CHAPTER VIII

POLICY IMPLICATIONS, SUGGESTIONS AND CONCLUSIONS

With the help of rates of return to various levels of general higher education calculated and shown in the previous Chapter, we can now explain the outcome of our study with particular attention to policy implication, its impact on overall employment structure and manpower requirement in Karnataka and also distributive equity in higher education.

This last and most important Chapter is, therefore, divided into six sections. In section (i) we discuss the implications of the study on educational policy making and our suggestions on decision-making for allocation of resources. Section (ii) deals with the relevance of rate of return analysis to educational planning. Section (iii) emphasizes the qualitative implications of higher education to society and development. Section (iv) considers equity aspect of higher education as a relation between educational attainment and family income size. In Section (v) role
of private and public sector education in income re-
distribution is discussed. Lastly, in section (vi) we
summarise the findings of our study.

(i) **Implications of the Study on Educational Policy-
Making and Suggestions:**

The first and the foremost implication of the study
to consider is whether there is under-investment or over-
investment in higher education in Karnataka. The criterion
followed is to compare the rate of return to higher
education with the alternative rate. For example, if the
former is higher than the latter, it is the evidence of
under-investment. Conversely, if the latter is higher than
the former it is the evidence of over-investment. Now if
we examine on this basis our social and private rates of
return to different levels of higher education in Karnataka
in comparison with the alternative rate, we find that
there is private under-investment on general under-
graduates, general double graduates and general post-
graduates, whereas on other levels (general graduates over
matriculates and also over undergraduates) there is private
over-investment. Similarly, there is social under-
investment on general undergraduates and general
post-graduates. On all other levels there is social over-investment. If we extend our comparison to adjusted rates, we find that there is both social and private over-investment on all higher levels of higher education viz. general graduates, general double graduates and general post-graduates). The comparison also shows that at the lowest and the highest levels of higher education the return in comparison with the alternative rates are more and hence the under-investment both at the bottom level and the apex level. Further at the lowest level, the returns are maximum as compared to the highest levels of higher education. While the former trend is a general phenomenon, the latter trend is unusual in Karnataka. Therefore, the policy in Karnataka, as our study suggests, should be that maximum resources should be diverted to lower level of higher education and adequate resources should also be diverted to higher levels of higher education than for the graduate level. This statement is also supported by our comparison between the rates for different levels of higher education made in the previous Chapter. The trend suggests that educational expenditures should be diverted from general graduates to general undergraduates, general post-graduates and general double graduates respectively. Between these levels, maximum
expenditures should be diverted to general undergraduates. Similarly, private expenditures should also be diverted from graduation to undergraduation. By such diversion equalization of the rates of return to all levels of higher education takes place. The process can be explained as under.

As shown in the previous Chapter, the social rates of return to general undergraduates and general post-graduates are 38.2 per cent, and 10.9 per cent respectively whereas it is only 0.8 per cent to general graduates. Therefore, diversion of resources from degree colleges to junior colleges and post-graduate courses in universities will begin to yield a net increase in the present value of future G.N.P. As suggested by Blaug et al., as we produce more undergraduates and post-graduates and less graduates, the rates of return to undergraduates and post-graduates begin to fall and the rate of return to graduates begin to rise.¹ Similar policy should be adopted to equalise private rates of return also. Alongside, some steps should be taken to increase the earnings of matriculates so that the

rates of return to undergraduates gets lowered. The trends in the rates of return to higher education in Karnataka suggest that too much investment is made in the wrong kind of education. As Harbison and Myers contend, India produces more secondary school and university graduates than she can employ. Therefore, there are large number of unemployed law, arts and humanities graduates. They further mention that primary education has not been given sufficient emphasis and that investment in both secondary and higher education have been poorly balanced. M. Blaug et al. have also brought out this point. They say that by all criteria primary and middle school education in India have not expanded to the desired extent although social rates of return to these levels are very high. All this lacks conscious educational planning. As such the strategy of human resource development for an underdeveloped country like India, as our study suggests, should be to devote more resources to the development and improvement of lower level and highest level of higher education. This diversion of resources from graduate (middle) level to lower and higher levels of higher education on priority, it may be

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emphasized, must be only up to a viable point.

As stated above there is both private and social over-investment on graduate level of general higher education in the State and in India too. Consequently, the output of general graduates is continuously increasing. This has led to alarming situation in graduate unemployment. In spite of this, general higher education has been allowed to grow at a pace determined by the pressures for admission by 'open door policy'. These pressures are demographic, socio-economic and political in nature. Demographic pressure is due to high rate of population growth which has led to clamour for consolidation of compulsory primary education and its extension. Thereafter, the flood of primary school leavers creates pressures for massive expansion of secondary education, and this in turn leads to more and mad rush for higher and university education. Socio-economic pressure is due to 'upgrading' of job standards and the social prestige attached to higher education. People think that unless they receive higher education, they cannot hope to be assured monetary returns to their efforts in receiving education. In other words, an assumption has really come to prevail that unless they are graduates, getting a job
is simply a mirage. Another supplementary factor is that, as our rates of return have shown, the private rates are higher than the social rates. Therefore, it is natural that the students go for higher levels of education. Thus, it has resulted in everybody's clamour for higher education which cannot be resisted so easily in a democratic society. Moreover, education for citizenship, education for life adjustment or education for enhancement of the freedom, dignity and worth of man have now become the laudable goals of modern societies. This increases the social demand for education which has been a social right in all democratic societies. Political pressure is inherent in a democratic society. Selective admission is a matter of colonial rule. Success of democracy needs elevating the educational level of the people. Self-development urge even among the rural people - let alone the urban elites, has made them to demand provision of higher educational facilities in rural areas through their elected representatives. As such, even politicians cannot resist the demand for higher education among the electorate and try to become the true representative of their electorate being submissive to the local demands and for that matter exert political pressure on the Government. National prestige attached to higher educational achievements of the people has also added
fuel to the fire.

All the foregoing facts assert one thing that 'open door policy' with regard to higher education has become inevitable. The outcome is over-expansion of higher education leading to educated unemployment. In other words, Malthusian like tendency in higher education field is being experienced in the sense that supply of general graduate labour is growing faster than the ability of our economy to absorb these graduates in employment. Added to this, an attitude has developed in educated individuals to prefer white collar jobs to manual and industrial jobs.

Where does the remedy lie? To this question, the answer is not that simple. However some suggestions may be made.

(1) Diversion of resources from graduate level and post-graduate level of general higher education to lower levels is imperative. Such a diversion will help the Government to cause a decline in the supply of general graduates and thereby check the growth of educated unemployment. Lowering of unemployment rate will thereby help the growth of economy. Secondly, such diversion of
resources reduces the private rate of return to undergraduate and post-graduate levels and increases the private rate to graduate level and thus helps to achieve the general objective function of 'Cost-Benefit Analysis' i.e., equalisation of rates of return to all levels of general higher education when it can be said that the available resources are efficiently utilised.

(ii) An alternative measure to reduce the private rates of return to lower and higher levels of education may be considered. The rate of income tax can be increased to recoup the subsidy given to higher education to possible extent. But it is not an easy remedy for the States because, income tax is a Central subject. However, if all the States experience the same situation, they may exert pressure on Central Government to raise the income tax rate to achieve the goal. This again involves the problem of Central-State financial relation in respect of education which is a State subject where Centre may not desire to directly involve itself. However, the recent efforts to include the education in the concurrent list may overcome this difficulty to some extent.
(iii) A variant of the above two measures and possibly a feasible measure is to raise the real value of fees at lower level and also at higher level of higher education coupled with proper subsidy policy based on scientific rationale. Such a divergence of fee rates at different level of higher education will act as an instrument to achieve the overall objective of desired enrolment in all levels of higher education. By this measure the private demand for education starts falling due to low private rates of return by the increase in costs of education of which fee forms a part.

(iv) The problem of increasing graduate unemployment in India and in Karnataka is two sided. It is not only due to over-expansion of graduate level of higher education by 'open door policy' but also the phenomenon of employment of graduate labour in lower levels of occupation. This 'upgrading' of the educational content of lower level occupation has become not only a process but a condition very often laid down by the Government. A graduate is demanded for a job requiring skills of a matriculate. This 'upgrading' of the educational content of occupation not only lowers the rate of return to particular level of education but also passes on the squeeze to the lower level of education. It also adversely affects the motivation of
the students and thereby reinforces the tendency towards the lowering of the quality of education. Therefore unless 'upgrading' of job standards is stopped no Government can resist the pressure for expansion of higher education. In other words for a job, minimum qualification should be prescribed rather than maximum qualification to reduce the rush for higher education. Even proposals that the university graduates should be held ineligible for certain types of jobs such as clerical posts, may be considered. As the Committee on Unemployment (1970) has noted, it is necessary to see that degrees are not used as filtering devices for jobs where a lower qualification will do.

(v) To prevent over-expansion of the higher education facilities leading especially to graduate unemployment and upgrading of educational qualifications for different categories of occupations, often recommendations are made for selective admissions especially to graduate courses of general higher education. Admissions must be made by

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conducting test examinations. This helps in encouraging meritorious students only. But this measure may come in conflict with the goal of equity in educational opportunities and therefore may be socially unacceptable and politically difficult. However, a variant of this measure is suggested by Blaug et al. which merits consideration. They suggest that people for public services should be selected before they go to college making their appointment conditional on getting a satisfactory degree.

(vi) As the findings of our study suggest, the Government should take steps to diversify the secondary and pre-university courses. For example, by a check on the over-supply of graduates, resources should be channelized from higher to lower levels of education such as secondary and undergraduate (pre-university) courses to give them vocational orientation. From this angle the emphasis recently laid by the pre-university education board on imparting vocational education at pre-university level deserves full support.

(ii) Rate of Return Analysis and Educational Planning:

Planning is a process of decision-making for actions
in future. This process is to be initiated deliberately by the policy makers to bring about the desired and orderly change. Before considering the significance of deliberate planning to guide decision-making in education, we are tempted to know why market mechanism cannot guide the decision-making in education. Adequate explanation for failure of market mechanism and the need for educational planning in education has been given by V.N.Kothari and P.R.Panchamukhi which is reproduced below.

'Planning may be felt necessary in case of education because the Invisible Hand itself may not lead to optimal allocation of resources to education, and/or to the fair or equitable distribution of education. Allocative efficiency through market mechanism demands that certain conditions will have to be satisfied, viz. there is free entry in the market, there is perfect knowledge on the part of the consumers and producers, externalities in both production and consumption do not exist, increasing returns to scale are not obtained in the production of the good in question, 

and the good is not a social good or a merit good which present problems in the allocation decisions. Distributional equity demands that the existing distribution of economic opportunities and social status are themselves not inequitous. If we try to apply the above tests in case of education we find that not all conditions are satisfied, and thus the market failure in the provision of education can be explained. Not all parents and children can be considered to be aware of the benefit that education generates. Similarly, a large number of student guidance bureaus would not have had any work if the students chose their course of study on their own with full knowledge of the different alternative courses that the educational system provides. Returns to scale do operate in the process of provision of education. One can visualise a U-shaped cost curve (or L-shaped cost curve) of education, indicating a decline in cost with increasing enrolment. Though detailed studies establishing this hypothesis are yet to come by, some pilot studies have indicated that at least upto a certain size costs fall.

Externalities in consumption of education are predominant. Educational level of my neighbours does enter into my utility function, for, educated neighbourhood certainly provides a decent, orderly and hence happy living. With
higher level of education, people's awareness of their social responsibility increases, tax evasion is 'reduced', hence Government's potential tax revenue and hence its capacity to satisfy people by additional supplies of public goods increases. Thus, education of others enters the utility function of everybody else in the society. In view of the existence of such externalities, the exclusion principle cannot be strictly applied in case of education. Hence the non-rivalness in consumption and non-excludability - the features of a public good, are observed in case of education. In view of the existing inequity in the distribution of economic opportunities and social status, education is not distributed equitably and hence distributional objectives are also not satisfied by the market mechanism. Therefore, for the purpose of allocative efficiency and distributional equity, a deliberate planning process will have to be initiated.

Now-a-days, in all planned economies educational planning has become an integral part of over-all economic planning. In India (including States) education is one of the sectors in the over-all plan. All proposals for education are submitted to Planning Commission by States and Centre. Planning Commission, after consideration of
the proposals, drafts the final plan both for States and the nation as a whole. Responsibility for implementation lies with States in case of State plans and with Centre in case of Central plans. Thus the objectives of overall economic planning become the objectives of educational planning viz. allocative efficiency and equity. Therefore, educational planning cannot address itself either to solve the problem of efficiency of resource allocation alone (using either social cost-benefit technique or manpower requirement approach) or to achieve equitable distribution of educational opportunities alone. It should have both the objectives. Further equity objective may be looked at as at a particular point of time or over the period of time. To spell out the objective more clearly, educational facilities should be made available to all the aspirants of education and in all regions, and since education can be considered as a significant factor in the determination of economic opportunities, greater efforts must be made to enlist the socio-economically backward sections of population in education, and thus attain equity in economic opportunities overtime. The first is the basis for the social demands approach to educational planning, and in the second, education is
considered as the inter-temporal equity device. Thus rate of return analysis (cost-benefit analysis), manpower requirements approach and social demand approach should be reconciled as they are complementary techniques of educational planning to bring about educational reforms which is the crave of the day.

In the previous section of this Chapter, we made a point on the basis of our findings that the supply of graduates could be controlled to keep the unemployment rate as low as possible. Let us take this argument a little further. A control in supply of graduates automatically keeps private demand for education low which in turn helps Government to equalise the supply with the total social demand for education. This increases the rate of return to a certain level which in turn increases the demand. Thus, by exercising control over the supply, Government can always increase or decrease the number of graduates according to the need of the economy. We have already discussed in the previous section the possible methods by which the supply can be controlled. The

advantages that follow the controlling of highly educated manpower may be listed as below. 6

(i) The low rates of return to higher levels of education can be increased.

(ii) When graduates are abundant in number, they are employed in those jobs where normally matriculates or undergraduates are employed. Therefore, if the supply of graduates is controlled, the employment condition of matriculates and undergraduates can be improved.

(iii) The fact that the over-expansion of higher education leads to a decline in the standard (quality) of education is self-explanatory. In India as well as in Karnataka, the quality of education is deteriorating fast. The present day students are devoid of any intellectual drive to pursue research. Students are interested to get degrees anyhow to qualify themselves to seek a job rather than to receive real education worthy of a degree they hold. It may be noted with great

agony of mind that even teachers have no interest in teaching with deep insight into the subject or in adopting new methods in teachings resulting in monotony and boredom by the oral duplication of the printed subject matter in a particular book. Though we witness the anxiety among planners and administrators both in plan document and verbal statements, no concrete proposals and actions seem to be in sight to improve the quality of education. Therefore, at least a control over the supply of graduates (quantity) greatly helps in improving the quality of education also.

What should determine the supply of educated manpower? is the next question which needs to be answered. The supply of educated manpower to a large extent depends upon the manpower needs of the economy in future. Therefore, the extent of control over the expansion of higher education facilities should be in proportion to the manpower needs in various sectors of the economy. For example, a study by Burgess, Layard and Pant7 which formed

the basis of the education commission's manpower and expenditure projections on the assumption that educated manpower must grow at the same rate as projected output, made manpower projections for 1986 taking manpower in India in 1961 as the base, on the basis of some 'norms' for the service as well as non-service sectors. Here rate of return analysis enters the process of educational planning in the sense that taking this projection into consideration the supply of various graduates can be increased up to the desired level on the basis of rates of return. Therefore, it is suggested that manpower planning should be implemented on the basis of the rate of return analysis. In other words, manpower needs approach and rate of return approach which are two important tools of educational planning need to be integrated. Hans Thias and Martin Carnoy in their case study of Kenya have tried to apply rate of return analysis in educational planning considering the future demand and supply of manpower in that country. Mark Blaug also asserts that the manpower forecasting approach and social demand projections should be blended with the rate of

8 Thias Hans and Martin Carnoy, Op.cit., Ch.V.
return approach. He holds that "as we combine forecasts of demand with projections of supply, we start thinking quite naturally of earnings associated with education as indicators of impending shortages and surpluses. And since the costs of training various types of specialised manpower differ considerably, we will be led to consider variations in earnings in relation to variations in the costs of education. This is the rate of return analysis, whether we call it that or not. By making such calculations on a year to year basis, we keep a continual check on labour markets for highly qualified manpower and gradually develop insights into the ways in which education interacts with economic growth". Although the scope of our present study as well as non-availability of sufficient data and the limitations of an individual researcher did not permit us to examine the role of rate of return analysis in the educational planning in Karnataka, the preceding analysis throws some light on this matter.

The conclusions we have derived above from the cost-benefit analysis of general higher education in Karnataka may

not be palatable to the Government and also to the policy makers. We hear the oft quoted statement that 'economists are the handmaids of politicians'. This implies that political decisions are not conditioned by economic decisions, but economic decisions in a democracy are taken under the political pressures. Therefore, if the cost-benefit analyst suggests to divert resources from higher level of education to lower level of education, it cannot be accepted by the policy makers on the ground that higher education is to be viewed as the process of producing highly skilled and specialised manpower which the industrialists urge in a mixed economy like ours and not merely as the means for increasing earnings. Higher education, they assert, is one of the determinants of national prestige also.

Being the situation, how far the suggestions made in this study shall be incorporated in the educational policy of Karnataka depends upon the political complexion of the Government in the State. Moreover, the rate of return analysis is itself caught by vicious circle. It is like this.
'As the approach is suspected, no figures are collected; as no figures are collected, no results are reported; as no results are reported, suspicion about the approach feeds on itself.'

Therefore, unless this vicious circle is broken, the significance of the approach cannot be conveyed with assertion. What is necessary is to dispel the feeling of suspicion that the approach is still too young to permit final approach. The fact that its fecundity is opening up new lines for exploration itself promises well. The only bottleneck in this approach is the lack of data especially the collection of statistics on personal earnings cross-classified by age and education. Therefore humble, sincere and critical efforts by researchers - individual and group certainly persuade the Government to raise the relevant data to make the approach relevant to know the efficiency of investment in education.

(iii) **Qualitative Implications of Higher Education to Society and Development:**

In the earlier section, we have already argued that not only rate of return considerations but social demand
for higher education also go into the matter of educational policy making. This social demand for education has its origin not only in the social right to education in all democratic societies but as mentioned earlier, in the laudable goals the modern societies desire to achieve through education viz. education for citizenship, education for life-adjustment, education for enhancement of the freedom, education for dignity and worth of man.¹⁰ Let us take this argument little further to know the qualitative implications of higher education to society.

Focussing our attention on the contribution of education to only earning capacity of the individuals is a partial view of the benefits of education because, earnings are the incomplete measure of the productivity of education especially from the society's point of view. Education benefits the future children of the educand who imparts informal education to them at home. The neighbours of the educated benefit by the social values developed in the children by the schools. Employers are benefitted from

getting trained labour. It benefits the society at large by developing the basis for informed electorate who in turn brings about improvement of democratic Government. Education pushes outward the utility possibility function for the society by cutting down the crime rates and thereby reduces the costs on law enforcement. Resources thus saved may be available for more productive uses such as increased employment opportunities. Education may also bring about increase in welfare possibilities directly such as development of public spiritedness or social consciousness of one's neighbour.'

For the modern organised society the importance of educated people is so much felt that 'without them the significance of all the media like books, journals and newspapers and more so knowledge would dwindle. If communication of information between the members of society is lost or does not grow, there would be no competition, no market economy and no political democracy also'. With respect to


12 Ibid., P. 177.
higher education, it may be emphasized that colleges and 
universities are not only the institutions to train the 
students but more so the centres of research activity from 
which the society benefits. Not only the higher education 
has a prestige value to the individual and the nation but 
it leads to social enlightenment by broadened knowledge. 
It also trains persons in particular skills required for 
underdeveloped countries for their national development 
if there are no bottlenecks in the development process. 
It can be said if elementary education provides orientation 
on the rudiments and secondary education on preparation for 
responsible participation, it is the university education 
which endeavours to systematise and apply knowledge into 
the affairs of men and of nations.

Universities are not conducted for the purpose of 
maximising life time earnings of their graduates. Their 
purpose is to select the most able for leadership in 
industry and Government to cultivate talent for the sake 
of self-enrichment, to promote scholarship and scientific 
research, to preserve and disseminate cultural values 
which are fundamental to the overall growth of the country. 
They are the veritable power house for thinking out issues, 
training manpower and taking expertise and technology into
the frontiers of service. Graduate of university run the Government offices, direct social and civic affairs, turn the wheels of the industry and help to extend the realm of knowledge. Truly, universities can be said to be in the position of being called as the brains, the hearts and the conscience of the society. Thus, education serves individual needs as well as those of society.

In a free society, educated people can fully realise their human potentialities to live a satisfying and productive social life. They can also contribute indirectly to the economic and general welfare of the nation. According to H.S. Parnes, the individual by his education is able to sharpen his capacity for appreciating, understanding and controlling both himself and the various facets of his environment. He/She also develops his/her ability to function effectively in the various roles that he/she is expected to play: as a husband/wife, parent, member of a working group, over and above member of the community. Nonetheless educated people provide the citizenry with an understanding of the technological, economic and social forces that affect them. Such an understanding is a necessary condition for wise policy-decisions especially in a democracy. At a time when many underdeveloped
countries like ours are experiencing numerous impediments to industrialisation and growth inherent in the attitudes and ideologies of the people, introduction of the masses to the age of science and technology through education would be a potent stimulus to economic development.\(^{13}\)

Education brings social harmony too. It promotes friendship, cooperation and peaceful living. It discourages violence - spiritual and physical. It promotes justice by instilling in us the desire for working against injustice. Educated people can produce better goods and services and can help in their better distribution. They can plan their families and so control the uncontrolled population explosion and thereby help social and economic development. For example, in India, according to the National Sample Survey it is found that education among women varies inversely with the size of their family. Average number of children for women with university education is only two. Thus, higher education among women can greatly help to reduce the pressure of population on our already strained economic and social life of people.

University education is not the mere instruction as is conceived today. It is not the mere training of memory, the imagination and the intellect. It is a process of transforming naive thinking into a critical thinking. So to say it is a process of humanising and consequently socialising which has a cultural implication. Further university education involves actively in bringing to light the various human problems and discussing them critically and finding out ways and means of acting upon them by dialogue method. Thus, it helps to bring about a social change for the better. In this sense, it may be suggested that the curriculum of the university education should reflect the needs of the society. This helps to educate men in the problems of the society, who can play a positive role in humanising and socialising the community and cooperate with the government which not only finances the higher education but more so exists for the good of all.¹⁴

As all of us know that all education proceeds by the participation of a person in social consciousness.

Lack of education is generally associated with conservation i.e., rigidity to change, inability to distinguish between right and wrong. Education on the other hand contributes in liberalising one's attitudes and develops susceptibility to progressive views and rationalism. On this score, 'it is realised that education can modify the attitudes of non-scheduled castes towards scheduled castes who are the victims of ill-treatment and undue discrimination by the former in keeping the latter away from interpersonal and social relationships. If both are properly educated untouchability can be abolished. Moreover, educational development among scheduled castes will help them change their traditional occupations and improve their level of living standards.'

Thus education can bring not only more social cohesiveness but can bring about qualitative improvement in the social and economic life of the people. In these days when admissions to higher education are open and not reserved for the privileged few, universities are capable of exerting profound influence on the fundamental structure of the society.

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What all the foregoing discussion emphasizes is that the role of education should not be restricted to personality formation only in the occupational sense. Education is predominantly a training for life rather than livelihood. It is also a socializer of individual and a transmitter of particular cultures and values. It is an instrument of social restructuring and social engineering. Especially in poor and developing countries like ours where less education and less educational opportunities are responsible for large income differentials between less educated and more educated, higher education can play an important role in breaking the vicious circle of poverty and in the formation of a middle class along with informed electorate basic to democratic society as stated earlier.

To sum up it may be said that though in strict logic, the investment in different levels of education should depend upon the returns to be obtained, little practical purpose will be served by such an approach. Education is a social infrastructure service for

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development purpose. It is an end in itself. 'It must compete with public transport and housing and with such social services as health and welfare where returns are not the criterion for the policy purpose. Choices in education have to be made by planners and administrators keeping in mind as to how far the content and distribution of any education should serve the purpose of social conservation and social change. When many developing countries (including India) are facing major problems of social change caused by the movement of large number of people from the rural areas to the towns, the transition from subsistence to cash economics and the impact of gradual industrialisation and technological change, these countries have the choice of making rapid social adjustments in which education can greatly help. Or else, they have the only choice of risking serious dangers of social disintegration'. Therefore, policy decisions especially on higher education in underdeveloped countries must be guided by economic, social and cultural implications as well. Universities should be regarded as the institutions not for issuing certificates to individuals to seek employment for monetary reward but those sending out human

beings with developed mind, critical thinking ability and transitive consciousness so that they can play the role of responsible citizens committed for the growth and progress of the nation. These educated citizens can also enhance the culture of a nation for the social development too.

Although some argue that modern education may increase superfluities in the society, reduce the degree of honesty, disturb the traditional value system, break the joint family system etc., it may be said that these arguments are all based on apprehensions and some exceptions. Educating people is part and parcel of a country's general development. Not content with satisfying the needs of the individual, education concerns the very life of the nation and is its most precious ferment.

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Some Considerations on Equity Aspect of Higher Education:

In Chapter III, we observed that in RRA of educational projects also, distributional effects are to be necessarily considered. These considerations are two-fold. First consideration is to estimate the contribution made by education to the achievement of equality in income distribution and thereby elevate the lower income groups. Second consideration is to see that the educational opportunities are distributed evenly. Thus there are two way considerations in the equity aspect of education; (i) distributional effect of education on income (ii) distributional effect of income on education.

In this section an attempt is made, on the basis of information collected during our survey, to study the effect of family income size on education. This is only an humble exercise because the information collected is not exhaustive and the data is limited. Hence the outcome of the exercise may reveal a vague picture about the decision of the people with different size of their family income in opting for different levels of general higher education.
For the purpose of analysis, we have divided the entire sample into nine income groups. In table 8.1 we have shown these different income groups along with the number of educated people falling into each group. Table 8.2 shows the proportions of these educated people associated with the different family income groups under the various levels of general higher education in Karnataka. This arrangement throws some light on the effect of income on education.

In our survey, most of the people (about 95 per cent) come from lower and middle and upper income groups. Very few (about 5% per cent) come from higher income groups. Table 8.2 reveals that more educated people are from lower and middle income groups in the range of 0-250 to 1501-2000. Upto this range of income, somewhat we find the tendency to go for higher education as the income rises. But beyond this range of income, this tendency is rarely found. However on close observation, there is a slight indication of going for higher level education along with rise in income in the highest income group.

For a brief description of the socio-economic background of the students, see Chapter IV.
Table 8.1
Family Income Groups and the Number of Educated People: by Higher Education Level, Karnataka, 1975-76

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<th>Family income group (Rs. per month)</th>
<th>Number of educated people</th>
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<td></td>
<td>Undergraduates</td>
<td>Graduates</td>
<td>Double Graduates</td>
<td>Postgraduates</td>
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<tr>
<td>0-250</td>
<td>-</td>
<td>14</td>
<td>6</td>
<td>2</td>
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<td>251-500</td>
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<td>751-1000</td>
<td>13</td>
<td>9</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>1001-1500</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>3</td>
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<tr>
<td>1501-2000</td>
<td>-</td>
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<td>2</td>
<td>1</td>
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<td>2001-2500</td>
<td>-</td>
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<td>1</td>
</tr>
<tr>
<td>2501-3000</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3001 &amp; above</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>58</td>
<td>100</td>
<td>36</td>
<td>31</td>
</tr>
</tbody>
</table>

Source: Our own survey.
Table 8.2
Proportion of Educated People Under Different Level, Karnataka, 1975-76 (Per cent)

<table>
<thead>
<tr>
<th>Family income group (Rs. per month)</th>
<th>Undergraduates</th>
<th>Graduates</th>
<th>Double graduates</th>
<th>Postgraduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-250</td>
<td>-</td>
<td>14.00</td>
<td>16.67</td>
<td>6.45</td>
</tr>
<tr>
<td>251-500</td>
<td>29.30</td>
<td>53.00</td>
<td>22.22</td>
<td>22.58</td>
</tr>
<tr>
<td>501-750</td>
<td>43.10</td>
<td>14.00</td>
<td>36.11</td>
<td>19.35</td>
</tr>
<tr>
<td>751-1000</td>
<td>22.42</td>
<td>9.00</td>
<td>8.33</td>
<td>35.48</td>
</tr>
<tr>
<td>1001-1500</td>
<td>5.18</td>
<td>6.00</td>
<td>5.56</td>
<td>9.68</td>
</tr>
<tr>
<td>1501-2000</td>
<td>-</td>
<td>2.00</td>
<td>5.56</td>
<td>3.23</td>
</tr>
<tr>
<td>2001-2500</td>
<td>-</td>
<td>-</td>
<td>2.77</td>
<td>3.23</td>
</tr>
<tr>
<td>2501-3000</td>
<td>-</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3001 &amp; above</td>
<td>-</td>
<td>1.00</td>
<td>2.78</td>
<td>-</td>
</tr>
</tbody>
</table>

Total 100.00 100.00 100.00 100.00
groups also but in few cases. For example, in 2001-2500 and 3001 and above ranges of income the proportion of educated people (however small) is more at the higher level of education than at the immediate lower level of education. Although this tendency could not be established clearly due to lack of sufficient data (which put a constraint on our statistical test to show precise relationship between income and education), a general statement can be made that there is not only a positive relation but also direct relation between income and education.

From the Table it can be realised that people from low income group being less capable of pursuing higher education, opportunity for higher education are confined mostly to better off classes. This position, therefore, demands that ample subsidies (in the form of merit-cum-means scholarships) and other educational facilities should be provided by the Government to this group of people. The funds for subsidising the university education of this group may be raised through special impost on
higher income groups. For example, in United States\textsuperscript{20} heavy reliance is made on local property taxes to finance educational expenditures because the incidence of such taxes falls on consumption of the rich and not on savings. This calls for a tax-transfer solution for distributional problem in cost-benefit analysis as discussed in Chapter II. Secondly, as in other capitalist and communist countries, students belonging to this group and desirous of pursuing higher education should be made self-supporting by way of throwing open ample opportunities for work while learning.

Another novel scheme of financing university education on equity principle as suggested by D.M. Nanjundappa\textsuperscript{21} merits serious consideration by Government. According to him, 'a larger share of public funds should be allocated directly to students and in turn make them pay the full cost of their education. Under this system, sums of money are made available from public funds as a loan.


to all potential students with necessary academic
standard belonging to low income groups on the condition
that they enter into a contract to repay the loan without
interest after they obtain the earning stage in instalments
spread over average earning span of their life.'

'Under the present fee structure', he adds, 'which
covers about 11-14 per cent of the total academic cost,
there is unjustifiable and indiscreet subsidy. As for
the poor, the scholarship and freeship given cover only a
fraction of the student community. This leaves behind
the bulk of the students with poor parents who have to
either give up educating their sons and daughters because
of personal financial problems or borrow at usurious
rates of interest to finance the education of their
children. The subsidy in the present fee is no answer
to the problem of enabling poor families to send their
children for higher education.' Therefore, he argues that
an indirect system of financing by interim free loans to
prospective students with minimum academic standard should
be extended only to students whose parental income is
below a certain limit (say about Rs. 15000 per year).
Notable feature of this scheme is that it makes the
student a unit in the transaction, not his family. As
the rich will be kept out from the system, the equity principle can be scrupulously followed. He has even suggested to incorporate an element of subsidy in the form of 25 per cent rebate in the repayment liability for the students attaining distinction to encourage and recognise merit. He concludes that although there are snags in its working, they are not without the possible means of dealing with them. Hence one strongly feels that the scheme should be introduced immediately.

All the analysis in the foregoing section emphasizes that if the present educational expansion according to the needs of the society is to have any meaning, equity objective in the sense of effective participation in education should form an inseparable part of educational planning.

(v) Private and Public Sectors in Educational Finance and Distributive Equity: Some Issues

In the foregoing section, we made a point that

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since there exists inequity in the distribution of education facilities, ample subsidies should be provided to the students of low income groups, the funds for which may be raised through special imposts on higher income groups. Let us take this argument little further to know the implications of such a policy measure and to suggest possible solutions to overcome them.

Since the World War II, in spite of obvious and enormous progress in the distribution of educational opportunities, in both developed and developing countries, there seems to be practically no relation between income inequality and education inequality. What are the reasons for this? The answer seems to be intriguing. The failure lies in the wrong proposition accepted in policy making. The proposition is that Government participation in the provision of education brings equity to unequal societies simply through public subsidy and not through progressive taxation. But unless such unsound proposition without empirical test is abandoned, distributive equity can't be appropriately planned.

One cannot overlook the fact that in most of the developing countries there exists a situation of income
inequality. Unequal incomes result in unequal savings and investments. To redress this income inequality through education, at least one condition should be fulfilled; low income groups should be able to invest more in their education than high income groups. But studies made on this problem reveal that low income groups benefit less than the rich from education and that Government subsidization tends to exacerbate the inequity. Then where does the wrong lie?

The Government involvement in education is justified on two grounds: economic efficiency and social equity. In most of the developing countries Government subsidy for education is based on the simple and general rule that everyone is equally entitled to the same amount of public subsidy. In other words, subsidization and pricing of education is regardless of income. But this pattern of subsidization has certainly adverse effect in the sense that higher income groups remain longer in the education system and hence receive larger share in the public subsidy. This is particularly true in developing countries like India where the distribution of educational opportunities and subsidies is very unequal. Therefore, in some countries people in the higher income groups are made to
pay for the education of their children via progressive taxation. But in developing countries, this is absent where progressive direct taxation is much less a source of revenue than indirect taxation which is not progressive. Hence how far Government participation in financing education leads to achieve social equity depends on how taxes and education subsidies are distributed among different income groups. Studies in this regard in Columbia have shown that if properly planned and implemented, distribution of taxes across income groups can offset the distribution of education subsidies and thus 'government involvement in the provision of education can contribute to redistribute income from high income to low income groups'. But when each level of education is separately examined the study shows different results. Only the public financing of primary education has a positive effect on income redistribution benefiting the poor. But in the case of secondary and higher education, a redistribution of income from the poor and the very rich to the lower and upper middle class takes place through the public financing. What is clear from this

is that any policy aimed at making a system of financing higher education more equitable should act on either the structure of public subsidies or the structure of taxation. If the people with less ability are to be made to pay for higher education, a system of 'scaling subsidies to income' should be adopted in the sense that public subsidies should be inversely related to income. But till today, no country seems to have put this policy into practice. In the absence of such a subsidy policy, it is difficult to know how it affects the demand for education, the quality of education and the overall efficiency of the educational system.

One way to make sure that education subsidies benefit low income more than high income groups, it is suggested, would be to encourage a private education sector in which high income groups can enroll their children. Thus the co-existence of fully subsidized public education sector with little or no subsidized private education sector is often advocated to solve the problem of distributive equity in education. Such experiment has been made in Columbia where certain key levels of education is privatized where high income groups enroll their children. Public education on the
other hand is subsidized and priced differently for the poor and the rich. Such experiment has however succeeded in achieving short term equity only and it is feared that it would tend to harm low income groups in the long run. This fear is not without logic. As the private education sector for the rich would provide a better education and ultimately higher earning capacity than the public subsidized system for the poor, policy makers have resented the existence of private education service for the rich. The explanation runs as follows.\(^{24}\)

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\text{As soon as the full cost - or something sufficiently close to it - of educational services are charged to some groups, quality of the most common type of education will deteriorate owing to the lack of a strong political constituency. Those with the highest purchasing power will foster the 'best' service, which will yield the highest returns (in the form of examinations passed and ultimately earning opportunities), and those with a lower purchasing power will go for cheaper education. Thus the privatization of education may serve to}\]

maintain, if not foster, long term income disparities especially if the size of the returns to education is positively associated with the importance of the private finance component in educational costs. In this case, the search for equity in the provision of education through an income related pricing system might run against long term equity.'

But these fears cannot be justified and asserted unless there are evidences in terms of rates of return calculated simultaneously and comparatively for public and private education which have, so far, never been carried out. However one can assume that access to fee paying school is certainly desired in order to improve on the rate of return one can get from the equivalent education in a tuition free school. Therefore, a question arises; how to introduce more equity into the provision of educational service without the harmful effect of 'privatization'? An alternative suggested is to increase the progressivity of tax system. This could be achieved through an additional tax on higher income and the proceeds of such tax may be earmarked for the financing of higher education. It is expected that such a tax would help to remove the adverse effects of the public subsidization of
higher level of education on the distribution of income by increasing the tax payments of high income groups. Payment of such tax by high income groups would make sure that the rich will be paying for the subsidies which they receive. By manipulating the tax rates corresponding to the various income groups, any degree of income redistribution can be achieved. In the long run as low income groups gain access to higher levels of education, the tax rates (without altering the tax system) can be decreased and can be geared to the gradual equilisation of educational subsidies across income groups. Further by an inquiry into the returns to education among socio-economic groups, the Government policy of financing educational services can aim at long run equity. The Government can assess its involvement in financing education by fitting the subsidization scheme and tax system into a single frame work because the taxes would be the benefit stream of Government subsidization of education while the outlays incurred to subsidize education to a certain level would be the cost stream. The Government can know the net amount of subsidies it distributed to each educated person by the 'Tax-Subsidy (T-S) criterion' i.e., the present value of all taxes paid on the returns to the education by the educated
person during his entire life time minus the subsidies received by him to reach this level of educational attainment. The 'net' subsidy per educated person would then be multiplied by the proportion of people reaching this level of education under consideration in each socio-economic group to arrive at the comparative cost of education to the Government for each group. When the present value of 'net' Government subsidies accruing to higher income groups is higher, Jallade has suggested that a more progressive tax such as 'education tax' should be imposed on the incomes of the educated. This 'education tax' can be in the form of adding or removing a few percentage points in the existing income tax rates of educated individuals in each socio-economic group.\(^{25}\) He argues that though this is conceptually not a perfect solution, it is advantageous from the operational point of view. It is simple for administration as it neither affects the tax base nor necessitates the overhauling of the existing tax system.

In conclusion, as contended by Jallade, it can be said that introduction of 'education tax' would help

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\(^{25}\) Ibid., P. 36.
to shape a pattern of incentives to acquire education which would be conducive to greater equality of educational opportunity because, not only it reduces the private return of education of high income groups more than the returns of low income groups but the proceeds of this tax would be used to increase the subsidization of education of low income groups. This helps to improve the availability and quality of educational services available to them. Therefore, given the political will (Government's willingness) and the acceptance by the public as in the case of health, transportation and housing, this scheme of education tax in the system of education finance will work in the right direction.

Higher education system in our country which leaves much to be desired towards the achievement of our cherished goal of social equality, the proposed 'education tax' deserves the consideration of our educational policy makers without generating significant political and social dissension in our mixed system of education - public and private.

(vi) **Summary of the Findings:**

When education is an investment in human capital,
its efficiency is to be determined by its economic productivity. When provision of educational facilities draws upon the scarce resources of the country, it is obligatory on the planners to see that the resources utilised on education, besides any other benefits, bring maximum returns both to the individual and the society as a whole. Rate of return analysis serves the purpose as a useful technique in knowing the economic profitability (though not precisely) of investment in education. Incorporation of cost-benefit analysis in spite of its shortcomings and limitations, therefore, has now-a-days emerged as one of the important tool of educational planning to provide broadly a line of thinking to the planners while formulating the educational policy. In pursuance of this view alone, this humble exercise of the cost-benefit analysis of general higher education in Karnataka is done. After having calculated the rates of return to different levels of general higher education, we are able to draw some important conclusions which are summarised below.

1) On the cost side, the study shows that the cost of higher education (upto double graduate level) in Karnataka is much less subsidised as compared to the subsidy in
India as a whole. Proportion of private cost in total social costs is much higher than that of public costs (See Table 4.10 in Chapter IV). But the subsidy at the post-graduate level is substantial (little less than 60 per cent).

2) On the benefit side, large variations are found in the earnings pattern of educated people in public sector and private sector in Karnataka. Government pay scales, even after recent rationalisation, are less than those in central corporations, banks and other big private business concerns. Pay scales in general do not bear any exact relation with academic qualifications. However, matriculates earn less than undergraduates. There is noticed the disproportionate rise in the earnings of the overall educated people in Karnataka.

3) All the age-earnings profiles - both social and private hold the general characteristics and they are more or less well-behaved profiles with a few exceptions.

4) Comparisons of some of our profiles in Karnataka with those in India constructed by Blaug et al. reveal that peak age of earnings and the ratio of peak earnings
to life time earnings of matriculates in Karnataka and India are more or less the same. But those of general graduates differ. Age of peak earnings is higher in Karnataka and the rise in earnings in Karnataka is steeper in comparison with rise in earnings in India (See Table 5.8 in Chapter V).

Now from the rates of return calculated to different levels of general higher education on the basis of costs and earnings pattern, the broad conclusions drawn are summarised below.

1) The comparisons of inter-level rates of return reveal that the rates of return both social and private to general undergraduates are highest due to the low cost for this course and less earnings for matriculates in Karnataka. Rates of return are less at the higher levels of higher education. But beyond general graduation, we notice one striking feature that the rate of return rises as we go on observing higher and higher levels of higher education. Accordingly, the rates of return to general double graduates over general graduates is higher than that of graduates over undergraduates. Further rate of return to general post-graduates over general graduates
is still higher (See Table 7.5 Chapter VII). The logical reasons for this peculiar behaviour is the higher pay scales for post-graduates over both double graduates and graduates; and higher pay scales of double graduates over graduates.

2) Both social and private investment on general undergraduates is profitable as the rates of return (social and private) to this level are higher than their alternative rates of return (10 per cent and 12.5 per cent respectively). From the individual point of view even the investment on double graduation and post-graduation is profitable, but on graduation, private investment is not at all profitable. From the social point of view investment on all higher levels of higher education ceases to be profitable as the social rates of return to these levels are less than the alternative rate. The adjusted rates of return reveal that both social and private investments on higher levels of general higher education are not profitable as the rates of return to these levels are all negative and need no comparison at all with the alternative rate.
3) Although the private rates of return are higher than social rates, the discrepancy is noticeable only at the lowest level and highest level of general higher education (See Table 7.10 in Chapter VII). The reason attributable to this phenomenon is that education at these levels are more subsidized but it is not adequately recouped or offset by income taxation when these educated people start earnings in their active lives.

4) Rates of return to general higher education in Karnataka do not compare favourably to similar rates in other countries as well as in other parts of our own country. They are far less. But the social rate to general graduation roughly compares with that calculated by H.N.Pandit in India (See Table 7.13 and 7.14).

Following these characteristics of the rates of return to general higher education in Karnataka and the conclusions drawn thereupon, some possible measures are suggested for future policy making to equalise the rates of return to all the levels of general higher education. This may help to maximise the social utility of higher education in the State. These suggestions are: diversion of more resources from graduate level to undergraduate
level and also to higher levels of general higher education. Another suggestion is a check on the supply of graduates to minimise the growing unemployment in the State on the one hand and to raise the quality of higher education on the other. However this control over the supply by restricting access to higher education should not be an isolated plan but should be in proportion to the future requirements of the economy. This emphasizes the relevance of manpower requirements approach in the rate of return analysis for a meaningful and effective educational planning.

Before closing, we do admit that the study is conducted under various limitations mentioned in Chapter I. As such, there is ample scope for further research in this field. For example, in isolating the on effect of education/earnings, multiple regression analysis can be used by collecting data and information on large number of educated people for various types and levels of higher education in the State. Likewise, the problem of regional equity may be studied by constructing indices of education for different districts in the State separately. This helps to plan the educational supply to reduce inter-regional inequalities. Further,
an investigation to compare the impact of Government subsidy in the financing and taxing of education across socio-economic groups as a whole shall be a helpful study in equity aspect of education. Thus, there are many more areas where further research can be initiated in this broad area of planning of higher education. One should also admit the fact that any study on cost-benefit analysis in any project in its entirety can be successful only if it is conducted by a group of researchers as the individual researcher has to work under many constraints - economic and non-economic.