PUBLIC FUNDING OF HIGHER EDUCATION IN INDIA – A STUDY WITH REFERENCE TO THE STATE OF GOA

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For the Award of the Degree of

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In
Commerce

By

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Under the supervision of

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2011

Dedicated to my beloved

Father

Shri. Madhavrao Deshpande

&

Mother

Smt. Shantabai Deshpande.

DECLARATION

I, Dhirendra Madhavrao Deshpande, hereby declare that the thesis titled "PUBLIC FUNDING OF HIGHER EDUCATION IN INDIA – A STUDY WITH REFERENCE TO THE STATE OF GOA" submitted to the Goa University, Goa, for the award of the Degree of Doctor of Philosophy is the outcome of original and independent research work undertaken by me during the period 2007-2011. This study is carried out under the supervision and guidance of Dr. Y. V. Reddy, Associate Professor, Department of Commerce, Goa University. It has not previously formed the basis for the award of any degree, diploma or certificate of this or any other University. I have duly acknowledged all the sources used by me in the preparation of this thesis.

Date : 15/2/2011
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CERTIFICATE

This is to certify that the thesis titled 'PUBLIC FUNDING OF HIGHER EDUCATION IN INDIA- A STUDY WITH REFERENCE TO THE STATE OF GOA' for the award of Ph.D Degree in Commerce is the bonafide record of the original work done by shri Dhirendra Madhavrao Deshpande, during the period of study under my supervision. This thesis has not formed the basis for the award of any degree, diploma, certificate, associateship, fellowship or similar title to the candidate of this university or any other university.

Date: 15/02/2011
Place: Goa

Dr. Y. V. Reddy
Supervisor

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ABBREVIATIONS USED

1. IIT: The Indian Institutes of Technology

2. IIM: The Indian Institutes of Management

3. IT: Information Technology

4. NRI: Non Resident Indian

5. CABE: Central Advisory Board of Education

6. NUEPA: National University of Education Planning and Administration

7. ICRIER: Indian Council for Research on International Economic Relations

8. GER: Gross Enrolment Ratio

9. GDP: Gross Domestic Product

10. UGC: University Grants Commission

11. AICTE: All India Council for Technical Education

12. IRAHE: Independent Regulatory Authority for Higher Education.

13. PROPHE: Program for Research On Private Higher Education

14. GSDP: Gross State Domestic Product

15. SDP: State Domestic Product

16. MHRD: Ministry of Human Resource Development, Government of India

17. ICT: Information and Communication Technology

18. EDI: Entrepreneurship Development Institute

19. NACC: National Assessment and Accreditation Council

20. SC & ST: The Scheduled Caste (SC) and Scheduled Tribe

21. OBC: Other Backward Castes.

22. UNESCO: United Nations Educational, Scientific and Cultural Organization

23. IIE: Institute of International Education

24. R&D: Research and Development

25. PPP /GDP: Purchasing Power Parity/ Gross Domestic Product

26. HEI: Higher Education Institution

27. CMP: Common Minimum Program

28. CSO: Central Statistics Organisation

29. NIT: National Institute of Technology

30. BE/RE: Revised Estimates/Budget Estimates

31. UNESCAP: United Nations Economic and Social Council for Asia and Pacific

32. VAT: Value Added Tax

CHAPTER 1

INTRODUCTION

Chapter Plan

- Background and History
- Higher education-Nature and Importance
- Higher Education as Merit Good
- Benefits of Higher Education
- References

CHAPTER 1

1. INTRODUCTION

"Every one has the right to education.....and higher education shall be equally accessible to all on the basis of merit."

Universal Declaration of Human Rights 1948

'Human history becomes more and more a race between education and catastrophe.

H.G. Wells The Outline of History

Today, more than ever before in human history, the wealth –or poverty of nations depends on the quality of higher education. Those with a larger repertoire of skills and a greater capacity for learning can look forward to lifetimes of unprecedented economic fulfillment. But in the coming decades the poorly educated face little better than the dreary prospects of lives of quiet desperation.

Malcolm Gillis, President of Rice University, 12 February 1999

1.1 BACKGROUND AND HISTORY

Higher education has registered a remarkable expansion practically all over the world. Globally, the percentage of enrolment (of the relevant age group)

has gone up from 19% in the year 2000 to 26% in 2007. In terms of absolute numbers, the enrolment of students in tertiary education has moved up to over 152 million students in 2007. This represents an increase of roughly 53% over the year 2000 figure.[1]

In India too, higher education has grown to become one of the largest systems globally. In parts of west, especially the US, Canada, New Zealand and Australia, the increase in demand for higher education is mainly due to export of higher education. These nations attract large numbers of students from the developing world. In the developing countries, incomes have increased over the last couple of decades. Amongst them are some of the fastest growing economies of the world; they have attracted huge inflow of foreign funds in to their economies. Naturally, on the one hand aspirations of people have gone up and on the other, more and more new opportunities are created by the growing knowledge economy. That is why the demand for higher education is for ever increasing in these countries.

Demographic shifts taking place all over the globe have also influenced the higher education scene. It takes much shorter time in developing countries for replacing the total number of students who leave their institutions after completing their studies. However, in the west, due to fall in birth rates, it takes much longer for replacing all those who are presently enrolled in tertiary education. Increasingly higher educational institutions in these countries are relying on students coming from third world countries. Governments practically the world over, have squeezed their budgetary allocations to education in general, and higher education in particular, in the last few decades.

As Knowledge for Development, the 1998–99 World Development Report puts it: "Knowledge is like light. Weightless and intangible, it can easily travel the world, enlightening the lives of people everywhere. Yet billions of people still live in the darkness of poverty – unnecessarily."[2] This study highlights the role of Government in financing higher education. Spending by Government has positive impact on equity and accessibility-two of the most important parameters of global growth of higher education.

1.2 HIGHER EDUCATION-NATURE AND IMPORTANCE

The 21st. century will, undoubtedly, be driven by knowledge. Physical assets, in comparison will cease to have the same importance they had earlier. A knowledge based society pre supposes the existence of a strong higher education system capable of turning out men and women with varied skills and specialized knowledge in specialized domains.

The developed world has already made suitable changes in it's policies to ensure rapid progress in higher education, research and development. These nations have some of the finest international universities which have built in enormous reputation for quality education. Their training and education prepares every student to partake and benefit from the knowledge society. The academic world, especially the tertiary education, has always been characterized by center and periphery phenomenon. The first world countries, and amongst them the leading nations are the U.S., U.K., Australia, New Zealand and Canada, are occupying the centre stage of global higher education. They have the world's finest and top universities and research Institutes. Not surprisingly, they are in a position to attract the global best

talent in Faculty recruitment and the brightest students too, prefer to study in these institutions.

Top class research in a large variety of areas is produced on a consistent basis by these high ranking universities. They provide break through and cutting edge technologies in practically all the emerging and niche areas. That is why they are ranked high by global rating agencies which have attained prominence in the post globalization period. The rating agencies use a variety of methodologies which are not always consistent. Some of them are swayed by extraneous considerations. Universities of third world countries are at the periphery and are up against heavy odds. The African Universities have not found a place in global ranking. Even the top Indian Institutes, IIT'S AND IIM'S, are well known and recognized for teaching-learning only and not for significant amount of top quality research output. After a long hiatus, things are beginning to change, albeit slowly. The 'London Times Higher Education supplement' ranking of the world's top 200 Universities included three in China, three in Hong kong, three in South Korea, one each in India (an IIT at number 41-the specific campus was not mentioned) and Taiwan.[3]

There appears to be a renewed thrust, in India too, on allocating higher amounts of money to educational sector in general and higher education in particular. The 11th Five Year Plan has hiked the outlay for education to Rs.84,843 Crores; this is nearly nine times increase over the previous plan.[4]

Education, including higher education, is largely funded by the Governments all over the world. In fact, it was almost entirely funded by Governments in India till the decade of eighties. Till then, it was believed that education at all levels was a public good and produced large externalities. However, fiscal pressures forced governments of several countries to cut expenditure drastically starting from the decade of eighties. In India economic and financial reforms have been sited as reasons for substantial cut in allocations for education, especially the higher education. During the same time, it was felt that elementary education needed greater attention of the Governments and that it was a 'public good'. Higher education would benefit the individual rather than the society as a whole and hence it's funding has to be borne by the student.

1.3 HIGHER EDUCATION AS A MERIT GOOD

There are a larger number of takers now than perhaps a decade ago, for the argument that even higher education produces 'externalities' and that it must be regarded as a merit good. The IT revolution has changed many things including certain concepts and ideologies. The economic value attached to knowledge has undergone a radical change. Knowledge today is no more a matter in private or personal domain. It transcends sectors and has been translated in to huge economic values. In the by gone era, knowledge based society would thrive on social, cultural and intangible I benefits. Today, in addition to all those benefits, we are also trying to leverage the maximum economic value out of knowledge workers. So, the knowledge based society that we are aiming to create, build and nurture, is based on solid economic

foundation. We can not build a knowledge based society with out the State playing a greater role in the field of education. Education is too risky to be left entirely to the private initiative or diktats of the market forces. Even the limited participation of the private sector in the higher educational field has produced mixed results. Whereas such initiatives have certainly expanded the scope of education (especially the technical and management education), qualitative growth has been the causality.

Interestingly, there is an argument that all education, including the higher variety, ought to the responsibility of the State. Since all education produce varying degree of social good, this argument holds good. Decades back, we would complain of brain drain especially from our best institutions, such as IIT'S and IIM'S. Now, it is being realized that these Indian professionals have helped create a strong brand image both for their institutions as well as for the country. As conditions in our country improve, these NRI's are returning back home armed with rich technological experience. Therefore, it is now being forcefully argued that even the rich should be entitled to subsidized higher education. After all, the same externality is being produced by them also as a result of education.[5] The argument that the Government does not have adequate financial resources has been put forward for several decades now. Hence, the Government needs to focus by restricting public funding to primary and probably secondary education. Though this might have been largely true in case of India in the past, things have changed significantly in recent times. In fact, Government has more money, in terms of foreign exchange resources, than it can employ

productively. We are sitting over a pile of around $287.4 billion foreign exchange resources, not knowing exactly what to do with this sort of funds.[6] This is in addition to incomes and savings generated in the internal economy. There are also those who argue that if higher education has become expensive (since the governments have virtually withdrawn from the sector), it can be supported by student loan programmes. They point out that there is no dearth of banks willing to finance courses which have a high level of market demand. Nothing wrong with this type of arrangement, except for the fact that the poor are so poor, that they generally tend to be kept out of these schemes in third world countries. The underprivileged class seldom gets easy and smooth access to loans in such cases. And their merits do not matter much.

Further, educational loans are based on the premise that there is private and individual gain and no social merit. This goes against the tenets of public good which is what education is. John stone argues that even the richest student's higher education be subsidised by the State, for, it produces far greater social benefits.[7]

Access, equity and excellence of higher education-are all universally accepted goals. The best way to fund education, it appears from our own experience and the practice followed in most parts of the world, is to fix low levels of fees accompanied by liberal grants from the State.

This positioning of higher education as a non-merit good resulted in declining financing by the State. As a result, budgetary allocations to colleges and

universities were cut year after year. Higher education institutions found it extremely difficult to meet the costs; they cut expenditure on research, endowments and programmes which did not elicit adequate student demand. Colleges and universities in most parts of the developing world are starved of funds directly affecting their functioning and quality. The effect is more visible on pure sciences and humanities.

At the same time, higher education institutions could not increase their tuition and other fees as the Governments-both Central and State-did not approve of the same due to political considerations. This has led to a situation where public funded educational institutions are grossly underfunded. The impact has been in the form of overcrowded class rooms, serious shortage of faculty, library and computing resources. Fortunately, after years of neglect, it appears that Governments in various countries have changed their outlook towards higher education.

In India, higher education is now classified as a 'quasi public good'. This is a change from the earlier category of 'non merit good'. After all, higher education has the potential to produce a large set of externalities in social, economic, cultural, demographic and political spheres. The Ministry of Finance has revised it's stand and now recognizes post elementary education as Merit 2 good and elementary educations as Merit 1 good. There are various ways in which a well developed system of higher education will help the society and the economy.

1.4 BENEFITS OF HIGHER EDUCATION

Tertiary education contributes to social and economic development through four major missions:

- The formation of human capital (primarily through teaching);
- The building of knowledge bases (primarily through research and knowledge development);
- The dissemination and use of knowledge (primarily through interactions with knowledge users); and
- The maintenance of knowledge (inter-generational storage and transmission of knowledge).[8]

The importance of human capital in a modern society hardly needs any further emphasis. It has already become the most important asset for any nation. The 21st Century will belong to nations and societies which will produce and nurture best human resources. The human capital in the US is valued three times it's value of goods and services.

The importance of higher education lies in the following:

a) It has the ability to unlock the potential of human resources at all levels; the resultant expansion is useful to all.

b) It addresses issues and concerns which may not have immediate tangible value for the employers but have huge implications in future, for e.g., humanities.

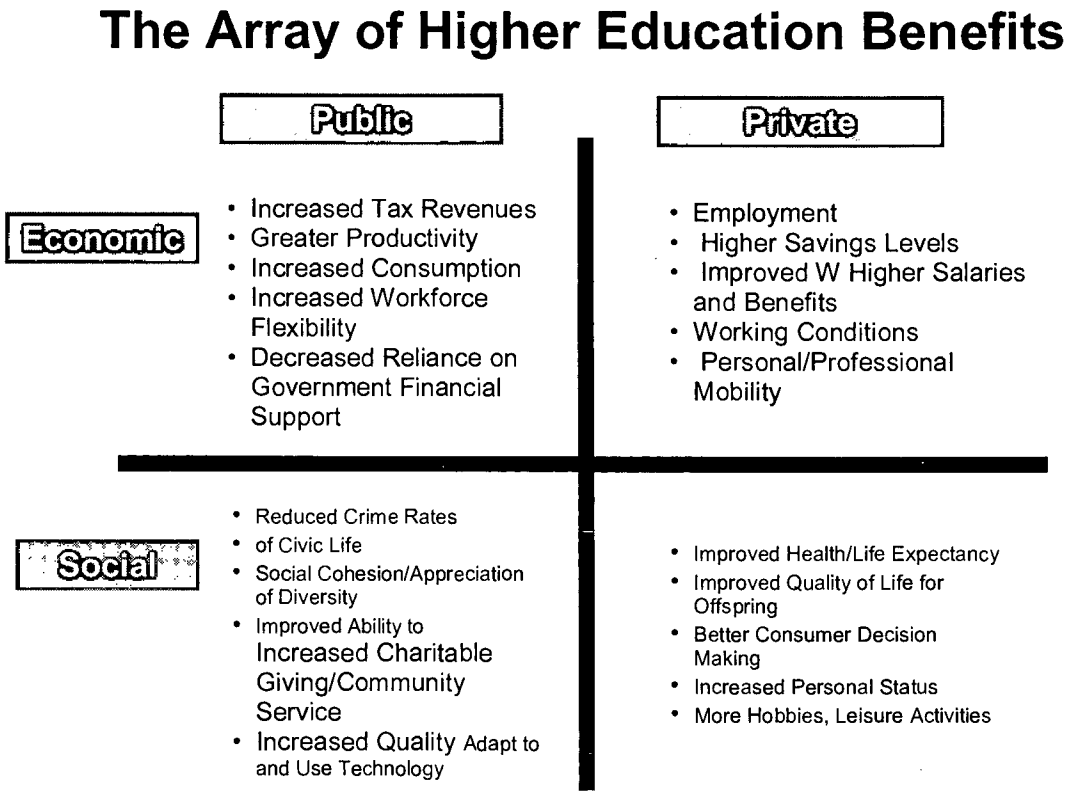
c) It facilitates developing and preserving of sets of values like democracy, freedom to discuss ideas and influence public opinion for welfare of the people.

d) It helps in creating pool of human resources which after acquiring a critical mass can aid scientific and economic development in a big way. Factor productivity depends almost entirely on human capital and efficiency.

Besides the private benefit, there is no denying the fact that nations also benefit in a big way from dissemination of higher education. Now there is empirical evidence to show the macro-economic impact arising from delivery of tertiary education. East Asian nations recorded highest growth in their economies every year during 1991 to 1995 vis-à-vis their Latin American counterparts. Economists have calculated that higher educational levels of Asian nations were responsible for full half point of that difference.

Education is also important in the context of working democracy and it's values. Not only the primary education, even the higher variety is considered as an important human right as per the Universal Declaration of Human Rights of United Nations 1948. Higher education promotes equity and this becomes very crucial in a country like India with vast and diverse population. It also creates awareness with regard to freedom of choice, a principle, which is the corner stone of democracy. Social mobility and intellectual growth is associated with pursuit of higher education. Ability to earn higher incomes benefits the individual alright but the nation and the Government too gain in terms of higher contribution to State taxes.

Figure 1: The Array of Higher Education Benefits



Source: The Institute for Higher Education Policy, "Reaping the Benefits: Defining the Public and Private Value of Going to College", March 1998

The private benefits of higher education accruing to individuals are rather well known and have been well documented- higher salaries, better employment avenues and prospects, better working conditions and a tremendous potential scope for vertical and professional mobility. Further, higher education also endows benefits such as better and improved life quality, higher status, life-work balance and provision of more time for hobbies and leisure etc.

It is the public economic and social gains from tertiary education that need further reiteration. The list of social merits, as can be seen from the above, is indeed impressive. Social orientation, community service, reduced crimes and harmonious living are some of the non-economic gains. The externalities extend to the economic domain, too. Higher education gives a definite edge in terms of improved productivity and efficiency, reduced dependence on Government support, improved flexibility and more importantly higher resources to the Government in terms of taxes. The establishment and sustenance of a knowledge based society is closely interlinked with higher education.[8]

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CHAPTER 2

LITERATURE REVIEW AND METHODOLOGY

Chapter Plan

- Literature Study
- Objectives of study
- Specific Objectives
- Hypothesis
- Methodology and Scope
- Chapterization Scheme
- References

CHAPTER 2

2. LITERATURE REVIEW AND METHODOLOGY

2.1 LITERATURE STUDY

1. CABE (Central Advisory Board of Education) Committee Report on Financing of Higher and Technical Education. (2005)[1]

This report is the official document of Government of India. The member Secretary, Prof: Jandhyala Tilak, Professor at NUEPA (National University for Educational Planning and Administration, New Delhi) is an internationally well known author on financing of higher education. This report covers extensively all the issued concerning Indian higher education scene, starting with growth of higher education in India, GER (Gross Enrolment Ratios) in India and abroad, whether higher education is a merit good, the questions of equity and access and also dealing with issues of funding, role of Governments and Private institutions in higher education.

The report concludes that Governments' spending on higher education is highly inadequate in India which is also impacting the quality. In order to ensure equity, access and quality in higher education, Governments should shoulder higher burden of funding.

2. Higher Education in India-Need for Change by Pawan Agarwal[2] ICRIER (Indian Council for Research on International Economic Relations) and Indian Higher Education: Envisioning the Future by same author.[3]

The author highlights the typology and growth of higher education in India. He projects the growth of private sector in higher educational field in India. Various ways of financing of higher education are analyzed; global practices in this regard are also sited.

The author points out that the regulatory mechanism in higher education is a miserable failure. He has suggested methods to overcome these weaknesses. He discusses at length the best practices of accreditation abroad; quality assurance in Indian higher education system is needed to take it to the next level. Issues of equity and access are addressed in his work.

The book on higher education gives a detailed analysis of GER (11%) and comparison with other nations. He explains how much catching up India has to do with China which has as a ratio of 20%, Korea 91% and the US 83%. He opines that very soon China would be in the highest league with USA and Japan. It is pertinent to note that China has already over taken Japan as the second biggest economy in the world in terms of GDP. Investments made by China in education and particularly higher education speaks volumes for the vision of it's leaders. The book has several pages on Chinese advancement in higher and technical education. He points out that China already has more than twice as many students as India-23 million plus. The research man power based on 708 researchers per million is more than six times that of India. The gap in critical area of higher education and research between India and China is widening.

The author explains the faulty salary structure in the field of higher education in India; it promotes and rewards mediocrity while merit generally takes a

back seat. As credit system is not adopted in most universities, inter-university movement of students is not easy. Decision making is extremely slow and several universities have become too large, complex and practically ungovernable.

Since education is on the concurrent list as per the Indian constitution, almost every state in the country tinkers with the higher education system. The regulatory mechanism is cumbersome, multiple and non-effective. The author is critical of the functioning of UGC and AICTE; they have not been able to carry out the task assigned to them efficiently. This study is an indictment of the present higher education system and a call for urgent need to reform the same. He estimates that Indians spend over Rs.7,000 Crores annually which is both worrying and an expression of no confidence in the existing formal system.

3. Report of the National Knowledge Commission- Mr. Sam Pitroda.[4]

The Report recommends massive reorganization and restructuring of higher education in the country. It gives the present working and weaknesses of the system in great detail. There is a need to expand the opportunities in higher education substantially by establishing 1,500 universities nation wide by 2015. China has authorized creation of 1,250 in just three years. Establishment of large number of universities calls for a massive funding effort on the part of the Government. It also suggests ways and means of roping in the private sector in a big way.

The report analyses issues of governance, faculty, research and infrastructure. It criticizes practically all the present regulatory bodies of higher

and technical education. The Commission, for the first time in India, suggested that an Independent Regulatory Authority for Higher Education (IRAHE) be established. It argues that there is no alternative to entry of more private institutions and public-private partnerships. As a facilitator, such an independent body would be required to oversee and exercise broad control.

On allocating 6% of GDP on education-

By Jandhyala B.G Tilak[5]

Prof.Tilak examines the entire issue of funding education by the state. He also looks at the supportive role of the private sector especially in the field of higher education. Prof Tilak reflects trends in state spending, increase in GDP and sectoral allocation of funds .He lays a road map to first achieve 6% of GDP spending and further increase it to 10% of GDP in a phased manner.

Prof. Tilak has tried take a holistic and comprehensive view of public financing of education in the country .He makes out a case for substantial hike in state funding of education. In doing so, he cites innumerable examples of countries where the public finding is much higher than the envisaged target of 10% of GDP.

Though the private initiative has been commendable, Prof Tilak points out the limited reach and objective of the private sector. He finds that private spending cannot be a substitute for state funding of higher education.

Prof. Tilak quotes extensively from the various committees reports of the Central Gqvernment, World Bank, and UGC. He points out that educational commission 1964-66 had recommended spending of at least 6% of GDP on education.

Despite recommendations of all expert committees, public funding of education remains less than 4% of GDP. In fact in the last few years, there has been a decline in allocation to education as a percentage of GDP. In a n elaborate manner he gives the roadmap, initially to achieve 6% of GDP allocation to education and then enhancing the same to 10% in a phased manner. Based on the CABE(Central advisory board of Education) committee's report, he gives a plan of sectoral allocation to primary, Secondary and Higher education including technical education.

Since there would be a quantum jump in public allocations to education, it is necessary to have proper plan and schemes so that funds are efficiently used.

Complimentary investments in related infrastructure should be made. For example, it is necessary to have proper roads, lighting and security mechanisms especially in the interior and rural areas so that expansion of educational opportunities is used.

All increases in allocation must come from the public treasury. Any investment made by the private sector must be looked at an as an additional

investment. The government, both Central and state have to make stupendous efforts to raise spending on education.

It is necessary to change the approach to funding of education. All education, including higher education is to be treated as merit/public good and a basic human right. As education commission warned, "In the age of science, there can be no greater risk than a policy of drift and niggardliness in education".

Finance and management of higher education:

Prof. Nanjundappa, the author of this book, is a distinguished economist, educationalist and an administrator. He was Vice Chancellor of two universities in Karnataka. He was a member of planning commission, Government of India. In this book, he writes about financial aspects of higher education and management of higher education.[6]

One of the main objective of this book is to point out the inherent defects of financing of higher education in our country. It also suggests remedies in terms of changes in fee structure and interest free loans to deserving students. Further, the author advocates a change in the method of administering the institutions of higher learning. He aims to popularize decentralization of University administration.

The entire book is divided in two parts. The first part deals with higher education and finance and the second with management at both micro and macro levels. In the first part, the author has brought vividly the various

challenges facing the higher education system in the country. He also deplores the fact of poor industry-academia linkages resulting in producing graduates who are not suited to the industry needs. Prof. Nanjundappa stresses the need for finding alternative solutions to the financial problems facing universities and the collages. He attacks the system of Capitation fees and discusses the historical developments until the interventions by the Supreme Court to ban the same in the country.

In the second part, the author discusses the type of crisis prevailing in the management of higher education. According to him, there is no point in blaming "the lack of political will" or the lack of energy in motivating and working in the university system. Instead, he has tried to evolve 'Total participatory Management' involving all the stake holders in the decision making process in the university system.

There is a need to forge a link in keeping with the new educational policy statement, between education and the industry. Besides supporting research, industry must provide free access to students on job training.

Training programs at different levels should be organized at various educational and industrial establishments so that both can benefit from the interaction and the exchange of ideas.

Five year plans should be discussed at length sector-wise at the universities so that appropriate change in curriculum can be made in keeping with the changes in the industry and services.

Thrust should be given on training of Teachers and trainers in educational institutions for constant updating of knowledge and advancement of technology.

The entire university community; students, teachers and non-teaching staff are to be given a chance to participate in decision making at all levels.

Teachers must have a major voice in all university bodies-academic council, executive council and the court.

There should be a complete change in the style and mode of functioning from the bureaucratic to a sense of co-operative partnership.

Higher education in India-change in management

(.V.C. Kulandai Swamy)

Editors- C.R.Pillai and P.R. Ramanujam[7]

Prof. V.C Kulandai Swamy has been the vice chancellor of three universities of Tamil Nadu and IGNOU. He was head of various national and international committees on hydrology, Education, Technical Education and Distance Education. He is also a renowned author in Tamil and recipient of Sahitya Academy Award in 1988.This book contains, in an abridged and edited form, his various speeches delivered in convocations, Presidential addresses and Conventions.

The book is edited with a view to bring to the fore various problems confronting the system of higher education in the country. With his wide experience as an educationalist, Prof. Kulandai Swamy has suggested alternative solutions to the problems plaguing our higher education.

The professed aim of the book is to assist, guide and give ideas to policy framers, educationalists and education administrators in the field of higher education.

The book is divided in to chapters such as Systemic and Curricular changes, Autonomy and Decentralization, Academic leadership and faculty, Privatisation and Globalisation and a Vision for future. It starts with an introduction on the higher education scene in the country. Quoting World Bank Report 2001, an attempt is made to bring out the disparities between developed countries and India in respect of proportion of total population of the relevant age group in higher education. Whereas in India it was a mere 7% , in U.K. it was 52%,88% in Canada and 81% in the U.S.A.

The authors point out that in the agricultural civilization, land and water were major resources; in the independent era, besides land and water, minerals and energy became important resources; in the knowledge era of 21st century, human resources have to come to occupy the highest position.

That higher education also reeds to get adequate Government funding as much as there is a case for public funding of school education.

Quality, relevance and equity must become the cornerstones of higher education policy.

We must move towards greater decentralization; the present system of affiliation should make way for more autonomous colleges and deemed universities.

More funds must be earmarked for research effort in the universities. Whereas Indian universities get no more than 2% of the total funds made available for research in China it is 19%.

Networking of our higher educational institutions, among themselves and with research institutions and industry, must happen quickly. Sharing of knowledge is an imperative need of modern society to grow and prosper.

Trends in growth and financing of higher education in India

By Prof:Ved Prakash [8]

The author, Prof: Ved Prakash in this paper, emphasizes the importance of a well developed and equitable higher education system for the success of emerging knowledge economy. It is well known that education contributes significantly to economic development. The developed countries understood this much earlier and invested in higher education of their citizens. Now they have a clear edge over the nations. Hence it is imperative that the developing countries, too, give due importance to both quantitative and qualitative expansion of the higher education.

Since independence and till the decade of eighties, the planning strategy in India was aimed at ensuring distributive justice, balanced regional growth and positive discrimination in favour of disadvantaged groups. However, since early 1990's, there has been a marked change in development strategy with the enhanced role of the private sector practically in all the fields. This has led to the diminished role of the State. Whereas this has produced positive results in many fields, it appears to be threatening the goals of social justice, equity and cultural diversity.

The study points out the lack of comprehensive database in India to help assess the response of the higher education system to the impact of globalization in the last two decades. Prof:Ved Prakash has discussed the trends in growth and financing of higher education and the resources required to meet the target of allocating 6% of GDP to education. He has comprehensively addressed issues such as access, equity, quality, financing, privatisation and internationalization.

In conclusion, the author has opined that there is a need for massive expansion of the higher education service in order to achieve a GER of 20% and above. It is imperative to recognise the limitations of the private initiative. There would remain large numbers of disciplines such as social sciences, physical sciences, biological sciences, mathematics, astronomical and chemical sciences which will not attract private service providers. All of these are essential to improve the nation's competitiveness through fundamental research.

They are also required in terms of inculcating democratic, moral and spiritual values. The State, therefore, should take a leading role in establishing institutions in these areas. The private initiative could be encouraged if it is accompanied by philanthropic motives; those entering the field of education with the sole aim of making profits should be banned. Finally, the author cautions with regard to the entry of foreign institutions. Most of them would like to take advantage of differential and excessive demand in the country. Majority of them are likely to be of mediocre levels which would try to take advantage of craze for foreign degrees. It may not be desirable to shut the

door on all foreign institutions, there is a need to evolve a policy which attracts only the best and genuine institutions.

Divided Government and Private Higher Education Growth in India, by Asha Gupta.[9]

Dr. Asha Gupta is a PROPHE (Program for Research on Private Higher Education, University of Albany) researcher. India has the second largest education system in the world. It comprises of approximately 304 universities including 62 'deemed' to be universities, 11 open universities, 14,600 colleges, 10 million students and half a million teachers. Beyond this, the exact number of private and international institutions involved in enrollment and imparting of higher education and vocational skills is not known.

The author, in this paper, traces the history and growth of private higher education in India. Before and after independence, the contribution of private sector in the higher education has been quite significant. Several philanthropists and individuals with religious orientations established institutions of higher learning with a view to promote values of spirituality, human dignity and integrity.

Dr. Asha has pointed out that there has been a proliferation of self-financed engineering, medical and management colleges in recent times. For example, in the year 2001, Andhra Pradesh had 95 private self financing type of colleges and 303 medical colleges; in comparison public, that is funded by the Government, colleges were only 11 in engineering discipline and 25 in medicine. Several of these institutions which have come up in different states do not have adequate infrastructure-both physical and manpower. Most of

these colleges have raised their fees; some of them in conjunction with professional courses and foreign collaborations. Mushrooming of private universities in states like Chattisgarh was the last nail in the coffin inviting public protests and judicial intervention by the highest court of the land.

The author has traced a few Supreme Judgments in respect of private higher education. The policy lacuna apart, these contradictory judgments have added to the already existing confusion on the issue of private participation in the field of higher education. As per law, minorities based on religion or language can establish an institution of higher learning. Basically the idea was allow these groups to have their own space for 'religious and charitable purposes'. But several politicians and businessmen took advantage to promote private colleges and charged exorbitant capitation fees.

In Unni Krishnan J.P Vs. the State of Andhra Pradesh (1993), the Supreme Court banned the Capitation Fee Act, 1988. At the same time, it allowed a certain number of 'paid seats' to be decided in consultation with the concerned state government. The intention was to charge certain category of admission seekers high fees (covering more than 100% cost) so that others could be charged lower fees (covering less than 100% fees). State governments were also given the powers to administer and regulate admissions in unaided private professional colleges in their respective states.

Later in 2002, the Supreme Court reversed it's decision in T.M.A Pai vs. the State of Karnataka. The court gave freedom to financially sound minority interests to establish and run colleges of their choice; they were also given the freedom to fix their own fees. The court did warn them against

'commercialisation' of education; but it did not appear to have any major impact on the functioning of the private colleges. Further in 2003 Supreme Court has taken a tough stand against institutions charging capitation fees. It has come down heavily upon those private institutions which are indulging in profiteering especially in professional colleges. Yet the fees remain high; in most cases, beyond the reach of large sections of the poor in the country.

Notwithstanding the legal interventions, nexus among politicians, bureaucracy, business class and academia, ensure that commercialization of higher education for private gains is continued unabated and sustained. Though the democratic India stands out with all it's judicial and state governments' interventions, the fact remains that it joins a powerful international trend of sharp growth in commercial private higher education.

Indian private higher education in comparitive perspective.

Daniel Levy[10]

India demonstrates characteristic features of private higher education which are largely on the same lines as in the other parts of the world. It's proportional size, accounting for more than 30% of all enrollments, the pace of growth, emphasis on market driven courses-all are visible features elsewhere in the world, too. According to the author, this paper has two purposes. One, is to present the massive private education system to the world so that there is a better understanding about the system and development in India. The second is to present it to Indians with a global

perspective for a better understanding, evaluation and further development of higher education in the country.

There are also some features of private higher education which are uncommon or typical to India. Total enrollment in private higher education is almost as high in the US mainly due to the size of the nation; but the cohort enrollment is very low even when compared with some of the developing nations. Another feature is the nature of funding of higher education-most of it is from non-government sources and by way of tuition.

Yet another distinguishing feature relates to the configuration in terms of the political system. Growth in private higher education is the highest in developing countries which are non-democratic or problematically democratic. On the other hand, India has remained remarkably democratic right from the time of it's independence. Due to the federal structure and decentralization, states play a major role in the field of higher education. Courts, too, have intervened as there is an intense debate on the role of private higher education and high level of fees. On the one hand there are beliefs which are rooted in socialistic pattern of society and the role of the State in dispensing higher education, on the other, growth of private higher education has continued unabated. This has led to conflicts requiring the intervention of courts even at the highest level.

The author examines in details four areas of private higher education, namely, expansion, types of private institutions, financing and politics. The paper tries to highlight the commonalities and differences between Indian

private higher education and it's global counter part. On expansion, Indian growth follows the global pattern. The private share in the total number of higher educational institutions is more than 40%; it is pertinent to note that the 'public' figure includes even those that are nominally private but yet receive grant-in-aid from the State/Central Government. This is higher than the percentage of private educational institutions in the USA. However, in terms of enrollment, India has little more than 30% in the private sector; the US has a larger percentage, but not much higher.

Asia as a region has the highest enrollment in private sector. Malaysia has over 90% enrollment in private higher educational institutions; Japan and South Korea nearly the same figure. Mongolia has 64% share in total enrollments. Indonesia, Philippines and Taiwan are over 70% private.

2.2 OBJECTIVES OF THE STUDY

Private and self financing type of education is growing rapidly in our country. It has contributed to the social and economic development in it's own way. But for the private initiative, the numbers of management, engineering and management institutions would not have gone up the way it has done in the last few decades. Quantitative expansion has indeed taken place in the higher education field, thanks mainly to the efforts of the private sector. But the private initiative has it's own limitations and deficiencies.

Financing of higher education, it was believed for a long time period, was the responsibility of the State. However, now there are differences in this perception.

Therefore this study tries to focus on the role of the State in funding of higher education. Naturally, funding comes with strings attached by the Government and various authorities. The study also looks at the other issues of relevance, access and equity and quality in higher education with in the context of State funding.

2.3 SPECIFIC OBJECTIVES:

1. To examine the growth trend of budgetary allocation to Higher Education in India and state of Goa.
2. To study the correlation, if any between the GSDP & budgetary allocation to Higher Education in India and state of Goa.
3. To study the adequacy of budgetary allocations in the state of Goa by benchmarking against the established norms.
4. To find out, through an opinion survey of stakeholders, the need for and relevance of public funding of higher education in the light of increasing role of the private sector in the state of Goa

2.4 HYPOTHESES.

Ho- There is no correlation between growth in GDP and growth in Government's spending on education in India and the state of Goa.

Ho- Perception of respondent groups is the same on the question of Government spending on higher education.

2.5 METHODOLOGY AND SCOPE

There are a number of research studies that have been carried out in respect of financing of higher education especially in the west. However, there are no studies which try to link State funding with GDP[11]. This gap in the research area is clear from the literature review.

The study is carried out using two different methods. In the first instance, secondary data is collected and analysed. The data consists mainly of budgetary allocations made by Governments (Central and State) to education. International comparisons are made to bring out the variations in funding patterns in different countries. Budgetary allocations made by the Government/s are compared with that of GDP and the State Domestic Product. Keeping in mind the specific objectives of the study, data is collated for international comparisons of public spending on Education. Further data is compiled to enable inter state comparisons with in the country.

There was a significant challenge in respect of data reliability and validation. The study requires data in respect of GDP of select countries and SDP of all Indian states. There are variations in both national and international data in respect of budgetary allocations to education. Therefore, as far as possible data from one authentic source (that measures GDP/SDP and budgetary allocations) is used consistently.

Different measures are used for indicating state and national incomes. The problem also gets compounded by the fact there are different agencies-public and private-that are projecting these figures. After careful consideration, it has been decided to use UNESCO figures for making international

comparisons. As far as inter state comparisons with in the country are concerned, the study relies on data compiled by MHRD. Goa specific data is also sourced from the State budgetary documents and Economic Survey.

The study is mainly focused on funding aspects of higher education and the thrust is on Governments' budgetary allocations to the sector. However, other aspects of higher education such as equity, access and quality have been taken in to consideration. In doing so, secondary data has been used from sources such as CABE (Central Advisory Board of Education) Committee reports, ICRIER, World Bank and UNESCO.

The limitation with regard to availability and authenticity of secondary data in respect of funding of higher education has already been pointed out. This is with regard to public funding, that is, aggregate outlays and actual expenditure by Governments-both Central and the State.

Further, households also spend on higher education. There are just a few research studies which have tried to estimate this part of the expenditure. In private institutions and self financed courses, tuitions are a major cost; it may not be so in public funded institutions and courses. Living costs vary widely from one region to another in India. Normally, student loans do not cover boarding and other incidental expenses.

The study is mainly focused on financial aspects of financing of higher education; references to social, cultural and other issues is incidental and is without in depth analysis or study.

The period selected for the study, fifteen years, is sufficiently long to take care of extreme fluctuations in GDP as well as budgetary allocations to educational sector. Data is collated for all Indian states to enable interstate comparisons.

It is aimed at finding out whether or not any of the Indian states is allocating benchmark 6% of GDP to be spent on education.

In part two, a stake holders' opinion survey in the state of Goa is carried out to find out responses to the question of public funding of higher education. Groups of stake holders identified are higher educational administrators, students, Teachers, Parents, Employers, Experts from the field of public finance, education and Economics and eminent persons in the society.

The educational administrators' category essentially includes members of college management and Principals/Directors or Heads of Institutions. As important stake holders in higher education, both present and ex students are covered in the survey. A pilot survey was conducted by administering the questionnaire in three colleges. It was helpful in making suitable changes, additions and modifications in the questionnaire. At this stage, it was found that even amongst college teachers, the level of awareness with regard to issues of financing of higher education was poor. Even while retaining the basic thrust of the questionnaire, attempt was made to further simplify it so that respondents make informed choices of various issues and questions. After making a few changes in the questionnaires, it was decided to administer to the larger target respondents.

The 'population' comprises of the entire college community (of students, teachers, non-teaching staff, members of management, parents and heads of institutions), employers, experts and members of civil society. As it was not possible to cover the entire 'population', it was imperative to decide on a size and type of sampling method. A sample size of 500 was selected as it was thought to be reasonable; it was based on the idea of targeting around 40

collegiate institutions in Goa. Each college was to be covered by ten respondents. The remaining 100 respondents in the sample size would be spread over other stake holders- parents, ex-students, experts, employers and eminent persons. In order to make the sample and study as representative as possible, stratified sample method has been used.

Further stratification with in the 10 sample size of respondents from each of the identified colleges was planned in the following manner; Principal/Director/Head of the institution and/or management member-1, students and Teachers 4 each and Non teaching staff 1. This way an attempt has been made to cover all the stake holders in a representative sample.

In analysis too, first the secondary data is examined and then the results of survey have been taken up for scrutiny. In respect of secondary data, international comparison is made in respect of budgetary allocations made by selected countries of the world. As far as possible, data is collected in respect of wide ranging types of nations, that is, rich countries, developing nations and poor nations. This analysis is to look at relative budgetary allocations of India to education vis-à-vis the other nations. Then inter state comparisons with in the country are made to find out the differences, if any, amongst the states in respect of allocations made to education in their respective budgets. Finally, an attempt is made to find out the position of Goa in this regard.

A trend analysis is made to find out whether with increase in GDP and SDP there have been similar and proportionate increase in budgetary allocations. The question that is sought to be addressed is whether there exists any correlation between the two. Mean and standard deviation are calculated to understand and analyze the relationship between budgetary allocations and

growth in GDP. This is done both in respect of all India GDP and budgetary allocations and the State of Goa's allocations and GSDP.

A simple model to gradually enhance budgetary allocations to education in Goa, based on a research study by Prof:Tilak, has been suggested.[5] The said model is suitably modified keeping in view the specific needs and circumstances of the Goan economy. The Government of Goa could use this as a road map for increasing budgetary allocations to education in a phased and planned manner. It will help in achieving threshold and bench mark levels of spending on education. More importantly, it will ensure that education in general and public institutions in particular will not be starved of funds and investments. Both quantitative and qualitative expansion of education hinges on this critical component.

Subsequently, primary data has been analysed. Of the 500 targeted sample size, about 250 have responded- 200 in hard copy submission and fifty in the form of soft copy mailed out my address. Through the questionnaire, data has been collected on various issues and matters concerning the topic of the study. Since there are multiple variables, Chi Square' test has been done to find out variance, if any, between the groups of respondents. Through this test, we understand the behaviour pattern of respondents in four categories. As a group and within the group, whether or not they have same opinion on the question of Government funding is ascertained with the help of Chi Square test. This test is also useful in understanding whether the differences, if any, are due to chance or are they real or actual differences.

2.6 CHAPTER SCHEME:

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5. ANALYSIS OF BUDGETARY ALLOCATION TO EDUCATION

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Government of Goa's Expenditure on Education

Correlation Between GSDP and Education

Achieving the Target of 6% of GDP Expenditure on Education-Options and Road Map

Share of Different Levels of Education in Expenditure (Inter Sectoral Share)

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Introduction, Objective and Methodology of the Survey

Survey Analysis

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Additional Survey of Industry Stakeholders

7. FINDINGS AND SUGGESTIONS

Suggestions and Conclusion

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Annexure

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CHAPTER 3

GROWTH OF HIGHER EDUCATION

Chapter plan

- Growth of Tertiary Education-International Scenario
- Brief History and Growth of Higher Education-Indian Scene
- 11th Five Year Plan Proposals
- Enrolment in Higher Education-National and International Perspective
- Recent spurt in Self Financed Courses and Colleges
- Inter-State variations in GER
- References

CHAPTER 3

3. GROWTH OF HIGHER EDUCATION

3.1 GROWTH OF TERTIARY EDUCATION- INTERNATIONAL SCENARIO.

Globally the number of students enrolled in higher education has skyrocketed over the past 37 years, growing five-fold from 28.6 million in 1970 to 152.5 million in 2007. In effect, this means an average annual increase of 4.6%; with the average number of students in higher education doubling every 15 years. However, the expansion in tertiary education has been particularly rapid since 2000, with 51.7 million fresh tertiary students enrolled around the world in a time span of just seven years.[1]

The sub Saharan Africa has registered the highest average regional growth rate. In the past thirty years, student numbers have increased by an average of 8.6% every year. Between 2000 and 2005, expansion reached a peak level with an annual growth rate touching 10%. Despite this remarkable achievement, the region as a whole still lags behind other regions in the world in terms of total tertiary student numbers. Even the speed with which tertiary numbers have increased has been slow, seen in the context of some other regions where the growth took place quite rapidly. Whereas it took 37 years to achieve these numbers in sub-Saharan Africa, such additions happened in recent years on an average every two years in China or five years in Latin

America and the Caribbean. Since the year 2000, the number of students in higher education has gone up by an average of 19% every year.[2]

. Rapid growth has also been reported in East Asia and the Pacific, where the number of students has short up twelve-fold, from 3.9 million in 1970 to 46.7 million in 2007. After the year 2000, the region became the global leader in terms of student numbers in higher education, surpassing North America and Western Europe. This has been primarily due to huge surge in student numbers in China.

Student numbers also rose in Latin America and the Caribbean by ten-fold since 1970, reaching 1the level of 7.8 million in 2007. While enrollment growth in this region was rapid between 1970 and 1980 with an annual rate of 11%, it slowed down between 1980 and 2000. Since 2000, enrolment growth in the region has again accelerated, reaching an annual rate of 6.8%.[3]

The expansion has been significantly slower in South and West Asia. The average annual growth rate was 5.2%. The region experienced a peak of 7% growth during the 1990s but thereafter rates have actually declined since 2000.This is in contrast to trends in other regions. In absolute figures, the student population has grown almost six-fold from 2.8 million to 18.5 million between 1970 and 2007.

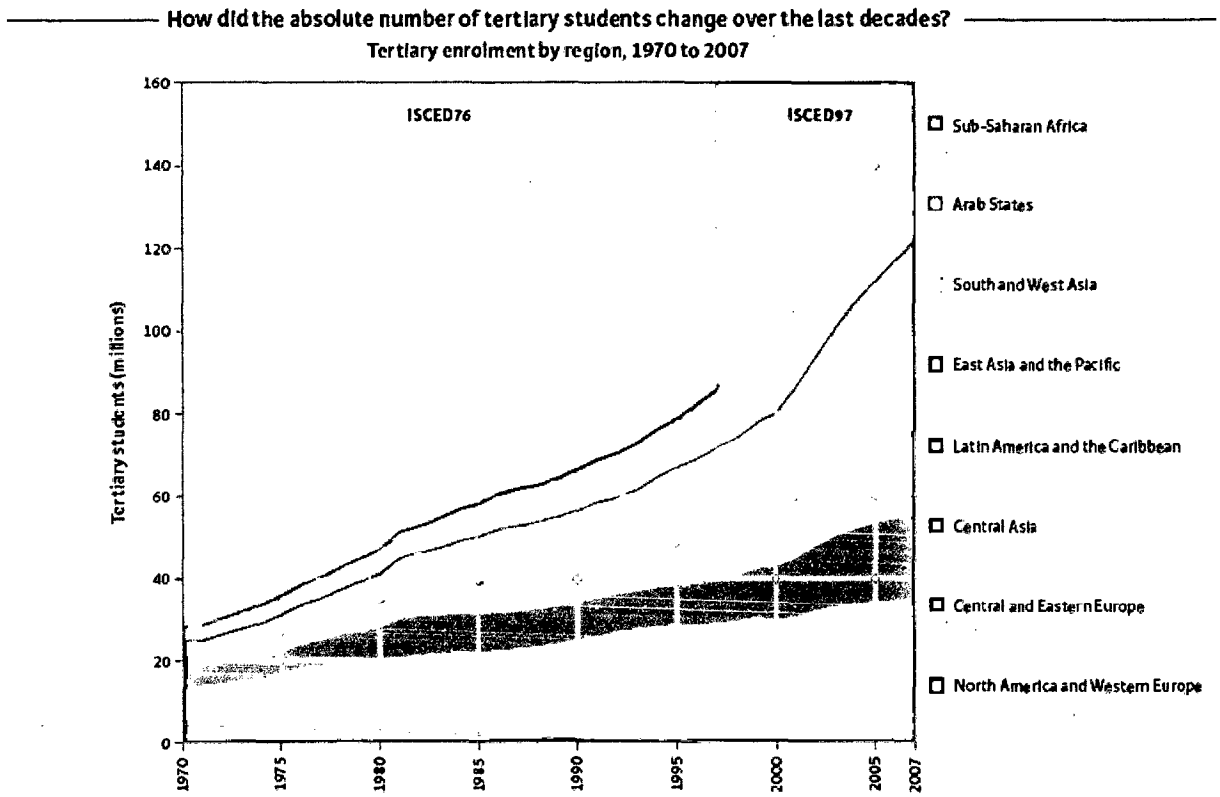
The slowest rate of growth in terms of net additions to student numbers in the tertiary sector was recorded in North America and Western Europe. This is not surprising. Nations in these regions have experienced historically high participation ratios in tertiary education. Since the decade of 1970's they have been affected by falling birth rates. When making regional and international

comparisons, it is useful to take in to account the total time required for student numbers to double. As per average growth rates reported since 1970, this occurred every 27 years in North America and Western Europe. Compare this with 8.4 years in sub-Saharan Africa and 9.3 years in the Arab States, one gets a picture in perspective. Student numbers doubled every 10 years in East Asia and the Pacific as well as in Latin America and the Caribbean. Further, the growth rate has been slower comparatively in South and West Asia, where it took 13.6 years for student numbers in higher education to double. The pronounced differences in growth rates across regions, especially between North America and Europe and the rest of the world, has had two significant impacts. One, the distribution of the world's tertiary education students has got skewed in favour of developing countries. And second, rich countries have started relying more on international students for their enrollments.[4]

In 1970 almost every second tertiary student in the world studied in North America or Western Europe. But now, it has fallen to one out of every four students. In effect, the regional share in global enrollment has gone down from 48% to 23% between 1970 and 2007-which is a fall of more than 50%[5]. (Figure.2).The distribution of tertiary students globally is shifting from high income nations to low and middle income nations. Today, a large majority of higher education students live in low and middle income countries. In 1970 57% of tertiary students lived in a small group of high income nations; now 42% of the total is from low middle income countries.[6](Figure.3) In 1970's too, high income countries had relatively much less population in the relevant age group-just one-fifth of the global numbers; rest of the students studying came

from overseas. The low income nations are unable to sustain the expansion in their tertiary enrollments; hence they are unable to keep pace with rising population.

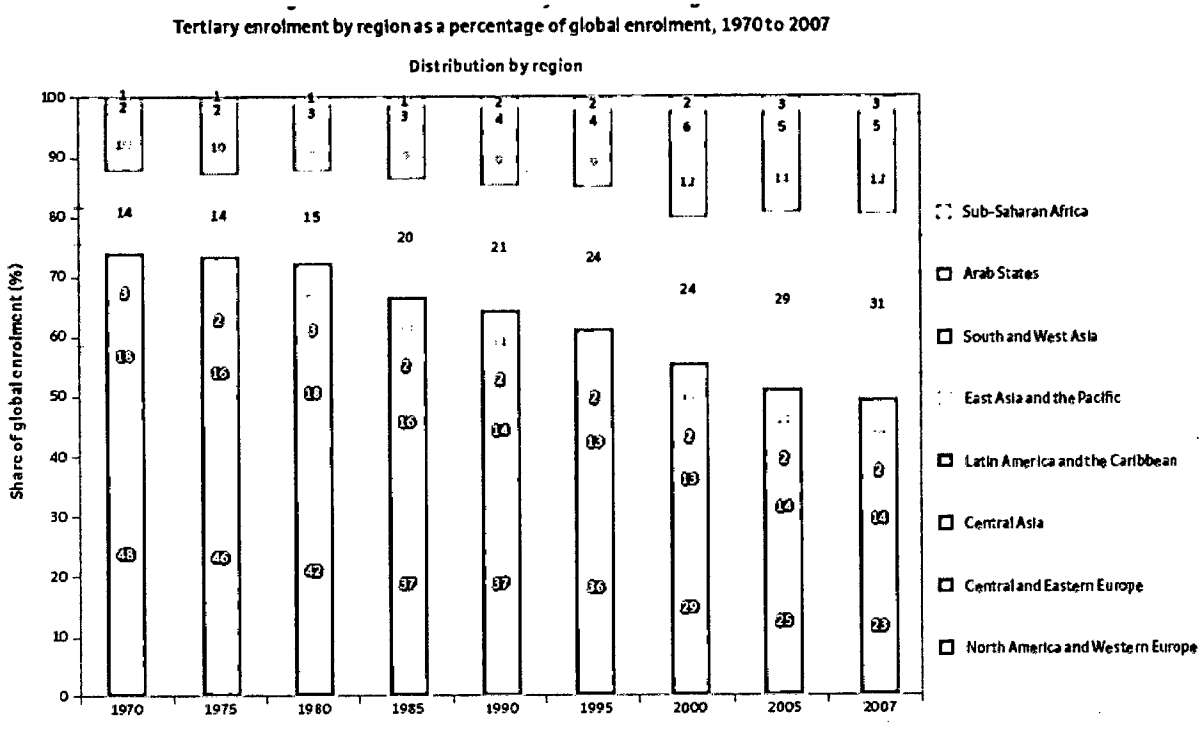
Figure 2: Tertiary Enrolment by region, 1970 to 2007



Source: UNESCO Institute of Statistics, Time series data

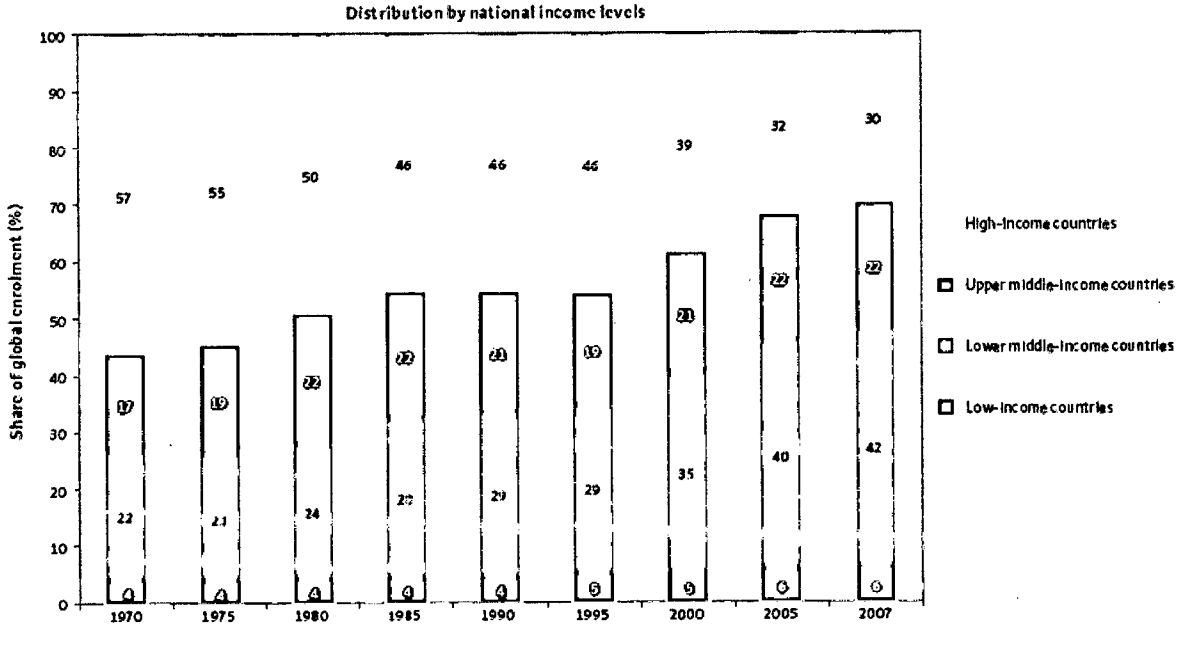
As can be seen from the Figure 2, Sub-Saharan Africa is the fastest growing in terms of tertiary enrollments followed by Arab States and South and West Asia. North America and Western Europe, as a region, is the slowest growing in terms of absolute higher education enrollments.[7]

Figure 3: Tertiary Enrolment as a percentage of global enrollment, 1970 to 2007



Source: UNESCO Institute of Statistics, Time series data

Figure 4: Distribution by national income levels



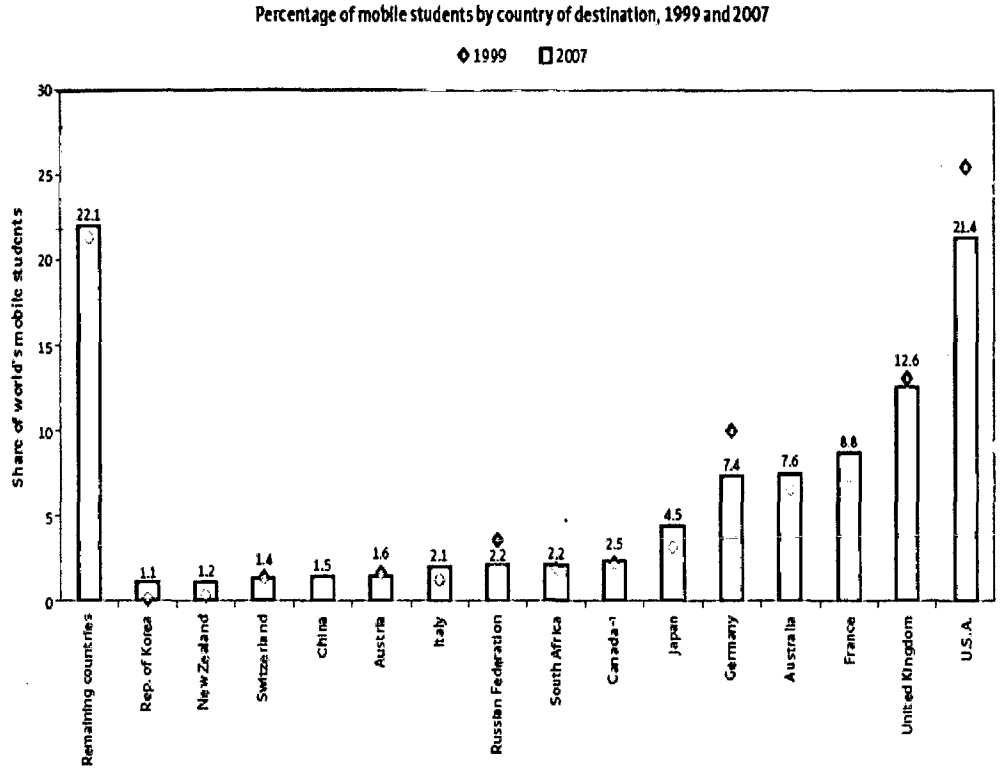
Source: UNESCO Institute of Statistics, Time series data

Low income countries have very low gross enrollments at 6% and they are not growing. Low middle-income nations registered rapid increase in GER between 1995 and 2005 but are now projected to grow slower than earlier. There has not been much change in the status of upper middle-income countries. There is a definite shift from high income countries over this period as can be seen from Figure 4.[8]

In 2007, there were 2.8 million students who were enrolled in tertiary education in overseas countries. This was 4.6% higher than those who had registered in the year 2006. Between 1999 and 2007 the percentage increase in students enrolled outside the countries of their origin was 55%, with an average annual growth rate of 5.5%. The share of female students has risen from a percentage of 46 in 1999 to 49 in 2007.[9]

China sent the maximum numbers of students overseas for higher education-4,21,000; though this growth rate is now falling as more Chinese prefer to stay at home for further studies. India is second in the list with about 1,53,00 students going abroad every year for higher studies. The percentage growth is increasing in case of India. Korea, Germany, Japan, France, USA, Malaysia, Canada and Russia are the other nations, in that order, sending highest numbers of students abroad for higher education. These ten countries account for 37.5% for the global mobile students for which data is available from 153 countries with UNESCO.[10]

Figure 5: Percentage of mobile students by country of destination, 1999 and 2007



Source: UNESCO Institute of Statistics, Time series data.

USA and U.K. have been top attractions for internationally mobile students. The USA gets nearly 22% of global students opting to study abroad whereas the U.K. is preferred by about 13% for higher studies. Australia, Canada and Germany have also been in the forefront in attracting foreign students in large numbers. Whereas the global top destinations have remained more or less intact, there are interesting shifts which have begun to take place. USA is seeing it's global share decline by almost 4% in the period between 1999 and 2007 whereas U.K. has barely managed to retain it's share. Germany has also lost some of it's sheen in the said period.[11]

China was not in the race in 1999; but now has emerged with a 1.5% share of globally mobile students in 2007. Republic of Korea and New Zealand have increased their market share in the said period (Figure 5).

Shifts taking place in global mobility of students has a basis in huge investments made in higher educational institutions by some of these nations in the last few years. The leading position of USA is directly attributable to high level of expenditure, more than 3% of GDP of which the public expenditure is almost 1%, in tertiary education. U.K. spends nearly 2% of GDP on tertiary education.[12]

The Republic of Korea is surging ahead with it's ambitious program on higher education. It's total expenditure on tertiary education is almost touching 3% of GDP, mostly led by private investments as Government spending is a little higher than 0.5% of GDP. China along with Hong Kong is emerging as the new destination for globally mobile students. It is driven mostly public expenditure amounting to almost half of total expenditure. In stark contrast, Indian spend on higher education is very small; in the 11th five year plan Government has set ambitious plans to set up world class universities, new IIT's, IIM and Indian Institutes of Information Technology. The Central Government is setting up 12 more Central Universities and has set aside Rs.3,280 Crores or $73 million. This may appear to be a lot of money-especially in the context of funds-starved Indian higher education. But the amount is grossly inadequate. Setting up of a large research-intensive world class university in China cost $700 million plus an annual budget of $400 million.[13]

3.2 BRIEF HISTORY AND GROWTH OF HIGHER EDUCATION-INDIAN SCENE.

There were 20 Universities and 500 Colleges at the time of independence. At present, there are 504 Universities and university-level institutions (as on 31.12.2009) - 243 State Universities, 53 State Private Universities, 40 Central Universities, 130 Deemed Universities, 33 institutions of national importance established under Acts of Parliament five Institutions established under various State legislations. In addition, there are 25,951 Colleges including around 2,565 Women Colleges. Out of 25,951 Colleges, 7,362 Colleges (28%) have been recognized under Section 2 (f) and 5,997 Colleges (23%) under Section 12-B of the UGC Act, 1956. At the beginning of the academic year 2009-2010, the total number of students enrolled, in the formal system, in the Universities and Colleges has been reported at 136.42 lakhs - 16.69 lakhs (12.24%) in University Departments and 119.73 lakhs (87.76%) in affiliated colleges. [14]

Education in ancient India was highly advanced. Centres of learning such as Nalanda, Vikramsila and Taxila were famous and drew learners from far and wide. The numbers of students coming from Ceylone, Burma, China, Korea, Tibet and Nepal.[15] There is some empirical evidence to show the existence of these centres of learning that existed in the Buddhist monasteries of the 7th century BC up to the 3rd century AD Nalanda[16]. In these centres, gathering of scholars-- *gurukula*-- used to be engaged in intellectual debates-- *parishads*-- in residential campuses. A few of these centres were large and had several faculties. Historians speculate that these

centres had a remarkable resemblance to the European medieval universities that came up much later. The ancient education system in India slowly got extinguished following invasions and disorder in the country.[17]

Till the eighteenth century, India had three distinct forms of traditional of fairly advanced learning in the Hindu gurukulas, the Buddhist viharas, and the Quaranic madarasas. Religious texts, arts and humanities were the thrust areas. Science education as we understand today was conspicuous by it's absence till the British set up a network of schools to impart western education in English medium.[16] The first formal education college to impart western education was established in 1818 at Serampore near Calcutta. The Colonial rulers were interested in rapid growth of higher education in India.[15] Gradually, many such colleges were established in different parts of the country at Agra, Bombay, Madras, Nagpur, Patna, Calcutta and Nagapattinam. In 1857, three federal examining universities on the pattern of London University were set up at Calcutta, Bombay and Madras. They offered degree programs only; essentially they were affiliating type and examining bodies granting first degrees.

For several decades, these universities did not offer post-graduate and research programs. It was only in 1920's that such courses were started.[15] The existing 27 colleges were affiliated to these three universities. Later, more universities were established. At the time of independence in 1947, there were 19 universities and several hundred affiliated colleges.[17]

The higher education system in India grew rapidly after independence. By 1980, there were 132 universities and 4738 colleges in the country enrolling around five per cent of the eligible age group in higher education. By 2005,

while in terms of enrolment, India was the third largest higher education system in the world (after China and the USA); with 17973 institutions (348 universities and 17625 colleges), it became the largest higher education system in the world in terms of number of institutions. The numbers of institutions are more than four times the number of institutions both in the United States and entire Europe. Higher education in China is having the highest enrolment in the world nearly 23 million. It is organized in only about 2,500 institutions. Whereas, the average enrolment in a higher education institution in India is only about 500-600 students, a higher education institution in the United States and Europe would have 3000-4000 students and in China this would be about 8000-9000 students.[18]This fragmented system of higher education in India poses difficult problems of management and control.

Affiliated colleges account for nearly nine tenth's of all under graduate enrollment and two-third of graduate enrolment [19]. The Indian higher education system is large and small. In terms of colleges and institutions it is very large, but cohort enrolment is quite small. Even after huge expansion of higher education, GER (Gross Enrolment Ratio) is just around 10%.[20]

Table 1: Estimated population by age group (2004) (In Crores)

Stages of education	Relevant age group	Total	SC	ST
Primary	06-11	12.13	2.15	1.13
Upper	11-14	7.33	1.24	0.62

Primary				
Elementary	06-14	19.46	3.39	1.75
Sec./Senior Sec	14-18	9.29	1.50	0.75
Hr.Education	18-24	12.21	1.93	0.92
All Education	06-24	40.96	6.82	3.42

Source: *: Educational Statistics at a glance 2004-05 MHRD*

The Table 1 gives the absolute number of students in various stages of education. Out of a total of around 41 Crores, numbers in higher education account for a little over 12 Crores, almost the same number as in the Primary age group of 6 to 11 Years.[21] As per capita incomes have increased, more persons are enrolling for higher education. Higher education has become more democratized; earlier it was 'elitist' in nature. It is pertinent to note that huge surge in GER have been achieved by low fee charging public educational institutions; the liberal arts and humanities programs they offer have attracted students from poorer sections.

Table 2: Growth of higher education system

Number of Higher Education Institutions						
Year	**Central Universi ties**	**State Universi -ties**	**Deemed to be Universities**	**Institutes of National Importan ce**	**Private Univer sities**	**Total**
1950-51	3	24	-	-	-	27
1960-61	4	41	2	2	-	49

1970-71	5	79	9	9	-	102
1980-81	7	105	11	9	-	132
1990-91	10	137	29	9	-	185
As on 2005	18	205	95	18	7	343

Includes five Institutes established through State Legislature Acts

Source: Agarwal. P. (2006) 'Higher Education in India' Working Paper ICRIER.

Table 3: Number of Institutions

Type of Institutions	**Numbers**
I-Universities	
1.Central Universities	18
2.State Universities	275
3.Institutions established under States Legislature Act	5
4.Institution Deemed to be University	96
5.Institution of National Importance	13
6.Research Institutes	136
Total	543
II-Colleges	
1.General Education	10,377
2.Engg.,Tech & Arch.	1,302

3.Medical(Allo/Ayur/Homeo/Unani)	817
4.Teachers Training	1,082
5.Others(Law/Mgmt./MCA/IT/Agri etc)	2,431
Total	16,009

Source: Educational Statistics at a glance 2004-05 MHRD

Table 4: Number of General and Professional Colleges

Year	**General & Professional Colleges**
1950-51	578
1960-61	1819
1970-71	3277
1980-81	4378
1990-91	5748
2001-02	11146
2003-04	16885

Source: Cabe committee on financing of higher and technical education.

Table 4 tracks growth of in terms of number of educational institutions. There has been phenomenal growth from the decade of fifties to the first decade of this century. In 1950-51, there were 578 higher educational institutions; by

2003-04, this number went up to 16,885. Increase in the number of Central Universities has not been very high; education is on the con current list and hence viewed as the responsibility of the State Government. Though the number of State Universities has gone up, yet it is not able to cater to the growing demand for higher education in the country. Huge increase in the number of colleges has resulted in smaller colleges in terms of total enrolments. The GER has not increased to the threshold level of 20%; in fact, the 11th. five year plan target is to achieve 15% GER.[22]

3.3 11TH FIVE YEAR PLAN PROPOSALS

As a part of the expansion of higher education in the country, the Government has decided to set up 4 new IIT'S; 20 new IIIT'S including some in PPP mode; 16 new Central Universities and 14 new Universities of world class. The 11th. Five Year Plan has an outlay of Rs.85,000 Crores. This is a massive hike of nine times over the 10th.Five Year Plan outlay. The priorities of Higher Education have been articulated in the 11th. Five Year Plan document.[23]

1. Expansion of Access-i.e., creating and adding institutional infrastructure for growth of higher education.
2. Expansion of Equity- to ensure that the marginalized and disadvantaged groups get to participate in higher education and also remove regional imbalance in this regard.
3. Improvement of Quality- recognising the urgent need for improving and enhancing quality standards in higher education.

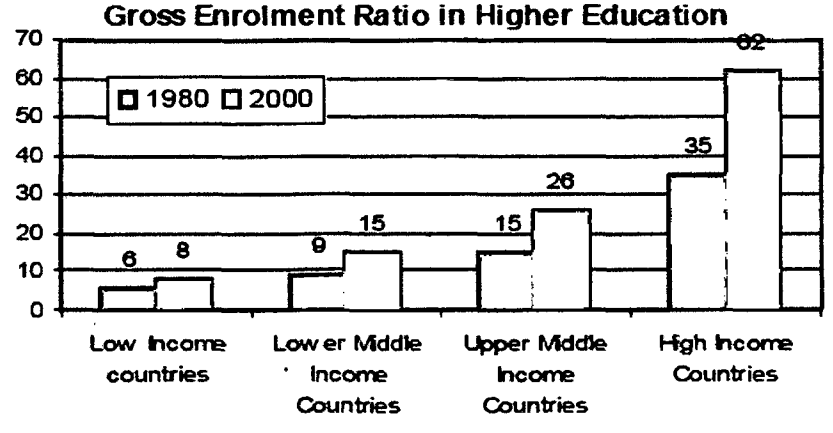
4. Optimal use of ICT-so that over all objectives of higher education met with limited resources and in quicker time.[24]

3.4 ENROLMENT IN HIGHER EDUCATION- NATIONAL AND INTERNATIONAL PERSPECTIVE

Gross enrolment ratio is used to compare access and equity between states (as in a federal structure in India) and also between nations. GER reflects the number of students in terms of percentage of youth population in the age group of 17/23 or 18/24 who are getting educated in higher educational institutions.

Empirical evidence suggests that GER is a function of per capita incomes in a given nation. There is a positive correlation between GER and per capita GDP.[25] Therefore, the ratio is higher in rich countries, moderate in middle income nations, while it is very low in poorer countries of the world.

Figure 6: Gross Enrolment ratio in Higher Education



Source: World Development Indicators 2003, Cabe committee on financing of higher and technical Education.

As can be seen from the Figure 6, there is a wide variation in GER across the spectrum; it also varies with in the category, for e.g., in respect of high income group, the range is between 35 and 62! As higher education is increasingly being viewed as a harbinger of peace and prosperity to nations and peoples, all nations are trying their best to enhance the enrolment ratios. Even the developed nations want to ensure that a higher percentage of their populations get in to tertiary education. Most of them have competitive advantage which they would like to hold on in future, too.[26]

The GER has increased dramatically in upper middle and upper income countries. USA was the first country to achieve critical figure (40%) for 'massification' of higher education. West Europe and Japan, too, have high rates of GER. Canada and USA have a very high GER of 88% and 80% respectively. Sweden has a ratio of more than 70% whereas U.K. and Australia have more than 60%. In the lower range, even Mexico, Malaysia, Thailand, Chile and Brazil have a GER of more than 20%. Today China and India are the top ranking nations in terms of very large higher educational system in the world.[27]

At least a couple of countries, USA and interestingly Korea, the latter being a new entrant in this elite league, have more than 80% enrolment. India fares badly even when compared with some of the poor and lower income group countries. It is pertinent to note that high income countries have, in fact, better results in terms of GER over the years. By the year 2005, these nations have a minimum GER of 60%.[28]

Table 5: Int'l Comparison on certain other Key Educational Parameters-2004

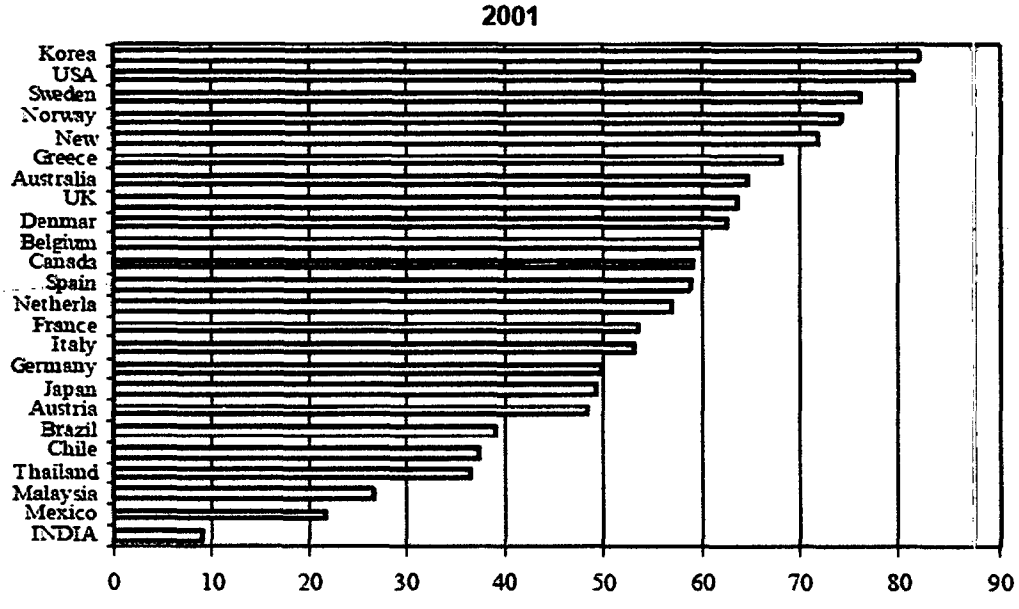
Countries	Gross Enrollment Ratio			Literacy	Public Exp. On Edu. As % of GDP
	Elementary	Secondary	Tertiary		
Countries with High EDI(> 0.950)					
USA	100	95	82	n.a.	5.7
UK	101	170	60	n.a.	5.3
France	105	110	56	n.a.	5.6
Germany	99	100		n.a.	4.8
Sweden	109	137	82	n.a.	7.7
Norway	99	114	80	n.a.	7.6
Countries with Medium EDI(0.800 to 0.950)					
Brazil	145	110	20	89	n.a.
Mexico	09	79	22	91	5.3
China	118	73	19	91	n.a.
Egypt	100	87	29	71	n.a.
Indonesia	116	62	16	90	1.1
Sri Lanka	102	81		91	n.a.
Countries with Low EDI(<0.800)					
Saudi Arabia	67	68	28	79	n.a.
India	107	52	11	61	3.68
Pakistan	82	27	3	50	2.0
Bangladesh	109	51	7	n.a	2.2
Nigeria	99	35	10	n.a.	n.a.

Source: Global Education Digest-2006 by UNESCO

Nations have been classified on the basis of Educational Development Index (EDI). USA, UK, France, Germany are grouped under the category have an EDI of more 0.95 whereas India, Pakistan, Bangladesh are together in a group with less than 0.8 EDI. Top countries fare well in terms of enrolments at all stages of education. Medium and low EDI nations perform well in elementary enrolments but have not reached the threshold critical mass (20%) and are hence still away from the goal of 'universalisation' of higher education.[29]

Though India has one of the largest higher education systems in the world, it has one of the lowest GER. It was less than 6% for a long time and has gone up to 11% in recent times. The Government of India has set a target of achieving a goal of 15% by the end of 11th. Five year plan. There is no direct co-relationship between GER and economic development though one can observe a broad pattern. There is no advanced country with a GER of less than 20%. Similarly, there is no country that has remained backward despite having very high GER in higher education. Country-wise evidence also shows that if a country aspires to transform itself in to a developed economy, then it must at least cross this threshold level. Further, there are just a few countries in the developing category with more than 20% GER. The only possible exceptions are Latin American countries and Philippines. Low GER offers an opportunity for growth of higher education and the private sector leads in the supply of higher educational services.[30]

Figure 7: Enrolment ratio in Higher Education in Selected Countries



Source: UNESCO Global Monitoring report 2005, Cabe Committee Report on financing of Higher and Technical Education

Figure 7 gives GER of various countries. Leading countries are Korea, USA, Sweden and Norway. Brazil, Chile and Thailand have GER of almost 40%. Australia, U.K., Denmark, and Canada have consistently high enrollment ratios of over 60%. India has a lot of catching up to achieve a threshold level of 40% GER, notwithstanding the fact that higher education has expanded remarkably in recent times.[31]

Table 6: Stage-wise Enrollment Higher Education (In Thousands)

Courses	Total	SC	ST
Ph.D/D.Sc/D.Phill	55.4	3.2	1.3
M.A.	469.3	75.9	23.1

M.Sc.	198.7	20.7	5.5
M.Com.	122.3	11.0	3.6
B.A./B.A.(Hons.)	3773.2	562.9	196.2
B.Sc./B.Sc.(Hons.)	1490.8	168.3	49.8
B.Com/B.Com.(Hons.)	1465.0	125.3	48.4
B.E./(B.Sc. Engg.),B.Arch.	696.6	59.3	21.5
Medicine,Dentistry.Nursing Pharmacy,Ayurvedic and Unani etc	256.7	29.6	9.5
B.Ed./B.T	155.2	20.0	9.1
Others	3095.1	184.6	66.2
Total	11777.3	1261.0	434.2

Source: Educational Statistics at a glance 2004-05 MHRD

Table 7: Typology and growth trends of higher education institutions

Type	Ownership	Financing	Number of institutions*	Number of students*	Growth trends
Universities under the Government	Public	Public	240	1,000,000	Not growing
Private Universities	Private	Private	7	10,000	Emerging scene

Deemed Universities (Aided)	Private or Public	Public	38	40,000	Growing slowly
Deemed Universities (Unaided)	Private	Private	63	60,000	Growing rapidly
Colleges under the Government	Public	Public	4,225	2,750,000	Not growing
Private Colleges (Aided)	Private	Public	5,750	3,450,000	Not growing
Private Colleges (Unaided)	Private	Private	7,650	3,150,000	Growing rapidly
Foreign Institutions	Private	Private	150	8,000	Emerging on the scene
		TOTAL	18,123	10,468,000	

Source: Pavan Agarwal(2006),ICRIER Working paper –Higher Education in India

3.5 RECENT SPURT IN SELF FINANCED COURSES AND COLLEGES

The Table 7 brings out the emerging higher educational scenario in India. Though Privatisation of tertiary education is not the declared official policy of Government of India, there is no denying the fact that there is a discernible shift taking place. The private sector is mainly responsible for the expansion of higher education in most parts of the country. It accounts for over 30% of all the enrolments and 43% of the total number of institutions delivering this service.[19]

The private sector performs the 'demand absorbing' function in the field of higher education. It accounts for almost the entire expansion of higher education in the fields of medicine, engineering, management and a few other professional courses such as Pharmacy, Teacher Training etc. Indian laws do not permit 'for-profit' universities and educational institutions. But it is quite well known that almost all private educational service providers do make profits-some of them in very large numbers.

The increasing role of private service providers is good in a very limited way. It expands the higher education services and gives a variety of choice to those who can afford to pay for tuition and other related costs. But the best of Universities, research institutions and under graduate colleges are in the public sector or aided by the Government. There are a few, probably just a handful of private institutions, in the field of education which have earned a good name for themselves. Otherwise, most of them are guilty of overcharging, exploiting both the students and faculty and generally giving a bad deal for the students. They are referred to by Philip Altbach as 'sleazy recruiters, degree packagers and low-end private institutions'[32]. As a direct consequence, teachers' work load has increased; full time faculty positions have been lost and greater reliance on part time and visiting faculty; research activities have been relegated to secondary position.

The Public (owned by the Government) and the State aided Universities and Colleges in India are losing ground in some ways. Nearly all of them suffer from severe shortage of financial resources though amongst them. Central Universities and their constituent colleges are in a slightly better position. Most of them have become too big and practically ungovernable.[33] The size

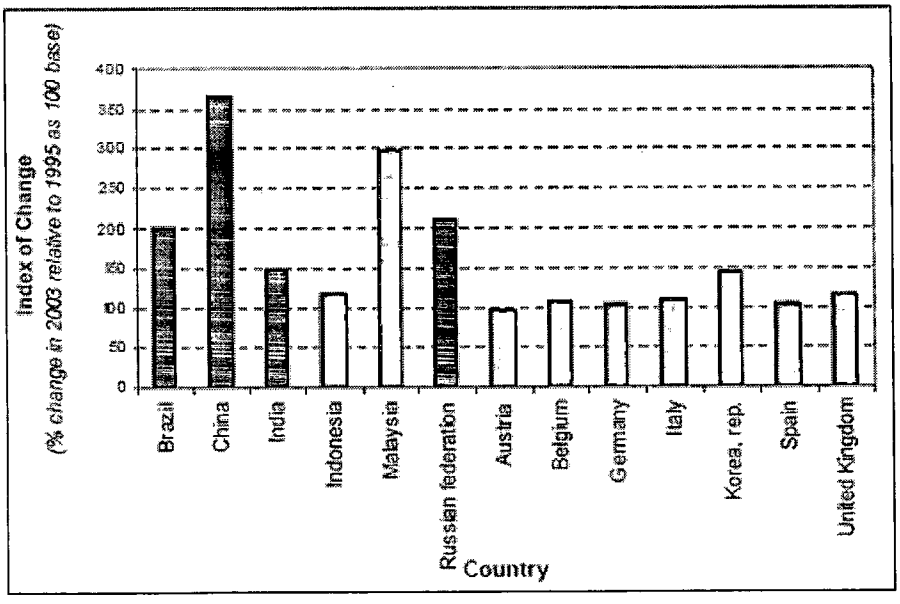
and the system (of a conventional affiliating university) make them unresponsive to market/industry changes and student requirements. Curriculum is not updated and the syllabi not changed in these institutions for over a decade. The academic freedom is not practiced and the few well meaning faculty lose the initiative to usher in course content changes because of inordinate delay in passing through various academic bodies and councils.

The collective decision making process is probably taken too far; on the one hand, there is no freedom for the individual teacher and on the other the whole process of bringing changes may take years even in smaller universities. Teachers have strong unions and the general tendency is to ensure that status quo is maintained. Very little, if at all, worthwhile research takes place and there is no mechanism in place to assess the quality of research output. There are no incentives for pursuing research except those linked to promotion to higher grade/position. In general, the overall work ethics even amongst the faculty is hardly encouraging. There is an acute shortage of good educational administrators; there is no incentive nor is there a challenge in terms of bringing about qualitative changes/reforms at the unit level.

There is an urgent need to reform the higher education. NAAC has done a good job of assessing and accrediting several hundreds of colleges and universities. But the task is simply too daunting and big for a single agency to accomplish good results in quick time. Moreover multiple rating agencies will bring about competition and innovative ideas and practices. Most of the governmental funding (up to 90% plus on an average) goes to meet salary bill

of employees. There is no money left even for maintenance of assets. UGC does fund for creation of certain type of educational infrastructure but it covers fewer public institutions and the funding is grossly inadequate. Therefore, enhanced public funding and decentralization ought to be the central themes of any reforms programme in Indian higher education.

Figure 8: Changes in the GER in various countries



Change in the Gross Enrolment Ratio (GER) in various countries

Source: Pavan Agarwal(2006),ICRIER Working paper –Higher Education in India

The Figure 8 speaks of change in GER of select nations. Between 1995 and 2003 China could increase it's GER by over 350%! In contrast, India could manage less than half of that figure. Certain smaller countries, for example, Malaysia, has managed to push a large number of it's young population in to institutions of higher learning.

Not only the ratio of enrolment is low in India, there are also wide regional variations. A few states with higher socio-economic indicators have a higher ration whereas others especially with low incomes and poor social indicators possess dismal higher education enrolment ratios.

3.6 INTER STATE VARIATIONS IN GER

It may be seen from the table 8 that the relatively advanced states such as Tamil Nadu. Chandigarh, Pondicherry and Maharashtra have more than 10% ratio. Gujarat, Andhra and Karnataka have ratio of nearly 10%; whereas poorer states such Bihar, U.P and M.P have GER of around 7%. Jammu and Kashmir has a GER of less than 5% which is probably due to disruptions caused by high intensity militant activities. Chandigarh has the highest GER of 28 plus percent. There are other smaller states or territories with significantly higher ratios such as Pondicherry-nearly 18%, Manipur-13.19% and Uttaranchal 12.25%. The all India average is pulled down by underperforming larger states such as Uttar Pradesh-7%, Bihar- 7.30% and Madhya Pradesh 7.77%: Rajasthan, yet another big state with 8.77% GER is not helping in pushing up the national ratio. The Government of India has set an immediate goal of achieving 15% GER which requires, among other things, a massive expansion of higher education system and institutions. Expansion of higher education has to take place in states and regions with low current GER ratios.[18]

Table 8: GER in Higher Education

State/Union Territory	Ratio		State/UnionTerritory	Ratio
Andhra Pradesh	9.51		Meghalaya	10.94
Arunachal Pradesh	6.37		Mizoram	9.51
Assam	8.67		Nagaland	4.33
Bihar	7.30		Orissa	8.71
Chattisgarh	7.27		Punjab	8.53
Goa	13.47		Rajasthan	8.77
Gujarat	9.65		Sikkim	6.29
Haryana	10.56		Tamil Nadu	10.91
Himachal Pradesh	12.76		Tripura	5.84
Jammu & Kashmir	4.95		Uttar Pradesh	7.03
Jharkhand	8.12		Uttaranchal	12.25
Karnataka	9.92		West Bengal	8;21
Kerala	7.66		Chandigarh	28.68
Madhya Pradesh	7.77		Delhi	10.94
Maharashtra	12.30		Pondicherry	17.88
Manipur	13.19		All India	8.97

Source: Selected Educational Statistics 2002-03, CABE Committee on financing of higher education.

Table 9: Gross Enrollment Ratio (GER)
(In % age)

Age Group	Total			SC			ST		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
6-11(Classes I-V)	110.7	104.7	**107.7**	123.3	106.6	**115.0**	128.1	115.5	**121.8**
11-14(Classes VI-VIII)	74.3	65.1	**69.7**	77.9	61.5	**69.7**	73.9	59.5	**66.7**
6-14(Classes I-VIII)	96.9	89.9	**93.4**	106.5	90.3	**98.4**	108.5	95.8	**102.2**
14-16(Classes IX-X)	57.4	45.3	**51.4**	52.2	37.5	**44.9**	43.3	30.5	**36.9**
16-18(Classes XI-XII)	30.8	24.5	**27.7**	26.5	19.1	**22.8**	21.5	12.6	**17.1**
14-18(Classes IX-XII)	44.3	35.0	**39.7**	39.8	28.7	**34.3**	33	21.9	**27.5**
6-18(ClassesI-XII)	79.7	72.3	**76.0**	85.5	71.8	**78.7**	85.6	73.7	**79.7**
18-24(Higher Edn.)	11.6	8.2	**9.9**	8.1	5.2	**6.7**	6.3	3.5	**4.9**

Source: Educational Statistics at a glance 2004-05 MHRD

Table 9 shows enrollment age and class wise. It also depicts enrollment of girls and backward community enrollment vis-à-vis the total GER. Less than 10% finally make it to the portals of higher education in India. This figure has now increased to around 11%. It is skewed in favour of boys as female GER is a little over 8% whereas in respect of males this ratio is 11.6%. Globally, more women are entering the tertiary education.

Not many from the backward communities make it to the higher educational institutions in the country. The GER of ST's is half of the total GER of nearly 10%. The SC category (6.7%) performs a bit better but still lags behind the national average.[21]

The main problem area lies in the age group of 14 to 16 in classes 9th. and 10th. In this class interval, the total GER falls from more than 93% to around 51%- a huge decline of almost 50%. In case of ST community the fall is a massive two-thirds- from 102% to 31%. There is a much steeper fall in enrollment of girls than boys. There is further drop in enrollments at the plus two stage. From more than 51% the total GER falls to around 27%; fall in girls and backward communities' enrollments are even higher. Half of SC and ST students who were in matriculation stage do not enroll for std.11th. These figures have significant impact in devising strategies for achieving higher GER ratios in tertiary education. With out inclusive growth, it will neither be possible nor desirable to expand higher education.[21]

Table 10: Stage-wise Drop-out Rates

Class-es	Total			SC			ST		
	Boys	**Girls**	**Total**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**
I-V	31.8	25.4	**28.6**	32.7	36.1	**34.4**	42.5	42.0	**42.3**
I-VII	50.5	51.3	**50.9**	55.2	59.9	**57.6**	65.0	67.1	**66.1**
I-X	60.4	63.9	**62.2**	69.1	74.2	**71.7**	77.7	80.7	**79.2**

Source: Educational Statistics at a glance 2004-05 MHRD

Table 10 on Stage-wise Drop-out rates give details of those who do not go on to the next higher stage of learning. Drop-out rates are indeed very high. More than 62% of the total numbers of students drop out before passing tenth standard. This also affects the GER at the higher secondary and college level subsequently. More number of girls drop out in this bracket. The percentage is close to 64%. More than 70% of SC and almost 80% of ST students do not go to the Higher Secondary level. Here again, drop out rate is higher for girls. Unless the drop out rates is reduced substantially, GER at higher levels will not improve. Hence, the Government's policy of expansion of higher education should also include measures aimed at retaining more students in the system of education.[21]

Table 11: GER for all categories of students

Year	14-18 years (Classes IX-XII)			18-24 years (Higher Education)		
	Boys	Girls	Total	Boys	Girls	Total
All Categories Students						
2001-02*	38.23	27.74	**32.99**	9.28	6.71	**8.00**
2002-03*	41.29	33.21	**37.25**	10.30	7.47	**8.89**
2003-04*	42.94	34.26	**38.60**	10.59	7.65	**9.12**
2004-05*	44.26	35.05	**39.66**	11.58	8.17	**9.88**
SC Students						
2001-02*	37.22	26.94	**32.08**	7.67	3.64	**5.66**
2002-03*	36.88	25.69	**31.29**	8.00	3.73	**5.87**
2003-04*	37.55	27.51	**32.53**	8.34	4.34	**6.34**

2004-05*	39.76	28.73	**34.25**	8.10	5.20	**6.65**
ST Students						
2001-02*	30.98	19.76	**25.37**	5.84	2.63	**4.24**
2002-03*	30.48	20.52	**25.50**	5.57	2.43	**4.00**
2003-04*	32.43	21.03	**26.73**	6.22	3.11	**4.67**
2004-05*	32.99	21.95	**27.47**	6.31	3.45	**4.88**

Source: Educational Statistics at a glance 2004-05 MHRD

As noted in Table 10, poor enrollments in 11th.std. are mainly due to high drop out rates in the earlier stage. Table 11 brings out enrollments of students belonging to general and backward categories. Overall enrollments in higher secondary have gone up but only marginally and remain at levels below 40%. The GER at the higher education level is also low, at less than 10% on the aggregate in the year 2004-05.[21]

Persons belonging to backward communities and females do not fare as well as others. GER at 9th. and 12th. Std. for SC students is a little over 32%; whereas for the entire student population it is almost 40%. Boys have an enrollment ratio of over 44% in this age group and category; on the other hand girls' ratio is 35%. This trend continues at the tertiary level.

Between the age group of 18 to 24, whereas boys GER for higher education is over 11%, girls ratio is around 8%. The ST category is students as the lowest level with their GER being less than 5% in the year 2004-05.21

Table 12: Percentage of population with higher education

	Rural			Urban		
	Male	Female	All	Male	Female	All
Scheduled Tribes	1.2	0.2	0.7	9.1	4.7	7.0
Scheduled Castes	1.3	0.3	0.8	4.1	2.0	3.1
Other Backward Castes	2.1	0.6	1.4	1.1	3.7	5.5
Others	4.4	1.4	3.0	18.2	12.7	15.6
All	2.6	0.8	1.7	12.7	8.2	10.5

Source: Educational Statistics at a glance 2004-05 MHRD

Table12 brings out the urban rural divide in the sphere of higher education. Whereas less than 2% of rural population has one or the other higher educational qualification, in case of urban India it is more than 10%. Gender differences are also high. In case of rural women less than 1% of the population is educated at the higher level; the percentage of women in urban areas is more than 8%. Just about 3% of the SC population has higher education qualification, only 0.3% of women in the category have these credentials. ST women have a percentage of just 0.2% in this regard. The ST category performs better than the other backward class in terms of overall

percentage of population with higher education qualifications. Whereas for the former, the percentage is 7%, for the latter it is only 5.5%.[21]

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CHAPTER 4

CHALLENGES IN INDIAN HIGHER EDUCATION-INDIAN CONTEXT

Chapter Plan

- Issues of Access and Equity
- Privatization of Higher Education
- Students' Fees and Cost Recovery
- Regulatory Aspects of Higher Education
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CHAPTER 4

CHALLENGES IN INDIAN HIGHER EDUCATION-INDIAN CONTEXT

The higher education sector has expanded rapidly in the country. Yet there is inequality in growth, access and distribution. Dadra and Nagar Haveli and Lakhsadweep have hardly any institutions of higher learning; 14 states have much higher levels of access to higher education compared to the national average (12.17) in terms of number of institutions available per lakh population in the age group 18-23 in 2003-04 [1]. One of the major challenges is to enhance the access to higher education. The state has a major role to play in this regard. Besides increasing investment and opening new colleges and universities, it has to create a proper regulatory environment where good quality private service providers are attracted. There is confusion as regards entry, fees and the type of courses/programs that can be offered. This has resulted in an unhealthy nexus between politicians, Government and private service providers.

Various Committees and statutory bodies have reviewed the higher education scenario in the country and have recommended future courses of action. Kothari Commission, National Knowledge Commission , CABE Committee on Autonomy in Higher education and Yashpal Committee are some of the major

contributors on the subject. Following are identified as specific challenges/problems of higher education in India that need to be addressed.

4.1 ISSUES OF ACCESS AND EQUITY.

Access to higher education has remained poor despite the massive expansion of the sector in the country. GER has risen to around 12% in recent times but the goal is to increase it to 15% by the end of 11th. five year plan (2007-2012) and then to 20% by the year 2015 to achieve critical mass. Expansion of higher education is particularly rapid in the last two decades. Enrollment has increased annually by 5% which is two and half times the growth in population[2]. This is an impressive growth. After sustained efforts, the enrolment is schools has gone up significantly; so there is a significant number of first generation school-goers who are now in their med-school phase. They are likely to enter the portals of higher education.

Table 13: Growth in Higher Education in India

Institutions	1950	1990	1996	2008
Universities*	30	177	214	431
Colleges	750	7346	9703	20,677
Enrolment ('000s)	263	4925	6755	11612
Teachers ('000s)	24.0	272.7	321.0	505

Note: *includes institutions deemed to be universities.

Source: Compiled from Higher Education in India: Issues Related to Expansion, Inclusiveness, Quality and Finance, UGC 2008 and http://planningcommission.nic.in

The primary responsibility of increasing the access lies with the Government. Private initiative does help but it has remained to confined to a handful of popular and market driven courses such as Management, Engineering and Medicine. The private service providers are also handicapped by absence of clear, transparent and consistent policy regime in the higher educational sector.

Issues of access and equity are interlinked. Again, quantitative expansion of higher education has not taken care of inclusion of the underprivileged and vulnerable sections of the society. The representation of SC, ST, OBC, women and minority community in colleges and universities remains low vis-à-vis their population size. It is no longer desirable to ignore the demands of these sections pertaining to access to higher education which besides providing tangible economic gains also offers social mobility and recognition. Central Government is moving in this direction; it has doubled the intake capacity in central universities and institutions of national importance such as IIT's and IIM's to allow for inclusion of reserved category learners. This move assumes importance when seen in another perspective. It has been observed that students from these groups generally tend to take up 'softer' disciplines for study. They need to be encouraged and facilitated to pursue studies in 'harder' disciplines so that social equity is achieved at all levels.

Lower educational attainments are attributable to certain social groups and communities; they are also related to other factors such as income, gender, region and place of residence. The last school attended also has an impact on the availability of avenues for further education. Students from rural schools are often in a position of disadvantage when it comes to seeking admissions in good urban colleges. Deprivation of educational opportunities, therefore, a multi dimensional problem and comprehensive and holistic solutions need to be found. A deprivation index with weighted scores to students needs to be devised so that admissions are not decided solely on the school examination scores[3]. Besides ensuring equity, this will also safeguard merit and encourage disadvantaged groups to compete and come up to the levels of others.

4.2 PRIVATISATION AND COST RECOVERY.

One of the major challenges in higher education across the globe is the escalation in it's cost. Besides the tuition, students have to incur expenditure on hostel and mess (living costs), books, e resources and other incidental expenses.

Trow (1973) classified education systems on the basis of gross enrolments. He referred to 'elite' class where the enrolments were less than 15%; 'mass' where the enrolments were between 15% and 50% and 'universal' in cases where enrolments were above 50%[4]. This classification throws some light on the outcomes of the higher education systems in any nation. Brennan (2004) analysed the characteristics of elite, mass and universal higher education

systems[5]. He opined that the elite higher education prepares a small ruling class for broad roles in government and society; mass higher education undertakes transmission of knowledge and prepares students for both technical and economic roles; and universal system involves adaptation of whole population to rapid social and technological changes.

Overall, according to Trow's classification, India may exhibit features of elite system. But it is important to note that there is wide disparity in enrolments in urban and rural areas, gender variations and amongst the deprived sections of the society. If one were to look at the aggregate numbers of those enrolled in higher education in India, then it certainly is quite large and assumes the character of mass system.

Traditionally almost the entire cost of higher education was borne by the State, practically all over the world. However, with increasing pressures on Government finances, the budgetary allocations to education have been cut, in some countries, drastically. As a result, there is a shift from exclusive dependence on government or tax payers to some reliance on students and/or parents. The UNESCO WCHE declaration emphasized the funding of higher education by both public and private sources.

In the west, a significant amount of higher education cost is shared by donations from philanthropists and alumni. The later donate large sums to their alma maters. Barring a few exceptional elite institutes such as IIT's, this is not a sizeable chunk in India and other developing countries. Further, in most developed countries, access to cheap student loans is available to almost any one who may want to avail the same. In the third world countries, poor do not have access and even the middle class have to pay high rates of

interests on such loans. A large number of Universities and Colleges, especially in the west, have curtailed student scholarships and fee waiver schemes in recent years. There is also a dip in the availability of part time jobs with in the higher educational institutes due to the impact of recession and financial crisis in the west.

There are seven different forms of cost sharing arrangements seen worldwide[6] 1) Introduction of tuition fees (in China in 1997, Britain in 1998 and in Germany in 2005 2) Charging dual fees with higher fees for less meritorious students with capacity to pay-prevalent in Russia, Eastern and Central Europe and India 3) Sharp rise in fees in public universities and institutions in US and India-IIT's and IIM's. 4) imposition of user charges-as in China and several African countries. 5) diminution of student grants or scholarships (in U.K., Russia 6) increase in effective cost recovery of student loans through various measures and 8) encouragement of a tuition-dependent private higher education sector. This has happened in Japan, Korea, Brazil and parts of Latin America.

In India, spending on higher education is mainly by governments-State and the Central- and households. Whereas data is available on budgetary allocations made by governments, there is no reliable information on private funding of higher education. The per unit cost, too, varies from course to course and in between regions. A group of Vice Chancellors had estimated the unit cost of higher education at Rs. 1,00,000. It is reasonable to take a unit cost of Rs.60,000 per student per annum [7]. Enrolment in higher education in the year was 2005-06 was 10.48 million; this means, based on the above norm, an annual expenditure of Rs.628.8 billion is required[7].

As against this, the government spends around Rs.190 billion per year. For instance, in the year 2004-05, governments-states and Central-together allocated Rs.131.4 billion. Historically, governments' spending on higher education has been going up by 5%. If we add that, then it comes to Rs. 145 billion. It is estimated that the Government spends another Rs.45 billion on post secondary education in health and agriculture sectors. Together, we arrive at a total spending of Rs.190 billion by governments[8].

Estimates of private spending are not readily available. P. Agarwal estimates that expenditure by households on tuitions is Rs.186.75 billion[9]. Revenue sources other than from tuition are not taken in to account as they form a negligible sum. Thus the total expenditure on higher education by households and governments works out to Rs.376.75 billion. This amount is just 60% of the desired total expenditure of 629.8 billion. Such a big gap reflects in poor standards and efficiency in higher education[10].

There is at least one more study by Tilak (2004) which is indicative of under spending in higher education[11]. He found that with numbers of enrolments increasing in recent years, the per student expenditure is declining. According to his estimate the decline is of the order of 28% in a 12 year period from 1990-91 to 2002-03.

Table 14: Public Expenditure on Higher Education per Student

Public Expenditure on Higher Education per Student (Rs.)			
	in current prices	in 1993-94 prices	Index
1990-91	5652	7676	100.00
1991-92	5636	6727	87.64
1992-93	6111	6710	87.42
1993-94	6738	6738	87.78
1994-95	7329	6687	87.12
1995-96	6944	5812	75.72
1996-97	7207	5619	73.20
1997-98	7793	5692	74.15
1998-99	9536	6448	84.00
1999-2000	10683	6954	90.59
2000-01	10543	6367	82.95
2001-02	9669	5582	72.72
2002-03RE	9446	5522	71.93
Source: Based on *Analysis of Budget Expenditure on Education* (various years).			

As the Table 14 shows, even the nominal expenditure on education is showing downward trend since the year 2000[12]. Per student public expenditure has registered a steep decline owing to large numbers of youngsters entering the portals of higher education. And the budgetary allocation has either remained static or declined over a period of time.

4.3 STUDENT FEES AND COST RECOVERY.

As a part of the exercise to recover higher percentage of costs from students' fees, the same have been hiked by almost every University and college, in some cases, quite steeply. Traditionally, tuition was almost free; subsequently

it was the major component in total fees. Now, it is one of the charges in a plethora of fees levied by institutions. Exam fees, convocation, registration, library, migration, statement of marks, welfare, gymkhana and others are only some in the long list. High fees in both 'aided' and 'unaided' courses affects equity; the poorer sections simply cannot afford high fees. It also impacts the GER adversely as poor students withdraw even from liberal arts education programmes.

Broadly, student fees have to be kept low so that equity and access are not hit. UNESCO and other expert bodies have set a norm of 20% of the recurring cost to be recovered by fees. In fact, in most of the developed countries, fees do not cross this threshold. But in India and several other developing nations, Universities and colleges have started generating high percentage of revenues from various student fees. In case, self-financed courses, fees cover 100% of the cost and sometimes even more. Even in public funded Universities and colleges in India, fees have been hiked; in addition, more and more self-financed courses are being offered to generate revenues. Even liberal arts and Humanities courses such as Commerce, Political Science, English, Journalism and pure science subjects such as Botany, Zoology, are being offered as self-financed courses. Annexure 5 gives an idea of average tuition fees charged by engineering colleges across states in India for their under graduate programs.

According to Bray (1998), privatisation, by definition, is a process rather than a state[4]. It is a process of moving from public ownership, finance and/or control to private ownership, financing and/or control. Viewed in this way, there has been significant privatisation of higher educational sector in the

country. More and more private self financed colleges are being established paving the way for privatisation. The public institutions, receiving government aid, have also embarked on the path of introducing self financed courses. Nearly 30% of all enrolment today is in private institutions that receive no aid or grant from the Government. More than 40%, 42.9% to be precise, of the total number institutions are private in India[7]. There is a class of institutions which are called 'aided colleges' which are privately owned, mostly by trusts or registered non-profit making societies. The administrative control is usually in the hands of college though it is subjected to oversight by concerned Government and UGC. Similarly the academic autonomy is excercised by these institutions with in the limits prescribed by the degree-granting University. These institutions are counted as 'public' institutions since their private nature is only nominal. Autonomous institutions have, of course, greater academic autonomy in terms of changing curriculum, courses, structure, evaluation etc.

Growth of private institutions follows more or less the global pattern. Western Europe is still dominated by public institutions despite certain changes in Germany. The US remains remarkably stable in it's public-private dispensation for over a decade. It has private enrolment almost comparable to that of India. Asia is the region where private boom has really taken off. Malaysia, Singapore and Japan, with over 90% of private share in higher education enrolment, are leading nations where there is now predominant private sector in higher education. Philippines, Indonesia, South Korea too have share of more than 70% in private enrolment[13]. The feature of private growth in India is that is state-based. Just as some of the prominent public

institutions have attained national character and fame, some of the renowned private institutions too have become truly national-be it in the form of students admitted or faculty recruitment. This is not to suggest that the private organisations have uniformly grown or spread in all parts of India. Much like elsewhere in the world, whether it is in China (Shanghai) or in Brazil (South eastern states) most of the concentration and growth have happened in the metros and large urban cities. States which had better social and economic indicators led the surge in private growth in India. The decade of 1970's mark the beginning of this surge in southern and western parts of India-the states of Karnataka, Andhra Pradesh, Tamil Nadu and Maharashtra. It is only much later that some northern states saw growth in private colleges[7].

Table 15: Higher Education Institutions and Enrollment

Type		Higher Education Institutes (Universities+Colleges)		Enrollment (in 000)	
		2000/01	2005/06	2000/01	2005/06
Public	Government	4342 (245+4097)	4493 (268+4225)	3443	3752
Private	Private aided	5507 (10-4997)	5760 (10+5750)	3134	3510
	Private Unaided	3223 (21+3202)	7720 (70+7650)	1822	3219
Total		13072 (266+12806)	17973 (348+17625)	8399	10481

Source: ICRIER W.P BY P. AGARWAL

Table 15 shows both the growth of higher educational institutions as well as the enrollments. It can be seen that the Government and private aided colleges have not grown significantly in recent years. In the five years period as mentioned above, Government institutions rose by a meager 150. Private aided institutions fared only a bit better, clocking an addition of around 250 in the said period.

Almost the entire growth that has taken place in the country in respect of higher education has been due to growth of private unaided colleges. Number of higher education institutions in this category has gone up from 3,223 to 7,720. The total increase in the numbers is from around 13,000 to 18,000[7].

Given the fact that bulk of the increase in institutions has taken place in the private unaided category, it only follows logically that enrollments too follow the same pattern. Enrollment here has moved up from around 18,00,000 to over 32,00,000. Rise in enrollments in Government and aided institutions has been marginal[7].

By 2003 Gujarat had two recognized private universities and other states to join the bandwagon were Orissa, Uttaranchal, Himachal Pradesh, and Sikkim. Powar and Bhalla (2008) give a case-study of private growth in Maharashtra, India's most developed and second largest state, with over 650 higher education institutions, over four-fifths private[15]. In Andhra Pradesh, where all 50 institutions were public fifty years ago, by 2001 641 of 989 were self-financing, and 93 of the state's engineering colleges were private. Private (self-financing) institutions out-number public ones in most states [14]. And most of India's states have allowed private higher education. A major part of India's surge has come with proliferation of professional colleges; by 2002 reportedly into the thousands in Maharashtra alone, with 70 percent of them private[15]. In contrast to broader and mostly public liberal arts colleges and institutions with a presence in science, these are pointedly commercial institutions. They blossomed first in engineering, then medicine and health, as well as management, teacher education and Pharmacy. As a matter of fact, the private share of these professional institutions, 83 percent of the total in Maharashtra, varies little across these fields. All are part of the global growth of job-oriented and market driven higher education, particularly championed by private higher education. [16]

Table 7 on typology and growth clearly brings out the picture of the growth of higher educational institutions in India. Public owned and financed colleges are stagnating in terms of enrolment. Private institutions, dependent on 100% fees and cost recovery, are growing rapidly. This is a serious cause for concern. With more private unaided institutions emerging, access to higher learning is adversely affected. Nor or these organisations bothered about issues of equity to vulnerable sections of the society. Further, there are also qualitative concerns in several of these institutions. The foreign institutions are also emerging on the scene. Universities from abroad are now allowed to establish their own off shore campuses in India subject to certain stiff conditions.

Nearly 85% of the engineering colleges are private self financed institutions[17]. In a sense, the system of Indian higher education is more privatized than most advanced countries. Though this has brought some relief to Government's finances, it is at a huge social and human cost. Not only is the issue of equity sidetracked, but the quality has also suffered. Some of our top public Universities, colleges and institutions in the areas of technology and engineering, medicine and management are capable of emerging as world class institutions; but of the several problems that they are facing, the crucial one is acute shortage of funding. Unlike private institutions, they can grow and prosper with out trading off equity. A comparative view of the system of higher education in India vis-à-vis the USA is shown in Annexure 6.

Privatisation also has other vital dimensions. By virtue of following the market demand, huge capacities are created in a few chosen disciplines. Such a trend has already led to lop-sided growth of higher education in the country.

Market may not be a very efficient allocator of educational resources. It is prone to creating glut like situations at some times; whereas at other times, it may create serious shortages of certain types of manpower.

Where private institutions reign supreme, there is bound to be exploitation. In India, some colleges charge dual fees; higher fees covering 100% or more costs for 'paid seats' and lower fees from merit seats. Even these 'lower' fees have been hiked in recent times and they too recovery a larger share of educational cost.

Interestingly, in countries where private higher education is dominant, economies have not made rapid progress, example, Latin American countries. Successful economies such as in western Europe or the US are associated with a largely public higher education system. The only exceptions seem to be Japan and Korea. [18]

There are few/no institutions, both in public and private sector, which can be classified as 'elite' as is understood in higher education parlance. Even outside India, there is expectation that India should have mechanism for truly world class universities[15]. Some of the institutions, such as IIT's and IIM'S and few other public institutions in the areas of science and medicine, are quite well known. Annually, some 3 lakh aspiring students compete for around 3,000 slots for IIT'S. Viewed in this context, no one can deny an element of 'elite' in them. These institutions have forged academic alliances with overseas universities of repute. But there are a number of issues and problems. Public funding on higher education is a meager 0.37% of GDP; whereas in the US, it is as high as 1.41%. Heavy funding is no guarantee of exalted and broad academic standing, but the lack of such funding is a

guarantee that there will be no such standing[15]. Yet another factor contributing to lack of elite character is the politicization of Indian higher education. Political interference kills creativity and zeal. Government has recently ordained promotion of quota based admissions for all public institutions including IIT'S and IIM'S. Considering the size of Indian higher education system, it is generally devoid of both differentiating and elite factors.

Several attempts are made to rationalize privatisation. To some 'privatisation' of higher education is alright so long as it is not 'commercialised'. To some others profit making from educational ventures is bad but it is alright to generate 'surplus'! Similarly, there are those who advocate 'reasonable' profits by private institutions and not 'exorbitant' profits. A section also feels public-private partnership is okay but not private participation. These are all forms with varying degrees of ownership, control and management of educational institutions. Much of the successful private higher education in the country is ties to business and employment missions[15]. Without a well thought-out and proper regulatory framework, it is difficult to ensure equity, transparency and propriety on the part of private players.

4.4 REGULATORY ASPECTS OF HIGHER EDUCATION

Regulation of higher education system has been a cause for concern for a long time. India inherited a British legacy of affiliating type of colleges. Over a period, fewer new Universities have come up; however, number of colleges have increased manifolds. (Table 7) As a result, some of the older Universities such as Pune, Mumbai, Delhi have more than 500 affiliated colleges. Overall, university system has become complex, large and difficult to govern. UGC has formulated plans and guidelines to grant autonomy to deserving institutions. Barring the state of Tamil Nadu, this scheme has had limited success.

Political configurations have influenced regulation of higher educational institutions[15]. All the Universities in the initial decades were set up as an Act of Parliament or State legislature. Subsequently, a 'deemed to be university' status was granted to a few of the deserving specialized autonomous institutions. During a particularly lax regime, several institutions were granted the 'deemed' status. Most of these receiving recognition and higher status belonged to politicians of all hue and cries. Recently, the UGC review committee has acted against 44 such institutions which do not deserve the 'deemed' status. The matter now rests with the Supreme Court. Courts have also intervened and generally tried to uphold public interest in higher education. Whether or not the Indian higher education is public or national, the Supreme Court is a potent higher education actor[15]. Regulatory framework has not been full proof and it has left many ambiguities with regard to the role and control of different persons or bodies. Supreme Court has mostly intervened on matters who is the authority for what in the system.

Education is on the con current list and hence it also becomes a State subject. Realising this opportunity, some states allowed setting up of large numbers of private universities with out proper infrastructure and/or manpower. There is a large unmet demand for higher education in the country[19]. Hence there was no problem of getting students enrolments. It may be pertinent to mention that in the year 2002, the State of Chattisgarh enacted the Chattisgarh Niji Kshetra Vishwavidyalaya [Sthapna Aur Viniyaman] Adhiniyam, 2002. Section 5 of the said Adhiniyam provides that the State government may by notification in the gazette establish a university by such name and with such jurisdiction and location of campus as may be specified therein. The State of Chattisgarh, in exercise of its power conferred in the said section of the Adhiniyam, initially permitted for the establishment of 108 universities, out of which the State government issued viability certificates for the establishment of 97 universities. Based on an amendment to the above said Act in 2004, the State of Chattisgarh denotified 60 universites out of 97. Two Public Interest Litigations were filed in the Hon'ble Supreme Court challenging the establishment of these universities. The Hon'ble Court struck down provisions of Sections 5 and 6 of the aforesaid Act while declaring the same to be ultra vireos. Consequently, all such universities have ceased to exist.[20]

Chattisgarh, one of the newer states in the union of India, gave permission to start quite a large number of Universities with in a matter of days or months. With in months, as a result of public interest litigation suit filed by Prof: Yashpal, all these establishments were closed by the order of Supreme Court.

There is a large unmet demand for higher education in India. Governments have squeezed their budgets for higher education since 1980's. Almost no new college has been set up in the Government or 'aided' sector. In the 11th. five year plan, a provision has been made to establish new IIT'S, IIM'S and National and world class Universities. The entry norms for private institutions is not clear; confusion apart, nexus between the politicians and bureaucracy has ensured that the former corner almost all the new private unaided institutions. UGC, AICTE and other regulatory bodies have not been able to stem the rot in the echelons of higher education in the country[21]. Hence, it has been decided to establish a National Regulatory Authority for Higher Educational institutions [2] .A bill in this regard is expected to be moved in the Parliament.

Yashpal Committee has spelt out the structure and role of the regulatory authority. The Committee has opined that the UGC should confine itself to it's funding role; the national regulatory authority shall take over the other functions of granting permission to new institutions; devising rules and norms in this regard, ensuring maintenance of high academic standards and the like.

4.5 INTERNATIONALIZATION OF HIGHER EDUCATION

One can ascribe various reasons why students chose to abroad for higher studies. A certain specialized course may not be available within the country and hence some students may seek out a foreign land where this is offered-a 'push' factor. There are others who prefer an over seas destination as it gives a broader horizon, a richer cultural understanding or simply a different experience.

There could also be 'pull' factors responsible for some nations and universities leading in export of higher education. Some of the best known universities and institutes attract learners from far and wide. Recession notwithstanding, there are nations which aim at retaining talented and highly skilled professionals. Since most institutions charge higher tuition from the foreign students, there is an incentive for the host institutions to attract students from abroad. Demographic factors may also 'pull' students to countries where natural growth in population has hit the rock bottom or even turned negative. Generally speaking, most of the first world nations are in this league whereas a large number of third world countries are facing problems of uninhibited growth in population.

4.6 GLOBAL RANKINGS OF UNIVERSITIES.

Amongst the global universities and Institutes, there is intense competition to secure top rankings. In the age of information and technology, rankings do influence even more the choice of internationally mobile students. The USA has the highest number of universities and institutes in top one and two hundred institutions.

Table 16: Top Institutions of each Country represented in the Top 200

TOP INSTITUTIONS OF EACH COUNTRY REPRESENTED IN THE TOP 200

Country	Number of institutions	Best Institution	World rank
US	72	Harvard University	1
UK	29	University of Oxford and University of Cambridge	=6
Germany	14	University of Göttingen	=43
Netherlands	10	Eindhoven University of Technology	114
Canada	9	University of Toronto	17
Australia	7	University of Melbourne	36
Switzerland	6	Swiss Federal Institute of Technology, Zurich	=15
China	6	Peking University	37
Sweden	6	Karolinska Institute	=43
Japan	5	University of Tokyo	26
Hong Kong	4	University of Hong Kong	21
South Korea	4	Pohang University of Science and Technology	28
France	4	École Polytechnique, Paris	39
Taiwan	4	National Tsing Hua University	=107
Denmark	3	Technical University of Denmark	=122
Singapore	2	National University of Singapore	34
Ireland	2	Trinity College Dublin	76
Turkey	2	Bilkent University	=112
Belgium	2	Katholieke Universiteit Leuven	119
Spain	2	University of Barcelona	142
Austria	2	University of Innsbruck	=187
Finland	1	University of Helsinki	102
South Africa	1	University of Cape Town	=107
Norway	1	University of Bergen	135
New Zealand	1	University of Auckland	=145
Egypt	1	Alexandria University	=147

Source: Times Higher Education 2009

The US has as many as 72 in the top 200 global universities and institutes. That is more than twice the number that the nearest rival U.K. with 29 has in the global rankings. The USA also bags all the top five slots. Germany and Netherlands are the only remaining two nations to have scores in double digits. India does not have a single institution to show in the list of top 200 universities. In the rankings of the years 2004 and 2005, two Indian IIT's were a part of top 100Unversities and Institutes. (Annexure 3) Nations, much smaller in size such as Turkey, Singapore and Spain have two institutions each in the top bracket. South Africa and even Egypt have one each in the table 16.

Predominance of US universities and institutions is not with out reason. As a nation USA spends 3.1% of GDP annually on tertiary education[22]. Recession and financial crisis not withstanding, academic salaries are about the highest in the world. In most of the top ranking universities, the atmosphere is cosmopolitan-all of which help in attracting and retaining the best talent. The US universities score especially on the research parameter. Several Professors take up editorship of journals and magazines; they decide what gets published. Institutions in US know how to nurture research.

IIE (Institute of International Education) promotes US higher educational institutes abroad in a big way. It held its annual U.S. Higher Education Fair series in six countries and 11 cities across Asia; the region that sends the maximum students to the United States. More than 10,000 prospective students, parents, educators and media representatives participated in these fairs. Over 150 U.S. institutions took part in these fairs, getting one to one interface with a large and growing numbers of well-prepared students eager to study in the US[23].

China including Hog Kong has 10 institutions in the list. China has made huge investments in recent years in it's tertiary education. At the place of 21, University of Hong Kong is the third highest ranked university outside USA and U.K. The numbers of Chinese nationals going abroad for higher education peaked some time back and is now declining[24].

Table 17: Grant of Patents

	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
Filed	12613	17466	24505	28940	35218
Examined	10709	14813	11569	14119	11751
Granted	2469	1911	4320	7539	15261

Source: Indian patent office.

Patent Applications

The number of applications for patents filed in 2007-2008 was 35,218 compared to 28,940 applications in 2006-2007 representing an increase of about 22 % in the filing. 11 applications were filed as patent of addition[25].

The number of applications for patents which originated in India were 6,040 contributing approximately 17% of the total number of applications filed during the year[26].

Out of the said applications, which originated in India Maharashtra accounted for the maximum number, followed by Karnataka, Delhi, Andhra Pradesh, West Bengal and Gujarat. The State / Union Territory wise break up figure is as shown in brackets: Maharashtra (1936), Karnataka (814), Delhi (812), Andhra Pradesh (414), West Bengal (303), Gujarat (286), Uttar Pradesh (161), Kerala (123), Haryana (123), Jharkhand (85), Madhya Pradesh (50),Punjab (44), Rajasthan (36), Chandigarh (33), Uttarakhand (25), Bihar (21), Assam (16), Chattisgarh (15), Himachal Pradesh (15)[27]

It is important to note that the leading states are also leading the country in

terms of better developed higher education infrastructure in relative terms, for instance, States of Maharashtra, Karnataka and Andhra Pradesh. Conversely, states which are lagging behind the 'knowledge race' are those where there is higher scope for immediate growth of higher education both in quantitative as well as qualitative terms. These are U.P., Himachal Pradesh and Madhya Pradesh.

Table 18: No. of Patents Granted By U.S. State To U.S And Other Nations.

NAME OF THE COUNTRY	NO. OF PATENTS
USA	1,85,244
US-ORIGIN 92,000	
FOREIGN ORIGIN 93,244	
JAPAN	30,679
GERMANY	10,086
S. KOREA	8,731
TAIWAN	7,779
U.K	3,843
FRANCE	3,813
INDIA	672

Source: US. Patent and Trade mark Office.

Table 18 clearly brings out the great global 'knowledge divide'. The USA leads the list of Patents granted in U.S[28]. Not surprisingly, America is also the home for a large majority of inventions, discoveries and innovations. It also encourages filing of applications and granting of patents to foreigners and entities from abroad. In fact, as can be seen from the above table, the number of patents granted to those of foreign origin is higher than those of US origin. Smaller nations such as Taiwan and South Korea score over U.K. and India

in terms of numbers of patents granted in US. The US. has one of the finest systems of higher education and is the biggest exporter of the same. A more detailed idea about patents granted in US for various countries along with accumulated patents is given in Annexure 7 and 8.

Perhaps, the biggest economic gain to the society at large is the innovation facilitated by higher education. Today, in a globalised world nations are ranked on the basis of patent rights that they register and enable their industries to use them profitably. With out a base of a largely public funded higher education program, it is difficult to envisage the emergence of a vigorous R & D effort.

Annexure 2 gives the details the numbers of Researchers, in total as well as per million population, in leading countries of the world.

Table 19: Expenditure on research and development
Top 10 economies

PPP GDP – purchase power parity gross domestic product;

HEI – higher education institutions

Countries	Expenditure on R & D (% of GDP 96-03)	Expenditure on R & D (US$ M at PPP)	% performed by HEIs	Expenditure on R & D Performed at HEIs (US$ M at PPP)
USA	2.60	284,584	16.8	47,810
China	1.31	72,014	10.1	7,273
Japan	3.15	106,854	13.9	14,853
India	0.81	19,200	2.9	557
Germany	2.50	54,449	17.1	9,311
UK	1.89	31,163	22.6	7,043
France	2.19	37,967	18.9	7,176

Italy	1.16	16,367	32.6	5,336
Brazil	0.98	-	-	-
Russia	1.28	16,838	6.1	1,027

Other select countries

Canada	1.94	18,596	34.9	6,490
Korea	2.64	24,869	10.1	2,512
Australia	1.63	7,815	26.8	2,094

Source: *Data on expenditure on R & D % of GDP from WDI (2006) and others from OECD Science and Technology Indicators 2004.*

- *Data on India is for the year 2000-2001 quoted from National Innovation System in the Asia –Pacific Region, UN ESCAP*

Source: Pavan Agarwal (2006),ICRIER Working paper –Higher Education in India

Table 19 above is indicative of the R & D effort across nations. Whereas India spends less than 1% of GDP on Research and Development, Japan's expenditure is more than 3%; average US spend over the period is 2.60%. Republic of Korea is expending 2.64 of it's GDP on R&D. Whereas US investment in R&D is nearly $3,00,000 on PPP (Purchase Power Parity) basis, Indian average expenditure is less than $20,000. Nearly 35% of all the R&D expenditure in Canada is incurred by tertiary education institutions. In Italy 32% of the expenditure on R&D is incurred by Higher Education institutions; in U.K. the percentage is 22% and the USA is 16%. In terms of numbers of researchers per million population, India is not well placed. Japan

and USA have more than 5,000 and 4,000 respectively, India has just 119 researchers per million population. (Annexure 2). Comparison between Industry and University R&D is given in Annexure 4. Investment in Research and Development drives the innovation in knowledge based industries and economies.

It is clear that the US and U.K. would continue to dominate the world in export of higher education in the foreseeable future. This dominance is due to better rated universities and institutes in these nations. There are several world class universities in these nations and they have been in existence for a very long period of time. Most of them have nurtured research and faculty pay is also better than any where else in the world.

There are definite shifts taking place in global students' mobility seeking avenues for higher educational services. These early trends and it takes years of hard work to establish academic and research capability. Though Asia is on the radar in this race, sadly, India, at present, is nowhere in the picture. One hopes that it would change a bit with the establishment of more Central and world class universities.

4.7 LINKAGES OF ACADEMIA WITH INDUSTRY.

The linkage between academia and Industry is not strong in India. Both of them operate in near isolation. Movements of employees, especially at the faculty level, do not happen frequently between the two. In such a scenario, industry is not in a position to reap the benefits of scientific research and innovation done by the tertiary education institutions. Nor does the faculty

doing research get the benefit of funding by the industry as often as it happens in the west.

There is a clear polarization between the industry and academia as brought by table 20.

Table 20: Difference in perception of University and Industry

Characteristics	University	Industry
Values	Altruistic, Scientific	Business, Commercial
Activity	Generation and dissemination of knowledge and ideas	Application of knowledge for economic gain
Objective	Excellence in academic	Customer satisfaction, profit
Role	Academic philosophy requires keeping up with theory and applications	Corporate philosophy involves continual improvement and greater efficiencies through new products and services, new design and manufacturing processes, innovations, software development
Motivation for Learning	Knowledge for its own sake; Continuous learning to upgrade Knowledge	Need-based, learning as necessary
Horizon	Long-term	Short-term
Output	Academic degree, publications , patents	Cost-effective quality product and processes
Openness	Keen to publish	Keen to keep know-how

	results expeditiously	proprietary
Attitude	'Holier than thou'	'Out here in the real world'

Source: *Natarajan, R. (2000), "University-Industry Cooperation, Collaboration and Partnership", Presented at the Presidents of World Prestigious Universities Forum on the Theme, "Higher Education and Development of High-tech in the 21st Century- University and Enterprises", Beijing- China,*

Source:Pavan Agarwal(2006),ICRIER Working paper –Higher Education in India

Table 20 vividly brings out the great Indian divide between Industry and Academia. Though the observations are general and they should not be applied selectively to any body or institution, they are largely reflective of the prevailing conditions in the country. Taking the last one first, 'Attitude' there is a more realistic assessment of ground reality in the industry; one must admit that the 'holier than thou' is changing, albeit slowly, in the academic world. The university stands for academic excellence whereas the industry generally is aiming at profit, incomes and markets.

Similarly, in terms of time horizon, academic is typically long term oriented whereas private sector looks for quick profits. At least a section of the industry is also looking at the term value proposition and customer satisfaction. In terms of output, the divide is stark. It is easier to measure and quantify industry results and performance, profit being one very important indicator. We are yet to develop and implement a proper mechanism for measuring performance of the academia in India.

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CHAPTER 5

ANALYSIS OF BUDGETARY ALLOCATION TO EDUCATION

Chapter Plan

- Public Expenditure on Education
- Correlation between GDP and Expenditure on Education
- Correlation between GDP and Expenditure on Higher Education
- Relative Share of State and Central Government Expenditure in Education
- Government of Goa's Expenditure on Education
- Correlation Between GSDP and Education
- Achieving the Target of 6% of GDP Expenditure on Education- Options and Road Map
- Share of Different Levels of Education in Expenditure (Inter Sectoral Share)
- References

CHAPTER 5

5. ANALYSIS OF BUDGETARY ALLOCATION TO EDUCATION

How much money or rather, what percentage of GDP (Gross Domestic Product) should the State spend on education? Though there are no hard and fast rules in this regard, several estimates of funds requirements have been made. The Kothari Commission had suggested a 6% of GDP as the appropriate amount for State funding of education. UNESCO, too, recommends the same norm[1].

Over the last several decades the 6% norm has been talked about and has been widely accepted by everyone concerned. In fact, the Education Commission was of the opinion that in the initial years of development of education, the proportion to be spent should be twice as much as the GDP growth rate. The Commission, in setting a modest target of 10% of GDP, had made comprehensive study of the educational statistical data available with UNESCO with regard to such other developed nations as the US, then USSR, and Japan[2].

Table 21: Expenditure on higher education

Country	Percentage of GDP on Higher Education	Public Expenditure On Higher Education per Student (2002-03)	GDP per capita 2002(US$)	Public Expenditure Per Higher Education Student As percentage of GDP per capita
USA	1.41	9,629	36,006	26
China	0.50	2,728	989	53
Japan	0.54	4,830	31,407	17
India	0.37	406	487	83
Germany	1.13	11,948	24,051	43
UK	1.07	8,502	26,444	31
France	0.99	8,010	24,061	29
Italy	0.87	7,491	20,528	28
Brazil	0.91	3,986	2,593	52
Russia	0.62	1,024	2,405	11
Canada	1.88	15,490	22,777	48
Korea	0.34	1,046	10,006	5
Indonesia	0.28	666	817	20
Philippines	0.43	625	975	14
Australia	1.19	7,751	20,822	27
Malaysia	2.70	11,790	3,905	118

Source: Agarwal P(2006),Higher Education in India-ICRIER

As can be seen from Table 21, there is a list of countries which spend more than 1% of GDP on higher education. They include USA 1.41%, Malaysia-2.70%, Australia-1.19%, Canada 1.88%. Further public expenditure on higher education in these countries is also on the higher side; for example in USA. It

was $9,629 in 2002-03, Germany %11,948, Canada $15,490 and UK $8,502. Compare this with India, public expenditure as a percentage of GDP was only just .37% and the per student expenditure too was a meager $406. In every other country listed in the table, public spending per student on higher education is higher[3].

There is a lot of catching up that remains to be done in respect of expansion of higher education in the country. India lacks a critical mass in higher education. A gross enrolment ratio (GER) of 11% compares poorly to China's 20%, Korea's 91% and the United States' (US) 83%[4].

Now the CMP (Common Minimum Programme) of the UPA Government has reiterated the commitment to increase the education spend to 6% of GDP. Though there is nothing new in it, the statement assumes importance in the context of IT revolution and the commitment to establish a knowledge based society.

5.1 PUBLIC EXPENDITURE ON EDUCATION

The National Policy on Education (1968) adopted a resolution accepting the recommendation of the Kothari Commission. Even after nearly four decades, 6% of GDP norm for education spend has remained a pipe dream. The public spending by Governments- the Central and States taken together-have not been able to reach any where near the 6% goal[1]. In fact, as can be seen from the All India table 22, there has been a reduction in the proportion of allocations made to education over the years.

Table 22: Public Expenditure on Education (in Crores)

Year	Expenditure on education by education & other Dept	Total expenditure by all sectors	GDP at current prices (at factor cost)	Expenditure on education other Dept as % of Public Expenditure	Expenditure on education by education & other Dept as % of GDP
1985-86	8713.02	67091.41	249547	12.99	3.49
1986-87	9479.13	80454.66	278258	11.78	3.41
1987-88	11798.35	92518.38	315993	12.75	3.73
1988-89	14069.82	107543.75	378491	13.08	3.72
1989-90	17192.5	126045.97	438020	13.64	3.93
1990-91	19615.85	146711.53	510954	13.37	3.84
1991-92	22393.69	170370.38	589086	13.14	3.80
1992-93	25030.3	190327.45	673221	13.15	3.72
1993-94	28279.69	218535.15	781345	12.94	3.62
1994-95	32606.22	251691.92	917058	12.95	3.56
1995-96	38178.09	286194.55	1073271	13.34	3.56
1996-97	43896.48	329389.92	1243546	13.33	3.53
1997-98	48552.14	380728.45	1390148	13.09	3.49
1998-99	61578.91	439768.12	1598127	14.00	3.85
1999-00	74816.09	512519.33	1786525	14.60	4.19
2000-01	82486.48	572160.14	1925416	14.42	4.28
2001-02	79865.7	619713.14	2100187	12.89	3.80
2002-03	85507.34	678548.31	2265304	12.60	3.77
2003-04	89079.25	743668.96	2549418	11.98	3.49
2004-05	96694.1	797345.74	2855933	12.13	3.39
2005-06	113228.71	889713.96	3275670	12.73	3.46

Source: 1.GDP Figures are taken from National Accounts statistics 2007 published by C.S.O.

2. Expenditure on Education Figure is taken from our publication titled 'Analysis of budgeted Expenditure on Education' published by Deptt. of Higher Education.

Note:- GDP Figures for the years1979-80 to 1998-99 are on the base year 1993-94 series and from 1999-2000 onward are on the base year 1999-2000.

As can be seen from table 22, Governments' expenditure as a percentage of GDP has been less than 4%. In two years, i.e, -1999-2000 and 2000-2001, it has been a little over 4%. The shortfall in the rest of the years is huge and cumulative having long term implications on the nature and quality of education system in the country. Since Governments have cut spending on education, private service providers have seized the opportunity to set up education shops. Most of them provide minimal infrastructure and staff and yet they charge exorbitant fees. They are able to enroll students in large numbers as they run popular and market driven courses. Ironically, a large number of poor in the country can not afford this expensive education. A section of the poor and lower middle class manages to thrive on costly loans and make huge consumption sacrifices. Hence, the emerging higher education in the country is bereft of equity and access to the poor.

5.2 CORRELATION BETWEEN GDP AND EXPENDITURE ON EDUCATION

One of the objectives of the study is to study the correlation, if any, between the public funding of education and the growth in GDP. During the fifteen years study period from 1990-91 to 2004-2005, India's GDP has increased by

6.41 times as can be seen from the Table -.From a little over five lakh Crores, it has increased to almost 32.7 lakh Crores. In the same period, overall educational expenditure has gone up from Rs.19,615 Crores at the beginning of the period to Rs.1,13,228 Crores- an increase of 5.7 times. It is pertinent to note that the expenditure in 1990-91 itself was less than the benchmark 6%; and over the fifteen years study period, it has in fact come down from 3.84% in 1990-91 to 3.46% in 2004-05[6].

0.986 Positive correlation (Annexure 9) signifies strong inter relationship between two variables-GDP growth and increase in the expenditure on education. However, it is important to note that the GDP growth rate has been faster; the mean rate of growth rate is 13.23 whereas the mean rate of growth in expenditure on education is 12.61. The average increase in total expenditure for the study period is 29.83%, whereas the average increase in GDP is 33.82%. Whereas both variables have risen, expenditure growth has not been able to keep pace with the rate of increase in GDP[7].

Further, during the study period, wide and sometimes erratic fluctuations in expenditure on education can be seen. The growth rate of expenditure has ranged from a negative 3.18% to 26.83%. The GDP growth rate has been fluctuating, on the other hand, in a narrow range of 7.77% to 17.37%. The standard deviation of both the variables is calculated as shown in Annexure 9. It may be observed that in respect of GDP growth rate, there is a deviation of around 3%; which means that during the period, it could fall to 10% growth on the lower side and rise to 16% plus on the higher side. In case of expenditure growth, the deviation is a high of nearly 7%, signifying movement of 7% from

the mean on either side[8]. This is indicative of the low priority accorded by Government to investing in education.

Table 23: Public Expenditure on Education (In Crores Rs.)

Year	Elementary		Sec/Hr Sec		University and Higher Education	
	Expenditure	% to GDP	Expenditure	% to GDP	Expenditure	%to GDP
1990-91	9076 .28	1.78	6310.33	1.24	3956.09	0.77
1991-92	10367.83	1.76	7400.56	1.26	4396.78	0.75
1992-93	11321.5	1.68	8574.97	1.27	4922.9	0.73
1993-94	13071.14	1.67	9371.34	1.20	5557.2	0.71
1994-95	15133.05	1.65	10835.33	1.18	6299.53	0.69
1995-96	18433.93	1.72	12530.38	1.17	6954.07	0.65
1996-97	21543.63	1.73	14164.00	1.14	7983.11	0.64
1997-98	24083.17	1.73	15663.5	1.13	8595.67	0.62
1998-99	30191.07	1.89	20100.97	1.26	11097.42	0.69
1999-00	34068.78	1.93	25447.89	1.44	15112.89	0.86
2000-01	39274.60	2.06	26057.50	1.37	16928.21	0.89
2001-02	40019.36	1.91	25163.47	1.20	14323.32	0.69
2002-03	41747.26	1.86	27498.97	1.22	15858.83	0.7
2003-04	47409.51	1.88	29718.6	1.18	17064.13	0.68
2004-05	NA	NA	NA	NA	18813.07	0.66
2005-06	52722.41	1.61	29220.12	0.89	21871.95	0.67
2006-07	65714.56	1.27	35043.37	0.92	26635.59	0.70
2007-08	72579.64	1.69	39904.07	0.93	30106.61	0.70

Source: Agarwal P(2006),Higher Education in India-ICRIER

Table 23 above gives the break up of budgetary allocations according to levels of education. Across all levels governments-central and states spend less on education; under-spending creates problems of equity, access and also quality in the service provided. Out of the threshold 6% of the GDP, the Government is expected to spend 3% on elementary education, 1.5% on secondary education, 1% on general higher education and 0.5% technical

higher education[9]. In elementary education, allocations have been less than 2% of GDP except in the year 2000-01. This is against the suggested norm of at least 3% of GDP. Secondary and higher secondary is also starved of public funds; but governments' allocations are quite close to the norm recommended by various committees and bodies. As against the expected allocation of 1.5% of GDP, this sector has generally got over 1.20%[10].

The higher education sector does not fare better in this regard; in fact, the neglect of the sector is even starker. The data in the Table on percentage of expenditure includes general higher education and technical education. Hence as per the norm, the public spending ought to be 1.5% per annum. However, actual expenditure has never exceeded in 1%. In fact, during most part of the study period, it has been less than half of the suggested norm, i.e., 0.75%[5].

5.3 CORRELATION BETWEEN GDP AND EXPENDITURE ON EDUCATION

Correlation calculated on the basis of the above formula reveals a positive relationship between GDP growth rate and increase in budgetary allocations made by governments to higher education; 0.96. (Annexure 10)

Increase in expenditure on higher education from Rs.3,956 Crores in1990 to 18,813 Crores in the year 2005-an increase of 4.7 times. During the same period the GDP rose by 6.41 times[5].

As against mean GDP growth rate of 13.23%, the mean growth of allocations to higher education is 12.34%. The average increase in expenditure during

the period of study is 23.47%, whereas the average rise in GDP is 33.82%. (Annexure 10)

Further, during the study period, wide and sometimes erratic fluctuations in expenditure on higher education can be seen. The growth rate of higher education expenditure has ranged from a negative 15.39% to 36.18%. The GDP growth rate has been fluctuating, on the other hand, in a narrow range of 7.77% to 17.37% (Annexure 10).

It may be observed that in respect of GDP growth rate, there is a deviation of around 3%; which means that during the period, it could fall to 10% growth on the lower side and rise to 16% plus on the higher side. In case of higher education expenditure growth, the deviation is a high of nearly 11%, signifying movement of 11% from the mean on either side (Annexure 10).

It is seen that the Government is not allocating 6% of GDP to education. As per the CABE committee recommendation, 3% is to be allocated to elementary education; 1.5% to secondary and higher secondary and 1.5% to higher education including technical education. In other words, out of the total higher education is to have a share of one-fourth. As against this norm, the higher education is getting a share of 20% or less every year. On the other hand, the share of elementary education on an average is over 45%; secondary education gets an allocation of around 32% (Annexure 10).

Viewed in this perspective also, there is a need for the governments to increase their allocations to education as well as higher education.

Table 24: Central funding of higher education institutions in India

Agency	Institutions (Type and Number)	No. of Students	Funding (2004-05) Rs in billion		Per student funding (average) In Rs	
			Plan	Non-plan	Plan	Non-plan
University Grants Commission	16 Central Universities +12 Deemed Universities & 59 Colleges	150,000	2.0	1,100	13,350	73,300
Central Government	42 University level Institutes (IITs, IIMs, NITs etc.)	50,000	5.0	750	100,000	150,000
State Government	180 Universities & 10250 Colleges	6,644,000	4.0	Nil	602	Nil
Self-financing Sector	70 University level + 7650 Colleges	3,637,000	Nil	Nil	Nil	Nil
Total		10,481,000	11.0	1,850	-	-

Source: *Estimates by author based on budget documents of Ministry of HRD, UG*

Source: Pavan Agarwal(2006),ICRIER Working paper –Higher Education in India

Table 24 above gives an idea of the type of funding support given by the Central Government. It spends disproportionately large sums of monies on few institutions whereas a large majority does not get any funding support from the Government. In 16 central Universities, 12 Deemed Universities and 59 colleges, average spending per student is over Rs.75,000. Further, University level institutes such IIT's, IIM's, NIT's, the average expenditure per

student is Rs.2,50,000. Compare this with the proportion of expenditure by State Governments, it is a little over Rs.600 per student[11].

How skewed the Government's expenditure is can be gauged from another perspective, too. Total number of students in tertiary education funded by State Governments is 66,44,000; in comparison, students enrollment in IIT's and IIM's is just around 50,000[12].

Table 25: Government expenditure on higher education in India

(Rs in Cr)

Year	In current Prices			Per cent Shares		In 1993-94 prices		
	State	Union	Total	State	Union	State	Union	Total
1990-91	1836.4	475.5	2311.9	79.43	20.57	2493.9	645.7	3139.6
1991-92	1948.1	495.6	2443.7	79.72	20.28	2325.4	591.6	2917.0
1992-93	2195.1	504.8	2699.9	81.3	18.7	2410.1	554.3	2964.4
1993-94	2589.3	514.3	3103.6	83.43	16.57	2589.3	514.3	3103.6
1994-95	2841.1	684.2	3525.3	80.59	19.41	2592.3	624.3	3216.6
1995-96	3158.1	713.2	3871.3	81.58	18.42	2643.1	596.9	3240.0
1996-97	3571.4	716.5	4287.9	83.29	16.71	2784.5	558.6	3343.1
1997-98	3921.4	938.1	4859.5	80.69	19.31	2864.0	685.2	3549.2
1998-99	4516.8	1600.0	6116.8	73.84	26.16	3054.3	1081.9	4136.2
1999-00	6047.0	2201.4	8248.4	73.31	26.69	3936.1	1433.0	5369.1
2000-01	6909.5	2285.3	9194.8	75.15	24.85	4349.1	1438.5	5787.6
2001-02	6440.0	1647.7	8087.7	79.63	20.37	3920.4	1003.5	4923.9
2002-03 RE	7241.2	1748.4	8989.6	80.55	19.45	4233.1	1022.1	5255.2
2003-04 BE	7506.6	1771.6	9278.2	80.91	19.09	4261.5	1005.8	5267.3

Source: Cabe Committee report on Financing of Higher and Technical Education (based on analysis of budgetary expenditure on education-various years).

Education in India is on the con current list. Interestingly, the federal states collectively have borne the higher responsibility for funding education. From table 25, it can be seen that whereas states have consistently shared expenditure of 80% or above, the share of Central Government has been around 20% on a consistent basis. However, the Central Government has always shouldered the initial major funding responsibility of all states in times of UGC pay revisions. The states' expenditure on account of pay revision is reimbursed by the Centre to the extent of 80% for the first five years. Pay revisions are taking place at an interval of ten years on similar lines as recommended by Central pay commissions. Effectively, it means that the Central Government is assuming responsibility for funding 50% of the total liability on account of pay revision[13].

5.4 RELATIVE SHARE OF STATE AND CENTRAL GOVERNMENT EXPENDITURE IN EDUCATION

Table 26: Share of Governments' expenditure on Education

Sub-Sectors	Expenditure (In Crores)	Expenditure in col 2. as % of		Out of Expenditure in col 2 % share	
		Tot Exp. On Edu.	GDP	State Govt.	Central Govt.
Ele. Edu.	53,796.7	51.5	1.89	83.6	16.4
Sec. Edu.	31,506.1	30.1	1.11	94.7	5.3
Hr.&Tech.	18,813.1	18.0	0.66	71.4	28.6

Edu					
Adult Edu.	450.1	0.4	0.02	36.3	63.7
Total	1,04,566.0	100.0	3.68	84.6	15.4

iv.Receipt from Education Cess

2004-05 5,010 Cr. (RE)

2005-06 7,477 Cr. (RE)

2006-07 8,746 Cr. (BE)

Source: MHRD Analysis of budgetary allocation2004-07

It is important to note that states share have been almost 95% and 84% in respect of secondary and Elementary education respectively. The Central Government has done slightly better in terms of funding higher education to the extent of 29% and adult education 64%[14]. With increased revenue from education cess, the union government ought to take greater funding responsibility across all sectors of education.

Table 27: Budgetary Allocations of States as a %age Of GDP

ANDHRA	2005-06	2.25%
BIHAR	2005-06	5.99%
GOA	2005-06	3.00%
GUJARAT	2005-06	2.12%
KARNATAKA	2005-06	3.06%
KERALA	2005-06	3.24%

MAHARASHTRA	2005-06	2.92%
RAJASTHAN	2005-06	3.94%
TAMILNADU	2005-06	2.61%
U. P.	2005-06	3.56%
W.B.	2005-06	2.48%
DELHI	2005-06	1.65%

Source: Analysis of budgetary expenditure on education 2005-08, MHRD

The aggregate spending on education on all India basis is the summation of all states' expenditure in this regard. It can be seen from the Table 27, that none of the Indian states (barring Sikkim or Mizoram in one odd year) allocate 6% of their GSDP (Gross State Domestic Product) to education. In fact most of the states spend less than 4% of GSDP on education. As a consequence, allocations to higher education are even lower considering the benchmark of 1.5% of GSDP[15].

Table 28: Expenditure by States on Education

State/UTs	Year	Estimates of Net state Domestic product current prices (Rs in crore	% to Total Budget of Edu. & Trg. (Rev) to Net S.D.P
Andhra Pradesh	2004-05	183123	2.61
Arunachal Pradesh	2003-04	1971	8.78
Assam	2004-05	38624	8.00
Bihar	2004-05	56110	7.64

Chattisgarh	2003-04	32400	4.37
Goa	2003-04	8420	3.64
Gujarat	2003-04	142559	3.18
Haryana	2004-05	73645	2.73
Himachal Pradesh	2004-05	17884	6.13
Jammu & Kashmir	2004-05	17939	5.92
Jharkhand	2004-05	37161	4.74
Karnataka	2003-04	118329	3.38
Kerala	2004-05	89452	4.42
Madhya Pradesh	2004-05	95052	3.89
Maharashtra	2003-04	294001	3.68
Manipur	2003-04	3571	7.46
Meghalaya	2004-05	4754	6.30
Mizoram	2002-03	2027	10.03
Nagaland	2002-03	4458	4.79
Orissa	2004-05	50031	4.28
Punjab	2004-05	79010	3.06
Rajasthan	2004-05	95298	4.45
Sikkim	2004-05	1375	11.95
Tamil Nadu	2004-05	167183	3.29
Tripura	2002-03	6085	8.20
Uttar Pradesh	2004-05	205249	4.32
Uttaranchal	2003-04	14649	7.36
West Bengal	2003-04	173674	2.75
Delhi	2003-04	77186	1.61
Pondicherry	2004-05	5839	3.90
ALL INDIA	2004-05	3200611	3.72

Source: Educational Statistics at a glance 2004-05 MHRD

As can be seen from the table 28, majority of the States are not in a position to spend the bench mark 6% of SDP on education[16]. A few smaller states like Assam or Mizoram have allocated more funds; in their cases, too,

governments have not been able to sustain higher levels of investments in education on a consistent basis. In fact, some of these states, have remained backward on several parameters since and before independence. Hence, the level of budgetary allocations for expansion of educational facilities will be higher than the normal national average.

5.6 GOVERNMENT OF GOA'S EXPENDITURE ON EDUCATION

Though the State of Goa has one of the highest per capita incomes in the country, it's governments' spending is less than the norm of 6% of GSDP. This is evident from the following table 29.

Table 29: Expenditure by Goa Government on Education

Year	Total Expenditure on Education (in 000s)	GSDP (in Lacs)	Total exp. As a % of GSDP GSDP	Exp. On higher education(in 000s)
99-00	21,53,541	6,32,975	3.40%	3,87,096
00-01	24,30,000	7,69,805	3.16%	2,81,861
01-02	25,50,000	8,07,301	3.16%	2,51,922
02-03	29,86,233	9,24,622	3.23%	3,10,414
03-04	31,54,812	9,65,664	3.27%	4,07,654
04-05	32,43,038	11,48,151	2.82%	6,52,434
05-06	34,01,404	13,26,237	2.56%	4,69,636
06-07	36,79,011	15,24,836	2.41%	5,09,449
07-08	30,44,229	17,21,459	2.09%	5,47,231
08-09	48,74,538	19,74,708	2.47%	7,23,502

Source: Economic Surveys and Directorate of planning and statistics, Government of Goa

5.7 CORRELATION BETWEEN GSDP AND EXPENDITURE ON EDUCATION

One of the objectives of the study is to study the correlation, if any, between the public funding of education and the growth in GSDP. During the period from 1999-00 to 2008-2009, Goa's GSDP has increased by more than three times as can be seen from table 29. From Rs.6, 32,975 lakhs it has increased to almost Rs.19,74,708 lakhs. In the same period, overall educational expenditure has gone up from Rs.21, 53,541 thousand at the beginning of the period to Rs.48,74,538 thousand[17]. There is a big jump in the expenditure in 2008-09 due to the implementation of sixth pay commission revision of salaries. It is pertinent to note that the expenditure in 1999-00 itself was less than the benchmark 6%; and over a period, it has in fact come down from 3.96% in 2000-01 to 2.41%. 2006-07[14].

Correlation calculation is shown in Annexure 11.

0.94 Positive correlation signifies strong inter relationship between two variables-GDP growth and increase in the expenditure on education. However, it is important to note that the GSDP growth rate has been faster; the mean rate of growth rate is 13.61 whereas the mean rate of growth in expenditure on education is 9.97. The average increase in total expenditure for the period is 8.69%, whereas the average increase in GDP is over 20%. Whereas both variables have risen, expenditure growth has not been able to keep pace with the rate of increase in GSDP (Annexure 11).

Further, during the period, wide and sometimes erratic fluctuations in expenditure on education can be seen. The growth rate of expenditure has ranged from around 4% to 17% except for the year 2008-09 when the percentage growth over the previous year was 35%. The GSDP growth rate has been fluctuating, on the other hand, in a range of 4% to 19% (Annexure 11).

It may be observed that in respect of GSDP growth rate, there is a deviation of around 5%; which means that during the period, it could fall to 7% growth on the lower side and rise to 17% plus on the higher side. In case of expenditure growth, the deviation is a high of nearly 10%, signifying movement of 10% from the mean on either side.

Further, allocations made to higher education are also lower than 1.5% threshold level. The mean is little over 10%. The average growth in expenditure is less than 9% and the standard deviation is 27%. In sum, there is not much difference in comparison with the over all expenditure on education. Generally, the higher education gets even a lower priority with in the overall educational sector. Calculations of mean, average, standard deviation and correlation are shown in Annexure 12.

If the Government of Goa continues to spend the same average per year, then the projection till the year 2017-18 will be as shown in table 30.

Table 30: Expected Increase in Spending on Education

Year	Exp. Exp. On Education(in lakhs)	GSDP (in lakhs)	Exp. Expenditure on Edu as % of GDP
2008-09	48,745.38	1,974,708.00	2.47%
2009-10	53,619.92	2,231,420.04	2.40%
2010-11	58,981.91	2,521,504.65	2.34%
2011-12	64,880.10	2,849,300.25	2.28%
2012-13	71,368.11	3,219,709.28	2.22%
2013-14	78,504.92	3,638,271.49	2.16%
2014-15	86,355.41	4,111,246.78	2.10%
2015-16	94,990.96	4,645,708.86	2.04%
2016-17	104,490.05	5,249,651.02	1.99%
2017-18	114,939.06	5,932,105.65	1.94%

Note: It has been assumed the state GDP will increase by 13% p.a., which is the mean calculated from the table 29. State Budgets have indicated a rate of growth higher than the national average. Further, high growth in future is not difficult to achieve. The nation's economy is expected to return to high growth path of around 9% after a dip due to financial crisis and global recession grown by an average of 9%. In the previous four years prior to the global recession and financial crisis, Indian economy has registered an average growth rate of 9%. Since services are fastest growing segment, in fact, the state economy may actually post higher growth.

The projection of spending on education by the state is calculated on the basis of an average increase of 10% p.a. which is the mean calculated from Table 29.

As we can see, instead of the expenditure on education increasing as a percentage of GDP, it is actually coming down. And if the trend continues, then public funding by the state would be as low as 1.94% of GDP in the year 2017-18. The implications of such a scenario could be quite serious. Firstly, the aim of establishing a knowledge-based society may remain a pipe dream. It may be argued that substitution by private initiative may fill the void. But in that case, education would probably be so much commercialized that it would become a marketable commodity.

Secondly, whereas the per capita incomes would go up, the actual level of access to education may actually start declining. This will have undesirable consequences for the society, state and the country as a whole. Thirdly, it will be extremely difficult to ensure equity for all sections of society as more and more educational institutions and courses enter private hands. This may tear apart the social fabric of the state and give rise to unnecessary conflicts.

Table 31: Growth in Tax Revenue of Government of Goa

(in Rs. Crores)

Year	Sales Tax	State excise	Other taxes	Total
1995-96	193.5	26.95	51.25	271.70
1996-97	220.30	26.76	55.67	302.73
1997-98	258.22	31.99	75.09	365.3
1998-99	254.22	35.17	67.82	357.21
1999-2000	348.18	36.06	74.24	458.48
2000-01	387.82	39.98	87.49	515.29
2001-02	401.47	46.13	122.30	569.90

2002-03	439.19	46.78	116.84	602.81
2003-04	502.36	53.43	154.98	710.77
2004-05	567.19	55.33	233.92	856.44
2005-06	743.31	55.35	297.81	1096.47
2006-07	844.82	57.23	389.47	1291.52
2007-08	879.28	75.94	403.7	1358.92
2008-09(BE)	1109.99	84.80	543.08	1737.87
2009-10(RE)	1257.7	88.0	515.15	1860.85

Source: Economic Survey 2009-10, Government of Goa

Own Tax Revenue of the states mainly comprises value added tax, state excise stamp duty registration fee and motor vehicle and passenger tax. It is pertinent to note that Sales Tax accounts for 68% of total tax revenue. During the period 1995-96 to 2009-10 (BE), the annual compound growth rate of state's own tax revenue works out to 14.73%. During the period 1995-96 to 2009-10 (BE), the annual growth rate in Sales Tax and State Excise works out to 14.30 % and 8.82% respectively[18].

Table 31 shows the growth in tax revenues of the state government. It is generally pointed out that the governments do not have the funds for spending on education. Several state governments and the union government, too, accord low priority for education, generally speaking. As can be seen from the above table, revenue from sales tax/VAT has increased by more than six times during the period from 1995-96 (Rs.193 Crores) to 2009-10 (Rs.1,257 Crores); other taxes have also registered a rise of over ten times. After the introduction of VAT revenues have risen remarkably for the Government of Goa-from Rs.567 Crores in 2004-05 to an estimated Rs.1257 Crores in 2009-10; that is an average growth of over one-third every year[19].

Hence, there is no shortage of funds provided the Government is intent on allocating higher sums to the cause of education in the State.

Table 32: Non Tax Revenue

(In Rs. Crores)

Year	Total
1995-96	84.31
1996-97	101.2
1997-98	97.18
1998-99	157.80
1999-2000	119.28
2000-01	102.78
2001-02	194.14
2002-03	329.69
2003-04	356.47
2004-05	369.87
2005-06	398.19
2006-07	450.29
2007-08	488.61
2008-09(BE)	627.43
2009-10(RE)	654.28

Source: Economic Survey 2009-10, Government of Goa

Power and water are the major sources of non tax revenue of the State.. It is evident from the table that non tax revenue collection also has shown an increase during recent years. During the period 1995-96 to 2009-10 (BE), the annual compound growth rate of state's own tax revenue works out to15.76%. During the same period, the annual compound growth rate of power and water supply works out to 19.39% and 15.44% respectively[20].

It may be seen from the above table that the non tax revenues have also registered a healthy increase in the state. During the period from 1995-96 to 2009-2010 the rise in receipts is almost eight times. In years 2002-03 and 2008-09, increase in revenues has been very significant[21]. Robust increases in both tax and non tax revenues help the State in achieving fiscal stability and prudence; with a strong income base, it is possible for the State to invest higher sums in education.

Table 33: Transfers from Government of India

(Rs. In Crores)

Sr No	Year	Central Taxes	Grants	Total
1	1995-96	71.05	73.25	144.30
2	1996-97	90.55	69.80	160.35
3	1997-98	96.57	63.80	160.37
4	1998-99	97.12	42.34	139.46
5	1999-00	95.92	40.12	136.04
6	2000-01	104.85	66.95	171.80
7	2001-02	107.26	59.29	166.55
8	2002-03	114.01	77.02	191.03
9	2003-04	135.07	52.55	187.62
10	2004-05	162.16	72.16	234.32
11	2005-06	244.72	66.52	311.24
12	2006-07	312.13	88.49	400.62
13	2007-08	393.72	148.45	542.17
14	2008-09(RE)	463.58	339.77	803.35
15	2009-10(BE)	505.50	419.42	924.92

Source: Economic Survey 2009-10, Government of Goa

Transfers from Central Government constitute an important source of revenue for the State Government. It consists of share in Central Taxes and Grants. In the period from 1995-96 to 2009-2010, the increase in income from this source is more than six times. The year 2008-09 is significant in terms of steep rise in income[22].

5.7 ACHIEVING THE TARGET OF 6% OF GDP EXPENDITURE ON EDUCATION -OPTIONS AND ROAD MAP.

If the State Government is intent on increasing the budgetary allocation to be spent on education, there are a few options which can be examined by it. In fact, the Government could chose from available options to hike the public expenditure on education.

OPTION-1

The Government may decide to reach the target 6% of GDP spend in the next year itself and continue to maintain the same 6% of GDP proportion in future also. The projection in such a scenario will be as shown in table 34:

Table 34: Increasing Allocation to Education Option 1

Year	Reqd allocation in Edn Exp (in lacs)	Share of GSDP in %
2008-09	118,482.48	6.00%
2009-10	133,885.20	6.00%
2010-11	151,290.28	6.00%
2011-12	170,958.01	6.00%
2012-13	193,182.56	6.00%
2013-14	218,296.29	6.00%
2014-15	246,674.81	6.00%
2015-16	278,742.53	6.00%
2016-17	314979.06	6.00%
2017-18	355926.30	6.00%

It will be very difficult to reach 6% level of spending on education with in just one year. It will entail a huge hike in the allocation for education in the next

year's budget. This option calls for a jump in funding from Rs. 48,745 lakhs (reference: Table 30) in the year 2008-09 to Rs.1,70,958 in 2011-12, a more than three fold increase! Some may argue in favour of such a 'shock treatment'. It may be contended that in a democratic set up, unless such radical steps are taken, the desired objective may not be reached. Further, education sector which is, by and large, starved of funds, needs a 'big push' to make any significant impact.

However, it will put enormous burden on the finances of the Government. It will also eat in to other important budgetary allocations and may slow the process of economic development. Such a course will be unrealistic, unplanned and probably quite risky, too. It may take care of quantitative aspects in education, but the qualitative concerns will not only remain but may pose many more problems. After all, it not just the question of enhancing the financial investment; it is also important to put in place plans, programs and schedules for educational expansion and qualitative improvements.

OPTION-:2

In this case, the Government may decide to increase allocations by about 1% of the GDP from the current level and achieve the target of 6% in the year 2013-14

Table 35: Increasing Allocation to Education Option 2

Year	Reqd allocation to Edn Exp (in lacs)	Share of GSDP in %
2008-09		
2009-10		
2010-11		

2011-12	113,972.01	4.00%
2012-13	160,985.46	5.00%
2013-14	218,296.29	6.00%
2014-15	246,674.81	6.00%
2015-16	278,742.53	6.00%
2016-17	314,979.06	6.00%
2017-18	355,926.34	6.00%

This is a more realistic approach which does not place heavy burden on the fisc. on the hand, and on the other, it gives enough time to plan for efficient absorption enhanced outlays in education. The path to achieve the 6% target is in a phased manner. But in this option, the budgetary allocations after 2013-14 will not be high. It would be a case of reaching the target and refusing to grow further. There is no hard and fast rule that the State should spend no more than 6% of the GDP. In fact, Kothari commission had suggested a progressive upliftment of expenditure to 10%. Several advanced nations spend higher proportion of their national income on education. Monies spent on education are not expenditure per se. They are rather investments, on which returns will start accruing at a later date.

Table 36: Increasing Allocation to Education Option 3

Year	Reqd allocation to Edn Exp (in lacs)	Share of GSDP in %
2008-09		
2009-10		
2010-11		
2011-12	113,972.01	4.00%

2012-13	160,985.46	5.00%
2013-14	218,296.29	6.00%
2014-15	287,787.27	7.00%
2015-16	371,656.71	8.00%
2016-17	472,468.59	9.00%
2017-18	593,210.56	10.00%

This is perhaps the best option for the State. If it is adopted, state funding of education will occupy center stage. The State would also find itself on a solid financial footing to shoulder it's onerous responsibility of educating it's citizens. One of the most advanced States in India on several parameters, Goa owes it to it's people.

With this option, the outlay for education will go up substantially but the hike is calibrated. It is possible to devise plans and programmes for absorbing additional allocations in the educational sector. Higher allocations and spending by the State on education are important, no doubt, but there is no guarantee that additional funds will be employed productively. Therefore, appropriate spending plans will have to be made in advance. Similarly, proper checks and balances mechanism will have to be put in place so that public funds are not wasted or otherwise diverted by the functionaries

5.8 SHARE OF DIFFERENT LEVELS OF EDUCATION IN EXPENDITURE (INTER-SECTORAL SHARE):

If it is decided to hike the public spending on education, there would inevitably arise the question of share of each level of education in the incremental allocation. Elementary education has always been considered the most important for obvious reasons. With out this foundation, the future structure can hardly be built. Elementary or primary education is also important in terms of improving the literacy rate. The socio-economic development of a State or a region is very much dependent on elementary education.

Education, at all levels produces externalities, though the degree may vary, not only so much from one level to another, but also from one individual to another. Hence, elementary education has been classified as Merit Good not only in India but elsewhere in the world too. The critical importance of elementary education has been underlined by the CABE (Central Advisory Board of Education) Committee on financing higher and technical education. It suggested that of the 6% of GDP allocation, elementary education be provided 3%, 1.5% to secondary education, 1% to general higher education and 0.5% to technical higher education[9]. These sectoral allocations can be used as a thumb rule or a slight modification may be done as per the needs of regional variations, as in case of Goa, for example.

As per this division, each level of education gets a higher share than what is the case presently.

Table 37: Increasing Allocation to Different Levels of Education Option1

Year	Reqd allocation in Edn Exp (in lacs)	Elementary	Secondary	Higher	Technical
2008-09					
2009-10					
2010-11					
2011-12	170,958.01	85,479.01	42,739.50	28493	14246.5
2012-13	193,182.56	96,591.28	48,295.64	32197.09	16098.55
2013-14	218,296.29	109,148.14	54,574.07	36382.71	18191.36
2014-15	246,674.81	123,337.40	61,668.70	41112.47	20556.23
2015-16	278,742.53	139,371.27	69,685.63	46457.09	23228.54
2016-17	314,979.06	157,489.53	78,744.77	52496.51	26248.26
2017-18	355,926.30	177,963.15	88,981.57	44,490.78	22,245.39

Table 38: Increasing Allocation to Different Levels of Education Option2

Year	Reqd allocation to Edn Exp (in lacs)	Elementary	Secondary	Higher	Technical
2008-09					
2009-10					
2010-11					
2011-12	113,972.01	56,986.00	28,493.00	18995.33	9497.667
2012-13	160,985.46	80,492.73	40,246.37	26830.91	13415.46
2013-14	218,296.29	109,148.14	54,574.07	36382.71	18191.36
2014-15	246,674.81	123,337.40	61,668.70	41112.47	20556.23
2015-16	278,742.53	139,371.27	69,685.63	46457.09	23228.54
2016-17	314,979.06	157,489.53	78,744.77	52496.51	26248.26
2017-18	355,926.34	177,963.17	88,981.58	59321.06	29660.53

Table 39: Increasing Allocation to Different Levels of Education Option3

Year	Reqd allocation to Edn Exp (in lacs)	Elementary	Secondary	Higher	Technical
2008-09					
2009-10					
2010-11					
2011-12	113,972.01	56,986.00	28,493.00	18995.33	9497.667
2012-13	160,985.46	80,492.73	40,246.37	26830.91	13415.46
2013-14	218,296.29	109,148.14	54,574.07	36382.71	18191.36
2014-15	287,787.27	143,893.64	71,946.82	47964.55	23982.27
2015-16	371,656.71	185,828.35	92,914.18	61942.78	30971.39
2016-17	472,468.59	236,234.30	118,117.15	78744.77	39372.38
2017-18	593,210.56	296,605.28	148,302.64	98868.43	49434.21

Elementary education was allocated Rs.60.89 Crores in 04-05; further hiked to Rs74.05 Crores in 06-07. Now as per the best suggested option, elementary education would get Rs.569.86 Crores in 2011-12. This amounts to a substantial hike in outlays for this sector.

Secondary education was allocated Rs. Rs.148.22 in 04-05; Rs.182.02 Crores in 06-07. The best option 3 provides for Rs.284.93 Crores-in-2011-12. The budgetary allocation to higher education is Rs 50.94 Crores in 2006-07[17]. As per the best option 3, higher education would get Rs.189.95 Crores in the year 2011-12. This would mean sizeable increase in the allocation for higher education. Though the amount appears to be a sizeable increase in absolute

figures, it must be noted the higher education budgetary allocation has risen marginally in the last decade or so.

Elementary education in the State presents a very interesting picture. The CABE Committee has recommended 3% of the GDP, that is, half of the entire allocation to elementary education. However, the sector is not in a position to absorb higher allocations due to a variety of factors. The recommendation of the committee is to be seen in the light of prevailing condition of elementary education in the country as a whole. The literacy level, gross enrolment ratio and other socio-economic conditions are poor in several backward states with large population.

The State of Goa scores on all these parameters. The objective of Universalisation of Elementary Education (UEE) has more or less been achieved [23].As per the 2001 Census the state literacy level is the fourth highest at 82.01%. There is, however, a cause or concern, for, there exists a gap of 13% in male and female literacy rate[24].

Due to the success of the family planning programmes, the natural growth in population is one of the lowest in the country. This trend is also due to better health care and hygiene, improved socio-economic conditions of the people. As a result, the total number of students enrolling at the primary level is falling in absolute figures. Not surprisingly, there is a corresponding decline in the number of primary schools in the state, as can be seen from below:

Table 40: School education

Years	**No. of Institutions**			
	Primary	Upper primary	Secondary	Sr.Secondary
2001-02	1033	84	361	81

2002-03	1037	75	344	81
2003-04	1009	79	363	80
2004-05	1003	73	364	81
2005-06	1001	72	345	81

Source: MHRD Goa state profile

Table 41: Enrollment

Year	I-V
2001-02	**1,20,066**
2002-03	**1,11,926**
2003-04	**1,07,875**
2004-05	**1,06,828**
2005-06	**1,04,512**

Source: MHRD Goa state profile

In a span of 5 years, number of primary schools declined by 32 from 1033 in 2001-02 to 1001 in 2005-06. During the same period, upper primary schools number also fell from a total of 84 to 72. Decline is directly attributable to the falling numbers of students seeking admission at the entry level, i.e., 1st.std. During the aforesaid period, absolute number of enrolment at the entry level fell by more than 15, 000. At higher secondary level and above, the numbers of institutions have held steady even as more students have entered the portals of higher education. This is due to increasing incomes, greater access to institutions of higher learning, awareness and general increase in the level of competition. This augurs well for the establishment of knowledge-based society in the state. It is important to address qualitative issues in this sector. The need for increased public investment, therefore, hardly needs any further emphasis.

Table 42: Drop-out Rate

Year	Nos.
2001-02	**1,20,066**
2002-03	**1,11,926**
2003-04	**1,07,875**
2004-05	**1,06,828**
2005-06	**1,04,512**

The biggest worry, however, is in respect of the drop out rate in the classes between 1 to 10th which was more than 40% in 2004-05. Kerala has a drop out rate of less than ten percent (8.58%) and Haryana 26.54%. Surprisingly, several front line states like Maharashtra, Tamil Nadu, Karnataka and Andhra Pradesh have significantly higher drop out rates of 52.06%, 58.82%, 60.38% and 66.70% respectively [15].

It is important to bench mark against the best on various macro indicators. To sustain economic and social development, it is important to address the issue of high drop out rates of above 40% at the 10th Std. level. It may also be pertinent to note that services contribute more than fifty per cent to State domestic product. Continuation of dominance of the tertiary sector, so also the professed to goal to establish a knowledge economy, depend on harnessing human resources more effectively than is the case presently. In view of the regional variations, as also looking at the future needs of the Goan economy, a modified CABE formula of sharing inter sectoral allocations could be used. Accordingly, 2% or one-third of the total public expenditure on education be allocated to elementary education, 2% to secondary education, 1.5% to higher education and .5% for technical education.

Table 43: Modified Allocations to Different Sectors of Education

Year	Reqd allocation To Edn Exp (in lacs)	Elementary	Secondary	Higher	Technical
2008-09					
2009-10					
2010-11					
2011-12	113,972.01	37,990.67	37,990.67	28493	9497.667
2012-13	160,985.46	53,661.82	53,661.82	40246.37	13415.46
2013-14	218,296.29	72,765.43	72,765.43	54574.07	18191.36
2014-15	287,787.27	95,929.09	95,929.09	71946.82	23982.27
2015-16	371,656.71	123,885.57	123,885.57	92914.18	30971.39
2016-17	472,468.59	157,489.53	157,489.53	118117.1	39372.38
2017-18	593,210.56	197,736.85	197,736.85	148302.6	49434.21

This way funding will be optimal at every level of education in the State.

5.9 REFERENCES:

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CHAPTER 6

STAKEHOLDER'S PERCEPTION ON FUNDING OF HIGHER EDUCATION IN GOA.

Chapter Plan

- Introduction, Objective and Methodology of the Survey
- Survey Analysis
- Testing of the Hypothesis- Chi Square Test
- Additional Survey of Industry Stakeholders

CHAPTER 6

6. STAKEHOLDER'S PERCEPTION ON FUNDING OF HIGHER EDUCATION IN GOA.

6.1 INTRODUCTION, OBJECTIVE AND METHODOLOGY OF THE SURVEY

In part two, a stake holders' opinion survey in the state of Goa is carried out to find out responses to the question of public funding of higher education. Groups of stake holders identified are higher educational administrators, students, Teachers, Parents, Employers, Experts from the field of public finance, education and Economics and eminent persons in the society.

The educational administrators' category essentially includes members of college management and Principals/Directors or Heads of Institutions. As important stake holders in higher education, both present and ex students are covered in the survey. A pilot survey was conducted by administering the questionnaire in three colleges. It was helpful in making suitable changes, additions and modifications in the questionnaire. At this stage, it was found that even amongst college teachers, the level of awareness with regard to issues of financing of higher education was poor. Even while retaining the basic thrust of the questionnaire, attempt was made to further simplify it so

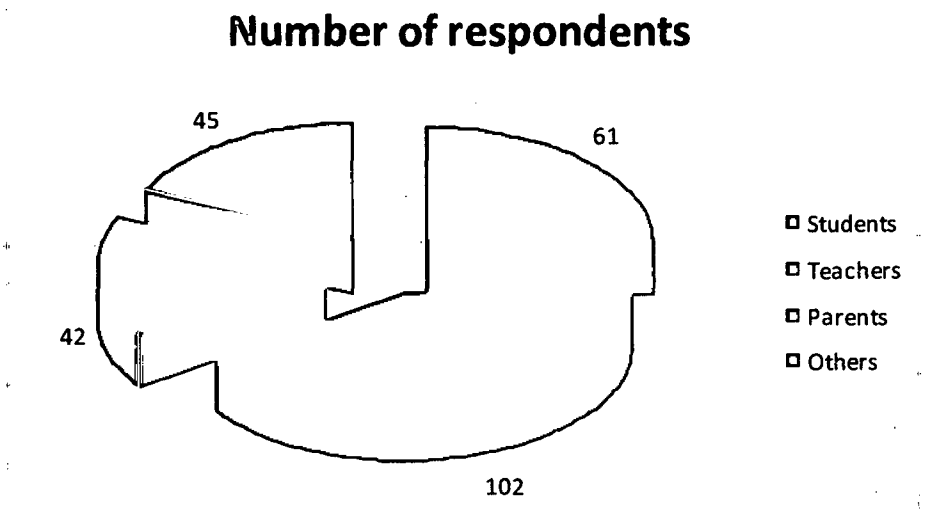
that respondents make informed choices of various issues and questions. After making a few changes in the questionnaires, (Annexure 13) it was decided to administer to the larger target respondents.

The 'population' comprises of the entire college community (of students, teachers, non-teaching staff, members of management, parents and heads of institutions), employers, experts and members of civil society. As it was not possible to cover the entire 'population', it was imperative to decide on a size and type of sampling method. A sample size of 500 was selected as it was thought to be reasonable; it was based on the idea of targeting around 40 collegiate institutions in Goa. Each college was to be covered by ten respondents. The remaining 100 respondents in the sample size would be spread over other stake holders- parents, ex-students, experts, employers and eminent persons. In order to make the sample and study as representative as possible, stratified sample method has been used.

Further stratification with in the 10 sample size of respondents from each of the identified colleges was planned in the following manner; Principal/Director/Head of the institution and/or management member-1, students and Teachers 4 each and Non teaching staff 1. This way an attempt has been made to cover all the stake holders in a representative sample.

Out of the sample size of 500, total responses received are 250. The data analysis is primarily made in respect of major stake holders categories. The break-up is as under:

Figure 9: Break up of respondents



Students including Ex-students- 61

Teachers including Principals- 102

Parents	42
Others	45

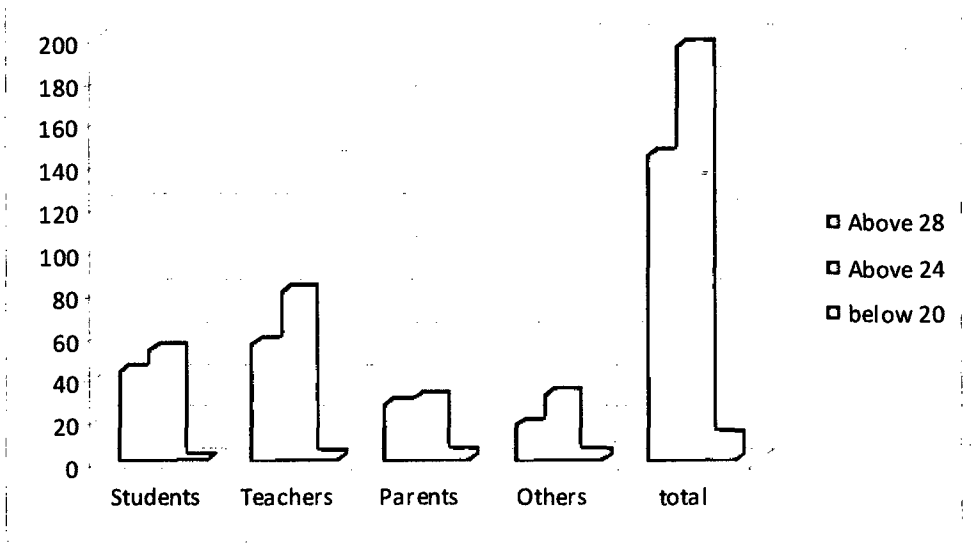
6.2 SURVEY ANALYSIS

Ten questions from the questionnaire, in the first stage, have been selected for assigning values on a scale of 1 to 4. A maximum score of 4 is assigned to an option in the questionnaire; this option expresses a clear position that the respondent is in favour of enhanced public funding in higher education. In contrast, an option of greater reliance on private or individual funding of higher education is assigned 0 score. Hence, a respondent who is almost entirely in favour of public funding of higher education would have secured a score nearer to the maximum score of 40 (4x10). On the other hand, a

respondent who is almost entirely in favour of self financing type of courses would score an aggregate nearer to 0.

Therefore, a score of 28 and above, representing 70% plus by a respondent is considered as being in favour of public funding of higher education. A score of less than 20 (50%) would represent respondent's preference in favour of self financing type of higher education.

Figure 10: Respondents' Scores



In respect of students as a category, numbers of those whose scores are 28 and above are 43. Nearly three-fourths have indicated their preference for public funded higher education.

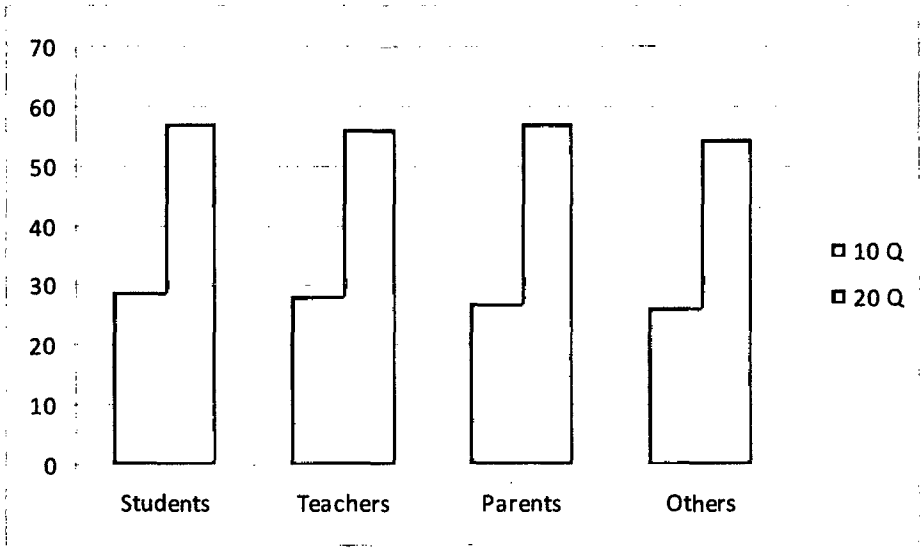
Teachers along with the body of students are important stakeholders in the system of education. Out of 102, those scoring 28 and above are 56. However, if a score of 24 and above, that is 60% is considered, then the number goes up to 81. Again, a very significant section feels that Government ought to share higher burden of cost of higher education.

Parents as a category, numbers of those with a score of 28 and above is 28. More than 65% of parents have expressed their choice in favour of public funding of higher education.

In case of 'others' as a category the overwhelming support for higher education funding by the Government is missing. Just around 40% have expressed unconditional support for public expenditure of higher education.

Almost the same results are obtained when all 20 questions asked in the questionnaire are considered. Values are assigned on the same logic and parameter as in case of the first 10 questions. Now, the maximum possible score escalates to 80 which is the highest expression of support to funding of higher education by the Government. On the same logic score closer to 0 is indicative support to private/individual funding of higher education.

Figure 11: Respondents' Scores- Comparative Figures



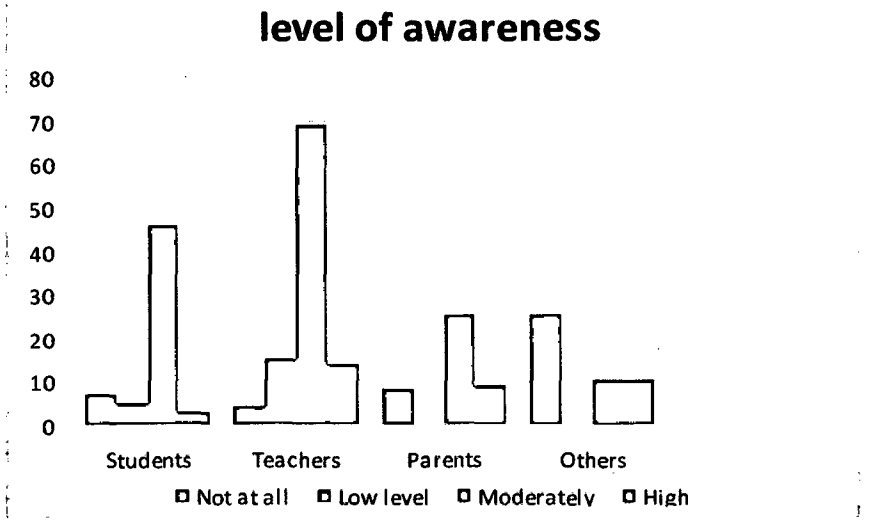
There is not much change in the mean scores of each category of responders. In case of students it goes up from 29 to 57; teachers from 28 to 56; parents from 27 to 57and others from 26 to 54. It is evident from these

figures alone that there is overwhelming support for the idea of public funding of higher education. In students category 36 out of 61 respondents have secured a score of 56 or above, i.e., 70%. This number goes up to 58 if a score of 60% (i.e., 48 and above) is considered. Almost 95% of the students respondents are in favour of public funding of higher education.

Teachers as a category also are in favour of public financing of higher education. Out of a total 102, 57 have a score of 70% and above. But if a score of 60% or above is taken, then the number goes up to 88. This again is a huge vote in favour of public funding. In fact there is no one securing score of below 20, one-fourth of the total of 80. This could be interpreted as being opposed to high fees and self financing model.

Figure 12 depicts the level of awareness amongst respondents with regard to public funding of higher education. Though there are a large number of stakeholders who have proclaimed to have moderate level of awareness, the overall picture is hardly encouraging.

Figure 12: Level of Awareness



On the question whether and how the Government should increase spending on higher education, almost all respondents have opined that the former ought to enhance public funding.

Figure 13: Response to Increase in Public Funding

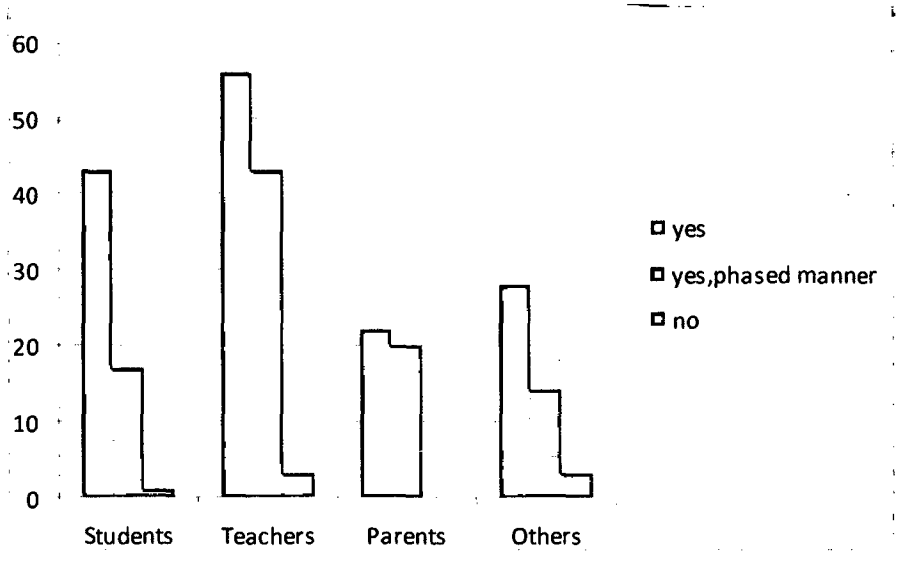


Figure 14: Response to Government Withdrawing from Funding

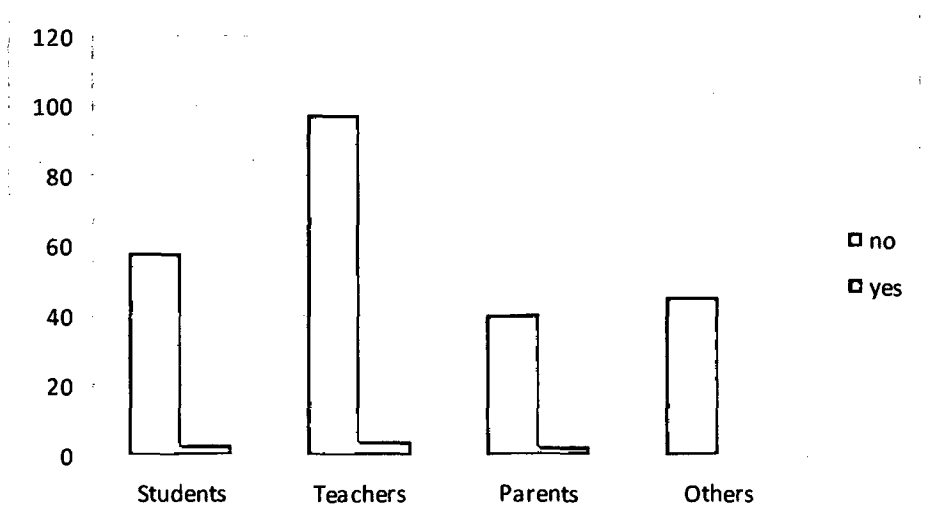
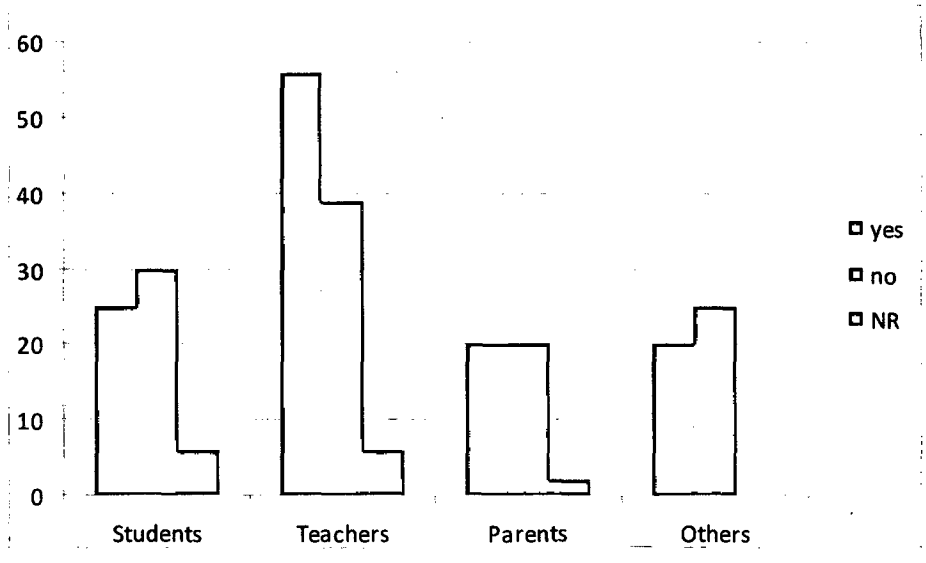


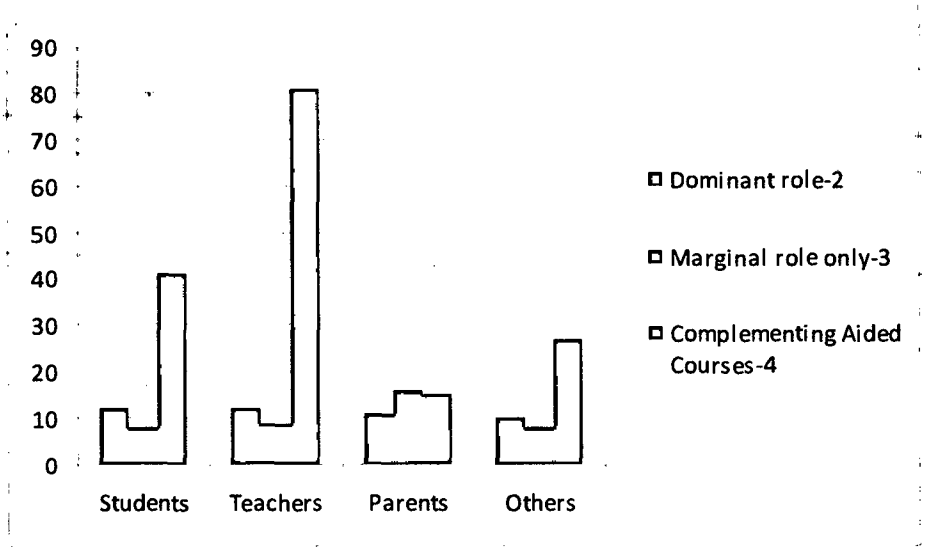
Figure 14 addresses the question on whether the Government should withdraw completely from higher education. The answer from an overwhelming majority is an emphatic no.

Figure 15: Response to Principle of Equity in Higher Education



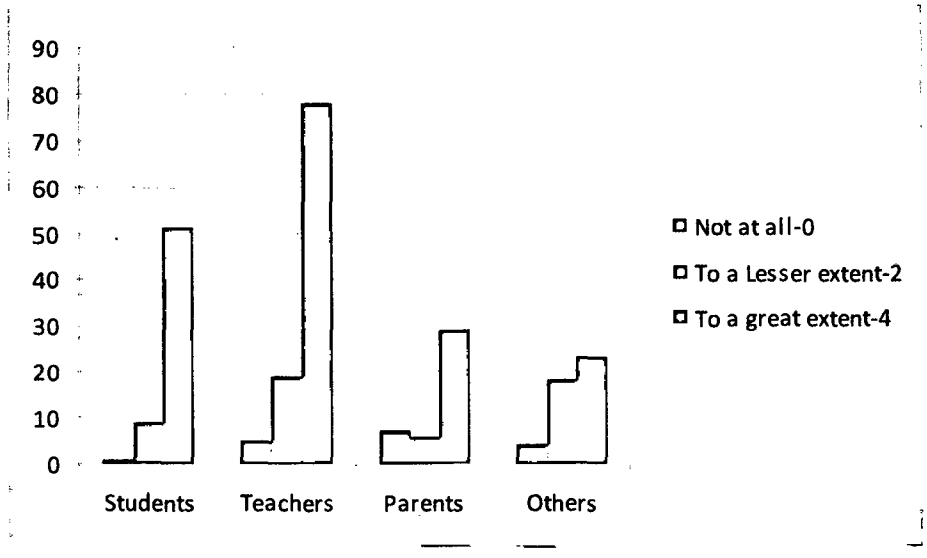
The Figure 15 relates to whether the principle of equity is compromised in self financed courses. A few of the respondents in students, teachers and parents have not expressed their opinion. There is no unanimity on this question amongst the various categories. A majority of teachers do feel that such is in fact the case.

Figure 16: Response to Role of Self financed Courses



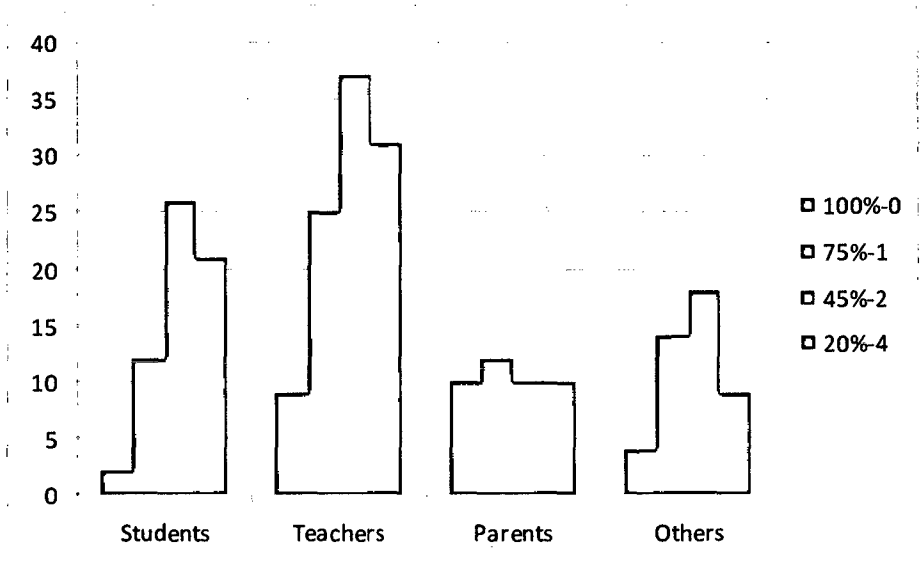
Unlike the question in the Figure 15, there are fewer differences in perception on the question of role of self financed courses. A great majority of them feel that these courses must play a complimentary role to the government aided courses.

Figure 17: Response to Importance of Different Courses



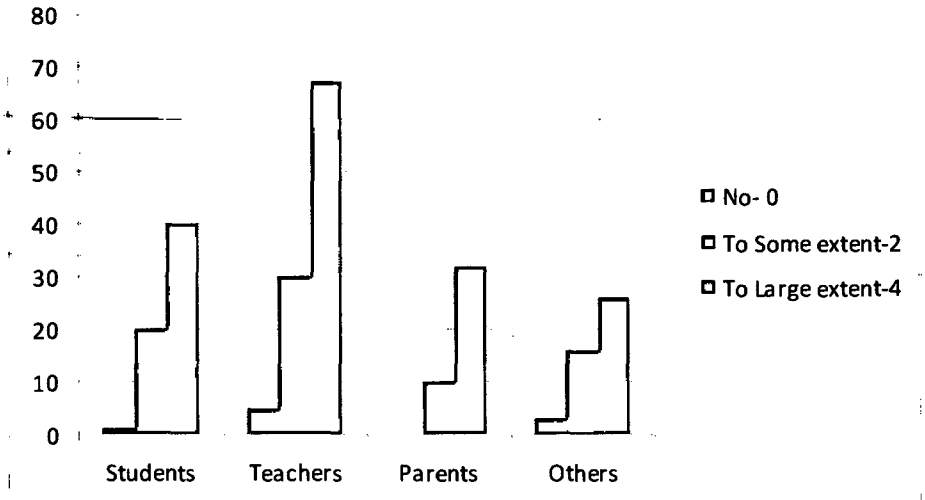
This is a question on the importance of courses in humanities and pure sciences to the nation or the society. Some of these courses do not attract students in large numbers. Private educational service providers do not, normally, show interest in running these types of courses. The State has a duty and responsibility of providing these services as it is in the interest of the economy. A large majority of respondents, especially Teachers as a group, have rated these courses very high in terms of their importance to the country.

Figure 18: Response to the Percentage of Cost Recovery



What percentage of the cost of education should be recovered by fees from students? The global norm is around 20%. However, Governments are facing varying degrees of financial crunch in various parts of the world. As such they are not willing to shoulder greater burden of funding education especially the higher education. As the student fees have gone up in recent times, even they think that they need to pay more for good quality education.

Figure 19: Response to whether Higher Education is Public good



This is the last figure in this series. It addresses a vital question as to whether higher education is a public good, that is, does it produce large externalities. Considering the enhanced importance of higher education in a globalised world, majority of respondents in all the groups have opined that higher education does produce externalities. Hence, it needs to be largely funded by Government.

The Null hypothesis- Perception of respondent groups is not the same on the question of Government spending on higher education.

The Research hypothesis-Perception of respondent groups is the same on the question of Government spending on higher education.

As per norms and benchmarks set by various expert bodies and committees, public funding of education should be at least to the tune of 6% of GDP. Respondents who favour higher government spending believe that government is not spending adequate amounts on higher education. On the other hand, some respondents think that individuals should bear the full burden

of higher education; and that the government has limited/no role to play in financing of higher education.

6.3 TESTING OF THE HYPOTHESIS- CHI SQUARE TEST.

In order to test the null hypothesis, Chi Square test is used. Through this test, we understand the behaviour pattern of respondents in four categories. As a group and with in the group, whether or not they have same opinion on the question of Government funding is ascertained with the help of Chi Square test. This test is also useful in understanding whether the differences, if any, are due to chance or are they real or actual differences.

Respondents have been classified in to four groups-students, teachers, parents and others. These stakeholders have responded to the survey questionnaire. The Cross tabular data consists of respondents groups as columns and their preference for government funding or otherwise as rows. Observed values have been interpreted thus- respondents securing a score of more than 70%, that is, 28 out of a maximum of 40, are taken as expressing their support to higher government spending on higher education. All those securing a score of less than 70% are considered on the other side, that is, not supporting completely the idea of government funding of higher education.

The observed values are shown in table 44

Table 44: Chi Square Observed Values

Observed	Students	Teachers	Parents	Others	Total
High support to Govt. spending	43	56	28	18	145
Low support to Govt. spending	18	46	14	27	105
Total	61	102	42	45	250

The expected values are as under.

Table 45: Chi Square Expected Values

Expected	Students	Teachers	Parents	others	Total
High support to Govt. spending	35.4	59.2	24.4	26.1	145
Low support to Govt. spending	25.6	42.8	17.6	18.9	105
Total	61	102	42.0	45.0	250

$$X = \frac{\sum (Oi - Ei)^2}{Ei}$$

Where Oi = Observed Values

Ei = Expected Values , i=1,2,3.....8

Using the above formula, the $\frac{(Oi - Ei)^2}{Ei}$ values are obtained as under

1.64116	0.16879	0.543908	2.513793
2.26637	0.233091	0.751111	3.471429

Chi Square is then the summation of the values in the above table.

The degree of freedom (Df) is calculated as under

(c-1)*(r-1), Where c=Number of columns and r= Number of rows

Or (4-1)*(2-1) = 3

Chi Sq	11.5897
Df	3
Lev of Significance	0.05
Chi Sq Benchmark	7.814

It can be seen that the Chi Square value is higher than the Chi Square benchmark value at 95% confidence level. Hence, the null hypothesis that perception of groups is not the same on the question of Government financing of higher education is rejected. Hence, it follows that the alternate hypothesis is accepted, which implies that the perception of the respondent groups is the same on the question of public funding of higher education.

In the second stage, all the twenty questions contained in Part A of the questionnaire have been considered for testing the hypothesis with the help of Chi Square Test. There is no change in the categorization of respondent groups. The interpretation of the cross tabular data also remains the unchanged. The criterion used for reckoning higher support to public funding is also the same, that is, 70% of the possible total score. Since there are now twenty questions and a maximum score of 80 (at the rate of a maximum of 4 per question), 70% works out to a score of 56. So, respondents who have secured a score of 56 or above are reckoned to support the idea of higher public support for funding of tertiary education. Scores below 56 reflect reduced support for Government funding.

The observed values are shown below:

Table 46: Chi Square Observed Values

Observed	Students	Teachers	Parents	Others	Total
High Govt to Support spending	36	57	27	16	136
Low Govt to support spending	25	45	15	29	114
Total	61	102	42	45	250

The expected values are as under.

Table 47: Chi Square Expected Values

Expected	Students	Teachers	Parents	others	Total
High Govt Support to spending	33.184	55.488	22.848	24.48	136
Low Govt support to spending	27.816	46.512	19.152	20.52	114
Total	61	102	42	45	250

2

$$X = \sum \frac{(Oi - Ei)^2}{Ei}$$

Where Oi = Observed Values

Ei = Expected Values , i=1,2,3.....8

Using the above formula, the $\frac{(Oi - Ei)^2}{Ei}$ values are obtained as under

X	0.238966	0.041201	0.754513	2.937516
	0.239924	0.096018	0.836086	3.687099

Chi Square is then the summation of the values in the above table.

The degree of freedom (Df) is calculated as under

(c-1)*(r-1), Where c=Number of columns and r= Number of rows

Or (4-1)*(2-1) = 3

Chi Sq	8.710
Df	3
Lev of Significance	0.05
Chi Sq Benchmark	7.814728

Here again, Chi Square value is higher than the Chi Square benchmark value at 95% confidence level. Hence, the null hypothesis that perception of groups is not the same on the question of Government financing of higher education is rejected. Hence, it follows that the alternate hypothesis is accepted, which implies that the perception of the respondent groups is the same on the question of public funding of higher education.

Part B of the questionnaire survey consisted of hypothesis and the converse on the topic of the study. Four statements have been selected and scores classified as 'positive' (supporting the research hypothesis) and 'negative' (not supporting the hypothesis).

Table 48: Aggregate Scores of Respondents

		Students	Teachers	Parents	Others
Q1	Agree	42	42	21	23
	Disagree	14	45	13	13
Q4	Agree	48	52	25	21
	Disagree	12	47	13	24
Q9	Agree	38	58	17	21
	Disagree	17	36	17	14
Q11	Agree	15	15	8	14
	Disagree	44	83	30	31

In respect of questions number 1 and 4, respondents who have agreed with the proposition are in support of the view that Government should bear greater burden of higher education. Those who have chosen the 'converse' in respect of questions at number 9 and 11 are in favour of Government bearing greater burden of higher education. Analyzed in this manner, the aggregate scores of different categories of respondents are given here under.

Table 49: Chi Square Observed Values

Observed	Students	Teachers	Parents	Others	Total
High Govt to support spending	151	213	93	89	546
Low Govt to support spending	79	165	51	72	367
Total	230	378	144	161	913

As against these observed values, expected values are calculated and shown below:

Table 50: Chi Square Expected Values

Expected	Students	Teachers	Parents	Others	Total
High Govt to support spending	137.5	226.1	86.1	96.3	546
Low Govt to support spending	92.5	151.9	57.9	64.7	367
Total	230	378	144	161	913

$$X = \sum \frac{(Oi - Ei)^2}{Ei}$$

Where Oi = Observed Values

Ei = Expected Values , i=1,2,3.....8

Using the above formula, the $\frac{(Oi - Ei)^2}{Ei}$ values are obtained as under

1.315884125	0.753919	0.572891	0.562535
1.957691368	1.121634	0.862048	0.857709

The Chi square value is as under

Chi Sq	8
Df	3
Lev of Significance	0.05
Chi Sq benchmark	7.815

INTERPRETATION. Chi Square value is higher than the Chi Square benchmark value at 95% confidence level. Hence, the null hypothesis that perception of groups is not the same on the question of Government financing of higher education is rejected. Hence, it follows that the alternate hypothesis is accepted, which implies that the perception of the respondent groups is the same on the question of public funding of higher education.

6.4 ADDITIONAL SURVEY OF INDUSTRY STAKEHOLDERS

A separate survey and study was conducted covering Industry stakeholders only. This has been done in addition to the main survey which covered 250 respondents; this also included industry stakeholders as a category. The objective of this additional study was to focus mainly on the expectations and views of the Industry representatives.

In order to ensure a more comprehensive coverage, questions in the survey were not restricted to funding of higher education; rather the questionnaire was designed to elicit their views on the over all issues of man power planning and requirements of the State.

As the major issues concerning the study were already covered in the main survey and study, it was decided to target twenty five respondents on random basis for this further study. Though the sample size is small, they represent a cross-section of the Goan industry. Fifteen respondents have sent their replies.

Goan economy has done well on several socio-economic parameters in recent years. The State has consistently recorded higher GDP growth rate in comparison with the national average. Yet, the State faces the problem of educated unemployed. Hence, a question on what needs to be done in the field of education to ensure employment for educated youth was included. A large number of the respondents-40%, have felt that vocational education has to be given greater thrust in the over all educational planning. Some have

expressed their choice in favour of greater private initiative in higher education services.

Fortunately the Goa Chamber of Commerce and Industry (GCCI) is an active association of industry representatives. It has an educational cell that contributes to the thought process and assists the Government and other private bodies and institutions in planning and execution of educational policies in the State. Therefore, a question on the role of GCCI in respect of education in the State was included. Of the respondents, forty percent have said the GCCI should actively associate with academic institutions at various levels so that the industry needs and changes are better reflected in their curricula. Another 6 respondents that is 40% have felt that the Chambers ought to take up initiative for training of passed out students from educational institutions.

There is a lot of scope for improvement and up gradation in higher education. Steps in this direction need to be taken on priority basis since we are moving towards a knowledge driven economy. Innovation has become the key driver of corporates as well as global economies. It is in this context that an overwhelming majority of respondents have felt that it is possible to improve the quality of education by forging closer ties with industry.

At the macro level it is important that man power planning is done by the State. In this context, a question in the survey pertained to adequacy of graduates passing out from the State. Almost all the respondents felt that the number of graduating students is adequate. Similarly, more than half of the respondents have expressed a view that there is a need to align industrial

policy with educational policy in the State. To a further question in this area, majority of respondents do feel that there is mismatch between skills needed in the industry vis-à-vis those imparted in educational institutions.

Another question in the survey related directly to the topic of the study that is, funding. Nearly half of industry respondents appear to suggest that student loans need to be one of the main sources of fund for supporting higher education. A third of the respondents have felt that the Government should bear the cost of education. Most of the respondents have expressed a view that fees should cover around fifty percent of the cost of higher education. The global view is that recovery of student fees should not exceed more than 20%. It has been seen that in a number of Indian universities and colleges, fees recovery exceed 100% of cost; hence the charge that there are institutions which indulge in profiteering in the field of higher education.

A significant majority of respondents have felt that the State employment exchange does not present a true picture of number of unemployed in the State. Generally it is observed that a person is not delisted even after he/she has obtained a job. Further, Goans' preference for Government jobs is well known; therefore, even after obtaining gainful employment in the private sector, a person is tempted to continue to register with the exchange.

There was a mixed response to the question as to whether privatization of higher education would solve all the problems. A third of the respondents were certain that it would not be so; whereas another third felt it could achieve results 'to a lesser extent'.

CHAPTER 7

FINDINGS AND SUGGESTIONS

Chapter plan

- Suggestions and Conclusion
- Further Scope for Research

CHAPTER 7

7. FINDINGS AND SUGGESTIONS

1. The hypothesis that there is no correlation ship between GDP growth rate and growth in Government's spending is rejected after testing. There is a positive coefficient of correlation of 0.986 between the two variables. Hence, the alternate hypothesis that there is a correlation between the two variables is accepted.
2. The analysis of secondary data indicates that Government of India does not make adequate budgetary provision (the benchmark is to spend 6% of GDP) for education in general and higher education in particular.
3. International comparison of spending on education by select countries in the world with India is made. Here, too, it has been seen that India fares poorly even when compared with some of the developing countries in the world.
4. Generally speaking none of the Indian states spend adequate sums on education on a continuous and sustained basis. This has been proved with the available data. The bench mark, which the various Indian and global

authorities like UNESCO, Kothari Commission, have indicated is a minimum of budgetary allocation of 6% of GDP by the Government.

5. The assumption that the private sector growth and presence has been increasing has also been established with the data that has been collated from different sources for this purpose.

6. With reference to specific objectives, it has been found out that there is growing trend in respect of budgetary allocations to education in general. This trend is discernable both for the nation as a whole as well as for the State of Goa. However, this increase is inadequate considering the vast and young population of this country and the demand for quality higher educational services. The rise in budgetary allocations is also not in keeping with the significant increase in GDP in recent years.

7. The study has established the existence of a strong and positive correlation ship between GDP and budgetary allocations made to education every year. Coefficient of Co-relation is calculated for all India figures as well as for the State of Goa. But, spending on education has been on the lower side right through out the period of study. The same situation has been maintained; with rising GDP, government has allocated higher sums for education but is still falling short of the desired bench mark levels by a big margin.

8. The Primary data, which has been collected through an opinion survey of stakeholders, also indicates the preference of overwhelming majority of respondents for increased allocations by government to higher education in Goa. A total of 196 respondents have secured a score above 24 (60% of a total of 40) in the survey. They are generally in favour of the Government

assuming a greater funding responsibility. Just 12 respondents out of a total of 250 (which is less than 5%) have opined in favour of self financing or private funding of higher education. They have secured a score of less than 20. The mean scores for students is 29; for teachers it is 28.3; for parents-27 and 26.3 for others.

9. Based on the Primary data, Chi Square test has been used to test the hypothesis. With the help of results of this test, null hypothesis that perception of respondent groups is not the same on the question of Government spending on higher education is rejected.

10. Simple model to gradually enhance budgetary allocations to Education in Goa, based on a research study by Prof: Tilak, has been suggested. The said model is suitably modified keeping in view the specific needs and circumstances of the Goan economy. The Government of Goa could use this as a road map for increasing budgetary allocations to education in a phased and planned manner. It will help in achieving threshold and bench mark levels of spending on education. More importantly, it will ensure that education in general and public institutions in particular will not be starved of funds and investments. Both quantitative and qualitative expansion of education hinges on this critical component.

7.1 SUGGESTIONS AND CONCLUSIONS.

The role of higher education in the overall socio-economic development process hardly needs any emphasis. It forms the critical component and the very basis of creation of a knowledge based society. This is also the professed objective of our economy. The twenty first century would undoubtedly belong to nations and societies that lead the world in knowledge accretion and innovation in critical frontiers and areas.

In India higher education has been starved of funds for too long. It has also suffered on account of policy neglect by Union and State Governments. The need to increase public spending on education to at least 6% of GDP has been reiterated several times by governments and expert bodies. Yet the average spending is no more than 4% of national income.

1. There is an urgent need to increase spending on education, particularly in higher education. A funds-starved system of higher education can neither grow nor can it deliver on quality front. Infra-structure in majority of our colleges and universities need urgent up gradation and revamping. This involves a lot of capital expenditure. Similarly, large numbers of teaching vacancies are lying vacant for a considerably long period of time in several institutions. There is a case for treating even the operating expenditure in education as an investment; after all, social and economic returns later more than justify these initial investments. Perhaps, a one time big investment to

care of the huge back log would be in order both for the Central and the concerned State Governments.

2. The State should reaffirm it's commitment to the cause of education. After a long hiatus, there is now some action on the part of the Union government to increase allocations to higher education. Typically, there is a greater problem in maintaining the tempo of higher investments in education, particularly in the higher education sector. This study has suggested a road map to hike outlays on education in a phased manner over a period of time.

3. Fees paid by the students are increasingly becoming the main stay of financing of higher education. In most cases of self financing courses and colleges, cost recovery by fees exceeds 100%. Even in several public funded colleges and universities, this figure has gone up significantly in recent years, in some cases up to 80% plus. Higher education has been accorded the status of quasi-merit or Merit 2 good. In that case, user charges should be not too high. The international norm for cost recovery through tuition is 20%.

4. There is a need to overhaul the present system of regulation of higher education in the country. On the one hand, it is highly regulated but poorly governed; on the other, it is unable to prevent entry of rent seeking and profit making entities which are exploiting the users. It is also preventing entry of good and new institutions in the private sector because of policy-muddle and confusion. The establishment of a National Higher Education Regulatory Authority, on the lines of suggestions made by National Knowledge

Commission and Yashpal Committee, with appropriate powers and mandates needs to be expedited.

5. Presently, University system, as a whole, is overburdened in the country. Several old and reputed universities have affiliated colleges in excess of 400 in their folds. First of all, affiliating system is itself outdated as it centralises authority and curb freedom to devise and run new courses. Secondly, with too many affiliating colleges under their supervisory control, several universities spend their time, money and energy in issues of affiliation, examination and granting of degrees. UGC has opined that a University, ideally should have no more than 50 affiliated colleges barring exceptional circumstances such as covering colleges in backward and high population regions. Similarly

6. Growth of private higher education needs to be properly regulated. Allowing it's unbridled growth will necessarily hit access and equity in higher education. Barring a few handful of them, the rest are degree granting colleges with no holds barred for commercial exploitation.

7. One of the reasons for low access and GER in India is owing to the proliferation of self financing courses and private colleges. They offer only such courses that have market demand. Seats for such courses in public funded institutions are limited. As a result, fees, in or the other form, have been hiked by private colleges. Even the fees in public funded institutions have been hiked in respect of technical and professional colleges in recent

years in most parts of the country. Therefore, the GER is not picking up. In order to increase access, hence, there is a need to lower the fees so that the low income group students enroll for higher studies.

8. As the Cabe Committee has pointed out, the data base on higher education in India is very weak. There is no body or mechanism whereby it is possible to properly assess personal and private expenditure on higher education. Even, the detailed data break up of higher education in respect of publicly funded colleges and universities are not available. Not only is this a handicap for research studies on the subject, it also seriously affects policy formulation in this vital area.

7.2 FURTHER SCOPE FOR RESEARCH

There are fewer research studies on education in India compared with the West. There is scope for studying and documenting alternative funding practices both in India and abroad. Some of the funding options may be more suitable to western advanced nations. Student loans may be more viable there as interest rates are very low and the repayment period is also higher. Moreover, there are ample opportunities for part time job with in and outside universities and educational institutions. Similarly, alumni donations are an important source of financing in the west; in India, barring a few elite institutions, it is yet to pick up. Philanthropic donations too are not significant in third world nations.

Levels of investments in education-both private and public are related areas of study and research. Studies relating to return on such investments are vital for future policy formulation and action.

Estimates of costs of education at various levels are not readily available; in several cases, they are not entirely reliable since they have not been compiled through rigorous primary research or through validated secondary data. Living and Boarding costs have gone up in recent years and there is wide degree of regional variation in this regard with in India. Hence, there is good scope for vital research in this area.

Region specific studies on economic and financial aspects of education are highly desirable and imperative. Educational attainments and outcomes vary across the nation. There are wide variations in GER and participatory ratios in different parts of the country. Issues and access and equity too vary in a big way between regions with different levels of socio-economic achievements.

Per capita incomes are rising in both urban and rural areas, though the rise in urban areas is relatively higher. State governments' revenues too have gone up in most cases. There is scope for carrying out comprehensive research studies on the impact of financing of higher education taking in to account all these perspectives. With the increase in budgetary allocations to all sectors of education, it would be imperative to study outcomes in terms of attainments in education, added skills and gainful employment.

ANNEXURE

Annexure 1
GER, private enrolments and expenditure share

Country	GER	Private enrolments	% expenditure from non-public sources	
			Public	Non-public
USA	81	23.2	34.0	66.0
China	13	8.9	-	-
Japan	49	77.1	-	-
India	11	30.7	50.3	49.7
Germany	48	3.7	91.3	8.7
UK	64	-	71.0	29.0
France	54	-	85.6	14.4
Italy	53	-	77.8	22.2
Brazil	18	70.8	-	-
Russia	70	10.0	-	-
Canada	58	-	58.6	-
Korea	85	-	15.9	-
Philippines	31	76.0	-	-
Australia	74	-	51.3	48.3
Malaysia	27	39.1	-	-

Sources: *For GER - UNESCO Statistical Yearbook (1998), UNESCO, Paris for 1990 and nearest years; UNESCO Institute of Statistics 2005, for 2001/2002 and nearest years; UNESCO 2004 FEA Global monitoring report for data on GNP per capita. Data on India as per analysis by the author. Pavan Agarwal(2006),ICRIER Working paper –Higher Education in India*

Annexure 2
Researchers and technicians in R & D

	Researchers in R&D 1996-2004		Technicians in R&D 1996-2004	
	Per million people 1996-2004	Number	Per million people 1996-2004	Number
USA	4484	1316951	-	-
China	663	859380	-	-
Japan	5287	675678	528	67478

India	119	128484	102	110129
Germany	3261	269032	1089	89482
UK	2706	162089	-	-
France	3213	194065	-	-
Italy	1213	69868	1347	77587
Brazil	344	63261	332	61054
Russia	3319	477272	557	80096
Other select countries				
Canada	3597	115104	-	-
Korea	3187	153294	-	-
Australia	3670	73767	-	-

Source: *UNESCO Institute of Statistics from WDI (2006)*

Annexure 3

Times Top 100 Universities

Country	Number of universities in Top-100	Top university in the country	Rank	
			In 2005	In 2004
United States	31	Harvard University	1	1
United Kingdom	13	Cambridge University	3	6
Australia	6	Melbourne University	19	22
France	5	Ecole University	10	27
China	4	Beijing University	14	17
Switzerland	4	ETH Zurich	21	10
Netherlands	4	Delft University of Technology	53	78
Japan	3	Tokyo University	16	12
Canada	3	McGill University	24	21
Hong Kong	3	Hong Kong University	41	39
Belgium	3	Brussels free University (French)	76	-
Singapore	2	National University of Singapore	22	18
Germany	2	Heidelberg University	45	47
India	2	Indian Institute of Technology	50	41

Austria	2	Vienna University	65	94
New Zealand	1	Auckland University	52	67
Finland	1	Helsinki University	62	129
Denmark	1	Copenhagen University	66	63
Israel	1	Hebrew University of Jerusalem	77	93
Russia	1	Lomonosov Moscow State University	79	92
South Korea	1	Seoul National University	93	118
Mexico	1	National Autonomous University of Mexico	95	195
	100			

Source : Times Higher Education Supplement, London

Annexure 4

Comparison of University and Industry R& D

University R &D	Industry R &D
Essential long –term	Essential short-term
Carried out by graduate students under the guidance of faculty supervisors, with the objective of fulfilling degree requirements.	Carried out by professional with objective of satisfying customer needs.
Maintaining continuity is more difficult.	Continuity is maintained in proportion to the industry goals.
Output is more in terms of research papers.	Out put is more in terms of products and processes, and patents.
Scope is more deep and detailed.	Scope of solution is detained by the extent of need.

Source: *Natarajan, R. (2000), "University-Industry Cooperation, Collaboration and Partnership", Presented at the Presidents of World Prestigious Universities Forum on the Theme, "Higher Education and Development of High-tech in the 21st Century- University and Enterprises", Beijing- China,*

Annexure 5

: Fees for undergraduate programmes in engineering (2005/06)

State	Average /Range (in Rs)
Madhya Pradesh	23300-26000
Chattisgarh	20000-31900
Gujarat	30000-36000
Chandigarh	72000
Haryana	45000
Himachal Pradesh	41000
J & K	32000
Punjab	51500
Rajasthan	41000
Andhra Pradesh	22000
Tamil Nadu	25500-40000

Source:AICTE

Annexure 6

: Higher Education System in United States and India

	United States	India
Size	Large and complex	Large and complex
Diversity	Highly diverse	Very little diversity
Role of Central (Federal) Government	Federal government has maintained an arms-length distance relationship with universities. The central government does not establish and maintain any institutions of higher education. It is responsible for majority of students 'grants and loans almost half of the students receive federal financial aid	Establish and provide grants to institutions of higher education, maintaining direct relationship with some of them. Small central funding for higher education largely goes for maintaining these institutions . Very small central funding for the rest of the system.
Role of State Government	Mainly authorize educational institutions to operate within states and license entry in to certain profession s; States prevent fraudulent practices of the higher education	Most public higher education institutions funded by state governments. States have limited role in maintaining standards . Because of reducing funding role and weak links in the Indian higher

	institutions and provide oversight of the minimum or threshold capabilities.	education system. Many state institutions operate outside the states
Higher education institutions	Strong commitment to internal accountability through regular programme reviews and systematic activities to assess student outcomes.	Commitment to internal accountability and external accountability (mainly to affiliating the universities) varies widely across range of institutions.
System	The federal government, the state governments and the voluntary accreditation agencies – called the 'Triad' play complementary roles with clear division of labour. Each carry out distinct activities with distinct purposes taking different paths to the same super ordinate goal of providing high quality education with diverse offerings and sound investment of public funds.	The central government, the state governments, largely statutory government controlled bodies like the UGC, professional councils and the universities (particularly the affiliating the afflicting universities) and the voluntary accreditation agencies create a multi-layered burdensome regulatory system trying to achieve often conflicting objectives. Due to poor public funding and weak regulatory mechanism

***Source**: Compiled by the author from various sources*

Source:Pavan Agarwal(2006),ICRIER Working paper –Higher Education in India

Annexure 7

Nos. of Patents Registered

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Ye
Total, U.S. And Foreign Origin	101419	109645	111984	147517	153485	157494	166035	167330	169023	164290	143806	173772	157282	157772	167549	4548
-- Subtotal -- U.S. Origin	55739	61104	61708	80289	83905	85068	87600	86970	87893	84270	74637	89823	79526	77502	82382	2620
-- Subtotal -- Foreign Origin	45680	48541	50276	67228	69580	72426	78435	80360	81130	80020	69169	83949	77756	80270	84967	1927
JAPAN	21764	23053	23179	30840	31104	31295	33223	34858	35515	35348	30341	36807	33354	33682	35501	761
GERMANY	6600	6818	7008	9095	9337	10235	11260	11280	11444	10779	9011	10005	9051	8914	9000	322
UNITED KINGDOM	2481	2454	2680	3467	3576	3669	3967	3843	3631	3450	3148	3585	3292	3094	3175	132
FRANCE	2821	2788	2958	3674	3820	3819	4041	4035	3868	3380	2866	3431	3130	3163	3140	120
CANADA	2104	2232	2379	2973	3226	3419	3606	3431	3427	3374	2894	3572	3318	3393	3655	87
TAIWAN	1620	1897	2057	3100	3693	4667	5371	5431	5298	5938	5118	6361	6128	6339	6642	77
KOREA, SOUTH	1161	1493	1891	3259	3562	3314	3538	3786	3944	4428	4352	5908	6295	7548	8762	66
SWITZERLAND	1056	1112	1090	1279	1279	1322	1420	1364	1308	1277	995	1201	1035	1112	1208	55
ITALY	1078	1200	1239	1584	1492	1714	1709	1751	1722	1584	1296	1480	1302	1357	1346	47
SWEDEN	806	854	867	1225	1401	1577	1741	1675	1521	1290	1123	1243	1061	1060	1014	41
NETHERLANDS	799	797	808	1226	1247	1241	1332	1391	1325	1273	993	1323	1250	1330	1288	39
AUSTRALIA	459	471	478	720	707	705	876	859	902	953	910	1325	1265	1291	1221	21
ISRAEL	384	484	534	754	743	783	970	1040	1193	1028	924	1218	1107	1166	1404	18
BELGIUM	397	488	515	693	648	694	718	722	622	612	519	625	520	510	594	17
AUSTRIA	337	362	376	387	479	505	589	530	592	540	463	577	457	464	503	15
FINLAND	358	444	452	595	649	618	732	809	865	918	720	950	850	824	864	15
DENMARK	199	241	333	392	487	436	479	426	529	414	358	439	388	391	390	10

Annexure 8

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Yea
Total, U.S. And Foreign Origin	101419	109645	111984	147517	153485	157494	166035	167330	169023	164290	143806	173772	157282	157772	167349	45480
-- Subtotal -- U.S. Origin	55739	61104	61708	80289	83905	85068	87600	86970	87893	84270	74637	89823	79526	77502	82382	26206
-- Subtotal -- Foreign Origin	45680	48541	50276	67228	69580	72426	78435	80360	81130	80020	69169	83949	77756	80270	84967	19274
U.S.S.R.	12	16	4	6	3	1	0	1	0	0	0	0	0	0	0	69
CHINA, PEOPLE'S REPUBLIC OF	62	46	62	72	90	119	195	289	297	404	402	661	772	1225	1655	68
SPAIN	148	157	177	248	222	270	269	303	309	264	273	295	268	303	317	64
NORWAY	130	139	142	198	224	248	265	242	262	243	220	244	247	273	265	61
INDIA	37	35	47	85	112	131	178	249	342	363	384	481	546	634	679	47
SINGAPORE	53	88	94	120	144	218	296	410	427	449	346	412	393	399	436	45
CHINA,HONG KONG S.A.R.	86	88	81	160	155	179	237	233	276	311	283	308	338	311	305	41
SOUTH AFRICA	123	111	101	115	110	111	120	113	112	100	87	109	82	91	93	40
HUNGARY	50	43	25	50	39	36	60	48	72	48	46	49	47	66	46	29
NEW ZEALAND	44	52	85	114	114	107	124	140	135	142	122	136	113	105	127	27
IRELAND	47	77	71	71	90	121	141	127	163	186	156	174	146	164	177	20
RUSSIAN FEDERATION	98	116	111	189	181	183	234	200	203	169	148	172	188	176	196	20
MEXICO	40	39	45	57	76	76	81	94	85	86	80	66	56	54	60	25
BRAZIL	63	63	62	74	91	98	110	96	130	106	77	121	90	101	103	21
Others (142)	178	200	231	296	359	366	414	427	446	377	338	458	402	468	527	101

Source for Annexure 7 and 8: US. Patent and Trade mark Office.

Annexure 9

Public Expenditure on education

Year	GDP at current prices (at factor cost)	% Growth rate	Expenditure on education by education & other Dept	% Growth rate	Expenditure on education by education & other Dept as % of GDP
1990-91	510954		19615.85		3.84
1991-92	589086	15.29%	22393.69	14.16%	3.8
1992-93	673221	14.28%	25030.3	11.77%	3.72
1993-94	781345	16.06%	28279.69	12.98%	3.62
1994-95	917058	17.37%	32606.22	15.30%	3.56
1995-96	1073271	17.03%	38178.09	17.09%	3.56
1996-97	1243546	15.87%	43896.48	14.98%	3.53
1997-98	1390148	11.79%	48552.14	10.61%	3.49
1998-99	1598127	14.96%	61578.91	26.83%	3.85
1999-00	1786525	11.79%	74816.09	21.50%	4.19
2000-01	1925416	7.77%	82486.48	10.25%	4.28
2001-02	2100187	9.08%	79865.7	-3.18%	3.8
2002-03	2265304	7.86%	85507.34	7.06%	3.77
2003-04	2549418	12.54%	89079.25	4.18%	3.49
2004-05	2855933	12.02%	96694.1	8.55%	3.39
2005-06	3275670	14.70%	113228.71	17.10%	3.46
	Mean	13.23%		12.61%	
	Average	33.82%		29.83%	
	Standard Deviations	0.030438537		0.069024783	
		Correlation	0.986450674		

Annexure 10

Year	Expenditure	% to GDP	Growth rate
1990-91	3956.09	0.77	
1991-92	4396.78	0.75	11.14%
1992-93	4922.9	0.73	11.97%
1993-94	5557.2	0.71	12.88%
1994-95	6299.53	0.69	13.36%
1995-96	6954.07	0.65	10.39%
1996-97	7983.11	0.64	14.80%
1997-98	8595.67	0.62	7.67%
1998-99	11097.42	0.69	29.10%
1999-00	15112.89	0.86	36.18%
2000-01	16928.21	0.89	12.01%
2001-02	14323.32	0.69	-
2002-03	15858.83	0.7	10.72%
2003-04	17064.13	0.68	7.60%
2004-05	18813.07	0.66	10.25%

Mean	12.34%
Average	23.47%
Standard Deviation	0.1096267
Correlation	0.960442533

Annexure 11

Year	Total Expenditure on Education (in Lacs)	Growth rate of expenditure
99-00	21535.41	
2000-01	24300.00	12.84%
2001-02	25500.00	4.94%
2002-03	29862.33	17.11%
2003-04	31548.12	5.65%
2004-05	32430.38	2.80%
2005-06	34014.04	4.88%
2006-07	36790.11	8.16%
2007-08	35914.60	-2.38%
2008-09	48745.38	35.73%

MEAN	9.97%
Average	12.63%
Standard Dev	0.10539
Correlation	0.945516598

Correlation between Tot Exp and Exp on Hr edu: 0.816840218

Annexure 12

Exp. On higher education(in Lacs)	Growth rate of Exp on Hr edu	GSDP (in Lacs)	Growth rate of GSDP	Total exp. As a % of GSDP	Exp. On Hr edu as a % of GSDP
3870.96		632975		3.40%	0.61%
2818.61	-27.19%	769,805	21.62%	3.16%	0.37%
2519.22	-10.62%	807,301	4.87%	3.16%	0.31%
3104.14	23.22%	924,622	14.53%	3.23%	0.34%
4076.54	31.33%	965,664	4.44%	3.27%	0.42%
6524.34	60.05%	1,148,151	18.90%	2.82%	0.57%
4696.36	-28.02%	1,326,237	15.51%	2.56%	0.35%
5094.49	8.48%	1,524,836	14.97%	2.41%	0.33%
5472.31	7.42%	1721459	12.89%	2.09%	0.32%
7235.02	32.21%	1974708	14.71%	2.47%	0.37%
Mean	10.76%		13.61%		
Average	8.69%		21.20%		
Standard Dev	0.27658		0.05381		
Correlation	0.809184868				

Annexure 13

STATE FUNDING OF HIGHER EDUCATION: A STUDY WITH PARTICULAR REFERENCE TO THE STATE OF GOA SURVEY QUESTIONNAIRE

This study, and hence this questionnaire, is about funding role of the State. It seeks to find out the opinions of a large number of stake holders in higher education in the State of Goa. They include students, Teachers, parents, educational administrators, experts in the field of education, Industry, economics and public finance, managements of institutions of higher education and the like.

RESPONDENT'S PROFILE:

PART A

a) Name in full: _____

b) Age in Years: _____

c) Occupation: _____

d) Qualifications and experience: _____

e) Address and e mail ID. _____

f) Association with a Higher educational Institute: As

Student ☐ Parent ☐ Teacher ☐ Industry stakeholder ☐
Any other (Pl. specify) ☐

g) Name of the Educational Institution last attended:

_____

h) What is the level of your awareness in respect of financing of higher education in the state of Goa?

High level ☐ Moderately aware ☐ Not aware at all ☐ Low level. ☐

1. What should be the role of self financed Courses in higher education?
   Dominant role ☐ Complementing the Aided courses ☐
   Marginal role only ☐

2. What type of courses are suitable for running on self financed basis?
   Engineering/Management/Job-Oriented ☐
   Arts/Humanities/Science ☐ Any other (specify) ☐

3. To what extent are Courses in Arts/Humanities/Pure Sciences also important for the nation/society?
   To a great extent ☐ To a lesser extent ☐ Not at all. ☐

4. Is there a need to hike the fees in aided courses?
   Yes ☐ Yes, but marginally ☐ No ☐ Yes, in a phased manner ☐

5. What percentage of cost of education should be recovered by tuition fees?
   20% ☐ 45% ☐ 75% ☐ 100% ☐

6. To what extent is the access to higher education affected adversely by high level fees in self financed courses?
   To a great extent ☐ To a lesser extent ☐ Not at all. ☐

7. Do you think that the principle of equity is compromised in self financed courses?
   Yes ☐ No ☐

8. What is the role and importance of students' loans in funding higher education?
   Very important ☐ Important ☐
   Not a substitute for funding by Government. ☐

9. To what extent is the academic autonomy affected by public funding?

To a great extent ☐ To a lesser extent ☐ Not at all. ☐

10. What is the extent of academic autonomy prevalent in self-financed courses?

To a great extent ☐ To a lesser extent ☐ Not at all. ☐

11. Do you think that higher education produces large externalities i.e, public good for the society?

Yes ☐ No ☐ To some extent ☐ To a large extent ☐

12. Is it right for the Government to completely withdraw from higher education?

Yes ☐ No ☐

13. Should the Government increase it's spending on higher education?

Yes ☐ No ☐ Yes, in a phased manner ☐

14. How important is it to make efforts to increase GER (Gross Enrolment Ratio) in Higher education?

Yes ☐ No ☐ Very important ☐ Less important ☐ Not at all ☐

15. Is it possible to increase GER with out higher Government support for higher education?

Yes ☐ No ☐ To some extent ☐ To a great extent ☐

16. Do you think that 'inclusive growth' is possible with out adequate public funding of higher education?

Yes ☐ No ☐ Largely possible ☐ Almost impossible ☐

17. What should be the Government's priority in respect of financing higher education?

Very High ☐ High ☐ Low ☐ Very Low ☐

18. Will increase in Government's spending on education solve all the problems afflicting higher education?

Yes ☐ No ☐ To a large extent ☐ To a lesser extent ☐

19. If the Government decides to hike budgetary allocation for higher education, what strategy should it adopt?

Open new colleges ☐ Allow existing institutions to expand ☐
Give more scholarships to poor and needy ☐ Any other ☐

20. What checks and balances do you suggest to ensure that funds are properly utilized by educational institutions?

Government audit ☐ Audit by Chartered Accountant ☐
Stakeholders'/Audit committee-periodic check and approval ☐
Any other (specify) ☐

PART B

Questions here are arranged in pairs. One to the left is the hypothesis and the other towards the right is the converse. You can agree with either of the two but not both.

Agree with the hypothesis		Agree with the converse	
Higher education should be free for every one.	☐	Full fees must be charged to cover full cost of education.	☐
We need greater private participation in higher education	☐	The role of private players should be restricted and regulated.	☐
There is no need to replace the Existing regulatory authorities Such as UGC, AICTE etc.	☐	A national education regulatory authority should be established to monitor and oversee growth of higher education.	☐
Student fees must be kept low by public funding.	☐	Fees should reflect cost of providing education.	☐
Scholarships and tuition fees waiver are to be given to large numbers of students.	☐	Such concessions should be restricted to only a few meritorious students.	☐
Student fees should be linked to faculty salaries.	☐	Fees should remain constant even when salaries rise.	☐
Fees in self-financed courses are generally very high.	☐	Fees in self-financed courses are not very high.	☐
There is a need to hike the fees in State/Government aided courses.	☐	There is no need to increase tuition fees in funded aided courses.	☐

Student loans can take care of needs of poor students.	☐	Loans are not a substitute for state funding of education.	
Higher educational institutions should augment resources by research, consultancy etc.	☐	Institutions should largely depend on student fees or government funding.	☐
Government lacks the resources to enhance spending on higher Education	☐	Government lacks the will to spend more on higher education.	☐

PART C

Request to the Principal/Head of the institution or Department to kindlprovide the following information.

1. Name of the institution. _____

2. Is your institution accredited by NAAC /NBA or any other agency? If yes, what is the grade accorded?

_____

3. Details of the courses run (Attach a separate sheet, if required)

Under Graduate	Post Graduate	State funded	Self-financed.

4. No. of students

Boys	Girls	Minority	SC/ST	OBC	Gen. category

5. Faculty strength:

Full time	Part time	Contract basis	Visiting

6. Student-teacher ratio : _____

7. Number of Non-teaching staff : _____

8. Fees (Course wise) Per annum and Total Course fees. : _____
(Attach a separate sheet, if required)

	Self financed	Government funded
Cost per student (Including capital expenditure)		
Cost per students (Excluding capital expenditure)		
Fees per student		
Percentage of cost Recovery from fees		

Your view on funding role of the Government.

_____

_____

In view of foreign Universities coming to India, how should India prepare to face competition?

_____

_____

_____

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