, several land reform measures were enacted and to protect them from being challenged in Courts of Law, these were placed in the Ninth Schedule to the Constitution. The Parliament, and under its lead, the State Legislatures have passed legislations to secure for the citizens—men and women equally—adequate means of livelihood; equal pay for equal work; protection against abuse and exploitation of workers' economic necessity; and the protection of their health and strength as also of children of tender age and youth, against exploitation and moral and material abandonment. Measures have also been implemented for just and humane conditions of work and for maternity relief. Legislations for the welfare of women, children, labourers and industrial workers have been enacted and wherever required suitable amendments were effected or new measures adopted to cope with changing situations. In matters of inheritance of property, revolutionary enactments were made by Parliament. Legislations for the welfare of the disabled and the handicapped have also been put on the statute books.

On another plane, Parliament brought forth several measures for the overall well-being of the nation. While the State carved out a role for itself in the developmental process, the private sector began to be increasingly encouraged to join the endeavour. The planning process ensured that clear-cut goals were set and achieved to the extent possible. Various key industries and service sectors were nationalized. The Parliament always kept itself alive to the changing realities. When the process of liberalization was initiated, it encouraged the effort, however signalling clearly that the State could not afford to totally abdicate its responsibility towards the citizens as ordained in the Constitution.

Ever in tune with the emerging situations, Parliament has kept track of the mood and pulse of the nation. This was amply proved when the voting age was reduced from 21 years to 18 years whereby millions of young men and women got their rightful claim to exercise their franchise. The Amendments providing for elected Panchayati Raj Institutions and Nagar Palikas have been visionary legislations in strengthening grassroot democracy.

It has been rightly said that a Constitution, howsoever nobly conceived, acquires its flesh and blood only in the matrix of practical politics. Our struggle for a more meaningful and purposive socio-economic democracy has to be an on-going one. The role of Parliament in this national endeavour is indeed second to none.

THE FUTURE

Knowledge of Basic features of the Constitution

The concept of the basic structure of the Constitution has come under increasingly sharp definition through the rulings of the Supreme Court handed from time to time. Basic features are not finite either. In fact, the Supreme Court has observed that "the claim of any particular feature of the Constitution to be a basic feature would be determined by the Court in each case that comes before it." The basic features as spelt out in various court rulings are presented below:

Box 1.2 : Basic features of the Constitution

- Supremacy of Constitution
- Democracy
- Rule of Law
- Sovereign Democratic Republic Structure
- Secularism
- Principle of separation of powers
- Objectives specified in the Preamble to the Constitution
- Federalism
- Judicial Review and Article 32
- Unity and integrity of Nation
- Independence of Judiciary
- Free and fair elections
- Emergency provisions
- Article 359(1) (suspension of right to move any court for enforcement of fundamental rights during emergency)
- Equal justice
- The essence of other fundamental rights in Part III
- Harmony and balance between Fundamental Rights and Directive Principles
- The concept of social and economic justice to build a welfare state
- Directive Principles of State Policy
- Equality of status and opportunity
- Parliamentary democracy
- Freedom and dignity of individual
- Limited amending power of Parliament
- Effective access to justice
- Freedom of Press
- Concept of justice

With increasing recourse to judicial review of the laws enacted by Parliament, it is only appropriate that Members are informed by knowledge of these basic features.

Change of form of Government ?

Based on the lessons of five decades of practice of democracy, a body of opinion has evolved in favour of replacing our parliamentary system with a presidential system of the American variety or even a presidential system combining the merits of the American, French and German experiences. The political developments of the last few years have also triggered a debate for a review of the Constitution and the demand to make it more relevant to the times. Should we at all go in for a new Constitution and a new model of governance? If so, how do we go about it ? Or, is it that our existing Constitution and system of governance are good enough, the crucial need being the will of the people to make the system work, whatever the system may be, so long as it is democratic ?

The controversy of President's Rule

Sovereign Democratic Republic and Federal that our polity is, and sovereignty vesting with the People, it is obvious that governance should be with the popular Governments to the maximum extent feasible. On this realisation, imposition of President's rule on the States by wielding Article 356 of the Constitution, has always been resented and has been a matter of controversy.

Since the commencement of the Constitution, President's rule has been imposed 95 times in 24 States. President's rule was introduced for the first time in Punjab, within two year of promulgation of the Constitution. Punjab (including the former State of PEPSU) and Kerala (including the former State of Travancore-Cochin) came under President's rule nine times. There have been several causes for imposition of President's rule on the States—

- defection by Members of the Legislatures;
- break up of coalitions
- passing of No Confidence Motion
- resignation of Chief Ministers
- absence of Legislatures in newly formed States
- public agitation in States leading to instability in administration
- absence of single party with absolute majority and inability of political parties to form coalitions.

Imposition of President' rule in the year 1977 in nine States was on account of the opinion that the then ruling parties in these States had effectively lost their legitimacy due to their losing the parliamentary elections.

Judicial pronouncements in regard to imposition of President's rule have established the following:

- Presidential satisfaction (effectively satisfaction of the Union Council of Ministers), though subjective in nature, is the essence of Article 356.
- The Presidential power, however, is not absolute. Presidential satisfaction should be based on relevant material. Such material could be accessed by the court. Claim of privilege as regards such material in the court will be decided by the court itself on merit in each case. Article 356 (1) by itself is not immune to judicial review.
- If the court strikes down the Presidential Proclamation, it has the power to restore the dismissed Government to office and to revive and reactivate the Legislative Assembly where it may have been dissolved or suspended.
- Unsecular policies or unsecular acts, if any, pursued by a State Government, are contrary to secularism which is a basic feature of the Constitution, and therefore, may render the State amenable for action under Article 356.
- Until proclamation of Presidential Rule is approved by the Parliament, the Legislative Assembly of the State concerned cannot be dissolved; can only be suspended.
- The President cannot take over some functions and powers of the State Government, even while keeping the State Government in office. There cannot be two Governments in one sphere.
- In the event of both the Houses of Parliament disapproving the Presidential proclamation, the proclamation itself will lapse and the dismissed Government would revive.

Quite recently, Article 356 came under review in a meeting of the Inter-State Council so as to discuss modalities of preventing misuse of the same. Prior warning or show cause notice before imposition of President's rule, approval of the Presidential proclamations by two third majority of the Parliament, etc., were some of the suggestions discussed. No agreement could be reached. Total scrapping of Article 356, however, is not seen to have been suggested by anybody.

In the context of the multi-party system that we have; of the sensitivities of the socio-economic

issues that have immediate implications for governance in accordance with the provisions of the constitution; and of changing values in the practice of politics, issues relating to Article 356, no doubt, need to be carefully and cautiously handled.

Governance through Coalitions

Since 1977, we have had 40 coalition Governments in the country. The average life of these Governments was only 26 months. The reasons for development of the trend towards multi-party Governments are not far to seek. The polity is federal in structure, though it is a union of States. Since the first elections till the late sixties, by and large, national parties were forming Governments. Thereafter, till about the late seventies, regional parties became strong in the States. Thereafter, regional parties started having partnership in Government at the Centre as well. The Eleventh General Elections have brought regional parties to power at the Centre with national parties outside Government. Ideological differences of political parties is yet another reason. While a broad underlying dichotomy is there between left and right ideologies, even within the left movement there are different political parties. Articulation of regional aspirations has also caused the emergence of several parties like the DMK, AIADMK, MDMK, TDP, AGP, Akali Dal, HVP, Kerala Congress, Karnataka Congress, etc. strong personality orientation of groups of people have led to strong political leaders floating their own parties. Factional politics, often triggered by revolt against Central leadership of existing parties, also results in emergence of new parties. Proliferation of parties with their own specific constituencies divides the electorates, ultimately adversely impacting on simple majority for any party. Hung Legislative Bodies are the consequence. In these circumstances, access to power is feasible only through coalition arrangements.

There are many reasons for coalition Governments being short lived. Firstly, when hung Legislatures are returned, parties are not prepared to face fresh elections immediately. There is an urge to avoid elections at least for some time. Secondly, adherence to principles of collective responsibility in a coalition Government becomes difficult. Members of Cabinet, belonging as they do, to different parties and disparate interests, take discordant positions on issues before Government. Thirdly, the Ministers, in order to demonstrate their autonomy to their constituents, take public postures not conducive to coalition stability. Fourthly, in coalitions, the Chief Ministers and Prime Ministers are often driven to functioning less autonomously than under single party rule. This is because of the pressure built up by even comparatively smaller constituents of coalitions. Fifthly, in the federal set-up that India is, often, the interests of a party in a coalition at the Centre, may be inconsistent with its interests in the Government of a State. This brings local party leaders into conflict with their leaders at the Centre. In such circumstances, for the local leadership of a party, it becomes a matter of sleeping with the enemy, in the interests of sustaining a coalition at the Centre. Lastly, parties co-operating at the Central level in a coalition could find it difficult to compromise their economic interests at the State levels. A typical example is the position of the Janata Dal and the DMK at the Centre, vis-a-vis their positions in Karnataka and Tamil Nadu, in the matter of sharing Cauveri and Krishna waters.

Coalition Governments to be successful, should have a common minimum programme, which would reflect **the highest common measure** of agreement on basic policy issues as between parties in partnership, Ideally, such a programme should be agreed upon before the elections. Elections fought on that basis would give greater credibility to the coalition of such parties in the event of their coming to power. Such a common minimum programme, should at least be agreed upon after the elections are over, but before assumption of office. Otherwise, the coalition might be seen by the people as opportunistic and, therefore, is likely to lose its credibility.

In the implementation of the common minimum programme, there should be fair consultations before decisions are taken at the Government level, on individual matters of policy and matters of public importance.

There must be institutionalised arrangements for consultations between the coalition partners. One of the reasons for a comparatively greater degree of success in governance through coalitions in Kerala, for example, has been the institution of co-ordination committees, liaison Committees, etc., consisting of top level functionaries from the coalition partners.

There would need to be a certain operational elegance in the process of consultation even in the co-ordination mechanisms as may exist. The history of coalitions in Kerala is replete with instances of comparatively smaller partners complaining of "Big Brother attitude" of larger coalition partners.

Distribution of portfolios amongst Ministers of different parties in a coalition and distribution of other offices in the Legislature as well as the Executive, amongst the coalition partners, in proportion to their relative strength would be

needed for successful coalition. Governance is a matter of sharing power. Sharing is more difficult in a coalition than in a single party Government. Particularly because of this, sharing of offices should be based on equitable principles.

The success of a coalition, to a significant extent, will be dependent on the man who leads it. By his stature, conduct, and approaches, all members of the coalition should get to feel that they are partners in meaningful sustenance of government rather than warring sharers of the spoils of offices.

A multi-party system is reflective of a basic and strong exercise of the Fundamental Freedom of Association. It is a fact of life that such a system will spawn coalition Governments. Coalitions are the order of the day in many true democracies. Well co-ordinated coalitions could lead to truly representative and good governance. We, in India, have had fairly significant experience in governance through coalitions. The successful examples are, Kerala and West Bengal models. We should perfect our own brand of coalition which would provide political stability basically needed for the socio-economic development of the people.

Decentralisation and sharing of political and administrative power, down to the grass-roots

We are a country of over 3 million square kilometres in extent; of a population reaching a billion mark; of people of different faiths—Hinduism, Islam, Christianity, Sikkhism, Buddhism, Jainism, etc.; of people speaking 1652 languages evolved over centuries from Negroid, Austric, Sino-Tibetan, Dravidian, Indo-Aryan and other speeches; of people whose linguistic diversity has been reckoned in terms of 18 officially recognised languages; and of people whose cultural diversity is not capable of true assessment. Pervasive through all these diversities are endless differences of castes and communities, not to speak of economic and regional divides. This multi-dimensional diversity is a fundamental challenge for running democracy in our country. If democracy is rule by respecting dissent, by consensus, by the will of the majority, one could comprehend the magnitude and complexities of this challenge in the face of our diversities.

Mahatma Gandhi understood our complexities and stipulated Ram Rajya as the system of governance we should opt for. What he meant was decentralised system of governance which would draw its sustenance from the grass-roots, the villages and the panchayats.

It took 42 years for us to adopt the 73rd and 74th Constitutional Amendments for instituting Panchayati Raj, making it part of the basic structure of our Constitution. Earlier on, of course, Panchayati Raj has been practised with different degrees of seriousness in certain States like Maharashtra, Rajasthan, Gujarat, Andhra Pradesh, Karnataka, etc. The practice of Panchayati Raj has been rather halting and hesitant.

The strength of true democracy is to be seen in a pro-active willingness to share political power. The framers of our Constitution were people with vision and laid down parameters for the Centre to share power with the States. They also stipulated in the Constitution local self governance as a directive principle. The latest constitutional amendments have translated this directive principle on self governance into an integral part of the Constitution itself. A large number of subjects relating to agriculture, health, education, rural industries, urban development, etc., have been listed for being vested in the three-tier Panchayati Raj institutions. What is important, however, is the basic willingness on the part of those in whose hands power is now vested to share it down the hierarchy of local self governance. We have still not broken over from our colonial mind-set of not willing to share power. The British, for long, thought and proclaimed that India was not mature for self governance. The same thought now prevails amongst our decision makers and they feel that local bodies are not yet ripe for self governance. This was evident even in the meeting of Chief Ministers held a few days back, when they were unable to come to a decision on the pace of *de facto* transfer of powers and responsibilities. First of all, we should make the practice of the 73rd and 74th Constitutional Amendments a reality on ground to achieve true democracy.

Even if the political decision makers are willing to truly empower the local bodies and people's institutions, the entrenched Establishment of the day is offering very stiff resistance to the process. An agitation is going on even in literate and enlightened Kerala which is a small State compared to Uttar Pradesh and Madhya Pradesh against the decision of the government to transfer officials from the existing stations to local stations. Our success in empowering people for true democracy will significantly lie in our capabilities to discipline the Establishment.

Violence and Terrorism

The Father of the Nation Mahatma Gandhi, Prime Ministers Indira Gandhi and Rajiv Gandhi have been victims of violence.

Despite our claims to be the largest democracy of the world, we do have our share of violence in the society. Over 10,000 lives have been lost on

account of violence in J & K since 1992. This is significantly due to Pakistan sponsored violence. This kind of violence is taking place in Jammu as well. And infrastructure services like the Railways, Electric Transmission Lines and Highways are the targets of attack.

militants, despite restoration of normalcy in Punjab are reportedly making efforts to revive terrorist activities.

The year 1996 has witnessed resurgence of militancy and violence on the part of ULFA and the Bodos in Assam.

Though less pronounced, the activists of the NSCN (National State Council of Nagaland) are restoring to violence and many killings.

The law and order situation in Manipur continues to cause concern because of the militancy of the Kuki and Valley extremists.

In Tripura, the depredations of tribal extremist groups like the ATTF and NLFT continue to vitiate the law and order scenario.

In Meghalaya the ethnic divide between tribals and non-tribals contributes significantly to the violence profile. In Madhya Pradesh, the Peoples War Group (PWG) was responsible for many incidents and deaths. The PWG is entrenched in Gadchiroli and Chandrapur Districts of Maharashtra.

Communal violence, caste tensions and sectarian conflicts are seriously impacting adversely on the internal security scenario.

Regional movements like the Uttarakhand Movement are also causing disturbance to tranquility in the country.

The LTTE has been having its presence in parts of Tamil Nadu.

Societal violence has underlying politico economic causes as well. Political and economic deprivation and exclusion are often the causative factors. These underlying factors will have to be understood and addressed.

Performance of Parliament

A scrutiny of the time spent on various kinds of business by the House shows that there has been a significant increase in the proportion of time devoted to discussion ("Half an hour", Rule 193 discussions apart from debate on President's Address, Statements of Ministers, etc.) From 4% in the First Lok Sabha, it reached a peak of 44% during the Ninth. This indicates shift of emphasis to issues of contemporary importance and representational and grievance ventilation. This is as it ought to be, considering that the Lok Sabha is the People's Chamber. However, the following other trends are matters of concern:

- Number of sittings has decreased from the level of 677 in the First Lok Sabha to 423 in the Tenth Lok Sabha (comparability is only between the 1st, 2nd, 3rd and 10th Lok Sabhas because they ran their full five year period. Others did not. The Fifth Lok Sabha lasted six years and hence not comparable).
- Average duration of business per day has come down from 6.27 to 5.58 (on the basis of the above comparison).
- The time spent on the prime function of legislation has come down considerably-ranging between 22% to 28% as against 49% during the First Lok Sabha. Even considering that the First Lok Sabha was a formative period and hence a high proportion of time devoted to legislation, the overall decline in this regard is demonstrable.
- During the Tenth Lok Sabha, 14% of the time was taken on Zero Hour. Important as the issues raised during this hour may be from the point of view of the grass roots experience of the Members of the House, the pandemonium and utter disorder that goes with it—several persons trying to speak at the same time—is often unproductive.
- A significant number of matters raised under Rule 377 go unreplied by Ministers during the respective sessions, as the experience of the Tenth Lok Sabha shows.
- A recent development—and a seriously disturbing matter—is the recurrence of disorderliness and interruptions. During the Tenth Lok Sabha, 10% of the time was lost in such phenomena often forcing adjournments of the House.

POLITICISATION OF BUREAUCRACY

Public perception is that styles of governance over the years has indeed established a nexus between politicians and civil servants which has serious adverse implications for civil service neutrality and probity in public life. In many quarters, the grievance is that for civil service including the police, the law makers have become

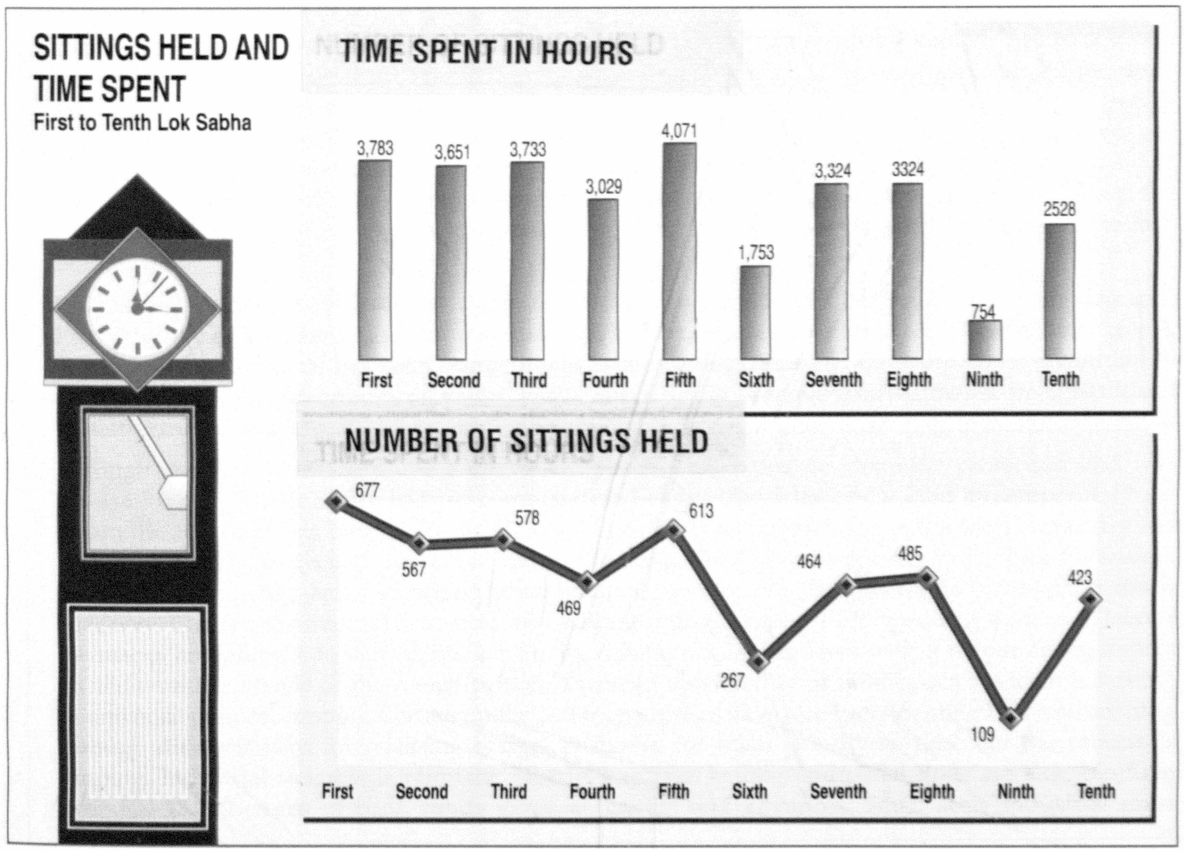
the masters and not the Rule of Law. How do we depoliticise the civil service?

Fundamental Duties

Fundamental Rights, flowing as they do from natural law or common law, has been guaranteed by the Constitution. These rights and harmony between them and the Directive Principles have also been spelt out as basic features of the Constitution. Justiciability of Fundamental Rights is also practised vigilantly. Together with Rights should go Duties. Hence, the importance of the 42nd Constitutional Amendment of 1976 which spelt out several Fundamental Duties—

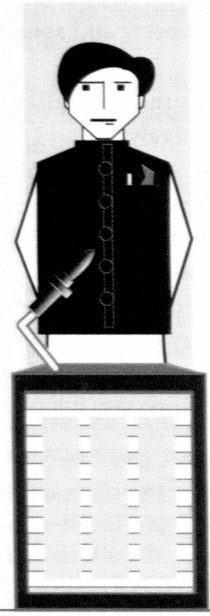
- Conformity to the Constitution, its ideals and institutions, the national flag and the national anthem;
- Cherishing ideals of freedom fighters;
- Protection of sovereignty, unity and integrity of the country;
- Defence of the country and performance of national service, when called for;
- Harmony amongst people, cutting across religious, linguistic and regional diversities and upholding the dignity of women;
- Preservation of heritage and composite culture;
- Protection of Environment;
- Development of scientific temper;
- Safeguarding public property and abjuring violence;
- Striving for all round excellence, individually and collectively.

These Fundamental Duties also partake of the nature of values. Inculcation of values is a function of Education. Of course, our Education Policy includes most of these values as part of the Core Curriculum. Implementation of this Curriculum in letter and spirit in innovative ways should be given high priority. That alone will help in the political leaders of the future give proper direction to policies and practices.

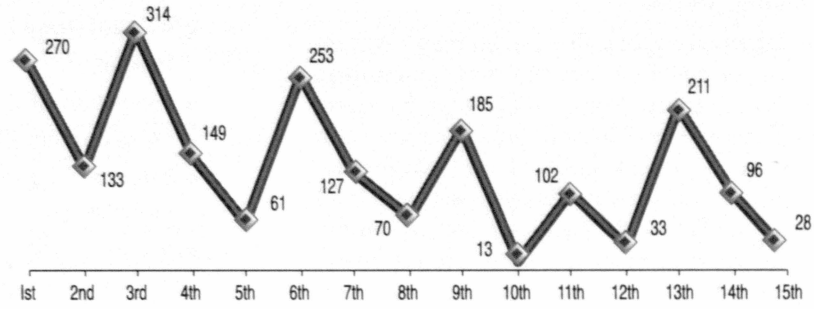


MATTERS RAISED UNDER RULE 377 DURING TENTH LOK SABHA

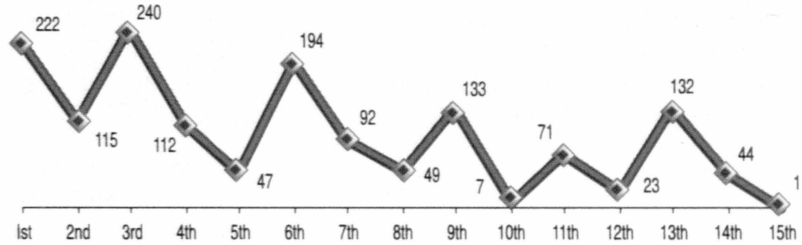
First to Fifteenth Session



NUMBER OF MATTERS RAISED



NUMBER OF REPLIES SENT BY MINISTERS TO MEMBERS



2

THE ECONOMY

We opted for planned economy and implemented eight Five Year Plans. Approach Paper for the Ninth Plan is under discussion. Starting from a growth rate of around 3.5% during the first Plan, we have acquired strength enough to achieve around 7.0% growth by now. Our propensity to save has always been high. The investment rate has come up to over 25% commencing from around 12% during the First Plan. Over the years, priorities and strategies in the Plans have spanned almost every area ultimately touching human development, though the emphasis may have varied from time to time. We have indeed succeeded in gradually transforming a feudal and colonial economy into a modern industrial economy. The process is not complete. In our concern for pre-empting exploitation of our country by economically superior powers and to ensure equity and social justice by pre-empting concentration of economic power in the hands of a few within the country, in earlier years, we adopted an overall strategy of economic protection and regulation. Planned, protected and regulated economy, over the years, did result in certain inefficiencies in resource deployment, adversely impacting on wealth generation. Revenues have been low, expenditure high, deficits significant, and debt burdens disproportionate to carrying capacity. To face the challenge of globalisation and international market competition, we have had to opt for economic reforms and structural adjustment since 1991. We have effected considerable de-regulation. Fiscal discipline is being seriously attempted. Restrictions on domestic investments and international trade are being dismantled. Currency reform has been done to a significant extent. Several sectors of the economy are being opened up for private sector participation and to foreign business. We have had some achievements to our credit. New production capacities are getting created. Foreign capital is flowing in, though slowly. GDP growth rate is being sustained at the level of 6 to 7%. Lot more ground remains to be covered. We have had to be cautious about the pace of reform, keeping the social dimensions in view. The national demand is for reform with a human face.

In five decades, we have reached food self sufficiency. Production has kept pace with demand. Productivity has also been significantly enhanced. But, by international standards, productivity is low. Agricultural growth rate has been stagnant and even been decelerating. Carrying green revolution to the Gangetic East, Brahmaputra valley and Central India, adequate investments in agricultural infrastructure and removal of restrictive trade practices are solutions deserving to be considered.

Through the Five Year Plans, industrial development was based on domestic protection and was inward looking. Public Sector had the commanding heights. Nevertheless, a solid infrastructural base to run the economy was created. To face the realities of market competition in the world, industry has had to be quickly readjusted to make it outward looking. The Public Sector has had to be rejuvenated. Declining Enterprises are undergoing rehabilitation process. But the process is not making much headway. Choked for internal resources and without budget support for operating expenses, labour payments are falling into substantial arrears in violation of labour laws with a demoralising impact on the working people of these enterprises. Perceived inevitability of public sector reform is lacking in universal political support. Certain public sector enterprises have also been identified for restructuring through disinvestment for releasing budget resources for other priority sectors. But the process is limping. Industrial sickness is rampant. Nearly, a quarter million industrial units are sick, blocking over Rs. 13,000 crores of bank funds given as credits and advances. Small scale industrial units

account for 99% of the total sick units, and 26% of the blocked credits and loans, the balance being blocked by 1% of non-Small Scale Enterprises.

Because of the inward looking industrial structure developed over the years, traded goods were meagre for a long time causing decline of India's share in world trade from nearly 2% in 1950 to less than half a percent in 1980. The composition of the Export basket have largely remained the same. The trade dimensions of economic reforms have released the productive forces in the industrial sector because of dismantling of restrictions on export and import business. Growth of exports has had an upswing to the order of 18 to 19% since 1993-94 to 1995-96 in dollar terms. Direction and composition of export have since started to diversify. The tempo has to be vigilantly maintained.

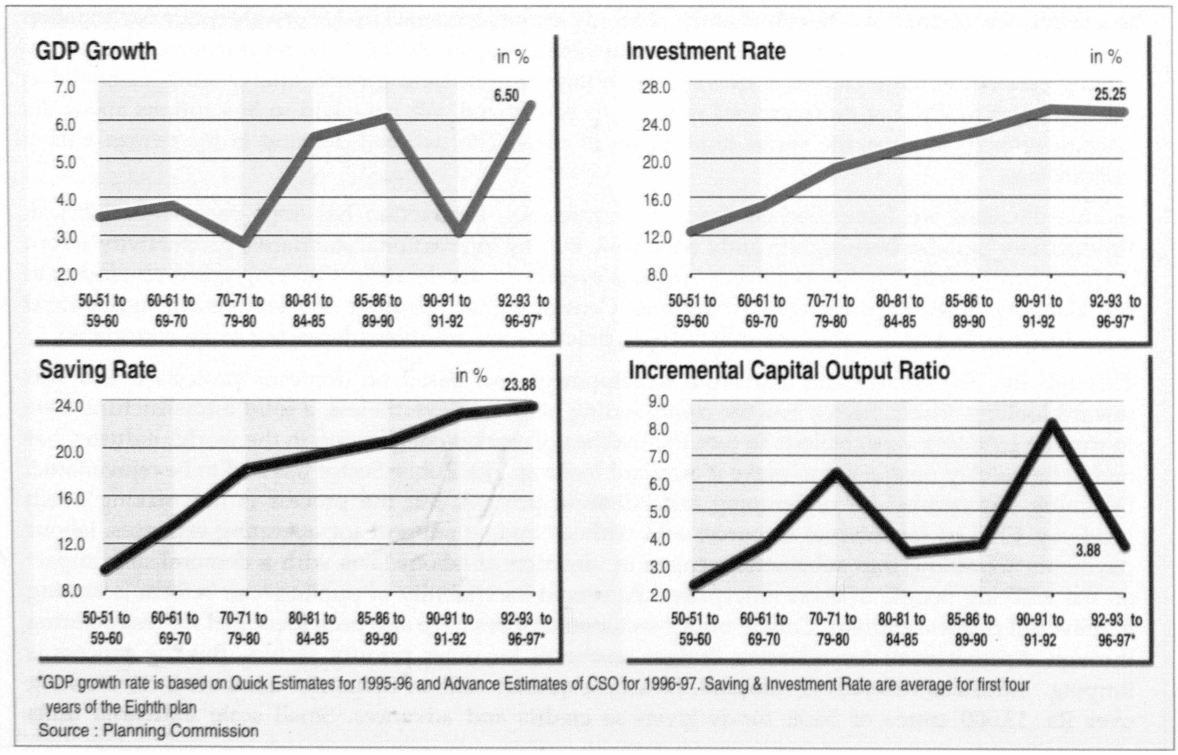
Despite all round growth through the struggle for development during five decades, income inequalities continue to persist. Economic growth, as far as it has been achieved, has not necessarily translated into distributive justice. The lowest twenty per cent of the population receive only 8.7% of the national income, while the highest twenty per cent receive 43% of the same. Regional disparities are wide and striking.

I

ECONOMIC PROGRESS SINCE INDEPENDENCE

Economic Growth

The Indian economy, which was stagnant during the first half of this Century, started growing after the Five Year Plans were launched. However, the growth rate in Gross Domestic Product remained lower than 4 per cent per annum during the first three decades. The decade of the seventies saw the growth rate of GDP dipping below 3 per cent per annum. It was only in the eighties that the growth rate crossed 5.5 per cent per annum. This was accompanied by a higher growth in agricultural income rise in per capita consumption and decline in Capital Output Ratio indicating more efficient use of capital as shown in the Table below:



*GDP growth rate is based on Quick Estimates for 1995-96 and Advance Estimates of CSO for 1996-97. Saving & Investment Rate are average for first four years of the Eighth plan

Source : Planning Commission

Table 2.1

GDP Growth, Savings Rate, Investment Rate and Incremental Capital Output Ratio (ICOR) in Indian Economy 1950-1997

Periods	GDP	Savings rate	Investment rate	ICOR
1950-51 to 59-60	3.59	10.77	12.04	2.00
1960-61 to 69-70	3.96	13.48	15.62	3.94
1970-71 to 79-80	2.94	18.91	19.06	6.48
1980-81 to 84-85	5.68	19.41	20.86	3.67
1985-86 to 89-90	6.04	20.61	23.08	3.82
1990-91 to 91-92	3.09	23.55	25.55	8.27
1992-93 to 96-97*	6.50	23.88	25.25	3.88

*GDP growth rate is based on Quick Estimates for 1995-96 and Advance Estimates of CSO for 1996-97. Savings & Investment Rates are average for first four years of the Eighth Plan.

Source : Planning Commission

ECONOMY THROUGH FIVE YEAR PLANS

Particulars of GDP growth rate and rates of Investment and Savings and incremental capital output ratio as juxtaposed to Plan priorities and strategies are presented below:

Box 2.1 : GDP Growth, Investment and Savings through Five Year Plans

Plan Period	Growth in GDP at factor cost	Investment rate% (1) & ICOR (2)	Savings Rate %	Priorities and strategy
1	2	3	4	5
First Plan	3.61	(1) 10.66	10.28	• Highest priority to agriculture for foodgrain production.
1951-52 to		(2) 2.98		• Investment in irrigation and Power
1955-56				• Increase investment from 5 to 7% of GDP
Second Plan	4.27	(1) 14.52	11.73	To establish a socialistic pattern of Society—
1956-57 to		(2) 3.40		• Increase GDP by 25%
1960-61				• Rapid industrialisation with emphasis on the development of basic and heavy industries.
				• Large expansion of employment opportunities.
				• Reduction of inequalities income and wealth; more even distribution of economic power.
				• Raise investment from 7% to 11% of GDP by 1960-61.
Third Plan	2.84	(1) 15.45	13.21	Self sustaining growth—
1961-62 to		(2) 5.44		• Increase in GDP at 5% per annum; a pattern of invetment which could sustain this rate of growth during subsequent plan periods.
1965-66				• Self sufficiency in foodgrains; agricultural production to meet the requirements of industry and exports.
				• Expand basic industries like steel, chemicals, fuel and power; establish machine building capacity to facilitate satisfaction of the country's demand for further industrialisation within a period of 10 years from the country's own resources.

1	2	3	4	5
				• Full utilisation of the man power resources; substantial expansion in employment opportunities. • Reduction in disparities of income and wealth; a more even distribution of economic power.
Performance during the years 1966-71 Annual Plans (Rolling Plan) 1966-67 1967-68 1968-69	4.66	(1) 15.99 (2) 3.43	14.35	Between 1966-69, three Annual Plans within the framework of the draft outline of the Fourth Plan were formulated. Indo-Pakistan conflict in 1965, two successive years of drought, devaluation of the currency, general rise in prices and erosion of resources available for Plan purposes delayed the finalisation of the Fourth Five Year Plan.
Fourth Plan 1969-74				• Acceleration of development; insulation of economy from the fluctuations of foreign aid. • Raising standard of living and concentration on the less privileged.
Performance during the years 1971-72 to 1975-76	3.08	(1) 17.87 (2) 5.80	17.27	• Provision of employment; • Diffusion of economic power.
Fifth Plan 1974-79				• Control Inflation • Targeted annual growth rate of GDP 5.5% • Achieve self reliance • Raise standard of living and consumption levels of people living below poverty line.
Performance during the years 1976-77 to 1980-81	3.24	(1) 21.47 (2) 6.63	21.65	
Sixth Plan 1980-85				• Removal of poverty • Strengthening infrastructure for both agriculture and industry • Emphasis on a systems approach to deal with inter-related problems.
Performance during the years 1981-82 to 1985-86	5.06	(1) 20.98 (2) 4.15	19.36	• Management efficiency and intensive monitoring in all sectors. • People's participation at the local level in the formulation of schemes.
Seventh Plan 1985—90				• Emphasis on rapid growth of foodgrain production. • Increase in employment opportunities. • Growth, modernisation, self reliance and social justice

1	2	3	4	5
Performance during the years				• Reduction of unemployment—special programmes—Jawahar Rozgar Yojana
1985-86 to 1989-90	5.81	(1) 22.70 (2) 3.91	20.37	• Recognition to small scale and food processing industries
Performance during the years				
1985-86 to 1991-92	5.31	(1) 23.17 (2) 4.36		
1990-91 & 1991-92				Eighth Plan did not take off on schedule in 1990. Two Annual Plans for 1990-91 and 1991-92 were implemented. These were formulated within the framework of the earlier approach to the Eighth Five Year Plan (1990—95). The basic thrust of these Annual Plans was on maximisation of employment and social transformation.
Eighth Five Year Plan 1992-97				Strategy of an indicative plan relevant to global economic changes, market forces and competition.
				• Definition and limitation of Government role and the Public Sector to the most essential activities important for the Society.
				• Introduction of Panchayati Raj at the local Government levels.
				• Special attention to employment in the rural areas with the objective of eradicating poverty.
				• Special employment programmes for educated youth and empowerment programme for women.
				• Revamped Public Distribution System.

The finances needed for development, were raised mainly through domestic savings which contributed between 90 and 95 per cent of investment in different periods. The rate of savings increased from an average of 10.3 per cent of GDP during 1951-56 to 21.7 per cent during 1976-81. It, however, declined in the eighties, averaging around 20 per cent. In the last two to three years again, the savings increased to levels ranging between 21 and 22 per cent of GDP. Household sector was the largest contributor to domestic savings, with its share rising over the years as shown in the table below. On the whole, performance of the Indian economy in the area of savings has been good as compared to many other developing countries. There have, however, been certain disturbing trends in this sphere in recent years. The public sector saving was declining.

Table 2.2

Sectoral Savings Rate for Indian Economy (per cent)

	1950-51 to 59-60	1960-61 to 69-70	1970-71 to 79-80	1980-81 to 84-85	1985-86 to 89-90	1990-91 to 91-92	1992-93 to 95-96*
Household Sector	8.01	9.22	13.57	14.10	16.21	19.10	18.83
Private Corporate Sector	1.04	1.53	1.61	1.62	2.04	3.00	3.60
Public Sector	1.72	2.74	3.73	3.69	2.36	1.45	1.45
Public Authority	1.47	2.17	2.50	1.54	–0.83	-	-
Non-Departmental enterprises	0.26	0.56	1.23	2.15	3.19	-	-
Gross Domestic Savings	**10.77**	**13.48**	**18.91**	**19.41**	**20.61**	**23.55**	**23.88**

*Data for 1996-97 is not available as yet.
Source : Planning Commission

A rising saving rate sustained a rising rate of investment. The rate of investment increased from about 10.7 per cent of GDP in the period 1951—56 to about 23 per cent during 1985—92. The biggest increase in the rate of investment occurred in the public sector. The share of public sector increased from 27 per cent of total investment in 1950-51 to a little over 46 per cent in the Seventh Plan. However, the growth rate of the economy was not commensurate with the rising levels of investment in the first three decades of Planning. The capital output ratio was increasing. The deterioration in the incremental capital output ratio (ICOR) could be attributed to several factors —

- consequences of the very process of development, like changes in the composition of investments (for example, from engineering to chemical industries)
- rising real cost in sectors like irrigation and mineral development where the easier opportunities had been exhausted first.
- inefficiency in resource use — time and cost overruns in execution of projects, lack of synchronisation in the implementation of inter linked projects.

Given the structure of the Indian economy, growth in the national income has largely been determined by the trends in agricultural production. The reason is that agriculture is the largest component of GDP and has an overall impact on other sectors *via* input linkages, employment and incomes. The average performance of the agriculture sector has shown some improvement in the eighties as compared to earlier periods.

The growth rates at three sector levels are presented below:

Table 2.3

Sectoral Growth Rate in Indian Economy – 1950–97 (Percentage share in GDP)

Sector	1950-51 to 59-60	1960-61 to 69-70	1970-71 to 79-80	1980-81 to 84-85	1985-86 to 89-90	1990-91 to 91-92	1992-93 to 96-97
Agriculture	2.75	2.59	1.31	5.77	3.66	1.10	3.60
Industry	5.87	6.37	3.93	6.07	7.45	2.67	8.42
Services	3.97	4.72	4.41	5.43	7.44	5.08	7.31
Total	**3.59**	**3.96**	**2.94**	**5.68**	**6.04**	**3.09**	**6.48**

Source : Planning Commission

As other sectors have come up, the share of agriculture in GDP has now stabilised at about 33 per cent as compared to 51 per cent in the fifties as shown in the Table below:

Table 2.4

Sectoral Share in Total 1950–96 (Percentage share in GDP)

Sector	1950-51 to 59-60	1960-61 to 69-70	1970-71 to 79-80	1980-81 to 84-85	1985-86 to 89-90	1990-91 to 91-92	1992-93 to 95-96
Agriculture	51.36	46.44	42.44	38.56	34.46	33.50	32.29
Industry	16.57	20.33	22.59	24.54	25.96	26.20	26.30
Services	32.07	33.23	34.97	36.90	39.58	40.30	41.41
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Source : Planning Commission

Growth has brought about a structural change in the economy as revealed by the above table. This has surfaced in the form of a shift in the sectoral composition of production, diversification of activities, advancement of technology and a gradual transformation of a feudal and colonial economy into a modern industrial nation. The composition of national income has changed steadily over the plan era. While the share of agriculture and allied activities in the GDP has declined, that of the tertiary sector has increased. The expansion of services has not only been conducive for employment generation but also for better efficiency of the system and better quality of life. Education, health care, extension work, research and its application are all part of the services sector. They contribute to the quality of life as well as productivity. As regards the secondary sector, the increase in its share in GDP is due mainly to improved performance of the infrastructure areas like electricity, gas and water supply and the growth of registered manufacturing sectors. Though the share of agriculture sector in the rate of growth of GDP is still quite large, for the first time, in the Seventh Plan it was less than the contribution of the tertiary sector. This is one of the consequences of significant step-up in the pace of growth.

An examination of the key indicators of economic performance suggests that the Indian growth experience so far can be divided into three phases.

Sustained Growth

A sustained growth phase spans the first three Five Year Plans (1950-51 to 1964-65). During this period, there was a distinct acceleration in the rate of growth of investment in general and public investment in particular in real terms. Industrial output recorded a fairly sustained compound growth rate of 8 to 10 per cent per annum. Foodgrain output rose at the compound rate of 3 to 3.5 per cent per annum. Overall per capita income in real terms experienced a compound growth rate of 1.84 per cent per annum.

Deceleration in Growth

A sharp break in this growth process took place since the mid-sixties. The period 1965-66 to 1979-80 covering the next three Five Year Plans (adjusting for Plan holiday and Annual Plans) has been characterised by a noticeable deceleration in the tempo of growth. There has been a virtual stagnation in absolute terms or a distinct deceleration in the rate of growth of real public sector investment as well as that of industrial output. While the growth rate of foodgrain output has been maintained, per capita income in real terms has alternated between stagnation and intermittent growth. The trend rate of per capita income was distinctly lower at around 1 per cent per annum during 1965-66 to 1979-80.

Accelerated Growth

Since the early eighties till now, the Indian economy seems to have shifted back to an accelerating growth phase despite various internal and external shocks. This is reflected in the compound rate of growth of foodgrains at around 3 per cent per annum, the rate of growth in the industrial output at 7 to 8 per cent per annum and the real per capita income growing at a compound rate of close to 3 per cent per annum during the period 1980-81 to 1994-96.

Growth in National Income and Per Capita Income

During the period 1950-51 to 1994-95, the National Income — Net National Product (NNP) has increased 5.4 times from Rs. 40,454 crore (at 1980-81 prices) to Rs. 2,21,406 crore implying a compound growth rate of about 4 per cent per annum. The per capita income has increased 2.1 times from Rs. 1127 to Rs. 2450 registering a growth of about 1.8 per cent per annum as shown in the Table 2.5:

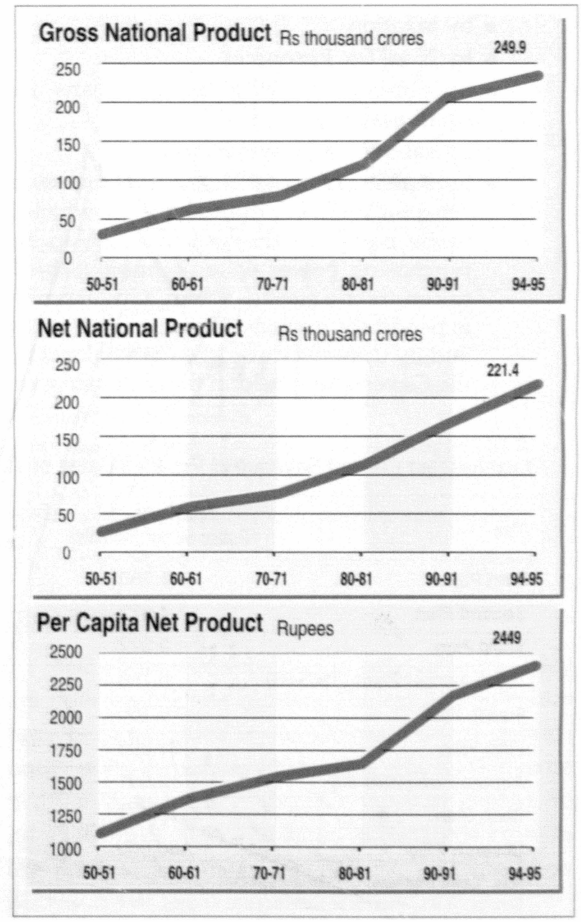


Table 2.5

Growth of National Income and Per Capita Income

(At 1980-81 prices)

Year	Gross National Product (GNP) (Rs in crore)	Net National Product (NNP) (Rs in crore)	Per Capita Net Product (Rs.)
1950-51	42,644	40,454	1,127
1960-61	62,532	58,602	1,350
1970-71	89,465	82,211	1,520
1980-81	122,772	110,685	1,630
1990-91	208,481	186,446	2,222
1994-95	249,903	221,406	2,449

As per quick estimates, the GNP during 1995-96 stands at Rs. 26,7330 crore. NNP is estimated to be Rs. 23,678 crore. Per capita income during 1995-96 is estimated to be Rs. 2,573 crore.

RESOURCE MOBILISATION

The Government raises resources by several methods—

- by taxation
- by Non-Tax Resources
- by public borrowing (market loans and small savings)
- by external borrowings and aid
- by deficit financing (this is also known as "created money", the volume of which is to be equal to the net increase in the purchasing power of the economy; this is taken recourse to when Government expenditure exceeds Government receipts and by drawing down the cash balances of the Government held in the State treasuries or by borrowing from the Reserve Bank of India.)
- by tapping the profits of the public sector.

Non-Tax Resources include domestic borrowings like market borrowings, small savings, Provident Fund, Deficit Financing and surpluses from Public Enterprises. Through the Five Year Plans, non-tax resources together have constituted a very high percentage of total public sector outlay. It was of the order of 63% and above excepting during the Fifth Plan, when it was 50.1%.

Consistent with the aspirations of the people, we always had ambitious Five Year Plans. Plan outlays kept doubling in each successive Plans. The Second Plan outlay was Rs. 4,672 crore, as against the First Plan outlay of Rs. 1,900 crore. The outlays for the Third to the Eighth Plans, respectively, were Rs. 8,577 crore, Rs. 15,779 crore, Rs. 39,426 crore, Rs. 1,02,646 crore, Rs. 1,80,000 crore and Rs. 8,50,000 crore. In order to finance these ambitious Plans and meet non-Plan expenditure, all the above mentioned modalities of raising resources were taken recourse to.

CURRENT REVENUE SURPLUSES AND FIVE YEAR PLANS

A large part of revenue collected from taxes on the rates prevailing in the pre-Plan year is utilised for meeting non-Plan expenses like internest payments, non-development expenditure, non-Plan development expenditure and maintenance expenditure on the previous Plan scheme, etc. If some surplus is available, it is utilised for financing the Plan. In financing different Five Year Plans, surpluses from current revenues have not been available significantly. This is partly due to low built-in revenue elasticity of tax structure (automatic increase in tax revenue without increasing rates or enlarging coverage, etc.) and partly due to large increases in non-Plan expenditure. There have been wide gaps between the original estimates and the actuals calculated after completion of the Plans.

Table 2.6

Balance from Current Revenue at Pre-Plan Rates of Taxation

(Rs. in crore)

Plan	Total Outlay in Public Sector (Actuals)	Balance from Current Revenue at pre-Plan rates of Taxation		Actuals as per cent of Total Outlay
		Original Estimates	Actuals	
First Plan	1,960	570	382	19.5
Second Plan	4,672	350	11	0.2
Third Plan	8,577	–550	–419	–4.9
Three Annual Plans (1966-69)	6,756	866	303	4.5
Fourth Plan	16,160	1,673	–236	–1.5
Fifth Plan	39,303	7,348	4,901	12.5
Annual Plan (1979-80)	12,601	2,823	2,217	17.6
Sixth Plan	*110,821	14,478	**1,893	1.7
Seventh Plan	180,000	–5,249	–	–

Note: *Latest Estimates ** Original Estimates

Source : R.B.I., Reports on Currency and Finance, 1969-70, Vol II, pp. 588-89; 1981-82, Vol III, pp. 102-03; 1985-86, Vol. II, pp. 106-07

As reflected by the above Table contribution of balance from current revenues in financing the Second, Third and Fourth Plans has been very poor and the actuals are seen to have been always much below the original estimates of current revenue surpluses.

Additional Taxation during the Plans

As the tax structure has not shown a sufficient degree of 'built-in' revenue elasticity, in different Five Year Plans, larger amounts were mobilised by increasing rates of taxes, expanding coverage of the tax, withdrawing concessions and by introducing new taxes termed by the Planning Commission as 'additional taxation' measures.

Table 2.7

Additional Taxation during the Plans

(Rs. in crores)

Plan	Total Amount of resource mobilised	Revenue from additional tax measures (Centre + States)	Additional taxes as % of total resources	Total Central Taxes	Total State Taxes	5 as % of 3	6 as % of 3
1	2	3	4	5	6	7	8
First Plan	1,960	255	13.0	175	80	68.6	31.4
Second Plan	4,672	1,052	22.5	800	252	76.0	24.0
Third Plan	8,577	2,892	33.7	2,042	850	70.6	29.4
Annual Plans (1966-69)	6,756	910	13.5	611	299	67.1	32.9
Fourth Plan	16,160	4,280	26.5	3,481	799	81.3	18.7
Fifth Plan	39,303	14,693	37.4	8,494	6,199	57.8	42.2
Annual Plan	12,601	2,115	16.8	1,510	605	71.4	28.6
Sixth Plan	110,821	20,146	18.2	13,133	7,013	65.2	34.8
Seventh Plan	180,000	21,250	11.8	8,250	13,000	38.8	61.2

Sources : 1. Government of India, Planning Commission, Review of the First Five Year Plan (1957), p. 28
2. Government of India, Planning Commission, Plan Resources and Outlay: A Review, July 1959, p. 36-37
3. Government of India, Planning Commission, Draft Fifth Five Year Plan, (1974-79), Vol. I, p. 55
4. R.B.I., Report on Currency and Finance, 1985-86, Vol. II, p. 106-07

Despite higher and increasing rates of taxes, the experience was that balances from current revenues were not adequately generated, both due to low levels of tax recoveries and expansion of Government expenditure, apart from low levels of tax base. The performance of the States in mobilising tax resources has also been rather low. One reason for this has been that the tax sources of the States are less elastic, compared to those of the Central Government. Apart from this, most of taxation efforts of the States have centred around non-agricultural sector—Sales Tax, State Excise Duties, Motor Vehicles Tax, etc. It is obvious that over taxation of industrial goods may depress the demand for them, adversely impacting in turn, on the industrial tax base, apart from reducing employment opportunities.

Government Expenditure

Currently, Central Government's total expenditure stands at the level of Rs. 2,32,176 crore. The annual increases in non-Plan expenditure have been rather high. Non-Plan expenditure as a ratio of total Central Government Expenditure is also very high.

Table 2.8

Central Government Expenditure: Features

(Rs. in crore)

Total Expenditure (1997-98)	2,32,176
Total Non-Plan Expenditure (1997-98)	1,69,324
Percentage of Non-Plan Expenditure to Total	73%
Range of annual increase in Total Expenditure	10 to 15% (except in 1991-92)
Range of annual increase in Non-Plan Expenditure	12 to 18% (Except in 1991-92 & 1992-93)

Source: Union Budget 1997-98: An Appraisal, Lok Sabha Secretariat

Subsidies

The volume of subsidies is large in India. They are both visible and hidden. The explicit subsidies have been provided in the Central Budget as such under non-Plan expenditure. This was Rs. 140 crore in 1972-73 and rose to Rs. 2028 crore in 1980-81, to Rs. 12158 in 1990-91 and stood at Rs. 16694 crore in the Revised Estimates for 1996-97, and has been placed at Rs. 18251 crore for 1997-98.

The proportion of expenditure on subsidy had come down to 11% of the non-Plan outlay from the level of 16% in the 1980s. It is not that the outlay on subsidies has come down over the years, but that the non-Plan outlay has increased significantly. Expenditure on subsidy has also increased massively. However the relative rate of increase of subsidy is lower than the rate of increase of non-Plan outlay, hence the proportion has come down. While the non-Plan outlay has gone up from Rs. 1,47,404 crore in 1996-97 to Rs. 1,69,324 crore in 1997-98—an increase of Rs. 21920 crore, the outlay on Subsidy has gone up by Rs. 1557 crore between 1996-97 (RE) and 1997-98 (BE)—from Rs. 16,694 crore to Rs. 18251 crore.

Table 2.9

Subsidies by Central Government (Rs. in crore)

	1995-96	1996-97 (BE)	1996-97 (RE)	1997-98 (BE)
A) Major Subsidies, of which	**12,128**	**14,716**	**14,233**	**17,130**
Food	5,377	5,884	6,066	7,500
Indigenous Fertilisers	4,300	4,500	4,743	5,240
Imported Fertilisers	1,935	1,648	1,350	1,950
Export Promotion & Market Development	16	460	400	440
Sale of decontrolled Fertiliser with concession to farmers	500	2,224	1,674	2,000
B) Other Subsidies, of which	**1,177**	**1,604**	**2,461**	**1,121**
Railways	418	469	466	537
Mill-made cloth	1	1	–	–
Handloom cloth	143	139	98	84
Import/Export of Edible Oil	100	-	50	50
Interest Subsidies	34	434	1,257	34
Other Subsidies	481	561	590	416
Total (A+B)	**13,305**	**16,320**	**16,694**	**18,251**

Source : Union Budget: 1997-98: Lok Sabha Secretariat, An Appraisal

Food subsidy has increased from Rs. 5377 crore to Rs. 7500 crore in two years, and is likely to go up. This is an essential area of social safety net. The benefit of the subsidy will be enhanced if the targetted poor people benefit from foodgrain distribution at subsidised prices.

Subsidy on indigenous fertilizers—Rs. 5240 crore, imported fertilisers—Rs. 1950 crore, sale of decontrolled fertilizer with concession to farmers—Rs. 2000 crore, and export promotion and market development at Rs. 440 crore add up to Rs. 9630 crore, which is 53% of total subsidies. Other subsidies including Railways, Handloom cloth, edible oils, interest subsidies and others together add to the total of Rs. 18251 crore. The significant reduction in subsidies has been on interest subsidies to sick PSUs which has drastically come down from Rs. 1257 crore in 1996-97 to just Rs. 34 crore. This is consequent on Government policy not to give budgetary support to sick PSUs under the new economic reforms regime.

The non-Plan expenditure on subsidy and interest, explicitly given in the Budget document alone form 51% of the non-Plan expenditure in 1997-98.

Essentiality of subsidies is indisputable where they are meant for achieving specific goals of redistributive justice or targeted to specific population or when they are meant for creating externalities (that is, where the total benefit is more than the money expenditure like in the case of immunisation, etc.). The effectiveness of the subsidy depends on its design. The benefit to the economy can be much more than the rupee value of the subsidy. The current debate in India is on how efficiently are these subsidies used to achieve economic and social objectives—and whether a substantial part of these subsidies are benefiting the better off sections of the society, or reallocating resources to items of lower priority at the cost of priority sectors and sections.

In India the explicit subsidies shown in the Budget document are only few. There are several

implicit subsidies, like price concessions, retention prices interest subsidies, reimbursement of losses and free services. When these implicit and explicit subsidies mask inefficiencies they become a social liability. The search now is to identify inefficiencies and wasteful expenditures in the form of subsidy. The matter is already before the Parliament for consideration.

A distinction is made between "merit" and "non-merit" subsidies based on the perceived significant externalities associated with merit goods/ services. It is also recognised that in some cases like food, subsidies may be justified on grounds other than externalities, such as on grounds of income distribution or meeting minimum needs.

Subsidies in the provision of economic and social services by Government have been studied for the year 1994-95 by the National Institute of Public Finance and Policy and a discussion paper has been prepared on the basis of a study by the Ministry of Finance, Department of Economic Affairs. The aggregate level of subsidy for all services provided by the Central and State Governments is placed at Rs. 137,338 crore and it constituted 14.4% of GDP. The Central subsidy was Rs. 43,048 crore and State subsidy was Rs. 94,290 crore. The subsidies on 'non-merit' goods are five times the subsidy on merit goods at the Central level. The latter constitutes 3.8% of GDP while the former 1%.

The non-merit subsidies for the Centre and the State together work out to 10.7% of the GDP. The average All India recovery rate for these non-merit goods/services is just 10.3% implying a subsidy rate of almost 90% according to the study.

The discussion paper on subsidies has pointed out that the macro economic costs of unjustified subsidies are mirrored in persistent large fiscal deficits and consequently higher interest rates. The subsidies also cause distortions in the economy as the benefits do not go to the sections that deserve them most.

The discussion paper concludes that subsidy reforms should be directed towards—

- reduction of their size,
- making them of finite duration,
- using them for strict economic objectives,
- making them transparent, and
- administering them through final goods, with a view to maximising their reach towards the target population at minimum cost.

The question is how would recovery rates that are very low be raised to reduce the pressure on the fiscal deficit. Can the user charges in the area of higher education, agriculture, irrigation, industries, power and transport be raised ? Can there be an apolitical and objective debate on the matter ?

Debt Burden

The Central Government debt burden has been increasing over the years. Total outstanding liabilities of the Central Government which stood at 43.9% of GDP in 1980-81 has climbed up to 53.4% of GDP in 1996-97. This comprises outstandings of internal debt of Rs. 6,13,208 crore and external debt of Rs. 54,902 crore totalling to Rs. 6,68,110 crore. The liabilities as a proportion of GDP were at the peak in 1993-94 touching 59%. Since then the proportion has been coming down gently. The worrying point is that the new debts since liberalisation are at higher interest rates and add more to the interest burden. Strategies for early retirement of costly debts is essential to control resource flows for interest payments.

The total external debt of the country as in 1996 was Rs. 3,15,435 crore (US $ 92.2 billion). This implied a debt to GDP ratio of 29% and a debt service ratio of 26%. Borrowals from multilateral and bilateral sources account for a high proportion of India's external debts. Principally, the debt is of a long term nature. Short term debt is only of the order of 5.5%. By international standards, India's external debt is considered to be quite high.

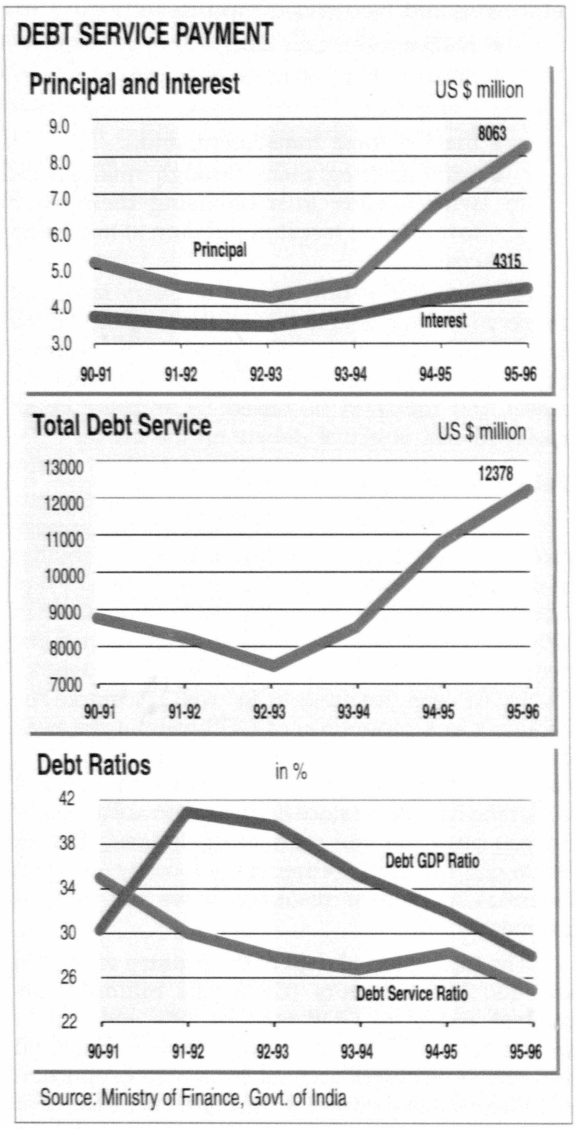
Table 2.10

Debt Service Payments and Debt Ratios

(US $ million)

Years	Principal	Interest	Total Debt Service	Debt Service Ratio (%)	Debt GDP Ratio (%)
1990-91	5,028	3,954	8,982	35.3	30.4
1991-92	4,705	3,545	8,250	30.2	41.0
1992-93	4,181	3,477	7,658	28.6	39.8
1993-94	4,783	3,818	8,601	26.9	35.9
1994-95	6,825	4,099	10,924	27.5	32.7
1995-96	8,063	4,315	12,378	25.7	28.7

Source : Government of India, Ministry of Finance



Source: Ministry of Finance, Govt. of India

The total assets of the Central Government stood at Rs. 4,27,393 crore in 1996-97. This formed 34.1% of the GDP. Assets are at their historical value and do not reflect their current value. Consequently a comparison of the assets and liabilities will not give the correct picture.

Even as the Government of india bears a very heavy debt burden, the State Governments also bear a very heavy debt burden on account of their liability to repay plan loans and small savings to the Government of India. As on 31st March, 1997, 25 State Governments had an outstanding loan liability, in this regard, of Rs. 1,42,227 crore.

Table 2.11

Outstanding Loan Liabilities of State Governments payable to the Government of India
(Plan Loans and Small Savings) (Rs. in crore)

State	Loan outstanding as on 31.3.1997
Andhra Pradesh	10,340.77
Arunachal Pradesh	229.94
Assam	3,644.50
Bihar	9,487.22
Goa	799.96
Gujarat	9,839.37
Haryana	3,517.96
Himachal Pradesh	1,660.25
Jammu & Kashmir	2,849.50
Karnataka	6,712.51
Kerala	4,550.07
Madhya Pradesh	6,390.73
Maharashtra	15,854.42
Manipur	204.76
Meghalaya	234.23
Mizoram	149.69
Nagaland	249.83
Orissa	4,666.23
Punjab	10,642.41
Rajasthan	6,994.12
Sikkim	136.50
Tamil Nadu	8,403.85
Tripura	354.02
Uttar Pradesh	21,096.97
West Bengal	13,217.32
TOTAL	**1,42,227.13**

Source: Ministry of Finance

Interest Burden

The mode of financing our Plan and non-Plan expenditure is determined by the extent of revenue receipts from direct and indirect tax resources and the cumulative returns from the earlier investments made in the public sector. Unfortunately for us, these two sources have not been able to match the resource requirement. Consequently, there has been a heavy reliance on domestic borrowings and a certain extent of external borrowings. While raising resources through borrowings is an accepted channel of funding, it becomes a nightmare if the burden is unbearable. It leads the economy into the classical debt-trap situation if borrowings in a year do not even cover the interest charges to be paid during the year.

The levels of interest commitments we have reached is alarming. The provision for interest payments in the 1997-98 budget is Rs. 68,000 crore. This forms 40% of the non-Plan expenditure of Rs. 1,69,324 crore. The debt burden in the Eighth Plan period having increased steeply, the interest liability has risen from 20% in 1980-81 to 28% in 1990-91, to 40% in 1997-98.

Between 1990-91 and 1997-98 total interest payments went up from 39% to 44% of revenue receipts. As revenue receipts are anticipated to increase substantially from Rs. 1,10,130 crore in 1995-96 to Rs. 1,53,143 crore in 1997-98, there is a 1% drop in the proportion of interest from 45% of the revenue receipts registered in 1995-96 to 44% in 1996-97. In absolute terms the increase in the interest burden is Rs. 9,500 crore in the current year over the revised estimate for last year.

Interest payments of Rs. 68,000 crore during 1997-98 would exceed gross fiscal deficit, or net additions to borrowings of Rs. 65,454 crore for the year. It accounts for 103.9% of fiscal deficit.

The real concern is that the rising interest burden increasingly has become a larger proportion of Government expenditure, which now forms 29.3% of total Government expenditure. It is not a happy situation to have to block 4.7% of the GDP only to service the loans depriving other developmental needs. A phased programme to reduce borrowings or fiscal deficit has to be mounted—simultaneously augmenting revenue receipts and generation of internal resources by the public enterprises.

Deficit Financing

The Government is committed to bringing down the fiscal deficit to a level of 4% (or lesser) of GDP. Deficit financing has a tendency to fire inflation and upset price stability. One of the sheet anchors of economic reforms is to keep deficits low and curb inflation. This requires two major conditions: one is increase of revenues and the other is reduction of expenditure. More often, both have to be done simultaneously to bring in good financial management of the economy and spur a good rate of economic growth, to achieve a whole range of goals to sustain economic development.

The practice of 'budget deficit', a system of using *ad hoc* treasury bills to finance deficits has been discontinued from 1st April 1997. A scheme of Ways and Means Advance (WMA) to the Central Government has been initiated by the Reserve Bank of India to accommodate temporary mismatches in Government's receipts and payments.

In future, Gross Fiscal Deficit (GFD) will be the key indicator of deficit. Gross Fiscal Deficit is defined as the difference between the revenue receipts and the total expenditure including loans net of repayments. The gross fiscal deficit budgeted for 1997-98 is Rs. 64,454 crore which forms 4.5% of GDP for the year.

In the period of economic reforms, over the past six regular budgets, the fiscal deficit has declined as a proportion of GDP from 8.3% in 1990-91 to 5% in 1996-97 (RE). Significant decline occurred in the first year, thereafter, it hovered around 6% though it rose to 7.5% in 1993-94. Revenue receipts have been rising and proportionately expenditure has been coming down over all.

Table 2.12

Gross Fiscal Deficit

Year	Rs. in crore	As % of GDP
1990-91	44,632	8.4
1992-93	40,173	5.7
1993-94	60,257	7.7
1994-95	57,703	6.1
1995-96	60,243	5.5
1996-97 (BE)	62,266	4.9
1996-97 (RE)	63,131	5.0
1997-98 (BE)	65,454	4.5

Source : Union Budget: 1997-98: Lok Sabha Secretariat, An Appraisal

Revenue Deficit is the excess of revenue expenditure over revenue receipts. It shows the deficit of the Government on the current account. The revenue deficit has declined from 3.5% of GDP to 2.1% in 1997-98 (BE), though the deficit has moved to Rs. 30,266 crore in 1997-98 from Rs. 18,562 crore in 1990-91. This is an increase of Rs. 2,000 crore over 1996-97 (RE).

The revenue deficit during 1996-97 worked out to 45% of the GFD for the year. The implication of this is that nearly half of Central Government borrowing was utilised for bridging the gap on revenue account which would not result in any income yielding asset creation.

The difference in receipts and disbursements under capital account makes for capital surplus or deficit. The capital surplus is to be ploughed back for development. The last ten years have consistently been showing a capital surplus, but the surpluses have been much less than the Revenue deficits.

In 1997-98, the capital surplus would seem to be equal to the revenue deficit and may apparently close the Budget deficit but will leave no resources to be transferred to the capital budget for developmental activities. This does not make for good fiscal policy.

It is immanent, therefore, that revenue receipts should be augmented in adequate measure to cover all expenditure and bring down expenditure, particularly the category that will not generate new resources.

A great deal of investment in the public enterprises has not been able to generate resources for development, as many of them have been incurring losses or generating low levels of profits. The poor returns from the Public Sector Undertakings, into which a significant part of our earlier Plan investments, has gone, is one reason for our inadequate revenue receipts causing the deficits. In the Economic Reforms Process, further support to Public Enterprises from budgetary sources has been discontinued and to this extent, deficits are getting lowered.

Revenue from Public Sector Enterprises

There are 241 Central Public Sector Enterprises. As in 1994-95, the capital employed by these enterprises was of the order of Rs. 1,613.1 billion (Rs. 1,61,300 crore). Their collective performance yielded only 6% pre-tax profit to capital employed and the percentage of profit after tax to their net worth was only 5.8%.

Table 2.13

Profitability of Central Public Sector Undertakings (CPSUs) (Rs. in Billions)

	1960-61	1970-71	1980-81	1990-91	1992-93	1993-94	1994-95
Number of Units	26	87	168	236	237	240	241
Paid up capital	1.7	18.2	87.3	432.4	518.7	559.7	582.9
Net Worth	1.9	22.0	115.5	757.3	956.5	1088.1	1230.0
Capital Employed	2.4	36.5	182.3	1020.8	1399.3	1598.4	1613.1
Gross Profit	0.1	1.5	14.2	111.0	159.8	185.6	225.1
Pre-Tax Profits	0.1	0.2	0.4	35.0	52.0	66.6	98.0
Profit After Tax (PAT)	0.1	0.0	-1.8	22.7	34.0	45.5	72.2
% Gross Margin to Capital Employed	10.3	9.5	13.2	17.9	18.0	17.3	20.6
% Gross Profit to Capital Employed	5.5	4.0	7.8	10.9	11.4	11.6	13.9
% Pre-Tax Profit to Capital Employed	4.5	0.6	0.2	3.4	3.7	4.1	6.0
% PAT to Net Worth	4.2	-0.1	-1.6	3.0	3.5	4.2	5.8

Source : Economic Review, 1996-97

It may be seen from the above Table that their overall performance was negative in terms of returns during the 70s and 80s. In the 90s, there has been a little bit of improvement. As on 31st March 1996, Fifty-six Central Public Sector Enterprises stood registered with the Board for Industrial and Financial Reconstruction. According to the Public Enterprises Survey (1995-96) carried out by the Ministry of Industry, Department of Public Enterprises, in 1995-96, 101 Central Public Sector Enterprises incurred a loss, in the aggregate, of Rs. 4,826 crore.

ECONOMIC REFORMS AND STRUCTURAL ADJUSTMENT

Since the early days of Independence, we were accustomed to a highly protected economy. We protected our economic enterprises, our investment, our currency, our commodity and capital markets, and our trade. The economy was characterised by large scale investments in the Public Sector and comparatively lesser role for the private sector; pre-emption/restriction of Foreign Direct Investment; regulation of capacities of industrial enterprises; high levels of corporate taxation on low tax bases; low tax and non-tax revenues; high levels of internal and external debt burden; ever increasing Government expenditure, artificially fixed non-convertible exchange rates and a trade policy regime based on import-export restrictions.

The consequences were recurrent fiscal deficits, high levels of current expenditure and consequent low capital formation for investments; high production constraints; heavy demands on

Government Budget; self perpetuating subsidies; low inflows of technologies with consequent low productivity levels, apart from low competitiveness and serious limitations on shift of resources from non-traded to traded goods; and decline of India's share in world trade to less than half of one per cent in the late 1980s as against 2% in the 1950s. Added to all this, was regulated labour market in the organized sector which meant better working conditions for some and fewer job opportunities for others.

In short, the general economic scenario was one of deployment of resources which was not conducive to economic growth and wealth generation. Economic stagnation or deceleration were demonstrable.

In June, 1991, in the midst of severe fiscal and external imbalances which had generated double-digit inflation and put the country on the verge of defaulting on its external debt obligations, the Government took a series of corrective measures aimed at crisis management as well as long term measures of structural reforms, aimed at improving efficiency and productivity and putting the economy back on the path of sustainable growth with equity and social justice.

Reform Measures

The various policy and administrative measures taken up as part of the economic reform process include—

- Control over budget and revenue deficit and lower taxes with better compliance;
- A predominantly market determined exchange rate policy;
- Introduction of current account convertibility of the rupee;
- Drastic reduction in import duties;
- Limiting licensing requirements to just 18 industries on grounds of safety, ecology and strategic considerations;
- Restructuring of chronically loss-making public sector enterprises (25 of them have been permitted restructuring by the Board for Industrial and Financial Reconstruction);
- Overhaul of foreign investment regime;
- Opening up the sectors of power, refineries, telecom, airlines, roads, coal, banking and financing services for private enterprises.

Reform Results

The reform process has brought about some good results. The GDP rose to the level of 6.2% in 1994-95 against 0.9% in 1991-92; the flow of direct taxes in the Government kitty doubled in four years since 1991-92; direct tax collection in 1994-95 was Rs. 26,000 crore as against Rs. 14,584 crore in 1991-92; actual flow of Foreign Direct Investment crossed Rs. 18,000 crore mark by September 1996 (FDI approvals were of the order of Rs. 97,777 crore); new private enterprises have been established in banking and financial services, commercial airlines and software development; Foreign Exchange Reserves, in rupee terms, increased to Rs. 64,660 crore.

During the Eighth Five Year Plan period as a whole, (1992—97), our performance was generally better in several spheres compared to the earlier Five Year Plan period — in agriculture, manufacturing, international trade, etc. Our food grain production has reached the level of 195 million tonnes. The Balance of Payments (BoP) strengthened considerably. Central Government's Fiscal Deficit as a ratio of GDP declined. Our Gross Domestic Savings went up to the level of 24%. Infrastructure Sectors also, excepting for Telecommunications, registered growth in net output. Inflation was contained at single digit levels.

By 1994-95, economic growth has reached the level of 7.2%. No doubt, there was a slow down in the pace of reforms in 1994-95. Nevertheless, growth registered 7.1% in 1995-96 as well. Growth rate is estimated to have been around 7% in 1996-97 also. In the background of economic recession that was being experienced elsewhere in the world, including the developed countries over the last couple of years, our growth has been considered to be significant. Based on our performance during the last three years, we are rated amongst the top ten performers in the world.

Foreign Capital Flows

Foreign Direct Investment (FDI) inflow since the beginning of reforms has crossed the level of Rs. 18,000 crore, while the approvals are of the order of about Rs. 97,777 crore. The Fuel and Services Sectors are the front runners in attracting FDI. Financial and banking services account for nearly 50% of FDI approvals. In the household sector, India has more than 20 million investors, the second largest in the world. However, as the above figures reflect, there is a wide gap between actual inflows and approvals, inflows being only 18.5% of approvals, which is indicative of systemic inadequacies in following up on approvals.

Table 2.14

Foreign Direct Investment : Actual Inflows vs Approvals

	1991	1992	1993	1994	1995	1996*	Total (1991to 96*)
Approvals							
Rs. Crore	739	5,256	11,189	13,591	37,489	29,513	**97,777**
US $ million	325	1,781	3,559	4,332	11,245	8,367	**29,608**
Actual Inflows							
Rs. Crore	351	675	1,786	3,009	6,720	5,877	**18,418**
US $ million	155	233	574	959	2,100	1,670	**5,690**
Actual as % of Approvals	48	13	16	22	19	20	**19**

Note: The approval and actual figures include NRI Direct Investment approved by RBI. All figures relate to calendar year
*Upto September 1996
Source: Economic Review, 1996-97

No doubt, much more remains to be done. Overall fiscal deficit needs to be brought down further. Infrastructure needs a significant order of further improvement. Financial sector reforms need to be pursued further. Distortions in Public Sector Enterprises need significant corrections. Tariff rates are considered still high by international standards and may need further attention.

Buoyant capital inflow from abroad are motivated by several factors. They are—

- low industrial country interest rates;
- strong liquidity in industrialised countries —particularly in USA, Japan and Europe;
- transnational location of industries as part of the process of globalisation on account of perceived lower cost of production in host countries;
- reduced country risk perceptions;
- market liberalisation by economic reforms in host countries;
- portfolio diversification by industrial country investors so as to maximise their returns.

Of course, the crisis situation in Mexico, the Czech Republic and Thailand in managing inflow of the foreign capital has caused the apprehension in the minds of countries undergoing reforms. What is needed, however, is development of capabilities amongst the host countries to properly manage capital inflows, such management capabilities duly supported by promotion of investor confidence by the policies of the host country government. In India, of course, we have taken precautions in terms of a limit of 24% on the equity investments of Foreign Institutional Investors. There are also regulations regarding withdrawals of investments.

No more returns could be withdrawn than invested except with the permission of the Reserve Bank of India.

Table 2.15

Net Investment by Foreign Institutional Investors : 1992-93 to 1996-97

Period	Amount (US $ million)	Per cent Variation*
1992-93		
January – March	4.3	–
Total	**4.3**	
1993-94		
April – June	47.7	–
July – September	176.2	–
October – December	599.1	–
January – March	811.1	–
Total	**1634.1**	
1994-95		
April – June	706.9	1382.0
July – September	441.0	150.3
October – December	205.8	–65.6
January – March	174.6	–78.5
Total	**1528.3**	**–6.5**
1995-96		
April – June	244.4	–65.4
July – September	510.0	15.6
October – December	262.4	27.5
January – March	1018.9	483.6
Total	**2035.6**	**33.2**
1996-97		
April – June	1078.7	341.4
July – September	511.5	0.3
October – December	442.6	68.7
Total	**2032.8**	**99.5**

*Variation over the level in the corresponding period of the previous year
Source: Economic Review, 1996-97

Relative to certain other countries in the Asian region, however, India is attracting far lesser capital inflows from abroad, though we have been steadily improving in attracting foreign capital.

Table 2.16

Foreign Direct Investment Inflows by host region

(US $ million)

Country	1990	1991	1992	1993	1994	1995(E)
China	3487	4366	11156	27515	33787	37500
Hong Kong	1728	538	2051	1667	2000	2100
India	162	141	151	273	620	1750
Indonesia	1093	1482	1777	2004	2109	4500
Republic of Korea	788	1180	727	588	809	1500
Malaysia	2333	3998	5183	5006	4348	5800
Singapore	5575	4879	2351	5016	5588	5302
Taiwan Province of China	1330	1271	879	917	1375	1470
All Developing Countries (including China)	33735	41324	50376	73135	87024	99670
Share of India in all developing countries (%)	0.48	0.34	0.30	0.37	0.71	1.76

Note: Figures for India in this table may differ from those in Table 2.14 because of differences in coverage and source of information (E): Estimates
Source : World Investment Report 1996, United Nations

Foreign capital inflows help in supplementing domestic savings available for investment; deepen the stock market, providing liquidity to the Market and finances for emerging companies; facilitates syndicated bank lendings for infrastructure which requires huge capital; and they by themselves bring in management know-how, technology transfers and access to international markets.

Special precautions to be taken in the management of foreign capital flows are :—

- Investments should go into productive channels;
- Right kind of investments have to be made, preferably in export oriented ventures;
- Significant current account deficits in the face of large foreign exchange resources would need to be avoided;
- Currency over valuation in the face of heavy capital inflows should be avoided too; this would call for vigilant monetary policy;
- Short term debts should be kept low.

II

SECTORAL PROFILE

AGRICULTURE

Through Five Year Plans Agriculture was accorded high priority to provide food security for the people. It also remained the most important sector for economic development as a substantial part of the national income came from agriculture. Most of all it was and still is the major sector of employment in the country. The development of industry was closely linked with the development of agriculture for the raw materials for industrial production and expansion of foreign trade with increased outputs of commodities from agriculture.

Growth Rate

Agriculture growth in India was about 3.2% till mid-sixties. This was attributed to expansion of area under cultivation; the growth rate increased by about 2.2% in the seventies, mainly due to increase in the yields. From 1980-81 to 1993-94 the acceleration of the rate of growth in agriculture at around 3.4% has been both due to high yielding varieties and improved technologies. The pace of growth in agriculture has declined since, and mainly due to slow growth of foodgrains production. The annual compound growth rate of foodgrains production for the past six years between 1990-91

to 1966-97 at 1.7% is lower than the annual population growth of 1.9%, which is a matter of concern.

The rate of growth of foodgrain crops lagged behind that of the non-foodgrain crops during the first fifteen years of economic Planning, but subsequently overtook the latter as would be seen from the table 2.17.

Table 2.17

All India Compound Rates of growth of Agricultural Production (Percentage)

	1952-66	1967-95
Foodgrains	2.52	2.59
Non-Foodgrains	3.87	2.49
All Crops	**2.90**	**2.56**

Source: Computed from Economic Surveys, (Ministry of Finance)

Production

The production of foodgrains increased from 50.8 million tonnes in 1950-51 to 191.5 million tonnes in 1994-95, with cereals production moving from 42.9 million tonnes in 1950-51 to 177.5 million tonnes in 1994-95. Against this remarkable achievement production of pulses remains stagnant at 11-12 million tonnes except for some very recent success.

Table 2.18

Trends in Agricultural Production

Group/Commodity	Unit	1950-51	1960-61	1970-71	1980-81	1990-91	1994-95
Foodgrains	Million tonnes	50.8	82.0	108.4	129.6	176.4	191.5
Cereals	Million tonnes	42.9	69.3	96.6	119.0	162.1	177.5
Rice	Million tonnes	20.6	34.6	42.2	53.6	74.3	81.8
Wheat	Million tonnes	6.4	11.0	23.8	36.3	55.1	65.8
Jawar	Million tonnes	5.5	9.8	8.1	10.4	11.7	9.0
Bajra	Million tonnes	2.6	3.3	8.0	5.3	6.9	7.2
Maize	Million tonnes	1.7	4.1	7.5	7.0	9.0	8.9
Pulses	Million tonnes	8.4	12.7	11.8	10.6	14.3	14.1
Oilseeds	Million tonnes	6.2	7.0	9.6	9.4	18.6	21.3
Sugarcane	Million tonnes	52.1	110.0	126.4	154.2	241.0	275.5
Cotton	Million Bales	3.0	5.6	4.8	7.0	9.8	11.9
Jute	Million Bales	3.3	4.1	4.9	6.5	7.9	8.0

Source : Economic Survey, 1996-97, Ministry of Finance

Productivity

In order to understand and appreciate the performance of agriculture, alongwith production trends, the productivity aspect is also to be considered. Following table shows productivity in agriculture, i.e. average yield per hectare in India.

Table 2.19

Yield per Hectare of Major Crops (Kg/hectare)

Group/Commodity	1950-51	1960-61	1970-71	1980-81	1990-91	1995-96
Foodgrains	552	710	872	1023	1380	1499
Cereals	-	753	949	1142	1571	1727
Rice	668	1013	1123	1336	1740	1855
Wheat	655	851	1307	1630	2281	2493
Jawar	353	533	466	660	841	834
Bajra	288	286	622	458	658	575
Maize	547	926	1279	1159	1518	1570
Pulses	-	539	524	473	578	552
Oilseeds	481	507	579	532	771	851
Sugarcane (tonnes/hectare)	-	46	48	58	65	68
Cotton	88	125	106	152	225	246
Jute	1044	1183	1186	1245	1833	1889

Source : Economic Survey, 1996-97, Ministry of Finance

While productivity levels have generally increased, they are significantly lesser than in other countries.

Table 2.20

Average Yield per hectare in selected countries

(Quintals per hectare)

Commodity / Country	1950-57	1961-65	1987-88
Rice			
India	8	10	17
China	17	18	35
USA	19	29	41
Japan	26	33	40
Wheat			
India	7	8	20
China	9	9	30
France	21	29	61
Germany	28	33	68
Cotton lint (kgs)			
India	90	120	202
China	160	250	764
Mexico	330	640	1100

Source: Agriculture in Brief (23rd Edition) 1990, Ministry of Agriculture

The year 1967-68 can be regarded as the benchmark year in the history of Indian agriculture. From this year onward efforts (in the form of new agricultural strategy) began to bear fruit; the stagnating trend of agricultural productivity changed its course and the yield per hectare began to increase. During the period 1969-70 to 1989-90 productivity increased by about 50 per cent. This buoyancy has been shared by almost all major crops, particularly wheat.

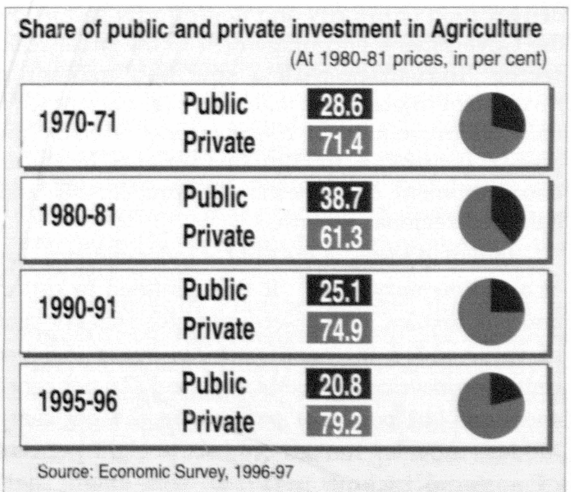
Investment

Substantial investment has been made in agriculture both by the Public and Private Sectors. The Private Sector Investment has been increasing in agriculture in the current decade, through it had registered a decline in the last decade in comparison with the public sector.

Table 2.21

Share of public and private investment in Agriculture

(At 1980-81 prices, in per cent)



Source: Economic Survey, 1996-97

The problem in regard to growth in the agricultural sector is that we have assured irrigation only in 30% of the cultivable lands in the country. Rest of the areas are dependent upon rain-fed irrigation. This renders agriculture vulnerable to the monsoons. It is well known that Green Revolution has been largely a phenomenon of the States of Punjab and Haryana, Western U.P. and Andhra Pradesh. It is principally from the districts of these States that surplus foodgrains are channelled into providing food self-sufficieny for the whole of the country.

The strategy for growth in the agriculture sector, worth considering in this background is:—

- Green Revolution being taken to the Gangetic East, Brahmaputra Valley and Central India as visualised by team of experts headed by Dr. Swaminathan.
- Large scale investments in infrastructure for agriculture, particularly for irrigation and soil conservation works and water-shed management.
- Ensuring that agricultural holdings are economically viable to support application of high-yielding variety technologies.
- Removal of restrictive policies regarding trade, movement and storage for agricultural commodities followed by Central as well as State Governments.

In this context, imaginative channelling of investments in rural development programmes which is at present about Rs.8,000 crore per annum for promoting agricultural growth is needed. These programmes are basically of two kinds—wage employment and self-employment programmes. Wage employment programmes could be geared to creating infrastructure for agriculture—minor irrigation works, check dams, land development works, etc. Self-employment programmes could be geared to imparting skills on agro-based, off-farm vocations like post-harvest processing of agricultural produce, food processing and rural industries ancillary to agriculture.

III

INDUSTRY

POLICIES: PAST AND NEW

Having adopted a 'mixed economy' where the public and private sectors could co-exist with the former dominating the core sectors of the economy, the Government has articulated its industrial policy through various Industrial Policy Resolutions. The key features of all these resolutions included a dominant role for the public sector (where the Government has a majority shareholding), demarcation of priority and non-priority sectors by the Government, encouragement to the small-scale sector industries with a specified maximum investment in plant and machinery (at present Rs. 6 million), prevention of concentration of economic power, control of foreign investments in India, encouragement of domestic entrepreneurship and balanced regional growth.

Indian industry at the time of Independence was at a rudimentary stage. It was confined to cotton and jute textiles, which accounted for 56.8 per cent of value-added in manufacturing, sugar (6.6 per cent), engineering (8.4 per cent), steel (7.6 per cent), chemicals (4.1 per cent) and cement (2.1 per cent). Modern industry formed only six to eight per cent of national income in 1950, with small scale enterprises and mining contributing 12 to 14 per cent. A feature of India's industrial sector soon after Independence was the virtual absence of capital or producer goods industry. Indian industries had to rely almost wholly on imported machinery and machine tools. In 1950, India met 89.8 per cent of its need for machine tools through imports, producing internally only Rs. 30 lakh worth of machine tools and portable tools.

The Industrial Policy Resolutions

Industrial growth after Independence was facilitated by the Industrial Policy Resolution of 1948, followed by the Industrial Policy Resolution of 1956, which had as its objective, the acceleration of the rate of economic growth and the speeding up of industrialisation as a means of achieving a socialist pattern of society. In 1956 capital was scarce and the base of entrepreneurship was not strong enough. Hence the 1956 Industrial Policy Resolution gave primacy to the role of the State to assume a predominant and direct responsibility for industrial development. Special importance was given in the two Resolutions of 1948 and 1956 to the development of steel, heavy engineering, machine tools and heavy chemicals industry.

The Industrial Policy Resolution of 1948 reserved certain industries for production by the public sector. These included the production of arms and ammunition, production and control of atomic energy and ownership and management of railways. However, coal, iron and steel, aircraft manufacturing, shipbuilding, manufacture of telegraph and wireless equipment (except radios) and minerals were reserved for production by Central or State Government undertakings. The 1956 Industrial Policy Resolution added some more industries to the list. The original thinking was that as far as the public sector was concerned, it should enter fields where private sector would find it difficult to invest. By 1956, this had changed and the public sector was supposed to capture the commanding heights of the economy.

The Industrial Policy Statement of 1973, *inter alia*, identified high-priority industries where investment from large industrial houses and foreign companies would be permitted. The Government found that while some of the elements of the earlier industrial policies still remained valid, the results had not been up to the expectations or declared objectives. In order that what were perceived as certain distortions of the past could be removed for meeting the genuine aspirations of the people within a time frame, the Government announced industrial policy in 1977. Industry and industrial policy were related to the needs of the economy as a whole. Role of the large scale sector in the socio-economic context was defined. Importance of cottage and tiny sectors was emphasised. Then came the Industrial Policy Statement of 1980 which focussed attention on the need for promoting competition in domestic market, technological upgradation and modernisation. The policy laid the foundation for an increasingly competitive export base and for encouraging foreign investment in high priority technology areas. This found expression in the Sixth Five Year Plan, which emphasised the need for productivity to be the central concern in all economic and production activities.

Nevertheless, the public sector continued to provide the thrust for the development of heavy industries. In critical areas such as power, railways, coal, petroleum, steel and fertilisers, the public sector were intensely involved in setting the pace of development. Apart from public investments in basic industry and infrastructure, the expansion of the private sector in line with Plan objectives and priorities was greatly facilitated by financial institutions. An elaborate network of specialised development banking institutions with the Industrial Development Bank of India at the apex was established to help finance industrial investment in the private sector. These institutions, numbering over 50, have become the major source of long-term finance for the corporate sector.

Developments in the Sixth and the Seventh Plans

The next Statement on Industrial Policy of 1991 found that the "earlier policies had created a climate for rapid industrial growth in the country; a broad-based infrastructure had been built up; basic industries established; a high degree of self-reliance in a large number of items – raw materials, intermediates, finished goods – had been achieved; new growth centres of industrial activity had emerged, as had a new generation of entrepreneurs; and a large number of engineers, technicians and skilled workers had been trained."

The Sixth Plan had achieved augmentation of new capacity more or less in consonance with the targets in a large number of industries including, among others, aluminium, zinc, lead, thermoplastics, yarn, petrochemical intermediates, electrical equipment, cement and consumer durables. However, shortfall in production had occurred in some basic industries, such as steel, cement, non-ferrous metals, fertilisers and certain other industries including textiles, jute manufactures, sugar, drugs and pharmaceuticals, commercial vehicles and railway wagons. Production targets were exceeded in a few industries like machine tools, passenger cars, motor cycles and scooters, consumer electronics and communication equipment. Domestic imbalances resulting from shortfalls in production had to be corrected through imports of essential commodities like steel, cement, fertilisers and sugar.

A technological thrust was given during the plan period in certain industries in the engineering sector. The first 500 MW thermal generating unit was commissioned and the manufacture of 500 MW turbo generators and boilers had commenced. There has been a systematic upgradation of production technology for other equipment, needed by the power sector. The manufacture of equipment for 1350 tonnes per day fertiliser units and blast furnaces of 3200 cubic metres capacity for steel plants was being undertaken in the country. A strong base had been laid for the rapid development of the electronics sector.

The Seventh Plan recognised the need to consolidate on these strengths and to take initiatives to prepare Indian industry to respond effectively to the emerging challenges. A number of policy and procedural changes which were introduced in 1985-86 aimed at increasing productivity, reducing costs and improving quality. Production capacity

restrictions on the industries were gradually reduced and broadbanding, which enabled a manufacturer to choose and produce any product mix which suited him in the context of the prevailing market conditions, was introduced. In 1986, as against a policy of re-endorsement of existing capacity, the scheme of minimum economic scale of production was introduced with Letters of Intent prescribing a minimum economic size for a single unit. The accent was on opening the domestic market to increased competition and readying the industry to stand on its own in the face of international competition. The public sector was freed from a number of constraints and given a large measure of autonomy. The technological and managerial modernisation of industry was pursued as the key instrument for increasing productivity and imporving competitiveness in the world.

As a result of the policies pursued since Independence, the country has been able to record a long term annual growth of just over 6 per cent with industrial sector. This growth record can be divided into three distinct periods: 7.7 per cent annual growth over the first three plan periods (1950–1965), four per cent annual growth over the Annual Plans (1966–69) and the Fourth and the Fifth Plan periods (1969–79), and finally the recovery to about 7.7 per cent growth over the Sixth and the Seventh Plan periods.

Dark Period

The period 1966–1980, was effectively the dark period for the Indian economy. This period encompassed a number of exogenous shocks: the devastating three-year drought of 1965–68, the aftermath of increased defence expenditures resulting from the 1962 conflict with China and two wars with Pakistan, the oil price shocks of 1973 and 1979, and the downturn in the availability of foreign resources. During this period, the Indian economy was constantly struggling to adjust.

As a result of various policy changes, the composition of Indian industry had undergone great transformation. At Independence, the consumer goods industry accounted for almost half of all industrial production. In 1991 such industries accounted for only about 20 per cent. Capital goods production had gone up to 24 per cent from the level of 4 per cent. Similarly basic goods share had increased from 20 per cent to 40 per cent.

New Industrial Policy

Despite achievements, over the years it was becoming increasingly apparent that the industrial licensing system as it had evolved specially after the mid-1960s had resulted in wide ranging inefficiencies and a high cost economy. Major policy changes were, therefore, introduced in July 1991 to provide competitive stimulus for accelerated economic growth. The thrust of the new policy was to inject new sources of competition in order to induce greater industrial effeciency by delicensing industries and by liberalising policy related to foreign direct investment. On July 24, 1991, a Statement on New Industrial Policy (NIP) was presented to Parliament, the new policy abolished industrial licensing, except for a list of 18 industries "related to security and strategic concerns, social reasons, hazardous chemicals, over-riding environmental reasons and items of elitist consumption." The number of industries reserved for the public sector was reduced to eight, where in Government's view security and strategic concerns predominate. The new policy is designed to enable entrepreneurs to take investment decisions based on commercial judgement, with a reduced regulatory role of the Government.

Simultaneously, trade related reforms, including the removal of quantitative restrictions and substantial reduction in tariffs, have increased international competition. Trade liberalisation has reduced effective protection to capital intensive activities and encouraged export oriented labour intensive manufacturing.

The adjustment of Indian industry to the reform process has been relatively quick. Overall industrial growth has been positive, rising from a mere 0.6 per cent in 1991-92 to 2.3 per cent in 1992-93. This was followed by a significant growth of 6 per cent in 1993-94 which further accelerated to 9.4 per cent in 1994-95 and 12.1 per cent in 1995-96. The performance of the manufacturing sector improved substantially from 0.8 per cent in 1991-92 to 13.7 per cent in 1995-96. The capital goods sector, which had been in the doldrums earlier, emerged as a leading contributor to industrial buoyancy with a growth of 24.8 per cent during the period 1994-95 and 19.4 per cent in 1995-96. The consumer durable sector showed significant growth from 1994 onwards while the consumer non-durable sector picked up rapidly in 1994-95 and 1995-96.

In the manufacturing sector, during the period April–March 1995-96, maximum growth was observed in the following sectors: transport equipment (20.9 per cent), electrical machinery (20.8 per cent), beverage, tobacco and products (20.0 per cent), metal products and parts (17.7 per cent), machinery and machine tools (17.6 per cent), food products (14.7 per cent) and basic metal and alloys (13.9 per cent).

THE PUBLIC SECTOR

The performance of the public sector as a whole in terms of returns on investments has already been presented in the part of this Chapter relating to non-tax revenues. As already mentioned, the collective performance of 241 Central Public Sector Enterprises yields only 6 per cent pre-tax profit and 56 of them have become candidates for Board for Industrial and Financial Reconstruction.

It should, however, be said to the credit of the public sector enterprises that they entered the field from stages of near financial vacuum. Many of them operated in low profitability areas. Many enterprises, no doubt, came up in non-basic consumer areas as well the public sector also took over several sick industries. Financial allocations for modernising these industries have most often been sub optimal. But, the public sector has helped building up basic industrial infrastructure required for running the economy. The principal problems of the public sector have been excessive manpower, low technology, strangulating financial constraints, responsibility without autonomy and involvement in fundamental right litigations on account of their treatment as "the State" within the meaning of Article 12 of the Constitution.

A major item on the agenda for economic reform is rehabilitation and restructuring of Public Sector Enterprises. Rehabilitation and turn around schemes have been prepared in respect of several Central Public Sector Enterprises.

Some of the basic problems in carrying out rehabilitation of these enterprises have been –

* As promoter, the Government have not been able to take decisions regarding provision of huge capital resources involved in rehabilitation on account of resource constraints.
* BIFR decisions on grant or rejection of permission for rehabilitation are delayed because of Government's inability to commit on further investments.
* The decision making proces in the Government is very convoluted and tortuous – proposals having to go through enterprise level decisions including through labour management negotiations; consideration of rehabilitation plans in tripartite industrial relations committees in the Labour Ministry; consideration by Group of Ministers, consideration by Committee of Secretaries, etc.
* Development of further deterioration and sickness on account of denial of financial support from financing institutions for the very reason that the enterprises are registered "Sick" with the BIFR.

THE NATIONAL RENEWAL FUND (NRF)

The Government established the National Renewal Fund (NRF) in the context of rehabilitation of public enterprises in 1992. Obviously, this Fund could not be utilised for meeting the investment requirements of rehabilitation, the allocations being small and the objectives being confined to payment of compensation to employees taking voluntary retirement, covering costs of retraining and re-deployment of employees and provision of financial support for employment generation schemes.

An amount of Rs. 3100 crore was provided in the Budget from 1992-93 to 1996-97 for operating the Fund. So far, 104756 employees have taken voluntary retirement in 66 enterprises.

Table 2.22

Industry wise number of employees who have availed of voluntary retirement benefits under the National Renewal Fund Scheme

Chemicals & Petro-Chemicals	4,073
Food Processing	220
Textiles	50,185
Steel	9,946
Mines	7,560
Water Resources	1,375
Fertilisers	2,219
Civil Supplies	462
Defence	1,596
Surface Transport	6,937
Heavy Industry	16,171
Tourism	973
Small Scale Industries	141
Telecommunications	2,395
Atomic Energy	416
TOTAL	1,04,669

Source: Ministry of Industry

Available data on age distribution of voluntary retirees shows that 50% of them are over 50 years old, 45% are between 35 to 50 years and 5% below 35 years.

As on 30th November, 1996, according to the Ministry of Industry, 16442 workers have been retrained, 2900 workers redeployed and 60075 workers counselled.

In a number of sick central public sector undertakings, wage payments to the employees is not being made up to date and the managements are in arrears. Without budget support for meeting operating expenses, the enterprises are not able to meet labour commitments. Industrial relations, therefore, are vitiated. The grievance of the trade unions is that these enterprises are contravening Labour Laws, leave alone, the Government being the model employer.

As allocations in the National Renewal Fund are pre-empted by Central Public Sector Undertakings, sick corporations under the State Governments are not able to get any resources from the Fund.

The scenario is one in which all concerned understand the inevitability of restructuring but don't have the political commitment for reforms.

Disinvestment

For the purpose of restructuring certain public sector enterprises, a Disinvestment Commission has been appointed. The principal objective is to disinvest the equity and shares of certain enterprises where this would be feasible so that the consequent resource generation could be allocated to other priority sectors. Altogether, 50 corporations were referred to the Commission for investigations. They have given three reports so far, having identified fifteen companies for disinvestment. In the case of three companies, no disinvestment has been recommended. In the case of twelve companies, details of which are presented below, disinvestment has been recommended—

Table 2.23

Companies in which disinvestment has been recommended

Name of the Company	Extent of disinvestment recommended
Bharat Alumunium Corporation Ltd.	40% Equity
Bongaigaon Refinery	50% Shares
Container Corporation of India Ltd.	49%
Gas Authority of India Ltd.	25% Equity
Hindustan Teleprinters Ltd.	Specific sale
Indian Telephone Industries Ltd.	Specific sale
India Tourism Development Corp. Ltd.	Specific sale of specific hotels
Kudremukh Iron Ore Co. Ltd.	Specific sale upto 74%
Madras Fertilisers Ltd.	Specific Sale
Mahanagar Telephone Nigam Ltd.	49%
Manganese Ore India Ltd.	49% after rehabilitation
Modern Food India Ltd.	100% equity through specific sales

Source: Department of Public Enterprises

Disinvestment process is under way in Mahanagar Telephone Nigam Ltd., Gas Authority of India Ltd. and Container Corporation of India.

SMALL SCALE SECTOR

The contribution of small scale industries to employment and exports is substantial. The small scale sector contributes over 40 per cent to the gross turnover in the manufacturing sector, 45 per cent of manufactured exports and 34 per cent of total exports.

The number, employment, output and exports in the small scale sector as estimated by the office of the Development Commissioner, Small Scale Industries are presented below:

Table 2.24

Overall performance of Small Scale Industries Sector

Year	No. of units as on 31st December (in lakh)	Output at current prices (Rs. crore)	Employment (Lakh nos.)	Export (Rs. crore)
1991-92	20.82	1,78,699	129.80	13,883
	(6.9)	(15.0)	(3.6)	(43.7)
1992-93	22.46	2,09,300	134.06	17,785
	(7.9)	(17.1)	(3.3)	(28.1)
1993-94	23.81	2,41,648	139.38	25,307
	(6.1)	(15.5)	(4.0)	(42.3)
1994-95	25.71	2,93,990	146.56	29,068
	(7.8)	(21.7)	(5.2)	(14.9)
1995-96(P)	27.24	3,56,213	152.61	*36,470
	(8.1)	(21.2)	(4.1)	(25.5)

Note: Figures in the brackets give the increase over previous year *Quick Estimates (P) Provisional

Source : Economic Survey, 1996-97, Ministry of Finance

In output terms, the small scale sector recorded a growth rate of 11.4 per cent in 1995-96, as against 10.1 per cent in 1994-95. The growth of the small scale sector has been generally above the growth rates achieved by the industrial sector as a whole. However, the estimated growth rate of the small scale industries in 1995-96 at 11.4 per cent barely kept pace with the overall industrial growth rate of 11.7 per cent.

INDUSTRIAL SICKNESS

As per the information available with the RBI, there were 2,71,206 sick industrial units in the country with outstanding bank credit off Rs. 13,739 crore as on March 1995. They accounted for 6.7 per cent of the total bank credit and 13.3 per cent of the total bank advances to industry. These ratios were significantly lower than in the preceding two years. While the small scale units accounted for 99.1 per cent of the total number of sick industrial units, their share in total outstanding bank credit to sick industrial units was only 25.8 per cent as per details given in table below:

Table 2.25

Profile of Sick Industrial Undertakings

(Rs. crores)

Category	March 1993		March 1994		March 1995	
	No. of Units	Amount Outstanding	No. of Units	Amount Outstanding	No. of Units	Amount Outstanding
SSI sick units	2,38,176	3,443.0	2,56,452	3,680.4	2,68,815	3,547.2
		(2.3)		(2.3)		(1.7)
		(4.4)		(4.6)		(3.4)
Non-SSI	1,867	7,901.3	1,909	8,151.5	1,915	8,739.6
		(5.3)		(5.0)		(4.3)
		(10.0)		(10.1)		(8.5)
Non SSI weak units	657	1,790.1	591	1,863.8	476	1,452.2
		(1.2)		(1.2)		(0.7)
		(2.3)		(2.3)		(1.4)
All sick industrial units (1–3)	2,40,700	13,134.4	2,58,952	13,695 7	2,71,206	13,739.0
		(8.8)		(8.5)		(6.7)
		(16.7)		(17.0)		(13.3)

Note: Figures in first bracket indicate percentage share to the total bank credit and the ones in second bracket indicate percentage share to the total bank advances to industry

Source : Economic Survey, 1996-97, Ministry of Finance

The reasons for industrial sickness are internal factors such as project appraisal deficiencies, project management deficiencies and several external factors like shortage of raw materials, power crisis, transport and financial bottlenecks, changes in Government policy, increase in overhead cost etc. Marketing problems in the form of market saturation, product obsolescence and demand recession are also to be held responsible.

Since its inception in May 1987, 1,853 references have been registered with BIFR upto December 31, 1996 under the Sick Industrial Companies (Special Provision) Act, 1985, both in respect of private companies and public sector undertakings. Out of 2,692 references received by it, 406 references were dismissed as non-maintainable under the Act. Rehabilitation schemes were approved/sanctioned in 404 cases while winding up was recommended in 496 cases. 184 companies have been declared "no longer sick" on successful completion of the rehabilitation schemes sanctioned for them. As regards public sector undertakings, out of the 188 references registered upto December, 1996, 28 were dismissed as non-maintainable, 36 were recommended for rehabilitation schemes and winding up was suggested for 24. Four public sector undertakings have already been declared "no longer sick" on successful completion of the rehabilitation schemes. The proportion of cases effectively decided to those registered by BIFR till the end of December, 1996 has improved to 80.41 per cent.

INDUSTRIAL RELATIONS

About 20 million man days are being lost in a year on account of strikes and lock-outs. The Industrial Relations law itself is called the Industrial Disputes Act. The bipartite Ramanujam Committee advised that the signal given by the title of the Act itself is one of strife and conflict and that the title should be changed as Industrial Relations Act. The mindset of disputes and conflicts by itself has to change. This is indeed a task of the labour as well as managements. The Trade Union law of British Rule Vintage creates an environment of multiple unions. The practice of the law detracts from working class unity which is not good for labour itself. This is conceded by all employers and workers alike. But efforts at curbing multiple unions have only failed over the years. While Chapter V B of the Industrial Disputes Act was designed to give labour protection and employment security during the days of Emergency it continues alive long after Emergency. Employers feel constrained by the provisions in Chapter V B of the Act and contend that they are not consistent with the flexibility required in manpower management for facing market competition. Workers claim that these provisions need to be continued exactly on account of market competition to face which business enterprises may take recourse to indiscriminate down sizing of man power. There is also a body of strong opinion amongst economists that the restrictive chapter V B provisions may, in the long run, seriously inhibit creation of additional job opportunities as the amployers may go capital and intensive.Efforts made to change these basic labour laws to be in tune with changing times have failed. Can we dispationately analyse the issue of harmonizing our labour laws with the needs of our liberalising economy?

IV

FOREIGN TRADE

The Past

The 1990s are witnessing momentous changes in the world and in India. The international political and economic order has been getting restructured and, as the 20th century draws to a close, many of its distinguishing philosphies and features have been swept away. In this turbulent world, India's policies have also had to adjust to the changing reality. Its basic policies aimed at self-reliance and import substitution which were pursued since Independence have helped to create a broad-based technological and manufacturing capability. Now we are in a position to respond with flexibility to the new situation, to enable the Government to achieve its aim of providing a life of dignity to the people. During 1991 India launched a macro-economic stabilisation programme to overcome the immediate balance of payments crisis. This stabilisation programme was supplemented by a major structural-reforms exercise encompassing the industrial, trade, fiscal, financial and external sectors of the economy about which reference has been made elsewhere in this chapter.

After Independence India adopted an inward looking import substitution policy, which laid heavy reliance on creating capital intensive heavy industries and gave primacy to investment in the capital goods sector. It could not therefore take advantage of the expansion in world trade during the 1950s and 1960s. India protected its domestic industry though high tariffs and other quantitative restrictions. This led to certain inefficiencies in the economic system. Many Indian products were not competitive enough in the world market and India's share of world trade was marginal.

Export pessimism dominated the mood of the early planners as it was rightly assumed then that until India's manufactures began to be diversified, there was little possibility of exporting manufactures, particularly as primary products and traditional manufactured goods had poor demand prospects in the world market. It was during the latter half of the fifties, when the Second Five Year Plan was under way with its emphasis on heavy industry, largely in the Public sector, that it began to be realised that India needed to export to be able to finance at least part of the maintenance and developmental imports.

Renewed emphasis on exports was laid in the Fourth Plan (1969-74) which envisaged progressive elimination of dependence on foreign aid while the Fifth Plan (1974-79) identified certain sectors such as engineering goods, garments, leather manufactures and marine products for achieving increases in exports.

Thus, as against virtual stagnation in the 1950s, export performance improved to an average growth of 3 to 4 per cent in the 1960s, and was more impressive in 1970s with an average growth of 6.3 per cent in volume and 15.9 per cent in value terms.

But in three decades, India's share in world exports had declined throughout from 1.85 per cent in 1950 to 0.64 per cent in 1970 and dropped further to 0.42 per cent in 1980. This was the period when

there was impressive growth in world trade and the opportunities were seized by many smaller Asian developing countries as well as the industrialising economies in Latin America to great advantage India's share in world trade is depicted below.

Table 2.26

India: Share in World Trade (per cent)

Year	Exports	Imports	Trade
1950	1.85	1.71	1.78
1960	1.03	1.69	1.36
1970	0.64	0.65	0.65
1980	0.42	0.72	0.57
1990	0.52	0.66	0.59
1991	0.50	0.56	0.53
1992	0.53	0.61	0.57
1993	0.58	0.60	0.59
1994	0.60	0.63	0.61

Source: UNCTAD Handbook of International Trade and Development Statistics, 1994, United Nations, 1995

Over the three decades ending the 1970s, the share of exports in Gross Domestic Product ranged from 4 to 6%. It has risen to the level of 9.9% by 1995-96.

Table 2.27

India's Exports and Imports (as percentage of GDP)

Year	Exports	Imports
1950s	6.0	NA
1960s	4.0	NA
1970s	6.0	NA
1980s	6.0	NA
1990-91	6.2	9.4
1991-92	7.3	8.3
1992-93	7.8	9.8
1993-94	8.8	9.7
1994-95*	8.8	10.5
1995-96*	9.9	12.6

*Quick Estimates (Planning Commission)
Source: Economic Survey 1995-96, 1996-97 and RBI Annual Report, 1995-96

In the continental sized economy of India the role of external sector in the development process was under-played so much that it took a succession of droughts' oil price shocks and balance of payments difficulties in the first two and a half decades of planning before the country could begin to see import substitution and export promotion as two sides of the same coin.

At the beginning of the eighties, as India embarked on the Sixth Five Year Plan (1980-85), which coincided with the second oil price hike, there was far greater recognition of the weaknesses bred by the inward-looking industrialisation of the earlier decades.

Foreign trade policy issues came to the fore in the early eighties and the view gained ground that India must avail of benefits of international division of labour by greater reliance on tariffs than import restrictions and liberalisation of imports of capital.

Thus, in the fourth decade of planned development (1980s), India was moving rather cautiously towards a regime of more open trade with the realisation that while import substitution had served the objective of building up domestic capabilities in a wide range of manufactures, the country could not for long shut itself off the technological change and winds of liberalisation sweeping across several developing regions of the world.

The following table gives a broad picture, in dollar terms, of exports and imports and trade balance in the period 1950-91 as well as in the five-year period 1991-96, the period of liberalisation. The growth rates are based on value terms with dollar as the bench-mark and relate averages of five-year periods till 1990-91.

Table 2.28

Profile of Exports, Imports and Trade Balance

(US $ million)

Year	Exports (including re-exports)	Imports	Trade Balance	Five Year Average Growth (percent) 'A'	
				Export	Import
1950-51	1269	1273	–4	–	–
1955-56	1275	1620	–345	5.2	4.8
1960-61	1346	2353	–1007	1.9	9.3
1965-66	1693	2944	–1251	5.0	7.1
1970-71	2031	2162	–131	2.0	–5.7
1975-76	4665	6084	–1420	17.8	*24.6
1980-81	8486	15869	–7383	13.8	15.8
1985-86	8904	16067	–7162	4.5	6.1
1990-91	18143	24075	–5932	11.6	8.2
Post New Economic Policy					
1991-92	17865	19411	–1546	–1.5	–19.4
1992-93	18537	21882	–3345	3.8	12.7
1993-94	22238	23306	–1068	20.0	6.5
1994-95	26331	28654	–2324	18.4	22.9
1995-96	31831	36370	–4539	20.9	26.9

'A': Average of the previous five years *Reflecting impact of Oil price hikes of mid-seventies (1973-74 & 1974-75 and 1979-80 & 1980-81)

Source: Compiled from Economic Survey 1995-96 and 1996-97, Ministry of Finance
RBI Annual Report, 1995-96

Trade Face of Economic Reform

In June 1991 a major shift in strategy was effected vis-a-vis the management of the economy. India's trade policy was liberalised along with the other sectors of the economy in response to the opportunities and challenges posed by national and international developments. A major structural reforms exercise was carried out in the Indian economy along with short-term measures to contain the balance of payments crisis. The new Exim Policy 1992-97, and the revisions made so far, aim at (i) creating a free environment for trade; (ii) strengthening the export promotion structure; (iii) removing all procedural irritants through simplification and streamlining of procedures; (iv) increasing export production, improving efficiency and sharpening India's competitive edge; (v) facilitating input availability; and (vi) focusing on quality and technological upgradation.

The rupee was devalued by 22 per cent in dollar terms, eliminating export subsidy and reducing import licensing restrictions. A dual exchange rate system was introduced initially but by March 1993, it was unified and a fully floating exchange rate regime in which the exchange rate is determined by market forces of demand and supply came into being. The foreign exchange market was widened and deepened, and in August 1994, the rupee was made fully convertible on current account, trade and non-trade. The downward adjustment of the rupee was designed to improve the country's international competitiveness and correct the imbalances in trade and current accounts.

Beginning with the 1991-92 Budget, Government also launched a phased reduction of import tariff bringing down the maximum from 300 per cent in 1990 to 50 per cent by March, 1995. The changes resulted in lowering the import-weighted average tariff from 87 per cent in 1991 to 27 per cent in March 1995. The dispersion of tariffs was also significantly reduced and quantitative restrictions were substantially eased. The trade reforms undertaken from 1991 helped to reduce the anti-export bias of Indian industry which was being exposed to both domestic and international competition.

Exports have responded impressively to the policy reforms and after the slowdown in the first two years under the impact of macro-stabilisation measures, grew by an average of 18-19 per cent in the subsequent three years (1993-94 to 1995-96) in dollar terms. Exports have now diversified both commodity-wise and country-wise with an increasing share going to the rest of Asia, particularly East and South-East Asia with which India is trying to evolve increased trade and investment cooperation, given the rapid growth and the dynamism of these economies. Following table highlights trends in India's direction of foreign trade:

Table 2.29

Direction of India's Trade in 1990s

(Percentage share)

Destination	1960-61	1970-71	1980-81	1985-86	1990-91	1994-95	1995-96
EXPORTS (% share)							
OECD, of which	66.1	50.1	46.6	50.8	53.5	58.7	55.7
EU	36.2	18.4	21.6	17.7	27.5	26.7	26.5
Germany	3.1	2.1	5.7	4.7	7.8	6.6	6.2
UK	26.9	11.1	5.9	4.8	6.5	6.4	6.3
USA	16.0	13.5	11.1	18.1	14.7	19.1	17.4
Japan	5.5	13.3	8.9	10.7	9.3	7.7	7.0
OPEC	4.1	6.4	11.1	7.7	5.6	9.2	9.7
E. Europe	7.0	21.0	22.1	21.1	17.9	3.6	3.8
Asia	6.9	10.8	13.4	10.6	14.3	20.1	21.3
Africa	6.3	8.4	5.2	2.7	2.1	2.5	3.4
Latin America	1.6	0.7	0.5	0.2	0.4	1.3	1.1
IMPORTS (% share)							
OECD, of which	78.0	63.8	45.7	53.6	54.0	51.4	52.4
EU	37.1	19.6	21.0	26.6	29.4	24.8	26.6
Germany	10.9	6.6	5.5	7.9	8.0	7.6	8.6
UK	19.4	7.8	5.8	6.4	6.7	5.4	5.2
USA	29.2	27.7	12.9	10.5	12.1	10.1	10.5
Japan	5.4	5.1	6.0	9.0	7.5	7.1	6.7
OPEC	4.6	7.7	27.8	17.4	16.3	21.1	20.9
E. Europe	3.4	13.5	10.3	11.0	7.6	2.4	3.4
Asia	5.7	3.3	11.4	11.9	14.0	14.2	14.4
Africa	5.6	10.4	1.6	3.0	2.2	2.9	2.3
Latin America	0.4	1.0	2.5	2.7	2.3	2.7	1.6

Source: Economic Survey, 1996-97, Ministry of Finance

The basic requirements of sustained export growth are competitive price of the product, quality, assured delivery at the destination, exchange rate stability with firm hold on inflation, cheaper credit and other incentives for export activity as it gets diversified benefiting labour-intensive items and rural areas, and adequate infrastructural facilities such as ports, power, communication and transport. In all these areas, both the Central and State Governments have to be actively involved in promoting and facilitating exports.

Composition of trade

While there is correlation between India's export growth and the growth of world trade—and the Uruguay Round Agreements should, over the years, enlarge opportunities for developing countries to increase their exports - the composition of India's export basket has remained largely the same for several years.

Table 2.30

Composition of Exports and Imports – 1990s

(Percentage^)

Group Commodity	1991-92	1992-93	1993-94	1994-95	1995-96
EXPORTS					
Agriculture & Allied Products*	17.9	16.4	18.0	16.1	19.1
Ores & Minerals	5.2	4.0	4.0	3.8	3.7
Manufactured Goods	74.6	76.3	74.9	77.5	74.4
Leather Items	7.1	6.8	8.0	8.2	6.0
Gems & Jewellery	15.3	16.5	18.0	17.1	16.6
Cotton Yarn, Fabrics, made-ups etc.	NA	NA	6.9	8.5	8.1
Readymade Garments	12.3	12.9	11.6	12.5	11.6
Handicrafts	4.7	4.6	3.4	3.1	2.6
IMPORTS					
Bulk Imports	44.6	44.1	39.2	39.5	39.1
P.O.L.	27.4	27.0	24.7	20.7	20.8
Fertilisers, Metals and other Bulk items	16.7	14.7	13.1	14.8	15.8
Non-Bulk Imports	55.4	55.9	60.8	60.5	60.9
Capital Goods	21.8	20.7	26.8	26.7	28.0
Export related items**	18.4	19.0	18.8	15.1	14.4
Others	15.2	16.2	15.2	18.8	18.5

^Worked out in dollar terms *Tea, Cotton etc. **Like Precious stones, chemicals, Textile Yarns etc.
Source: RBI Annual Reports, 1993-94 & 1995-96

The foreign trade sector performance in the Eighth Five Year Plan has broadly conformed to the Plan assumption of exports growing by 13.6 per cent per annum in volume terms. In the first four years, the average annual rate worked out to 12.8 per cent. India's share in world exports increased from 0.52 per cent in 1992 to 0.57 per cent in 1995-96. Export to GDP ratio has improved from 8.2 per cent in 1992-93 to around 10 per cent in 1995-96 as mentioned earlier. But in the case of imports, as against the 8.4 per cent per annum postulated in the Plan, they increased by an average of 34.1 per cent in the first three years. The trade deficit and the current account deficit, however, will be well within the targets envisaged in the Plan and would be 1.7 per cent and 1.5 per cent of GDP respectively.

India has to assume many obligations implicit in the Uruguay Round Agreements such as conforming to the Trade-Related Intellectual Property Rights (TRIPS) and Investment measures. Although a ten-year time-frame is available for revision of India's Patents Law which does not at present provide for product patents, under the Uruguay Round Agreements, it has to establish a mechanism for filing of product patents from January 1, 1995. USA has referred the matter to the Dispute Settlements Body of the World Trade Organisation (WTO). India is also under pressure to lift import restrictions which are maintained for balance of payments reasons in view of its relatively improved BOP position.

India is committed to further liberalisation of its import regime, notwithstanding the dismantling of licensing controls over a wide area. At the same time, there are concerns whether developed nations of the world are implementing in letter and spirit their part of the obligations under the Uruguay Round Agreements.

India has a long way to go before it could emerge as a strong global player, as currently it occupies the 32nd place as a leading exporter of merchandise, well below several countries in East and South-East Asia as shown in the table 2.31.

Table 2.31

India and Select Asian Economies : A Comparison (Figures for 1994, in $ US Billion and percentages)

Countries	Exports $ bn.	Share in world %	Imports $ bn.	Share in world %	Rank in Exports
China	121.0	2.9	116.0	2.7	11
Singapore*	96.8	2.3	102.7	2.4	12
South Korea	96.0	2.3	102.3	2.4	13
Taiwan	92.9	2.2	85.5	2.0	14
Malaysia	58.8	1.4	59.6	1.4	19
Thailand	45.3	1.1	54.5	1.3	22
Indonesia	40.1	1.0	32.0	0.7	26
India	25.1	0.6	26.8	0.6	32

*Includes Re-exports of $ 38.5 billion

Source : Trends and Statistics, International Trade – 1995 - WTO

India has to make up for the time lost in its inward-looking route to development which left the country far behind in the international league, despite building a strong industrial base and possessing highly technical manpower, the third largest in the world.

The Future

With the liberalisation of the foreign trade sector and the sustained growth of both exports and imports for the last two to three years in excess of 20 per cent in dollar terms, the opportunities for India to enlarge its share of global exports substantially on the one hand, and also to provide a growing market for various industrial inputs and priority items of mass consumption on the other are great. With annual GDP growth in the range of 6-7 per cent in the next few years and annual foreign trade growth of 20 per cent and above, the share of foreign trade as a proportion of GDP is bound to continue to rise, evidencing an increasing degree of openness of the Indian economy. As a result of the adoption of export-friendly policies and an accompanying attitudinal shift within the Indian business community which is now taking a much greater interest in the global market place than before, exports are expected to touch US$ 75-80 billion at current prices by the turn of the century. The favourable policies permitting the import of sophisticated machinery and other production inputs, access to modern technologies, and foreign direct investments for strengthening the production infrastructure, all augur well for the realisation of these projections in the years to come. India's emergence as a major market with higher per capita levels of consumption is bound to have positive spin-off effects on neighbouring countries in South and Central Asia as well as in Africa.

V

DISPARITIES

Problem of Income Inequality

India's development experience so far has not succeeded in reducing the disparities of income distribution despite targetted poverty alleviation schemes and measures. The richest 30 per cent of the population account for 52 per cent of the private consumption expenditure in rural areas and 54 per cent in urban areas. The poorest 30 per cent have had a disproportionately low share of 15 per cent in total consumption expenditure in the rural areas and 14 per cent in urban areas.

As a result of increased amount of savings and investment, the GNP of India increased from Rs. 8,938 crore in 1950-51 to Rs. 47,0269 crore in 1990-91. The lowest 20 per cent of the population received only 8.7 per cent of the National Income, whereas the highest 20 per cent received 42.6 per cent of the same.

Table 2.32

Per Capita monthly average expenditure at current prices in rural and urban areas

Year Round of Sample Survey	Rural Areas		Urban Areas	
	Highest Decile	Lowest Decile	Highest Decile	Lowest Decile
1983 (38th)	276.65	42.64	455.06	57.45
1986-87 (42nd)	347.96	54.38	481.24	74.68
1987-88 (43rd)	400.06	63.28	721.33	85.04
1988-89	426.82	71.58	734.15	91.90

Source: Lok Sabha Unstarred Question No. 2112 dated 4.12.91

Table 2.33

Distribution of Income and Consumption

Country	Survey Year	Percentage share of income and consumption			
		Lowest 10%	Lowest 20%	Highest 20%	Highest 10%
Nepal	1995-96	3.2	7.6	44.8	29.3
Bangladesh	1992	4.1	9.4	37.9	23.7
INDIA	1992	3.7	8.5	42.6	28.4
Pakistan	1991	3.4	8.4	39.7	25.2
China	1995	2.2	5.5	47.5	30.9
Sri Lanka	1990	3.8	8.9	39.3	25.2
Indonesia	1993	3.9	8.7	40.7	25.6
Brazil	1989	0.7	2.1	67.5	51.3
Malaysia	1989	1.9	4.6	53.7	37.9
Australia	1985	-	4.4	42.2	25.8
Japan	1979	-	8.7	37.5	22.4
UK	1988	-	4.6	44.3	27.8
USA	1985	-	4.7	41.9	25.0

Source: World Development Report, 1997 (World Bank)

International comparison of income inequalities brought out in the above data show that disparities in India are somewhat similar to those obtaining in Sri Lanka, Indonesia and Japan and less accentuated than in China, Brazil and developed countries at the lowest 20% segment of the population.

It is historical experience that growth of national income by itself does not tricle down to all sections of the population. This is partly because, under ordinary market conditions, people who are already better-off have a greater chance of contributing to growth and benefiting from it. The benefit of rapid growth accrues to the lower income groups only to a limited extent. Nor does the pursuit of an equitable distribution of income by itself lead to rapid growth. The success of all redistributive laws, policies and programmes and reduction of income inequalities critically depend upon the level of education, awareness and organisation of the people.

Regional imbalances@

Growth across States varied considerably during the 1980s, with Andhra Pradesh, Gujarat, Haryana, Maharashtra and Punjab achieving relatively high per capita income growth, while per capita income in other highly populated States such as Bihar, Madhya Pradesh, Orissa, Uttar Pradesh and West Bengal was well below the national average. Preliminary data indicate that these differences are likely to have been maintained if not accentuated since 1991-92. Although data on growth performance across States are only available with a considerable lag, information on the State-wise distribution of new investment shows that 60 per cent of new investment since 1991 has been located in only four States representing 37 per cent of the population - Maharashtra, Gujarat, Tamil Nadu and Uttar Pradesh. This has obviously been for the reason that relative to other States, these States have better infrastructure, built over the years apart from investor friendly and hospitable environment.

The human development situation varies a great deal from one State to another. This has been revealed by a recent UNDP financed Human Development Indicators Survey, conducted by the National Council for Applied Economic Research (NCAER) and quoted in "Human Development in South Asia 1997"—a Report of Human Development Centre (HDC), Islamabad. The findings of this Survey bring into focus wide disparities prevailing in the human development profiles in various Indian States. For instance Punjab enjoys a per capita income twice as high as that of West Bengal. While only 27 per cent of the population survives below the absolute poverty line in Haryana, the percentage of absolute poor in Orissa is 55. The adult literacy rate in India varies from 41 per cent in Rajasthan to 90 per cent in Kerala.

As per the disaggregated analysis of Human Development Index developed by the HDC based on the human development Index for fitteen Indian States Kerala has the highest HDI (0.597) in India

@ Factors contributing to disparities in human development cumulatively reflecting on Regional Imbalances and dealt with in this part have been gone into in much greater detail in the Chapters on Human Development and infrastructure.

while Madhya Pradesh has the lowest (0.341). In every component of the HDI (whether life expectancy, education, or income), there are vast differences between the various States of India. The following table reveals disaggregated Human Development Index for India:

Table 2.34

Disaggregated Human Development Index for India

State	Life Expectancy 1990-92 (years)	Adult Literacy rate 1991 (%)	Real GDP per capita 1993 (PPP$)	HDI Value	HDI Ranking
Kerala	72	86	1,017	0.597	1
Punjab	66	52	2,124	0.516	2
Maharashtra	64	60	1,802	0.513	3
Haryana	63	49	1,915	0.476	4
Gujarat	60	57	1,416	0.458	5
West Bengal	61	57	1,186	0.452	6
Himachal Pradesh	64	51	1,180	0.447	7
Karnataka	62	52	1,224	0.442	8
Tamil Nadu	62	51	1,119	0.432	9
Andhra Pradesh	60	40	1,227	0.393	10
Assam	54	49	932	0.374	11
Orissa	55	46	896	0.368	12
Bihar	59	39	640	0.3504	13
Rajasthan	58	36	961	0.3503	14
Uttar Pradesh	56	38	884	0.343	15
Madhya Pradesh	54	41	898	0.341	16

Note: a. Since disaggregated data on the combined enrolment ratio is not available , the education index component of the HDI gives the entire weight to the adult literacy index. Comparisons with data for rural India only (NCAER 1996) - for which the combined enrolment ratio is available indicate that variations in the HDI value and rankings due to this omission are minimal.

b.Real GDP per capita in 1993 PPP$ is calculated by multiplying the ratio of the regional per capita income to the national per capita income by India's real GDP per capita of 1,240 (in PPP$) reported in UNDP 1996b.

Source : Human Development of South Asia, 1997 (HDC, Islamabad)

The importance of infrastructure in economic development of a developing country like India cannot be understood. Centre for Monitoring Indian Economy (CMIE) has developed Infrastructure Index for various Indian States to reveal wide disparities among Indian States. CMIE have focussed essentially on certain crucial infrastructural facilities viz. energy, transport, communications, irrigation and finance. Education and health have also been included as these are considered to be social infrastructure.

The indicators used in each of the broad sector are listed below:

- Per capita electricity & petroleum consumption
- Villages electrified
- Railway route length per '000 sq.km. of area
- Surfaced roads per '000 sq.km. of area
- Unsurfaced roads per '000 sq.km. of area
- Handling capacity of major ports
- Gross irrigated area as % of gross cropped area
- Bank branches per lakh of population
- Post offices per lakh of population
- Telephone lines per 100 persons
- Primary schools per lakh of population
- Hospital beds per lakh of population
- Primary health centres per lakh of population

Following table presents a comparative picture of infrastructure development in various States of India:

Table 2.35

Relative Infrastructure Development Index: 1980-81 to 1993-94

(All India = 100)

State	1980-81	1981-82	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94
Andhra Pradesh	98.1	97.8	100.1	98.9	100.4	97.9	95.9	98.7	98.9	97.0	96.8	95.9	96.1
Assam	77.7	77.3	77.0	79.2	80.3	78.8	79.3	79.6	79.6	84.0	81.7	80.4	78.9
Bihar	83.5	85.1	84.5	84.8	84.2	83.3	84.0	84.1	83.1	79.7	81.7	83.4	81.1
Gujarat	123.0	122.2	126.5	126.5	124.8	120.3	119.3	117.7	116.8	122.0	122.9	122.9	122.4
Haryana	145.5	148.0	147.0	143.1	143.1	144.0	152.0	136.0	141.9	139.7	143.0	140.1	141.3
Himachal Pradesh	83.5	87.3	91.7	90.7	93.4	90.9	93.5	96.0	107.4	95.9	97.1	97.7	98.8
Jammu & Kashmir	88.7	89.9	89.5	88.4	88.8	87.2	88.9	87.7	86.6	83.7	79.2	83.2	84.0
Karnataka	94.8	95.3	97.2	97.9	97.5	96.3	94.5	98.4	95.2	96.4	96.5	96.1	96.9
Kerala	158.1	156.2	150.3	150.2	149.2	148.9	150.8	154.6	153.2	157.4	158.0	153.2	157.1
Madhya Pradesh	62.1	63.5	67.6	67.8	68.8	68.9	68.6	69.7	69.6	71.7	71.5	74.0	75.3
Maharashtra	120.1	117.3	118.9	116.6	116.8	112.3	111.9	112.0	111.0	111.5	109.6	107.1	107.0
Orissa	81.5	86.1	84.3	86.4	87.8	87.6	90.0	90.2	93.3	93.5	95.0	97.3	97.0
Punjab	207.3	207.0	210.6	204.6	205.8	215.2	213.3	199.7	195.8	192.6	193.4	191.6	191.4
Rajasthan	74.4	73.6	75.8	77.2	77.4	77.6	79.1	78.9	81.1	79.2	82.6	81.2	83.0
Tamil Nadu	158.6	155.4	148.7	148.7	148.5	145.0	143.6	149.1	147.4	145.5	145.9	143.3	144.0
Uttar Pradesh	97.7	99.3	101.3	101.2	103.0	103.0	104.3	102.8	103.9	103.6	102.3	103.7	103.3
West Bengal	110.6	109.6	109.8	108.6	100.5	99.2	97.7	97.3	96.3	93.8	92.1	94.4	94.2
ALL INDIA	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Profiles of States, March 1997, (CMIE, Mumbai)

Various five year Plans emphasised the need to remove regional imbalances. In this context the Sixth Five Year Plan document observed:

> "An important objective of the Plan is to bring about a progressive reduction in regional inequalities in the pace of development and in the diffusion of technological benefits. It should be generally accepted that the fulfilment of the objective requires upgrading the development process in the backward regions rather than curtailing the growth of theses regions which have acquired certain momentum."

Through eight Five Year Plans, have we been successful in removing regional imbalances? Far from it. Major States like Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh are backward in socio-economic development. Following table reveals the various facets of socio-economic profile of Indian States projecting regional imbalances.

Following table provides a detailed account of some basic important indicators of availability of infrastructural facilities:

Table 2.36

Indicators of Availability of Infrastructural facilities

State	Area (Thousand sq. km.)	Population CARG (1981-91 %)	Per capita NSDP (1994-95 Rs.)	Railways 1993 (per thousand sq. km.)	Roads 1993 (per thousand sq. km.)
Andhra Pradesh	275.05	2.19	7155	18.40	602.5
Assam	78.44	1.20	5999	29.80	860.0
Bihar	173.88	2.14	3816	30.41	504.7
Gujarat	196.02	1.94	10578	26.94	550.2
Haryana	44.21	2.45	12158	33.91	584.6
Himachal Pradesh	55.67	1.91	7784	4.78	518.5
Jammu & Kashmir	222.24	2.57	4244	0.40	56.4
Karnataka	191.79	1.93	8082	16.05	728.1
Kerala	38.86	1.35	6983	27.07	3550.5
Madhya Pradesh	443.45	2.41	5845	13.50	468.7
Maharashtra	307.71	2.32	13112	17.74	731.3
Orissa	155.71	1.85	5157	12.86	1371.0
Punjab	50.36	1.91	14188	42.08	1130.7
Rajasthan	342.24	2.53	5200	16.97	372.4
Tamil Nadu	130.06	1.44	8941	30.91	1559.3
Uttar Pradesh	294.41	2.30	5331	30.38	716.6
West Bengal	88.75	2.23	6877	43.07	692.8
ALL INDIA	3287.3	2.13	9285	19.00	662.6

State	Telecommunications 1993 (Lines per hundred persons)	Post Office 1993 (per 10 sq. km.)	Net Irrigated Area 1992-93 (% to net sown area)	Per Capita Consumption (1994) Power (KW)	Petroleum Products (Litres)
Andhra Pradesh	0.73	0.59	38.5	309	56.4
Assam	0.31	0.49	21.1	69	37.8
Bihar	0.22	0.68	46.7	100	31.5
Gujarat	1.53	0.45	27.6	520	139.2
Haryana	1.13	0.58	75.6	453	116.8
Himachal Pradesh	1.09	0.49	17.3	217	44.6
Jammu & Kashmir	0.51	0.07	42.6	195	49.3
Karnataka	1.08	0.50	20.3	301	61.2
Kerala	1.44	1.30	14.9	207	72.6
Madhya Pradesh	0.65	0.25	24.4	264	39.7
Maharashtra	2.00	0.40	13.7	443	123.6
Orissa	0.35	0.52	32.8	180	38.4
Punjab	1.56	0.76	93.3	690	152.1
Rajasthan	0.65	0.30	26.4	241	59.8
Tamil Nadu	1.13	0.93	46.4	364	90.0
Uttar Pradesh	0.37	0.68	65.6	161	43.8
West Bengal	0.60	0.95	34.8	156	46.8
ALL INDIA	0.90	0.47	35.1	270	68.1

CARG: Cumulative Average Rate of Growth; NSDP: Net State Domestic Product

Source: Compiled from Profiles of States, March 1997 (CMIE, Mumbai)

Although in the eighties some signs of improvement in certain less advanced States have been observed, regional disparities continue to exist. Development institutions and organisational capabilities in the backward regions of the country and the delivery system for development programmes would need to be strengthened to deal effectively with the problems of development and redistributive justice.

The removal of large disparities in development between regions requires flow of resources across regions. At present, the Plan does provide for special area programmes such as the Hill Area Plan, Tribal Areas Plan and other schemes for backward areas. While these programmes aim at creating a basic infrastructure, the backlog of development is large and considerable efforts are to be made for integration of such regions into the mainstream of economic activity in the country.

3

INFRASTRUCTURE

Infrastructure is the Achilles Heel of the Indian Economy. All along, the Public Sector has had the predominant presence in the infrastructure sector—Energy, Transport and Tele-communication.

The infrastructure scenario is characterised by severe demand-supply imbalance, supply of facilities far outstripping the demand. The situation puts a question mark on the very sustainability of our economic growth. Utilisation of existing capacities has to be maximised. The opening up of the infrastructure sector for private sector participation as part of the process of the Economic Reforms needs a serious and credible follow-up so that non-Government capital flows are truly substantial, at the same time relieving pressures on the Government budget. Commercially viable pricing policies for infrastructure services, would call for strong political commitments and national consensus. The Total infrastructure investments projected in 1994 in the perspective of the first five years is about Rs. 450,000 crore and Rs. 750,000 crore for another five years.

Coal : While coal accounts for about 85 per cent of total primary sources of commercial energy and about 67% of total energy consumption in the country, its productivity and quality are low. Increasing production costs are sought to be neutralised by hikes in administered prices. Private Sector participation is confined to captive mines with the power generation and Iron & Steel Industry. The Sector is languishing in inefficiency on account of monopolistic environment.

Power : Though installed capacity of power generation as in 1996 is 85,000 MWz, fresh capacity creation is retarded by lack of resources, procedural delays and inter-State disputes. Seventy eight per cent of hydel potential remains untapped. Thermal Plant Load Factor, amongst the State Electricity Boards, is only 58%. Transmission and distribution losses are of the order of 21%. Power supply charges are far below Production costs gap being Rs. 1.23 per KWH. Seventeen State Electricity Boards have accumulated an incredible deficit of over Rs. 18,000 crore (March 1996). Without radical structural changes in the sector, the current demand-supply gap for power may be 25% of the Peak-Load Demand by 2000 AD.

Petroleum : Domestic crude production has been stagnating in the range of 30 to 35 million tonnes. Being import dependent, the country is subject to the vagaries of international oil price fluctuations. The operation of the oil pool account under which the consumers are expected to be supplied petroleum products at reasonably stable prices through a mechanism of administered prices and subsidies, has left the oil companies with an outstanding of Rs. 5,700 crores (March 1996). Unless fresh exploration efforts are accelerated and oil pool account mechanism is rationalised, import dependence by the end of the century may rise upto 70%.

Railways : The Railways have achieved impressive growth since Independence. Dieselisation and electric traction have registered substantive progress. Significant computerisation of services has also taken place. But, the railways are choked for internal resources on account of dwindling freight shares and having to bear large scale cross subsidisation of its operations and move mass consumption commodities at below par fares, not to speak of cut backs on Plan allocations.

Road Transport : Road transport has emerged as a major player in freight and passenger transport - handling 60% of freight Government and 80% of passenger traffic. There is serious imbalance between demand for transport facilities and supply of the same. Status of maintenance of existing road network is poor. Inadequate road networks impact on transportation costs and erode the international

competitiveness of the Indian economy. It is estimated that by 2005-06 AD, the funds required for the development of this sector would be of the order of Rs. 68,000 crore.

Civil Aviation : The Civil Aviation sector has also expanded in terms of its infrastructure and capacity and occupies an eminent position with a large fleet. But, this sector is marked by dismal performance in capacity utilisation. Air India has been declining with its market share going down to the level of 22%. Its loss in 1995-96 was Rs. 272 crore; the loss of Indian Airlines has mounted to Rs. 1000 crore, the same year.

Shipping : The share of Indian shipping in overseas trade has been registering a continuous decline over the last ten years. Now, it is only of the order of 28%. The sector is dogged by problems of lack of a conducive environment for raising resources; sectoral allocation of tonnage in India's trade; and of recruitment and retention of man power. The Indian fleet requires technological upgradation and modernisation.

Major Ports : Eleven Major Ports capable of handling about 230 million tonnes of traffic has been created over the years. But, they are over crowded and poorly equipped. Congestion, inadequate services, excess man power, low technology, maintenance and productivity, and highly constrained domestic logistics are the serious shortcomings of this sector. Development of Minor Ports is lagging behind for want of resources with the States. The country needs doubling of the present port capacity.

Telecommunication : Telecommunication Networks have expanded, the present level being 14 million Direct Exchange Lines. There is a waiting list for two million lines. Our telephone density compares very poorly with that of other developing countries. Rural connectivity needs to be given utmost priority as about 300,000 villages are yet to be covered. Manufacturing capacity of the indigenous industry is small, relative to major operators in the world. The Sector is lagging in technology, R & D base and export orientation.

I

BACKGROUND

Infrastructure is generally understood as the physical framework of facilities through which goods and services are provided to the public. Its linkages to the economy are multiple and complex, because it affects production and consumption directly, creates positive and negative spillover effects and involves large flows of expenditure.

Infrastructure contributes to economic development both by increasing productivity and by providing amenities which enhance the quality of life. The services provided lead to growth in production in several ways:

- Infrastructure services are intermediate inputs to production and any reduction in these input costs raises the profitability of production, thus permitting higher levels of output, income and/or employment;
- They raise the productivity of other factors including labour and capital. (Infrastructure is even described as an "unpaid factor of production" since its availability leads to higher returns obtainable from other capital and labour.)
- Their adequacy lead to diversification of production, expansion of trade, coping with population growth, reducing poverty and improving environmental condition.

Coverage

The infrastructure sector covers a wide spectrum of services: energy (coal, power, petroleum and gas) transportation, railways, roadways, airways and water transportation and telecommunications. The social infrastructure includes health, education and other primary services. Six infrastructure industries having a combined weight of 28.8 per cent in the Index of Industrial production include coal, electricity, crude oil, petroleum products, steel and cement.

Impact Spiral

Research indicates that with each 1 per cent increase in per capita Gross Domestic Product while

total infrastructure stock increases by 1 per cent, household access to safe water increases by 0.3 per cent, paved roads by 0.8 per cent, power by 1.5 per cent and telecommunications by 1.7 per cent. Infrastructure productivity will determine how India will cope with the increasing pace of urbanisation, globalisation and technological innovations in manufacturing and logistics.

Typically, as income rises, the composition of infrastructure changes significantly. For low income countries, more basic infrastructure is important—water, irrigation and transport. As economies mature, most of the basic consumption demands for water are met; the share of agriculture in the economy shrinks and more transport infrastructure is provided. The share of power, petrol and petroleum products, and telecommunications is greater in high income countries.

Investment Requirements

Developing countries have to make massive investments of financial, human and managerial resources in infrastructure. A recent World Bank Study has estimated that developing countries as a whole invest about $200 billion per year in physical infrastructure facilities. This is about 4 per cent of their Gross Domestic Product. Roughly four-fifths of this, or about $160 billion is financed through domestic public resources, about one-sixth or about $ 30 billion through international development assistance and the remaining, about $ 10 billion, through private capital. The private sector's share, while still small, is fast rising in many countries and sectors.

The need for investment in infrastructure rises exponentially with economic growth rate. Future investment needs thus are expected to be much bigger, because of demand created by economic growth, rising population, rapid urbanisation as well as the need for reconstruction of economy and to make up for lack of adequate investment.

The Indian economy has been projected to accelerate its growth from the current 6 per cent to 7.5 per cent by 2000-01 and 8.5 per cent by 2005-06. Such growth would require a rise in the investment rate from the current 25 per cent of GDP to about 29 per cent in 2000-01 and 31.5 per cent in 2005-06.

Prominence of the Public Sector

Infrastructure services have generally been provided by the public sector across the world for most of the 20th century. The private sector's increasing interest in infrastructure provision on a commercial basis is only a recent phenomenon, which has emerged in the last five to ten years. No doubt the possibility of commercialisation of infrastructure investment and services has increased tremendously over the last decade the role of public sector in investment, delivery of services and in regulation will continue to be vital.

Changing Scenario in the Country

Provision and maintenance of adequate infrastructure facilities at reasonable cost are absolutely necessary if rapid economic growth is to be achieved and sustained. In the past, the responsibility for providing infrastructure services in the country was vested with the Government. This was due to a number of reasons including lumpiness of capital investments, long gestation period, externalities, high risks and low rates of returns. But the old paradigm of infrastructure being a public sector preserve has been disturbed by fiscal constraints and challenged by technological innovations. Limits on budgetary allocations and public debt, and the dismantling of the allocated system of credit have catalysed encouragement of private entry in infrastructure provision.

The Government's development strategy attaches high priority to the development of efficient infrastructure and towards creating an enabling environment for private participation in the infrastructure sector. A variety of options available for public-private partnership can also encourage better risk sharing, accountability, cost recovery and management of infrastructure.

Though, as already stated, physical infrastructure, particularly in the areas of energy, transport, communication and irrigation, has traditionally been provided by the public sector, since the scale of construction in these areas is very large and these are of direct and indirect benefit to large sections of the society, the public sector will continue to play a dominant role in this area and will have the ultimate responsibility of meeting the demands. However if private initiative comes forward to participate in creating such infrastructure like power plants, roads, bridges, medium and minor irrigation projects, social housing and industrial estates on reasonable terms and with full protection of people's interests, such initiative must be positively encouraged.

Today the structural reforms have put the Indian economy on a higher and accelerated growth path. According to a World Bank estimate, in 1993, the cost of delays in ports and poor shipping facilities imposed an additional cost of around $ 420 million on Indian exporters. Non-availability of funds on timely basis and lack of proper evaluation and implementation of projects have led to major time and cost over-runs, resulting in a gross mis-match between supply and demand.

Growth at a Glance

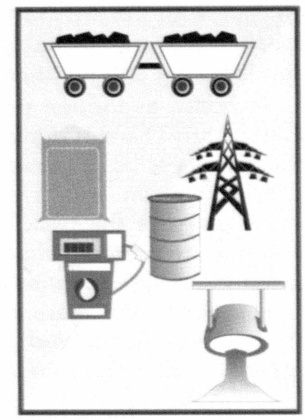
Following table provides, in brief, performance of the six infrastructure industries since 1950-51:

Table 3.1

Trends in the performance of Infrastructure Industries

Industry	Unit	1950-51	1960-61	1970-71	1980-81	1990-91	1995-96 (P)
Coal	(million tonnes)	32.3	55.2	76.3	119.0	225.5	270.1
Electricity	(billion kwh)	5.1	16.9	55.8	110.8	264.3	380.1
Crude Oil	(million tonnes)	0.3	0.5	6.8	10.5	30.4	35.1
Petroleum Products	(million tonnes)	0.2	5.7	17.1	24.1	48.0	54.5
Cement	(million tonnes)	2.7	8.0	14.3	18.6	48.8	69.3
Steel	(million tonnes)	1.0	2.4	4.6	6.8	13.5	21.4

Source : Economic Survey, 1996-97



Infrastructure monitoring by the Department of Programme Implementation aims at reviewing the physical performance, with reference to the targets for the financial year, of nine industrial infrastructure sectors, namely power, coal, steel, railways, telecommunications, shippings and ports, fertilizer, cement, petroleum and natural gas which have a pivotal role in the economic development of the nation. This involves identification of problem areas requiring action on a priority basis and coordinating the efforts of administrative Ministries with a view to overcoming critical bottlenecks, determining inter-sectoral linkages for achieving optimal results with emphasis on better capacity utilisation. Overall growth profile of infrastructure sector during the Eighth Five Year Plan (i.e. 1992-96) is given in the following table:

Table 3.2

Trends in the growth rate of Infrastructure Sector

(Per cent Change over previous years)

Sectors	1992-93	1993-94	1994-95	1995-96
Coal	3.9	3.3	3.2	6.4
Power Generation	5.0	7.4	8.5	8.3
(a) Hydel	–4.0	0.8	17.2	-12.1
(b) Thermal (including nuclear)	8.1	9.5	6.1	14.6
Petroleum				
(a) Crude production	–11.2	0.3	19.3	9.0
(b) Refinery Throughput	4.0	1.5	3.8	3.6
Transport				
(a) Railways revenue earning goods Traffic	3.6	2.5	1.7	7.0
(b) Cargo handled at major ports	6.7	7.6	10.0	9.1
Telecommunication – New Telephone connections provided	34.2	24.5	44.0	23.3

Source: Economic Survey, 1994-95 and 1996-97

Energy, transport and telecommunications are the most important segments of the infrastructure sector. It is not possible to achieve high growth in one without keeping pace with the other. Detailed scrutiny of the performance of these segments, related policy issues and problems and future challenges is indispensable as we enter the 21st century.

II

ENERGY

The energy sector comprises the coal, power, oil and natural gas and non-conventional energy sectors. It claims a major share of allocation in our Five Year Plans. Its share ranges from 25 per cent to 30 per cent of the public sector Five Year Plan allocation. The energy supply-side requires heavy investment and imports. On the other hand, the demand side is highly vulnerable as there are hardly any activities be it industry, transport, agriculture or household, that does not require energy. Thus, macro economic development and the energy sector are highly interdependent.

THE COAL SECTOR

Coal is the major fossil fuel resource in the country. It accounts for about 85 per cent of the total primary sources of commercial energy. Indian coal is largely bituminous grade with high ash content. The establishment of the National Coal Development Corporation in 1956 was the first in the planned development of the coal industry. However, it was not until the nationalisation of coal mines in 1971 and of non-coking coal mines in 1973 that a comprehensive programme for the development of coal mines was launched. The Geological Survey of India has estimated that the coal reserves, as of 1996, amount to 202 billion tonnes. Out of this, coking coal reserves are estimated to be 15 per cent while 73 per cent are inferior grade non-coking coal.

Coal accounts for about 67 per cent of total energy consumption in the country. To ensure sustained and planned development of all facets of the coal industry, massive investments to the tune of about Rs. 160 billion have been made since its nationalisation, in opening up of new mines, reorganization of existing mines and development of the associated infrastructure. Coal production has registered an annual growth rate of about 6 per cent during the last 2 decades, steadily increasing from a level of 77 million tonnes in 1972-73 to about 270 million tonnes in 1995-96.

This magnitude of increase in the production of coal was feasible due to the greater emphasis given to opencast mining. Opencast mines contributed about 28 per cent of the total production in 1973 and increased their share to about 70 per cent in 1995-96. The major factors in favour of opencast mines are shorter gestation period, high recovery and safety, and a low cost of production. However, the coal produced is of an inferior grade.

India's underground mines are grossly under-utilised because of low levels of mechanization. This is evident from the low and stagnating productivity *i.e.* output per manshift (OMS) in underground mines which was 0.54 tonnes in 1974-75 and 0.56 tonnes in 1994-95. Against this, productivity in the opencast mine increased from 0.76 tonnes in 1974-75 to 4.35 tonnes in 1994-95. Productivity in Indian coal mines is much less compared to that of Australia and USA. Productivity in coal mines in Australia was 11.9 tonnes for underground mines and 30.6 tonnes for opencast mines in 1990-91. Similarly, in the United States, the productivity in underground and opencast mines was 19.3 tonnes and 17.7 tonnes respectively. Only 21 per cent of the total coal production in India has coking properties and is largely used for steel manufacturing and in foundaries. Non-coking coal is mostly used for power generation and steam generation by industries.

One of the major constraints on the profitability of the coal sector is low productivity in the underground mines. The underground mines employ 80 per cent of the manpower but contribute only 30 per cent of output. Productivity can be improved through better utilisation of existing stock of machinery and equipment, greater flexibility in manpower deployment and rationalisation of the work force.

The problems: The problems afflicting the Indian Coal industry are manifold:

- Poor quality coal and bottlenecks in the coal movement.
- Low capacity utilization of washeries.
- Growing dependence on import of coking coal.
- Administered prices.

Poor quality: Indian Coal has high ash content and low calorific value. The ash content varies from 20 to 30 per cent and sometimes exceeds 40 per cent. The transportation of such a non beneficiated coal, carrying in cart material over long distances, not only leads to wastage of transport capacity and energy, but also result in low efficiency of coal based thermal power plants and adds to air pollution through higher emission and ash disposal.

Coal washeries: Coal washeries can reduce unwanted ash and therefore considerable weight does not have to be transported. Overall performance of the washeries is unsatisfactory with capacity utilisation consistently remaining below 45 per cent over the years. This may be attributed to the lack of renovation and modernisation of these units.

Import of coking coal: Given the trends in the production of coking coal and its high ash content, it is unlikely that imports of coking coal will go down in the immediate future. Imports of coal has been consistently increasing and reached a level of 8.5 million tonnes in 1994-95.

Administered prices: Coal prices increased suddenly in the unregulated premium markets. The spurt in the open market coal prices has affected the non-power and non-steel consumers. The Government deregulated pricing of coking coal and A, B and C grades of non-coking coal during 1995-96. The coal companies are free to fix the prices of these varieties.

Price increases in domestic coal have been rather sharp since 1980, with prices of all the grades doubling between 1980 to 1986. It needs to be noticed that regular price hikes are not a solution to neutralizing higher input costs. The remedy lies in creating competitive conditions in the prevailing sellers' market and compel the monopolistic national coal producing units to increase operational efficiency by competition. Can there be full decontrol of coal prices? Can import duty on non coking and coking coal be reduced/abolished to create competition and improve efficiency?

Private sector participation: In line with the liberalisation policy of the Government, private sector participation has been allowed in the coal industry w.e.f. 9.6.1993 in the areas of (i) Captive coal mining by consumers engaged in power generation and iron and steel industry; (ii) Construction of washeries and captive power plants on Build-Own-Operate (BOO) basis.

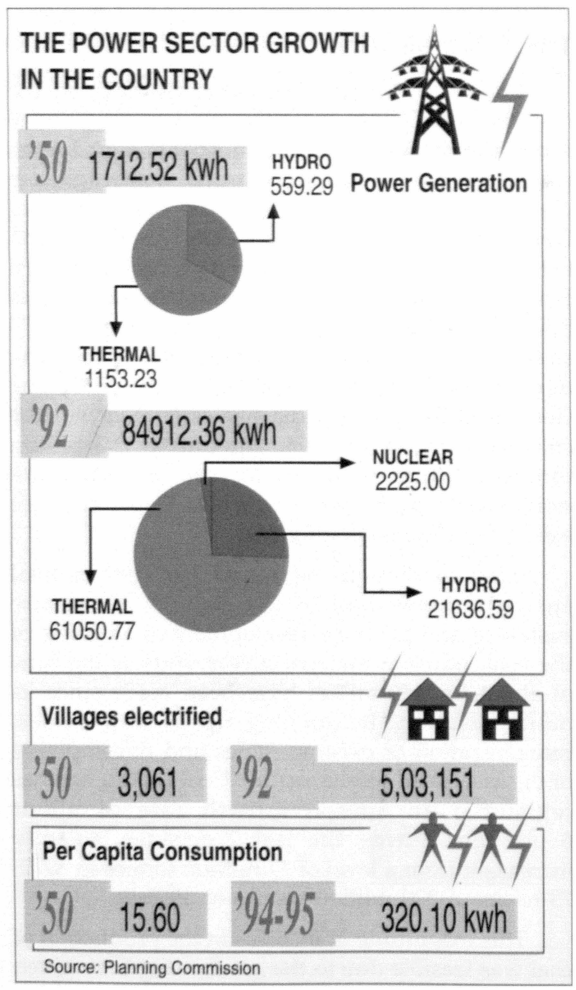
Areas of Concern: Some of the major areas of concern are:

- Inadequate availability of coal for power sector due to production and movement constraints.
- Inadequate domestic availability of coking coal of required quality for the steel sector.
- Low productivity in underground mines.
- Inadequate private participation.

THE POWER SECTOR

Electricity generation in the country which was only 4.1 billion units (kwh) in 1947 increased to about 350 billion kwh by 1995 registering a compound annual growth rate of 7.5 per cent. Despite this, the power sector has been afflicted by serious shortage of supply *vis-a-vis* demand. Electricity cannot be easily imported or stored and hence, creation of generation capacity domestically is critical for meeting the country's demand for power. If the capacity additions are not done in time, power shortages will result in a system marked by inefficient operations and management, declaration of investments and growth in other sectors of the economy in general. In India, the endemic power

Table 3.3



shortages and cuts lead to inadequate capacity utilization, unproductive expenditure such as in back-up generators and much waste, all of which impose a major constraint on economic growth.

Power Generation: At present thermal plants generate 74 per cent of total power and the hydro electricity plants another 24 per cent with the balance 2 per cent being generated by nuclear plants. The installed capacity as on March 31, 1996 was about 85,000 MW. [See Table 3.3].

Our per capita power consumption (320 Kwh) compares very poorly with that of the world average which is 2216 Kwh. Our consumption is even lower than that of certain other developing countries cutting across regions—China, Thailand, Pakistan, Egypt, Mauritius, Zambia, Argentina and Brazil, the figures for which respectively are 719, 1162, 416, 787, 906, 706 and 1783 (all in Kwhs) respectively.

Several reasons have been identified for slippages in capacity creation in the Central and State Sectors. These include paucity of funds, delay in placement of orders for main plant and equipment, delay in supply of equipment by suppliers, procedural delays in land acquisition, non-resolution of inter-State disputes, etc. It is assessed that 78 per cent of the country's hydel potential remains as yet unexploited. Another important reason for slippages, particularly in State Sector projects, has been that the States saw the announcement of policy for private participation as an opportunity to cut back on their involvement in generation of projects. As a result many projects that were scheduled for commissioning through State Sector resources have not been provided adequate funds for timely completion.

Box 3.1 : Major landmarks in the development of the Power Sector

1948	•	Creation of Central Electricity Authority (CEA) and State Electricity Boards (SEBs) under the Electricity (Supply) Act.
		Establishment of the Damodar Valley Corporation (DVC) as a joint venture of Government of India and the States of West Bengal and Bihar.
1956	•	Establishment of Neyveli Lignite Corporation (NLC)—to mine and develop lignite and to generate lignite based power.
1969	•	Creation of Department of Atomic Energy (DAE) and later in 1987 its commercial corporation—The Nuclear Power Corporation (NPC).
	•	Establishment of Rural Electrification Corporation (REC)—to provide financial assistance for rural electrification.
1975 &	•	Creation of—
1976		National Thermal Power Corporation (NTPC)
		National Hydro Electric Power Corporation (NHPC)
		North Eastern Electric Power Corporation (NEEPC).
1982	•	Creation of the Department of Non-Conventional Energy Sources.
1986	•	Establishment of Power Finance Corporation (PFC).
1987	•	Establishment of Indian Renewable Energy Development Agency (IREDA) as a government corporation to promote new energy technologies.
1988	•	Establishment of area specific corporations—
		Tehri Hydro Development Corporation (THDC)
		Nathpa Jhakri Power Corporation (NJPC).
1989	•	Establishment of powergrid as a corporation for transmission of power—to operate and maintain inter-regional and inter-state transmission systems.
1991-92	•	Policy formulated for private sector investments in the electricity sector.

The Plant Load Factor (PLF) is an important indicator of operational efficiency of thermal power plants. Trends in the PLF are depicted in the following table.

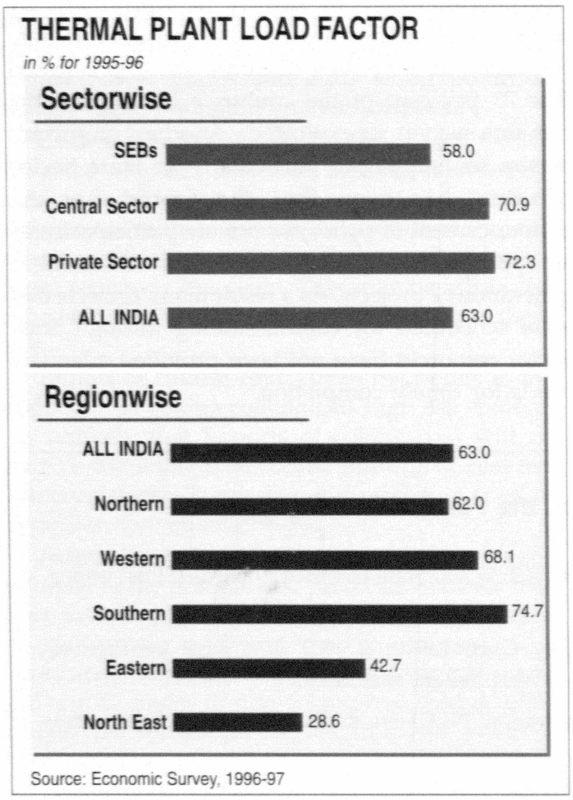


Table 3.4

Thermal Plant Load Factor

(per cent)

	1992-93	1993-94	1994-95	1995-96
State Electricity Boards	54.1	56.6	55.0	58.0
Central Sector	62.7	69.8	69.2	70.9
Private Sector	58.8	57.0	65.8	72.3
All India	**57.1**	**61.0**	**60.0**	**63.0**
REGION				
North	62.0	64.0	59.1	62.0
Western	59.7	62.4	63.8	68.1
Southern	62.6	68.3	69.1	74.7
Eastern	39.8	44.8	43.7	42.7
N. East	24.3	19.9	28.6	28.6

Source: Economic Survey, 1996-97

The low capacity utilisation of thermal power plants of the State Electricity Boards (SEBs) is largely due to deficiencies in management and operation, lack of proper maintenance and non-availability of coal of appropriate quality. There are wide inter-State variations in the average PLF of Thermal Plants in the case of Eastern and North Eastern regions which continued to be much lower than the all India average during 1995-96.

Poor Performance of SEBs: The critical problem area in the power sector is the poor performance of SEBs, which generate and distribute power, set tariffs and collect revenues. Agriculture and industry are the two most important categories of consumers in terms of their relative shares, with SEB electricity charges set at much below cost for the agricultural sector and above unit cost for industrial sector.

The gap between the average cost of generation and supply on the one hand and average realisation from the agricultural sector on the other is widening.

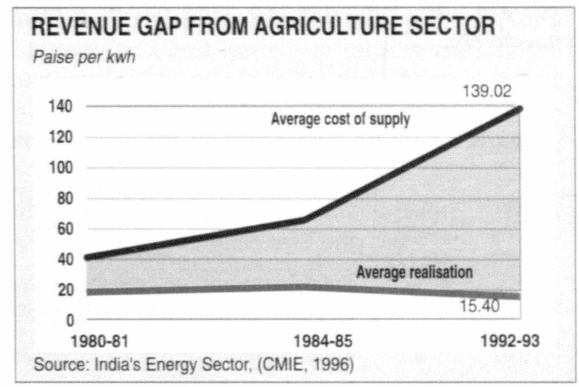


Table 3.5

Revenue Gap from Agriculture

Paise /KWH

AVERAGE	1980-81	1984-85	1992-93
Cost of Supply	41.90	65.07	139.02
Realisation	18.84	18.44	15.40
Gap	23.06	46.63	123.62

Source: India's Energy Sector (CMIE, 1996)

Unit revenue realisation from the agricultural sector in none of the SEBs covers a reasonable fraction of the average cost for the SEBs in absolute terms which was a little over Rs. 7500 crore in 1995-96 and was projected to increase further to Rs. 10,096 crore in 1996-97. The hidden subsidy for agriculture and domestic sectors has increased from Rs. 7,248 crore in 1991-92 to Rs. 19,227 crore in 1996-97 and is projected to further go up to Rs. 21,580 crore in 1997-98.

T & D Losses: In addition, the SEBs have continued to suffer from transmission and

distribution (T & D) losses, which stood at 21.8 per cent in 1992-93. However, these have come down marginally to 20.9 per cent in 1994-95. These figures are very high when compared with the international average of less than 10 per cent for the advanced countries of the world.

It has been estimated that a reduction in T & D losses by 1 per cent would result in savings of capacity of about 800 MW at present day consumption. These T & D losses are due to the sparsely distributed loads over large rural areas, substantial amount of energy sold at low voltage level, under-investment in the power distribution system, inadequate billing and high pilferage. Inherent losses in conductors and equipment can be brought down through system improvement schemes and the pilferage and theft of energy can be brought down through administrative measures.

Restoration of the financial health of SEBs and improvement in their operational performance continue to remain the most crucial issues in the power sector SEBs which are required to earn a minimum rate of return of 3 per cent on their net fixed assets in service after paying for depreciation and interest charges. There were only 3 SEBs with a rate of return of more than 3 per cent in 1994-95. The managerial and financial inefficiencies in the State Sector utilities have, in turn, adversely affected future capacity addition and system improvement programmes. On the one hand, the SEBs do not have enough resources to finance future programmes and on the other, their ability to raise investible funds from alternative sources is limited due to their poor financial and commercial performance.

Resource Crunch: The net budgetary support to the Central Public Sector Undertakings under the Ministry of Power as a proportion of the approved Plan outlay has been declining steadily over the years. Owing to the decline in budgetary support, the Central Public Sector Underakings have to mobilise finances through internal and extra budgetary (IEBR) resources. Today IEBR constitute 67 per cent of total Plan outlay for the power sector.

Private Sector Participation: In view of paucity of resources with Central/State PSUs as well as SEBs and the need to bridge the gap between the rapidly growing demand for and supply of electricity, policy now is to encourage greater investments by private enterprises in the power sector. This policy, which has the objective of mobilising additional resources for capacity addition in power generation and distribution had been formulated in 1991. The policy to invite private participation also covers areas of transmission and distribution. Interest has been expressed in putting up more than 124 power projects with a total capacity of 67281 MW and involving an investment of about Rs. 24672 crore.

Need for Institutional Reforms: The Indian power sector will not be able to obtain the required investment unless structural changes are undertaken to enable it to perform on a sound commercial footing. Without drastic measures, the current demand supply gap is likely to widen in the future, possibly reaching some 25 per cent of peak demand by the year 2000 AD. The experiences of Argentina, China, USA and UK provide some useful lessons on how different reform processes can be conducted and an understanding of these experiences may be of significant value for those who are working at reforming India's power sector. The reform process will require coordinated efforts to deal with the inter-related issues of markets, institutions, regulations and finance. A rapid pace of reform may be critical for its success.

Better supply side management could increase supply from the installed capacity. It is essential to analyse the issues relating to the national grid. The issues which emerge from this are regarding the benefits from integrated grid operations and how it reduces costs, improves system utilisation and meets larger demand. Moreover, measures to improve power station efficiency leading to reduction in auxiliary consumption i.e. consumption of power by power plant itself (8 per cent to 14 per cent) could mean substantial savings, both in terms of energy and costs.

Is energy saved equal to energy generated? India's power planning has a strong supply bias. Planners have always sought more generation and more power plants. Efficiency improvements and various demand side management options induce the consumers to use energy more effectively. One unit of energy saved at the consumer end reduces generation requirements by 1.4 units considering T & D losses and auxiliary consumption by the power plant itself. However, to deliver 1.4 unit, the required capacity would be nearly twice as much when one considers the need for reserve margins, plant load factor, and so on.

After about 50 years of planned development the power scenario today is not so bright. Widening gap between supply and demand, leading to frequent power break-downs and load shedding with peak shortage mounting to 18 per cent, shortfall in new capacity creation by 42 per cent, transmission and distribution losses of about 18 per cent and poor financial position of SEBs in the backdrop of dwindling budgetary support paint a gloomy picture for the power sector today. The effects of shortfall

in power capacity addition during the Eighth Plan are going to be felt during the Ninth Plan. The Ninth Plan should come forward with a bold strategy to tackle the future challenges of the power sector. There is a need to set into motion a time bound action plan for improving the performance of the power sector.

Some of the major areas of concern are:

- Increased energy and peak shortages due to shortfall in targeted capacity addition.
- Resolving a number of issues relating to private sector participation.
- Rationalisation of tariff structure by SEBs.
- Improvement in Plant Load Factor (PLF)
- Improved utilisation of external aid
- Adequate investment for T & D Sector for reducing T & D Losses.

There is an urgent need to accelerate investment in power in both public and private sectors. Any further delay in clearing private power projects will inflict incalculable costs on the economy.

THE PETROLEUM SECTOR

India has recoverable reserve of crude oil of 739 million tonnes. The development of the indigenous oil industry in India has been an area of high priority since the mid-1970s, largely with the discovery of Bombay High off shore. Rapid strides were made in crude oil production during the early 1980s, reaching a peak of 30 million tonnes during 1989-90. However, this fell to 27 million tonnes during 1992-93 largely on account of the closure of many wells in the Bombay High region. However, by 1994, the Oil and Natural Gas Commission (ONGC) now Oil and Natural Gas Corporation Ltd., brought down the number of sick wells from 15 per cent to 10 per cent which enabled it to revive the uptrend. Due to this, there was a 19 per cent increase in production during 1994-95 (32 million tonnes) and during 1995-96 it was 35 million tonnes registering a 9 per cent increase over 1994-95. ONGC contributed 90 per cent of the total crude oil produced in the country.

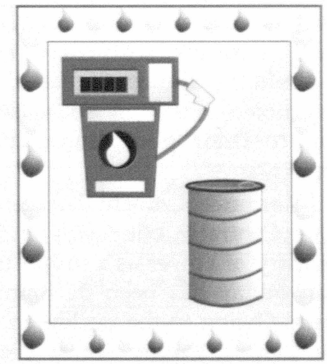
The total refinery crude throughout during 1995-96 was 58.58 million tonnes. The production of Natural gas in 1995-96 at 22.31 billion cubic metres. Trends in production in the Petroleum Sector during the first four years of the Eighth Plan are shown below :

Table 3.6

Production Trends in the Petroleum Sector

	Unit	1992-93	1993-94	1994-95	1995-96
Crude Oil Products	Million Tonnes	26.95	27.0	32.2	35.2
(i) Onshore	Million Tonnes	10.20	11.6	12.0	11.9
(ii) Offshore	Million Tonnes	16.75	15.4	20.2	22.7
Refinery throughput	Million Tonnes	53.48	54.3	56.5	58.6
Petroleum Products	Million Tonnes	50.36	51.1	52.9	55.1
Natural Gas	Billion Cubic Metres	18.10	18.3	19.4	22.3

Source: Economic Survey, 1994-95 and 1996-97



Imports : The gross imports of crude oil and petroleum products during 1995-96 was 47.68 million tonnes. The value of POL imports during 1995 was Rs. 24,095 crore. The import bill has swollen on account of increasing quantum of import of petroleum products, depreciating rupee value and soaring prices in international markets. With a spurt in international prices of crude oil in recent times, there is an increased burden of oil import bill on the economy. Thus, proper management of our resources has occupied the centre stage.

Pricing of oil products : The Government controls the prices of all oil products. These prices are only periodically revised. In order to ensure that refineries, oil producers and traders get adequate returns on their operations in spite of the administered prices, an Oil Coordination Committee (OCC) set up by the Government operates the so-called oil pool account. The purpose of this account is to provide crude oil to refineries at a fixed price; provide cost plus prices to refineries for their products; ensure margins to the marketing

companies and enable cross-subsidisation of products.

The administered pricing mechanism allows for a huge subsidy, notably to kerosene, LPG and high speed diesel. The subsidy on kerosene and LPG continues to burden the Oil Pool Account beyond reasonable limits. The Oil Pool Account is maintained to provide uniform and stable prices to the consumer within the country and reasonable retention margins for the oil companies. It is supposed to be self balancing in a longer time-frame. The cumulative outstanding of the oil companies stood at Rs. 5,700 crore as on 31 March 1996.

The mounting outstandings of the oil companies from the oil pool account are having an adverse impact on the financial position of the oil companies and has also resulted in their experiencing severe cash crunch necessitating them to resort to huge borrowings.

The Ministry of Petroleum and Natural Gas has finalised plans for the complete de-regulation of the oil sector in five-year time framework.

Problem Areas

The main problem areas of the oil sector which raise certain pertinent questions requiring early action are the following :

(a) India's large and growing reliance on imports of oil and oil products makes it susceptible to changes in the international oil prices.

(b) The domestic crude production has stagnated for some years and even gone down. How do we manage our oil resources better ?

(c) Since the finding of Bombay High in the '80s, we have not found any other major field. We have also been unable to attract foreign companies to come for exploration in India. Why is it so and what should we do ? Why are no efforts made to exploit NE Region ?

(d) It also puts a burden on Government finance. Can we reform oil pricing ?

The oil and gas production during 1992—97 was estimated to be 160 million tonnes and 100 billion cubic metres respectively as against the Eighth Plan targets of 197.32 million tonnes and 125.42 billion cubic metres respectively. The shortfalls are on account of uncertain reservoir behaviour in Bombay offshore basin, problems in the North Eastern Region and delays in implementation of joint venture projects. The import dependence for oil in 2001-02 may go up to 65-70 per cent against about 55 per cent now.

The following areas would need specific attention :

- Acceleration of Exploration efforts, especially in the deep offshore areas. Possibility of acquisition of acreage in other countries should also be explored.
- Improvement of reservoir management and enhanced oil recovery.
- Rationalisation of the administered pricing mechanism reflecting the cost of supply.
- The possibility of importing natural gas at competitive rates, particularly in the form of liquified natural gas at the coastal locations.

III

TRANSPORT

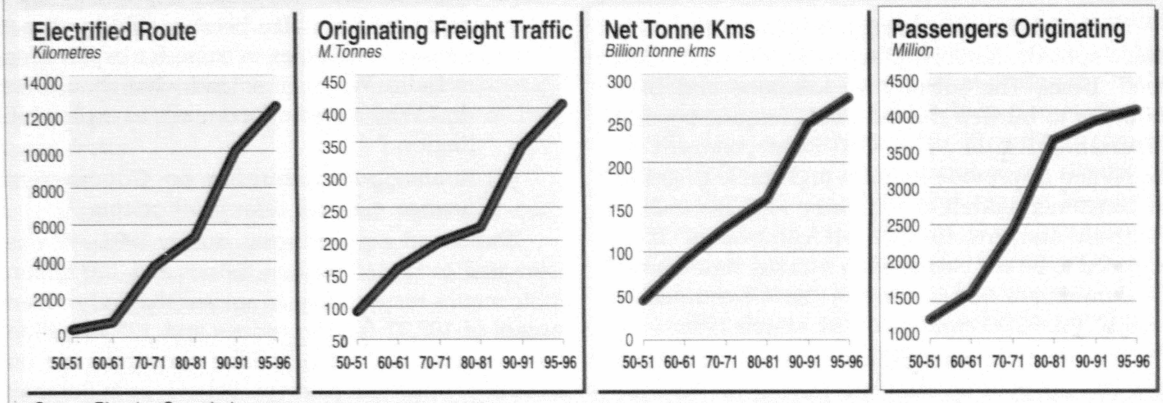
Transport is a crucial infrastructure needed for the development process. This sector is capital intensive. The projects in this sector have low return and long gestation periods. This sector accounts for a major share of energy consumption in India especially of petroleum products. The pressure on this sector is likely to build up further with economic and population growth; rapid industrialisation, urbanisation and agricultural development. Transport plays an important role for sustaining economic activities and creating employment opportunities. The share of this sector in the total Gross Domestic Product (GDP) in India was about 4.55 per cent in 1990-91. The role of transport in the national economy is gaining greater significance.

RAILWAYS SECTOR

Over 140 years old now with a route network of 62,915 kms., the Indian Railways is the principal mode of transport in the country. The Indian Railway System is the second largest system in the world under a single management. In 1995-96, the Railways carried over 11 million passengers per day and lifted more than a million tonnes of freight traffic daily on a network spread over 62,915 route kms. covering 7,068 stations.

The growth of rail transport in India since Independence has been impressive as seen from the upsurge of two basic indices of service performance; number of originating passengers and passenger kms. and originating tonnage of freight and tonne kms. of freight carried.

RAILWAYS: THE FREIGHT AND PASSENGER TRAFFIC



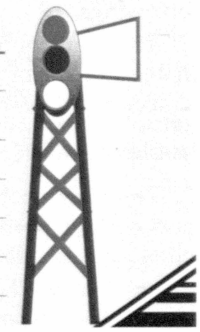
Source: Planning Commission

Table 3.7

Railways : Physical Programmes and Achievements

ITEM	1950-51	1960-61	1970-71	1980-81	1990-91	1995-96
Route Length (kms)	53596	56247	59790	61240	62367	62915
Electrified Route (Length km)	388	748	3706	5345	9968	12306
Originating Freight Traffic (M. Tonnes)	93.0	156.2	196.5	220.0	341.4	405.5
Net Tonne Kms. (Billion tonne Kms.)	44.12	87.68	127.36	158.47	242.70	273.52
Passengers Originating (Million)	1248	1594	2431	3613	3858	4018

Source: Planning Commission



In the past, freight transport output (measured in net tonne kilometres) has increased by about 6.20 times, passenger output (non-suburban passenger kilometres) by about 4.50 times whereas the network has grown by only about 1.17 times in terms of route kilometres and by 1.36 times in terms of track kilometres. The significant increase in transport output has been brought about by more intensive utilisation of the available assets, improvement in their productivity and technology upgradation. This can be seen in the table below :

Table 3.8

Indices of Growth of Traffic Output and Inputs (1950-51 = 100)

Year	Traffic Output Indices		Investment input Indices				
	Freight traffic (NTKms)	Passenger traffic (non-suburban passenger km.)	Wagon capacity	Passenger coaches	Route km.	Running track km.	Tractive effort of locos
1950-51	100	100	100	100	100	100	100
1960-61	199	110	152	154	105	107	144
1970-71	289	159	226	188	112	121	178
1980-81	359	279	269	210	114	128	201
1990-91	550	394	278	219	116	133	192
1991-92	582	419	286	225	117	133	194
1992-93	585	400	285	231	117	134	194
1993-94	583	389	273	233	117	134	188
1994-95	573	419	260	229	117	134	196
1995-96	620	448	256	227	117	136	196

Source: Indian Railways; Yearbook 1995-96

Policy Initiatives

The impressive growth achieved by the Railways since Independence has been brought about by suitable policy initiatives and planning process. After Independence, emphasis on the development of basic and heavy industries has thrown the main responsibility for carrying raw materials and finished products for these industries on the railways. Plans for expansion of rail capacities have been drawn up in terms of increased quantities of such traffic to be carried over in the Plan period. Within their available capacities, the Railways have to accord higher priorities to the movement of raw materials connected with development projects and essential commodities like foodgrains which are comparatively low rated in preference to commodities bearing high freight rates.

A large part of investment on the Railways under the Five Year Plans accounted by the works designed to maintain/increase capacity on the existing railway system so as to meet the traffic demand arising from the economic development of the country and only a small part of the investment has been devoted to the expansion of railway system to new areas. In the beginning, the new lines were built with a view to linking them up with the development of basic industries like coal. A few lines were constructed to open up new areas.

Substantial technology transfer took place in the railways in the 1950s and 1960s. The major change was shift from steam to diesel locomotives together with a shift from the two-axle 20 tonne freight wagons to the four-axle 60 tonne wagons and vacuum braking system. This technological upgradation together with electronic communication and signalling made it possible to run the fairly high density of mixed passenger and freight operations required to meet the increased capacity in accordance with the growth in demand. In an effort to cut costs and improve efficiency, Indian Railways is going ahead with its policy of converting all routes to diesel and electric traction. Electrification of high density routes has the added advantage of a pollution free system. Steam traction has been completely wiped out insofar as movement of freight traffic is concerned.

About 20 per cent of the total route km. on Indian Railways has been electrified upto March 31, 1996. Of the total electrified route km. 1,379 route km. are on the suburban sections and balance 11,496 on heavy density freight route. Today, out of the seven major trunk routes connecting Mumbai, Calcutta, New Delhi and Chennai, five are fully electrified and works is on progress on the other two.

Indian Railways has a multiple gauge system, namely broad gauge, metre gauge and narrow gauge. Upto 1992-93, the policy was that the gauge conversion should only be done selectively where the traffic density was heavy as transhipment at break of gauge points abused severe bottlenecks. In 1992-93, a significant change in the railway policy with regard to gauge conversion was made when the project unigauge was launched, with the objective of generating transport capacity by opening up alternative routes to ease the congestion on the busy trunk routes which are working to saturation and to provide speedy and uninterrupted means of communications between areas which have potential for growth.

Normally, the new railway line projects are undertaken out of loan capital by way of budgetary support. For the first time in the Seventh Plan, a new experiment was carried out for funding the construction of Container Corporation of India Ltd. (CONCOR) railway by raising market borrowings and setting up a Corporation where the equity contribution is to be shared between Railways and beneficiary States.

A major feature of the modernisation effort made by Indian Railways in the last decade was the progressive use of computers. Computerisation is being extended to coal accounting systems, inventory control, management information system in the production units, operational control rooms, passenger reservations and recently in freight operations.

Problems

Falling share in freight traffic : In spite of impressive achievements, the growth of railways has not kept pace with the growing demand of the national economy. As a result the **share of railways in total traffic has come down.** In the case of freight traffic, the share of railways which was 88 per cent in 1950-51 fell to 47 per cent in 1991-92. By 2000, the share of Railways in goods traffic is projected to decline to 35 per cent. This is a matter of concern as railways is energy efficient and safer mode of transport. The fall of rail share in the total traffic is due to the inability of railways to generate additional capacity to meet the growth of traffic. The adequate capacity of the railways has been in turn mainly due to low investment.

Declining budgetary support

In the **railways budgetary support on Plan outlay has come down from 75 per cent in the Fifth Five Year Plan to about 22 per cent in the**

Eighth Five Year Plan. The increased reliance on market borrowings to finance rail projects has led to continuous increase in the proportion of revenue required to service the borrowings. High cost of borrowing from capital market has reduced the net surplus to the railways for investment.

This may be seen in the backdrop of falling share of Railways in the Plan outlays. Railways share as percentage of total plan outlay fell from 10.3 per cent during 1950-74 (*i.e.* upto Fourth Plan) to 6.3 per cent in the Eighth Plan (1992-97).

Cross Subsidisation

In spite of repeated emphasis by various Committees, the railways continue to practise **large scale cross subsidisation of its operations.** The passenger traffic accounts for about 60 per cent of the transport output and contribute only 28 per cent of the earnings. The progressive reduction in the budgetary support and practice of cross subsidisation have reduced the capacity of railways to generate resources for investment.

Increase in Social Burden

Another area of concern is the increasing burden of railways on account of **operation of branch lines, movement of mass consumption commodities at lower rates,** etc. The increase in the social burden on railways has also reduced its capacity for investment.

In spite of the problems being faced by the Railways its performance has been quite satisfactory. The Table below indicates the operating efficiency parameters of the Indian Railways as compared to other developing countries in the World:

Table 3.9

Operating Efficiency Parameters

International Comparison

Country	Year	TU per Line Km. (000)	NT Km. Per wagon (000)	Diesel Loco Availability (per cent)
India	1994	9154	866	89
China	1994	29743	3185	82
Bangladesh	1992	2209	47	74
Sri Lanka	1994	2250	61	NA
Pakistan	1994	2544	203	78
Malaysia	1994	1546	338	80
Indonesia	1994	3481	357	78

Note: TU/Line Km – Traffic Units

Source: Railway Board

ROAD TRANSPORT SECTOR

Road transport has emerged over the past decades as the major mode for transporting freight and passenger traffic in India. The share of road in the movement of goods and passengers has increased significantly over the years. In 1950-51, roads carried only 12 per cent of freight and 26 per cent of passenger traffic. By 1995-96 the share of roads in total movement of freight has increased to 60 per cent and that of passengers to 80 per cent. As per the Economic Survey 1995-96, these ratios are expected to expand to 65 per cent in freight and 87 per cent in passenger transport by the year 2000.

Traffic vs. Network

Road traffic has been growing at 9 to 10 per cent per year and this has placed excessive strain on the National Highways and the State Highways. In line with the increase in traffic carried by roads, the total number of vehicles has also grown from 0.3 million in 1951 to 25.3 million in 1994. It is expected that the total number of registered vehicles will increase to 54 million by year 2001.

However, the main road network comprising National and State Highways has not matched this traffic growth. The National Highway system is the main arterial transport system of the country. Road length under this system is about 34,000 kms. which works out to be less than 2 per cent of total road length but carries approximately 40 per cent of the total traffic. The expansion of National Highways has been by only about 55 per cent from about 20,000 kms. in 1951 to 34,000 kms. in 1995 and that of the State Highways by 118 per cent from 60,000 km. in 1951 to 1,31,000 km. in 1995.

The main roads have also not kept pace with the traffic demand in terms of their quality. Out of the total 1,65,000 km. length of National and State Highways, only 2 per cent of the length is of four lanes and 34 per cent of two lane while the remaining 64 per cent length is composed of single lane roads.

Inadequate road networks have led higher transportation costs which have also severely eroded international competitiveness of the Indian economy. The economic losses due to bad condition of the main roads are estimated to be of the order of Rs. 200 to Rs. 300 billion per annum.

The main roads comprising National and State Highways need strengthening and capacity augmentation. The maintenance of roads is more important than their upgradation and expansion. Maintenance of roads is a neglected aspect of road system in India. Such a large road network built at a huge cost is showing signs of disintegration and deterioration. It has been observed that availability

of funds for maintenance generally does not exceed 50-60 per cent of normal requirements.

Road length in relation to area and population for selected countries is shown below :

Table 3.10

Road length in Relation to Area and Population for Selected Countries – 1994

COUNTRIES	Total Road Length (in Kms.)	Area (Sq. Kms.)	Population (Million)	Road Length per 100 Sq. Kms. of Area	Road Length per Million of Population
AFRICA					
Egypt	52000	1001449	59.68	5.20	871.31
Morocco	59790	710781	26.07	8.41	2293.44
Zambia	37359	752618	-	4.96	-
South Africa (c)	182329	1123226	31.24	16.23	5836.40
ASIA & MIDDLE EAST					
India (e)	3015229	3287263	844.32	91.72	3571.19
Indonesia (b)	244164	2027087	179.38 (a)	12.05	-
Japan	1137453	377801	125.00	301.07	9099.62
Malaysia	-	330434	18.61 (c)	-	-
Pakistan	204346	796095	126.61	25.67	1613.98
EUROPE					
Austria	200000	83859	8.04	238.50	24875.62
Belgium	140978	80519	10.10	461.94	13958.22
France	812550	551000	57.80	147.47	14057.96
West Germany (c)	639805	248694	81.34	257.27	7865.81
United Kingdom (d)	366477	229988	56.56	159.35	6479.44
AMERICA					
United States (d)	6284039	9809418	259.16	64.06	24247.72
Mexico (d)	245433	1969269	84.50	12.46	2904.53
Brazil (d)	1824364	8511965	-	21.43	-
Canada (c)	901903	9970610	27.30	9.05	33036.74
OCEANIA					
Australia (a)	810264	7683000	17.66	10.55	45881.31
New Zealand (d)	92308	270534	8.52	34.12	26223.30

Note : (a) relates to the year 1990, (b) relates to the year 1991, (c) relates to the year 1992, (d) relates to the year 1993, (e) relates to the year 1995
Source : Planning Commission

From the above table it is seen that road length in relation to area and population, India lags behind several developing countries. However, India ranks second in total road length. This is because of the size of our country in terms of both area and population.

The quality and capacity of national highways have to be enhanced consistent with the traffic expansion and overall economic growth of the country. The deficiencies in the road network have contributed to safety hazards besides entailing higher transport cost. These highways will, therefore, require major augmentation of capacity as well as structural upgradation.

Funds for the Development of Roads

The road sector has been progressively under funded in successive Five Year Plans. The allocation of funds for roads constituted 6.7 per cent of the total First Five Year Plan public sector outlay, which has come down to only 3 per cent in the Eighth Five Year Plan. In the case of National Highways the investment 1.4 per cent of the total plan outlay in the First Five Year Plan has declined to only 0.6 per cent of the total public sector outlay in the Eighth Five Year Plan.

All over the world, four sources, as given below, are used to build and maintain quality road

infrastructure. In India, only the first has as yet been tapped:

- Allocation from the existing user taxes collected as part of general revenue. India's spending on roads is only about one-third of the revenue raised through road taxes and related levies.
- Creation of an earmarked fund through levy of specific user tariffs.
- Development and maintenance of highway on 'User pays' basis by raising commercial and multilateral loans.
- Private sector participation.

Private Sector Participation

The magnitude of the task on hand and the volume of funds required for this purpose are clearly beyond the capacity of the public sector. Hence the amendment of the National Highways Act to allow the private sector to construct and charge a fee or toll will permit the private sector to participate in construction, maintenance and operation of roads on Build, Operate and Transfer (BOT) basis. So far, response of the private sector towards the privatisation process in the road sector has been relatively lukewarm. Private parties appear to be concerned about the low or uncertain return on investment, cost escalations caused by uncontrollable administrative delays and lack of consistent and committed policies by the authorities.

According to an estimate overall resource requirements to meet development and expansion needs of National, State and Super National Highways would be Rs. 320 billion from 1996-97 to 2000-01 and an additional Rs. 360 billion between 2001-02 and 2005-06. How do we mobilise funds of this size ?

CIVIL AVIATION SECTOR

The Past upto 1953

The Indian air transport industry in 1946 consisted of the Tata Airlines and Indian National Airways which, though small, was were organised and professionally competent. By the middle of 1947, provisional licences were issued to 11 Companies over 51 routes for air operations. The newly licensed airlines were deficient in organisation, equipment, etc. and were not able to provide the requisite degree of safety and competence. Realising the critical situation in which India's air transport industry was placed, the Government decided upon complete nationalisation and in March, 1953 the Parliament passed the Air Corporations Act, under which Air India International and Indian Airlines were formed as public sector Corporations from 1st August, 1953.

Entry of Private Sector

The civil aviation sector was opened to the private sector in April 1990 with the introduction of "open sky policy" with regard to cargo; as per this policy, international airlines were allowed to operate cargo flights without restrictions. The privatisation in civil aviation was enlarged through the launching of the Air Taxi Operator Scheme. Subsequently, with the repeal of Air Corporations Act in 1994, the monopoly of Indian Airlines, Air India and Vayudoot over scheduled air transport services came to an end. Seven private taxi operators have since been granted scheduled airlines status. There are now 21 air taxi operators who operate charter/non-scheduled air services, with 34 aircrafts in 120 plus category.

Liberalisation

In the revised Civil Aviation Policy approved by the Cabinet on 1st April, 1997, the Government has permitted foreign equity upto 40 per cent and NRI/OCB investment upto 100 per cent in the domestic air transport services. Equity from foreign airlines, directly or indirectly, has not been allowed in the domestic air transport services. Barriers to entry and exit from the sector have been removed and the minimum fleet size for the scheduled operator has been raised from the existing 3 to 5 aircrafts.

Airport Management: Some structural change

With the enactment of the Airports Authority Act, 1994, the 2 Airports Authorities *viz.* International Airports Authority of India (IAAI) and National Airports Authority (NAA), responsible for management and development of international airports and domestic airports (including civil enclaves at Defence airports), respectively were merged *w.e.f.* 1.4.1995 to form a single unified authority, *viz.* Airports Authority of India (AAI). Vayudoot Limited was merged with the Indian Airlines Limited *w.e.f.* 25th May, 1993.

Progress since Independence

The number of civil airports in the country has increased from 62 in 1951 to a total of 92 airports presently.

The growth of the two national airlines since 1953 has been as under :

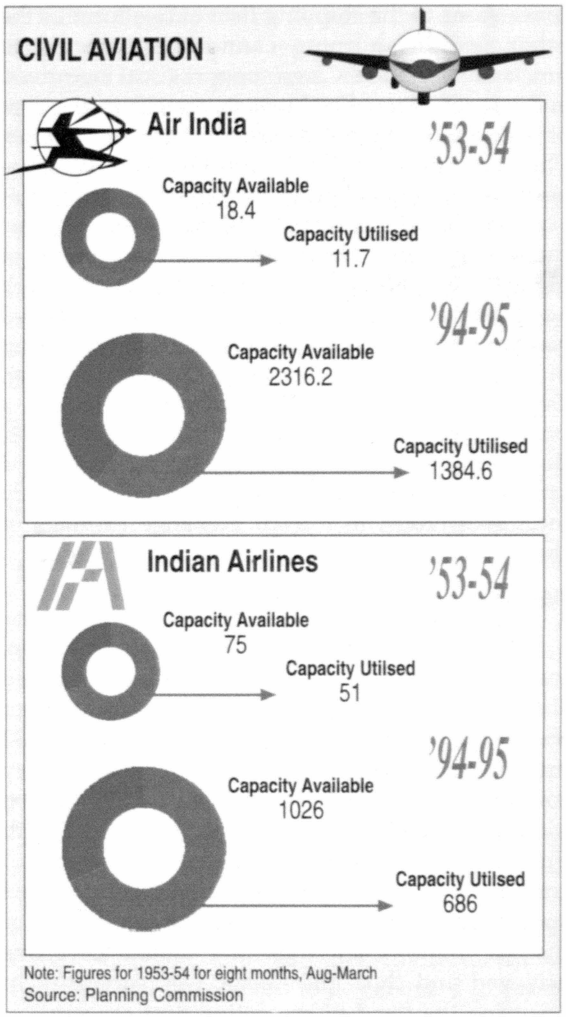


Table 3.11

Air India

	1953-54*	1994-95
Capacity Available (Available Tonne km - Million)	18.4	2316.2
Capacity Utilised (Revenue Tonne km - Million)	11.7	1384.6

Indian Airlines

	1953-54	1994-95
Capacity Available (Available Tonne km - Million)	75	1026
Capacity Utilised (Revenue Tonne km - Million)	51	686

(* Aug '53 to March '54, Eight months data)
Source: Planning Commission

India occupies an eminent position in the civil aviation sector as compared to other developing countries having a large fleet size owned by the two national carriers. Air India had a fleet of 28 aircrafts as on December 31, 1996. The fleet strength of Indian Airlines at present is 53. The country has a total of 92 civil airports including a total of 5 international airports besides 28 civil enclaves at the Defence airports.

PRESENT PROBLEMS

There has been a significant decline in the performance of Air India during the last few years and its share in the international air traffic passing through India has gradually declined, which is partly due to non-induction of additional aircraft capacity and partly due to low yield from operations. Air India started incurring loss since 1995-96 when its loss was Rs. 272 crore against a profit of Rs. 41 crore in 1994-95.

Air India's overall load factor of 62 per cent is low compared to other international airlines. Its share of international traffic originating from India has come down from 42 per cent in 1981 to 35 per cent in 1991 and 20.4 per cent in 1994. However, in 1995 Air India's market share had improved marginally to 22 per cent.

Indian Airlines has been incurring losses for the last several years. Its financial performance began to decline since 1989-90. From that year till 1995-96, the airlines incurred losses amounting to around Rs. 1000 crore, leading to the erosion of its reserves. The declining performance of the airline is largely attributed to the grounding of A-320 aircraft operations on uneconomic routes and the merger of Vayudoot with the airline in May, 1993.

Out of the total 92 domestic/international airports and 28 civil enclaves in the Defence airports, only 35 airports are remunerative. The other airports are not handling any traffic or are handling low traffic making the airports unremunerative. With the exception of China, airport capacity in India remains low relative to East Asia as shown in the Table below:

Table 3.12

International Comparison of Airport Capacity

	Airports per 1 million pop.	Airports per 1000 sq. km
India	0.38	0.11
Malaysia	5.83	0.35
Philippines	3.67	0.52
Singapore	3.46	15.81
South Korea	2.50	1.16
Indonesia	2.21	0.23
Thailand	1.74	0.20
China	0.17	0.02

Source: World Bank Country Study: INDIA (1996)

THE FUTURE

In air transport, the infrastructure should be strengthened through greater investment including that from the private sector. Communication and navigational facilities should be improved in the interest of safety. The capacity of the national carriers need to be strengthened and private sector efforts for further strengthening the fleet, improve the services and bring down the traffic may be welcomed.

Can our national carriers become self sustaining of improving their operations. service and financial performance ?

SHIPPING SECTOR

The role of shipping in a country's promotion of trade and economic development has been recognised by maritime countries the world over. For India with a coast line of about 5600 kms. studded with 11 major ports and more than 179 minor and intermediate ports, this sector is of vital importance. At present, 95 per cent of its international trade in terms of volume and 77 per cent in terms of value is moved by sea.

Indian shipping sector has to play vital role in the strategy of 'Export-led Growth' which is closely knit with overall liberalization ethos and consequent opening up of the economy. As a vital infrastructure, the shipping sector has tremendous potential to stimulate exports by making them more competitive in the international market; and by providing related transport facilities, it can reduce the cost of exports. Further, shipping constitutes invisible exports of the country, making substantial contribution to foreign exchange earnings on current account and thus, improving the balance of payment position.

Important Policy Initiatives

In 1950, the Central Government accepted the policy of coastal trade for Indian tonnage and also assumed responsibility for training personnel of the Merchant Navy. The broad objectives under the initial planning period were enunciated as under :

- to cater fully to the needs of the coastal trade with due regard to the possibility of diverting some traffic from railways to coastal shipping.
- to secure an increasing share of India's overseas trade for Indian ships and to build up a nucleus fleet.

Changes in thrust areas from Plan to Plan, by and large reflected in built continuity and were in line with the changes in the international shipping environment. As maritime countries are providing concessions to the shipping fleet in one form or the other, Indian shipping cannot be expected to function in isolation. Cargo support, fiscal incentives, and upgradation of technology remain in the core of policy prescriptions enunciated from time to time. The major thrust of the Eighth Five Year Plan has been on the acquisition of modern diversified fleet capable of fulfilling the national objectives of export promotion. Other objectives include scrapping of old vessels, and modernisation of fleet through acquisition of fuel-efficient vessels, gradual movement towards complete delicensing, provision of cargo support by canalising all cargo of Govt. Departments/agencies to Indian vessels through a policy of purchase on FOB and sale on CIF terms, development of adequate repair facilities and provision of a package of physical and monetary incentives linked to foreign exchange earnings of the sector.

Physical and Financial Progress

At the beginning of the First Five Year Plan, India had a tonnage of 3.91 lakh Gross Registered Tonnes (GRT) which has continuously grown upto the end of the Sixth Five Year Plan to reach 6.32 million GRT. Due to prevailing recessionary conditions, gross tonnage declined to 5.91 million tonnes by the end of the Seventh Plan. The Eighth Five Year Plan period heralded a new era of confidence in the shipping sector. After a prolonged spell of recession, witnessed during the decade of the 80s, Eighth Plan target of 7 million GRT was achieved and thus, this sector was successful in reversing the trend of stagnating fleet capacity.

In terms of Plan expenditure, the shipping sector, after a modest beginning with total expenditure of Rs. 19 crore during the First Five Year Plan, witnessed massive investment initiatives from Fourth Plan onwards. During the Fourth Five Year Plan, total expenditure rose to Rs. 155 crore and further to Rs. 469 crore during the Fifth Plan. During Eighth Five Year Plan against the total approved outlay of Rs. 3400 crore, anticipated expenditure was expected to be Rs. 3333 crore.

Problems

An analysis of age-profile of Indian fleet does not depict an encouraging picture. A large number of vessels have either completed their economic life or are due to complete it in the near future. Further, share of Indian shipping in India's overseas trade is continuously declining after attaining the peak percentage of about 41 per cent in the year 1987-88. At the beginning of the Eighth Five Year Plan, share

of Indian flagships in its overseas trade was nearly 36 per cent and by the terminal year of the Plan it dropped to 28 per cent. Stringent External Commercial Borrowings (ECB) norms and migration of trained manpower towards foreign flagships are other areas of concern.

Development of coastal shipping requires immediate attention. The policy of 100 per cent reservation of the coasts for the Indian flagships could not be followed vigorously due to cumbersome customs procedures and non-availability of suitable Indian vessels exclusively meant for coastal shipping.

Future

Tonnage expansion plan is to be so evolved to enable India to retain the existing share of its overseas trade. Attempts are required to (a) create a conducive environment for raising resources from capital markets and external borrowings, (b) phasing out the sectoral allocation of tonnage in India's overseas and coastal trade, (c) providing further autonomy in ship acquisition, (d) address the issues of recruitment, training and retention of manpower of Indian flag vessels, and (e) making appropriate amendments to the Merchant Shipping Act.

Innovative means are required to be considered for expansion of fleet, setting up of subsidiaries offshore, dual registration of ships, and securing foreign investment either as joint ventures or directly. Cargo preference and other benefits to the Indian flag fleet will be required to be extended to vessels acquired through such schemes.

Infrastructural facilities at the ports are required to be geared up not only to relieve the existing congestion but also to take a step forward to develop hub and feeder' system to enable them to handle large containerised vessels in an efficient manner.

PORTS SECTOR

There are 11 major ports and 179 minor/ intermediate ports studded along the 5560 kms. long coast line of India. The major ports are administered by port trusts under the control of Central Government, whereas responsibility of development of minor ports vests with the State Government concerned. Over 90 per cent of India's sea borne trade moves through the major ports.

Important Policy Initiatives

At the time of Independence, major ports in the country were in a poor and dilapidated state because of intensive use, lack of proper maintenance and inadequate replacement of assets. The thrust of initial Plan was to rehabilitate and modernise the facilities at all the existing ports and also to set up new major ports, better designed to serve the hinterland. In view of heavy investment required and long gestation period and within the assumptions of market failure associated with it, the State assumed a dominant role in the development of port infrastructure. With the aim of giving financial autonomy to the major ports, the Major Port Trust Act, 1963 was enacted. The liberalisation ethos which swept across the country since 1992 had its impact on port sector as well. With a view to ushering in an era of competition and modernisation, the ports sector was gradually thrown open to private sector participation. Comprehensive guidelines in this regard have been issued in 1996 and decks have been cleared for private sector participation in constructing the terminals on BOT basis and in providing port related services.

Physical and Financial Performance

Since 1951 there has been a steady growth of traffic at various ports. In 1950-51 there were five ports which handled total traffic to the tune of 19.2 million tonnes; by the end of financial year 1976-77 there were ten major ports which handled total traffic of 67.8 million tonnes. In 1996-97 there were eleven major ports handling total traffic to the tune of 227.13 million tonnes.

In terms of investment also the performance has been very encouraging during the post-Independence period. During First Five Year Plan a total expenditure of 28 crore was made on ports and lighthouses; by the Fourth Plan it increased to Rs. 255 crore and further to Rs. 497 crore during the Fifth Plan. The Eighth Plan expenditure is expected to be Rs. 2150 crore.

Problems

According to a World Bank Study (1996), India's major ports are over crowded, poorly equipped and inefficiently laid out. They are used beyond their capacity with average utilisation rates currently ranging from 118 to 135 per cent compared with international norms of between 55 and 65 per cent. This degree of congestion leads to extraordinary turnaround delays : Lengthy delays and inadequate port services have induced carriers to charge higher freight rates from Indian ports than from other Asian ports. These ports suffer from the problems of excess manpower, obsolete equipment, poor equipment maintenance facilities, low levels of productivity and equipment and over-congestion due to capacity constraints. Another constraint relates to domestic logistics, such as road and raillinks and lengthy custom procedures. As a consequence of inadequate

transport facilities and lengthy documentary procedures, import-export containers are packed and unpacked in ports, neutralising the advantages of containerisation. Urgent action is, therefore, called for to resolve the various issues and improve the productivity at our ports which would augment the capacity to some extent. However, in the long run, there is a need to augment the capacity through building new berths, developing new ports and installing modern cargo-handling equipment.

The present container handling rates are also low compared to international standards. Our most modern port, Jawaharlal Nehru Port Trust (JNPT) handles 8.5 boxes per ship hour compared to 69 in Singapore and 30-40 in Colombo. Even in terms of per crane hour, productivity of containers handled ranging from 7.5 at JNPT to 15 in Chennai, does not compare favourably with 36 boxes at Singapore and 26 at Colombo. Therefore, much more needs to be done to improve the productivity levels of labour and equipment. A World Bank Study (1994) compared Indian port handling costs to those in selected other countries, and, not counting the loss of potential exports, estimated the comparative cost disadvantage at $ 80 per container for exporters and $ 190 for importers.

The development and management of minor ports is a State subject. However, States have not been able to find adequate funds for their ports. The role of minor ports is increasingly assuming importance owing to the encouragement given to development of coastal shipping and it is viewed as an alternative to over-congested major ports.

Future

Development of transport infrastructure is required to be seen in the context of overall growth scenario. Port should move with and subserve the overall economic growth. Demand forecasts suggest that India will need additional port capacity of roughly 200 million tonnes by the end of the century (Asian Development Bank, 1996). Current estimates place the capacity at 174 million tonnes.

There is a need to change the basic approach in tune with those being followed by well-managed ports the world over. At present, our ports function as 'service ports' and are engaged in providing all sorts of ports and harbour facilities irrespective of any consideration of cost-effectiveness. Indian ports also have to assume the role of 'landlord ports' wherein all equipment and port related supporting services are provided by ports operators.

Containerisation holds the key for the future development prospects. Modernisation of ports suitably designed for eventual use as container berths requires greater emphasis. Keeping in view the financial constraints in providing resources for port development and also to introduce an element of competition in the provision of port services, the induction of private sector should be encouraged in major ports. The private entrepreneurs can invest in creation of total facilities including infrastructure like berth, dredging, etc. and superstructure like sheds, equipment, etc. or superstructure only for their own use and use by others on payment basis.

For proper development of port infrastructure and to check wasteful duplication of port facilities, there is a need to evolve an integrated approach to ensure upmost coordination among the major and minor ports.

IV

TELECOMMUNICATION

An efficient and well developed information and communication system is one of the vital infrastructural inputs required for rapid over all socio-economic development. Telecommunication services occupy a central place for providing necessary connectivity and integration with the rest of the world. For a developing country like India, it has become one of the essential pre-requisites for achieving an accelerated pace of development.

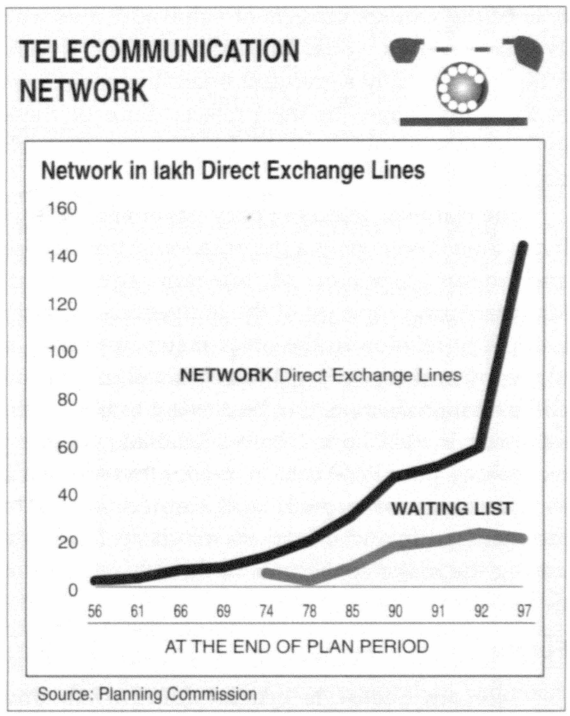
The Past

Development of telecommunication was taken up in a planned way by the launching of the First Five Year Plan in 1951 and the programme was continued throughout all the subsequent Five Year Plans. The development of basic services has been entirely funded by public funds as telecom services has been the monopoly of the Government. The basic thrust through the Plans has been on expansion and modernization of the network. In the Eighth Plan, greater priority was accorded to modernization of network and rural connectivity. For the first time, private sector was involved in the telecommunication services by permitting the provision of value added services on franchise basis by the private parties. During Eighth Plan, the telecommunication

sector was given a major thrust by allocating 9.7 per cent of total Plan outlay (Central sector).

Expansion of basic network

There has been a phenomenal growth of telecommunication network in India since Independence. Starting with about 1 lakh lines in 1951, the telecom network has increased to 14 million Direct Exchange Lines (DELs) as on March 31, 1997. But the growth in waiting list has been equally large as is evident from the table below :



Source: Planning Commission

Table 3.13

Growth in Telecommunication Network

At the End of Plan Period

	Network (Lakh DELs)	Waiting List (Lakh)
First Plan (1951-56)	1.73	—
Second Plan (1956-61)	3.32	—
Third Plan (1961-66)	6.51	—
Annual Plans (1966-69)	8.14	—
Fourth Plan (1969-74)	12.44	5.32
Fifth Plan (1974-78)	18.67	2.42
Sixth Plan (1980-85)	28.95	8.42
Seventh Plan (1985-90)	45.89	17.13
Annual Plan (1990-91)	50.74	19.61
Annual Plan (1991-92)	58.10	22.89
Eighth Plan (1992-97)	144.30	20.07

Source: Planning Commission

The basic telecom services have witnessed a sustained high growth rate during the last decade; growing at a rate of 16-17 per cent per annum. The current annual rate of expansion is 2.45 million DELs (1996-97). In spite of this rapid growth, there is still a large unmet demand. About 20 lakh people are waiting for this basic facility. Given India's large size and population, the present telephone density of 1.7 telephones per 100 persons (1997) is quite low seen in the context of world average of 12 and that of comparable developing countries *e.g.* 16.5 in Malaysia, 7.4 in Brazil and 5.8 in Thailand (1995). Revenue from telecom services constituted 1.8 per cent of GDP for India against a similar figure for the Asia-Pacific region (1995).

Present Status

The Indian telecom network is the 14th largest in the world and 4th largest in Asia (1995). The present status of the network is given below :

- More than 22,000 telephone exchanges working in the country.
- A network of more than 144 lakh telephone connections with about 20 per cent of the total connections working in the rural areas.
- Availability of National and International Subscriber Trunk Dialing (ISTD/STD) facility to about 95 per cent of the subscribers.
- About 50 per cent of the 6 lakh villages of the country have public telephone facility.
- Availability of variety of services such as Mobile Radio Telephone, Radio Paging, facsimile, Data Transmission, Integrated Services Digital Network (ISDN) etc. to cater to the business and other needs of customers.

Rural connectivity

As more than 70 per cent of India's population lives in the rural areas, providing basic telecom services to the rural areas is of vital importance for the nation's development. Rural connectivity was one of the major objectives of the Eighth Plan. A target of covering 3.6 lakh villages was fixed for the Eighth Plan. Assuming a significant contribution by private sector, the National Telecom Policy (1994) had revised the target to cover all of about 6 lakh villages by March 1997. As the provision of basic services by private operators did not take off as envisaged, the achievement of the target was restricted to the efforts and resources available with DoT. During the Eighth Plan, about 2.17 lakh villages

were provided telephone facilities. Taking the telephones provided earlier into account, about 3 lakh villages have been covered so far.

Problems/Issues

The following table shows the under-performance of India, relating to comparable countries on a range of telecommunications sector indicators, in particular telephone density and line faults :

Table 3.14

Telecommunications Sector

(Indicators, 1993)

	Telephone Density per 100 pop.	Waiting Period (years)	Faults per 100 lines per year
India	0.89	2.5	218.0
EUROPE	30.85	2.9	NA
Argentina	12.29	1.3	12.5
Mexico	8.79	1.0	NA
Brazil	7.51	0.7	43.2
ASIA	4.27	1.4	NA
Egypt	4.26	5.8	NA
Thailand	3.71	6.5	32.2
AFRICA	1.6	4.9	NA
China	1.47	0.8	NA
Philippines	1.31	9.9	10.0
Pakistan	1.31	4.9	120.0
Indonesia	0.92	0.5	49.0
Sri Lanka	0.9	>10	15.0

Source: World Telecom Indicators, 1994-96

India has already recognised the importance of this sector in enhancing its ability to compete by inviting private sector participation. The service provision by the private operators of basic telecom services is yet to start though the National Telecom Policy and the guidelines for entry of private sector into basic services were announced in 1994. The major constraints in this regard seem to be non-finalisation of inter-connect and licence agreements, non-resolution of the issues like appropriateness of licence fee and other levey charges and availability of adequate finance.

The success or failure of deregulation will largely depend on how well the Telecom Regulatory Authority of India (TRAI) functions. It has to be made truly autonomous and self-financing to ensure its effective functioning. As it will have to handle complex issues of multi-disciplinary nature, it needs to be supported by a team of highly qualified professionals from different fields like economics, law, technology, business administration and finance.

In the changed scenario of competition in the area of basic services, can the Department of Telecommunications (DoT) be corporatised to effectively compete with the private companies run purely on commercial lines? If Corporatised, will functional freedom be given to the new institution? Will functional autonomy be a reality?

Requirement of funds by private sector to finance the various projects of value added as well as basic services would be large. As there is very little scope for any significant operating cash flows in the early stages of the projects, bulk of these investments would have to be financed through equity and loans.

The National Telecom Policy has envisaged that India should emerge as a major manufacturing base and major exporter of telecom equipment. Manufacturing capacity of the indigenous industry is small in relation to the other major operators in the world and export constitutes a small proportion of the total production. Can be develop Indian multi-nationals in this area ? Non-availability of latest technology, poor R&D base, non-adoption of exports as a strategy of growth and limited access to international financial markets for cheap funds are among the major constraints in the achievement of this goal.

Future

Telecom Sector is crucial for growth and modernisation. It is one of the fastest growing sectors in India and has immense potential for future growth. It is one of the prime support services needed for rapid growth and modernisation of all sectors of the economy. Keeping this in view, it needs to be promoted and developed as a basic infrastructural segment.

Rural connectivity needs to continue as a major thrust. As already stated, there are about 6 lakh villages of which only about 3 lakh villages have been covered. Can the remaining villages be covered by 2000 AD through joint efforts by the Public Sector and private operators ? Can we significantly enhance the penetration ratio to a much larger cross-section of the population ? Can we satisfy the audio, video and data communication needs of the business community? Can foreign companies be attracted to have manufacturing based in India to support domestic and export production?

V

WHITHER FROM HERE ?

The general infrastructure picture which emerges is that not only has the demand for infrastructure facilities and services continues to outspace supply but also that the quality of existing supply is poor. The visible signs of shortfalls in capacity and inefficiencies include power failures, increasingly congested roads, inadequate airport infrastructure, over-crowded ports and long-waiting lists for installation of telephones. The widening gap between demand and supply of infrastructure also raises questions concerning the sustainability of economic growth in future.

In order to sustain a GDP growth rate of 7 per cent it is imperative to have an acceleration in the rate of investment in infrastructure. It is obvious that the massive investment needs in infrastructure cannot be met within the financial resources of the Government without crowding out other priority social and economic programmes. As a proportion of GDP, total investment in infrastructure ranged from about 4.5 per cent to 6 per cent, but broadly averaging about 5.5 per cent of GDP during the late 1980s and early 1990s.

Sustained growth of the economy depends on adequate availability of basic infrastructural facilities, such as power, transport and communications, of adequate quality. The Eighth Plan has fallen significantly short not only of the targets but also of the Seventh Plan, in these areas due to the slower pace of investment than had been contemplated. Although the negative effects have yet to be felt in their entirety due to the improved capacity utilisation of existing facilities, there is a limit to which these options can be pursued. In the longer run there is no alternative to creating the requisite capacity. Efforts at containing the fiscal deficit of the Government have fallen disproportionately on public investment, particularly in those sectors which are more dependent on budgetary support. The share of capital expenditure in the total expenditure of the Government has declined sharply from around 30 per cent at the beginning of the Eighth Plan to 24 per cent. Sectors which have the potential to raise their own investible resources have recorded a mixed performance. Petroleum and telecommunication have performed well and have raised greater resources than targetted. Power, transport and irrigation, on the other hand, have performed well below expectations insofar as generating investible surpluses are concerned.

Future investment needs are projected to be much higher because of demands created by rapid urbanisation, and the need to make up for past inadequate investment. In order to satisfy the upwardly spiralling demand, it appears unavoidable that an organisational format be established in which development of the sector is less dependent on government funds and investment can be financed from the capital markets and internal resources on a self-sustaining basis.

The efficacy of private sector participation in infrastructure development would be contingent upon the capability to commercialise these projects whereby recovery of investments would be through a system of user charges. In fact, the potential for commercialisation and competition in infrastructure is more widespread than is commonly perceived. It seems obvious too that activities such as power generation and distribution, or long distance telecommunications may not be adaptable to market provision unless they are unbundled from related activities.

The first priority for augmenting the availability of infrastructural facilities will lie in accelerated completion of ongoing projects so that they start yielding returns as early as possible. This in itself, however, may not be enough and efforts would have to be made to initiate new infrastructure investments.

The Expert Group on Commercialisation of Infrastructure Projects, set up by the Ministry of Finance in 1994, estimated that total infrastructure investment requirements would be about Rs. 400,000 crore to Rs. 450,000 crore (US$ 115 to $ 130 billion) over the next five years and about Rs. 7,500,00 crore (US$ 215 billion) during 2001-02 to 2005-06. The Expert Group has provided directions for policy reforms which can help in greater commercialisation of infrastructure along with the promotion of public-private partnerships.

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 infrastructural projects viable and attractive for the private sector. At the same time steps will have to be taken to reduce transmission losses, including theft of power, which in themselves are important reasons for raising the average cost of energy. Reduction of such avoidable losses will be critical for reducing the burden of the consumers and ensuring viability of investments.

Although the private sector will play a growing role in additional capacity creation in future, the public sector enterprises would need to continue to shoulder the major burden of providing critical infrastructural services. Credible public sector reforms seem indispensable to broad base their management, to upgrade technology, to improve their performance and quality of services and to generate adequate investible resources through rationalisation of service charges and better recovery of costs. The process of deregulation and privatisation of infrastructure services also needs to be supplemented by the establishment of statutory regulatory authorities for ensuring fair competition among public and private operators, and protecting consumer interests, public safety, internal and external security, needs of vulnerable and weaker sections and environmental sustainability. Unless there is a dramatic improvement in the efficiency of service delivery, infrastructure bottlenecks are likely to remain a significant constraint in achieving progress in global integration and sustained rapid export growth. Are we truly perceptive of these realities ? Are we prepared for pragmatic policy changes ?

4

SCIENCE AND TECHNOLOGY

From the days of Prime Minister Jawaharlal Nehru, Science and Technology has been high on the national agenda. The Scientific Policy Resolution, designed by Nehru has been the centerpiece of the planning and development process in India. Since Nehru's days, we have created a vast Science & Technology infrastructure which spans over several disciplines—from Agriculture Technology to Atomic Science, from Ocean Development to Space Science. We have built up a vast network of research institutions, national laboratories, institutes and Universities. Today, we have a stock of 3.5 million scientists and technocrats. Our scientific and technological courses are highly valued the world over and in fact, our men of excellence in science and technology are providing brain power even to the developed parts of the world. But, our inadequacies are low investments in research and development, low out-turn of scientific and technological manpower, negligible R&D output in the private sector, and an exceptionally Government centred R&D activity. What we need are cadres of innovators as distinct from scientific bureaucracy.

THE PAST

Scientific and technological research makes a fundamental contribution to development. The crucial role of science and technology as an instrument of social and economic change has been appreciated and the rapid development of science and technology and its application, accepted as a major objective of planning in India. This trust in science is embodied in the historic Scientific Policy Resolution (SPR) of the Government of India adopted in 1958. At the time of Independence, the industrial and technological base of India was very small. Since then a scientific and technological infrastructure covering a very broad spectrum of discipline has been created. Scientific and technological accomplishments of significant magnitude have been seen in areas of high technology like atomic energy, space and electronics, while close to the lives of masses, the success in attaining self-sufficiency in foodgrain production, based on genetic engineering, has been equally spectacular.

Ever since Independence in 1947, India has committed to use Science and Technology for its economic development. Prime Minister, Jawahar Lal Nehru, perceived Science and Technology as the main thrust of India's socio-economic development. The Scientific Policy Resolution of the Government of India during his stewardship envisaged a definite role of science in Indian planning and development. This thrust has continued after him also. The Government of India took up a massive programme of setting up national laboratories and institutes of higher learning in various fields of Science and Technology. About 150,000 qualified scientific and technical personnel are produced every year. Today the total stock of scientific and technically qualified manpower is estimated at 3.5 million, ranking India as the third largest complement of such manpower in the world, occupying a unique position among developing countries.

India was the first developing country in the world to create a separate Ministry of Scientific Research and Natural Resources in 1951 for organising and directing scientific research for national development. However, new Departments in the field of science and technology started functioning after the seventies which include the Department of Science and Technology (DST) and Department of Electronics. Later, the Department of Environment & Forests, the Ministry of Non-Conventional Energy, the Department of Biotechnology and the Department of Ocean Development emerged from the activities of the DST. About 150 specialised research laboratories and institutes have so far been established under the aegis of Indian Council of Agricultural Research

(ICAR), Council of Scientific and Industrial Research (CSIR), Indian Council of Medical Research (ICMR), Departments of Atomic Energy, Science & Technology, Space, and the Defence Research & Development Organisation, etc.

In recent years, public and private sector organisations and undertakings, assisted by fiscal incentives, have established over 600 in-house research & development laboratories largely to meet their internal technological requirements. A relatively new but important development in the last fifteen years is the rapid growth of engineering consultancy organisations to provide design and consultancy services and act as the bridge between research institutions and industry. There are now over 150 such firms of varying size and capability employing over 20,000 technologists. The total expenditure on science and technology is now close to 0.6 per cent of the GNP.

A range of industries, from the small to the most sophisticated, has been established covering wide areas of utilities, services and goods, and a large number of technologists are now familiar with their operations. There is now a reservoir of expertise well acquainted with the most modern advances in basic and applied areas, and equipped to make choices between available technologies, readily absorb new technologies and provide a framework for future national development. Indian Scientists and technologists have distinguished themselves not only in class rooms and laboratories but also in factories and fields, in conceptual planning and formulation of strategies and in their implementation.

Scientific Policy Resolution of 1958

The Parliament adopted the Scientific Policy Resolution in 1958. The objectives of the policy are:

- to foster, promote and sustain, by all appropriate means, the cultivation of science and scientific research in all its aspects — pure, applied and educational;
- to ensure an adequate supply, within the country, of research scientists of the highest quality and to recognise their work as an important component of the strength of the nation;
- to encourage and initiate, with all possible speed, programmes for the training of scientific and technical personnel, on a scale adequate to fulfil the country's needs in science, education, agriculture, industry, and defence;
- to ensure that the creative talent of men and women is encouraged and finds full scope in scientific activity;
- to encourage individual initiative for the acquisition and dissemination of knowledge, and the discovery of new knowledge, in an atmosphere of academic freedom and in general;
- to ensure for the people of the country all the benefits that can accrue from the acquisition and application of scientific knowledge.

Resource Allocation for Science and Technology during the Plan periods

In the First Five Year Plan, attention was chiefly devoted to the building up of national laboratories and other research institutions. In the subsequent Plans the available facilities were developed, research was made more broad-based and research facilities in Universities and at other research centres were further extended. Priority assigned for science and technology is reflected in increasing allocation of funds in successive Plans.

Table 4.1

Science and Technology outlays in different plan periods

(Rs. in crores)

Five Year Plan Period	Plan Outlay
First Plan (1951-56)	14
Second Plan (1956-61)	33
Third Plan (1961-66)	71
Plan Holiday (1966-69)	47
Fourth Plan (1969-74)	142
Fifth Plan (1974-79)	693
Annual Plan (1979-80)	208
Sixth Plan (1980-85)	2016
Seventh Plan (1985-90)	5087
Annual Plans (1990-92)	1416
Eighth Plan (1992-97)	5169

Source: Planning Commission

Planning for Science and Technology is mainly achieved by preparing plans for the following three sectors in an independent manner:

- for the scientific Departments, *viz.*, Department of Science and Technology, Department of Scientific and Industrial Research, Department of Biotechnology, Department of Ocean Development, Department of Space, Department of Atomic Energy, Department of Electronics, Ministry of Environment & Forests;

- for science and technology components of over 30 socio-economic Ministries/ Departments including organisations like Indian Council of Medical Research, Indian Council of Agricultural Research, Central Board for Irrigation and Power etc; and
- for a separate Science and Technology sector in the plans of the States and Union Territories.

As a result of developments over the last eight plans in extensive network of institutions engaged in scientific research has come into existence and pure research, applied research and research in specialised fields are being undertaken at a large number of centres.

Box 4.1 : Research : What and Where

Category of Research	Where being done
Pure Sciences Research	Universities, laboratories of Scientific Societies and Associations; Council of Scientific and Industrial Research; Department of Atomic Energy in their laboratories
Applied and Industrial Research	National Laboratories; Co-operative Industrial Research Associations; Industrial Undertakings
Engineering Research	National Laboratories; Institutes of Technology; Engineering colleges and Universities; Research Agencies of Infrastructure Ministries like Railways, Surface Transport, Power, etc.
Mineral Sciences Research	Geological Survey of India; National Mettalurgical Laboratory; Central Fuel Research Institute; Central Mining Research Station; Oil & Natural Gas Corporation
Medical Research	Indian Council of Medical Research
Agricultural Research	Indian Council of Agricultural Research and Research Institutes under the Council; Agricultural Universities
Atomic Research	Atomic Energy Establishment, Trombay

Research and Development (R & D) Expenditure

Investment in scientific research makes a large and enduring contribution to the prosperity of the country. Significant inputs of S & T are needed in various socio-economic sectors with R & D carried out and promoted in the concerned industries. Substantial investments have been made over the last five decades in building R & D institutions to meet the requirements of the industry. The support to the industry for establishing a strong R & D base was given from time to time by providing incentives through tax concessions of various types. Presently, there are 214 Universities, 400 national laboratories and 1300 in-house R & D centres in the industrial sector. Several Science and Technology departments have been set up in the areas of environment, non-conventional energy sources, biotechnology, ocean development, industrial research, space, atomic energy, defence, health, agriculture and electronics.

The investment in R & D has significantly increased from Rs. 4.68 crore in 1950-51 to Rs. 5,141.64 crore in 1992-93. The rate of R & D expenditure, measured as percentage of gross domestic product, increased from a meagre of 0.05 per cent in 1950-51 to 0.95 per cent by 1987-88 but then dropped to 0.73 per cent by 1992-93 as may be seen from the Table 4.2.

Table 4.2

Expenditure on Research and Development: 1950-51 to 1992-93

	Rs. crores				% to total R & D expenditure			Total R & D expenditure
	Central Government	State Government	Private Sector	Total	Central Government	State Government	Private Sector	as % of GDP at market prices
1950-51	4.68	NA	NA	4.68	100.00	–	–	0.05
1955-56	12.14	NA	NA	12.14	100.00	–	–	0.12
1965-66	62.45	3.51	2.43	68.39	91.31	5.13	3.55	0.26
1970-71	112.47	12.58	14.59	139.64	80.54	9.01	10.45	0.32
1971-72	125.93	9.53	16.18	151.64	83.05	6.28	10.67	0.33
1972-73	149.67	22.10	22.89	194.66	76.89	11.35	11.76	0.38
1973-74	161.53	24.13	30.35	216.01	74.78	11.17	14.05	0.35
1974-75	231.14	24.00	36.46	291.60	79.27	8.23	12.50	0.40
1975-76	287.63	26.73	42.35	356.71	80.63	7.49	11.87	0.45
1976-77	300.54	25.20	48.42	374.16	80.32	6.74	12.94	0.44
1977-78	343.92	28.50	58.20	430.62	79.87	6.62	13.52	0.45
1978-79	412.49	40.24	75.87	528.60	78.03	7.61	14.35	0.51
1979-80	500.36	46.04	92.14	638.54	78.36	7.21	14.43	0.56
1980-81	580.49	59.34	120.69	760.52	76.33	7.80	15.87	0.56
1981-82	721.94	71.79	147.00	940.73	76.74	7.63	15.63	0.59
1982-83	912.00	97.05	196.98	1,206.03	75.62	8.05	16.33	0.68
1983-84	1,053.37	119.90	207.83	1,381.10	76.27	8.68	15.05	0.67
1984-85	1,422.25	126.11	233.19	1,781.55	79.83	7.08	13.09	0.77
1985-86	1,654.06	162.78	251.94	2,068.78	79.95	7.87	12.18	0.79
1986-87	1,979.21	164.56	291.63	2,435.40	81.27	6.76	11.97	0.83
1987-88	2,358.88	183.92	310.27	2,853.07	82.68	6.45	10.87	0.86
1988-89	2,675.59	254.05	417.62	3,347.26	79.93	7.59	12.48	0.84
1989-90	2,933.92	301.23	490.59	3,725.74	78.75	8.09	13.17	0.82
1990-91	3,116.01	308.18	549.98	3,974.17	78.41	7.75	13.84	0.75
1991-92	3,527.04	348.83	636.94	4,512.81	78.16	7.73	14.11	0.73
1992-93	3,976.58	393.29	771.77	5,141.64	77.34	7.65	15.01	0.73

Source: Centre for Monitoring Indian Economy (CMIE), Basic Statistics : India, August 1994

The data in Table 3 show a rapid increase in the number of scientists and technical personnel during 1950–90. India has the third largest pool of technical manpower in the World, as already stated.

Table 4.3

Estimated Stock of Scientific and Technical Personnel : 1950 to 1990

('000 numbers)

	Engineering		Medical		Agriculture		Science		Total
	Degree	Diploma	Degree	Licentiate	Post graduate	Graduate	Post graduate	Graduate	
1950	21.6	31.5	18.0	33.0	1.0	6.9	16.0	60.0	168.0
1955	37.5	46.8	29.0	35.0	2.0	11.5	28.0	102.9	292.7
1960	62.2	75.0	41.6	34.0	3.7	20.2	47.7	165.6	450.0
1965	106.7	138.9	60.6	31.0	3.7	39.4	85.7	261.5	731.5
1970	185.4	244.4	97.8	27.0	135.0	47.2	139.2	420.0	1174.5
1980 (Estimated)	221.4	329.4	167.6	167.6	96.5	96.5	217.5	750.3	1782.7
Beginning of 1985 (Estimated)	372.6	564.2	268.2	3.7	161.6		350.3	1138.3	2658.9
1990 (Projection)	454.5	734.8	314.4	5.5	196.2		419.7	1139.4	3464.4

Note : Data for 1965 and 1990 taken from Seventh Five Year Plan : 1985-90 are not comparable with those for earlier years which are based on CSIR compilation.The difference may be due to different definitions and coverage followed by the two agencies.

Source: Centre for Monitoring Indian Economy (CMIE), Basic Statistics : India, August 1994

DEVELOPMENT OF SCIENCE & TECHNOLOGY — AN AREA PROFILE

ATOMIC ENERGY

India had taken confident strides towards harnessing the atomic energy for peaceful purposes almost fifty years ago, with the enactment of the Atomic Energy Act in 1948. The mandate defined in the Act covers production of nuclear power using country's mineral resources of uranium and thorium and creation of a strong R&D infrastructure for the development and application of appropriate technologies. Towards this end, the Department of Atomic Energy is engaged in the development of pressurised heavy water reactors, fast breeder reactors and advanced thorium reactors along with the associated fuel cycle systems. The work of the department also includes promoting non-electricity applications of nuclear energy by building research reactors, production of radio isotopes for use in areas such as medicine, agriculture and industry; developing advanced technologies such as accelerators, lasers, material technology, biotechnology; supporting basic research in nuclear energy and allied areas of science etc.

In terms of development of infrastructure, initially the Atomic Energy Commission (AEC) was established on 10 August 1948 with Dr. Homi J. Bhabha as its first Chairman. The Commission was entrusted with the formulation and implementation of the policy of the Government in all matters concerning atomic energy. It was subsequently that the Department of Atomic Energy (DAE), the executive arm of AEC, was set up in 1956. Thus began the efforts for building up a versatile infrastructure of research facilities, trained scientific and technical manpower, material processing centres and the know-how and capability to manufacture nuclear components and electronic equipment to support the atomic energy programme.

The Department of Atomic Energy today has under its aegis: (i) five research organisations *viz.*, the Bhabha Atomic Research Centre-Mumbai, Indira Gandhi Centre for Atomic Research-Kalpakkam, Centre for Advanced Technology-Indore, Variable Cyclotron Centre-Calcutta and Atomic Minerals Division-Hyderabad; (ii) three industrial undertakings *viz.*, the Heavy Water Board-Mumbai, Nuclear Fuel Complex-Hyderabad and Board of Radiation & Isotope Technology-Mumbai, and (iii) four public sector undertakings *viz.*, the Nuclear Power Corporation of India Limited, (NPCIL), Uranium Corporation of India Limited, Indian Rare Earths and Electronics Corporation of India Limited.

The Deparment is also fully aiding six national institutes *viz.*, the Tata Institute of Fundamental Research-Mumbai, Tata Memorial Centre-Mumbai, Saha Institute of Nuclear Physics-Calcutta, Institute of Physics-Bhubaneswar, Mehta Research Institute-Allahabad and Maths Science Institute-Chennai.

NUCLEAR POWER PROGRAMME

The importance of nuclear energy to meet the long term energy needs of the country was recognised quite early when in 1954 Dr. Homi J. Bhabha drafted the comprehensive three-stage nuclear programme using natural resources, uranium, thorium and plutonium. This covered building Pressurized Heavy Water Reactors (PHWRs), fast breeder reactors and thorium based reactors for producing electricity. Over the years, we developed capability to establish and manage power plants indigenously. The nuclear Power infrastructure was developed in different parts of India.

Box 4.2 : Use of nuclear energy for producing power : Progress

1969	Establishment of Tarapur Atomic Power Station (TAPS)
1972 & 1980	Building up of two Pressurised Heavy Water Reactors (Candu design and Canadian collaboration) at Rawatbhata (Rajasthan)
1984 & 1986	Commencement of commercial operation of two more Candu reactors at Kalpakkam, Chennai, using indigenous technology totally
1987	Nuclear Power Board converted into Nuclear Power Corporation
1989	Commissioning of two Candu design reactors (220 megawatt capacity) at the Narora Atomic Power Station (NAPS)
1992 & 1995	Commissioning of two more atomic power reactors at Kakrapar, (Gujarat)
As on date	Nuclear Power Plants have crossed generation of one lakh million unit mark. Currently Indira Gandhi Centre for Atomic Research engaged in development of fast breeder reactors and associated technologies.

SPACE PROGRAMME

Another area of high technology where there has been continuing and significant progress is that relating to space programme. The principal objective of the space programme in India has been to develop indigenous competence in designing and building sophisticated hardware including rockets and satellites for scientific research and practical application, in the areas of communication, meteorology and remote sensing of earth resources. Activities in the field of space science and technology were initially started within the Department of Atomic Energy. When Vikram Sarabhai succeeded Homi Bhabha as Chairman, Atomic Energy Commission, he devoted a large part of his time and energy to planning and implementation of programmes in the field of Space. The Indian space programme was formally organised in 1972 with the setting up of Space Commission and a separate Department of Space (DOS) to promote development and application of space technology, specifically in the areas of telecommunication, television broadcasting, meteorology, resources survey and management. Development of satellites, launch vehicles and associated ground systems is integral to the space programme objective. Beginning with the successful launch and operation of the satellite Aryabhatta in 1975 followed by the launching in 1979 of Bhaskara, both with the cooperation of the Soviet Union, the Indian space programme has made an impressive progress over the last two and a half decades through a well integrated self-reliant programme.

India's first indigenously designed and fabricated experimental communication satellite, APPLE, was launched on the European Arians Launcher in June 1981 which successfully completed its mission in October 1983. In the same year, i.e. 1983 the Indian National Satellite System (INSAT) was established with the commissioning of INSAT-1B.

The INSAT is a multi-purpose satellite system for telecommunications, meteorological observations and data relay, television broadcasting and radio and television programme distribution. It is a joint venture of Department of Space (DOS), Department of Telecommunications (DOT), India Meteorological Department (IMD), All India Radio (AIR) and Doordarshan. DOS has direct responsibility for establishment and operation of INSAT space segment. At present the system is served by the last of the first generation INSAT-1D launched in 1991 and three ISRO built second generation satellites, INSAT-2A, INSAT-2B and INSAT-2C, launched in July 1992, July 1993 and December 1995 respectively. Two more satellites in the INSAT-2 series, INSAT-2D and 2E, are now under fabrication.

Presently, in the country there are 210 telecommunication terminals of various types, including 50 terminals for rural telegraphy in the north eastern part of the country, operating in the INSAT network providing about 4,410 two-way speech circuits over 162 routes. More than 700 micro-terminals have been set up under the National Informatic Centre to provide nationwide data communication links between district and State capitals.

The meteorological data gathering with Very High Resolution Ratiometer (VHRR) instrument on board INSAT and its dissemination, along with its collection of remote area meteorological data from unattended platforms, has vastly improved weather forecasting in the country. Satellite based locale-specific disaster warning system has been established with over a hundred disaster warning receivers installed in the cyclone-prone coastal areas.

INSAT has enabled a vast expansion in the television service with over 700 TV transmitters linked through INSAT. The INSAT television network provides access to over 80 per cent of India's population. The launch of INSAT-2C now enables Indian television outreach beyond Indian boundaries catering to the population from South East Asia to Middle East. Educational television service through INSAT has been introduced both at University level in the national network and at primary school level in several States including Andhra Pradesh, Orissa, Maharashtra, Gujarat and Uttar Pradesh. A channel on the INSAT has been dedicated for development of education and training. A two-year pilot project for demonstration of satellite-based developmental communication and training has been taken up in Jhabua district of Madhya Pradesh.

INDIAN REMOTE SENSING SATELLITE SYSTEM

The Indian Remote Sensing (IRS) satellites are the mainstay of National Natural Resources Management System (NNRMS), for which the Department of Space (DOS) is the nodal agency providing operational remote sensing data services. The IRS system was operationalised with the commissioning of IRS-1A in March 1988. Remote sensing applications in the country, under the umbrella of NNRMS, now cover diverse fields such as crop acreage and yield estimation, drought warning and assessment, flood control and damage assessment, land use/land cover information, agro-climatic planning, wasteland management, water resources management, underground water

exploration, prediction of snow-melt run-off, management of watersheds and command areas, fisheries development, urban development, mineral prospecting, forest resources survey, etc. Active involvement of the user Ministries/Departments has ensured an effective harnessing of the potential of space-based remote sensing. An important application of IRS data is in the Integrated Mission for Sustainable Development (IMSD) initiated in 1992. IMSD, under which 174 districts have been identified, aims at generating locale-specific action plans for sustainable development.

LAUNCH VEHICLE TECHNOLOGY

Design and development of rocket engines were taken up from the early years of the Space programme. Initially the emphasis was on development of solid propellant engines. Indian industry has been in the production of these engines. Engines of higher thrust have been built and tested.

India started launch vehicle development in a modest way through SLV-3 launched in August 1980 which could put 40 kg. class satellite into near earth orbit. The capability was further built up through Augmented Satellite Launch Vehicle, ASLV, which had two successful flights - in May 1992 and May 1994 - when it injected the SROSS (Stretched Rohini Satellite Series) satellites, carrying a gamma ray burst experiment and retarding potential analyser into low earth orbit. The second satellite, SROSS-C2, is still sending valuable scientific data.

India has developed the operational launch vehicle and Polar Satellite Launch Vehicle (PSLV), capable of launching 1,000—1,200 kg. Indian Remote Sensing (IRS) class of remote sensing satellites into polar sunsynchronous orbit. The Space Department is now actively engaged on building the Geostationary Satellite Launch Vehicle (GSLV) and its first development flight is scheduled for 1997-98.

ELECTRONICS

Electronics has been identified as an effective tool in addressing problems in various spheres. Applications of electronics is seen in employment generation, literacy and education, health, agriculture, infrastructure and population control. The Department of Electronics has been adopting policies and altering its plan priorities in line with the changing economic environment. The Department aims to bring the benefits of electronics to every walk of life, and has been playing a catalytic role to make the Indian electronics industry a global player. This is being achieved in a three pronged strategy, namely, in supporting technology development, setting up of critical infrastructure and formulating policies conductive to industrial growth.

Overall production of the electronics industry in India is very widely distributed. There are, at present, over 3,600 units comprising 11 Central public sector units (with 29 manufacturing establishments), 65 units in State public sector, over 565 units in organised private sector and more than 2,800 units in small scale sector. Public sector units and the small scale sector contribute about 19 per cent and 40 percent respectively of electronics production. Organised private sector accounts for about 41 per cent of production.

OCEAN DEVELOPMENT

India's coastline is more than 7,500 km. long and its territory includes 1,256 islands. Its exclusive economic zone covers about an area of 20 lakh sq. km. and the continental shelf extends upto 350 nautical miles from the coast. Indeed the domain for the development of oceanic resources and protection of the marine environment extends from the coastal land and islands to the wide Indian Ocean. The Department of Ocean Development was set up in 1981 to promote and coordinate the multifaceted endeavours needed to accomplish the task, as well as to develop the new emerging area of Antarctic research and deep seabed mining.

Antarctic Research Programme

Antarctica provides an excellent opportunity for the conduct of scientific research for the benefit of all mankind. It is a pristine laboratory of worldwide significance which has enabled researchers to detect and monitor global environment phenomena such as the depletion of atmospheric ozone, global warming and sea level changes. The Antarctic Treaty parties, which also include India, are fully committed to scientific research in Antarctica. Parties have long recognised the fundamental role that Antarctica plays in understanding global environmental processes and the unique opportunity it provides for research. The initiation, promotion and coordination of the Indian Antarctic research, which commenced with the launching of the first expedition during 1981 continues over a very wide range of scientific activities.

The Antarctic research activities have become a regular feature since 1981. Scientific research expeditions are sent every year. A second permanent station (indigenously designed) Maitri was established in the ice-free area about 70 km. away from Dakshin Gangotri, the first station established during 1983-84.

The Indian Antarctic research programmes have been designed to take advantage of the unique site and environment of Antarctica towards

understanding the key global processes that govern our future well-being. More than 20 research institutions, Universities and Government Departments have contributed to the success of the Antarctic Research Programme. Invaluable logistic support for these activities has been provided by the three services—Army, Navy, Air Force and by Defence Research and Development Organisation. The Indian Antarctic programmes have provided research and first hand learning opportunities to more than 1,000 persons from different institutions and agencies, including scientists and those from the Defence services. They have encouraged development of indigenous technology in specified fields. The annual expeditions to Antarctica since 1981 have helped to prepare a visible ground for front ranking research endeavours in basic and environmental sciences and have won for India a well deserved recognition amongst the Antarctic Treaty Nations. India has Consultative Status in the Antarctic Treaty System. It is a member of Scientific Committee on Antarctic Research and party to the Convention on the Conservation of Antarctic Marine Living Resources. Fifteen Scientific expeditions of Antarctica have so far been launched in continuation of scientific research programmes on atmospheric science, meteorology, biology, oceanography, earth sciences, etc.

Deep Seabed Exploration

As a result of pioneering work done in the area of deep seabed exploration with special emphasis on the location and sampling of polymetallic nodules, India was recognised as a pioneer investor in 1982. A mine site of 1.5 lakh sq. km. in the Central Indian Ocean was allocated by the Preparatory Commission for the International Seabed Authority in August, 1987.

India was the first country in the world to register as a pioneer investor in August 1987 on the basis of delineation of a prospective area covering 3 lakh sq. km. The survey and exploration efforts till now have been directed mainly to assess the relative concentration and quality characteristics of nodules and broad seabed topography. The survey of the entire pioneer area of 1.5 lakh sq. km. has been completed by using the hydrosweep. Environmental data, baseline oceanographic data on physical, chemical and biological parameters have also been collected. Nineteen pilot plant campaigns at National Metallurgical Laboratory, Jamshedpur and Regional Research Laboratory, Bhubaneswar, for obtaining material and energy balance under the extractive metallurgy project have been completed.

BIOTECHNOLOGY

The primary objective of biotechnology is to develop products and processes/technologies whose large scale application results in societal benefits in the sectors of health, agriculture, animal resources development, aquaculture, energy environment & forests and industry. This discipline of technology got special attention in the Planning in India when the Government of India set up a separate Department of Biotechnology in 1986 which has since then completed a decade of its activities for the promotion of this field and for creation of a strong, indigenous self-reliant base of modern biology.

The Department has evolved an Integrated Programme of Manpower Development to generate a critical mass of well trained scientific personnel for the various biotechnological research, teaching and industrial activities in the country. These cover teaching, training and popularisation of biotechnology. Infrastructural facilities have been created in various scientific institutions in the country which include—germ plasm collection, animal house facilities, centralised facility for import and distribution of enzymes and biochemicals, genetic engineering units and a network of bio-informatic system etc.

Several programmes have been initiated to develop simple, easy to use, inexpensive and sensitive diagnostic kits for early detection of communicable and non-communicable diseases. In the area of crop biotechnology, several centres for Plant Molecular Biology (CPMBs) have so far been established for research in upstream areas. In the area of horticulture and plantation crops, a number of R&D projects have been initiated for developing complete tissue culture regeneration protocols for large scale multiplication of elite planting material of desired characteristics. So far as animal biotechnology is concerned, major areas in which research is being pursued are—Embryo Transfer Technology (ETT), health care, diagnostics, nutrition, genetic resources conservation, leather biotechnology and development of bio-products.

It is noteworthy that specific application of biotechnology for the protection of environment and conservation of biodiversity through R&D efforts have yielded significant results. Areas covered are environmental pollution, monitoring and restoration of environmental quality, substitution of non-renewable sources with renewable sources, bio-remediation, strain improvement of biodegradation of toxic industrial waste/Zenobiotics, development of cleaner technologies and conservation of endangered/threatened plant species which are of economic importance to the nation.

At present the bio-control network programme is under implementation with 48 R&D projects at various institutions/universities throughout the country for the control of serious insect pests and diseases affecting cotton, sugarcane, pulses, oilseeds and vegetables.

In the field of industrial biotechnology efforts are being made to develop products and processes with specific need based inputs so as to transform semi-finished R&D results into industrially usable products.

INDUSTRIAL RESEARCH

Industry is a major contributor to growth of the National Domestic Product. Industrial research in diverse fields of scientific activity in the country is being undertaken through a network of 40 laboratories and 81 field stations/extension centres/regional centres set up by the Council of Scientific and Industrial Research (CSIR) all over the country. Established in 1942, the CSIR is an autonomous body with a wide charter for promotion and development of science and technology. The areas of research vary from molecular biology to leather, from seismicity to computer modelling, from aerospace to ocean science, from glass to steel, from micro-electronics to a variety of test facilities and so on.

The CSIR laboratories have responded to the radical changes and the industrial, economic and trade policies introduced by the Government integrating the Indian economy with global economy. Since Independence successful technology transfers have taken place in many areas including drugs, agro-chemicals, chemicals and petrochemicals, petroleum refining, food and food processing, materials, machinery and equipment, and effluent treatment.

Several initiatives were taken by the CSIR during each of the Plan periods to re-orient the R&D programmes and realign priorities to meet the emerging needs of the industries. The CSIR has also made significant contribution to the development of R&D manpower of highest calibre in India through its schemes of awards of fellowships/associateships and support to extramural R&D Schemes in universities and colleges. So far about 45,000 research fellowships/associateships have been awarded by the CSIR.

AGRICULTURAL RESEARCH

The past 50 years have witnessed great changes in our rural scene as a result of introduction of science and technology in various facets of production and post-harvest operations. The Imperial Council of Agricultural Research was set up in 1929 to promote, guide and coordinate agricultural research throughout India. In 1947, this institution was renamed as the Indian Council of Agricultural Research (ICAR). In due course of time, the Department of Agricultural Research and Education (DARE) was set up and the Director General, ICAR also became Secretary, DARE. The ICAR now operates 46 Central research institutes (of which 4 are national institutes) and 26 national research centres. The ICAR has assisted in the setting up of 29 Agricultural Universities (including a Central Agricultural University at Imphal for the North-East region). Over the past five decades, the ICAR has made monumental contributions to agricultural production in India through massive application of science and technology. High-yielding varieties and associated production technologies generated through research ushered in what is popularly known as 'Green Revolution' in Indian agriculture. The impact of research and development efforts of ICAR is clearly reflected in the advances made in production since Independence. Lately, the research emphasis is shifting from single commodity-research to farming system-research and resource-conservation and management research. The large scientific infrastructure has indeed increased the production of foodgrains, milk, sugarcane, fruits, vegetables, onions, potatoes, eggs, cotton, oil seeds etc., over the last several decades.

India used to be visited by periodic famines involving many deaths before we achieved independence. Even thirty years ago, we had to supplement internal production of foodgrains with imports. Now the country is able to export a variety of agricultural products including foodgrains. The steadfast application of science at the field level and the acceptance of new varieties by farmers, combined with their hardwork, resulted in self-sufficiency in foodgrains achieved about two decades ago. The ICAR on the one hand and the community of farmers on the other have been mainly responsible for this revolution. Certainly imaginative political and administrative leadership in the sixties played a vital catalytic role in this achievement.

MEDICAL RESEARCH

The Indian Council of Medical Research (ICMR) was set up in 1949 but had its origins in the Indian Research Fund Association (IRFA) set up in 1911. The specific objective of IRFA was sponsoring and coordinating medical research in the country. The ICMR now has 21 National Research Institutes/Centres which are mission-oriented institutes,

located in different parts of India. These institutes/ centres carry out research in specific areas like tuberculosis, leprosy, cholera, diarrhoeal diseases, viral diseases including AIDS, malaria, kala-azar, vector control, nutrition, food and drug toxicology, reproduction, immunohaematology, oncology, etc. There are also 6 Regional Medical Centres which concentrate on regional health problems. In a situation of resource limitation, the ICMR is trying to balance research efforts between competing fields. Infectious diseases, malnutrition and excessive population growth are major priorities for medical research. Emerging health problems such as cardio-vascular diseases, metabolic disorders (including diabetes mellitus), neurological disorders, cancer, mental disorders, blindness etc. are receiving attention of the research groups. Research work on traditional medicines based on herbs has also been taken up. The ICMR has been, on the one hand, using available knowledge to tackle diverse problems of health and disease control, and on the other, using the tools of modern biology to study the causes for diseases, their early diagnosis and control through new therapeutic agents. Developing vaccines for prevention of diseases is another thrust area of its activities.

THE FUTURE

Low Investment in R & D

Investment in Research and Development (R & D) as a ratio of GDP is 0.73%. Low investment in R & D, apart from rendering it impossible to expand research, holds back full exploitation of existing facilities. Lack of best equipment and knowhow drives the existing institutions to make do with outdated equipment and practices and turning out only low quality research.

Inadequate Scientific and Technological Manpower

In the industrialised countries, scientists and technicians constitute about 85% of those who undergo pre-research and development studies at the second and third levels of education. In India, the annual enrolment for professional and technical education is only of the order of 7.74 lakh persons. Only 4.5% of budgeted expenditure goes to the share of technical education. This situation inhibits absorption of existing and imported technologies, leave alone generation of new technologies.

Low R & D output of Private Sector

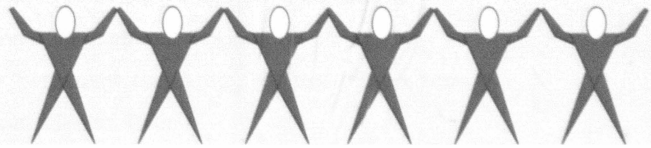
R & D in the country has been a predominantly governmental activity. Between the Central and State Governments, they account for 85% of R & D expenditure, the private sector accounting for 15% only. In order to encourage private research, particularly industry-relevant research, over the years, tax exemptions have been made available under section 35 of the Income Tax Act-the entire research expenditures or donations to research institutions having been treated as deductible. There was also a stage when such deduction was being made available to the extent of 135%. Nontheless, private sector investment which was 3.55% in 1965-66 rose to a maximum of only 16.33% in 1982-83. Thereafter, it has ranged between 10 and 15%. This has been largely due to our past policies of domestic industry protection and to industrial monopolies and oligopolies in an environment of assured domestic market.

Government centred R & D: need for change

A predominantly Government centred research, conducted away from the day-to-day needs of the industry and the people, and within the parameters of Governmental procedures and resource constraints tends to make research lacking in end-user orientation. Such research also often tends to be repetitive and confined to laboratories. Transfer of technologies from laboratories to the end-users also calls for additional investments for extension and field trials and application. What the country needs are cadres of scientific and technological innovators as integral part of production enterprises and not science and technology bureaucrats.

Can we develop a research culture in which production enterprises will be able to cope with the fast changing technologies by development of in-house, in-industry capabilities? How do we enhance investments in research and development without additional strain on Government budget? How do we make the research activities of Government agencies more end-user oriented? How do we make them specific target and time frame oriented?

HUMAN DEVELOPMENT



5

POPULATION

Expected to hit the One Billion mark by the next decennial census in 2001, India will relegate China to the second place as the most populous country of the world. In the half century of family planning, India has been able to avert only about 200 million births, add 20 years to life expectancy and halve infant mortality, while other countries in South East Asia have moved far ahead. High fertility rate and maternal mortality declining sex ratio, ever growing urbanisation, persisting low per-capita income and widening gap between the rich and the poor are disturbing. Greater concentration on the strategies to curb population growth in the four States of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh that have responded poorly to initiatives so far, and add upto 42% of the increase of the country's population seem to be of the highest priority.

POPULATION MAGNITUDE

Today, our population is 960 million as against 361 million in 1951. The Population we have added over these years is equivalent to half that of China. We constitute 16 percent of the world population. Our size and demographic structure have very vital implications for food security, nutrition, health, education, employment, dependency ratios, migration, ultimate human development and quality of life, economic growth and distributive justice.

The annual rate of growth of our population (1981-91) is of the order of 2.14%. The population projection for the year 2001 (the year of the next decadal census) is about 1000 million.

POLICY AND ACHIEVEMENTS

We have been making, no doubt, sustained efforts at addressing our population problem. Over the years, policy statements have been made, studies conducted from time to time, and programmes evolved and implemented. As a consequence we have made some progress. Couples in reproductive age group have come to be significantly protected against conception through modern methods of contraception as well as education and awareness generation. Over fifty years, protection has enhanced nearly five fold. Infant mortality has halved. Birth rate has been reduced by a third. Life expectancy has increased by 20 years.

Box 5.1 : Calendar of developments on Population Policy

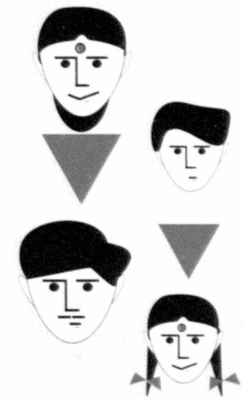
1951	Launching of Family Planning Programme
1976	Statement of National Population Policy
1977	Policy Statement on Family Welfare Programme
1983	National Health Policy
1993	Report of the NDC Committee on Population
1994	Report of the Expert Group (headed by Dr. Swaminathan) on Population Policy.

Table 5.1

Achievements on the population front

Parameters	1951-61	Latest Data (source & year)
Birth rate per thousand	41.7	28.3 SRS 1995
Death rate per thousand	22.8	9.0 SRS 1995
Life Expectancy	41 years	61 years
Infant Mortality Rate (per 1000 live births)	146	74
Couple Protection Rate (Percentage)		46.5 PD 1996
Total Fertility Rate (No. of births during reproductive age)	5.9%	3.5 SRS 1993
Cumulative number of births averted (in million)	0.04	197.39 PD 1996

SRS: Sample Registration System, PD : Programme data
Source: Annual Report (1996-97) of Ministry of Health and Family Welfare, Govt. of India



SEX RATIO AND IMPLICATIONS

But there is yet another side to the balance sheet of our performance. The sex ratio in our population is 927 females per 1000 males. The figure was 934 per 1000 in 1981. Declining sex ratio is, indeed, a danger signal and behind these figures there is a sordid societal picture.

High maternal mortality

There is an incredible level of maternal mortality—400 per 100,000 live-births as against 7 to 9 per 100,000 live births in developed countries. This situation is due to poor nutrition, malnutrition and anaemic conditions amongst women in reproductive age-groups, apart from deliveries by untrained nurses in appallingly unhygienic home conditions. Unconscionable practice of pre-natal sex determination (amniocentesis), female foeticide and infanticide also prevail. No doubt, we have enacted The Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994. But, the problem is one of effective implementation of the law.

High fertility rates

Nearly six per cent of infants die due to prematurity directly caused by poor maternal health, apart from diarrhoea caused by consumption of polluted water pushing up infant mortality rates (IMR). This situation, indeed, is the central factor which retards all efforts at reducing fertility and birth rates. Parents resort to repeated child births as an insurance against losing children due to high infant and child mortality.

Maternal health, infant survival and couple protection are the factors directly impacting on fertility and birth rates. Integrated management of these factors is the key to tackling our population problem. Has this been our strategy ? If so, to what extent are we on the path of progress ?

INTERNATIONAL COMPARISON

Presented below is a table reflecting the status of India in comparison to the developed regions and a dozen select countries of the world. (This table is based on select indicators used by the UN Fund for Population Activities (UNFPA) to monitor the goals of the International Conference on Population and Development (ICPD) 1994. These countries have been selected by including the most populous ones and those in South and South East Asia).

Table 5.2

Status of India, compared to developed regions and eleven other populous countries of the world

As per UNFPA Indicators for monitoring ICPD 1994 goals

Region/ Country	Population (million)	Total Fertility rate	% access to basic health care	% birth with trained attendants	Access to safe drinking water	Infant mortality rate	Maternal mortality rate
WORLD	5848.7	2.79	NA	57	—	57	
Developed Regions	1178.4	1.59	–	99	—	9	—
India	960.2	3.07	85	35	81	72	570
Pakistan	143.8	5.02	55	18	60	74	340
Bangladesh	122.0	3.14	45	14	97	78	850
Sri Lanka	18.3	2.10	93	94	46	15	140
China	1243.7	1.80	92	85	–	38	95
Philippines	70.7	3.62	85	53	85	35	580
Indonesia	203.5	2.63	80	36	62	48	650
Malaysia	21.0	3.24	NA	98	NA	11	80
Thailand	59.2	1.74	90	71	NA	30	200
Egypt	64.5	3.40	99	46	64	54	170
Nigeria	118.4	5.97	66	31	39	77	1000
Brazil	163.1	2.17	NA	73	72	42	220

	PRACTICE OF CONTRACEPTION					ILLITERACY		LIFE EXPECTANCY	
Region/ Country	% knowing method	% knowing source	Following any method	Following modern method	Births per 1000 Women in Age 15-19	Male	Female	Male	Female
WORLD	NA	NA	57	49	66	16	29	63.4	67.7
Developed Regions	–	–	70	51	33	1	2	70.6	78.4
India	95	NA	41	37	116	35	62	62.1	62.7
Pakistan	78	46	12	9	93	50	76	62.9	65.1
Bangladesh	100	98	47	39	138	51	74	58.1	58.2
Sri Lanka	99	98	66	44	34	7	13	70.9	75.4
China	NA	NA	83	80	5	10	27	68.2	71.7
Philippines	97	93	40	25	48	5	6	69.9	74.3
Indonesia	95	93	55	52	62	10	22	63.3	67.0
Malaysia	99	94	48	31	29	11	22	69.9	74.3
Thailand	100	99	74	72	51	4	8	66.3	72.3
Egypt	100	93	47	46	62	36	61	64.3	67.3
Nigeria	46	34	6	4	150	33	53	50.8	54.0
Brazil	100	95	66	57	73	17	17	63.2	71.2

Source: The State of World Population, 1997: United Nations Population Fund (UNFPA)

This above data bring out that, compared to South East Asian countries, on the test of certain crucial parameters,—infant mortality, maternal mortality (compared to Malaysia and Thailand), percentage of birth to women in the age group of 15-19, life expectancy and incidence of illiteracy—India comes out very poorly.

IN-COUNTRY DISPARITIES

The picture of India that emerges, if we make a disaggregated analysis of the status of a few major States, is very much more depressing as would be clear from the table 5.3.

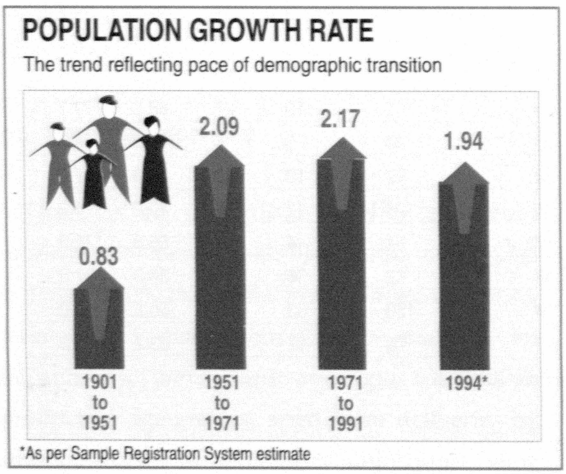
Table 5.3

Population parameters : Data on certain States performance of which is significantly below national average*

State	Total fertility rate (1991)	% of birth with untrained attendants	Infant Mortality rate 1993		Birth rate 1995	Death rate	Life expectancy 1989-93	Literacy rate 1991	
			Male	Female				Persons	Female
India	3.64	52.7	73	75	28.3	9.0	59.4	52.19	39.19
Kerala	1.80	2.2	16	10	17.7	6.0	72.0	89.81	86.17
Assam	3.50	68.6	81	81	29.3	9.6	54.9	–	–
Bihar	4.40	72.1	68	72	32.1	10.5	58.5	38.48	22.89
Orissa	3.30	68.6	118	101	28.0	10.8	55.5	49.09	34.68
Uttar Pradesh	5.10	65.3	87	100	35.4	10.4	55.9	41.60	25.31
Madhya Pradesh	4.60	71.9	106	106	33.0	11.1	54.0	44.20	28.85
Rajasthan	4.60	75.4	82	81	33.7	9.1	58.0	38.55	20.44

*Kerala Figures have also been presented as they indicate performance much above national average – to bring out the gap vis-a-vis other States
Source: Women in India, A statistical profile (Ministry of HRD, Department of Women and Child Development)

Dr. Swaminathan Group on population has specially pointed out that four States (Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh) have accounted for 42% of the net increase of the country's population between 1981 and 1991.

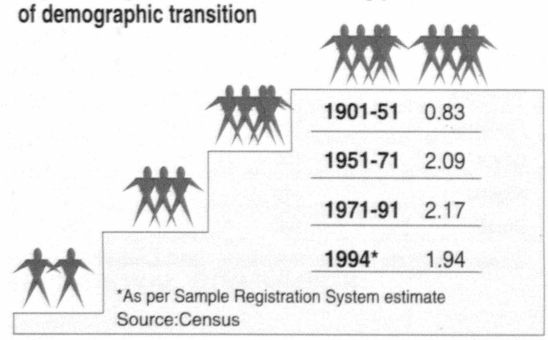


DEMOGRAPHIC TRANSITION : STATUS

Pace of decline in mortality which commenced in the early fifties has been slowing down. And, the pace of decline in fertility since the early eighties has been accelerating. These factors have helped in slowing down of the rate of growth of population; the trend of which has been as follows:—

Table 5.4

Population growth rate trend reflecting pace of demographic transition



The low pre-1951 growth rate was due to the difference between birth and death rates. Since 1951, due to public health programmes undertaken by the Government, death rate has come down. But, reduction in fertility rate has not kept pace despite planned Government investments on awareness generation and anti-natal policies since the First Five Year Plan. Hence, the increase in birth rate over the four decades upto 1991. In other words, the pace of demographic transition from the situation of high birth and death rates to law birth and death rates has not been adequate enough. This phenomenon has had implications for dependency ratios and economic growth.

DEPENDENCY RATIOS

Table 5.5

Dependency ratios 1951-1991

Year	Total Population (millions)	Age distribution of Population (percentage)			Dependency Ratio		
		0-14	15-59	60	Young	Old age	Total
1951	361.1	38.42	56.09	5.49	68.49	9.80	78.29
1961	439.2	41.03	53.30	5.67	76.96	10.64	87.60
1971	548.2	42.02	51.99	5.99	80.82	11.51	92.33
1981	683.3	39.55	53.96	6.49	73.29	12.02	85.31
1991	846.3	36.18	57.25	6.57	63.20	11.49	74.69

(i) Dependency ratio of young = Population in 0-14 age group divided by that in 15-59 age group.

(ii) Old age dependency ratio = Population in the age group of 60+ divided by that in the age group of 15–59.

(iii) Total dependency ratio = Population in the age group of 0-14 + that in the age group of 60+ divided by population in the age group of 15–59.

Source : An overview of demographic transition in India by K. Srinivasan, Executive Director, Population Foundation of India. (The author has relied on Official Statistics)

The truths to be drawn from this table are that our population is young, about 36% of the total being below 15 years of age. They together with those in 60+ age group make 42.75% of our population. The overall dependency ratio having significantly increased since 1951, has started to decline since 1981. However, the ratio remains quite high at 74.69. That is, every economically active person has to earn enough to support himself and three quarters of another person. Consequently, both remain at a comparatively lower economic level. High dependency ratios are harsher on the economically weaker sections, particularly those living below poverty line, giving rise to reverse dependency on population in the age group of 14 and below and causing undesirable social practices such as Child Labour. In the present context of our country, dependency has also been largely precarious because of high levels of unemployment and under employment amongst the people in the working age group of 15 to 59.

URBAN CONGLOMERATIONS

There has been ever-growing urbanisation. Urban population as a ratio of total population has increased from 17.29% in 1951 to 25.72% in 1991. Now there are 22 cities with a population one million and above. The population growth ratios of these cities are also staggering as may be seen from the following table 5.6.

Table 5.6

Population of Million Plus Cities

City	Population in million		Growth Ratio 1991/1951
	1991	1951	
Greater Mumbai	12.60	2.97	4.24
Calcutta	11.02	4.70	2.34
Delhi	8.42	1.44	5.85
Chennai	5.42	1.54	3.52
Hyderabad	4.34	1.13	3.84
Bangalore	4.13	0.79	5.22
Ahmedabad	3.31	0.88	3.76
Pune	2.49	0.61	4.08
Kanpur	2.63	0.71	2.86
Lucknow	1.67	0.50	3.34
Nagpur	1.66	0.49	3.39
Surat	1.52	0.24	6.90
Jaipur	1.52	0.30	5.07
Cochin	1.14	0.21	5.42
Vadodara	1.23	0.21	5.86
Indore	1.11	0.31	3.58
Coimbatore	1.10	0.29	3.79
Patna	1.10	0.33	3.33
Madura	1.09	0.37	2.95
Bhopal	1.06	0.10	10.00
Vishakapatnam	1.06	0.11	9.64
Ludhiana Municipal Corporation	1.04	0.15	6.93
Varanasi	1.03	0.37	2.78

Source: Census

Urbanisation has been accompanied, *inter alia*, by migration, high density of population in cities and metropolitan towns beyond the carrying capacity of land and water, unhygienic environment, lack of medical infrastructure and all the consequent adverse implications for population parameters.

ECONOMIC CONSEQUENCES

Depressed NNP

Population growth has, to a significant extent, nullified our economic growth. As the following table brings out during the period from 1951 to 1994, while our Net National Product (NNP) at constant prices increased five times, the per capita NNP could only double.

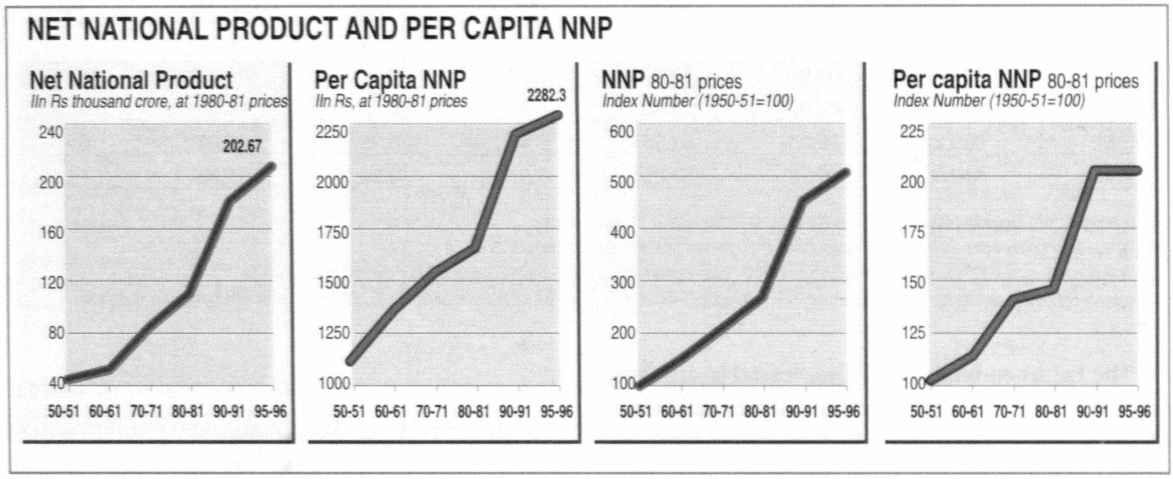
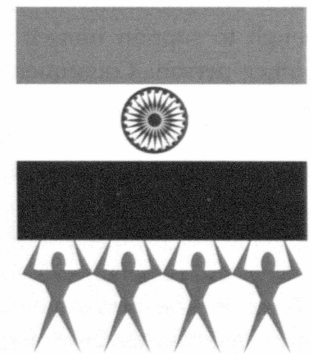


Table 5.7

Net National Product and Per Capita Net National Product of India 1951-94

Years	Net National Product at Factor Cost (Rs. Crore) at 1980-81 prices	Per Capita Net National Product (Rs.) at 1980-81 prices	Index Numbers (1950-51 = 100) NNP at 1980-81 prices	Per Capita NNP at 1980-81 prices
1950-51	40454	1126.9	100.0	100.0
1960-61	58602	1350.3	144.9	119.8
1970-71	82211	1519.6	203.2	134.8
1980-81	110685	1630.1	273.6	144.7
1990-91	186469	2222.5	460.9	202.5
1993-94	202670	2282.3	501.0	202.5

Source: Government of India, Economic Survey, 1994-95



Fragmentation of Land holdings

According to the 1988 finding of the National Sample Survey Organisation (NSSO), between 1953-54 and 1981-82, the number of operational land holdings increased from 44 to 71 million consequent on fragmentation of holdings due to population growth. The average size of operational holdings declined from 3.05 hectares to 1.67 hectares. Sub-optimal land-holdings may render application of modern agricultural technologies difficult. This could adversely impact on agricultural productivity.

Food Security : Low per capita foodgrains

From 1951 to 1996, foodgrains production registered an increase of nearly four times—from 50 to 198 million tonnes. But, per capita foodgrains availability has increased by only 25% (1951-85).

Other consequences : future scenario

While the annual rate of growth of population is 2.1%, the growth of labour force is 2.5% (1981-91). According to the Report of the Standing Committee of Experts on Population Projections, our population may reach the level of 1164 million by

the year 2011 and we may reach zero population growth (ZPG) only towards the end of the 21st century.

Estimates for the future in the background of the current population structure and trends are :

- Additional foodgrains required by year 2021 to satisfy FAO norm of 2250 calories per capita per day — 43 million tonnes
- Additional demand for education upto middle school level by year 2021 — for 78 million children
- Additional houses to be provided (including for backlog upto year 2002) — 70 million
- Additional employment to be found (including for backlog upto year 2002) — 94 million

Haves and havenots : Gap

In the context of the growth in population we have experienced, one would have felt that the saving and investment rates would decline. But, this has not happened in our country. Indeed, the rate of savings and investment has been steadily on the increase over the various Plan periods. During the First Plan period these rates, respectively, were 10.28% and 10.66%. These figures have risen upto 24% and 25% and in the matter of savings and investment, India ranks amongst the top quarter of developing countries. This phenomenon is to be explained by the fact that we have been making significant additions to the stock of population with capacity to save and invest which is as large as that of the United States. This does not, however, detract any way from the fact that 38% of our population continues to live below poverty line and their betterment would demand continued and targeted special attention as a matter of the highest national priority.

DR. SWAMINATHAN GROUP REPORT

The latest in the series of Reports on Population Policy, *i.e.*, the Draft Policy Statement presented by Dr. Swaminathan Group along-with its Report calls for a pro-nature, pro-poor and pro-women policy.

Box. 5.2 Recommendations of Dr. Swaminathan Group

- Unity in National Population goal, but diversity in implementation strategies.
- Thinking, planning and acting locally and supporting nationally.
- Speedy and effective implementation of the Minimum Needs Programme.
- Recognition of limits to the human carrying capacity of the supporting eco-systems.
- Integration of gender-equity in plans for health and family welfare and arresting and reversing the declining sex ratio.
- Creation of an enabling environment and empowerment mechanisms to stabilise population by achievement of a total fertility rate (TFR) of 2.1 by the year 2010.
- Family limitation to be the joint responsibility of the couples.
- Preparation of socio-demographic charters by Panchayati Raj Institutions; creation of broad-based administrative mechanisms at the district level, departmental and elected bodies and NGOs and social workers networking together; promotion of integrated quality of life improvement measures at the State level; and creation of a Cabinet Committee on Population and Development to monitor the implementation of the National Population Policy, providing political support and policy guidance.
- Freezing of seats in the Parliament upto the year 2011 and prospectively debarring those not adopting small family norm from elective offices.
- A balanced and spatial distribution of population to tackle pressures on civic amenities and environment arising out of rapid urbanisation.
- Achieving socio-demographic and reproductive health indicators as envisaged in the goals adopted by the (ICPD) 1994.

The Swaminathan Group has also suggested an implementation strategy covering the areas of primary health care; reproductive health care; training of service providers; contraceptive methods; incentives; organised sector role; health insurance; gender issues; people's participation; information, education and communication; political support; involvement of Panchayati Raj Institutions; the youth and non-governmental organisations; research, monitoring and evaluation and creation of data bases; and resource support.

Though the Swaminathan Group Report was received in May 1994, it continues to be under consideration still. The Report deserves attention as a matter of highest priority.

6

FOOD SECURITY AND NUTRITION

India is proud of her food security. Foodgrain production has touched 195 million tonnes from a low of 50 million tonnes in 1951. Despite a long crusade against malnutrition India still loses 11% of under-five children and 3 to 4% of women in the reproductive age group largely due to morbidity caused by malnutrition. It is true that symptoms of severe malnutrition have been wiped out from most part of the country, yet over 25% of children remain severely malnourished in Bihar, while 52.5% of all children under five in the country are moderately and severely malnourished. India still produces 28.2% of low birth weight babies, 50% of the population suffer from iron deficiency and 20% of all maternal deaths are due to anaemia. Iodisation of salt has been universalised and special programmes for removing Vitamin A deficiency and iron deficiency have been mounted through the ICDS and Child Survival and Safe Motherhood programmes. Micronutrient deficiencies in the population continue to cause morbidity leading to low productivity in the economy.

THE PAST

Removal of Food Shortage

During pre-Independence periods, India was vulnerable to famines and massive food shortages. Food security was on top of the country's agenda since Independence. Substantial foreign exchange earnings of the country had to be dedicated to imports of food. Part of foreign aid was also in terms of foodgrains. In the first three Five Year Plan periods, priority was given to agriculture and its inputs, and food production. In the sixties and seventies, the introduction of high yielding varieties of wheat and rice and production and application of fertilisers apart from irrigation ushered in the green revolution resulting in significant enhancement of production.

Despite droughts in the nineteen eighties, foodgrain production remained stabilised. Attention was given to the production of oilseeds, which were being imported to meet the country's deficit through the strategy of the Technology Missions and in half a decade, self sufficiency was reached. In the current decade, the concentration has been on the production of pulses to meet the demand for protein nutrition. Hopefully, we are on the way to achieve the targets before the close of the century.

During years of famines, food shortages and epidemics took their toll on life, apart from perpetuating malnutrition and morbidity. Life expectancy was low, diseases rampant and death lingered at the doorsteps. On the average, people did not live beyond 41 years at the beginning of the First Five Year Plan, with a death rate of 27.4 and infant mortality rate of 146.

India is now proud of her food security. In about 50 years it has nearly quadrupled production of foodgrains from around 50 million tonnes (1951) to 195 million tonnes (1996). Yet the state of malnutrition in the country nullifies many of the developmental efforts that have been taken on various fronts. While the high birth rate is a national concern, the unconscionable wastage of human resource with high mortality rates is a blot on our society. While we add 18 million-plus persons each year to our population, we also lose 11% of the under-five children and 3 to 4% of the women in the reproductive age-group. And, more than 50% of under-five children are subject to morbidity owing to malnutrition.

Progress in nutrition

Work on nutrition in the 1930s was largely laboratory-based. Clinical studies were carried out in Public Health Institutes in the country on

diagnosis, course and treatment of severe nutritional disorders like Beri-Beri, Pellagra, Scurvy etc. Malnutrition with its various effects was demonstrably seen in the country during those years. Concentration on removal of food shortages and on enhancement of food production during the first two Five Year Plans did not *ipso facto* mean elimination of malnutrition. The "impending protein crisis" haunted the environment in the Fifties. Measures like lysine fortification of wheat, protein rich weaning foods, protein from leaf, algae etc. gained prominence. As malnutrition persisted, despite increased food production and technological advancement, greater focus was brought on to nutrition delivery to economically poorer groups.

The Community Development (CD) Programme introduced in 1951 devoted some attention to Nutrition Extension as part of an overall and multifaceted strategy for social development, apart from agriculture, industries, etc. In the 1960s the Applied Nutrition Programme, a multi-sectoral coordinated programme encouraged production of nutrition inputs through school gardens, kitchen gardens, backyard poultry, etc. The positive outcome of this phase was the increasing realisation that combating malnutrition needed community participation and involvement of the Government to bring in a coordinated approach. The Food and Nutrition Board with its mobile Food and Nutrition Extension Service under the Ministry of Agriculture was established in 1964 to disseminate nutrition information to people for diversifying diet. Mid-day meal programmes to enhance the enrolment and retention of children in schools and bridge the energy-protein gap were started in some of the States. The iodisation of salt to combat the widespread problem of Goitre in the Sub-Himalayan Region of the country, was another important initiative.

In the next decade of the 70s, a variety of nutrition programmes targeted at specific nutritional deficiencies like crash feeding programmes under special nutrition programme for pre-school children to bridge calorie-protein gap in their diets, prophylaxis programmes against nutritional anaemia in women, and nutritional blindness in children etc. were initiated. It was soon realised that nutrition intervention without supportive health measures would be like 'pouring water in a leaky pot.' In 1975, which marked the beginning of the multi-sectoral phase, the Integrated Child Development Services (ICDs) Project, coordinating health, nutrition and education was started. The Universal Immunization Programme, Oral Rehydration Therapy (ORT) and a series of indirect nutrition support programmes like those relating to poverty alleviation, public distribution of food, health, family welfare and adult education were also launched.

The Planning Commission recognised the importance of Nutrition and dedicated a special chapter in the Sixth Five Year Plan, to be followed in the subsequent Plans with emphasis on multi-sectoral coordination. A Task Force was set up in 1980 by the Planning Commission to review the situation in the country. This Task Force recommended the formulation of a National Policy to tackle the problems relating to nutrition.

The National Nutrition Policy and the Plan of Action on Nutrition were adopted in 1993 and 1995 respectively. The Plan of Action covered 14 different sectors that were responsible for their contribution towards achieving the goals of the policy. The main goals of the policy, among other things, were :

- Virtual elimination of blindness due to Vitamin A deficiency by 2000;
- Reduction in anaemia among pregnant women to 25% level by 2000;
- Control of iodine disorders;
- Creation of a structural environment for providing the necessary coordination and inputs from the related sectors;
- Addressing problems of specific groups.

Box 6.1 : Calendar of nutrition development

1951	• **Commencement of Nutrition Extension as part of Community Development (CD) Programme**
1960s	• **Introduction and implementation of the Applied Nutrition Programme (ANP)**
1964	• **Establishment of the Food and Nutrition Board (with its mobile Nutrition Extension Service) under the Ministry of Agriculture**
1970s	• **Introduction and implementation of a variety of nutrition programmes targeted at specific nutritional deficiencies**
1975	• **Introduction of Integrated Child Development Services (ICDSs)**
1993	• **Adoption of the National Nutrition Policy**
1995	• **Adoption of the Plan of Action on Nutrition.**

PERSISTING MALNUTRITION AND MORBIDITY

Causes

Despite all our past efforts, the incidence of high malnutrition of various degrees still persisting in India, is a serious matter of concern. The major reason attributed to this situation is the absence of household food security commensurate with the national food security. While it has been estimated by nutrition experts that the per capita average calorie requirement is 2,400 kilo calories (K cal) per day, the actual average is lower at 2280 K cal, and for some even less. About 7% of rural households and 3% urban households still do not have access to two square meals a day. This is a reflection of the household food insecurity, and acute poverty in some of the households. A further cause for this insecurity at the household level is the inadequacy of the public distribution system.

Yet another reason for the accentuation of malnutrition is the intra-household food insecurity reflecting the inequitous distribution of food between men and women and girls and boys in the household. The cultural ethos being biased in favour of the male, the men and boys in the house get preference over women and girls in the household in the matter of sharing food available in the household. Where there is a deficit, the deprivation is greater for the females.

Cultural practices and lack of awareness about nutrition are also strong factors contributing to malnutrition. These include wrong cooking methods which cause a lot of nutrition loss; discarding a lot of locally available food due to prejudices; and not using some of them due to ignorance. The greatest default in nutrition is inadequate and improper feeding of infants. Infants gain weight and development if they are given solid foods along with breast feeding, once they cross four months. Similarly pregnant women need to eat well, but due to various misconceptions, pregnant women are deprived of nutrition when it is critical for them. This leads to undernourishment of the infant to be born and anaemic condition and malnourishment of the mother. That awareness about nutrition and good practices are very vital factors in combating malnutrition, under-nourishment and consequent infant and child mortality is brought out by the performance of Kerala State, compared to certain other States. In Kerala infant and child mortality are the lowest because of high female literacy. Despite higher food availability/higher energy intake in States like Madhya Pradesh, Orissa, Punjab and Tamil Nadu, their infant and child mortality rates are much higher than in Kerala because of lower female literacy rates as may be seen from the following table :

Table 6.1

Literacy-awareness-nutrition-Infant and Child mortality nexus

(Some Nutrition Related Indicators)

INDICATORS	Kerala	Madhya Pradesh	Orissa	Punjab	Tamil Nadu	India
Percentage of Population below poverty line	17.00	36.70	44.70	7.20	32.80	29.90
Female Literacy Rate	86.13	28.85	34.68	50.41	51.33	39.29
Food available Status** (Rural)	86.50	92.80	76.20	99.10	92.60	92.30
Food available Status** (Urban)	96.00	95.90	92.70	98.50	98.70	97.30
MPCE## on Food (Rs) (Rural)	206.60	148.80	149.10	226.60	151.70	160.60
MPCE## on Food (Rs) (Urban)	228.20	216.60	247.10	243.70	218.9	223.6
Energy Intake (Cal/Cu/day)	2140.00	2614.00	2700.00	2760.00	1871.00	2280.00
Female work participation rate (% of total population)	15.85	32.68	20.79	4.40	29.89	22.25
Total Fertility Rate (15-49)	2.00	3.90	2.92	2.91	2.48	3.39
Life Expectancy (1981-88) (M)	65.90	50.60	53.60	63.00	57.40	55.90
Life Expectancy (1981-88) (F)	72.20	51.80	53.10	64.70	58.50	55.90
Percentage of children (12-23 months) who recd. all vaccinations	54.40	29.20	36.10	61.90	64.90	35.40
Infant Mortality Rate (IMR)	17.00	122.00	126.00	53.00	57.00	80.00
Under 5 Mortality Rate (U5MR)	32.00	130.30	131.00	68.00	86.50	109.30

** Percentage of households getting 2 sq. meals, ##Monthly Per Capita Expenditure

Source: Towards better nutrition for women and children, Problems and Programmes
(Dr. Sarla Gopalan, Secretary, Ministry of HRD, Department of Women and Child Development)

Further, the environmental factor, namely, poor quality of water and poor sanitation cause morbidity and sickness and reduce absorption of nutrition. Diarrhoea, caused by poor quality of water and other infections, make retention of nutrition in the system difficult.

We do claim that it is significant to have brought down severe malnutrition to less than 9% for All India in 1990 and reduced malnutrition by 10% points in a period of about three years from 1990 to 1993. There are still parts like Bihar where severe malnutrition is around 25%. The chronic malnutrition among pre-school children is still disturbing. A large number of children suffer from mild to moderate malnutrition. This is also known as "Era of surviving children". While the children do not succumb to severe malnutrition they suffer malnutrition of varying degrees.

Micronutrient deficiencies

Attention to supply/availability of micronutrients, particularly the major ones, iron, vitamin C and vitamin A, and iodine to the vulnerable groups is not yet adequate.

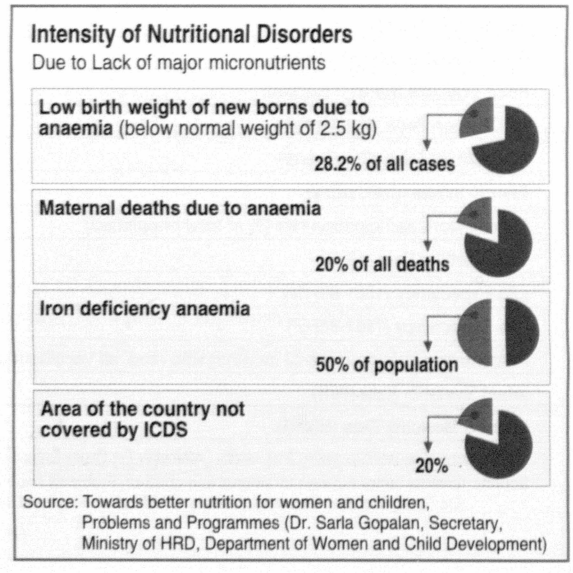
Over the last two decades, there has, of course, been considerable reduction in blindness due to vitamin A deficiency (from 0.3% to 0.4% between 1976-79 and 1988-89) as a cause of all blindness in the community. This is attributed to reduction of severe malnutrition and measles with massive doses of vitamin A to infants below one year. The same improvement is not evident in the reduction of Bitot's Spot in older children as subsequent doses of vitamin A are not administered with the same intensity. The Bitot's spot has decreased from 1.8% to 0.7% between 1975-79 and 1988-90.

Iron Deficiency Anaemia (IDA) is a major concern in developing countries. Anaemia is not just a symptom of poverty, it cuts across all economic classes. It is highest in pregnant women, little lesser in lactating mothers and present in all other age groups. IDA affects productivity through morbidity and therefore has much larger impact on the economy. Unfortunately, this is the most ignored deficiency as its clinical manifestations are not spectacular.

Iodine Deficiency Disorders (IDD) cause abortions, still births, congenital anomalies, increased IMR, squint, deaf-mutism, mental deficiency and dwarfism. The consequences in child and adolescent include goitre, impaired mental function and retarded physical development. Iodine deficiency is an environmental deficiency, it can be tackled only by ensuring fortification of items of daily diet. Thus, iodization of salt is the most feasible low cost solution and adopted in India. Iodisation of salt has been universalised in India. This is a giant step that should change the situation in the coming years. There are still a few parts of the country where there is resistance to accepting iodised salt, mainly for commercial reasons.

The implementation of the Integrated Child Development Services (ICDs) for the last 20 years has, no doubt, focussed on micro-nutrients—particularly vitamin A and Iron, in the areas covered by the programme. Yet substantial part of the country is not covered by ICDS. Even with the package of services for health, nutrition and education under ICDS, malnourishment has not been fully conquered owing to certain other factors. One reason is that "supplementary" nutrition becomes an inadequate "main meal" for some poor children. Secondly, as already stated, poor sanitation and indifferent quality of water cause a high incidence of infection and diarrhoea in the children negating some of the positive impacts of nutrition. ICDS has been able to popularise Oral Rehydration Therapy (ORT) to mitigate dehydration. But ORT cannot prevent loss of nutrition owing to diarrhoea. The latest strategy is to bring greater convergence between the ICDS and drinking water-sanitation programmes, to strengthen the environment for healthy development. The quality of implementation of the ICDS programme itself needs improvement by ensuring the quality of the package of services with adequate supplies of supplementary nutrition, micronutrients, vaccines and regular training of the functionaries and awareness generation in the community on these matters.

Table 6.2



Source: Towards better nutrition for women and children, Problems and Programmes (Dr. Sarla Gopalan, Secretary, Ministry of HRD, Department of Women and Child Development)

The phenomenon of low birth weight is rather intense relatively to certain other parts of the world as brought out in the following table :

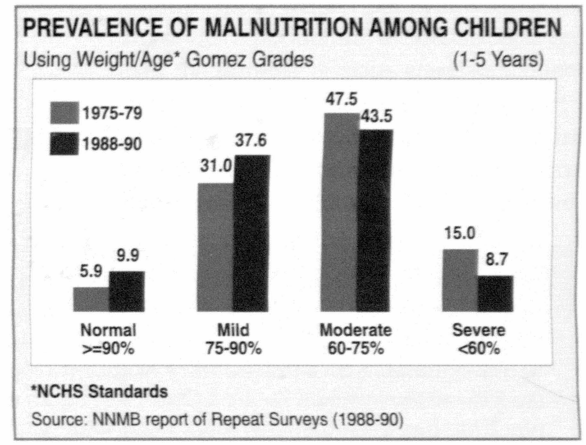
Table 6.3

Low Birth Weight (LBW) in Selected Asian Countries and U.S.A.

Country	LBW (<2500 g) percentages
U.S.A.	
White	6.0
Black	10.6
Thailand	9.6
Indonesia	10.5
Myanmar	17.8
Sri Lanka	18.4
Nepal	
Rural	14.3
Urban	22.3
India	28.2

Source : Report of the WHO Expert Committee on the use of anthropometry for women during the reproductive cycle and the new born Infant, 1993

Presented below is a chart on incidence of malnutrition among children in the age group of 1 to 5 years:



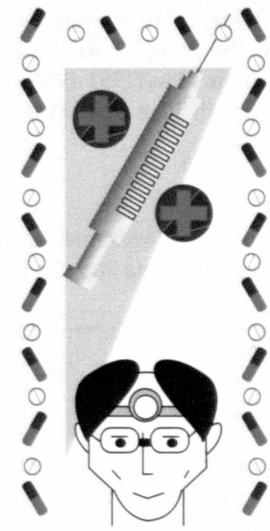
It is evident from this figure that severe and moderate malnutrition has been coming down but normal and mild nutrition has been going up. The increase of malnutrition in the latter two categories is but a reflection of the decrease in the former two categories.

Table 7.4

Manpower gaps in Primary Health Care Institutions

Category of manpower	Requirement as per 1991 census	In position as on 30.6.96	Gap (2–3)
Specialists	22,348	2,751	19,597
Doctors at PHCs	22,349	26,930	-4,581
Block Extension Educator/Health Educator	27,936	5,621	22,315
Pharmacist	33,523	20,022	13,501
Lab Technician	33,523	9,711	23,812
X-ray Technician/Radiographer	5,587	1,288	4,299
Nurse Midwife	61,458	12,683	48,775
Health Assistant (M)	22,349	15,745	6,604
Health Assistant (FM)	22,349	18,904	3,445
Health Worker (M)	134,108	62,229	71,879
Health Worker (FM) (Sub-Centre + PHC)	156,457	133,773	22,684

*Total requirement worked out after ignoring surplus infrastructure
Source: RHS Bulletin, June 1996 (Ministry of Health and Family Welfare)



Disability Adjusted Life Year (DALY) Loss

According to the World Development Report (1993), the Disability Adjusted Life Year Loss (DALY LOSS) for India is 292 million. This is 21% of the total of the world's DALY LOSS. This is a matter of serious concern, particularly, considering that we constitute 16% of worlds population (DALY is the difference between the actual age of death and life expectancy). If a person dies at 50 years of age as against life expectancy of 60, loss of life years, that is DALY Loss is 10 (60 minus 50). India ranks next only to Sub-Saharan Africa in the matter of DALY Loss.

8

EDUCATION

Education infrastructure has expanded. Investment in Education has steadily increased over the Plans from Rs. 153 crore in the First Plan to Rs. 19,600 crore in the Eighth Plan rising from 1.2% of the Plan expenditure to 3.9% by 1986-87. Yet the 1991 Census counted 200 million illiterates, more than half the total population of the country in 1951. Target setting in Education has continuously been a self-deluding exercise. Quality has suffered. Teachers are inadequate. Disparities in achievements between States is pronounced. While a variety of incentives have been planned in different States, their implementation is poor. There is severe resource gap for education considering the goal of 6% of GDP as the targeted expenditure. According to the World Bank, India would achieve universalisation of primary education only three decades later than the Republic of Korea and two decades later than Malaysia and Indonesia. Access to education for women and Scheduled Castes and Tribes reflects unconscionable discrimination. Education at all levels is significantly divorced from the world of work and job market requirements.

THE PAST

The policy on education has been a subject matter of study from the British days. Several Commissions and Committees have gone into the matter and given recommendations from time to time, the implementation of which has impacted on the evolution of the policy over the years.

Constitutional Provisions

The framers of our Constitution gave significant attention to issues concerning education. Universalisation of elementary education (Article 45 concerning provision for free and compulsory education for children), facilities for instruction in mother tongue (Article 350A), standard setting for higher education including scientific, technical and professional education, promotion of special studies and research (Seventh Schedule Union List I) and rights of minorities to establish and administer educational institutions (Article 30) are all matters which have been clearly spelt out in the Constitution. These provisions have been made, keeping in view the concerns of equity and social justice, of creating a universal base to build the educational system on, of ensuring quality of education and of affirmative action to protect the minorities. The 42nd Amendment to the Constitution (1976) also brought education under the Concurrent List. This was done so as to give national direction for orderly development of education at all levels in a coordinated manner throughout the country.

Expansion of Education

The educational infrastructure at all levels has expanded significantly over the last five decades, considerable public and private investments having gone into the educational needs of the people.

Evolution of Education Policy

1781	First Educational Minute of Governor General, Lord Warren Hastings	To promote growth and promotion of liberal education in India first of the college (Madrasa) established in Calcutta.
1813	Charter Act	Foundation of English Educational system in India. Called for encouragement of learning by "natives of India"; revival and improvement

		of literature; promotion of knowledge of sciences in India.
1823	Memorial of Rajaram Mohan Roy to the Governor General	Pleaded for more liberal system of education with special attention to science subjects.
1835	Minute of Lord Macaulay	Recommended teaching of English in place of oriental learning; specifically advised that the Indians should be given "what was good for their health and not what was palatable to their taste"; also recommended codification of Hindu & Muslim laws; the British East India Company adopted a resolution accepting the recommendation of Lord Macaulay; this was the first educational declaration; promotion of western arts and sciences was treated as avowed objective of the new policy.
1854	Wood's Despatch	Considered as Magna Carta of English education in India; stressed the importance of women's education; called for an articulated scheme of education from primary to University level; laid stress on voluntary religious and moral instruction in government schools; stressed the training of teachers; recommended establishment of universities and expansion of mass education and vocational education; as a result of this Universities of Madras, Bombay and Calcutta came to be established.
1882-83	First Education Commission during the time of Lord Rippon (Also known as Hunter Commission)	Investigated into the educational developments since 1854, i.e., the year of Wood's despatch and recommended expansion of education, particularly elementary education and female education.
1902	Indian Universities Commission appointed by Lord Curzon—Raleigh Commission	Investigated into the status of universities established till then, courses of studies and methods of examination; proposals for new universities made; scholarships and hostel facilities for students also recommended.
1910	Gokhale's Resolution on Primary Education in Imperial Legislative Council	Recommended free and compulsory elementary education throughout the country (Bill was defeated).
1913	Govt. of India Resolution on Education Policy	Envisaged expansion of educational institutions in all sectors; improvement in the scope of education; training of teachers; examination reforms; revision of curriculum; value of education; residential facilities for students, etc.

1929	HARTOG Committee	Reported on the quality and status of teachers; condemned hasty expansion of educational institutions; recommended consolidation and improvement.
1935	Govt. of India Act	Educational activities were categorised into federal and provincial subjects.
1937	Wardha Education Committee	Involvement of the child in the learning process; choice of a craft as a socially productive activity; correlation between students and crafts; correlation between physical and social environment, etc. recommended; mother tongue as medium of instruction and adult education recommended.
1948-49	Indian Education Commission under the Chairmanship of Dr. Radhakrishnan	Advised expansion and improvement in university education to support the then existing and future requirements of the country; recommended professional education particularly in the field of agriculture, engineering, technology and law.
1952-53	Secondary Education Commission under Dr. A.L. Mudhaliar	Strengthening the secondary system of education including vocationalization recommended.
1958-59	Durgabhai Deshmukh Committee on Women's Education	Emphasised special education facilities for adult and rural women.
1964-66	Education Commission (Kothari Commission)	Recommended a national policy; made comprehensive recommendations on educational reconstruction in all States and sectors; this led to the National Education Policy of 1968; recommendations included uniform educational structure of 10+2+3, common school system, universalisation of elementary education, vocationalisation of education, etc.
1986	National Policy on Education - 1986	Recommended establishment of a national system of education; emphasised universalisation of elementary education, vocationalisation of secondary education, streamlining higher and technical education, apart from establishment of open educational system and delinking of jobs from degrees etc. for the first time, Human Resource Development emphasised.

Table 8.1

Growth of Recognised Educational Institutions since 1951

Institutions	Years 1950-51	1960-61	1970-71	1980-81	1987-88
Primary	209671	330399	408378	485538	543677
Upper Primary	13596	49663	90621	116447	141014
High/Higher Secondary	7288	17257	36738	51594	66857
College for General Education (Degree and Post graduate Standard)	498	1043	2598	3425	4329
College for Professional Education*	155	696	2398	727**	876**
Universities	27	45	82	110	142

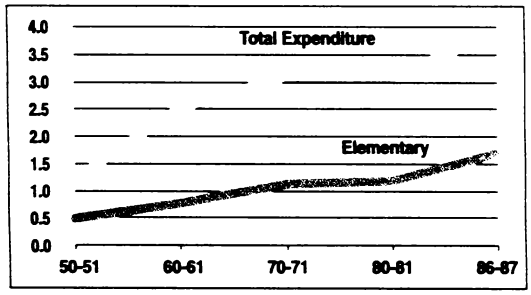
*Includes Engineering, Technology, Medicine, Architecture, Agriculture and Forestry, Veterinary Science and Teacher Training Institutes.
**Includes only Engineering, Technology, Medicine, and Teacher Training Institutes
Source: Ministry of Education and Culture, A Handbook of Educational and Allied Statistics, 1980
Ministry of Education, A Handbook of Educational and Allied Statistics, 1983
Ministry of Education, Selected Educational Statistics, 1980-81

Investment in Education

Expenditure on education as a percentage of GNP increased from 1.2% in 1950-51 to 3.9% in 1986-87. Now a decision has been taken to enhance educational expenditure to 6% of GDP. Plan expenditure on education increased from Rs. 153 crore in the First Plan to Rs. 19600 crore in the Eighth Plan. (Figure of the Eighth Plan is that of outlay).

EXPENDITURE ON EDUCATION

As per cent of GDP



Source: NIEPA, Education for All by 2000, New Delhii
Ministry of Human Resource Development, p. 105

Table 8.2

Expenditure on Education (As per cent of GNP)

	Elementary	Total Expenditure on Education
1950-51	0.48	1.2
1960-61	0.76	2.5
1970-71	1.12	3.1
1980-81	1.19	3.1
1986-87	1.68	3.9

Source: NIEPA, Education for All by 2000, New Delhi
Ministry of Human Resource Development, 1990, p. 105

[Also see Table 8.3 on next page.]

THE CHALLENGE OF THE FUTURE

The challenge of education, however, has been rather mighty and has thrown up phenomenal problems on account of vastness of the population, the linguistic and cultural diversities, the rural-urban and male-female divides, economic and regional disparities. These factors, apart from presenting serious difficulties in the management of education, have had negative implications for access to education. Expanded educational infrastructure by itself does not ensure access. Poverty and gender prejudices, apart from physical distances to educational institutions do inhibit access. Most importantly, the quality of education itself in terms of its inadequate relevance to the world of employment has also adversely impacted on access and on retention even if there be access. Low retention is reflected by high drop out rates which in turn reflects of wastage. According to the 1991 Census literacy rate is only 52.21%, though no doubt, this was a significant improvement over the literacy rate of 16.67% in 1951, particularly considering the growth in population. As in 1991 we had about 200 million illiterates, more than half the total population of the country in 1951.

Table 8.3

Plan Expenditure on Different Sectors of Education (per cent)

Plan Expenditure	Elementary Education	Secondary Education	Adult Education	Higher Education	Others	Technical Education	Total
1st Plan (1951-56)	56	13		9	9	13	100
	(850)	(200)		(140)	(140)	(200)	(1530)
2nd Plan (1956-61)	35	19		18	10	18	100
	(950)	(510)		(480)	(300)	(490)	(2730)
3rd Plan (1961-66)	34	18		15	12	21	100
	(2010)	(1030)		(870)	(730)	(1250)	(5890)
Plan Holiday (1966-69)	24	16		24	11	25	100
	(750)	(530)		(770)	(370)	(810)	(3230)
4th Plan (1969-74)	30	18		25	14	13	100
	(2390)	(1400)		(1950)	(1060)	(1060)	(7860)
5th Plan (1974-79)	35	17		22	14	12	100
	(3170)	(1560)		(2050)	(1060)	(1070)	(9120)
6th Plan (1980-85)	33	21	9	22	4	11	100
	(8360)	(5300)	(2240)	(5590)	(1080)	(2730)	(25300)
7th Plan (1985-90)	37	24	6	16	3	14	100
	(28490)	(18320)	(4700)	(12010)	(1980)	(10830)	(76330)
Expenditure (1990-92)	37	22	9	12	2	17	100
	(17290)	(10530)	(4160)	(5880)	(1180)	(8230)	(47270)
8th Plan outlay (1992-97)	47	18	9	8	4	14	100
	(92010)	(34980)	(18480)	(15160)	(7510)	(27860)	(196000)

Note : Figures in parenthesis in millions of rupees

Source : Dr. R.V. Vaidyanatha Iyyar, Educational Planning and Administration in India, Retrospect and Prospect, Department of Education, MHRD

Target setting for educational goals

Setting of targets for achieving educational goals has never been realistic. It did not firstly take into account—

- sluggish demographic transition;
- the availability of resources;
- competing claims on the available resources from various sectors of planning;
- social, economic, cultural and regional disparities.

This lack of realism was evident in the target stipulation of the Education Commission (1964-66) as well as in the National Policy on Education, 1986. Realism in target-setting is bound to be a challenge unless measures for population control are pursued with total political commitment supported by social mobilization and overall prudent economic management leading to enhancement of income levels at individual family levels.

BASIC EDUCATION

The social and economic benefits of investments in basic education, particularly primary education are well established. Reduced fertility rates, reduced infant and child mortality rates, improved reproductive health of women, improved household health, increased labour productivity, increased economic output have all been directly correlated to investment in primary education. Enrolment has, indeed, enhanced at all levels over the years—not merely at the basic level—on account of planned attention.

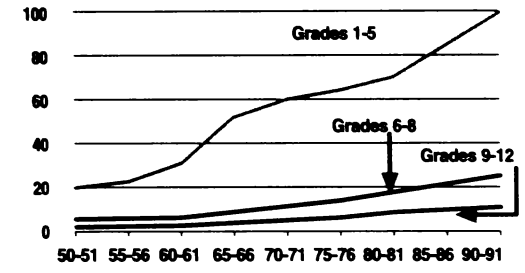
Table 8.4

Enrolment at basic and other levels (in million)

	Grades I-V	Grades VI-VIII	Grades IX-X	Grades XI-XII
1950-51	19.1	3.0	1.4	NA
1990-91	97.3	34.0	19.1	0.03

Source: Ministry of HRD, Department of Education

ENROLMENT IN PRIMARY, UPPER PRIMARY AND SECONDARY SCHOOLS Students enrolled in millions



Source: India, Ministry of Human Resource Development, 1994

Pursuant to the National Policy on Education, 1986, several Centrally sponsored schemes have been under implementation, so as to give a national direction to universalisation of elementary education—Operation Black Board, District Institutes of Education and Training (DIETs), Non-Formal Education (NFE), Minimum Levels of Learning (MLL), District Primary Education Programme (DPEP), etc. These schemes address the quantitative as well as qualitative aspects of primary education. Apart from provision of domestic resources, bilateral and multilateral sources like Overseas Development Agency (UK), Swedish International Development Agency (SIDA), United Nations Children's Fund (UNICEF) and International Development Association (IDA) have also been tapped. The National Policy on Education was further sharpened in its focus with special attention to education of girls and decentralisation of educational administration, consistent with the 73rd and 74th constitutional amendments, vesting Panchayati Raj institutions with responsibility for primary, secondary etc. levels of education.

But a lot remains to be done. Though enrolment at the beginning of primary stage has increased, about 40% of the entrants drop out without completing primary education. And, disparities are very pronounced—as between States, boys and girls, the urban and rural children, the scheduled castes and tribes and others. While the number of literates has increased from 52 million in 1951 to 350 million in 1991, the number of illiterates in the latter year was 197 million. Out of 10.5 crores of children of primary school going age, 3.5 crores are still out of school.

Box 8.1 : Balance Sheet of performance in basic and other levels of education

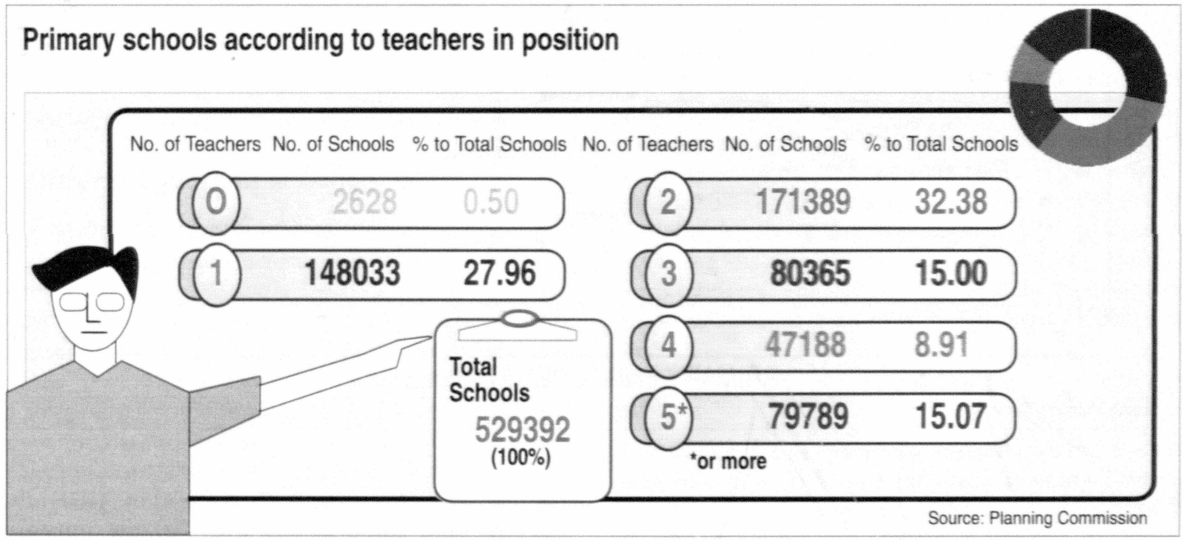
Achievements			Remaining problems as on date
	1951	1991	
Literacy	18.3%	52%	
Number of literates	52 million	350 million	Number of illiterates 197 million
Number of lower primary schools	2.10 lakh	5.75 lakh	Number of children in 35 million primary school going age out of school
Number of children enrolled in primary schools	19.2 million	98 million	Drop out rate at 40% primary level
Number of upper primary schools	13,600	1.61 lakh	Number of schools, 5 lakh requiring quality upgradation in Govt./local bodies sector
Number of children enrolled in upper primary schools	3.12 million	34 million	Low learning achievement (arithmetical, writing and reading and comprehending skills, despite five years of schooling are low)
Number of secondary schools	7416	90,000	
Number of children enrolled in secondary schools	1.45 million	22 million	Low quality of schools—lack of water supply and sanitary facilities, lack of floor space for pupils, lack of trained teachers and proper teaching-learning materials
Number of tertiary institutions		8000	
Number of students enrolled in tertiary institutions	5.60 lakhs	5 million	

Teachers

Availability of teachers is the basic requirement for education. Primary schools with a single teacher only, account for 28% of the total schools; and another 32% of the schools have only 2 teachers. Non-availability of adequate teachers also impacts on teacher-pupil ratio. This ratio has been increasing. Against the norm of 30 to 35 pupils per teacher, we have 42 pupils on the average. This adversely affects attention to the pupils and, consequently, quality of education. Inadequacy of teachers is projected in the table below:

Table 8.5

Primary schools according to teachers in position

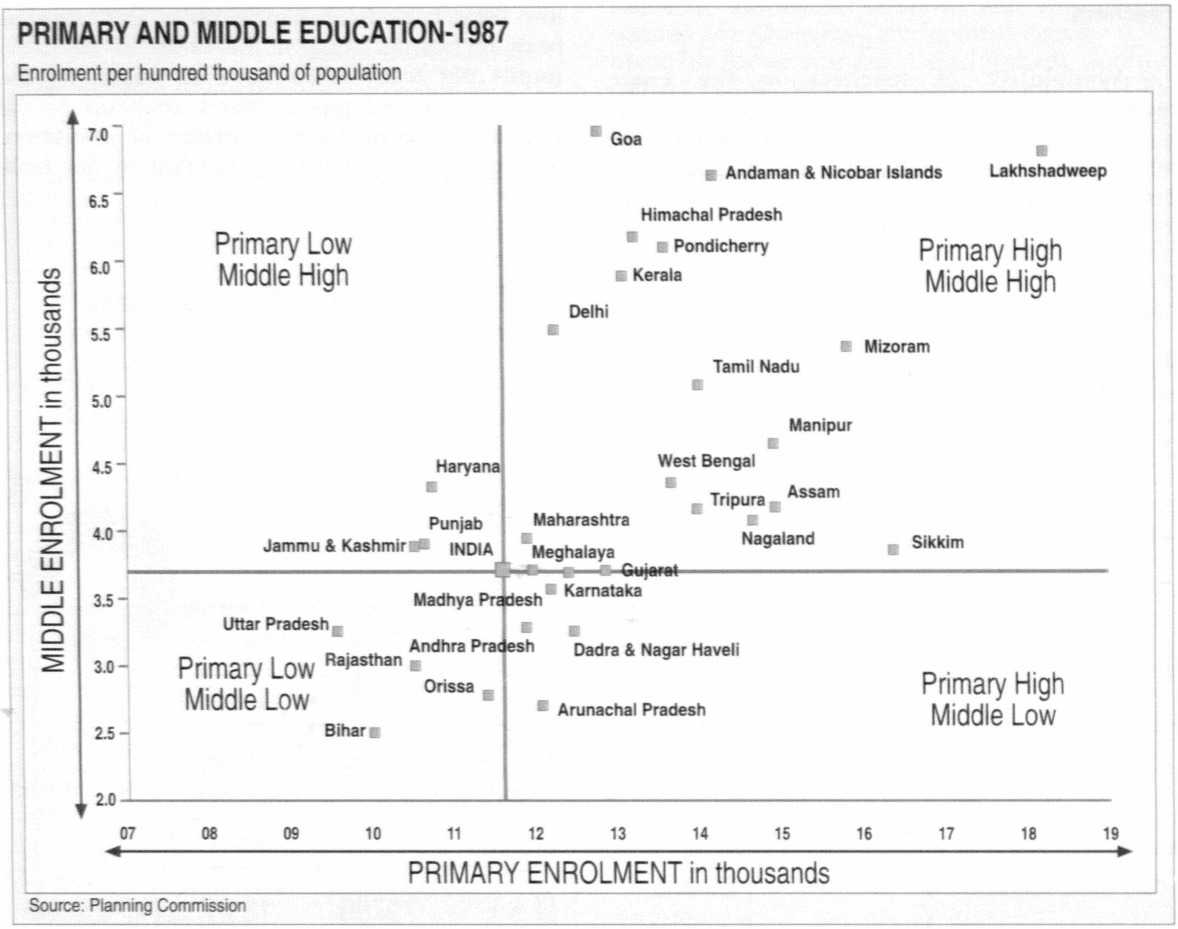


Source: Planning Commission

The problem of inadequacy of teachers is further compounded by their very frequent transfers. The educational administration in the State levels comes under high pressures from the teacher community in the matter of transfers for various reasons, the principal amongst them being lack of adequate physical and living facilities in the rural areas. The pressure is mostly for transfers to home-stations and urban and sub-urban stations.

Inter-State disparities

Level of basic education gives an indication of overall education advancement as well. Without basic levels, education at higher levels (secondary and tertiary levels) does not become feasible. Inter-State educational disparities in terms of enrolment at primary and middle levels is presented in the following chart, taking the national average as the reference point.



Source: Planning Commission

Incentives

In handling demand-side management (to enhance demand for education), several States have different kinds of incentive schemes. They provide for scholarships, free text books, free stationery, free mid-day meals, attendance allowances, etc. Complaints about the implementation of these schemes are universal. The manner of their implementation and their efficacy would deserve scrutiny for their betterment.

Resources

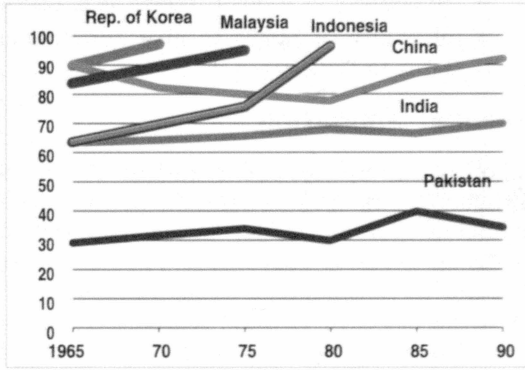
Resources need to be mobilized for catering to the children already in the school system (about 7 crore of them), to enhance coverage so as to bring in the out-of-school children and to improve the quality of schooling. The estimated projection of resource requirement by year 2007 is about Rs. 2000 crore, availability only about Rs. 1600 crore, the gap being Rs. 400 crore. It has been found that if expenditure on education is enhanced from the current level of 3.7% to 6% of GDP, the resource gap could be bridged. For the purpose, special measures for transfer of additional resources from the Central to State Governments (particularly to Andhra Pradesh, Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh and West Bengal would be needed) have to be taken. The States also have to enhance allocation for primary education over the existing level. With enhanced and targeted thrust on primary education, the educational needs at upper primary level would increase too. This will have to be separately provided for.

India, East and South East Asia

India lags far behind certain other countries in Far East and South East Asia (Republic of Korea, China, Malaysia and Indonesia) in primary education. According to the World Bank, India would achieve universalisation of primary education only three decades later than the Republic of Korea and two decades later than Malaysia and Indonesia.

PRIMARY NET ENROLMENT

The progress made by six Asian countries towards 95 per cent primary net enrolment



Note: Figures for India for 1985 from fifth All India Education Survey (FAIES) and for 1990 from World Bank staff estimates

Source: Lockheed & Verspoor 1991, NCERT 1992b, IIPS 1995, World Bank 1995c, Warwick & Reimers 1995

EDUCATION AND THE WORLD OF WORK

Vocational Education at School level

Making education relevant to employment has been a matter of concern over scores of years - from the days of Wood's Despatch in 1854 which emphasised vocational education. The Warde Committee (1937) called for "crafts" learning being made part of the learning process for children. The Mudhaliar Committee (1952-53) recommended vocationalization of secondary education. Kothari Commission (1964—66) emphasised this too. The National Policy on Education (NPE) 1986 set specific targets for diversion by 1995 of 25% students for the vocational stream at Plus Two level. Subsequently, the date line for achievement of this target was shifted to the year 2000. Managerial structures (for implementation of the programme) at the National, Regional, State and District levels were recommended. These structures have also been established though not in all the States. Since 1992-93, about Rs. 300 crore have been released by the Government of India to the States for implementing this scheme. Much work has been attempted for designing and introduction of vocational courses, establishment of curricula, provision and training of teachers, preparation of teaching learning materials, creation of linkages with apprenticeship training in industrial enterprises and recruitment to public services. But the result achieved so far is "creation of capacity" in schools (by 1995-96) for intake of 9.35 lakh students. This is 11.5% while the target is diversion of 25% students for vocational stream by 2000.

Vocational education in schools suffers set-back on account of several factors:

- Weak management structures.
- Sluggish release of funds to schools.
- Inadequacy of physical facilities in schools.
- Inadequacy of vocational teachers.
- Lack of adequate linkages with industries.
- Inadequacies in curricula.
- Inadequate placements even for apprenticeship.

In accordance with NPE, 1986 as revised in 1992, a scheme of vocationalization at the first degree level has also been launched by the University Grants Commission (UGC) in 1994-95. Over 700 institutions have been identified by the UGC for introduction of vocational courses. For running the scheme 35 subjects have been identified too.

The basic problem, however, is that vocational stream of education doesn't carry credibility with the students or their parents, nor with employers. For the students and parents, it is poor people's stream. They don't necessarily have confidence in the employability of the competence and skills acquired in the vocational courses for gainful employment. The employers tend to believe that these vocational graduates lack adequate practical skills.

Craftsmen Training

Under the National Vocational Training System introduced in 1950, a Craftsmen Training Scheme has been under implementation. The objective is to impart training in various vocational trades to meet the skilled manpower requirements of the country. At present such training is being imparted in 42 Engineering and 18 Non-Engineering trades. Generally, Engineering trades can be accessed by those who have completed secondary education and Non-Engineering trades by those who have completed Elementary education. There are over three thousand Industrial Training Institutes (ITIs) and Industrial Training Centres (ITCs), both government and non-government, their seating capacity being 4.73 lakhs. The National Council for Vocational Training (NCVT) conducts trade tests on All India basis and issues National Trade Certificates. There are a significant number of ITIs which are yet to be recognised by the NCVT for want of proper infrastructure.

Some of the traditional courses offered by these institutions need to be replaced by employment relevant courses to meet present day job-market requirements.

The employers often feel that the vocational graduates of the ITIs do not have adequate practical orientation. The curriculum design for the vocational courses of the ITIs would need to be reformed so that competency levels are consistent with requirements of execution of jobs.

There are private enterprises like the Motor Industries Corporation (MICO) which run vocational courses suited to their requirements. Such trainees are in high market demand. Such private efforts of industries deserve encouragement.

An index of low labour market demand for ITI graduates is that out of 2.25 lakhs of seats for engagement of apprentices under the Apprentices Act, only 1.50 lakh seats are actually availed of.

HIGHER EDUCATION

Since 1950-51 higher education has expanded. The number of Universities has increased from 50 in 1950-51 to 207 in 1995-96. During the same period the number of colleges has increased from 750 to 9278 and the number of students from 2.63 lakhs to 64.26 lakhs. Faculty-wise enrolment of students for higher education is about 40% for Arts, 22% for Commerce, 20% for Science, 5% for Engineering, another 5% for Law, 3% for Medicine, 1% for Agriculture and the rest others. This mix of enrolment is indicative of the need for a shift from general education to professional education.

Some of the problems that dog higher education are:—

- lack of quality/standards consistent with expansion;
- lack of infrastructure facilities to qualify for UGC assistance;
- constraint of resources;
- low response from students for first degree level vocational courses;
- inadequacy of resources to create infrastructure and modify courses and curricula; the share of Higher Education in total Plan Expenditure is only 8% compared to 47% for Elementary Education, and 18% for Adult education; allocation for Higher Education was as high as 25% of Plan expenditure during the Fourth Plan; over the years, Plan allocations have had to be diverted to lesser levels particularly elementary education; while higher allocations for elementary education cannot be faulted, substantial allocation needs to be provided to Higher education consistent with its expansion;
- inadequacy of trained teachers;
- reluctance of States to give autonomous status to Colleges.

TECHNICAL EDUCATION

Following up on the National Policy on Education (NPE), 1986, fifteen schemes have been formulated and are under implementation for improving technical education. The Eighth Plan outlay for these Schemes was Rs. 365 crores. The underlying objective of these schemes is removal of obsolescence and reorganization of technical education. The All India Council for Technical Education (AICTE) has been given statutory status in this context. The principal mandate of the Council is to ensure standards of technical education in the country. For the purpose, the Council has been vested with legal powers in the matter of granting recognition to technical education courses and institutions and accreditation.

Nevertheless many weaknesses of the technical education system need sustained attention for their removal, some of the major ones of which are:—

- Imbalance between industry-requirements and traditional curricula leading to unemployment and underemployment of graduates.
- High wastage ratios-20% at degree level, 35% at Post-graduate level.
- Brain drain (Quantified data are not available though estimates are put at 20%).
- Serious shortages of faculty-ranging from 25% to 40%.
- Lack of adequate infrastructure.
- Low ratio of budget support and sub-optimal financial inputs resulting in wastage of investments.
- Ineffective industry-education linkages.

Low performance in the area of technical education has serious implications for our transformation into a modern society and in the matter of facing the technical and technological challenges of the 21st century.

How do we find the resources required for building up of a technical education system of international standards, particularly considering that priority for resource allocation to elementary education has to be the highest both on grounds of economics and equity?

Table 8.6

Profile of women (relative to men) in access to education

	Males	Females
Female literacy	64.13%	39.29%
Enrolment ratios		
Classes I-V	114.5%	93.3%
Classes VI-VIII	79.5%	55.0%
Classes IX-X	41.5%	23.3%
Plus Two level	27.50%	14.00%
Degree standard and above*	5.29%	2.91%
Engineering and technology*	0.44%	0.04%
Other professional courses*	1.00%	0.33%
No. of persons in		
Classes IX-X	116.07 lakhs	87.81 lakhs
Plus 2	38.03 lakhs	19.24 lakhs
Graduate Courses		
Arts	14.18 lakhs	10.18 lakhs
Science	6.30 lakhs	3.46 lakhs
Commerce	7.92 lakhs	3.30 lakhs
Engineering	2.71 lakhs	45,180
Medical	72,339	38,111
Polytechnic	2.65 lakhs	55,266
Vocational	4.63 lakhs	57,929 (ITIs etc.)
Post Graduate Courses		
Arts	1.64 lakhs	1.04 lakhs
Science	63,235	35,789
Commerce	60,635	18,377
Doctoral	29,876	11,466

Note: Higher the level of education, lesser is the number of girls. In several levels of education, number of girls is lesser than that of boys.

* These figures relate to the year 1993-94

Source : Selected Educational Statistics, 1995-96, Ministry of Human Resource Development, Department of Education

WOMEN'S EDUCATION

The importance of women's education cannot be overemphasised. Women-centred society will also be a mother centred society. Mothers playing a crucial and primary role in the preparation of children for life and educating women yield spin off benefits in several respects—child care, nutrition, delayed marriages, low fertility rates, enhancement of family income-levels through their own employment as well, participation of children in education, etc. But male-female disparities have all along been sharp over the years, whether it be in terms of literacy, or enrolment for education at various levels or access to employment-relevant vocational and technical education.

While there are several factors inhibiting women's education such as household chores like collection of water, fuel, fodder, etc. apart from sibling care, lack of schools near home, lack of female teachers, apprehension of molestation outside home, etc., the underlying reason, however, is still the strongly prevailing societal attitude of gender discrimination. The situation cannot be altered by anything lesser than a social transformation.

EDUCATION OF SCs AND STs

4.18 The educational level of SCs and STs is at a much lower level than that of Non-SCs and STs at all levels. As between the SCs and STs, the latter are at a much lower level.

Table 8.7

Educational profile of SCs/STs relative to non-SCs/STs

	Non SCs/STs	SCs	STs
Literacy	52.2%	37.41%	29.60%
Enrolment ratios			
Classes I-V	104.3%	111.9%	113.0%
Classes VI-VIII	67.6%	61.3%	50.0%
No. of persons in			
Classes IX & X	167.79 lakhs	21.29%	8.50 lakhs
No. of persons in plus two	57.27 lakhs	6.57 lakhs	2.38 lakhs
Graduate Courses			
Arts	24.35 lakhs	2.73 lakhs	1.13 lakhs
Science	9.77 lakhs	70,285	14,304
Commerce	11.22 lakhs	60,084	17,574
Engineering	3.17 lakhs	21,084	5,650
Medical	1.10 lakhs	9,961	2,989
Polytechnic	3.20 lakhs	36,392	11,072
Vocational	4.10 lakhs	50,381	16,945
Post Graduate Courses			
Arts	2.69 lakhs	36,302	9,045
Science	99,024	7,066	1,357
Commerce	79,012	5,987	1,799
Doctoral	41,342	1,514	445

Source : Selected Educational Statistics, 1995-96, Ministry of Human Resource Development, Department of Education.

As in the case of women, the higher the level of education, lesser is the participation by these categories. This is reflective of their very poor economic status. Indeed, they are largely amongst the poorest in the country and are among the landless and skill-less. Being of this status, opportunity cost of employment for them is very high. Of course, large budget allocations are made for pre and post-matric scholarships for SCs and

STs. But, their economic status explained above and consequent non-participation and low participation in education by themselves tend to limit the scholarship allocations because allocations are always made with reference to the level of absorption of budgeted resources. This is not to say that scholarships as an incentive by itself is the sole determinant of educational participation. The more underlying issue to be addressed is creation of an overall conducive socio-economic environment.

RESOURCES FOR EDUCATION SECTOR

A decision has already been taken in principle, to invest 6% of GDP in Education. While this would naturally get reflected in budget allocations of a higher order relative to present levels, it would be unrealistic to assume that the hike in allocations is going to be very high—competing demands on budget funds even for other priority sectors being rather strong. The Education Sector should and can raise internal resources. Some efforts have already been made in this direction. The Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs) and the Indian Institute of Science have already hiked educational fees substantially. IITs are also now allowed to earn revenues by taking up Industry collaboration and Research Projects and retain the same for institutional development, with matching Government contribution. Reportedly, the IITs have already raised an amount of about Rs. 200 crores.

But, in the general Higher Education Sector, meaningful fee hikes have not taken place even though many students come from affluent families which have the capacity and even willingness to pay. Fees in this sector being hiked up, in order to protect the Scheduled Castes and Tribes and the economically weak, we can still provide scholarships. But fee hikes have always been sensitive and have sparked off agitations. Can we hike General Higher Education fees substantially? Do we have the political willingness and commitment to do this?

In other countries, schemes are operated for advancing bank loans for education, being recoverable when the graduate enters the world of employment. We also have similar schemes. But the number of loans advanced is rather small, around 50,000 and the amount about Rs. 15 lakhs. The schemes are operated, obviously at low levels. Reasons for poor off-take of loans would merit examination. The success of loan schemes is also a function of the employability of the graduates which, in turn, raises issues regarding job-market relevance of educational courses. From the internal resource generation point of view also, therefore, making education relevant to the world of work assumes importance. Modalities of viable and practicable Bank loan schemes may have to be established.

9

EMPLOYMENT

Employment was recognised as the best palliative for poverty alleviation. The earlier Five Year Plans concentrated on macro economic factors and development of agriculture and industrial sectors which were expected to raise employment levels. From the Sixth Plan onwards concentration has been on specific beneficiary and employment oriented programmes. The approach to the Ninth Plan is to create the environment with skills, technologies, markets and a higher rate of economic growth to expand employment. The crux of the problem is that the rate of growth of employment in the economy has been lower than the rate of growth of the labour force owing to the rapid growth of the population. Other countries in South East Asia have registered higher rates of economic growth compared to their population growth and also been able to shift large proportion of labour from agriculture to manufacturing and service sectors; India continues with over 60% of employment yet in agriculture with a very slow growth in the other sectors. Secondly, 90% of employment is still in the unorganized sector. Progressively, with growth in the labour force India is adding more numbers to the unemployed, which is estimated at 6% of the labour force. Unemployment for women, educated persons and urban population is more.

THE PAST

Expansion of employment opportunities has been an important objective of development planning in India. There has been a significant growth in employment over the years. However, a relative higher growth of population and labour force has led to an increase in the volume of unemployment from one Plan period to another. Progressive reduction in the incidence of poverty and unemployment has always been a major objective of the Five Year Plans. It has been realised that larger and efficient use of available human resources is the most effective way of poverty alleviation, reduction in inequalities and sustenance of a reasonably high pace of economic growth.

Box 9.1 Employment Strategy through the Five Year Plans

First Plan

Emphasis on rural sector

Expansion of irrigation and introduction of intensive agriculture.

Enlargement of existing large industries; creation of new industries; development of small industries.

Second Plan

Employment generation for the existing unemployed; increased work opportunities for the under-employed.

Establishment of close linkages between education and training facilities and future requirements of the economy to combat educated unemployment.

Third Plan

Wider and even spread of employment effects.
Rural industrialisation and rural works programmes.
Choice of techniques in industries.

Fourth Plan

Enhancement of rural employment through labour intensive schemes—minor irrigation, soil conservation, ayacut development, private house building, transport linkages, rural electrification.
Special programmes for small farmers and rural artisans.
Public sector investments in industries and minerals, transport, communications and power.

Fifth Plan

Enhancement of agricultural productivity through modern technologies.
Land Reforms and creation of a productive small farmer base.
Self-employment; emphasis on sericulture, handicrafts, carpet weaving, etc.

Sixth Plan

Beneficiary and employment oriented rural development programmes like NREP, RLEGP, IRDP, TRYSEM, etc.
Linkages between education, employment and development to deal with educated unemployment.

Seventh Plan

Faster growth rate of employment than that of the labour force.
Continued emphasis on agricultural infrastructure, intensive cropping and targeted rural development programmes.
Expanded private sector housing, particularly through institutional finance.

Eighth Plan

Full employment by 2000 AD.
Enhancement of economic growth.
Employment oriented growth structure.
Special employment programmes, particularly for women.
Productive use of human capital resources.
Diversification of agriculture.
Development of rural non-farm sector.
Faster development of service sector.
Education, training and entrepreneurial development.

Approach to Ninth Plan

Generation of productive employment through growth process itself.
Skill development and enhancement of technological levels.
Creation of market channels for those engaged in traditional occupations.
National Employment Assurance Scheme.

THE EMPLOYMENT SCENARIO

According to the 1991 Census (excluding Assam and Jammu & Kashmir) there were 306 million workers, about 10% of which were marginal workers. The work force of the nation (including marginal workers) accounts for 37.4% of the total population. In 1991, about 69% of the population was engaged in agriculture and allied activities. The classification of workers (1961-1991) is given in Table 9.1.

Table 9.1

Classification of workers : 1961 to 1991

	In Lakhs			
	1961	1971	1981	1991
TOTAL WORKERS	1,825	1,807	2,420	3,060
Main workers	1,825	1,750	2,207	2,789
Marginal workers		57	213	271
Male workers	1,249	1,444	1,793	2,186
Female workers	576	363	627	874
RURAL WORKERS	1,566	1,491	1,951	2,417
Rural male workers	1,030	1,164	1,385	1,635
Rural female workers	536	327	566	782
URBAN WORKERS	259	316	469	643
Urban male workers	220	281	408	551
Urban female workers	39	35	61	93
	Workers as % of total population			
TOTAL WORKERS	42.97	34.17	36.70	37.49
Male	57.16	52.75	52.62	51.61
Female	27.93	14.22	19.67	22.26
RURAL	45.09	35.33	38.79	40.09
Rural male	58.30	53.78	53.77	52.57
Rural female	31.42	15.92	23.06	26.79
URBAN	33.47	29.61	29.99	30.15
Urban male	52.37	48.88	40.06	48.93
Urban female	11.16	7.18	8.31	9.24

Source: Centre for Monitoring Indian Economy

The majority of the work force is unorganised in nature; 80% of the workers are living in rural areas, of which 63% is engaged in agriculture; 85% of the workforce is self-employed or are employed on casual wages; and only 15% of the workforce have regular salaried employment.

According to the Planning Commission, India had a labour force of 339.2 million (37.4% of the total population) at the end of March, 1995. The term labour force covers those involved in gainful activity regularly or occasionally and those seeking or are available for work. Out of this total labour force, 52 million are educated, and 1.52 million are well-trained technical manpower.

During the period 1991-95, about 27.07 million persons entered the labour force at an annual rate of 2.1%. Job opportunities generated during the period was around 22.77 million, implying an increase of 1.8% per annum. Thus, 4.30 million persons out of the 27.07 million who entered the labour force during the period were left without any job. The growth in labour force has been mainly influenced by the rate of growth of population.

Employment in Major Sectors

Organised sector accounts for only about 10% of total employment. This ratio has also been more or less steady over the years. During the period from 1990-95, employment in the private sector increased at the average rate of 1.23% as against 0.73% in the public sector. In the public sector, rate of growth of employment has been decelerating. In the private sector, there is a significant accelerating trend though it has not reached the level of 1992. As already brought out, agriculture has been the lead sector of economic activity in India and continued to dominate through the eight Five Year Plans. While its contribution to GDP has dropped from 60% to 32%, its share in employment has only dropped from 75% to 65% between 1961 and 1993-94. Even in the rural areas the share of employment in the primary sector has dropped only from 85.8% to 78% in the same period. The growth of employment has been very slow in the secondary sector, from 11.2% to 14.8%, while it has gone up slightly higher to 20% from 13.2% in the tertiary sector. In many of the fast growing developing countries these ratios changed very fast shifting employment to the secondary and tertiary sectors. This has not happened in India.

The increasing share of employment in the tertiary sector has gone significantly to women workers in the urban areas, in the services industry.

Table 9.2

Employment in Major Sectors

(In lakhs)

Branch	1990	1991	1992	1993	1994	1995
			At the end of March			
Central Govt.	33.97	34.10	34.28	33.83	33.92	33.95
State Govt.	69.79	71.13	71.90	72.93	73.37	73.55
Quasi Govt. (Centre)	35.23	35.64	35.54	35.92	35.66	35.74
Quasi Govt. (State)	26.50	26.58	28.39	28.98	29.48	29.46
Local Bodies	22.23	23.13	21.98	21.60	22.02	21.97
Total	187.72	190.58	192.09	193.26	194.45	194.67
Public Sector (A)		(1.52)	(0.80)	(0.61)	(0.61)	(0.11)
Private Sector (B)	75.82	76.76	78.46	78.50	79.30	80.59
		(1.24)	(2.22)	(0.06)	(1.01)	(1.60)
Grand Total	263.54	267.34	270.55	271.76	273.75	275.26
A+B		(1.44)	(1.21)	(0.45)	(0.73)	(0.54)

Note : Figures in brackets indicate total percentage change over previous year.
Source : Ministry of Labour, Annual Report, 1994-95, 1995-96.

Table 9.3

Industrial distribution of workers by sex (1972-73 to 1993-94)

Sector/Sex/Industry	1972-73	1977-78	1983	1987-88	1993-94
Persons :					
Total 100 of which					
Agriculture	73.9	71.0	68.6	65.0	64.7
Manufacturing	8.8	10.2	10.7	11.1	10.5
Construction	1.9	1.7	2.2	3.8	3.2
Trade	5.1	6.1	6.2	7.2	7.4
Services	7.9	8.1	8.9	9.3	10.3
Males :					
Total 100 of which					
Agriculture	68.8	65.6	62.6	58.7	58.3
Manufacturing	9.9	11.0	11.7	11.9	11.0
Construction	2.1	2.2	2.9	4.2	4.1
Trade	6.5	7.8	8.0	9.2	9.5
Services	2.3	9.4	10.6	10.8	11.7
Females :					
Total 100 of which					
Agriculture	84.3	81.8	81.2	77.7	78.0
Manufacturing	6.6	8.5	8.9	9.5	9.3
Constuction	1.3	0.8	1.0	2.8	1.2
Trade	2.3	2.8	2.7	3.1	3.2
Services	5.1	5.7	5.5	6.2	7.6

Source: Planning Commission

Occupational Structure: India, East Asia and South Asia

From the standpoint of employment policy, the East Asian experience confirms that rapid growth of labour intensive manufacturing is the key to achieving full employment and rising standards of living to developing countries. Such a pattern of growth results initially in the rapid reduction of surplus labour in traditional and the informal sector, and subsequently to rising real wages when surplus labour has been eliminated.

In South Asia, the changes in employment conditions have on the whole been positive, although falling well short of the dramatic successes of East Asia. This has been due to the fact that growth, although faster than in the past, has not matched the rates reached in East Asia.

The growth has also been of shorter duration and South Asian countries have only recently embarked on economic reforms towards a more open market economy. Moreover, these countries still have the vast majority of their labour force in agriculture as is evident from the table below:—

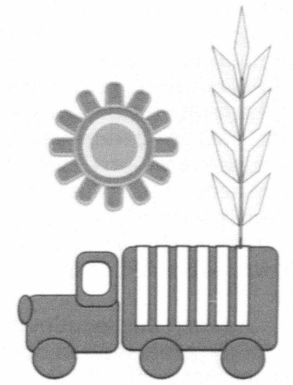
Table 9.4

Labour Force in Agriculture, Industry and Services Sectors (1960-1990)

World trends with reference to status of development (Percentage of labour force)

	Agriculture		Industry		Services	
	1960	1990	1960	1990	1960	1990
All Developing countries	77	61	9	16	14	23
Least Developed countries	86	74	5	10	9	17
Industrial countries	27	10	35	33	38	57
World	61	49	17	20	22	31

Source: Human Development Report, 1997, (UNDP, New York)



So far as South Asian countries, including India, are concerned, the occupational structure of these economies presents the following picture:

Presented below are data on occupational shifts in India since 1951.

Table 9.5

Occupational Structure in South Asia during 1990-92 (Percentage of labour force)

Region/country	Agriculture	Industry	Services
SOUTH ASIA	60	12	29
India	62	11	27
Pakistan	47	20	33
Bangladesh	59	13	28
Nepal	93	1	6
Sri Lanka	49	21	30
Bhutan	92	3	5
Maldives	25	32	43

Source:Human Development in South Asia, 1997
(Human Development Centre, Islamabad, Pakistan)

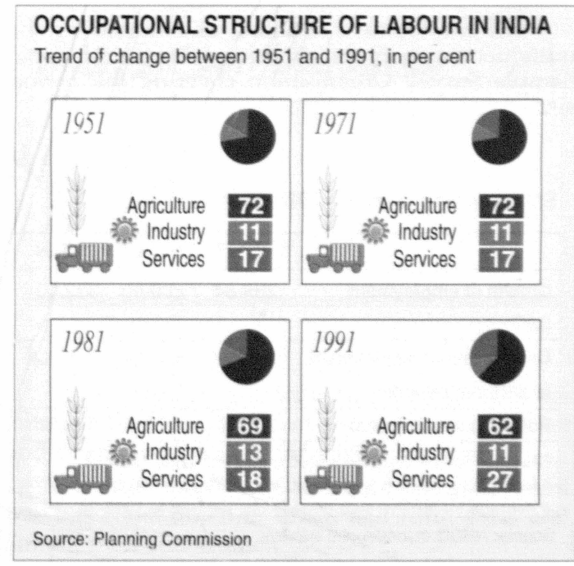


Table 9.6

Trend of change in occupational structure of labour in India: 1951-91

(In per cent)

Sector	1951	1971	1981	1991
Agriculture	72	72	69	62
Industry	11	11	13	11
Services	17	17	18	27

Source: Planning Commission

Following observations can be made from the above table:

First, the occupational structure of the Indian economy is lopsided. There is a heavy dependence on agriculture, about two-thirds of the working population derives its subsistence from agriculture, non-agriculture sector absorbing hardly one-third of the total working population. Secondly, over the last two decades some definite changes in occupational structure, in line with changes experienced in other developed countries have taken place. Over this period, the share of the primary sector in occupational structure has come down while the share of services sector has gone up.

Against this, employment trends in China were more dynamic than in South Asia, a direct result of the exceptionally high rates of growth sustained since the late 1970s. This was marked by a steep decline in agricultural employment from 77 per cent of the labour force in 1977 to 69 per cent in 1980 and further down to 60 per cent in 1990. At the same time non-agricultural employment grew by an impressive margin of 58 per cent between 1977 an 1990.

EMPLOYMENT GROWTH TRENDS

The employment situation as reflected by the quinquennial surveys conducted by the National Sample Survey Organisation covering the period since 1977-78 is presented below:

Table 9.7

Status of employment : 1977-78 to 1993-94

	1977-78	1987-88	1993-94
Growth of employment (Millions)	239.84	290.93	332.00
Growth rate of employment in different periods	2.10%^	1.77%*	2.23%#
Rate of unemployment	2.60%	2.70%	1.90%

^Average for the five year period from 1977-78 to 1983-84
* Average for the five year period from 1983 to 1987-88
# Average for the five year period from 1987-88 to 1993-94
Source: NSSO quinquennial surveys

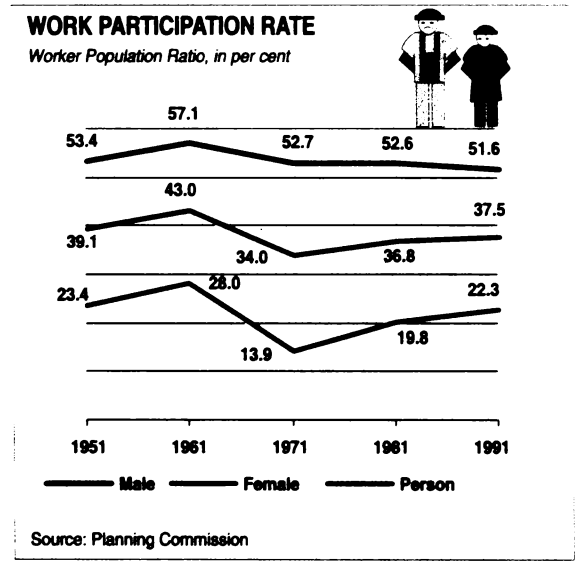
While employment increased by 51 million in the ten years between 1977-78 and 1987-88, it increased by 41 million in the next five year period, reflecting accelerated growth.

The rate of growth of employment also accelerated in the five year period from 1987-88 to 1993-94 to 2.23%, though it had dipped in the previous five year period to 1.77% against 2.10% of the still earlier quinquennial.

The rate of usual status (open) unemployment which had registered an increase to 2.70% in 1987-88 over 2.60% in 1977-78, has come down to 1.90% in 1993-94.

WORK PARTICIPATION: A TREAD-MILL PHENOMENON

Work Participation rate (worker population ratio) has remained fairly stable despite rapid growth in population. It was 39.1% in 1951. As per NSSO Surveys, over the decades 1972-73 to 1993-94, the figure has been around 41-42%. As per census data also, this stability is to be seen, though the figures are somewhat different. This stability is to be viewed in the background of growth of population from 361 million in 1951 to 894 million in 1994.



Source: Planning Commission

A striking phenomenon to be noticed from the above graph is that women are increasingly participating in work, while men's participation has shown a gentle declining trend. The rising overall work participation has been significantly due to that of women.

The participation rates are higher amongst rural population than amongst the urban population; more for males than for females. According to the quinquennial surveys of the NSSO, these ratio differentials are as follows:

Table 9.8

Work participation : Urban-rural and male-female differences

	Urban Areas	Rural Areas
Male	49 to 52%	Around 54%
Female	13 to 15%	32 to 34%

Source : NSSO

The work participation ratio of 37.5% compares quite unfavourably with substantially higher ratios in the developed countries. This is a reflection of the distribution of population in the economically active age group. The proportion of women in the labour force at 36% in the rural and 21% in the urban areas which is also far below the levels found in most of the developed countries manifests, *inter alia*, cultural gender bias. (At least in a dozen States, the work participation rates range from about 7% to 16% only).

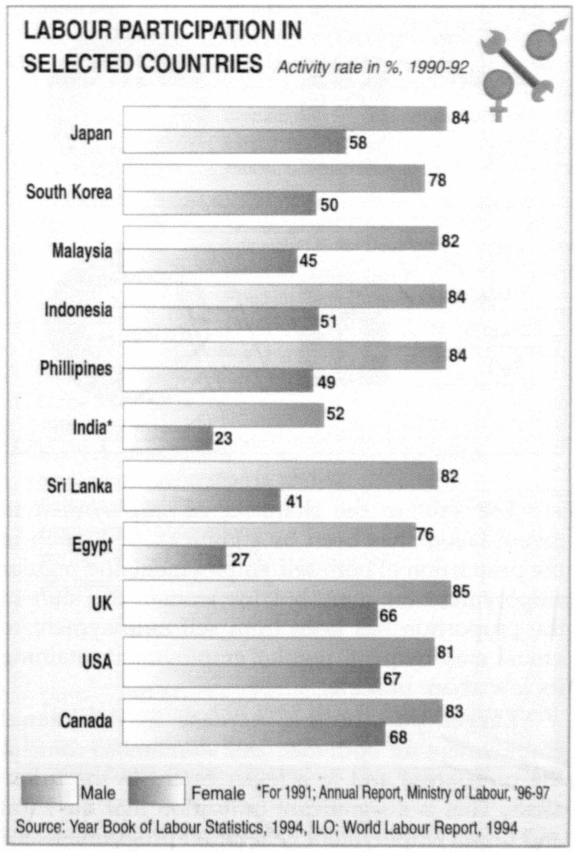


Table 9.9

Labour participation in select countries of the world (Activity Rate %, 1990-92)

	Male	Female
Japan	84	58
China	-	-
South Korea	78	50
Malaysia	82	45
Indonesia	84	51
Philippines	84	49
India*	52	23
Sri Lanka	82	41
Egypt	76	27
United Kingdom	85	66
USA	81	67
Canada	83	68

* For 1991 : Annual Report of Ministry of Labour, 1996-97
Source: Year Book of Labour Statistics, 1994, ILO; World Labour Report, 1994

UNEMPLOYMENT

Overall daily status employment (under-employment) in the country is 6% (5.9% for males and 6.3% for females). While the rate of this category of employment for males and females is the same in rural areas, male-female disparity is rather striking in the urban areas.

Table 9.10

Unemployment : Male - Female disparities

	Urban Areas	Rural Areas
Male	6.7	5.6
Female	10.5	5.6

Source : NSSO

More women, particularly urban women are entering the labour market and both employment and unemployment are increasing for them.

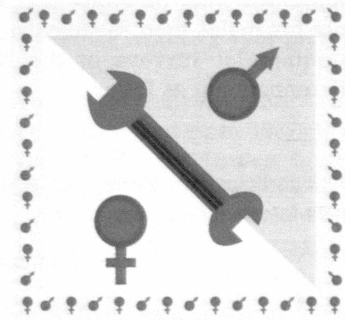
Over the last 20 years, no doubt, unemployment rate has come down in urban and rural areas and among men and women.

Table 9.11

Movement of daily status unemployment (under-employment) rates
Urban-rural and male-female differences (per cent)

	India		Urban Areas		Rural Areas	
	Male	Female	Male	Female	Male	Female
1972-73	7.0	11.5	8.0	13.7	6.8	11.2
1987-88	5.6	7.5	8.8	12.0	4.6	6.7
1993-94	5.9	6.3	6.7	10.5	5.6	5.6

Source: NSSO



A significant factor noticed in the trends of movement of unemployment rates as between the last two quinquennial surveys is that in rural areas, unemployment amongst males has enhanced by 1% while in the urban areas, it has increased by 2.1%. This, perhaps, is due to a complex mix of factors such as migrant workers from rural areas adding to the existing stock of the unemployed; increasing number of people going for education; and educated people still remaining unemployed.

Educated Unemployment

According to the last two quinquennial surveys of the NSSO, while overall employment (educated and uneducated) has increased and has brought down unemployment for all in the economy, the proportion of persons left out of employment is higher for the educated than for the uneducated. More educated women are also getting left out of employment than uneducated women.

Table 9.12

Educated Unemployment per cent

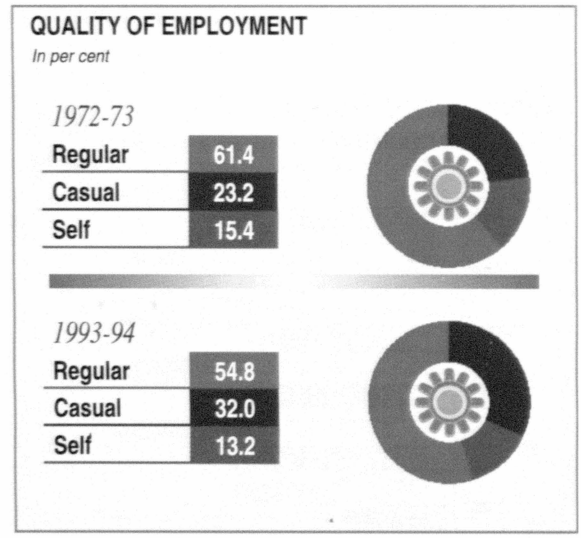
	1987-88	1993-94
Educated unemployment	11.82	9.56
Proportion of educated persons in unemployment	40.00	62.00
Proportion of educated employed	11.60	15.60
Rate of educated unemployment for women	27.02	22.36
Rate of educated unemployment for men	9.88	7.89

Source: NSSO

The States where the educated unemployment is more than the All India average during 1993 are Assam, Bihar, Haryana, Jammu and Kashmir, Kerala, Orissa, Tamil Nadu, Tripura and West Bengal.

QUALITY OF EMPLOYMENT

It is interesting to note that in two decades between 1972-73 and 1993-94, the composition of employment between self-employment, regular employment and casual employment has shown significant shift towards increasing casual employment and declining self employment and regular employment.



The shift in the character of employment to casual labour has been by significant reduction in the proportion of both self-employment and regular employment for men, but for women the shift in the proportion has been from self employment to casual employment, regular employment retaining its low share of 6.2%.

Larger part of the increase in the casual employment for both men and women has come in the rural areas and to a lesser extent in the urban areas. This is a significant indication that the rural and urban employment generation programmes for

poverty alleviation have had a positive impact, and certainly more in the rural areas.

Women seem to have gained slightly in increasing the proportion of regular employment in urban areas, while men have slipped from a high proportion of 50.7% of regular employment to 42.1% and slightly increased in self-employment (2.5%) and casual employment (6.1%).

It appears that the era of economic reforms has not contributed to significant loss of employment, as feared, as the rates of unemployment have come down, though there is no evidence of increasing regular employment in the economy. Since greater social security is in regular employment and self-employment to some extent, the economy has to look for creation of more of these opportunities. It is also significant that the daily status unemployment being high, livelihood for many of the casually employed becomes very precarious.

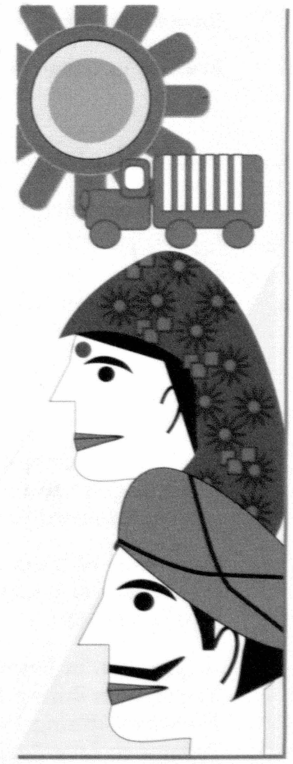
PAST PERFORMANCE AND FUTURE PROSPECTS

We have, indeed, attempted target oriented employment generation for the last five decades. Achievements have not always matched targets. From the Fourth to the Seventh Plans, fixation of targets and estimation of achievements and backlogs in employment generation having been controversial, target orientation was played down. Massive public investments came to be made by Government for direct employment generation.

Table 9.13

Employment generation through Five Year Plans

	Target	Achievement
First Plan	–	5.5 million
Second Plan	10 million	6.5 million
Third Plan	17 million	14.0 million
Fourth Plan	No Specific projections for targets and their achievements made comprehensive programmes of rural development, labour intensive public works programmes, further utilisation of industrial capacity, promotion of labour intensive production etc. as envisaged in the World Employment Programme of ILO emphasised	
Fifth, Sixth and Seventh Plans	Piecemeal approach of the Fourth Plan followed	
1977	Food for Work Programme commenced	
1978-80	Integrated Rural Development Programme (IRDP) introduced. National Rural Employment Programme (NREP) (Restructured Food for Work Programme) started.	
1983-84	Rural Landless Employment Guarantee Programme (RLEGP) commenced	
Estimate of additional employment generation in the later half of 1980s per year		5 million (average)
Estimate of additional employment generation in 1991-92		3 million
Estimate of additional employment generation during 1992-93 to1994-95 per year		6.3 million (average)



It was estimated in 1952 that if full employment is to be reached by the year 2002 A.D., 94 million jobs may have to be created in the aggregate. The overall employment and unemployment scenario in this backdrop is recaptured below keeping in view high population growth rate (2.1%), work force growing at a faster rate (2.5%), but employment growth rate (2.5%) not keeping pace with that of the work force.

Box 9.2 Employment & Unemployment Scenario

1.	Total population: (As per 1991 census)		846 million
2.	Growth rate of Population:		2.1%
3.	Total employment at the beginning of 1992-93 as per Weekly Status:		301.7 million
4.	Labour force at the beginning of 1992-93		319.0 million
5.	Backlog of unemployment at the beginning of Eighth Five Year Plan, i.e. 1.4.92.		17.0 million
6.	Severely underemployed (2% of employed)		6.0 million
7.	Total number of workers looking for full time employment at the beginning of Eighth Five Year Plan, i.e. 1.4.1992		17+6=23.0 million
	PROJECTION		
1.	Increase in labour force during 1992-97		35.0 million
2.	Increase in labour force during 1997-2002.		36.0 million
	TASK		
1.	Persons requiring employment during 1992-97		23+35=58.0 million
2.	Persons requiring employment during 1992-2002		58+36 = 94.0 million
	UNEMPLOYMENT		
1.	Unemployment Rate	1987-88	1993-94
	Overall	3.77%	2.56%
	Male	3.60%	2.60%
	Female	4.19%	2.44%
2.	Incidence of unemployment among Educated		11.8%
	(Percentage of educated unemployed	Male	9.8%
	to total Educated) during 1987-88	Female	26.7%
3.	Percentage of Educated unemployed (Percentage of Educated to total unemployed) during 1987-88	40%	
4.	Registration in Employment Exchanges	All India Total	
	Registration during 1995	59 lakh	
	Placement during 1995	2 lakh	
	Persons In Live Register as on 31-12-95	367 lakh	
		EDUCATED	
	Registration during 1993	37 lakh	
	Placement during 1993	0.95 lakh	
	Persons in Live Register as on 31-12-93	236 lakh	

Source : Annual Report of Ministry of Labour : 1996-97.

As against the estimation of 94 million jobs to be created by 2002 A.D., during 1992-93 to 1994-95 we seem to have created only about 19 million jobs. For creating the balance of 75 million jobs (94 million minus 19 million), over the Ninth Plan Period (1997-1998 to 2001-2002 A.D.), we have to create 12 to 13 million jobs per annum presuming that during 1995-96 and 1996-97, we have created around 12 million jobs at the average of 6.3 million per annum. In other words, we have to double the annual rate of employment generation.

It is also to be borne in mind that the numbers of educated unemployed are on the increase. (As in 1993-94, the stock of educated unemployed was about 10 million). The special poverty alleviation programmes meant largely for the unskilled labour and the poorest of the poor may not square with the needs of the educated unemployed. A quality shift in the additional employment to be generated in the country is indispensable. A whole new approach of shift from targeting just jobs to targeting specific skills which are deficient in the labour market is needed. This, in turn, would call for reorientation of manpower development strategies through special educational and skill development courses.

10

LABOUR STANDARDS

Our track record in contributing to ILO conventions on labour standards is even better than that of some developed countries. We have a plethora of Central and State labour laws. But, implementation of even basic labour laws is depressing and remains controversial. The obsession of successive Governments and Trade Unions with the 10% of the organized sector workers has resulted in an unintended development of elitism in the working class movement. Labour productivity has not gone hand in hand with labour protection. Nor do we compare favourably with some of our Asian neighbours in this regard. An estimated 17 million children continue to be denied education and are exposed to hazards and exploitation in the world of work. While statistically our occupational health and safety standards reflect a commendable trend overall, we are visited by major disasters now and then. A second National Labour Commission needs to be set up considering a sea change in the environment of the working people.

NORMATIVE AND LEGISLATIVE WORK

India has been a founder member of the International Labour Organisation (ILO). We have actively participated in establishing of labour standards at the international level. We have ratified 37 ILO conventions relating to various areas —wages and working conditions, industrial relations, social security, protection of women and children, etc. This is a good track record compared to ratification of conventions by even some of the developed countries.

Having placed labour in the Concurrent List, at the Central and State levels, we have enacted a large number of laws. We also have a substantial Central and State labour machinery for securing implementation of labour laws. But, our standard of implementation of laws leaves much to be desired. This is, to a large extent, due to the unorganized nature of the bulk of our labour force.

PRECARIOUS EMPLOYMENT

As brought out in the chapter on Employment, organized labour in the country is only about 10%. Significant dependence on agriculture, slow growth of secondary sector and expansion of employment in the tertiary sector (Trade and Service etc.) are indicative of the precarious nature of employment of the majority of our worker population. Trends of shift of worker population from regular employment to self employment and casual employment has also been dealt with earlier. These trends imply lack of job security, low wages and working conditions during working life and lack of social security in circumstances of loss of employment.

Box 10.1 : Attributes of unorganized labour

The broad characteristics of unorganized labour are :

- Acute incidence of underemployment (often underemployed workers work for more than one employer according to availability of jobs).
- Scattered nature of the work places (workers doing the same kind of jobs are in thinly spread habitations and do not necessarily live together in compact geographical areas).
- Incidence of home based work.
- Lack of integration on account of all the above factors with consequent low collective bargaining power.
- Low levels of unionisation (Trade Unions have serious difficulties in accessing workers who are underemployed, scattered and home based).
- Lack of concrete employer-employee relationship.

The following data on work force bring out the magnitude of unorganized categories as in the year.

Table 10.1

Profile of unorganized categories of workers

Number of workers in million

Rural Workers		
Number of Workers	251	
% to work force	80	
Engaged in agriculture		
Number of Workers	200	
% to work force	64	
Self/Casually employed		
Number of Workers	267	
% to work force	85	
Marginal workers		
Number of Workers	35	
% to work force	11	
Salaried employment		
Number of Workers	47	
% to work force	15	

Construction, Contract and migrant workers and child workers also account for substantial numbers amongst unorganized workers.

BASIC LABOUR LAWS

Basic amongst the labour laws, especially designed to give protection to unorganized labour are the Bonded Labour (System) Abolition Act, the Minimum Wages Act and Equal Remuneration Act.

Bonded Labour (System) Abolition Law

We ratified ILO Convention No. 29 on Forced Labour in 1954. Bonded Labour (System) Abolition Act was enacted in 1976 and, in law, abolishing bonded labour, terminating liabilities to repay bonded debts and releasing of encumbered properties. The total number of bonded labourers reportedly identified in the country and released from bondage is 2.51 lakhs. Existence of bonded labour in the country remains a controversy. Social activists frequently complain and report on prevalence of bonded labour practice in different parts of the country. The States have been categorically sticking to the position that bonded labour practice has been rooted out *de facto* as well. This has also been a matter of scrutiny by the Labour Ministry related Parliamentary Committee.

Minimum Wages Law

While the Central Government has remained upto date in the matter of revising and updating Minimum Wages, not all the States have been upto date in regard to all the scheduled employments. Nor are the notified rates always consistent with the stipulated norms. Supply of labour in employments in the unorganized sector being by and large in excess of demand, job-seekers competitively undersell on another, offering themselves for employment below the levels of statutorily notified minimum wages. The situation often becomes fertile ground for exploitation resulting in labour standards becoming sub-human.

Equal Remuneration Law

It is nearly three decades since we ratified ILO Convention No. 100 on Equal Remuneration. Having ratified this Convention in 1958, we took 18 years to enact the Equal Remuneration Act, 1976. Nor do we have any credit to claim in the matter of implementation of this law by which we are expected to dispense gender justice — in terms of payment to women of equal wages for work of equal value. Even meaningful monitoring of implementation of this law is rendered nearly impossible for want of information from the States. Information furnished is also mostly incomplete.

Child Labour

Child Protection and Development are specifically spelt out in Articles 24, 39 and 45 of the Constitution. They provide for—

- Prohibition of employment of children below 14 years of age in factories, mines and hazardous employments.
- direction of State policy to secure that the tender age of children is not abused; that they are not forced by economic necessity to enter avocations unsuited to their age or strength; that they are given opportunities and facilities to develop in a healthy manner in conditions of freedom and dignity and are protected against exploitation.
- free and compulsory education upto 14 years of age.

We have been trying to tackle the problem of child labour from the early quarter of this century. Commissions and Committees have studied and reported on the problem.

We have enacted the Child Labour (Prohibition and Regulation) Act, 1986 and adopted the National Child Labour Policy, 1987 and ratified the UN Convention on the Rights of the Child. In law, employment of children in hazardous employments and processes stands prohibited. In non-hazardous employments and processes, such employment is to be regulated.

But child labour in hazardous as well as non-hazardous employments and processes prevails extensively. As on date, the estimated child labour population is 17 million. Over 92% of child labour population is in 11 States.

Table 10.2

Child Labour Incidence

Number of working children

STATE	Main workers	Marginal Workers	Total workers
Andhra Pradesh	15,37,293	1,24,647	16,61,940
Bihar	7,95,444	1,46,801	9,42,245
Gujarat	3,73,027	1,50,558	5,23,585
Karnataka	8,18,159	1,58,088	9,76,247
Madhya Pradesh	9,97,940	3,54,623	13,52,563
Maharashtra	8,05,847	2,62,571	10,68,418
Orissa	3,25,250	1,27,144	4,52,394
Rajasthan	4,90,522	2,83,677	7,74,199
Tamil Nadu	5,23,125	55,764	5,78,889
Uttar Pradesh	11,45,087	2,64,999	14,10,086
West Bengal	5,93,387	1,18,304	7,11,691
Total	84,05,081	20,47,176	1,04,52,257

Source : Census, 1991

Of late, comparatively liberal budget provisions have been made for child labour elimination work. An amount of Rs. 40 crore was provided in 1996-97 budget. Non-Government Organizations are being involved in a big way in child labour elimination programmes. The problem is, indeed, colossal and is defying speedy solution, stemming as it does from extensive poverty.

Child labour is self perpetuating. Children in the world of work will lose education and skill development and become nonemployable. When they become adults, they, in turn, will end up sending their children to work. Child labour, apart from being unconscionable by itself, is now sought to be linked to international trade through the "social clause". Child labour factor is increasingly likely to be exploited as a non-tariff barrier.

Whether it be elimination of bonded labour or child labour, enforcement of minimum wages or equal remuneration, the issues being very basic to civilized and humane labour standards, need to be on the top of the national agenda.

Child labour elimination is an issue of social and political awareness and commitment as much as it is an issue of alleviation and removal of poverty. How do we generate this awareness and commitment? How do we translate this commitment into action and within what time frame ?

DUAL LABOUR STANDARDS

All these years, there has been excess concentration on betterment of the 10% of organized labour in the work force. Whether it be Governments or Trade Unions, almost all their time and efforts have been devoted only to the concerns of this Sector of the work force — the concerns being their job security, periodic wage revision, dearness payments, fringe benefits, social security, strikes, lock outs and bandhs. It is not that these concerns don't deserve to be addressed. The reality of life, however, has been a rather unfortunate, unintended and involuntary development of elitism in the working class movement and labour administration all over the country.

LABOUR STANDARDS AND PRODUCTIVITY

According to the ILO norms and standards, employment is envisaged to be full, freely chosen and productive. Of course, efforts are made in every country, by management of the economy and labour, to achieve full employment. Freely chosen employment implies elimination of practices forced and bonded labour. By and large, by strong governmental action, forced and bonded labour practices are not allowed in democracies. If employment is to be productive, it can be ensured not merely by securing civilized and humane labour standards. Such labour standards should also go side by side with emphasis on productivity. Productivity is of machines as well as labour. Enlightened and efficient managements do, of course, attempt to maintain high levels of machine productivity by several steps including preventive maintenance and upgradation of technology. There are also enterprises where managements are poor and machine productivity is not given adequate attention. But it has also been experienced that provision of labour standards according to norms does not always yield the desired levels of productivity. Very often, long term Labour-Management settlements for revision of wages and other benefits are made in several industries without adequate concern for productivity.

In fact, there is reluctance and even unwillingness on the part of labour to accept higher levels of productivity. The consequence is that employment does not become productive as envisaged in ILO norms. This seriously affects the commercial viability of industrial enterprises which end up paying wage bills without generating additional wealth and much beyond their paying capacity. Can we develop a Management and Work Culture in this country, by which enhancement and enforcement of labour standards will go hand in hand with enhanced productivity ?

In this context, we may also bear in mind that India has quite a low productivity level compared to certain other Asian countries.

Table 10.3

Labour Productivity in India: An International Comparison

Countries	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
AGRICULTURE										
Rep. of China	2768.7	2725.0	3099.4	3449.3	3583.0	3663.3	3629.9	3617.0	4040.7	3991.4
India	341.8	347.1	345.0	329.8	294.4	277.1	188.1	165.3	130.4	138.3
Indonesia	593.7	552.4	548.6	549.4	557.6	554.1	554.5	576.0	616.0	609.9
Japan	6489.5	6625.5	6961.5	6891.1	7648.6	7918.7	7580.5	8298.4	7657.4	8381.0
Korea	3154.8	3366.6	3233.7	3619.4	3630.7	3621.6	3902.2	4238.1	4376.2	4633.5
Malaysia	3680.7	3734.3	3849.8	4030.8	4402.8	4662.4	4823.3	5354.8	5615.5	5776.9
Pakistan	550.3	544.2	580.6	568.5	587.3	588.8	688.0	711.9	660.7	659.9
Philippines	779.2	761.0	813.2	841.4	872.8	848.0	841.6	808.9	802.3	817.0
Thailand	347.9	347.8	349.4	351.8	366.7	365.1	406.2	403.4	428.2	-
MANUFACTURING										
Rep. of China	9322.5	10190.7	10764.1	11294.9	11737.4	12315.2	13420.2	23925.0	14860.4	15689.1
India	1105.8	1184.5	1229.6	1212.4	1052.9	1101.4	749.2	614.2	504.1	522.3
Indonesia	2408.4	2721.2	2900.2	3151.1	2813.5	3073.3	3290.0	3489.2	3652.1	3915.1
Japan	26852.7	26577.3	28162.2	29804.7	31017.8	32605.9	33260.2	32436.2	31825.0	32064.2
Korea	7898.8	8643.0	8952.0	9636.3	9602.6	10473.6	11235.5	11210.5	13305.3	14564.3
Malaysia	7198.8	7686.9	8149.1	8942.4	8607.4	8748.6	9036.2	8955.4	9512.9	10121.2
Pakistan	1134.8	1264.0	1202.5	1441.9	1456.7	1493.0	1703.3	1758.4	2022.5	2070.7
Philippines	4023.8	4133.0	4035.3	4065.6	4190.9	4517.1	4115.6	3797.5	3968.9	3965.2
Singapore	14208.0	15597.9	16736.9	17753.8	18580.1	17707.1	18470.3	18728.1	10844.1	23919.1
Thailand	4125.5	4540.3	4467.2	5214.7	5369.0	5508.7	5587.6	5984.0	6065.9	—
TRADE										
Rep. of China	6209.9	6478.2	7010.9	7259.0	7680.2	8426.2	8791.1	9369.9	10039.6	10324.5
India*	1299.9	1404.0	1426.6	1330.2	1110.0	1076.6	719.8	609.3	494.3	526.5
Japan	16707.8	16851.1	16870.7	17340.4	18435.5	19386.6	19970.4	20292.7	20045.8	19937.1
Korea	3797.1	4293.9	4743.7	5209.6	5305.3	5537.9	5786.8	5614.2	5358.3	5407.5
Malaysia	4118.6	3456.0	3451.4	3409.6	3672.0	3951.4	4455.0	4876.5	5329.3	5566.8
Singapore	11125.9	11361.4	11950.7	13719.7	14493.6	13972.2	14797.4	15041.2	16360.1	16745.3

*Include Hotel and Restaurant.

Source : Asian Productivity Organisation : "Productivity - Volume 37, No. 3. October-December 1996

OCCUPATIONAL SAFETY

We have made sustained efforts, no doubt, in giving attention to the concerns of occupational safety. But the Bhopal Gas tragedy of 1984 will remain a blot in our track record. Available records upto 1996 also show that in the Petroleum and Chemical Industries there have been fatal and serious accidents rather regularly for reasons such as fire, explosions, toxic releases, etc.

The trend of fatality rate in coal mines (deaths due to accidents per 1000 persons employed) has come down from 0.94 during 1901-1910 to 0.36 in 1991-95. For the same period, in non-coal mines, it has come down from 0.76 to 0.35. This is indeed a creditable achievement, considering the vast expansion of production in mines since 1951—production (1994) being about 270 million tonnes of coal, 12 million tonnes of oil, 4700 million cubic metres of gas and 175 million tonnes of other minerals as against 35 million tonnes of coal and no oil and gas production and less than 10 million tonnes of other minerals in 1951. However, we have had 28 disasters in mines since 1951, an average of 1.8 per year. Two recent major coal mine disasters were those of New Kenda and Gaslitand in which 55 and 64 workers respectively died.

SECOND NATIONAL LABOUR COMMISSION

The employment scenario and working environment has undergone a sea-change in fifty years due to diversification of industries, induction of new technologies and processes and the demand for new skills amongst working people. Increasing work participation by women is yet another important phenomenon in the employment scenario. One of the social dimensions of economic reforms and structural adjustment is the impact on the status of employment. All these have implications for labour standards which need to be comprehensively investigated. Almost three decades have passed by since the First National Labour Commission (1966-69). The Indian Labour Conference recommended the establishment of the Second National Labour Commission as early as 1992. Should this recommendation not be acted upon?

11

SOCIAL SECURITY

We have labour laws providing for various social security measures—medical care, employment injury compensation, maternity protection, separation compensation, provident fund, etc. A major measure brought under implementation by the Government recently is pension for industrial workers covered by the Employees Provident Fund law. But, these benefits are accessed largely by organised sector workers only. The extent Group Insurance and Welfare Fund Schemes applicable to certain categories of the working people in the unorganized sector provide only minimal social security benefits. The poverty line related National Social Assistance Programme (NSAP) introduced in 1995 provides some succour to the aged, the bereaved, and expectant mothers. Delivery of Social Security Service by the major social security formations in the country *viz.* the Employees' Provident Fund Organisation (EPFO) and the Employees' State Insurance Corporation (ESI) would need to improve significantly. New modalities of decentralised delivery of services through autonomous funds even within the framework of the existing laws could be explored.

CONSTITUTIONAL PROVISION

Article 41 of the Constitution says, "The State shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and public assistance in cases of unemployment, old age, sickness, disablement, and in other cases of undeserved want."

The circumstances envisaged in the above Constitutional provision are also the ones which form the basis for social security protection to the working people under some of the important conventions of the International Labour Organisation.

INTERNATIONAL SOCIAL SECURITY CONVENTIONS

The Social Security Convention No. 102 of 1952 provides for medical care benefits and survivor benefits. Sickness, unemployment, old age, employment injury, maternity and invalidity are the contingencies qualifying for medical care.

Termination of Employment Convention No. 158 of 1957 provides for separation benefits, unemployment insurance and other forms of social security to workers who suffer termination of employment.

The Employment Promotion and Protection against Unemployment Convention No. 168 of 1988 provides for protection in contingencies of loss of earnings due to full unemployment and partial unemployment—the method of protection being contributory or non-contributory funding (that is, based or not based on contribution by the employee).

The Workmen's Compensation (Occupational Diseases) Conventions 18 and 118 and 1925 and 1934 provide for compensation to working people contracting occupational diseases in the course of employment.

SOCIAL SECURITY LAWS AND PROGRAMMES OF INDIA

Though India has ratified only the workmen's compensation conventions mentioned above and not the other social security conventions, we have national laws providing for Social Security Protection which substantially conform to international norms.

Under the Employees' Provident Fund and Miscellaneous Provisions Act, 1952, Contributory Provident Funds have been established to protect working people against loss of earnings on job-separation. Nearly 20 million employees in 177 industries are covered by this law. Since 1995, the Provident Fund resources are also used to provide

Pension to workers covered by the Provident Fund Act. Under the Employees' State Insurance Act, 1948, medical care and cash assistance are given to nearly 7 million employees and 28 million beneficiaries. Medical cover under this law is provided on a contributory basis. Under the Payment of Gratuity Act, 1972, employees are provided gratuity at 15 days' wages for every completed year of service. The Maternity Benefit Act, 1961 provides for leave with wages for working women in times of confinement. The Industrial Disputes Act provides for separation benefits (lay-off and retrenchment compensation) on temporary cessation/termination of employment. The Employees Provident Fund and Employees' State Insurance Schemes are, indeed, gigantic ones and are being run by two social security formations which are amongst the largest in the world. As on 31.3.1996, the total investment of Provident Fund was over Rs. 52,000 crore. The Employees State Insurance Investments amounted to about Rs. 2,700 crore as on 31.10.1996.

DELIVERY OF SOCIAL SECURITY SERVICE

Gigantic as these schemes may be, the workers covered by them do have serious grievances about their implementation. So far as Provident Fund and Pension are concerned, the grievances mainly relate to lack of promptitude in settlement of claims. The Employees' State Insurance Scheme has been eternally afflicted by a dual system of administration. The Employees' State Insurance Corporation creates the medical infrastructure, makes the same available to the State Governments and releases bulk of the resources to run them. The Corporation also disburses cash benefits for medical care. The State Governments run the hospitals and always complain that their share of expenditure is more than what the corporation is due to disburse. It is very often the complaint of the beneficiaries that the hospitals are in bad state of maintenance and are short of even essential medicines.

The underlying issue in running these social service schemes is one of ensuring efficient delivery of services. In many parts of the world, the working people in different Industries/enterprises come together, establish their own Social Security Funds, invest them and administer them autonomously in a cost effective, sustainable and remunerative manner, subject to broad statutory regulations by Governments to ensure their safe and sound administration. In fact, our Provident Fund and Employees' State Insurance laws do have enabling provisions under which decentralized, autonomous Funds of this nature could be permitted to be established. But such an approach is a matter of will and commitment to dismantle social security bureaucracies.

UNORGANIZED WORKERS AND SOCIAL SECURITY

By and large, Social Security benefits under the major schemes, *viz.* Provident Fund and Employment State Insurance Schemes, are availabe only for organized sector workers, that is, for those amongst 10% of the total work force. Unorganized Sector workers, by and large, are not able to access these benefits because in their case, employer-employee nexus is rather uncertain. For accesing these benefits, flowing as they do from employer's contribution as well, this nexus is vital.

The Life Insurance Corporation (LIC) is implementing Group Insurance schemes for unorganized labour in 23 different occupations, having created a Social Security Fund from its own resources and of the Government of India. Yet, another LIC scheme for landless agricultural labourers covers about 12 million workers in the country. There is also an Insurance Scheme of the LIC covering beneficiaries under the Integrated Rural Development Programme (IRDP) so as to protect the beneficiary families against indebtedness and indigence in the events of the death of the bread winner or the loss of assets. While these scheme are envisaged well, their weakness is lack of proper managerial arrangements at the ground level. There needs to be coordinated and synergic action as between the LIC officials and District officials.

WELFARE FUND SCHEMES

Commencing from 1946, the Labour Ministry has brought under implementation, several welfare fund scheme for about two lakh workers in Iron Ore, Managanese Ore, Chrome Ore and Mica mines, apart from cine and Beedi workers. These schemes are funded by cess collected from export/domestic sales of the Ores/products. These funds had a reserve of about Rs. 60 crore as on 1.4.1996. Resources from these funds are used for providing certain benefits for workers like medical care, housing, educational concessions, etc. It has been the persistent complaint of State Governments that more cess is collected from their areas than benefits flow to workers in their areas. These funds are operated through the Government of India Budget, expenditure each year being limited to cess revenue collection in the year, though there are accumulated reserves. These Funds also deserve to be administered by decentralised mechanisms. Several States have evolved their own Welfare Schemes for workers in different employments like Asha Kiran Scheme of Karnataka for agriculture workers and

Construction workers and the schemes of Kerala meant for fishermen, coir workers, construction workers etc. While of these schemes are successful, the principal problem in implementing them has been disproportionate administrative costs.

SOCIAL SECURITY FOR DEPENDENTS

For many years, several States have been running pension schemes for indigent and old persons, destitutes, widows, handicapped, etc. In 1995, the Government of India brought into effect the National Social Assistance Programme (NSAP) under which three schemes are being implemented—National Old Age Pension Scheme, National Family Benefit Scheme and National Maternity Benefit Scheme. These are poverty-line related schemes. Beneficiaries are to be those living below poverty line. Funds of the order of Rs. 900 crore are being provided by the Government of India to State Governments for extending assistance to about 53 million old persons (65 years of age and above), about half a million families which have lost breadwinners and about 4.5 million maternity cases. While this programme is indeed an appropriate measure considering the high dependency ratios in the country, there is a strong case for streamlining the system of State-wise target-setting (fixation of numerical ceilings of beneficiaries for each State). As the schemes under the programme are linked to poverty line and poverty line is different for different States, the targets should reflect the number of those living below poverty line as well.

12

POVERTY

The conquest of poverty has been a persistent and sustained effort since the beginning of planning in India. Success has been elusive despite direct attacks to remove poverty. A variety of employment initiatives has been introduced. The national average of population living below the poverty line has climbed up to 38%, leaving 323.4 millions in this condition. The poverty band has increased to a differential of 48.61% between States in 1993-94 against a differential of 42.49% in 1973-74 according to the revised methodology of the Planning Commission. Poverty remains a very major concern of the nation.

Consistent efforts have been made since the First Five Year Plan to bring about rural development and for the upliftment of the poverty-stricken rural masses. What started as Community Development Movement with sub-district administration infrastructure for developmental purposes spawned a series of special schemes and programmes. They further evolved over the years into schemes for direct attack on poverty in a targeted manner.

Box 12.1 : Evolution of Poverty Alleviation Programmes

1952	Launching of the Community Development (CD) Movement : CD movement was an integrated approach to rural development; agriculture, animal husbandry, rural industries, health and women's development were the sectors in which development was concurrently sought to be brought about.
1957	Concept of Panchayati Raj for decentralized administration evolved, following up on the Balwant Rai Committee Report (Panchayat Raj Institutions were established in different parts of the country between 1957 and 1967).
By end of Second Five Year Plan (1961)	5000 National Extension Service Blocks created.
1960s	Land Reform measures, namely abolition of intermediary tenures, tenancy reforms, ceilings on land holdings, distribution of surplus lands, consolidation of land holdings etc. commenced in several States.
Early 1970s	Establishment of Small Farmers Development Agencies (SFDAs), Marginal Farmers' Development Agencies (MFDAs) Crash Schemes for Rural Employment, Food for Work Programme, Drought Prone Area Programme (DPAP) and Desert Development Programme (DPAP). The content of these programmes was strengthening the rural base of the economy, development of rural infrastructure (roads and other community assets), employment creation through labour intensive works etc.
1974-79 (Fifth Five Year Plan Period)	Emphasis shifted to fulfilling minimum needs.

1980-85 (Sixth Five Year Plan Period)	Direct, targeted Poverty Alleviation Programmes. Started: Integrated Rural Development Programme (IRDP) universalised. Families living below poverty line given attention through banking credit and Govt. subsidies being conjunctively used.
	Training of Youth for Self Employment (TRYSEM) and Development of Women and Children in Rural Areas (DWCRA) launched, the latter for upliftment of women in families living below poverty line.
	Wage Employment Programmes - National Rural Employment Programme (NREP) and National Rural Employment Guarantee Programme (RLEGP) - established.
1985-90 (Seventh Five Year Plan Period)	Indira Awaas Yojana (IAY) for provision of housing to SCs/STs and bonded labourers introduced as part of RLEGP.
	Social Forestry Programmes also introduced as part of RLEGP.
	Subsequently NREP and RLEGP were merged into Jawahar Rozgar Yojana.
	Technology Mission on Drinking Water provision launched.
1992-97 (Eighth Five Year Plan Period)	73rd and 74th Constitutional Amendments Legislated for establishment of 3-tier Panchayat Raj System and democratic municipal governance.
	Employment Assurance Scheme (EAS) to provide 100 days work in a year introduced.
	National Social Assistance Programme (NSAP) with its components, namely National Old Age Pension Scheme (NOAPS), National Family Benefit Scheme (NFBS) and National Maternity Benefit Scheme (NMBS) introduced - to provide social security to poor households.
	Ganga Kalyan Yojana (GKY) introduced to provide ground water based irrigation facilities.

About 76 million people living below poverty line are in urban areas. Their squalour is even harsher than that of the rural poor. Several counterpart poverty alleviation programmes have also been started for the benefit of the urban poor. They are being implemented by the Ministry of Urban Development. The Ministry of Human Resource Development (Department of Women and Child Development) and its field formations implement programmes for the benefit of women among the poor.

Incidence of Poverty

Poverty estimates in India have been used as development indicators. Lately, these estimates have been used for allocation of resources meant for poverty alleviation among competing regions of the economy. The Planning Commission started looking at the incidence of poverty in the different regions of the country since the Sixth Five Year Plan.

From early seventies, poverty line was anchored on the expenditure required for purchasing food articles, consumption of which would ensure the energy adequacy norm of 2100 kilo calories for those in urban areas and 2400 kilo calories for those in rural areas. On this basis, the per capita expenditure required per month at 1973-74 prices was pegged at Rs. 49.09 for rural areas and Rs. 56.64 for urban areas. For subsequent years, the proportion of population below poverty line was worked out on the basis of consumer expenditure data from the NSS by converting the expenditure to 1973-74 consumer prices. As per this formula, poverty ratios were seen to be declining rapidly for some States. Many States, however, questioned this methodology and argued that their poverty ratios had not actually declined to the extent indicated. Therefore, Planning Commission appointed the Expert-Group under Lakadawala. This Group, after going into the matter, accepted the energy adequacy principle but introduced a federal dimension to the estimates of poverty. It recommended State-specific parameters for working out poverty ratios. In particular, it recommended usage of the Consumer Price Index for Agricultural Labour in the rural areas and Consumer Price Index of urban non-manual employees and industrial workers for urban areas. On this basis, they refixed the poverty line separately for each State. This reflected altered proportions of poverty in different States. The National average was found to be 38% (1993-94). Overall, people below poverty line were found to be 323.4 million in 1993-94 against the estimation of 149.8 million as per the earlier Planning Commission methodology. The Commission reviewed the poverty estimates made by the Lakadawala Group. It dropped out of reckoning, the Consumer Price Index for urban non-manual employees. This, in turn, brought down the number of people below poverty line in the urban areas by 3.1 million.

The comparative picture regarding the level at which poverty line stands anchored now relative to

the earlier level is furnished below:

Table 12.1

Poverty Line

Expenditure per capita per month, 1993-94

Old Planning Commission Methodology	
Rural	Rs. 229.14
Urban	Rs. 264.38
Lakadawala Group Formula	
Rs. 163.01 (for Andhra Pradesh) to Rs. 243.84 (for Kerala)	
Rs. 224.11 (for J & K) to Rs. 322.69 (for Maharashtra)	
Lakadawala Group Formula as modified by Planning Commission	
Rs. 163.01 (for Andhra Pradesh) to Rs. 243.84 (for Kerala)	
Rs. 212.42 (for Assam) to Rs. 328.56 (for Maharashtra)	

Source: Planning Commission

Presented below are four Tables furnishing detailed Statewise data on poverty for the five quinquennia commencing from 1973-74. In Table 12.2, absolute numbers of people living below poverty line and as proportion to population of States are furnished. Table 12.3 indicates poverty band (range of proportion of people below poverty line) in various States, relative to All India average. In Tables 12.4 and 12.5, poverty lines expressed in terms of monthly per capita amount applicable, respectively, in rural and urban areas have been indicated.

Table 12.2

Statewise trend of poverty decline

Decline of proportion of those living below poverty line over the two decades since 1973-74

States	PERSONS 1973-74		PERSONS 1977-78		PERSONS 1983		PERSONS 1987-88		PERSONS 1993-94	
	Lakhs	% of total	Lakhs	% of total	Lakhs	% of total	Lakhs	% of total	Lakhs	% of total
Andhra Pradesh	225.69	48.86	197.54	39.31	164.58	28.91	160.43	25.36	153.97	22.19
Arunachal Pradesh	2.66	51.93	3.36	58.32	2.82	40.88	2.83	36.22	3.73	39.35
Assam	31.33	51.21	103.38	57.15	77.09	40.47	75.75	38.21	98.38	40.36
Bihar	370.57	61.91	401.82	61.55	482.05	62.22	420.93	32.13	493.35	54.96
Goa	4.18	44.26	3.88	37.23	2.23	18.90	2.98	24.32	1.91	14.92
Gujarat	138.42	48.15	130.88	41.23	117.92	32.79	122.36	31.54	105.19	24.21
Haryana	38.32	35.36	35.48	29.55	29.60	21.37	25.37	16.64	43.88	25.05
Himachal Pradesh	9.73	26.39	13.04	32.45	7.41	18.40	7.52	15.45	15.88	23.44
Jammu & Kashmir	20.48	40.83	21.72	38.97	15.60	24.24	16.95	23.82	20.92	25.17
Karnataka	170.87	54.47	168.17	48.78	149.81	38.24	158.61	37.53	156.46	33.16
Kerala	135.52	59.79	127.22	52.22	106.77	40.42	88.48	31.79	78.41	25.43
Madhya Pradesh	276.30	81.78	302.87	61.78	277.97	49.78	284.30	43.07	298.52	42.52
Maharashtra	287.42	53.24	329.91	55.88	290.89	43.44	296.27	40.41	305.22	36.88
Manipur	5.35	49.96	7.08	53.72	5.65	37.02	5.29	31.35	6.80	33.78
Meghalaya	5.52	50.20	6.79	55.19	5.62	38.81	5.48	33.92	7.38	37.92
Mizoram	1.82	50.32	2.31	54.38	1.96	36.00	1.70	27.52	1.94	25.66
Nagaland	2.90	50.81	3.74	56.04	3.50	39.25	3.66	34.43	5.05	37.92
Orissa	154.47	66.18	176.32	70.07	181.31	65.29	165.93	55.58	160.60	48.56
Punjab	40.49	28.15	30.23	19.27	28.64	16.18	25.17	13.20	25.11	11.77
Rajasthan	128.51	46.14	116.88	37.42	123.83	34.46	142.90	35.15	128.50	27.41
Sikkim	1.19	50.86	1.54	55.89	1.35	39.71	1.36	36.08	1.84	41.43
Tamil Nadu	239.52	54.94	255.47	54.79	260.07	51.66	231.07	43.39	202.10	35.03
Tripura	8.54	51.00	10.61	55.58	8.95	40.03	8.84	35.23	11.79	39.01
Uttar Pradesh	535.73	57.07	504.37	49.05	556.74	47.07	556.53	41.46	604.46	40.85
West Bengal	299.30	63.43	310.57	60.52	318.69	54.85	283.81	44.72	254.56	35.36
A & N Island	0.74	55.56	0.91	55.42	1.11	52.13	10.25	12.41	1.06	34.47
Chandigarh	0.84	27.96	1.03	27.32	1.19	23.79	1.09	43.89	0.80	11.35
Dadra & Nagar Haveli	0.38	46.55	0.49	37.20	0.18	15.67	0.84	14.87	0.77	50.84
Delhi	22.84	49.61	18.15	33.23	18.39	26.22	0.78	67.11	15.51	14.69
Lakshadweep	0.21	59.68	0.20	52.78	0.19	42.36	0.17	34.95	0.14	25.04
Pondicherry	2.74	53.82	3.00	53.25	3.28	50.06	3.05	1.46	3.31	37.40
All India	3213.38	54.88	3288.95	51.32	3228.97	44.48	3070.49	38.88	3203.68	35.97

Note : 1. Poverty Ratio of Assam is used for Sikkim, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland and Tripura. 2. Poverty Ratio of Tamil Nadu is used for Pondicherry and A & N Island. 3. Poverty Ratio of Kerala is used for Lakshadweep. 4. Poverty Ratio of Goa is used for Dadra & Nagar Haveli. 5. Urban Poverty Ratio of Punjab is used for both rural and urban poverty of Chandigarh. 6. Poverty Line of Maharashtra and expenditure distribution of Goa is used to estimate poverty ratio of Goa.
Source:Planning Commission

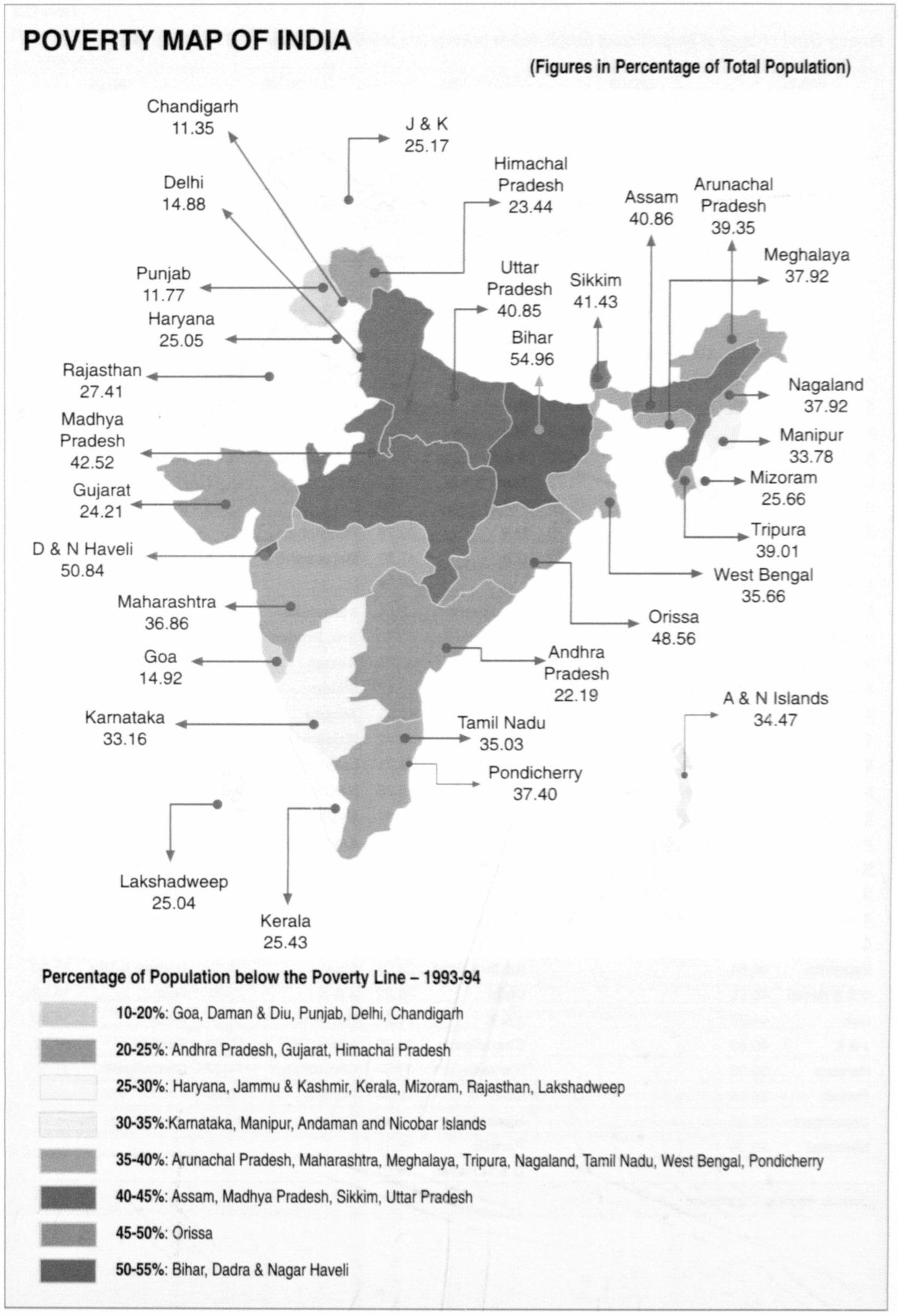

POVERTY MAP OF INDIA
(Figures in Percentage of Total Population)
Chandigarh 11.35
J & K 25.17
Himachal Pradesh 23.44
Delhi 14.88
Assam 40.86
Arunachal Pradesh 39.35
Meghalaya 37.92
Punjab 11.77
Uttar Pradesh 40.85
Sikkim 41.43
Haryana 25.05
Bihar 54.96
Rajasthan 27.41
Nagaland 37.92
Madhya Pradesh 42.52
Manipur 33.78
Gujarat 24.21
Mizoram 25.66
Tripura 39.01
D & N Haveli 50.84
West Bengal 35.66
Maharashtra 36.86
Orissa 48.56
Goa 14.92
Andhra Pradesh 22.19
A & N Islands 34.47
Karnataka 33.16
Tamil Nadu 35.03
Pondicherry 37.40
Lakshadweep 25.04
Kerala 25.43
Percentage of Population below the Poverty Line – 1993-94
10-20%: Goa, Daman & Diu, Punjab, Delhi, Chandigarh
20-25%: Andhra Pradesh, Gujarat, Himachal Pradesh
25-30%: Haryana, Jammu & Kashmir, Kerala, Mizoram, Rajasthan, Lakshadweep
30-35%:Karnataka, Manipur, Andaman and Nicobar Islands
35-40%: Arunachal Pradesh, Maharashtra, Meghalaya, Tripura, Nagaland, Tamil Nadu, West Bengal, Pondicherry
40-45%: Assam, Madhya Pradesh, Sikkim, Uttar Pradesh
45-50%: Orissa
50-55%: Bihar, Dadra & Nagar Haveli

Table 12.3

Poverty Band : Range of proportion of people below poverty line in various States – 1973-74 to 1993-94

(In per cent)

1973-74		1977-78		1983		1987-88		1993-94	
		Orissa	70.00						
		M.P.	61.78						
		Bihar	61.55						
		W. Bengal	60.52						
		Aru. Pradesh	58.32						
		Assam	57.15					Bihar	54.96
		Tripura	56.88					D & N Haveli	50.84
		Nagaland	56.04					Orissa	48.56
		Sikkim	55.89			D & N Haveli	67.11	M.P.	42.52
Orissa	66.18	Maharashtra	55.88			Orissa	55.50	Sikkim	41.43
W. Bengal	63.43	A & Nicobar	55.42	Orissa	65.29	Bihar	52.13	Assam	40.86
Bihar	61.91	Meghalaya	55.19	Bihar	62.23	W. Bengal	44.72	U.P.	40.85
M.P.	61.78	Tamil Nadu	54.79	W. Bengal	54.85	Tamil Nadu	43.39	Aru. Pradesh	39.35
Kerala	59.79	Mizoram	54.38	A & Nicobar	52.13	A & Nicobar	43.39	Tripura	39.01
Lakshadweep	59.68	Manipur	53.72	Tamil Nadu	51.66	M.P.	43.07	Nagaland	37.92
U.P.	57.07	Pondicherry	53.25	Pondicherry	50.06	U.P.	41.48	Meghalaya	37.82
A & Nicobar	55.66	Lakshadweep	52.79	M.P.	49.78	Pondicherry	41.46	Pondicherry	37.40
Tamil Nadu	54.94	Kerala	52.22	U.P.	47.07	Maharashtra	40.41	Maharashtra	36.86
All India Average	**54.88**		**51.32**		**44.48**		**38.86**		**35.97**
Karnataka	54.47	U.P.	49.05	Maharashtra	43.44	Karnataka	37.53	W. Bengal	35.66
Pondicherry	53.82	Karnataka	48.78	Lakshadweep	42.86	Aru. Pradesh	36.22	Tamil Nadu	35.03
Maharashtra	53.24	Gujarat	41.23	Aru. Pradesh	40.85	Assam	36.21	A & Nicobar	34.47
Aru. Pradesh	51.93	Andhra Prad.	39.31	Assam	40.47	Sikkim	36.06	Manipur	33.73
Assam	51.21	J & K	38.97	Tripura	40.43	Tripura	35.23	Karnataka	33.16
Tripura	51.00	Rajasthan	37.42	Kerala	40.42	Rajasthan	35.15	H.P.	28.44
Sikkim	50.86	Goa	37.23	Sikkim	39.71	Lakshadweep	34.95	Rajasthan	27.41
Nagaland	50.81	D & N Haveli	37.20	Nagaland	39.25	Nagaland	34.43	Mizoram	25.56
Mizoram	50.22	Delhi	33.23	Meghalaya	38.81	Meghalaya	33.92	Kerala	25.43
Meghalaya	50.20	Himachal	32.45	Karnataka	38.24	Kerala	31.78	J & K	25.17
Manipur	49.96	Haryana	29.55	Manipur	37.02	Gujarat	31.54	Haryana	25.05
Delhi	49.61	Chandigarh	27.32	Mizoram	36.00	Manipur	31.35	Lakshadweep	25.04
Andhra Prad.	48.86	Punjab	19.27	Rajasthan	34.46	Mizoram	27.52	Gujarat	24.21
Gujarat	48.15			Gujarat	32.79	Andhra Prad.	25.86	Andhra Prad.	22.19
Rajasthan	46.64			Andhra Prad.	28.91	Goa	24.52	Daman & Diu	15.80
D & N Haveli	46.55			Delhi	26.22	J & K	23.82	Goa	14.92
Goa	44.28			J & K	24.24	Haryana	16.64	Delhi	14.69
J & K	40.83			Chandigarh	23.79	Himachal	15.45	Punjab	11.77
Haryana	35.35			Haryana	21.37	Chandigarh	14.87	Chandigarh	11.35
Punjab	28.15			Goa	18.90	Punjab	13.20		
Chandigarh	27.98			Himachal	16.40	Delhi	12.41		
Himachal	26.39			Punjab	16.18				
				D & N Haveli	15.67				

Source: Planning Commission

Table 12.4

Poverty Lines as per the new official methodology

(Rs. monthly per capita)

	RURAL				
STATES	**1973-74**	**1977-78**	**1983-84**	**1987-88**	**1993-94**
Andhra Pradesh	41.71	50.88	72.66	91.94	163.02
Arunachal Pradesh	*	*	*	*	*
Assam	49.82	60.29	98.32	127.44	232.05
Bihar	57.68	58.93	97.48	120.36	212.16
Goa	50.47	58.07	88.24	115.61	194.94
Gujarat	47.10	54.70	83.29	115.00	202.11
Haryana	49.95	59.37	88.57	122.90	233.79
Himachal Pradesh	49.95	59.37	88.57	122.90	233.79
Jammu and Kashmir	46.59	61.53	91.75	124.33	*
Karnataka	47.24	51.95	83.31	104.46	186.63
Kerala	51.68	58.88	99.35	130.61	243.84
Madhya Pradesh	50.20	56.26	83.59	107.00	193.10
Maharashtra	50.47	58.07	88.24	115.61	194.94
Manipur	*	*	*	*	*
Meghalaya	*	*	*	*	*
Mizoram	*	*	*	*	*
Nagaland	*	*	*	*	*
Orissa	46.87	58.89	106.28	121.42	194.03
Punjab	49.95	59.37	88.57	122.90	233.79
Rajasthan	50.96	57.54	80.24	117.52	215.89
Sikkim	*	*	*	*	*
Tamil Nadu	45.09	56.62	96.15	118.23	196.53
Tripura	*	*	*	*	*
Uttar Pradesh	48.92	54.21	83.85	114.57	213.01
West Bengal	54.49	63.34	105.55	129.21	220.74
Andaman & Nicobar	*	*	*	*	*
Chandigarh	*	*	*	*	*
Dadra & Nagar Haveli	50.47	58.07	88.24	115.61	194.94
Daman & Diu	*	*	*	*	*
Delhi	49.95	59.37	88.57	122.90	233.79
Lakshadweep	*	*	*	*	*
Pondicherry	*	*	*	*	*
ALL INDIA^	49.63	56.84	89.50	115.20	205.84

*In the Expert Group, poverty ratios for these states have not been calculated separately, but has been adopted from those of other states. The details are as follows:

1. Poverty Ratio of Assam is used for Sikkim, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland and Tripura
2. Poverty Ratio of Tamil Nadu is used for Pondicherry and A & N Island
3. Poverty Ratio of Kerala is used for Lakshadweep
4. Poverty Ratio of Goa is used for Daman & Diu
5. Urban Poverty Ratio of Punjab used for both rural and urban poverty of Chandigarh
6. In 1993-94, Poverty Ratio of Himachal Pradesh is used for Jammu & Kashmir
7. Since Poverty Ratio is estimated from the consumption expenditure distribution and the poverty line, it is preferable that the poverty lines of these states may be equated to that of the state whose poverty ratio is adopted

^The poverty line (implicit) at All India level is worked out from the expenditure class-wise distribution of persons and the poverty ratio at All India level. The poverty ratio at All India level is obtained as the weighted average of the state-wise poverty ratio

Source: Planning Commission

Table 12.5

Poverty Lines as per the new official methodology

(Rs. monthly per capita)

	URBAN				
STATES	1973-74	1977-78	1983-84	1987-88	1993-94
Andhra Pradesh	53.96	69.05	106.43	151.88	278.14
Arunachal Pradesh	*	*	*	*	*
Assam	50.26	61.38	97.51	126.60	212.42
Bihar	61.27	67.27	111.80	150.25	238.49
Goa	59.48	73.99	126.47	189.17	328.56
Gujarat	62.17	72.39	123.22	173.18	297.22
Haryana	52.42	66.94	103.48	143.22	258.23
Himachal Pradesh	51.93	66.32	102.26	144.10	253.61
Jammu and Kashmir	37.17	55.41	99.62	148.38	*
Karnataka	58.22	68.85	120.19	171.18	302.89
Kerala	62.78	67.05	122.64	163.29	280.54
Madhya Pradesh	63.02	74.40	122.82	178.35	317.16
Maharashtra	59.48	73.99	126.47	189.17	328.56
Manipur	*	*	*	*	*
Meghalaya	*	*	*	*	*
Mizoram	*	*	*	*	*
Nagaland	*	*	*	*	*
Orissa	59.34	72.41	124.81	165.40	298.22
Punjab	51.93	65.70	101.03	144.98	253.61
Rajasthan	59.99	72.00	113.55	165.38	280.85
Sikkim	*	*	*	*	*
Tamil Nadu	51.54	67.02	120.30	165.82	296.63
Tripura	*	*	*	*	*
Uttar Pradesh	57.37	69.66	110.23	154.15	258.65
West Bengal	54.81	67.50	105.91	149.96	247.53
Andaman & Nicobar	*	*	*	*	*
Chandigarh	*	*	*	*	*
Dadra & Nagar Haveli	59.48	73.99	126.47	189.17	328.56
Daman & Diu	*	*	*	*	*
Delhi	67.95	80.17	123.29	176.91	309.48
Lakshadweep	*	*	*	*	*
Pondicherry	*	*	*	*	*
ALL INDIA^	56.76	70.33	115.65	162.16	281.35

*In the Expert Group, poverty ratios for these states have not been calculated separately, but has been adopted from those of other states. The details are as follows:

1. Poverty Ratio of Assam is used for Sikkim, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland and Tripura
2. Poverty Ratio of Tamil Nadu is used for Pondicherry and A & N Island
3. Poverty Ratio of Kerala is used for Lakshadweep
4. Poverty Ratio of Goa is used for Daman & Diu
5. Urban Poverty Ratio of Punjab used for both rural and urban poverty of Chandigarh
6. In 1993-94, Poverty Ratio of Himachal Pradesh is used for Jammu & Kashmir
7. Since Poverty Ratio is estimated from the consumption expenditure distribution and the poverty line, it is preferable that the poverty lines of these states may be equated to that of the state whose poverty ratio is adopted

^The poverty line (implicit) at All India level is worked out from the expenditure class-wise distribution of persons and the poverty ratio at All India level. The poverty ratio at All India level is obtained as the weighted average of the state-wise poverty ratio

Source: Planning Commission

The above data on the population below poverty line over two decades between 1973-74 and 1993-94 show:

The proportion of those below poverty line has declined by nearly 19 percentage points from 54.88% to 35.97%.

- The poverty band (difference between the lowest and highest proportion of population below poverty line) has remained between about 42% and 55%.
- Poverty proportion has, indeed come down in all the States, though in the case of a few States, there has been some ups and downs, mostly marginal, in certain quinquennia.
- As in 1993-94, Chandigarh had the lowest proportion of people below poverty line (11.35%) and Bihar had the highest proportion (54.96%).
- Bihar, Madhya Pradesh, Orissa and UP are the major States where poverty proportion has consistently remained quite high. As in 1993-94, these four States accounted for 155 million of the country's 320 million (48%) living below poverty line.
- Thirteen States still remain above the national average of the proportion of people living below poverty line. Amongst these States eight are in the Eastern and North Eastern region. And, five out of these are amongst the seven sisters of the North East and the Sixth one is Sikkim.
- Maharashtra and Karnataka have consistently tended to remain near about the national average.
- Kerala, Tamil Nadu and West Bengal are the three States which have made a steady and significant progress in their transition below the national average.
- Andhra Pradesh, Haryana, Gujarat, Himachal Pradesh, Punjab and Rajasthan are the major States which have consistently remained below the national average.

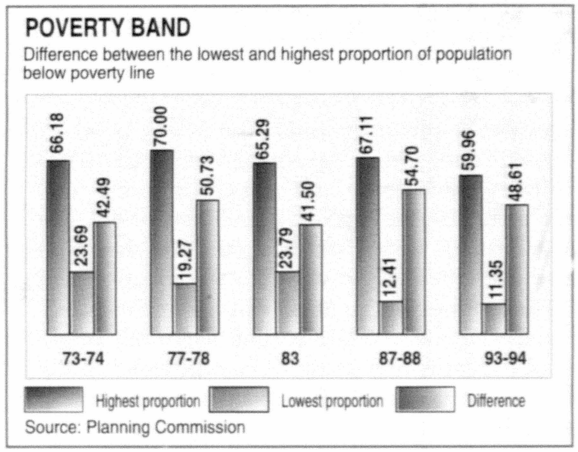


Table 12.6

Summary of poverty band over the years

	1973-74	1977-78	1983	1987-88	1993-94
Highest proportion	66.18	70.00	65.29	67.11	59.96
Lowest proportion	23.69	19.27	23.79	12.41	11.35
Difference	42.49	50.73	41.50	54.70	48.61

Source: Planning Commission

13

GENDER ISSUES

Gender concerns have gained prominence in the Human Development Agenda. The roles played by women in society and their contribution as a human resource are slowly becoming visible. Efforts to remove discrimination against females and establish equality has become part of a global movement, emphasized in all the four World Conference on Women including the last one at Beijing in 1995. The Women's Movement in India has been addressing various social issues and has gained momentum through the years. Several mechanisms have been created in the country to work for the advancement of women and generate social awareness on gender issues. Empowerment of women and capacity building have become the main goal to help remove discrimination. While several legal and policy level initiatives have been taken there are a great deal of concerns remaining to be addressed in the matter of women's education, skill development, employment, health and other social issues including a basic transformation in archaic mind-set about attitude to women.

Human development has moved to centre-stage in the global development debate. Among other matters, the socio-cultural environment that governs the behaviour of men and women has come under critical scrutiny to eliminate discrimination and establish equality, equity, justice and rights. It has come to be clearly realised that women are being treated as the unequal gender on several counts. Therefore, the attention of the society is being drawn to the variety of social, political, economic and cultural factors that have perpetuated this lower status for women. Now there is a determined effort to alter this situation, through legal instruments as much as through a conscious process of attitudinal and behavioural changes to bestow equality on women through affirmative action. The women's movement in India and in different parts of the world, over a century, and global action through the agenda of the United Nations in its half a century of advocacy has significantly changed the perceptions of Governments and the process of change has set in, even though at a slow pace. The issue is to accelerate this pace and recognise women for their roles and contributions and as a valuable human resource that is vital and inevitable for development. India, had the distinction of being the first country to unreservedly commit itself to the Beijing Declaration and the Platform for Action of the Fourth World Conference on Women at Beijing in September 1995.

India's contribution to the global debate on women's issues has been rich, diverse and in many ways unique. The principles of gender equality and gender equity have been basic to Indian thinking. The 19th and early 20th centuries saw a succession of women's movements, first around social issues and later around the freedom struggle itself. The Constitution of India adopted in 1950 not only granted equality to women, but also empowered the State to adopt measures of affirmative discrimination in favour of women. The Constitution further imposes a fundamental duty on every citizen to renounce practices derogatory to the dignity of women.

The Committee on the Status of Women in India was appointed in 1971 to report on the situation of women. The Report of the Committee "Towards Equality" led to wide policy debates emphasizing a shift from viewing women as targets of welfare policies in the social sectors to regard them as critical actors of development. This was reflected in the multi-pronged strategy for advancement of women envisioned in the Sixth Five Year Plan which addressed issues of access to education, health care and family planning, employment, support services and the creation of an enabling policy and legal

environment. In the next two decades, a network of agencies was established to form the National Machinery for women to bring about the ambience required for the advancement of women.

The Central Social Welfare Board was the first co-ordinating Agency established in 1953 under the direction of Prime Minister Jawaharlal Nehru and ably presided over by Smt. Durga Bai Deshmukh for nearly a decade thereafter. Realising the magnitude of co-ordination that was required to accelerate the process of mainstreaming women in development, and goaded by the International Momentum of the UN World Conference on Women, the Department of Women and Child Development was set up in 1985 as part of the newly created Ministry of Human Resource Development. The National Commission for Women was set up under a statute in 1992 to oversee the implementation of women's rights and privileges. This had been a long pending demand of the women's movement in India.

Perspectives have changed rapidly since then from development to empowerment of women. The 73rd and 74th Constitutional Amendment Acts of 1993 constitute a watershed in the advancement of Indian women. A third of the membership of the local bodies and a third of chairpersonship of these institutions are now reserved for women. With elections to the Panchayati Raj Institutions having been held in most of the States, nearly a million women have been inducted into decision making bodies, and over 7000 women preside over these bodies. The new experience has been very refreshing despite initial apprehensions of ignorance and incompetence of illiterate women in such positions. The major effort now is on capacity building through training and awareness generation. The approach to social development issues at these grass root level organisations has slowly started changing—they are yet to become effective.

After the Fourth World Conference on Women, India has initiated a variety of strategies to sensitise the society on gender issues. A draft national Policy for empowerment of women has been formulated after wide consultation and is awaiting adoption.

A Bill for reserving one third of the membership of the Lok Sabha and State Legislatures is under the consideration of the Parliament (81st Constitutional Amendment).

A Committee of members of Parliament has been constituted to review the variety of measures taken for advancement and empowerment of women and accelerate the process. This brings a great deal of responsibility on the Parliament—the policy making body to ensure women their rightful place in society.

A review of the status of women in different spheres highlights the impacts of various efforts made so far and emphasises the areas that need greater attention and yet others that cause concern.

Item	Performance	Concern
Sex Ratio	The 1991 census counted 407.1 million females against 439.23 males, making a ratio of 927 females to 1000 males which is a decline from 972 females per 100 males in 1901, 946 in 1951 and 934 in 1981.	Decline of sex ratio is an indicator of the low status of women, and higher mortality/or lesser female babies at birth. Females being genetically stronger, generally female-male ratio is more than 1:1. This is so in the developed countries. The concern is about the missing women. Female infanticide, pre-natal sex selection are considered as contributory factors. This is symbolic of male preference.
Age structure	Higher proportion of adult women in the working age group due to increasing survival rates for the whole population.	Relative increase in women in the reproductive age group; higher unemployment amongst women.
Life expectancy	Life expectancy has increased for women to the same level as that of men (though it was slightly	Generally, life expectancy has to be four to five years more for women than for men as in

Item	Performance	Concern
	higher in 1986—90 than for men). It now stands at 61 years.	developed countries; larger numbers of old and dependent women and widows.
Mortality	There is significant decline in the mortality rate for both girls and boys. It has come down to 24.9 from 51.7 for boys and to 26.2 from 55.1 for girls between 1970 and 1992.	Neglect of the girl child as a social milieu; continued high level of maternal mortality.
	The success of the immunisation programme has reduced male and female infant mortality to 74 in 1993 from 123 and 131 respectively in 1978-80. Special programme for Child Survival and Safe Motherhood has been launched in 1992-93. Death rate has declined for the population as a whole. Death rates for females above 30 years of age are lower than that for males in the higher age groups.	Women headed households and higher incidence of poverty.
Age at marriage	Child Marriage Restraint Act, 1976 has raised the age at marriage for girls to 18 and for boys to 21 years. Mean age at marriage for girls was 19.5 years in 1992.	Early marriage of girls and early pregnancies — premature babies are still common. High fertility rate is one of the outcomes, apart from infant and maternal mortality.
Fertility	The age-specific fertility rate declined for women in all age groups. Total fertility rate declined from 4.5 births in 1981 to 3.6 in 1991. The reduction in the number of pregnancies for women has released them for other productive work.	The fertility rates have to come down further for stabilisation of the population. The concern now is that women are the main targets of all family planning efforts. Strategies for targeting men needs to be evolved for better family planning and fertility control. Early marriages are still very common and is another reason for high fertility.
Literacy	Over the four decades (1951-91), female literacy has gone up five times, *i.e.* from 8.86% to 39.9% in 1991. During the decade 1981-91 in particular, female literacy increased at a relatively faster pace (9.6%) than male literacy (7.6%).	Female literacy in some State are yet around 20% and around 0 to 5% in 42 Districts for S.C. girls. Generally, literacy is low in rural areas (30% for women) and lower for Scheduled Castes. Reach of special efforts for literacy promotion are still inadequate and

Item	Performance	Concern
	Girls enrolment in schools has increased at all levels — primary (9 fold); upper primary/middle stage (30 fold) and higher secondary stage (40 fold) between 1951-91.	social barriers still persist. Illiteracy lowers women's status. Drop-out rates for girls is very high. Only 32% of girls entering primary stage finish schooling. Low levels of education stand as a barrier to higher skill development and better economic status.
Employment	Work participation of women has increased to 2.27% in 1991 from 19.67% in 1981 and 14.22% in 1971. Increase in work participation in rural areas is even more significant at 26.79% in 1991 from only 15.92% in 1971. Out of 22.27% female work participation in 1991, main workers contributed 16.03% and marginal workers 6.24%. While participation of main workers increased between 1981-91 both in rural and urban areas, marginal work participation increased only in rural areas and remained constant at 1% in urban areas. Regional variation in work participation ranged between a low of 4% and 34% in major States. Proportion of employment in other services is increasing slightly; the proportion in manufacturing industry has decreased; the high proportion in agriculture remains the same with a slight shift as cultivation from agricultural labourers. Women's employment in the organised sector has significantly increased in absolute numbers, though it is only 4% of all women's employment against 10% for men. The proportion of women in the organised sector as against men has increased from 11% in 1971 to over 14% in 1993.	Families are still ashamed to acknowledge their women as workers and perceive this as an indignity. A lot of work women do also goes unaccounted in National Accounts, and is not valued even in households. Women form majority of the marginal workers. The low work participation in some States is both owing to cultural factor and their under-representation. Unemployment among women is on the increase; unemployment of educated women in the urban areas is even more significant; they still continue to get relegated to peripheral jobs and precarious employment.
Legislation	A whole range of laws had been enacted and amended to give better status to women and protect their rights.	Application and implementation of many of the provisions leaves much to be desired and women do not get the benefit of the legal provisions. Lacunae in the

Item	Performance	Concern
		provisions and modifications recommended are at various stages of scrutiny at a slow pace.
Resources for women's advancement	A plethora of programmes for the advancement of women has been initiated. Convergence of these have been proposed under Indira Mahila Yojana to have a women component plan.	The allocations are small, implementation is inadequate and coordination and convergence are yet poor. Progress is tardy.
Social sensitisation	The process of awareness generation and sensitisation of legislators, administrators, policy makers, judiciary, law enforcement officers and women and men has been initiated.	The intensity of awareness generation is yet inadequate; awareness on gender issues is yet to percolate.
Mitigation of violence and abuse of women and girls	Organisation of women and imparting legal literacy has gained momentum.	Violence and abuse are still pervasive.

14

ENVIRONMENT

The gigantic size of our population, fast spreading urbanisation and sizable level of agro-based industrialisation have caused gross violation of environment in our country. The forest cover of 75 million hectares falls far short of the national norm of 33% (66% for hill areas) of the total geographic area to be kept under forest cover. Overgrazing, commercial and non-commercial over exploitation of forest resources and encroachments have caused incredible denudation and damage to bio-diversity. Land, water and air are getting highly polluted because of domestic, industrial and 'non-point' pollution triggering morbidity amongst the people and entire eco systems are under constant threat. No doubt, we have evolved national policies, established a number of laws, created institutional infrastructure, drawn up Action Plans to protect environment and subscribed to international thinking and conventions. We have been investing as well on environment. Can we reverse the damage already done? How are we going to rise up to the Rio Declaration and Agenda 21?

INTRODUCTION

Environment has been defined 'as the aggregate of all external conditions and influences affecting the life and development of organisms'. The 'term' takes into account all variables which directly or indirectly infringe on it. These include in general all physical, social, cultural factors and conditions influencing the existence or development of organisms.

In the Indian tradition, nature and mankind form an inseparable part of the life support system. The five elements (i.e. air, water, land, flora and fauna) are inter-related and inter-dependent and have co-evolved and co-adapted. Disturbance in one gives rise to an imbalance in others.

Even in modern times, as is evident in our constitutional provisions, environmental legislation and planning objectives, conscious efforts have been made for maintaining environmental security along with developmental advances. The Indian Constitution has laid a new important trail in the Section on Directive Principles of State Policy by assigning the duties for the State and all citizens through article 48 A and article 51 A(g) which state that the "State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife in the country" and "to protect and improve the natural environment including forests, lakes and rivers and wildlife, and to have compassion for the living creatures."

Over the years, there has been progressive pressure on the environment and the natural resources, the alarming consequences of which are becoming evident in increasing proportions. These consequences detract from the gains of development and worsen the standard of living of the poor who are directly dependent on natural resources. It is in this context that it is essential to give a new thrust towards conservation and sustainable development.

In this connection, the experience of western countries can be cited. In 1903 an environment duty was levied in West Germany on the industries and the practice is still very successful. It has been observed in the West that whenever strict pollution control measures were introduced, the industry would initially protest but eventually an appropriate technology would be developed to keep the pollution within specified limits.

ENVIRONMENTAL PROBLEMS

Nature and Dimensions

Environmental problems in India can be classified into two broad categories:

a. those arising as negative effects of the very process of development; and
b. those arising from conditions of poverty and under-development.

The first category has to do with the impact of efforts to achieve rapid economic growth and development and continuing pressures of demand generated by those sections of society who are economically more advanced and impose great strains on the supply of natural resources. Poorly planned developmental projects are also often environmentally destructive. The second category has to do with the impact on the health and integrity of our natural resources (land, soil, water, forests, wildlife, etc.) as a result of poverty and the inadequate availability, for a large section of our population, of the means to fulfil basic human needs (food, fuel, shelter, employment, etc.)

Population is an important resource for development, yet it is a major source of environmental degradation when it exceeds the threshold limits of the support systems. Unless the relationship between the multiplying population and life support systems can be stabilized, development programmes, however, innovative, are not likely to yield the desired results. It is possible to expand the 'carrying capacity' through technological advances and spatial distribution, but neither of these can support unlimited population growth.

Our forest wealth is dwindling due to over-grazing, over-exploitation—both for commercial and house-hold needs—encroachments; unsustainable practices including certain practices of shifting cultivation and developmental activities such as roads, buildings, irrigation and power projects. The recorded forest cover in the country is 75.01 million hectares which works out to 19.5% of the total geographical area against the broad national goal of 33% for the plain areas and 66% for hilly regions. Even within this area, only 11% constitute forests with 40% or more of crown cover. According to the State of Forest Report, 1995, the actual forest cover in the country was 64.01 million hectares during 1987-89. The loss of habitat is leading to the extinction of plant, animal and microbial species. According to the Botanical and Zoological Surveys of India, over 1500 plant and animal species are in the endangered category. The biological impoverishment of the country is a serious threat to sustainble advances in biological productivity. Gene erosion also erodes the prospects for deriving full economic and ecological benefits from recent advances in molecular biology and genetic engineering.

Our unique wetlands, rich in aquatic and bird life, are facing problems of pollution and over-exploitation. The major rivers of the country are also facing problems of pollution and siltation. Our long coastline is under similar stress. Our coastal areas have been severely damaged due to indiscriminate construction near the water-line. Coastal vegetation including mangroves and sea grasses is getting denuded. Our mountain ecosystems are under threat of serious degradation.

Compounding these human-inflicted wounds on natural ecosystems and life-support mechanisms, we are facing serious problems of pollution and unsanitary conditions especially in urban areas. Pollution arising from toxic wastes industries and other development projects is causing irrevocable damage. This has resulted in the pollution of our water bodies and adversely affected the growth of our aquatic flora and fauna.

Principal health and productivity consequences of environmental mismanagement are highlighted below:

Box 14.1 : Principal health and productivity consequences of environmental mismanagement

Environmental Problem	Effect on health	Effect on productivity
Water pollution and water scarcity	More than 2 million deaths and billions of illnesses a year attributable to pollution; poor household hygiene and added health risks caused by water scarcity	Declining fisheries; rural household time and municipal costs of providing safe water; aquifer depletion leading to irreversible compaction; constraint on economic activity because of water shortages
Air pollution	Many acute and chronic health impacts: excessive urban particulate matter levels are responsible for 300,000-700,000 premature deaths annually and for half of childhood chronic coughing; 400 million-700 million people, mainly women and children in poor rural areas, affected by smoky indoor air	Restrictions on vehicle and industrial activity during critical episodes; effect of acid rain on forests and water bodies

Solid and hazardous wastes	Diseases spread by rotting garbage and blocked drains. Risks from hazardous wastes typically local but often acute	Pollution of groundwater resources
Soil degradation	Reduced nutrition for poor farmes on depleted soils; greater susceptibility to drought	Field productivity losses in range of 0.5–1.5 percent of gross national product (GNP) common on tropical soils; offsite siltation of reservoirs, river transport channels, and other hydrologic investments
Deforestation	Localized flooding, leading to death and disease	Loss of sustainable logging potential and of erosion prevention, watershed stability, and carbon sequestration provided by forests
Loss of biodiversity	Potential loss of new drugs	Reduction of ecosystem adaptability and loss of genetic resources
Atmospheric changes	Possible shifts in vector-borne diseases; risks from climatic natural disasters; diseases atributable to ozone depletion (perhaps 300,000 additional cases of skin cancer a year worldwide; 1.7 million cases of cataracts)	Sea-rise damage to coastal investments; regional changes in agricultural productivity; disruption of marine food chain

Source : World Development Report 1992 (World Bank)

ENVIRONMENT FRAMEWORK

Constitutional and Legal Provisions

As mentioned earlier Article 48A and 51A (g) added to the Directive Principles of State Policy and Fundamental Duties by Constitution Forty-second (Amendment) Act directs the State and all the citizens to protect the environment. There is enough scope and flexibility for the Government of India to legislate on any aspect of environment, whether it be forests, protection of wildlife, land, water or air, apart from population control and family planning, which are environment related. We have adequately legislated to meet environment concerns:

Box 14.2 : Environment Related Laws of India

Law	What it provides for
The Water (Prevention & Control of Pollution) Act, 1974, as amended in 1981	Establishment of a Central Board for prevention and control of water pollution as also State Boards.
The Air (Prevention and Control of Pollution) Act 1981, as amended in 1988	Dealing with prevention and control of Air and Water pollution by Central Board and State Boards for water pollution prevention and control
The Environment (Protection) Act, 1986	Empowerment of the Central Board with powers for inspection of equipment, plants and records, maintained in factories, premises, etc.
The Water (Prevention and Control of Pollution) Cess Act, 1977 as amended in 1991	Levy of Cess on industrial water consumption, water consumption by local authorities, etc.
The Public Liability Insurance Act, 1991	Provision of relief to persons affected by accidents while handling hazardous substances, etc.
National Environment Tribunal Act, 1995	Liability for damages arising out of any accident while handling hazardous substances, establishment of National Environmental Tribunal, etc.
National Environment Appellete Authority Ordinance, 1997	Establishment of Appellate Authority to hear cases of appeal against pollution control restrictions.

Regulations and Notifications have been issued in regard to management, handling, manufacture, storage, etc., of hazardous chemicals, prohibition of import of arsenic, cyanide, mercury, etc.

INSTITUTIONAL SUPPORT

Institutional support has been built over the years to handle environment concerns. In 1972, a Committee on Human Environment was created. In 1980, a Central Department of Environment was established. In 1985, the Department was converted into a Ministry. Then came the establishment of Central Pollution Control Board and State Boards. By end May 1996, the Central and State Boards were seized of over 6,000 environment related cases. The activities undertaken by the Central Board include river basin studies for Narmada, Tapti, Godavari and Mahanadi rivers. Identification of polluted stretches of rivers, criteria for operating Eco-Mark scheme, identification of over 1500 polluting industries, preparation of inventory of hazardous waste generating industries in several States.

PLAN INVESTMENTS

From the Fourth Five Year Plan onwards, Environment has been explicitly referred in Plan documents. Inter-dependence of living things with environment, husbanding of renewable resources, environmental development programmes, regeneration of degraded eco-systems, a national policy for environment protection, etc., have been dealt with in the Plan documents.

Table 14.1

Eighth Plan and Annual Plan Outlays – Ministry of Environment & Forests (In Rs. crores)

Sector Outlay	VII Plan Outlay	VIII Plan Outlay	ANNUAL PLANS 1992-93	1993-94	1994-95	1995-96	1996-97
Environment	110	325	48	70	79	80.0	125.0
National River Conservation Dte.	240	350	55	65	78	79.0	106.0
Forests and Wildlife	155	250	62	85	100	107.5	148.4
National Afforestation & Ecological Development Board	292	275	*115	98	103	104.0	90.0
TOTAL	**797**	**1200**	**280**	**318**	**360**	**370.5**	**469.4**

*Rs 26.19 crores transferred to NWDB

Source : Annual Report, 1996-97, Ministry of Environment and Forests

PREVENTION AND CONTROL OF POLLUTION

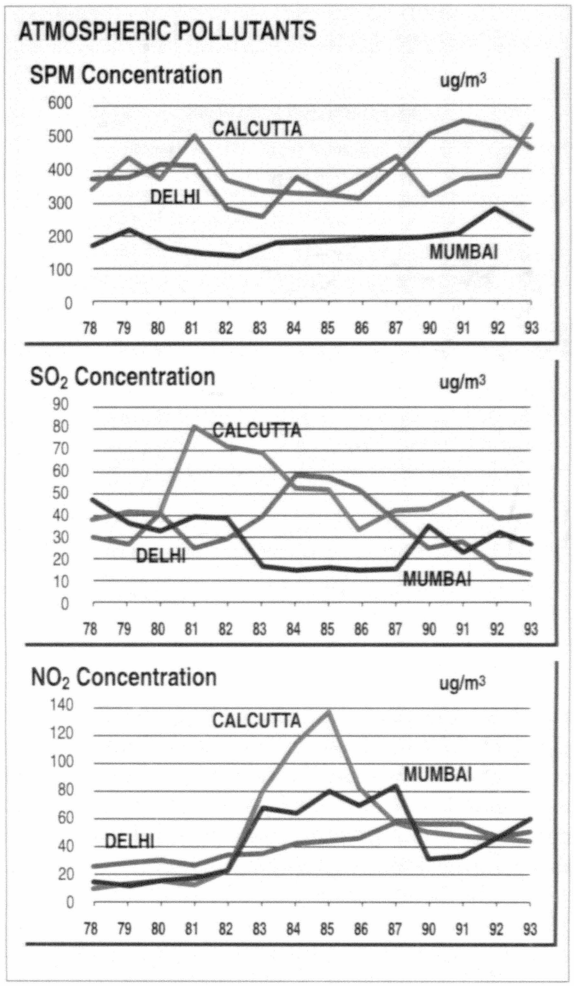
Water Pollution

Some of the major schemes taken up for prevention and water pollution are The Ganga Action Plan, The Yamuna Action Plan, and the National River Conservation Plan (NRCP). The objective of these Plans is to arrest degradation of river water quality, prevention of effluent flow into river systems, establishment of river pollution monitoring stations, etc.

Air Pollution

Air pollution is caused by industrial processes, domestic sources, "non-point" sources, etc. Distilleries, sugar mills, paper mills, etc., are always associated with polluting emissions and chemicals. Domestic heating and cooking, particularly where fossil fuel is used, are also sources connected with air pollution. The "non-point" sources are loading and unloading operations, open refuse burning, agricultural activities, etc. Agro-based industries throw out waste water and solid wastes. Reportedly, 45% of the large and medium industries of India are agro-based and account for significant causation of air pollution. Air polluting chemicals often cause cancer, respiratory problems, congenital defects and brain and nervous disorders.

Urban air quality has generally deteriorated throughout the Indian cities. The annual mean concentration trends for various atmospheric pollutants were observed by the National Environmental Engineering Research Institute (NEERI) in 1993 for some cities. For Mumbai, Calcutta and Delhi, the trends are given in Graphs on the following page.



From the graphs it is clear that NO_2(Oxides of Nitrogen) concentration trend is stabilizing for Mumbai, Calcutta and Delhi. Whereas, SO_2 (Sulphur Dioxide) concentrations are decreasing in Delhi, they are marginally increasing in Mumbai and Calcutta. SPM (Suspended Particulate Matter) concentrations have somewhat increasing trend in all these cities.

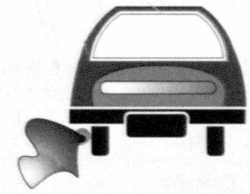
Important amongst the air pollution control measures undertaken by the Government are :

- Establishment and notification of standards for major sectors of air and water polluting industries;
- Establishment of ambient air quality standards; Identification of 24 critically polluted areas of the country and drawing of action plans for these areas;
- Implementation of a scheme for setting up common effluent treatment plants for small scale industrial units;
- Establishment and notification of gross emission standards for on-road vehicles; Introduction of low-lead petrol throughout the country; and
- Survey of vehicular emissions, implementation of a programme for introduction of catalytic converter fitted vehicles in metropolitan towns of India.

Presented below are tables on estimated vehicular pollution load for major cities of India and national ambient air quality standards.

Table 14.2

Vehicular Pollution Load in twelve major cities



Vehicular Pollution Load
(Tonnes per day)

City	1987	1994
Delhi	871.92	1046.30
Mumbai	548.80	659.57
Bangalore	253.72	304.47
Calcutta	244.77	293.71
Ahmedabad	243.94	292.73
Pune	212.76	255.31
Chennai	188.54	226.25
Hyderabad	169.03	202.84
Jaipur	74.98	88.99
Kanpur	71.99	86.17
Lucknow	69.58	83.49
Nagpur	47.80	57.39

Source: Rajya Sabha Starred Question, No. 57 of 22.11.1996

Table 14.3

National Ambient Air Quality Standards

Pollutant	Time Weighted Average	CONCENTRATION IN AMBIENT AIR		
		Industrial Area	Residential, Rural and Other Areas	Sensitive Area
Sulphur Dioxide (SO_2)	Annual Average	80	60	15.00
	24 hours	120	80	30.00
Oxides of Nitrogen as NO_2	Annual Average	80	60	15.00
	24 hours	120	80	30.00
Suspended Particulate Matter (SPM)	Annual Average	360	140	70.00
	24 hours	500	200	100.00
Respirable Particulate Matter	Annual Average	120	60	50.00
Size less than 10_{um}	24 hours	150	100	75.00
Lead	Annual Average	1.0	0.75	0.50
	24 hours	1.5	1.00	0.75
Carbon Monoxide	8 hours	5.0	2.0	1.00
	1hour	10.0	4.0	2.00

Source : Lok Sabha Unstarred Question, No. 607 of 25. 2. 1997

Land Pollution

Solid wastes and their disposal are a major problem. With increasing income, non-biodegradable wastes are also on the increase. Non-disposal of solid wastes attracts rodents and flies which in turn spread diseases. It also pollutes and degrades land and water resources. Development of suitable technologies for utilisation of solid wastes is essential to minimise health and environment consequences. A picture regarding solid wastes and their composition is presented below:

Table 14.4

Composition of Solid Wastes from Cities

Characteristics (%)

Cities	NON-DEGRADABLE					DEGRADABLE
	Paper	Plastics	Metal	Glass	Ash & earth	
Calcutta	3.18	0.65	0.66	0.38	34.00	47.00
Delhi	6.29	0.85	1.21	0.57	36.00	35.00
Nagpur	1.88	1.35	1.33	1.34	41.42	34.81
Bangalore	4.00	2.00	–	1.00	15.00	78.00
Mumbai	10.00	2.00	3.60	0.20	44.20	40.00

Source : Potential for Energy Generation from Wastes in India, 1996, Bio-Energy News, Vol. 1, No.1, p. 8

Noise Pollution

Noise pollution can cause disorders and diseases such as loss of hearing, acoustic trauma, cardio-vascular problems, mental disorientation, etc. Noise is on the increasing trend in metropolitan cities due to population density, automobiles and industrial activities. Thanks to the Pollution Control Board, noise pollution control is being enforced around hospitals, residential areas, etc. The Board has also evolved codes of practice for controlling noise originating from various sources.

National Policy Statements

In order to deal with the problem of environment and development in a comprehensive manner, the National Forest Policy, 1988 and National Conservation Strategy, Policy Statement on Environment and Development, 1992 have been adopted by the Government of India.

In order to preserve the genetic diversity in eco systems, bio-sphere reserves have been set up. A National Committee on Wet Lands, Mangroves and Coral Reefs has been constituted too. India has nearly 7,000 sq. kms. of mangrove area—7% of mangrove area of the world. Management Action Plans have been established to manage 13 wet lands and 15 mangroves so far. India has also ratified the convention on Biological Diversity in 1994.

In terms of the Policy Statement for Abatement of Pollution adopted in 1992, clean technologies are being encouraged by regulation as well as incentives.

Forests

India has about 75 million hectares of notified forests. Per Capita available forest is only 0.08 hectares because of our population size. The main features of the Revised Forest Policy (1988) are preservation and restoration of biological balance, conservation of national heritage, check on soil conservation and denudation in river catchments, etc., check on extension of sand dunes, increase of forest cover through afforestation and social forestry, provision of fuel and fodder to the rural people and forest produce to tribals and peoples' movement and involvement of women to minimize pressures on forests.

GLOBAL INITIATIVES

Several global initiatives have been taken in the area of environment as protection of environment is to basically take place within each country and coordinated international action is required to ensure that environment protection standards are reasonably uniform.

Box 14.3 : International Initiatives on Environmental Protection

1968	Biosphere conference organised by UNESCO; Coordinated exploitation of earth's resources deliberated on.
1970	Conference of Fisheries Experts organised by FAO; Effects of sea pollution discussed.
1972	UN Conference on Human Environment, Stockholm; Principles for future international conduct evolved; a new international environment agency, the UNEP, initiated.
1982	UN Convention on the Law of the Sea; Various aspects of the Law of the Sea including control of sea pollution discussed.
1992	UN Conference on Environment and Development, Rio de Jeneiro (Earth Summit); environment and interrelated problems facing humanity discussed; Rio Declaration made and Agenda 21 set up; The Declaration presented 27 principles to govern economic and environmental behaviour of individuals and nations to achieve global sustainability; environmental protection projected as integral part of developmental process; Agenda 21 is a blue print for action on sustainable development; it reflects relationships between environment and economic programmes proposed for implementation at local, regional and international levels.

Agenda 21

The United Nations Conference on Environment and Development (UNCED) in Rio de Jeneiro in June 1992 has provided leaders with an opportunity to agree on a strategy for environmentally responsible development in the next century. Most environmental problems will be addressed at the local and national levels, of course, but there are a number of areas in which an international commitment to change is needed. These are set out in Agenda 21—an agenda for the next century—the primary document discussed at the conference. They include:

- Allocating international aid to programs with high returns for poverty alleviation and environmental health, such as providing sanitation and clean water, reducing indoor air pollution, and meeting basic needs.
- Investing in research and extension to reduce soil erosion and degradation and put agricultural practices on a sustainable footing.
- Allocating more resources to family planning and to primary and secondary education, especially for girls.
- Supporting governments in their attempts to remove distortions and macroeconomic imbalances that damage the environment.
- Providing finance to protect natural habitat and biodiversity.
- Investing in research and development of non-carbon energy alternatives to respond to climate change.
- Resisting protectionist pressures and ensuring that international markets for goods and services, including finance and technology, remain open.

The Rio Declaration and Agenda 21 are being built into the planning process through sectoral action under the various Ministries, coordinated by the Planning Commission. An Environmental Action Plan (EAP) has been drawn up. Priority areas identified are environment management, environmental impact assessment, environmental education, forestry, urban management, renewable sources of energy, water quality management, etc.

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FIFTY YEARS OF INDIAN PARLIAMENTARY DEMOCRACY

CORRIGENDA

Page No.	Location/Line	For	Read
1	Box, line 5	and the five	and five
1	Box, line 6	find tuned	fine tuned
1	Box, para 2, line 3	compounds	confounds
4	col. 2, para 3, line 4	article 39(6)	article 39(b)
10	col. 1, para 3, line 2	high watermark	watershed
14	col. 2, para 3, line 9	The	Some of the
17	col. 2, para 1, line 4	and laid	who laid
17	col. 2, para 1, line 24	a few days back	in August 1997
18	col. 1, para 3, line 3	restoring	resorting
30	Table 2.9, footnote	Lok Sabha Secretariat An Appraisal.	An Appraisal, Lok Sabha Secretariat
33	Table 2.12, footnote	Lok Sabha Secretariat An Appraisal	An Appraisal, Lok Sabha Secretariat
34	Table 2.13, footnote	Economic Review	Economic Survey
36	Tables 2.14 & 2.15, footnotes	Economic Review	Economic Survey
39	col. 2, para 1, line 4	through it had	though it had
41	col. 1, para 2, line 11	industrial	a new industrial
42	col. 1, para 1, line 4	with	in the
43	col. 2, para 2, line 3	1,04,756	1,04,669
44	Table 2.24, Note	the increase	the percentage increase
47	col. 2, para 5, line 6	relate averages	relates to averages
52	col. 1, last para, line 2	tricle down	trickle down
54	col. 2, last para, line 1	Following table	It
57	Box, last para, line 2	freight Government and	freight and
69	col. 2, para 1, line 6	abused	caused
69	col. 2, para 2, line 6	railway by raising	by raising
69	col. 2, para 4, line 13	adequate	inadequate
78	col. 1, para 2, line 12	other levey charges	other charges
78	col. 2, para 3, line 7	Can be	Can we
83	Box 4.1, col. 2, line 9	Mettalurgical	Metallurgical
96	col. 2, last para, line 4	law	low
97	col. 1, last para, line 4	population	population of
107	Table 7.2	Two Annual Plans (1991-92)	Two Annual Plans (1990–92)
111	col. 2, line 3	Wardha	Warde
114	Box 8.1, col. 4, line 5	Number of Schools, 5 lakh	5 lakh schools

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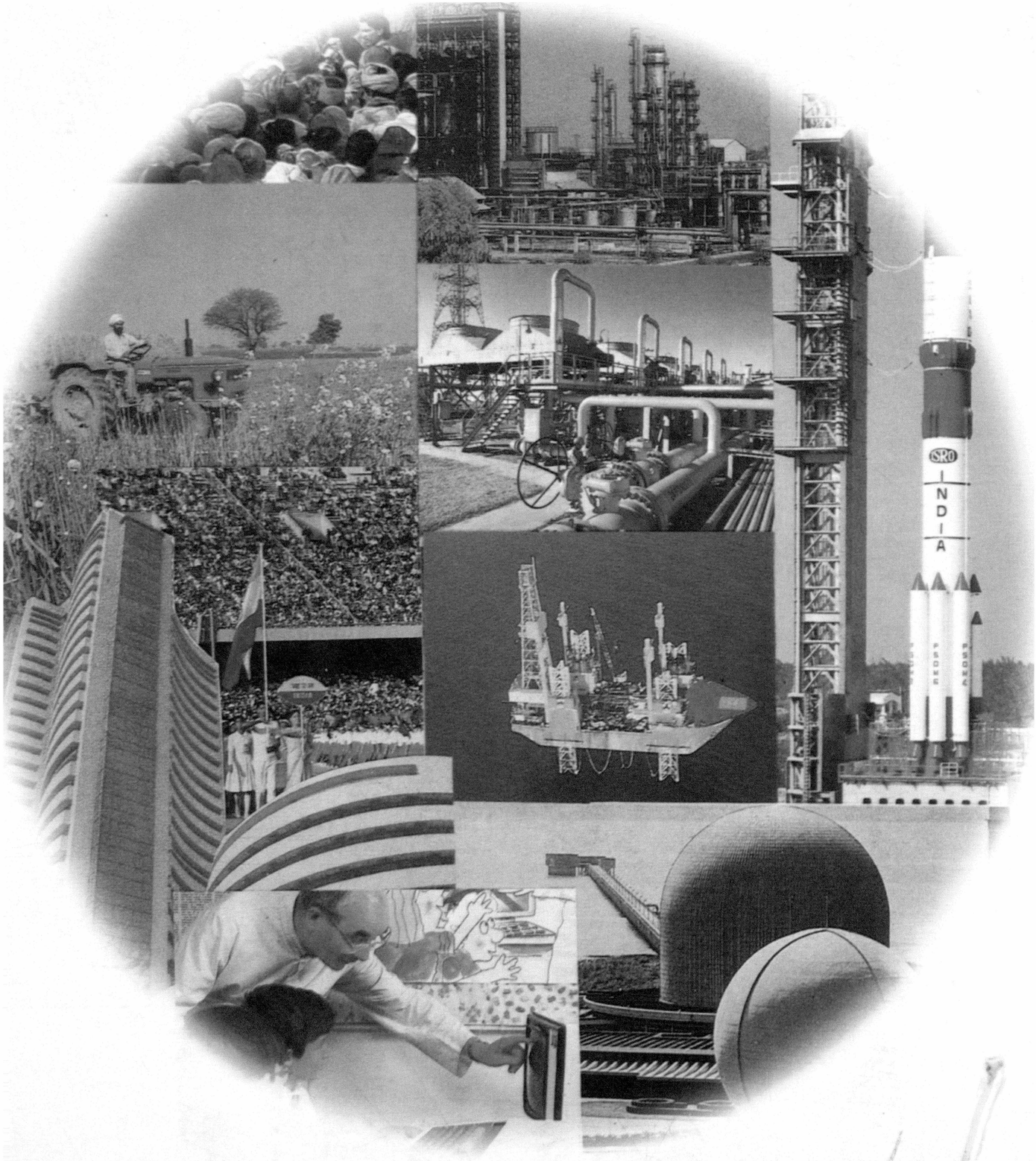
Page No.	Location/Line	For	Read
119	col. 2, para 2, line 1	4.18 The	The
119	col. 2, Table 8.7, line 6	21.29%	21.29 lakhs
129	col. 1, last para, line 1	1952	1992
138	col. 2, para 1, line 3	Employment	Employees
139	col. 1, line 3	of these	all these
141	Box 12.1, col. 2, line 5	Training of youth	Training of Rural Youth
147	Bar chart, figures regarding lowest proportion (73-74)	23.69	26.39
	figures regarding difference (73-74)	42.49	39.79
	figures regarding lowest proportion (83)	23.79	15.67
	figures regarding difference (83)	41.50	49.62
	[corresponding changes to be made in Table 12.6 also]		
149	Table, col. 2, line 5	per 100	per 1000
151	Table, col. 2, line 2	2.27%	22.7%
151	Table, col. 2, line 26	Shift as	Shift to
156	Table 14.1, col. 1, heading	Sector outlay	Sector



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